

SIEMENS

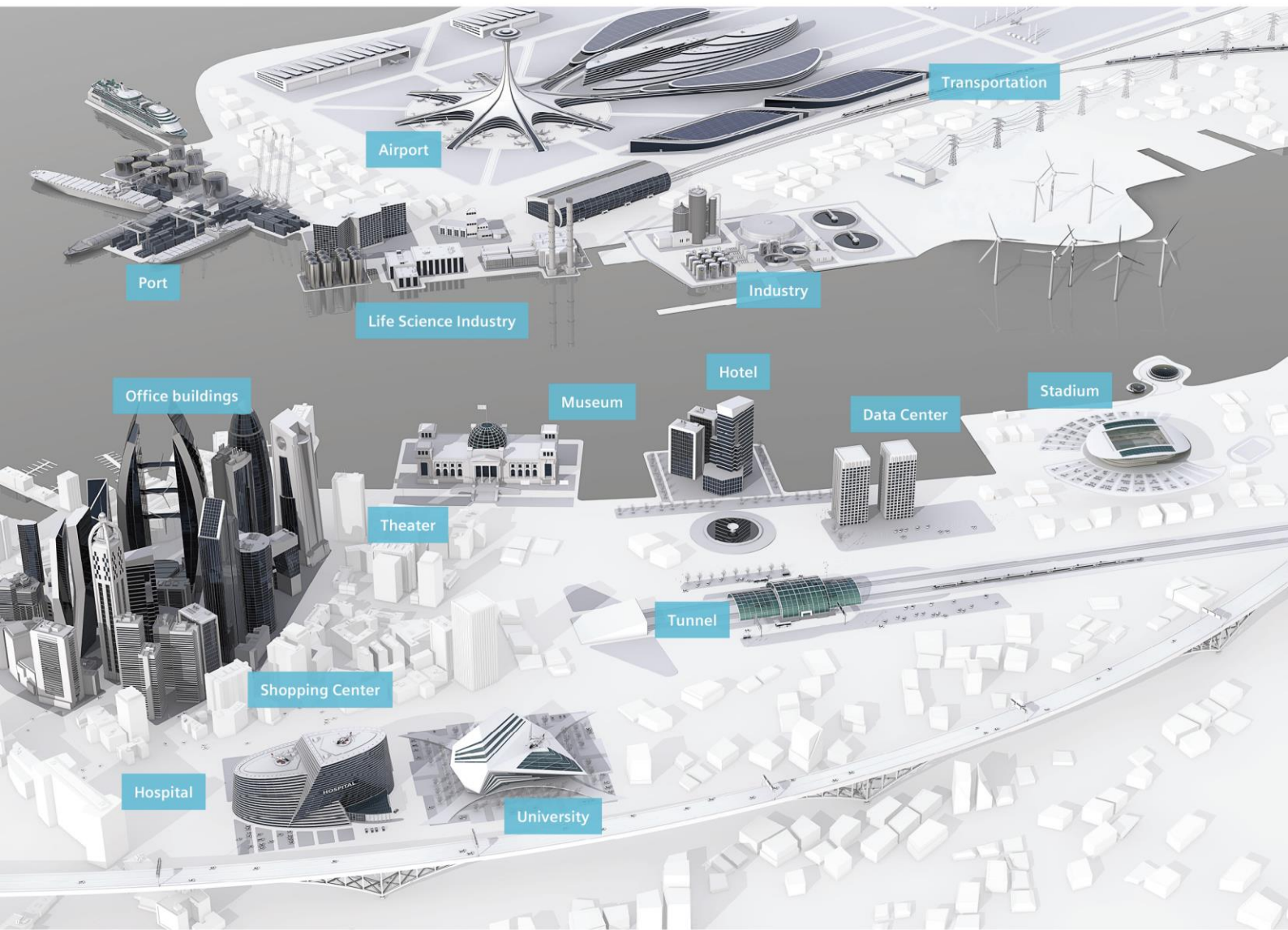
Ingenuity for life

HVAC products and building automation systems

Product Catalog 2021



[siemens.com/hvac-products](https://www.siemens.com/hvac-products)



Port

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Transportation

Life Science Industry

Industry

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Museum

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Data Center

Stadium

Theater

Tunnel

Shopping Center

Hospital

University

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More warranty for you!



5 years warranty on valves and actuators, damper actuators and sensors.

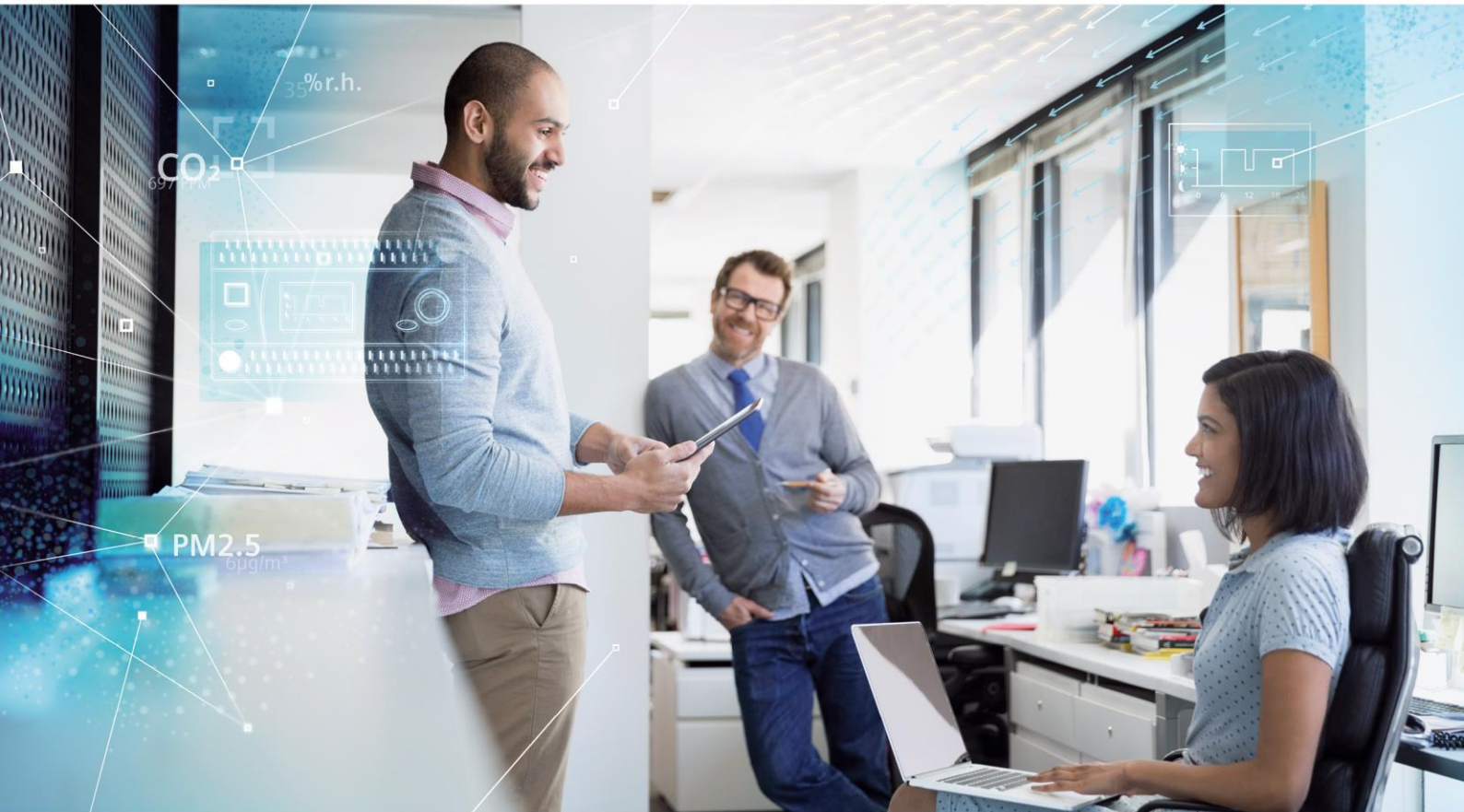
Dear customers

Smart Infrastructure from Siemens intelligently connects energy systems, buildings and industries to adapt and evolve the way we live and work. We work together with customers and partners to create an ecosystem that intuitively responds to the needs of people and helps customers to better use resources. It helps our customers to thrive, communities to progress and supports sustainable development.

Transform your buildings into perfect places using innovative products and proven applications from Siemens. The broad product portfolio covers a wide variety of requirements and applications. This extensive product range forms the basis for efficient and cost-effective solutions across the entire lifecycle of a building. The interplay of heating, ventilation and air conditioning as well as lighting and shading maximizes energy savings and user comfort. We look forward to the professional and personal dialogue with you and to a successful cooperation – in every project and in every building.

Your room can do more for your health

Room automation that puts people at the center.



Since many years, healthy and productive spaces have been playing a major role in our lives and nowadays are even more important than ever. Indoor air pollutants like PM2.5 fine dust particles and Volatile Organic Compounds (VOC) have a fundamental impact on occupant health. At the same time, the transmission of viruses as well as the impact of allergens are highly dependent on indoor humidity. What exactly can your room do for your health? Room automation boosts your well-being and productivity and can help to prevent the spread of viruses and bacteria: room sensors, operation units and thermostats to provide a healthy and productive indoor climate.

Avoid dry air in the room.

The transmission of viruses, bacteria and allergens are highly dependent on indoor humidity, so make sure to keep a level of 40 to 60% relative humidity.

Controlled pressure.

In rooms with controlled lower air pressure, and where viruses and bacteria exist, the air contamination of neighboring areas can be prevented more effectively.

Higher ventilation levels.

With additional fresh air, the relative number of viral particles in the air volume is reduced and contaminated air is removed more efficiently from the area.

[siemens.com/
room-
automation](https://www.siemens.com/room-automation)



Fine dust (PM2.5)

Room automation helps to monitor and control PM2.5 fine dust pollution and improves health and well-being.

Occupant presence

Understand how your spaces are used, drive room specific strategies in HVAC based on room analytics and occupant behaviors.

VOC

Improving ventilation control reduces the impact of the sick building syndrome caused by indoor Volatile Organic Compounds (VOCs) by reducing absenteeism and improving productivity.



CO₂

Controlled ventilation keeps CO₂ levels below 1,000 ppm to increase overall productivity by 2–18%.

Relative humidity

Keeping humidity levels between r.h. 40–60% reduces virus transmission by up to 70%.

Adjust application when needed

Monitoring and controlling of key parameters

Add advanced control logics

Real time measurement of data

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47%r.h.



PM2.5
6µg/m³

24.5°C



RDG200

The room in your hands.

- **Standalone and system thermostat:** KNX open protocol and integration to Synco™ and Desigo™ ecosystem
- **Preloaded applications:** Covers all the applications you need for many verticals
- **Fast commissioning:** Very fast and easy commissioning via NFC and large choice of commissioning alternatives

CO₂
697 PPM

[siemens.com/RDG200](https://www.siemens.com/RDG200)

Do it right: Dynamic hydronic balancing

Hydronic balancing means, the right amount of water at the right time in the right place. Sounds easy! But is it? There are several solutions, but one is definitely the right way to do it.

Hydronic balancing with standard control valves

To create a balanced hydronic system with standard control valves you must first determine design flow rates and calculate the pressure losses across the whole hydronic network. Then you determine a valve type, size and proper flow coefficient. In the next step you need to make sure that the selected valve has sufficient control authority for the job. After that, you also need to calculate and select a manual balancing valve for this consumer. You must repeat this process for all consumers and commission the whole system by manually adjusting the position of all balancing valves.

Now the system is balanced. But it is only statically balanced, which means that as soon as your hydronic distribution network operates at part load, the system is no longer balanced and runs inefficiently. This leads to high costs and energy consumption that could be avoided. Also, the room's

comfort is impaired because pressure fluctuations have an impact on the room's temperature.

Not an optimal solution although it is still widely used.

Hydronic balancing with dynamic valves

Using dynamic valves, such as PICV or Intelligent Valves, in your HVAC system the valves do the balancing for you. There is no need for complex pressure loss and control authority calculations. Only the volumetric flow determines which valve must be used. You also don't need any additional flow regulating or balancing valves, which means less installation effort. On-site commissioning is extremely simple thanks to easy max flow presetting and automatic balancing. This is possible because dynamic valves ensure balanced water flow rates under all load conditions, thereby eliminating any impact of fluctuations on the room temperature. This way, dynamic valves

allow for energy savings of up to 30 percent with no sacrifice of comfort. With Intelligent Valves you can even save up to 37 percent.

In other words: Dynamic balancing is the right way to do hydronic balancing.



Static hydronic balancing: Uneven energy distribution under part load conditions.



Dynamic hydronic balancing: The hydronic system is always balanced, independent of load conditions and pressure fluctuations.

More on saving energy with PICVs



More on hydronic balancing



Benefits of dynamic hydronic balancing



- No need for complex hydronic calculations
- Fast and easy product selection
- Fewer components, less installation effort
- Effortless commissioning
- Automatic dynamic hydronic balancing
- High comfort
- Energy savings of up to 37 percent



Planning tomorrow

Turning ideas into perfect places

Get ready for tomorrow

Buildings are becoming more and more complex. Structures that used to be passive now have to meet higher demands for efficiency, safety, sustainability and comfort. While digitization enables new ways of connecting and operating buildings, cost and time pressures create resistance for the adoption of these new technologies. With decades of experience in building automation, we know these challenges and have the expertise to help master them.

All you need for turning ideas into perfect places

Thorough planning has never been as important as it is today. The more complex a building becomes, the more detailed the planning process must be. With our extensive market experience, we want to make the planning process as time-efficient as possible. With planning tools, extensive data and comprehensive information about our certified product portfolio we are ready to help turn ideas into perfect places.

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bt/consultants](https://www.siemens.com/bt/consultants)



Building information modeling (BIM)

Understanding the language of buildings



BIM is the equivalent of digitalization in the construction industry: A digitally supported process for planning, constructing and operating buildings that enables a significant productivity increase in the construction industry.

BIM helps to plan, build and operate buildings with greater insight. BIM data combined with real-time building data will enhance predictive data analytics over the building lifecycle. This enables significant gains around productivity, efficiency, reliability and overall quality.

Siemens owes its success in delivering digital services to its strengths and competencies in building management and predictive data analytics, supported by reliable and secure infrastructure.

With our trusted domain and IT expertise, we have built long-standing credibility around all disciplines of building technologies. In our pursuit of excellence to deliver the perfect place, you essentially benefit from our years of experience in building technologies.

Siemens BIM-compliant product data: the basis of the BIM process

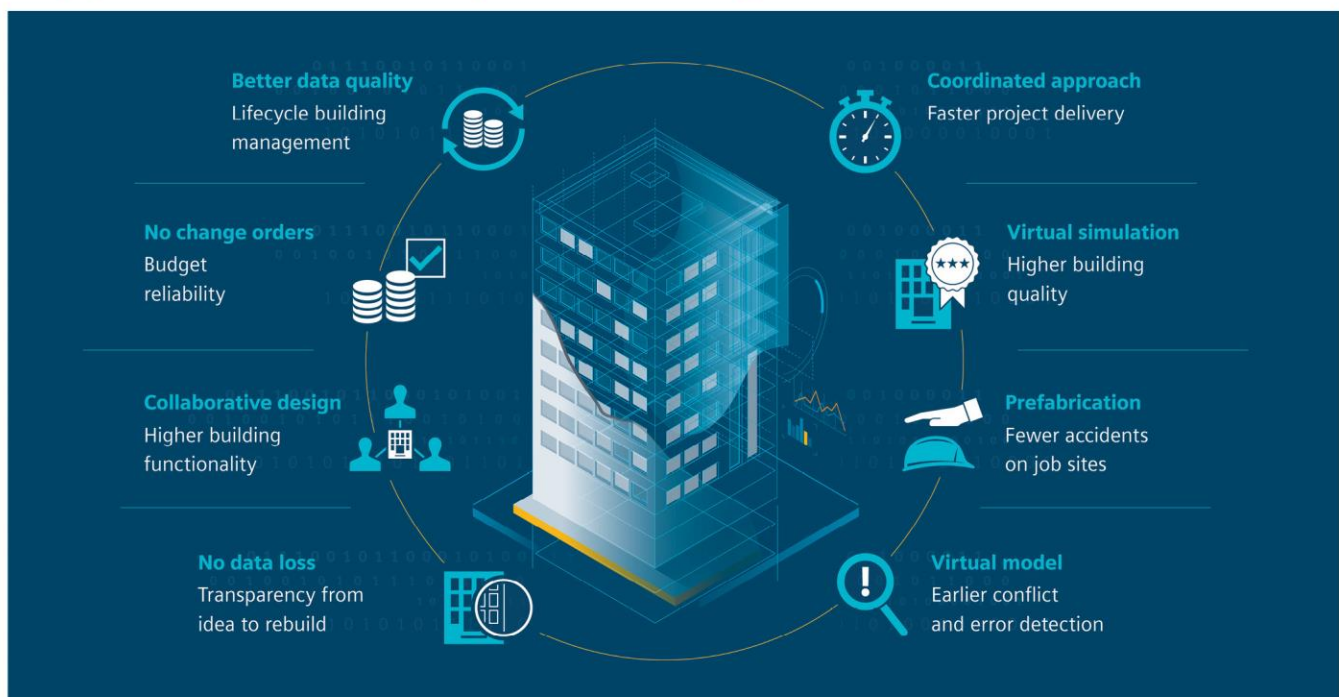
Siemens BIM-compliant product data allows easy integration of the data into authoring processes. With more than 4,000 products already available and more to come, Siemens is setting the benchmark for BIM-compliant product data.

Benefits at a glance:

- Fast download of all data
- Support for 2D and 3D planning
- Simple product search and download
- Visualize data before downloading
- Regular plug-in update to keep data current
- Continuous expansion of BIM data



Enjoy increased efficiency and flexibility



Comprehensive support for your day-to-day tasks



Siemens actively supports you through every phase of your project with tools, apps and training that facilitate your day-to-day tasks.

Easily locate products

The HIT Portal makes your search for the right products for designing HVAC plants easier and less time-consuming. This simple and intelligent tool will guide you through an intuitive sequence of steps: You can select and document any HVAC control device as an individual product or through a system configuration. Using its library of over 400 preconfigured HVAC applications for standard controllers, HIT will provide you with a comprehensive specification: This typically includes a plant diagram, list of material, and technical documentation for each device, as well as pricing.

[siemens.com/hit](https://www.siemens.com/hit)

Consultant support

Find everything you need to plan the buildings of the future in one place. Our site specifically for consultants and planners is a one stop shop for everything from specification text, application guides and BIM data.

[siemens.com/bt/consultant](https://www.siemens.com/bt/consultant)

Order products quickly and efficiently

All automation, drive and installation products, including products from the HVAC and KNX/EIB portfolios, are listed on the Industry Mall information and order platform:

[siemens.com/industrymall](https://www.siemens.com/industrymall)

Damper actuators tailored to your needs

Use the Product Configurator to quickly and easily customize the OpenAir products you require. You can choose between two labels, position your logo on the label, specify the cable type and length and select from among various connector types. Give it a try!

[siemens.com/industrymall](https://www.siemens.com/industrymall)

Training and support

Siemens supports you in every project step from the planning stage through the installation to the trouble-free operation. With Siemens standing by as your professional partner, you're well equipped to meet all your customers' challenges. In addition to practical tools and on-site support through the worldwide sales and service network, you also benefit from the knowledge of our experts. Whether you're looking for technical courses – for example, in hydronics – or product training, Siemens supports you every step of the way. Your contact at Siemens will be happy to help you finding the right training for you.

Product information anytime, anywhere

Use the Scan to HIT app to scan the data matrix code on actuators for immediate access to all essential product information, including data sheets and installation instructions.



Hydronics made easy

The Combi Valve Sizer app makes it very easy to select the right Acvatix PICV and matching actuator. Just enter the maximum volumetric flow desired and select other features such as type of threaded connection or DN size, and the ideal PICV type will be displayed. The app also calculates the maximum volumetric flow and presetting, checks the commissioning settings and provides access to all data sheets.



Valve sizing made easy

The Acvatix slide ruler is a tool to help you find the right valve and actuator for your application.



Mobile commissioning and maintenance

ABT Go is the mobile tool for commissioning and maintenance tasks of Siemens devices used in building automation and control systems such as the Intelligent Valve.



Operate and control remotely

With HomeControl IC, it is possible to connect small and medium-size buildings quickly and easily. This enables multi-site, remote building operation and management for saving costs and increasing customer satisfaction.

[siemens.com/Synco-IC](https://www.siemens.com/Synco-IC)

All Siemens apps can also be found on
[siemens.com/bt/apps](https://www.siemens.com/bt/apps)

Type Overview

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EZU10-10060	Pair of temperature sensors Pt1000, length 100 mm, ø 6 mm, type PL, cable length 6 m	A6V11444716	518
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FKA0004	Expanding bracket of lamella-type radiator	N2886	645
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GDB341.9E	Electromotoric rotary actuator for ball valves, non-spring return, AC 230 V, 2-position/3-position, 5 Nm, 150 s	A6V10636150	540
GDB346.1E	Rotary air damper actuator, AC 230 V, 2-position/3-position, 5 Nm, 150 s, 2 auxiliary switches	A6V10636149	596
GDB361.1E	Rotary air damper actuator, AC 230 V, DC0/2...10 V, 5 Nm, 150 s	A6V10636149	596
GDD141.1E/RW	Air damper actuators for railway vehicles, DC 24 V, 2-position/3-position, 5 Nm, 30 s	A6V10636280	604
GDD142.1E/RW	Air damper actuators for railway vehicles, DC 24 V, 2-position/3-position, 5 Nm, 30 s, potentiometer	A6V10636280	604
GDD146.1E/RW	Air damper actuators for railway vehicles, DC 24 V, 2-position/3-position, 5 Nm, 30 s, 2 Auxiliary switches	A6V10636280	604
GDD146.1G/RW	Air damper actuators for railway vehicles, DC 24 V, 2-position/3-position, 5 Nm, 30 s, 2 Auxiliary switches	A6V10636280	604
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GEB146.1E/102	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	599
GEB161.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	599
GEB161.1E/102	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	599
GEB161.1E/MO	Rotary air damper actuator, AC 24 V, Modbus RTU, 15 Nm, 150 s without spring return	A6V101037253	599
GEB163.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	599
GEB164.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	599
GEB166.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	599
GEB341.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	599
GEB346.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	599
GEB361.1E	Rotary air damper actuators 20 Nm, without spring return	A6V11449860	599
GGA126.1E/10	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm	N4617	624
GGA126.1E/12	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm	N4617	624
GGA126.1E/T10	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm, with thermosensor	N4617	624
GGA126.1E/T12	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm, with thermosensor	N4617	624
GGA326.1E/10	Actuator for fire protection dampers, AC 230 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm	N4617	624
GGA326.1E/12	Actuator for fire protection dampers, AC 230 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm	N4617	624
GGA326.1E/T10	Actuator for fire protection dampers, AC 230 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm, with thermosensor	N4617	624
GGA326.1E/T12	Actuator for fire protection dampers, AC 230 V, 2-position, 18 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm, with thermosensor	N4617	624
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GIB163.1E	Rotary air damper actuator, AC 24 V, DC 0...35 V adjustable, 35 Nm, 150 s	N4626	544
GIB164.1E	Rotary air damper actuator, AC 24 V, DC 0...35 V adjustable, 35 Nm, 150 s, 2 auxiliary switches	N4626	544
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GIB331.1E	Rotary air damper actuator, AC 230 V, 3-position, 35 Nm, 150 s	N4626	544
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GLA141.1E/RW	Air damper actuators for railway vehicles, DC 24 V, 2-position/3-position, 10 Nm, 90 s	A6V10636286	605
GLA142.1E/RW	Air damper actuators for railway vehicles, DC 24 V, 2-position/3-position, 10 Nm, 90 s	A6V10636286	605
GLA146.1E/RW	Air damper actuators for railway vehicles, DC 24 V, 2-position/3-position, 10 Nm, 90 s, 2 Auxiliary switches	A6V10636286	605
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GLB111.9E/MO	Electromotoric rotary actuator, AC 24 V, 10 Nm, 150 s with Modbus RTU	A6V10881143	542
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GLB142.1E	Rotary air damper actuator, AC/DC 24 V, 2-position/3-position, 10 Nm, 150 s, potentiometer	A6V10636202	598
GLB146.1E	Rotary air damper actuator, AC/DC 24 V, 2-position/3-position, 10 Nm, 150 s, 2 auxiliary switches	A6V10636202	598
GLB161.1E	Rotary air damper actuator, AC/DC 24 V, DC 0/2...10 V, 10 Nm, 150 s	A6V10636202	598
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GLB163.1E	Rotary air damper actuator, AC/DC 24 V, DC 0...35 V adjustable, 10 Nm, 150 s	A6V10636202	598
GLB163.2E	Linear air damper actuator, AC 24 V, DC 0...35 V adjustable, 250 N, 150 s	N4664	609
GLB164.1E	Rotary air damper actuator, AC/DC 24 V, DC 0...35 V adjustable, 10 Nm, 150 s, 2 auxiliary switches	A6V10636202	598
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GLB331.2E	Linear air damper actuator, AC 230 V, 3-position, 250 N, 150 s	N4664	609
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GLB341.1E	Rotary air damper actuator, AC 230 V, 2-position/3-position, 10 Nm, 150 s	A6V10636202	598
GLB341.9E	Electromotoric rotary actuator for ball valves, non-spring return, AC 230 V, 2-position/3-position, 10 Nm, 150 s	A6V10636203	542
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GLD146.1E/RW	Air damper actuators for railway vehicles, DC 24 V, 2-position/3-position, 8 Nm, 30 s, 2 Auxiliary switches	A6V10636286	605
GLD161.1E/RW	Air damper actuators for railway vehicles, DC 24 V, DC 0/2...10V, 8 Nm, 30 s	A6V10636299	605
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GMA131.9E	Electromotoric rotary actuator with spring-return for ball valves, AC/DC 24 V, 3-position, 7 Nm, 90/15 s	N4658	541
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GMA161.1E/MO	Rotary air damper actuator, AC/DC 24 V, Modbus RTU, 7 Nm, spring return 90/15 s	A6V101037201	591

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GMA161.9H	Electromotoric rotary actuator with spring-return for ball valves, AC/DC 24 V, DC0...10 V, 7 Nm, 90/15 s	N4658	541
GMA163.1E	Rotary air damper actuator, AC/DC 24 V, DC0...35 V adjustable, 7 Nm, spring return 90/15 s	N4614	591
GMA164.1E	Rotary air damper actuator, AC/DC 24 V, DC0...35 V adjustable, 7 Nm, spring return 90/15 s, 2 auxiliary switches	N4614	591
GMA166.1E	Rotary air damper actuator, AC/DC 24 V, DC0...10 V, 7 Nm, spring return 90/15 s, 2 auxiliary switches	N4614	591
GMA321.1E	Rotary air damper actuator, AC 230 V, 2-position, 7 Nm, spring return 90/15 s	N4614	591
GMA321.9E	Electromotoric rotary actuator with spring-return for ball valves, AC 230 V, 2-position, 7 Nm, 90/15 s	N4658	541
GMA326.1E	Rotary air damper actuator, AC 230 V, 2-position, 7 Nm, spring return 90/15 s, 2 auxiliary switches	N4614	591
GNA126.1E/10	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 9 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm	N4620	623
GNA126.1E/12	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 9 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm	N4620	623
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GNA126.1E/T12	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 9 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm, with thermosensor	N4620	623
GNA326.1E/10	Actuator for fire protection dampers, AC 230 V, 2-position, 9 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10x10 mm	N4620	623
GNA326.1E/12	Actuator for fire protection dampers, AC 230 V, 2-position, 9 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12x12 mm	N4620	623
GNA326.1E/T10	Actuator for fire protection dampers, AC 230 V, 2-position, 9 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10x10 mm, with thermosensor	N4620	623
GNA326.1E/T12	Actuator for fire protection dampers, AC 230 V, 2-position, 9 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12x12 mm, with thermosensor	N4620	623
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GPC126.1A	Rotary air damper actuator, AC/DC 24 V, 2-position, 4 Nm, spring return 60/15 s, 2 auxiliary switches	A6V10636100	590
GPC131.1A	Rotary air damper actuator, AC/DC 24 V, 3-position, 4 Nm, spring return 60/15 s	A6V10636100	590
GPC136.1A	Rotary air damper actuator, AC/DC 24 V, 3-position, 4 Nm, spring return 60/15 s, 2 auxiliary switches	A6V10636100	590
GPC161.1A	Rotary air damper actuator, AC/DC 24 V, DC0...10 V, 4 Nm, spring return 60/15 s	A6V10636100	590
GPC166.1A	Rotary air damper actuator, AC/DC 24 V, DC0...10 V, 4 Nm, spring return 60/15 s, 2 auxiliary switches	A6V10636100	590
GPC321.1A	Rotary air damper actuator, AC 230 V, 2-position, 4 Nm, spring return 60/15 s	A6V10636100	590
GPC326.1A	Rotary air damper actuator, AC 230 V, 2-position, 4 Nm, spring return 60/15 s, 2 auxiliary switches	A6V10636100	590
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GQD121.1A	Rotary air damper actuator, AC/DC 24 V, 2-position, 2 Nm, spring return 30/15 s	N4604	589
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GQD131.1A	Rotary air damper actuator, AC/DC 24 V, 3-position, 2 Nm, spring return 30/15 s	N4604	589
GQD131.9A	Electromotoric rotary actuator with spring-return for ball valves, AC/DC 24 V, 3-position, 2 Nm, 30/15 s	N4659	538
GQD136.1A	Rotary air damper actuator, AC/DC 24 V, 3-position, 2 Nm, spring return, 30/15 s, 2 auxiliary switches	N4604	589

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GQD161.9A	Electromotoric rotary actuator with spring-return for ball valves, AC/DC 24 V, DC0...10 V, 2 Nm, 30/15 s	N4659	538
GQD166.1A	Rotary air damper actuator, AC/DC 24 V, DC0...10 V, 2 Nm, spring return 30/15 s, 2 auxiliary switches	N4604	589
GQD321.1A	Rotary air damper actuator, AC 230 V, 2-position, 2 Nm, spring return 30/15 s	N4604	589
GQD321.9A	Electromotoric rotary actuator with spring-return for ball valves, AC 230 V, 2-position, 2 Nm, 30/15 s	N4659	538
GQD326.1A	Rotary air damper actuator, AC 230 V, 2-position, 2 Nm, spring return 30/15 s, 2 auxiliary switches	N4604	589
GRA126.1E/10	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm	A6V10888424	622
GRA126.1E/12	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm	A6V10888424	622
GRA126.1E/12A	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm	A6V10888424	622
GRA126.1E/C12	Actuators for fire protection dampers	A6V10888424	622
GRA126.1E/T10	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm, with thermosensor	A6V10888424	622
GRA126.1E/T12	Actuator for fire protection dampers, AC/DC 24 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm, with thermosensor	A6V10888424	622
GRA326.1E/10	Actuator for fire protection dampers, AC 230 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm	A6V10888424	622
GRA326.1E/12	Actuator for fire protection dampers, AC 230 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm	A6V10888424	622
GRA326.1E/T10	Actuator for fire protection dampers, AC 230 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 10 x 10 mm, with thermosensor	A6V10888424	622
GRA326.1E/T12	Actuator for fire protection dampers, AC 230 V, 2-position, 4 Nm, spring return 90/15 s, 2 auxiliary switches, shaft 12 x 12 mm, with thermosensor	A6V10888424	622
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GRD221.1U	GRD221.1U 30 lb-in,SR,2PT,120V,FS	A6V11692965, A6V11486812	625
GRD226.1U	GRD226.1U 30lb-in,SR,2PT,120V,SW,FS	A6V11692965, A6V11486812	625
GRD321.1U	GRD321.1U 30 lb-in,SR,2PT,230V,FS	A6V11692965, A6V11486812	625
GRD326.1U	GRD326.1U 30lb-in,SR,2PT,230V,SW,FS	A6V11692965, A6V11486812	625
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GSD141.9A	Electromotoric rotary actuator without spring return for ball valves, AC/DC 24 V, On-Off, 2 Nm, 30 s	A6V10636056	539
GSD146.1A	Rotary air damper actuators, AC/DC 24 V, 2 Nm, 30 s, 2 auxiliary switches	A6V10636055	595
GSD161.1A	Rotary air damper actuators, AC/DC 24 V, 2 Nm, 30 s	A6V10636055	595
GSD161.9A	Electromotoric rotary actuators without spring return for ball valves, 2 Nm, 30s	A6V10636056	539
GSD166.1A	Rotary air damper actuators, AC/DC 24 V, 2 Nm, 30 s, 2 auxiliary switches	A6V10636055	595
GSD341.1A	Rotary air damper actuators, AC 240 V, 2 Nm, 30 s	A6V10636055	595
GSD341.9A	Electromotoric rotary actuator without spring return for ball valves, AC 230 V, On-Off, 2 Nm, 30 s	A6V10636056	539
GSD346.1A	Rotary air damper actuators, AC 240 V, 2 Nm, 30 s, 2 auxiliary switches	A6V10636055	595
GSD361.1A	Rotary air damper actuators, AC 240 V, 2 Nm, 30 s	A6V10636055	595
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HMXIK001-002	Installation set Rp 3/4" - ball valve Rp 3/4" with coupling nut G 3/4" and flat gaskets	N5323	655
HMXIK001-003	Installation set Rp 1" - ball valve Rp 1" with coupling nut G 3/4" and flat gaskets	N5323	655
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HMXIK002-001	Installation set R 1/2" - fitting R 1/2" with coupling nut G 3/4" and flat gaskets	N5323	655
HMXIK002-002	Installation set R 3/4" - fitting R 3/4" with coupling nut G 3/4" and flat gaskets	N5323	655
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VKF41.65	Butterfly valve, flange, PN6/10/16, DN65, kvs 200	N4131	570
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VMP45.10-0.63	3-port seat valve with bypass, external thread, PN16, DN10, kvs 0.63	N4845	500
VMP45.10-1	3-port seat valve with bypass, external thread, PN16, DN10, kvs 1	N4845	500
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VMP47.10-0.4	3-port seat valve with bypass, external thread, PN16, DN10, kvs 0.4	N4847	502
VMP47.10-0.63	3-port seat valve with bypass, external thread, PN16, DN10, kvs 0.63	N4847	502
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VPE110B-200	Angle radiator valve, DIN, pressure-compensated, dpw 10 kPa, PN10, DN10, 95....483 l/h	N2185	528
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VPF43.125F110	Combi valve, flanged, PN16, DN125, 18.5...110 m ³ /h	N4315	520
VPF43.125F135	Combi valve, flanged, PN16, DN125, 23...135 m ³ /h	N4315	520
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VPF53.50F25	Combi valve, flanged, PN25, DN50, 4.3...25 m ³ /h	N4316	523
VPF53.65F24	Combi valve, flanged, PN25, DN65, 4.4...24 m ³ /h	N4316	523
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VQI46.15L0.5Q	PICV, internally threaded, PN 25, DN 15, 30...520 l/h, pressure test points	A6V11877580	536
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VQP46.15F1.3Q	PICV, externally threaded, PN 25, DN 15, 300...1300 l/h, pressure test points	A6V11877580	534
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VQP46.25F1.8	PICV, externally threaded, PN 25, DN 25, 620...1800 l/h	A6V11877580	534
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VVF22.65-63	2-port valve, flanged, PN6, DN65, kvs 63	N4401	429
VVF22.80-100	2-port valve, flanged, PN6, DN80, kvs 100	N4401	429
VVF32.100-160	2-port valve, flanged, PN10, DN100, kvs 160	N4402	431
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VVF42.150-400C	2-port valve, flanged, PN16, DN150, kvs 400, for Asian market	A6V10794157	436
VVF42.150KC	2-port valve, flanged, DN150, pressure compensated	A6V10794157	440
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WFW40.D110	Mechanical water meter single-jet with module slot, 2.5 m ³ /h, 110 mm, G ¾ ", hot	N5302	648
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WHE542-D291S	Electronic heat cost allocator with watchdog timer, Double sensor, Summer switch-off: 06/01 – 09/30, due date 09/30, meter reading by walk-by: Monthly, S-mode	A6V10786229	644
WHE632-D292C	Electronic heat cost allocator with watchdog timer, Double sensor, Summer switch-off: 06/01 - 09/30, due date 09/30, C-mode	A6V10786229	644
WMK636.DAL00	Electronic multi-jet cold water meter for A34 measuring capsule Q3 = 2.5 m ³ / h, connection thread M77 x 1.5 mm, M-bus radio communication, 10-year battery, up to 30 ° C	A6V12128928	651
WMK636.DIS00	Electronic multi-jet cold water meter for IST measuring capsule Q3 = 2.5 m ³ / h, connection thread G2 ", M-bus radio communication, 10-year battery, up to 30 ° C	A6V12128928	651
WMK636.DTE00	Electronic multi-jet cold water meter for TE1 measuring capsule Q3 = 2.5 m ³ / h, connection thread M62 x 2 mm, M-bus radio communication, 10-year battery, up to 30 ° C	A6V12128928	651
WMW636.DAL00	Electronic multi-jet hot water meter for A34 measuring capsule Q3 = 2.5 m ³ / h, connection thread M77 x 1.5 mm, M-bus radio communication, 10-year battery, up to 90 ° C	A6V12128928	651
WMW636.DIS00	Electronic multi-jet hot water meter for IST measuring capsule Q3 = 2.5 m ³ / h, connection thread G2 ", M-bus radio communication, 10-year battery, up to 90 ° C	A6V12128928	651
WMW636.DTE00	Electronic multi-jet hot water meter for TE1 measuring capsule Q3 = 2.5 m ³ / h, connection thread M62 x 2 mm, M-bus radio communication, 10-year battery, up to 90 ° C	A6V12128928	651
WRI982	Consumption data interface	N2735	215
WSM506-OE	Ultrasonic heat meter 0.6 m ³ /h, mounting length 110 mm, connecting thread G 3/4", sensor Ø5.2x45 mm, battery life 11 years	N5372	658
WSM506-BE	Ultrasonic heat meter 0.6 m ³ /h, mounting length 110 mm, connecting thread G 3/4", sensor Ø5.2x45 mm, M-bus communication, battery life 11 years	N5372	658
WSM506-FE	Ultrasonic heat meter 0.6 m ³ /h, mounting length 110 mm, connecting thread G 3/4", sensor Ø5.2x45 mm, M-bus radio communication, battery life 11 years	N5372	658
WSM515-OE	Ultrasonic heat meter 1.5 m ³ /h, mounting length 110 mm, connecting thread G 3/4", sensor Ø5.2x45 mm, battery life 11 years	N5372	658
WSM515-BE	Ultrasonic heat meter 1.5 m ³ /h, mounting length 110 mm, connecting thread G 3/4", sensor Ø5.2x45 mm, M-bus communication, battery life 11 years	N5372	658
WSM515-FE	Ultrasonic heat meter 1.5 m ³ /h, mounting length 110 mm, connecting thread G 3/4", sensor Ø5.2x45mm, M-bus radio communication, battery life 11 years	N5372	658
WSM525-OE	Ultrasonic heat meter 2.5 m ³ /h, mounting length 130 mm, connecting thread G 1", sensor Ø5.2x45 mm, battery life 11 years	N5372	658
WSM525-BE	Ultrasonic heat meter 2.5 m ³ /h, mounting length 130 mm, connecting thread G 1", sensor Ø5.2x45 mm, M-bus communication, battery life 11 years	N5372	658
WSM525-FE	Ultrasonic heat meter 2.5 m ³ /h, mounting length 130 mm, connecting thread G 1", sensor Ø5.2x45mm, M-bus radio communication, battery life 11 years	N5372	658
WSM606-BE	Ultrasonic heat meter, 0.6 m ³ /h, Ø5.2x45 mm, G 3/4 ", battery life 11 years, M-bus	N5372	660
WSM615-BE	Ultrasonic heat meter, 1.5 m ³ /h, Ø5.2x45 mm, G 3/4 ", battery life 11 years, M-bus	N5372	660
WSM625-BE	Ultrasonic heat meter, 2.5 m ³ /h, Ø5.2x45 mm, G 1", battery life 11 years, M-bus	N5372	660
WSM805-FBBAE3A	Ultrasonic heat meter 0,6 m ³ /h, mounting length 110 mm, connecting thread G 3/4 ", sensor M10x1 mm, 27.5 mm, M-bus communication, 2 pulse inputs, 6 year battery	A6V11905989	661
WSM805-FHBAE3A	Ultrasonic heat meter 0,6 m ³ /h, mounting length 110 mm, connecting thread G 3/4 ", sensor Ø5.2x45 mm, M-bus communication, 2 pulse inputs, 6 year battery	A6V11905989	661

Type Overview

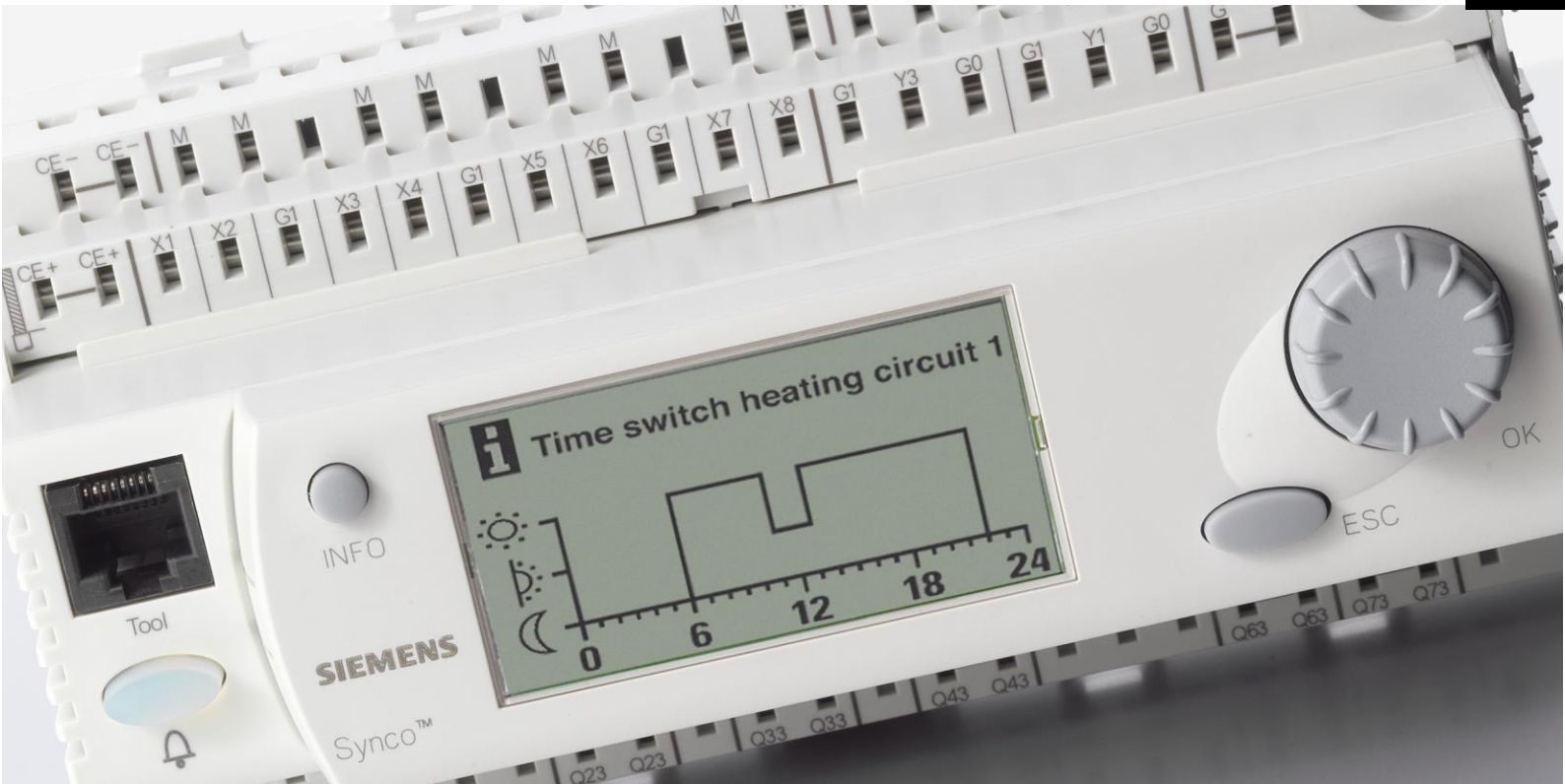
Product no.	Product Title	Data sheet	Page
WSM821-FBBAE3A	Ultrasonic heat meter 1.5 m ³ /h, mounting length 110 mm, connecting thread 3/4", sensor M10 x 1 mm, 27,5 mm, M-bus communication, 2 pulse inputs, 6 year battery	A6V11905989	661
WSM821-FHBAE3A	Ultrasonic heat meter 1,5 m ³ /h, mounting length 110 mm, connecting thread 3/4", sensor Ø5,2mm, 45 mm, M-bus communication, 2 pulse inputs, 6 year battery	A6V11905989	661
WSM836-FBBAE3A	Ultrasonic heat meter 2.5 m ³ /h, mounting length 130 mm, connecting thread 1", sensor M10 x 1 mm, 27,5 mm, M-bus communication, 2 pulse inputs, 6 year battery	A6V11905989	661
WSM836-FHBAE3A	Ultrasonic heat meter 2.5 m ³ /h, mounting length 130 mm, connecting thread 1", sensor Ø5,2mm, 45 mm, M-bus communication, 2 pulse inputs, 6 year battery	A6V11905989	661
WSN506-BE	Ultrasonic heating/cooling meter 0.6 m ³ /h, mounting length 110 mm, sensor Ø5.2x45 mm, connecting thread G 3/4", M-bus communication, battery life 11 years	N5372	658
WSN506-FE	Ultrasonic heating/cooling meter 0.6 m ³ /h, mounting length 110 mm, sensor Ø5.2x45 mm, connecting thread G 3/4", M-bus radio communication, battery life 11 years	N5372	658
WSN515-BE	Ultrasonic heating/cooling meter 1.5 m ³ /h, mounting length 110 mm, sensor Ø5.2x45mm, connecting thread G 3/4", M-bus communication, battery life 11 years	N5372	658
WSN515-FE	Ultrasonic heating/cooling meter 1.5 m ³ /h, mounting length 110 mm, sensor Ø5.2x45mm, connecting thread G 3/4", M-bus radio communication, battery life 11 years	N5372	658
WSN525-BE	Ultrasonic heating/cooling meter 2.5 m ³ /h, mounting length 130 mm, sensor Ø5.2x45mm, connecting thread G 1", M-bus communication, battery life 11 years	N5372	658
WSN525-FE	Ultrasonic heating/cooling meter 2.5 m ³ /h, mounting length 130 mm, sensor Ø5.2x45mm, connecting thread G 1", M-bus radio communication, battery life 11 years	N5372	658
WSN606-BE	Combined ultrasonic heat/cooling energy meter, 0.6 m ³ /h, Ø5.2x45 mm, G 3/4", battery life 11 years, M-bus	N5372	660
WSN615-BE	Combined ultrasonic heat/cooling energy meter, 1.5 m ³ /h, Ø5.2x45 mm, G 1", battery life 11 years, M-bu	N5372	660
WSN625-BE	Combined ultrasonic heat/cooling energy meter, 2.5 m ³ /h, Ø5.2x45 mm, G 1", battery life 11 years, M-bus	N5372	660
WSN805-FBBBF3A	Ultrasonic heat/cooling energy meter 0.6 m ³ /h, mounting length 110 mm, connecting thread 3/4", sensor M10 x 1 mm, 27,5 mm, m-bus communication, 2 pulse inputs, 11 year battery	A6V11905989	661
WSN821-FBBBF3A	Ultrasonic heat/cooling energy meter 1.5 m ³ /h, mounting length 110 mm, connecting thread 3/4", sensor M10 x 1 mm, 27,5 mm, m-bus communication, 2 pulse inputs, 11 year battery	A6V11905989	661
WSN836-FBBBF3A	Ultrasonic heat/cooling energy meter 2.5 m ³ /h, mounting length 130 mm, connecting thread 1", sensor M10 x 1 mm, 27,5 mm, m-bus communication, 2 pulse inputs, 11 year battery	A6V11905989	661
WTT662-BA1100	Network node	A6V11731517	676
WTT665-BD5000	Mobile data collector		680
WTT667-0E0000	M-bus RF gateway WTT667-0E0000	A6V11521727	677
WTV531-GA5060	Level converter	A6V10844290	682
WTV676-HB6035	M-bus web server	A6V11157961	681
WTX631-GA0090	M-bus Level Converter/Repeater 250	A6V11742346	682
WTX660-E05060	RF converter	A6V11135903	678
WTZ.BAT	Battery for WTT..		677
WTZ.RM	PC radio module	N2876	678
WZM-E1	Mounting kit G1", for threaded connection R 3/4"		659
WZM-E2.1	Mounting kit G2 x R 1 1/2"	N5324	673
WZM-E34	Installation kit G 3/4", for threaded connection R 1/2"		659
WZM-E54	Installation kit G1 1/4 x R1"	N5324	673
WZM-F190	Spacer for heat meter DN20, length 190 mm, PN16, incl. 2 flat gaskets		673
WZM-F260	Spacer for heat meter DN25, length 260 mm, PN16, incl. 2 flat gaskets		673
WZM-F270	Spacer DN 50, length 270 mm, PN16, incl. 2 flat gaskets	N5324	673
WZM-F300	Spacer DN 40, length 300 mm, PN16, incl. 2 flat gaskets	N5324	673
WZM-F300.65	Spacer DN 65, length 300 mm, PN16, incl. 2 flat gaskets	N5324	673

Product no.	Product Title	Data sheet	Page
WZM-F300.80	Spacer DN 80, length 300 mm, PN16, incl. 2 flat gaskets	N5324	673
WZM-F360.100-25	Spacer DN 100, length 360 mm, PN25, incl. 2 flat gaskets	N5324	673
WZM-G110	Spacer G ¾", length 110 mm, incl. 2 flat gaskets		657
WZM-G130	Spacer G 1", length 130 mm, incl. 2 flat gaskets		657
WZM-G190	Spacer G 1", length 190 mm, incl. 2 flat gaskets	N5324	665
WZM-G260	Spacer G 1¼", length 260 mm, incl. 2 flat gaskets	N5324	673
WZM-V110	Adapter set from G ¾" to 1", incl. gaskets		649
WZM-V130	Extension set from 110 mm G ¾" to 130 mm G ¾", incl. gaskets		649
WZM-V130	Adapter from 110 mm G ¾" to 130 mm G ¾", incl. gaskets		659
WZM-V130.G1	Adapter from 110 mm G ¾" to 130 mm G 1B", incl. 4 gaskets		659
WZM-V165	Extension set from 110 mm G ¾" to 165 mm G ¾", incl. gaskets		649
WZM-V190	Adapter from 110 mm G ¾" to 190 mm G 1B", incl. gaskets		659
WZM-V190	Extension set from 110 mm G ¾" to 190 mm G 1", incl. gaskets		649
WZM-VE165	Adapter from 110 mm G ¾" to 165 mm G ¾", incl. 1 gasket		659
WZR-OP-USB	Optical read head with USB interface for PC		657
WZT-A100	Mounting set G ½" with threaded hole G ¼" for direct mounting of long sensors	N5324	674
WZT-A12	Adapter M10x1 mm x G 1/2 B" for sensor DS M10x1 mm / d=5.2 x 45 mm		657
WZT-A34	Adapter G ¾ B" with threaded hole to install sensor DS M10x1 mm, incl. gasket G ¾"		657
WZT-A38	Adapter G 3/8 B" with threaded hole to install sensor DS M10x1 mm, incl. gasket G 3/8"		657
WZT-FA	Mounting set for sensor Ø 5.2x45 mm		662
WZT-G10	Welding sleeve with threaded hole for temperature sensor DS M10x1 mm		526
WZT-G12	Welding sleeve G ½", 45° to the pipe axis, with threaded hole G ½"		518
WZT-GLG	Welding sleeve G ½", 90° to the pipe axis, with threaded hole G ½"		518
WZT-K1	Ball valve Rp 1" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm		526
WZT-K1-1	Ball valve R 1" with union nut G 1"		657
WZT-K12	Ball valve Rp ½" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm		526
WZT-K12-34	Ball valve R ½" with union nut G ¾"		657
WZT-K34	Ball valve Rp ¾" for sensor DS M10x1 mm, length = 27.5 mm or Ø 5.2x45 mm		526
WZT-K34-1	Ball valve R ¾" with union nut G 1"		657
WZT-K34-34	Ball valve R ¾" with union nut G ¾"		657
WZT-KA	Fitting probes 907836003/4		659
WZT-M35	Protection pocket G ½ B", length 35 mm, made of brass, for temperature sensor Ø 5.2x45 mm		657
WZT-M50	Protection pocket G ½ B", brass, Ø 5.2x50 mm, for temperature sensor Ø 5.2x45 mm		659
WZT-MS110	Mounting set 110 mm		657
WZT-MS130	Mounting set 130 mm		657
WZT-S100	Protection pocket G ½ B", stainless steel, with threaded hole G ¼", L = 100 mm	N5324	674
WZT-S150	Protection pocket G ½ B", stainless steel, with threaded hole G ¼", L = 150 mm	N5324	674
WZT-S43V	Pocket G ½ B", stainless steel, 5.2 x 37 mm, with seal		657
WZU-485E-BAC	BACnet module RS-485 (MS/TP)		672
WZU-485E-MOD	Moduł Modbus RTU RS485		672
WZU5-1020	Pair of temperature sensors Pt500, PL Ø 6x100 mm, cable length 2 m	N5324	673
WZU5-1050	Pair of temperature sensors Pt500, PL Ø 6x100 mm, cable length 5 m	N5324	673
WZU5-1520	Pair of temperature sensors Pt500, PL Ø 6x150 mm, cable length 2 m	N5324	673
WZU5-1550	Pair of temperature sensors Pt500, PL Ø 6x150 mm, cable length 5 m	N5324	673
WZU5-2815	Pair of temperature sensors Pt500, DS M10x1 mm, sensor length 27.5 mm, cable length 1.5 m	N5324	662
WZU5-2825	Pair of temperature sensors Pt500, DS M10x1 mm, sensor length 27.5 mm, cable length 2.5 m	N5324	662
WZU5-3815	Pair of temperature sensors Pt500, DS M10x1 mm, sensor length 38 mm, cable length 1.5 m	N5324	662
WZU5-3825	Pair of temperature sensors Pt500, DS M10x1 mm, sensor length 38 mm, cable length 2.5 m	N5324	662
WZU5-4515	Pair of temperature sensors Pt500, PS Ø5.2x45 mm, cable length 1.5 m	N5324	662

Type Overview

Product no.	Product Title	Data sheet	Page
WZU5-4550	Pair of temperature sensors Pt500, PS Ø 5.2x45 mm, cable length 5 m	N5324	662
WZU-AC110/230-15	Power supply AC 110/230 V for UH50..	N5324	673
WZU-AC110/230-50	Power supply AC 110/230 V for UH50..	N5324	673
WZU-ACDC24-50	Power pack AC/DC 24 V	N5324	673
WZU-AM	Analog module	N5324	672
WZU-BA+GUM	Standard battery (2x AA) for 6 years, complete with fastener	N5324	673
WZU-BDS	Universal battery (D-cell), life 6 and 16 years respectively	N5324	673
WZU-GPRS	GPRS module with external antenna (magnetic attachment) and power pack 110...230 V	N5324	672
WZU-GPRS-ANT	GPRS module with external antenna (for screw mounting) and power pack 110...230 V	N5324	672
WZU-MB-G4	M-bus module for heat and heat/cooling energy meters, generation 4	N5324	672
WZU-MH	Mounting plate for top hat rail	N5324	662
WZU-MI	M-bus module with 2 pulse inputs for heat and heat/cooling energy meters, generation 4	N5324	672
WZU-NE24	Power pack for WZU-AM, WZU-485E-BAC and WZU-485E-MOD	N5324	672
WZU-P2	Pulse module with 2 channels	N5324	672
WZU-WA	Mounting plate for wall mounting		662
WZU-WH	Plate for wall mounting		662
WZX-UA-PEU	UltraAssist standard, first licence, CD with UB-Dongle		657
WZX-UA-PEU-MINI	UltraAssist Profi, first license, CD with USB mini-dongle		657
WZX-UA-PFU	UltraAssist standard, second license, USB dongle		657
WZX-UA-PFU-MINI	UltraAssist Profi, second license, USB mini-dongle		657
Z155/100	Blanking flange, DN100		498
Z155/15F	Blanking flange, DN15		497
Z155/20F	Blanking flange, DN20		497
Z155/25F	Blanking flange, DN25		497
Z155/32F	Blanking flange, DN32		497
Z155/40	Blanking flange, DN40		497
Z155/50	Blanking flange, DN50		497
Z155/65	Blanking flange, DN65		497
Z155/80	Blanking flange, DN80		498
Z366	Stem heating element for media temperatures 0 °C, 30 W, AC 24 V		513
ZM100/A	Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	578
ZM101/A	Terminal housing for valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	578
ZM110	Terminal housing for control of valves with magnetic actuator, 0...20 V Phs		578
ZM120/A	Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	578
ZM121/A	Terminal housing for valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	578
ZM150	Replacement electronic for M3P..GY, M3P..FY, M2H..FY., M3B..GY., M2S..FY and M2FE..	N4348	498
ZM200/A	Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	578
ZM210	Terminal housing for control of valves with magnetic actuator, 0...20 V Phs		578
ZM220/A	Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	578
ZM250	Replacement electronic for M3P..FY..	N4454	498

Standard controllers



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Standard controllers

Overview and selection tools

Overview of heating controllers product details



Preferential applications	RLE..		RVP..		RVP..			RVL..				RMH..	RMK..
	132	162	201	211	340	350	360	479	480	481	482	760B	770
Heating group	■	■	■	■	■	■	■					■	■
Boiler control													
1-stage			■	■								■	■
2-stage						■	■			■	■	■	■
Multi-boiler system													■
Domestic hot water	■	■		■		■	■			■	■	■	■
Domestic water solar						■	■			■	■	■	
2nd heating group							■	■				■	
3rd heating group									■			■	

Operation system	RLE..		RVP..		RVP..			RVL..				RMH..	RMK..
	132	162	201	211	340	350	360	479	480	481	482	760B	770
Type of operation													
analog	■	■	■	■									
digital					■	■	■	■	■	■	■	■	■
Heating curve bar								■	■	■	■		
Time switch													
analog			■	■									
digital			1)	1)	■	■	■	■	■	■	■	■	■
Programmed plant types	6	3			2	3	6	1	6	29	21	41	18
Yearly clock					■	■	■	■	■	■	■	■	■

1) Variant

Communication	RLE..		RVP..		RVP..			RVL..				RMH..	RMK..
	132	162	201	211	340	350	360	479	480	481	482	760B	770
Controller network					LPB	LPB	LPB	LPB	LPB	LPB	LPB	KNX	KNX
Web operation					OZW672..			OZW672..				OZW772..	

Sensors	RLE..		RVP..		RVP..			RVL..				RMH..	RMK..
	132	162	201	211	340	350	360	479	480	481	482	760B	770
Outside sensor QAC22	■	■	■	■	■	■	■	■	■	■	■	■	■
Outside sensor QAC32			■	■	■	■	■	■	■	■	■	■	■
Strap-on temp. sensor QAD22			■	■	■	■	■	■	■	■	■	■	■
Immersion temp. sensor QAE2..			■	■	■	■	■	■	■	■	■	■	■
Cable temp. sensor QAP2..			■	■	■	■	■	■	■	■	■	■	■
Room temp. sensor QAA24					■	■	■	■	■	■	■	■	■
Room temp. sensor AQR2531ANW					■	■	■	■	■	■	■	■	■
Solar sensor QLS60											■	■	■

Room units	RLE..		RVP..		RVP..			RVL..				RMH..	RMK..
	132	162	201	211	340	350	360	479	480	481	482	760B	770
Room unit QAA50.110/101 analog			■	■	■	■	■	■	■	■	■		
Room unit digital QAW70..			■	■	■	■	■	■	■	■	■		
Room unit digital QAW740												■	■

Overview of district heating controllers product details



Preferential applications	RVD120	RVD140	RVD250	RVD260	RVP340	RVL480	RVL481	RMH760B
Heating group	■	■	■	■	■	■	■	■
District heat exchanger	■	■	■	■	1)	1)	1)	■
Domestic hot water	■	■	■	■			■	■
Domestic water solar		■	■	■			■	■
2nd heating group				■				■
3rd heating group								■

1) Variant: For the description of the controllers see chapter 1 „Communicative heating controllers“.

Operation system	RVD120	RVD140	RVD250	RVD260	RVP340	RVL480	RVL481	RMH760B
Type of operation								
analog			■	■	■	■	■	■
digital	■	■						
Heating curve bar						■	■	
Time switch								
analog			■	■	■	■	■	■
digital	■	■						
Programmed plant types	3	8	28	14	2	6	29	41
Yearly clock	■	■	■	■	■	■	■	■

Communication	RVD120	RVD140	RVD250	RVD260	RVP340	RVL480	RVL481	RMH760B
Controller network			LPB	LPB	LPB	LPB	LPB	KNX
M-bus slave			■	■				
Web operation	ext. Modbus-Interface	ext. Modbus-Interface	OZW672.. WTV676		OZW672..	OZW672..		OZW772..

Sensors	RVD120	RVD140	RVD250	RVD260	RVP340	RVL480	RVL481	RMH760B
Outside sensor QAC22	■	■	■	■	■	■	■	■
Outside sensor QAC32	■	■	■	■	■	■	■	■
Strap-on temp. sensor QAD22	■	■	■	■	■	■	■	■
Immersion temp. sensor QAE2..	■	■	■	■	■	■	■	■
Cable temp. sensor QAP2..	■	■	■	■	■	■	■	■
Room temp. sensor QAA24					■	■	■	■
Room temp. AQR2531ANW sensor					■	■	■	■
Solar sensor QLS60								■
Pressure sensor QBE2002..		■	■	■				

Room units	RVD120	RVD140	RVD250	RVD260	RVP340	RVL480	RVL481	RMH760B
Room unit QAA50.110/101 analog	■	■	■	■	■	■	■	
Room unit digital QAW70..	■	■	■	■	■	■	■	
Room unit digital QAW740								■

Standard controllers

Overview and selection tools

Overview of HVAC controllers product details



	RLM..	RLA..	RWD..			RLU..					RMU..			RMS..	RMZ		
	162	162	82	62	68	202	220	222	232	236	710B	720B	730B	705B	785	787	788
	Air duct temperature controller	Room temperature controller	Universal controller, 1 control loop, 2DO	Universal controller, 1 control loop, 2AO	Universal controller, 1 control loop, 1AO, 1DO	Universal controller, 1 control loop, 2DO	Universal controller, 1 control loop, 2AO	Universal controller, 2 control loops, 2AO, 2DO	Universal controller, 2 control loops, 3AO, 2DO	Universal controller, 2 control loops, 3AO, 6DO	Modular universal controller, 1 control loop	Modular universal controller, 2 control loops	Modular universal controller, 3 control loops	Switching and Monitoring Device	Universal module, 8UI	Universal module, 4UI, 4DO	Universal module, 4UI, 2DO, 2AO
Option modules for RMU7..0B and RMS705B											4 ²⁾	4 ²⁾	4 ²⁾	4 ²⁾	1 ²⁾	2 ²⁾	2 ²⁾
Operation	■	■	■	■	■	■	■	■	■	■	■ ¹⁾	■ ¹⁾	■ ¹⁾	■ ¹⁾			
KNX communication											■	■	■	■			
7-day time switch and holiday/special day program											■	■	■	■			
Supervision											■	■	■	■			
Logic functions											■	■	■	■			

Outputs

Step switch						■		■	■	■	■	■	■	■			
Relay	1	1	2		1	2		2	2	6	2	4	6	6		4	2
3-position			1 ³⁾			1 ³⁾		1 ³⁾									
DC 0...10 V	2	2		2	1		2	2	3	3	2	3	4	4			2

Universal inputs

T1						■	■	■	■	■	■	■	■	■	■	■	■
Pt1000			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
DC 0...10 V			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Digital						■	■	■	■	■	■	■	■	■	■	■	■
LG-Ni 1000			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Number of universal inputs	-	-	2	2	2	4	4	4	5	5	6	8	8	8	8	4	4

Fixed inputs

DC 0...10 V	1	1															
Digital	2	1	1	1	1	1	1	1	2	2							
LG-Ni 1000	1	1															
Integrated LG-Ni 1000 sensor	1	1															

Controlled variable

Universal			■	■	■	■	■	■	■	■	■	■	■	■			
Temperature °C	■	■	■	■	■	■	■	■	■	■	■	■	■	■			

Control mode

PID						■	■	■	■	■	■	■	■	■			
P/PI	■	■	■	■	■	■	■	■	■	■	■	■	■	■			

Control loops

Cascade			■	■	■	■	■	■	■	■	■	■	■	■			
Number	1	1	1	1	1	1	1	2	2	2	1	2	3	3			

■ ¹⁾ Optional operation:
 RMZ790: Plug-in operator unit
 RMZ791: Detached operator unit
 RMZ792: Bus operator unit

²⁾ Maximum number of option modules
 RMZ78x per controller

³⁾ 2 Relays or one 3-position

AO Analog output
 DO Digital output
 UI Universal inputs

Immersion temperature controller, AC 230 V, 3-position output

RLE132

Compact electronic controller with immersion type temperature sensor and setting unit combined in one device. It is designed for installation directly onto the plant. Only the wires for mains connection and controller output need to be laid. Supplied with protection pocket for indirect temperature sensing.



Application:

Modulating temperature controller, with 3-position control signal and auxiliary relay. The RLE132 is ideally suited for control of the following heating plants:

- Domestic hot water temperature
- Flow temperature control
- Calorifiers or heat exchangers

Features:

- Values for both normal and reduced temperature can be set
- Setpoint changeover via external contact or time switch
- Optional legionella function
- Auxiliary digital output for heat demand
- Connection for remote setting unit
- Minimum limitation of boiler return temperature
- Minimum or maximum limitation of the return temperature
- PI control (selectable)
- Service mode

Data sheet	N3334
Operating voltage	AC 230 V
Frequency	50/60 Hz
Power consumption	4 VA
Setpoint setting range	0...130 °C
Setpoint readjustment range	0...50 K
Digital input, contact query	DC 3...6 mA DC 6...15 V
Relay outputs	N.O. contact, potential-free
Relay output, switching voltage	AC 24...250 V
Relay output, switching current	2 A
PN class	PN 10
Immersion length	150 mm
Degree of protection	IP65
Dimensions (W x H x D)	125 x 152 x 78 mm

Stock no.	Product no.
BPZ:RLE132	RLE132

RLE162



Immersion temperature controller, AC 24 V, DC 0...10 V output

Compact electronic controller with immersion type temperature sensor and setting unit combined in one device. It is designed for installation directly onto the plant. Only the wires for power supply connection and controller output need to be laid. Threaded nipple (AQE2102) for direct temperature comes with the product RLE162.

Applications:

Modulating temperature controller, with 1 or 2 continuous DC 0...10 V output signals and auxiliary relay. The RLE162 is used for control and limiting of temperature in hot water, heating or cooling plants:

- Domestic hot water temperature
- Heating flow temperature
- Closed circuit heat exchangers
- Water-side control of HVAC units
- Chilled water temperature

Features:

- High or low temperature limitation
- Auxiliary digital output
- Compensation via outside sensor
- Connection for remote setting unit
- P or PI control (selectable)
- Service modes
- Heating and cooling modes available
- Setpoint changeover via external contact or time switch
- Optional legionella function

Data sheet	N3333
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	2 VA
Setpoint readjustment range	0...60 K
Setpoint setting range	-10...130 °C
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Analog input, signal	LG-Ni1000
	0...1000 Ohm
	DC 0...10 V
Analog outputs, number	2
Digital inputs	Potential-free input signal
Digital input, contact query	DC 3...6 mA
	DC 6...15 V
Relay outputs	N.O. contact, potential-free
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	2 A
Immersion length	130 mm
PN class	PN 10
Degree of protection	IP65
Dimensions (W x H x D)	125 x 152 x 78 mm

Stock no. Product no.

BPZ:RLE162 **RLE162**

Accessories for RLE132 / RLE162

Product Title	Data sheet	Stock no.	Product no.
Protection pocket, 150 mm, MS63 nickel-plated, G $\frac{1}{2}$ ", PN10, LW7	N1194	BPZ:ALT-SB150	ALT-SB150
Setpoint adjuster, passive, scale 0...50 °C (exchangeable)	N1991	BPZ:BSG21.1	BSG21.1
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	QAC22

Application examples Synco™ 100

These are only a few examples of many applications that can be done with the with Synco™ 100 controllers: RLE..

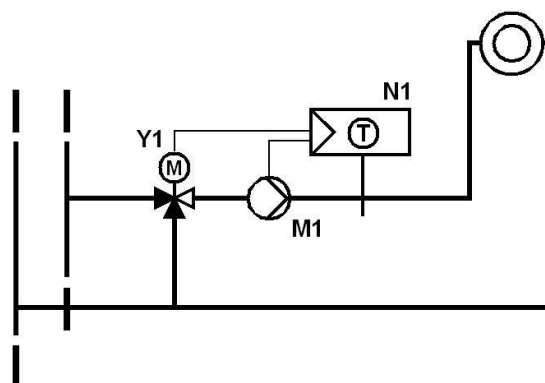
More Synco™ 100 applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RLE.. data sheet.

Heating Plant, Flow Temperature Control - Flow temperature control in a common distribution circuit

RLE132

H0C003 LE1 HQ

- Controller (N1) with immersion built-in sensor to control the heating flow temperature via modulating control of the mixing valve (Y1)

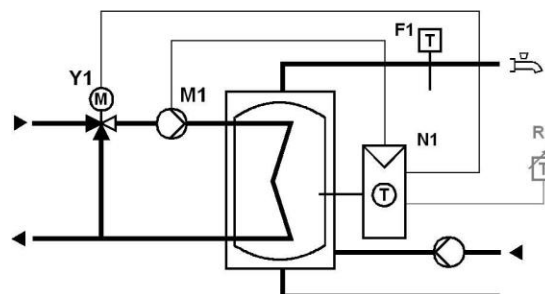


Domestic Hot Water Plant - Temperature control of domestic hot water storage via mixing valve and HWS circulation pump

RLE162

H00B01 LE1 HQ

- Controller (N1) with built-in immersion sensor to control the d.h.w. storage temperature via modulating control of the primary d.h.w. heating valve (Y1) and the circulating pump (M1).



Standard controllers

Standalone heating controllers

Heating controller RVP2..

RVP201..



Heating controller with analog operating elements

Heating controllers for use in residential or smaller commercial buildings that have their own heat generation. Easy-to-understand analog operating elements for the enduser.

Key functions

Weather-compensated flow or boiler temperature control, with or without room influence or room temperature control. Control of 3- or 2-position actuators or direct control of a burner.

Additional settings

- Control of the heating pump
- Quick setback and boost heating
- Heating curve
- Room temperature influence
- Frost protection for the plant and the room
- Automatic ECO function for switching the heating system on and off depending on demand
- Maximum limitation of the flow or boiler temperature
- Pump overrun and pump kick
- Remote switching of operating mode via room unit or external switch

Operating modes

The following operating modes can be selected with the slider: Automatic/Protection, Automatic/Reduced, Setback, Normal operation and Protection.

Data sheet	N2464
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Analog input, signal	LG-Ni1000 NTC 575
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	2 A
Degree of protection	IP40
Dimensions (W x H x D)	144 × 96 × 115 mm

Range overview RVP201..

Product Title	Stock no.	Product no.
Heating controller without time switch	BPZ:RVP201.0	RVP201.0

Heating controller incl. DHW heating

RVP211..

Heating controller for use in residential or smaller commercial buildings that have their own heat generation and own DHW heating. Easy-to-understand analog operating elements for the enduser.

Key functions (same as RVP201)

Other settings (same as RVP201)

DHW heating functions

- Storage tank charging by control of a charging pump:
 - Absolute priority: Heating circuit pump remains locked during DHW charging
 - No priority (parallel): Heating circuit pump and DHW charging pump operate parallel
- Storage tank charging by control of a diverting valve
- Frost protection for DHW
- DHW temperature can be acquired via a temperature sensor or thermostat

Operating modes

The following operating modes can be selected with the slider: Automatic/Protection, Automatic/Reduced, Setback, Normal operation, Protection, or DHW heating only.

Data sheet	N2464
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Analog input, signal	LG-Ni1000 NTC 575
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	2 A
Degree of protection	IP40
Dimensions (W x H x D)	144 x 96 x 115 mm



Range overview RVP211..

Product Title	Stock no.	Product no.
Heating controller without time switch, with d.h.w. heating	BPZ:RVP211.0	RVP211.0

Accessories for RVP2..

Product Title	Data sheet	Stock no.	Product no.
Analog 24-hour time switch	N2464	BPZ:AUZ3.1	AUZ3.1
Analog 7-day time switch	N2464	BPZ:AUZ3.7	AUZ3.7

Field devices for RVP2..

Product Title	Data sheet	Stock no.	Product no.
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	QAE9120.010
Multifunctional room operator unit	N1637	BPZ:QAW70..	QAW70..
Room unit with PPS interface	N2281	BPZ:QAA50.110/101	QAA50.110/101
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	QAC22
Outside sensor NTC 575 Ohm	N1811	BPZ:QAC32	QAC32
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	QAD22
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	QAE2120.010
Cable temperature sensor silicone 1.5 m, LG-Ni1000	N1831	BPZ:QAP21.3	QAP21.3

Standard controllers

Standalone heating controllers

Application example RVP2..

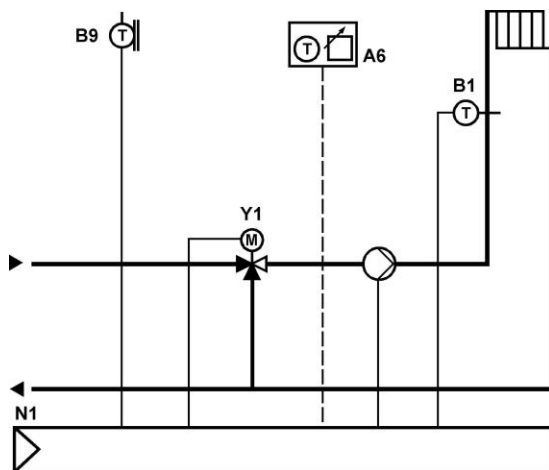
Application example RVP2..

These are only a few examples of many applications that can be done with the family of controllers: RVP2...

More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RVP2.. data sheet.

RVP201.1

H0C001 VP2 HQ b

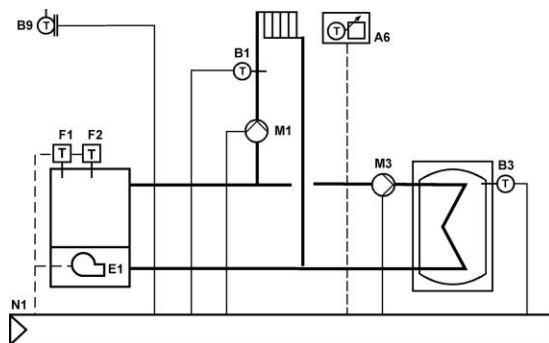


Weather-compensated heating system, one heating circuit

- Weather-compensated flow temperature control with 3-position actuator acting on mixing valve
- Frost protection for building and plant
- Time program with analog 24-hour time switch
- ECO function switches off heating depending on outside temperature
- Room temperature-dependent boost heating and quick setback (with room unit only)
- Maximum limitation of flow temperature

RVP211.1

HAAA01 VP2 HQ b



Weather-compensated heating system, heat generation, one heating circuit, d.h.w. - Weather-compensated flow temperature control acting on boiler

- Weather-compensated flow temperature control acting on boiler with single-stage burner
- Control of d.h.w. supply via pump-charged storage tank
- Frost protection for building and plant
- Time program with analog 24-hour time switch
- ECO function switches off heating depending on outside temperature

Heating controller for 1 heating circuit

RVP340



Weather-compensated flow temperature control of heating circuit with or without room influence.

Key functions:

- 2 preprogrammed plant types can be selected, with automatic assignment of the functions required for each plant type
- Weather-compensated flow temperature control through control of valve (mixing) in a heating circuit
- Weather-compensated flow temperature control through control of the 2-port valve in the primary return of a heating circuit with district heat connection (substation)

Additional functions

The RVP340 provides the following functions (no submodules or extra devices required):

- Optimum start/ stop
- Quick setback and boost heating
- Automatic ECO function, depending on the outside temperature and the type of building construction
- One 7-day program with 3 heating periods per day
- Yearly time program for holidays
- Digital setting of the heating curve
- Pump kick and pump overrun
- Minimum and maximum limitation of the flow temperature
- Multifunctional outputs
- Digital input for remote control of operating mode
- Communication with other controllers via LPB data bus (RVP3.., RVL4.. and RVD2..)

Data sheet	N2545
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	6 VA
Analog input, signal	LG-Ni1000 NTC575
Digital inputs	Status contact
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	4 x 2(2) A
Degree of protection	IP40
Dimensions (W x H x D)	144 x 96 x 109 mm

Stock no.	Product no.
S55370-C136	RVP340

RVP350



Heating controller for 1 heating circuit and d.h.w.

Weather-compensated flow temperature control of heating circuit with or without room influence, d.h.w. heating and demand based boiler temperature control.

Key functions

In addition to the functions of the RVP340, the RVP350 provides the following:

- 3 preprogrammed plant types can be selected, with automatic assignment of the functions required for each plant type
- Weather-compensated flow temperature control through control of valve (mixing) in a heating circuit
- Demand based control of the boiler temperature through control of the burner
- D.h.w. heating with charging pump, electric immersion heater and solar collector

D.h.w. control

D.h.w. control independent of the heating circuit. Control can be enabled as follows:

- According to its own 7-day program
- According to the program of the heating circuit
- According to the programs of the zone controllers on the data bus
- Permanently (24 hours a day)

D.h.w. heating features a legionella function, which can be deactivated. Legionella protection is activated once a week. The d.h.w. temperature is acquired with sensors or thermostats.

Boiler temperature control

Boiler temperature control operates as demand-dependent 2-position control. The boiler temperature is controlled through cycling of a 1- or a 2-stage burner (direct burner control). When there is no heat request, the boiler will either be shut down or maintained at the minimum temperature (selectable). Both minimum and maximum limitation of the boiler temperature are adjustable.

Data sheet	N2545
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Analog input, signal	LG-Ni1000
	NTC 575
Digital inputs	Status contact
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	2 x 2(2) A
	7 x 1(1) A
Degree of protection	IP40
Dimensions (W x H x D)	144 x 96 x 109 mm

Stock no. Product no.

S55370-C137

RVP350

Standard controllers

Communicating heating controllers

Heating controller RVP3..

Heating controller for 2 heating circuits and d.h.w.

RVP360



Weather-compensated flow temperature control of 2 independent heating circuits with or without room influence, d.h.w. heating and demand-dependent boiler control.

Key functions

In addition to the functions of the RVP350, the RVP360 provides the following:

- 6 preprogrammed plant types can be selected, with automatic assignment of the functions required for each plant type
- Control of 2 mixing heating circuits
- Control of 1 pump heating circuit and 1 mixing heating circuit

Data sheet	N2546
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	8 VA
Analog input, signal	LG-Ni1000 NTC 575
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	2 x 2(2) A 9 x 1(1) A
Degree of protection	IP40
Dimensions (W x H x D)	144 x 96 x 109 mm

Stock no.	Product no.
S55370-C139	RVP360

Accessories for RVP3..

Product Title	Data sheet	Stock no.	Product no.
Front module with passiv temperature measurement, LG-Ni1000	N1408	S55720-S133	AQR2531ANW
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	QAE9120.010
Multifunctional room operator unit	N1637	BPZ:QAW70..	QAW70..
Room unit with PPS interface	N2281	BPZ:QAA50.110/101	QAA50.110/101
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	QAC22
Outside sensor NTC 575 Ohm	N1811	BPZ:QAC32	QAC32
Web Server for LPB devices	N5712	BPZ:OZW672..	OZW672..
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	QAD22
Room temperature sensor LG-Ni1000	N1721	BPZ:QAA24	QAA24
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	QAE2120.010
Cable temperature sensor for high-temperature applications (180°C)	N1833	BPZ:QAP21.2	QAP21.2
Cable temperature sensor silicone 1.5 m, LG-Ni1000	N1831	BPZ:QAP21.3	QAP21.3
Mounting plates for front modules with passiv temperature measurement	N1408	BPZ:AQR2500..	AQR2500..

Standard controllers

Communicating heating controllers

Application examples RVP3..

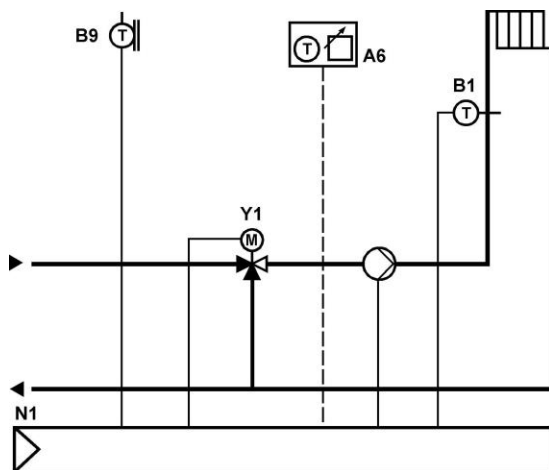
Application examples RVP3..

These are only a few examples of many applications that can be done with the family of controllers: RVP3...

More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RVP3.. data sheet.

RVP340

H0C001 VP3 HQ

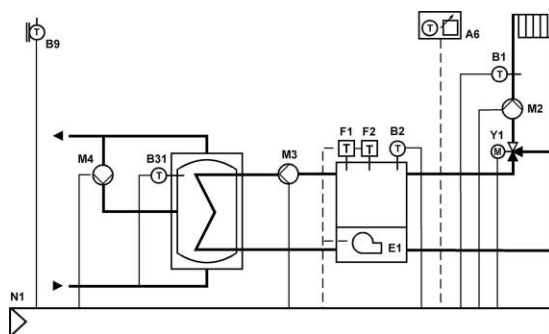


Weather-compensated heating system, one heating circuit

- Weather-compensated flow temperature control with 3-position actuator acting on mixing valve
- Frost protection for building and plant
- Digital yearly time switch
- Time switch program with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on outside temperature
- Room temperature-dependent boost heating and quick setback (with room unit only or with building model)

RVP350

HACA01 VP3 HQ

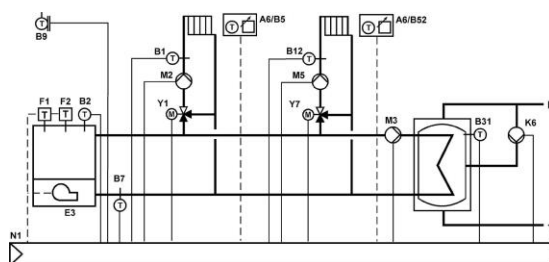


Weather-compensated heating system, heat generation, one heating circuit and d.h.w

- Weather-compensated flow temperature control with 3-point actuator acting on mixing valve
- Demand-dependent flow temperature control acting on boiler with single- or two-stage burner
- Frost protection for building and plant
- Digital yearly time switch
- 2 time switch programs, each with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on outside temperature
- Room temperature-dependent boost heating and quick setback (with room unit only or with building model)

RVP360

HBDA01 VP3 DE



Weather-compensated heating system, heat generation, two heating circuits and d.h.w.

- Weather-compensated flow temperature control with 3-point actuator acting on mixing valve
- Demand-dependent flow temperature control acting on boiler with single- or two-stage burner
- Frost protection for building and plant
- Digital yearly time switch
- 2 time switch programs, each with 3 heating periods
- Separate time switch program for d.h.w.
- Flow temperature limit control
- ECO function switches off heating depending on outside temperature
- Room temperature-dependent boost heating and quick setback (with room unit only or with building model)

Multifunctional Heating Controllers

RVL4..

Multifunctional heating controller for use in all types of residential and nonresidential buildings, configured for all standard heating applications. The RVL controllers provide weather-compensated flow temperature control and preprogrammed plant types with automatic assignment of the functions required for each type of plant.

The RVL controllers are characterized by the easy-to-understand user interface, large display and setting features:

- Analog heating curve
- Room temperature setpoint knob
- Proven operating line principle
- Setting level for the heating engineer
- Communication facilities
- Remote operation

Operating voltage	AC 230 V
Frequency	50 Hz
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	2 A
Dimensions (W x H x D)	144 x 144 x 113 mm

Heating controller for 1 heating circuit or boiler temperature control

RVL480

Key functions

Weather-compensated flow temperature control, with or without room influence
 6 preprogrammed plant types are provided



Plant system

- Control of a mixing valve serving a heating zone (space heating)
- Control of a burner (1- or 2-stage)
- Control of a valve in the primary return of a heating zone with district heat connection
- Demand-dependent control (precontrol) of a mixing valve / of the boiler temperature / of a heat exchanger (heat demand signal via data bus)

Additional functions

The RVL480 offers the following functions (no submodules or extra devices required):

- Display of parameters, actual values, operating states and fault status signals
- 7-day program with 3 heating periods per day
- 2 additional programs, each with 3 switching periods per day
- Automatic summer/winter changeover
- Holiday program (up to 8 holiday periods per year)
- Optimum start/stop in accordance with the heating program (with or without room influence)
- Automatic ECO function, depending on the outside temperature and the type of building construction
- Optional remote selection of operating modes (via room unit or external switch)
- Scalable DC 0...10 V output for passing on the heat request to other devices
- Quick setback and boost heating
- Preselection of flow temperature setpoint via external contact
- Minimum and maximum limitation of the flow temperature
- Minimum and maximum limitation of the return temperature (shifting / constant)
- Maximum limitation of the room temperature
- Communication with other devices via the data bus
- Limitation of the return temperature differential (DRT) for district heat applications
- Frost protection and pump protection
- Flow temperature alarm

Data sheet	N2540
Power consumption	7 VA

Stock no.	Product no.
BPZ:RVL480	RVL480

RVL481

Heating controller for boiler temperature control and d.h.w. heating

**Key functions**

Weather-compensated flow temperature control, with or without room influence, with simultaneous demand-compensated boiler and DHW control.

29 preprogrammed plant types can be selected from a combination of 6 heating applications and 5 DHW applications.

Heating circuit plant types

- Control of a mixing valve serving a heating circuit (space heating)
- Control of a burner (1- or 2-stage)
- Control of a valve in the primary return of a heating zone with district heat connection
- Demand-dependent control (precontrol) of a mixing valve / of the boiler temperature / of a heat exchanger (heat demand signal via data bus)

DHW plant types

- Charging of DHW storage tank through control of a charging pump.
- Charging of DHW storage tank through control of a mixing valve
- Charging of DHW storage tank through control of a diverting valve
- DHW heating via heat exchanger through control of a 2-port valve in the primary return
- DHW heating with electric immersion heater only
- DHW heating with solar collector

Additional functions

In addition to the functions of the RVL480, the RVL481 offers the following functions (no submodules or extra devices required):

- 2 programs for heating and DHW, each with 3 heating periods per day
- 1 multifunctional relay for switching on/off the plant according to various parameters and functions

Data sheet

N2541

Power consumption

9 VA

Stock no.

Product no.

BPZ:RVL481

RVL481

Heating controller for boiler temperature control for modulating or 2-stage burners with d.h.w. heating

RVL482

Key functions

Weather-compensated flow temperature control, with or without room influence, with simultaneous demand-compensated boiler and DHW control.

21 preprogrammed plant types can be selected from a combination of 5 heating applications and 4 DHW applications.



Heating circuit plant types

- Control of space heating through control of a mixing valve in the heating circuit
- Control of space heating through control of a mixing valve with simultaneous demand-dependent control of the boiler temperature
- Control of space heating through control of mixing valve and boiler, plus minimum limitation of the boiler return temperature with own mixing valve
- Demand-dependent control (precontrol) of the boiler temperature (heat demand signal via bus)
- Demand-dependent control (precontrol) of the boiler temperature with minimum limitation of the boiler return temperature via mixing valve (heat demand signal via bus)

DHW plant types

- Charging of DHW storage tank through control of a charging pump.
- Charging of DHW storage tank through control of a mixing valve
- DHW heating via heat exchanger through control of a 2-port valve in the primary return
- DHW heating through electric immersion heater only
- DHW heating with solar collector

Additional functions

In addition to the functions of the RVL480 and RVL481, the RVL482 offers the following functions:

- 2 scalable DC 0...10 V inputs for heat demand signals from external consumers
- Connection facility for solar and wind sensor (refer to chapter "Sensors")
- Control of a boiler or circulating pump
- Optional selection of circulating pump/bypass pump
- Three 7-day programs, each with 3 heating periods per day

Data sheet	N2542
Power consumption	9 VA

Stock no.	Product no.
BPZ:RVL482	RVL482

RVL479

Heating controller for a second heating circuit

**Application**

Heating controller for use in all types of buildings that require specific control of a second heating zone at an attractive price.

Key functions

The RVL479 operates with a partner unit, for independent weather-compensated control of a second heating zone.

1 preprogrammed heating application: Space heating via control 3-position of a mixing valve.

Additional functions

- Dedicated control of the second heating zone makes it possible to use an independent user interface for diagnostics
- Separate 7-day program with 3 heating periods per day
- Separate holiday program
- Dedicated display of parameters for the second zone (operating state and fault status signals)
- Independent optimum start/stop for the second heating zone
- Minimum and maximum limitation of the flow temperature
- Minimum limitation of the return temperature
- Maximum limitation of the room temperature
- Communication with other devices via LPB data bus
- Transmission and common usage of data (outside temperature, heat demand, alarms, etc.)
- Frost protection and pump protection

Data sheet	N2543
Power consumption	7 VA

Stock no.	Product no.
BPZ:RVL479	RVL479

Suitable partner units for RVL479

Product Title	Data sheet	Stock no.	Product no.
Heating controller for 1 heating circuit or boiler temperature control	N2540	BPZ:RVL480	RVL480
Heating controller for boiler temperature control and d.h.w. heating	N2541	BPZ:RVL481	RVL481
Heating controller for boiler temperature control for modulating or 2-stage burners with d.h.w. heating	N2542	BPZ:RVL482	RVL482

Field devices for RVL4..

Product Title	Data sheet	Stock no.	Product no.
Front module with passiv temperature measurement, LG-Ni1000	N1408	S55720-S133	AQR2531ANW
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	QAE9120.010
Solar sensor	N1943	BPZ:QLS60	QLS60
Multifunctional room operator unit	N1637	BPZ:QAW70..	QAW70..
Room unit with PPS interface	N2281	BPZ:QAA50.110/101	QAA50.110/101
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	QAC22
Outside sensor NTC 575 Ohm	N1811	BPZ:QAC32	QAC32
Web Server for LPB devices	N5712	BPZ:OZW672..	OZW672..
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	QAD22
Room temperature sensor LG-Ni1000	N1721	BPZ:QAA24	QAA24
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	QAE2120.010
Cable temperature sensor for high-temperature applications (180°C)	N1833	BPZ:QAP21.2	QAP21.2
Cable temperature sensor silicone 1.5 m, LG-Ni1000	N1831	BPZ:QAP21.3	QAP21.3
Mounting plates for front modules with passiv temperature measurement	N1408	BPZ:AQR2500..	AQR2500..

Multifunctional room operator unit

QAW70..

Programmable unit with display of date, time of day, room temperature, outside temperature, setting values and current 7-day program. With knob for manual setpoint readjustments and presence button for manually activating the savings program

Data sheet	N1637
Measuring range, temperature	0...32 °C
Setpoint readjustment range	±3 K
Communication	PPS
Connection cable	2-wire
Degree of protection	IP30
Dimensions (W x H x D)	97 x 143 x 41 mm



Range overview QAW70..

Product Title	Stock no.	Product no.
Multifunctional room unit, instructions in en, de, fr, it	BPZ:QAW70-A	QAW70-A
Multifunctional room unit, instructions in nl, sv, el, pl	BPZ:QAW70-B	QAW70-B

Room unit with PPS interface

QAA50.110/101

Room unit with LCD display, room temperature measurement and display, knob for manual setpoint readjustments, operating- and presence button

Data sheet	N2281
Voltage supply	Supply from controller module
Sensing element	NTC 10k
Measuring range, temperature	0...45 °C
Setpoint readjustment range	±3 K
Communication	PPS
Mounting	Wall mounting
Connection cable	2-wire
Degree of protection	IP20
Dimensions (W x H x D)	96 x 96 x 47 mm



	Stock no.	Product no.
	BPZ:QAA50.110/101	QAA50.110/101

Standard controllers

Communicating heating controllers

Application examples RVL4..

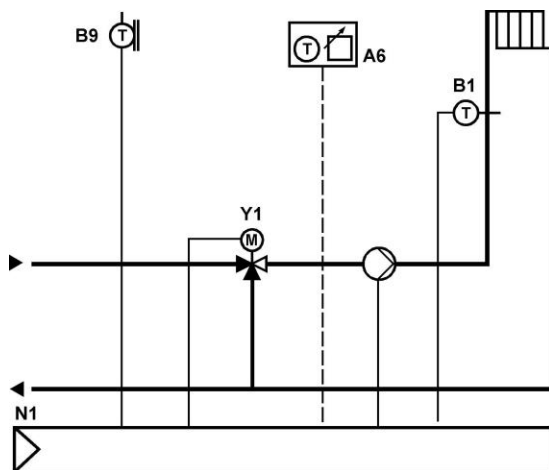
Application examples RVL4..

These are only a few examples of many applications that can be done with the family of controllers: RVL4...

More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RVL4.. data sheet.

RVL480

H0C001 VL4 HQ

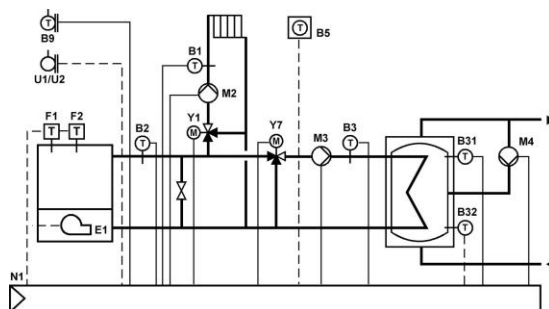


Weather-compensated heating system, one heating circuit

- Weather-compensated flow temperature control with 3-position actuator acting on mixing valve
- Frost protection for building and plant
- Digital yearly time switch
- Time switch program with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on outside temperature
- Room temperature-dependent boost heating and quick setback (with room unit only or with building model)
- Analog setting of heating curve

RVL482

HACB01 VL4 HQ



Weather-compensated heating system, heat generation, one heating circuit, d.h.w.

- Weather-compensated flow temperature control with 3-point actuator acting on mixing valve
- Demand-dependent flow temperature control acting on boiler with single- or two-stage burner
- Frost protection for building and plant
- Digital yearly time switch
- 3 time switch programs, each with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on outside temperature
- Room temperature-dependent boost heating and quick setback (with room unit only or with building model)
- Analog setting of heating curve and room temperature setpoint

Standard controllers

Communicating heating controllers

Modular heating controller RMH760B..

Heating controller

RMH760B-1



- Heating controller as primary controller or main controller (district heat) or heating circuit controller
- Boiler temperature control
- Control of max. 3 heating circuits and DHW heating (7 variants available) with optional extension modules
- Tested, predefined applications (refer to Application Catalog)
- Flexible configuration
- Clear-text operation with separate operator unit (plug-in type or detached)
- Integrated KNX bus communication
- No commissioning tool required

The RMH760B-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish.

Extension modules complement the heating controller and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously. The operation of the device from commissioning to enduser operation can be done via the operator unit.

Available extension modules:

- 2 heating circuit modules RMZ782B
- 1 DHW module RMZ783B
- 1 universal module RMZ787
- 2 universal modules RMZ789

A total of 4 extension modules can simultaneously be used with the heating controller.

Available operator units:

- Plug-in type operator unit RMZ790
- Detached operator unit RMZ791
- Bus operator unit RMZ792

Data sheet	N3133
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal inputs, number	6
Universal input, signal	T1 (PTC) Pt1000 Potential-free digital status contact NTC575 LG-Ni1000 Digital pulse contact DC 0...10 V 2 x LG-Ni1000 1000...1175 Ohm 0...1000 Ohm
Relay outputs, number	5
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	173 x 90 x 80 mm

Stock no.

Product no.

BPZ:RMH760B-1

RMH760B-1

RMK770-1



Boiler sequence controller

Modular heating controller with integrated control and supervisory functions for:

- Up to 6 boilers, multistage or modulating burners
- Precontrol, heating circuit
- Tested, predefined applications (refer to Application Catalog)
- Flexible configuration
- Clear-text operation with separate operator unit (plug-in type or detached)
- Integrated KNX bus communication
- No commissioning tool required

The RMK770-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish.

Extension modules complement the boiler sequence controller and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously. The operation of the device from commissioning to enduser operation can be done via the operator unit.

Available extension modules:

- 3 universal modules RMZ785
- 3 universal modules RMZ787
- 3 universal modules RMZ788
- 3 universal modules RMZ789

A total of 3 extension modules can simultaneously be used with the boiler sequence controller.

Available operator units:

- Plug-in type operator unit RMZ790
- Detached operator unit RMZ791
- Bus operator unit RMZ792

Data sheet	N3132
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Digital inputs, number	2
Digital inputs	Potential-free input signal
Digital input, contact query	5 mA
	DC 15 V
Universal inputs, number	8
Universal input, signal	T1 (PTC)
	Pt1000
	Potential-free digital status contact
	LG-Ni1000
	DC 0...10 V
	2 x LG-Ni1000
	1000...1175 Ohm
	0...1000 Ohm
Relay outputs, number	7
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	173 x 90 x 80 mm

Stock no. Product no.

BPZ:RMK770-1

RMK770-1

Standard controllers

Communicating heating controllers

Application examples RMH760B.. and RMK770..

Application examples RMH760B.. and RMK770..

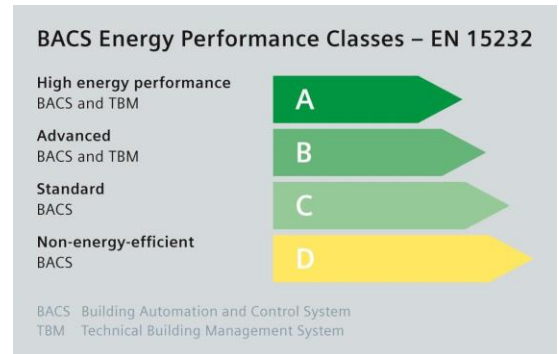
These are only a few examples of many applications that can be done with the with Synco™700 controllers: RMH760B.. / RMK770..

More Synco™700 applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RMH760B.. / RMK770.. data sheet.

The evaluation of the energy efficiency classification is based on EN15232:2012. For a determination of the energy efficiency classification of the application, please use the "HIT Tool".

Further details are available in the manual "Building automation - impact on energy efficiency" in our HIT Online.

www.siemens.com/hit



Weather-compensated heating control, one heating circuit, d.h.w.

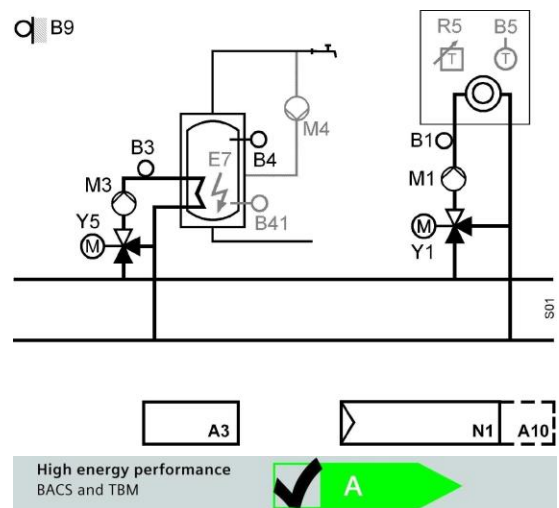
- Weather-compensated flow temperature control with adjustable setpoints for Comfort, Precomfort, Econo-my and Protective Mode
- Frost protection for the building and the plant
- Changeover between 3 room temperature setpoints according to the time switch program
- Yearly clock
- Holiday and special day program with up to 16 periods
- 7-day program (maximum six switching points per day)
- Time switch program for the heating circuit
- Limitation of the flow temperature
- Automatic heating limit with adjustable limits
- Optimum start control
- Quick setback
- Control of the storage tank charging temperature with adjustable setpoints for Normal, Reduced, Legionella and Protective mode
- Time switch program for DHW heating

The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Integrated individual room control including demand control "by occupancy, air quality, etc." (Heating circuits for precontrol in individual room control)
- Indoor temperature control (Room temperature in individual room control via KNX requires extra configuration)
- Variable speed pump control with constant Δp (The pump must have integrated output control)
- Variable temperature depending on the load (Heat demand signal required)

RMH760B..

HO0CB02 H6B HQ



To fulfill the classification, the plant must be equipped with all indicated functions.

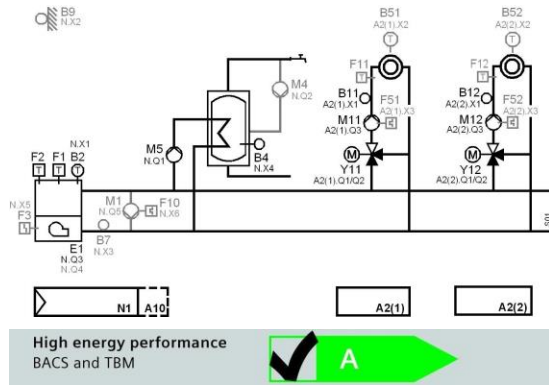
Standard controllers

Communicating heating controllers

Application examples RMH760B.. and RMK770..

RMH760B..

HCDA01 H6B HQ



To fulfill the classification, the plant must be equipped with all indicated functions.

Weather-compensated heating control, heat generation, 2 heating circuits, d.h.w.

- Weather-compensated flow temperature control with adjustable setpoints for Comfort, Precomfort, Economy and Protective Mode
- Frost protection for the building and the plant
- Changeover between 3 room temperature setpoints according to the time switch program
- Yearly clock
- Holiday and special day program with up to 16 periods
- 7-day program (maximum six switching points per day)
- Time switch programs for heating circuits 1 and 2
- Limitation of the flow temperature
- Automatic heating limit with adjustable limits
- Optimum start control
- Quick setback
- Control of the storage tank temperature with adjustable setpoints for Normal, Reduced, Legionella and Protective mode
- Time switch program for DHW heating
- Demand-compensated boiler temperature control
- Protective boiler startup by reducing the consumer setpoints
- Control of a single-stage or 2-stage burner
- Control of the boiler temperature via modulating burner with DC 0... 10 V control
- Burner fault contact

The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Integrated individual room control including demand control "by occupancy, air quality, etc." (Heating circuits for precontrol in individual room control)
- Indoor temperature control (Room temperature in individual room control via KNX requires extra configuration)
- Variable speed pump control with constant Δp (The pump must have integrated output control)
- enerator; Variable temperature depending on the load

Standard controllers

Communicating heating controllers

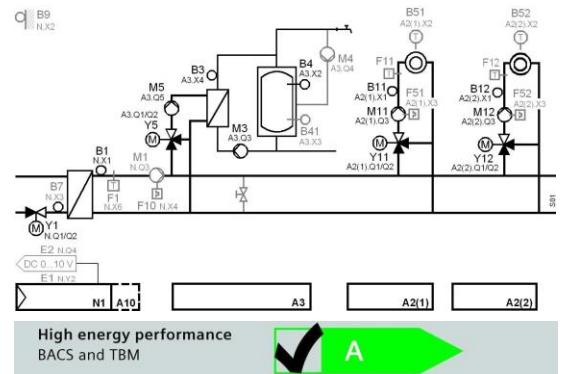
Application examples RMH760B.. and RMK770..

Weather-compensated heating system, district heating connection, 2 heating circuits, d.h.w

RMH760B..

DADC04 H6B HQ

- Weather-compensated flow temperature control with adjustable setpoints for Comfort, Precomfort, Economy and Protective mode
- Frost protection for the building and the plant
- Changeover between 3 room temperature setpoints according to the time switch program
- Yearly clock
- Holiday and special day program with up to 16 periods
- 7-day program (maximum six switching points per day)
- Time switch programs for the heating circuits
- Control of the storage tank charging temperature with adjustable setpoints for Normal, Reduced, Legionella and Protective mode
- Time switch program for DHW heating
- Limitation of the flow temperature
- Automatic heating limit with adjustable limits
- Optimum start control
- Quick setback
- Demand-compensated primary control



To fulfill the classification, the plant must be equipped with all indicated functions.

The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Integrated individual room control including demand control "by occupancy, air quality, etc." (Heating circuits for precontrol in individual room control)
- Indoor temperature control (Room temperature in individual room control via KNX requires extra configuration)
- Variable speed pump control with constant Δp (The pump must have integrated output control)
- Intermittent control of emission and/or distribution, automatic control with optimum start/stop
- Generator; Variable temperature depending on the load

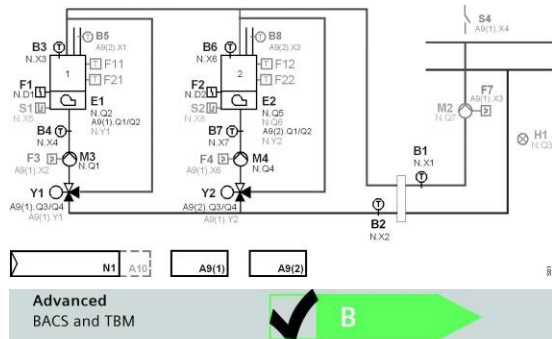
Standard controllers

Communicating heating controllers

Application examples RMH760B.. and RMK770..

RMK770..

HFF003 MK7 HQ



To fulfill the classification, the plant must be equipped with all indicated functions.

Dual-boiler plant, boiler pumps, boiler return with 3-port valve

- Control of the boiler sequence
- Automatic changeover of lead boiler depending on the number of boiler operating hours
- Control of the boiler pumps
- Control of the boiler temperature via modulating burner with 3-position or DC 0...10 V control
- Burner fault contact
- Limitation of the burner's minimum on time
- Controlled maintained boiler return temperature with 3-port valve and 3-position or DC 0...10 V actuator
- Protective boiler startup
- Maximum and minimum limitation of the boiler temperature
- Selection of boiler operating mode
- Flue gas measuring mode, boiler testing mode
- Burner hours run and burner startup counter
- Minimum and maximum limitation of the flow temperature
- Automatic changeover to summer operation
- (heating OFF)
- Pump overrun, pump kick
- Valve overrun, valve kick
- Acquisition and evaluation of heat requisition signals via Konnex bus

The indicated energy efficiency classification can be attained only if the following functions are implemented:

In connection with an application that fulfils the energy efficiency class B, necessary for:

- Emission control
- Control of distribution network hot water temperature (supply or return)
- Control of distribution pumps
- Intermittent control of emission and/or distribution

Extension modules and operator units for RMH760B.. and RMK770..

Plug-in type operator unit

RMZ790

- Operator unit plugs into the Synco™ 700 controllers
- For displaying and changing plant data for service staff and enduser
- Clear-text operation
- Can be plugged in and removed during operation
- Power supply via the controller



Data sheet N3111

Stock no. Product no.

BPZ:RMZ790 RMZ790

Detached operator unit with 3 m cable

RMZ791

Like plug-in type operator unit, but:

- Other mounting choices (typically for control panel door or wall mounting)
- Larger display
- Connection via a prefabricated 3 m cable, supplied as standard



Data sheet N3112

Stock no. Product no.

BPZ:RMZ791 RMZ791

Bus operator unit

RMZ792

Communicating operator unit for operating up to 150 controllers, room units and central units from the Synco™ 700 range via KNX bus.

Favorite pages can be freely defined. Designed for fixed installation or mobile use.

Data sheet	N3113
Operating voltage	AC 24 V
Voltage supply	KNX bus
Power consumption	2.5 VA
Degree of protection	IP20
Dimensions (W x H x D)	145 x 96 x 34 mm



Stock no. Product no.

BPZ:RMZ792 RMZ792

QAW740



Room unit with KNX bus

Configurable unit with display of operating mode, timer, temperatures and fault.

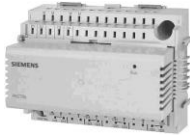
With 3 operating elements:

- Knob for setpoint readjustments
- Operating mode button
- Timer button

Data sheet	N1633
Voltage supply	KNX bus
Measuring range, temperature	0...45 °C
Setpoint readjustment range	±3 K
Communication	KNX (KNX TP1)
Connection cable	2-wire
Degree of protection	IP20
Dimensions (W x H x D)	96 x 96 x 47 mm
Weight (net)	0.22 kg

Stock no.	Product no.
BPZ:QAW740	QAW740

RMZ78..



Universal modules

Additional inputs and outputs required by the Synco™ 700 controllers can be provided by these modules. A description of the functions is given with the relevant controller module.

Data sheet	N3146
Voltage supply	Supply from controller module
Power consumption	3 VA
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal input, signal	0...1000 Ohm
	1000...1175 Ohm
	DC 0...10 V
	Potential-free digital status contact
	LG-Ni1000
	Pt1000
	T1 (PTC)
	2 x LG-Ni1000
Relay outputs	switching contact, potential-free
Relay output, switching voltage	AC 19...265 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	117 x 90 x 75 mm

Range overview RMZ78..

Universal-inputs, number	Analog outputs, number	Relay outputs, number	Weight (net) [kg]	Stock no.	Product no.
4	2	2	0.322	BPZ:RMZ788	RMZ788
6	2	4	0.359	BPZ:RMZ789	RMZ789
8	0	0	0.3	BPZ:RMZ785	RMZ785
4	0	4	0.334	BPZ:RMZ787	RMZ787

Standard controllers
Communicating heating controllers

Extension modules and operator units for RMH760B.. and RMK770..

Heating circuit module

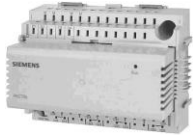
RMZ782B

- Weather-compensated flow temperature control via heating circuit's mixing valve
 - Control of heating circuit pump
- The available heating circuit control and supervisory functions are the same as those of the RMH760B-1



Data sheet	N3136
Voltage supply	Supply from controller module
Power consumption	3 VA
Analog outputs, number	1
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal inputs, number	3
Universal input, signal	LG-Ni1000 0...1000 Ohm 1000...1175 Ohm DC 0...10 V Pt1000 NTC 575 T1 (PTC) 2 x LG-Ni1000
Relay outputs, number	3
Relay outputs	Switching contact, potential-free
Relay output, switching voltage	AC 19...265 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Weight (net)	0.334 kg
Dimensions (W x H x D)	117 x 90 x 75 mm

Stock no.	Product no.
BPZ:RMZ782B	RMZ782B

RMZ783B**DHW module**

- Control of the storage tank temperature
- Storage tank charging with integrated coil, with pump or mixing valve
- Storage tank charging with detached heat exchanger, with pump and mixing valve
- Storage tank charging according to a time program
- Control of the circulating pump according to a time program

Data sheet	N3136
Voltage supply	Supply from controller module
Power consumption	3 VA
Analog outputs, number	1
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 A
Universal inputs, number	4
Universal input, signal	LG-Ni1000 0...1000 Ohm 1000...1175 Ohm DC 0...10 V Pt1000 NTC 575 T1 (PTC) 2 x LG-Ni1000
Relay outputs, number	5
Relay outputs	Switching contact, potential-free
Relay output, switching voltage	AC 19...265 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Weight (net)	0.36 kg
Dimensions (W x H x D)	117 x 90 x 75 mm

Stock no.	Product no.
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BPZ:RMZ783B	RMZ783B
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RMZ780**Module connector**

Module connector for detached mounting of extension modules within the control panel.

Data sheet	N3138
Max. cable length	10 m
Dimensions (W x H x D)	18.5 x 87.5 x 22.5 mm

Stock no.	Product no.
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BPZ:RMZ780	RMZ780
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Standard controllers

Communicating heating controllers

Field devices for RMH760B.. and RMK770..

Sensors, setpoint adjusters

Product Title	Data sheet	Stock no.	Product no.
Setpoint adjuster, passive, scale 0...50 °C (exchangeable)	N1991	BPZ:BSG21.1	BSG21.1
Flue gas temperature sensor Pt1000	N1846	BPZ:FGT-PT1000	FGT-PT1000
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	QAE9120.010
Solar sensor	N1943	BPZ:QLS60	QLS60
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	QAC22
Outside sensor NTC 575 Ohm	N1811	BPZ:QAC32	QAC32
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	QAD22
Strap-on temperature sensor with cable LG-Ni1000	N1802	BPZ:QAD26.220	QAD26.220
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	QAE2120.010
Immersion temperature sensor Ø 4 mm with cable and fitting	N1790	BPZ:QAE26.9..	QAE26.9..
Cable temperature sensor PVC 2 m, LG-Ni1000	N1831	BPZ:QAP22	QAP22

Monitors

Product Title	Data sheet	Stock no.	Product no.
Flow switch for use in hydraulic systems, PN10, DN32...200	N1592	BPZ:QVE1900	QVE1900
Flow switch for use in hydraulic systems, PN25, DN20...200	N1594	BPZ:QVE1901	QVE1901
Thermal reset limit thermostat	N1202	BPZ:RAK-TW.1..H	RAK-TW.1..H
Temperature limiter	N1206	BPZ:RAK-TB.1..M	RAK-TB.1..M
Safety limit thermostat	N1204	BPZ:RAK-ST..M	RAK-ST..M

Room units / sensors

Product Title	Data sheet	Stock no.	Product no.
Front module with passive temperature measurement, LG-Ni1000	N1408	S55720-S133	AQR2531ANW
Front module for base modules, temperature (active)	N1411	S55720-S136	AQR2532NNW
Base module with KNX for temperature and humidity measurement	N1411	BPZ:AQR2570..	AQR2570..
Room temperature sensor LG-Ni1000	N1721	BPZ:QAA24	QAA24
Room sensor KNX for temperature, white	N1602	S55624-H103	QMX3.P30
Room unit with room temperature sensor and setpoint readjuster -3...3 K	N1721	BPZ:QAA27	QAA27
Room temperature sensor LG-Ni1000 for mounting on recessed conduit boxes	N1722	BPZ:QAA64	QAA64
Room unit with KNX bus	N1633	BPZ:QAW740	QAW740
Mounting plates for front modules with passive temperature measurement	N1408	BPZ:AQR2500..	AQR2500..

Transformers

Product Title	Data sheet	Stock no.	Product no.
Transformers	N5536	BPZ:SEM62..	SEM62..

Service tool

Product Title	Data sheet	Stock no.	Product no.
Commissioning and plant operating software	N5649	S55800-Y100	ACS790
Service tool for KNX / LPB	N5655	BPZ:OCI700.1	OCI700.1
USB - KNX Service interface	A6V10438951	S55800-Y101	OCI702
Web server for Synco devices	N5701	BPZ:OZW772..	OZW772..

The software (ACS790) can be downloaded for free via <http://www.siemens.com/acs790>.

RVD12..



District heating controller

Control of district heat substations, space heating and d.h.w. heating.
Optimized for low return temperatures in district heating networks.

- 3 ready programmed and preselected plant types
- Straightforward, easy-to-understand operation
- Analog adjustment of room temperature setpoint, other adjustments with operating lines
- Display of time of day, time program, setpoints, actual values, limitations, errors, etc.
- Optional remote operation via room unit
- 2 independent switching programs each with 3 occupancy times per day
- Holiday function (via room unit)
- DRT limitation for the reduction of peak loads
- Maximum limitation of the return temperature on the primary side
- Minimum and maximum limitation of the flow temperature
- Automatic summer / winter changeover
- Automatic ECO function
- Pump protection
- Legionella function
- Frost protection function
- Automatic monitoring of sensors with alarm indication
- Relay and sensor tests, manual operation
- Locking function for district heat parameters
- Communication via Modbus
- Display with background lighting

Plant-specific

- 1 pump heating circuit, control of the flow temperature, optionally weather-compensated / weather- and room temperature-compensated / room temperature-compensated
- D.h.w. heating:
 - Storage system with integrated heat exchanger and 1 storage tank sensor
 - Charging pump

Data sheet	N2510
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	5.5 VA
Analog input, signal	LG-Ni1000
	NTC 575
Digital outputs	3 × AC 230 V 1(1) A
	1 × AC 230 V 2(2) A
Dimensions (W x H x D)	144 x 96 x 109 mm

Range overview RVD12..

Product Title	Stock no.	Product no.
Controller, 3 programmed plant types, instructions in da, de, en, fi, fr, it, sv	S55370-C109	RVD120-A

District heating controller

RVD14..



Same functionality as the RVD120, but with the following extra features:

- 8 ready programmed and preselected plant types
- Solar d.h.w. heating
- D.h.w. heating with electric immersion heater
- Refill function
- Communication via Modbus

Plant-specific

- Precontrol of internal control loops
- 1 pump or mixing heating circuit, flow temperature control, optionally weather-compensated / weather- and room temperature-compensated / room temperature-compensated
- D.h.w. heating:
 - Instantaneous system
 - Storage tank charging system with 1 or 2 storage tank sensors
 - Storage system with integrated heat exchanger
 - 2 charging pumps
 - Circulating pump
 - Solar d.h.w. heating

Data sheet	N2510
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	6 VA
Analog input, signal	LG-Ni1000 NTC 575 DC 0...10 V
Digital inputs, number	1
Digital inputs	Flow switch
Digital outputs	5 × AC 230 V 1(1) A 4 × AC 230 V 2(2) A
Dimensions (W x H x D)	144 x 96 x 109 mm

Range overview RVD14..

Product Title	Stock no.	Product no.
Controller, 8 programmed plant types, instructions in da, de, en, fi, fr, it, sv	S55370-C113	RVD140-A

Field devices for RVD1..

Product Title	Data sheet	Stock no.	Product no.
Pressure sensor for neutral and slightly aggressive liquids and gases (0...10 V)	A6V10432494	BPZ:QBE2003-P..	QBE2003-P..
Pressure sensor for refrigerants (0...10V)	A6V10434676	BPZ:QBE2004-P..U	QBE2004-P..U
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	QAE9120.010
Multifunctional room operator unit	N1637	BPZ:QAW70..	QAW70..
Room unit with PPS interface	N2281	BPZ:QAA50.110/101	QAA50.110/101
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	QAC22
Outside sensor NTC 575 Ohm	N1811	BPZ:QAC32	QAC32
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	QAD22
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	QAE2120.010
Cable temperature sensor for high-temperature applications (180°C)	N1833	BPZ:QAP21.2	QAP21.2
Cable temperature sensor silicone 1.5 m, LG-Ni1000	N1831	BPZ:QAP21.3	QAP21.3

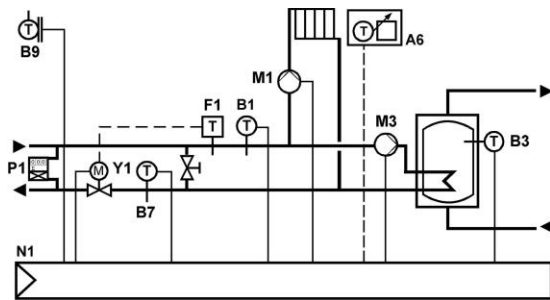
Application examples RVD1..

These are a few examples of applications that can be done with the controllers RVD1..

More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RVD1.. data sheet.

RVD12..

DAAA01 VD1 HQ

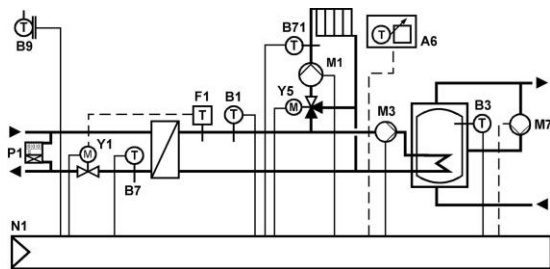


Direct system, weather-compensated heating and d.h.w.

- Weather-compensated flow temperature control with pump heating circuit
- Demand-dependent flow temperature control with 3-position actuator acting on two-port valve
- Maximum limitation of primary return temperature depending on the outside temperature
- Frost protection for building and plant
- Digital 7-day time switch
- 2 time switch programs, each with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on outside temperature
- Room temperature-dependent quick setback (with room sensor or with building model)
- Optional remote operation via room unit

RVD14..

DACA01 VD1 HQ



Weather-compensated flow temperature control acting on mixing circuit, d.h.w. supply with storage tank

- Demand-dependent flow temperature control with 3-position actuator acting on primary two-port valve
- Weather-compensated flow temperature control with 3-position actuator acting on mixing valve
- Maximum limitation of primary return temperature depending on the outside temperature
- Frost protection for building and plant
- Digital 7-day time switch
- 2 time switch programs, each with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on the outside temperature
- Room temperature-dependent quick setback (with room sensor or with building model)
- Optional remote operation via room unit

District heating controller

RVD25..



Multifunctional heating controller for use in district heating substations and district heating plants with LPB and M-bus communication. Suited for one heating circuit with d.h.w. heating in instantaneous systems or with storage tank. 28 programmed plant types. Operating voltage AC 230 V.

Key features:

- Optimized for low return temperatures in district heating networks.
- Display of time of day, time program, setpoints, actual values, limitations, errors, etc.
- Optional remote operation via room unit
- 2 independent switching programs each with 3 occupancy times per day
- Yearly clock with automatic summer- / wintertime changeover
- Power and / or volumetric flow limitation in combination with heat meter
- Pump and valve protection
- Automatic monitoring of sensors with display of alarm
- Locking function for district heat parameters
- Optional suppression of hydraulic creep
- Frost protection function
- DRT limitation for the reduction of peak loads and of idle heat
- Maximum limitation of the return temperature on the primary side
- Minimum and maximum limitation of the flow temperature
- Optimum start / stop control of the heating system
- Automatic ECO function
- Legionella function
- Forced charging function for plant with storage tank
- Cooling down protection for the primary supply lines
- Solar d.h.w. heating
- D.h.w. heating with electric immersion heater
- Refill function
- Selectable heating period

Plant-specific:

- Precontrol internal and interconnected
- 1 mixing or pump heating circuit
- D.h.w. heating with selectable priority:
 - Instantaneous systems
 - Storage charging system
 - Storage system with integrated heat exchanger
 - Circulating pump, 2 charging pumps

Data sheet	N2513
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	5.5 VA
Communication	LPB (interconnected controller) M-bus (slave)
Analog input, signal	DC 0...10 V LG-Ni1000 NTC 575
Digital inputs, number	1
Digital inputs	Pulse transmitter Status contact
Digital outputs	1 × PWM, DC 12 V 2 × AC 230 V 2(2) A 8 × AC 230 V 1(1) A
Dimensions (W x H x D)	144 x 96 x 109 mm

Range overview RVD25..

Product Title	Stock no.	Product no.
Controller, 28 programmed plant types, instructions in de, en, fr, it, da, fi, sv	S55370-C125	RVD250-A

RVD26..



District heating controller

Multifunctional heating controller for use in district heating substations and district heating plants with LPB and M-bus communication. Suited for 2 heating circuits with d.h.w. heating in instantaneous systems or with storage tank. 14 programmed plant types. Operating voltage AC 230 V.

Same functionality as RVD250, but with the following extra features:

- 2 heating circuits
- Without precontrol in interconnected systems
- 3 independent switching programs each with 3 occupancy times per day

Plant-specific:

- Precontrol internal control loops
- 2 heating circuits (mixing and / or pump heating circuit): Control of flow temperature, optionally weather-compensated / weather- and room temperature-compensated / room temperature-compensated
- D.h.w. heating with selectable priority:
 - Instantaneous systems
 - Storage charging system
 - Storage system with integrated heat exchanger
 - Charging pump
 - Circulating pump

Data sheet	N2515
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	6 VA
Communication	LPB (interconnected controller) M-bus (slave)
Analog input, signal	DC 0...10 V LG-Ni1000 NTC 575
Digital inputs, number	1
Digital inputs	Pulse transmitter Status contact
Digital outputs	1 × PWM, DC 12 V 2 × AC 230 V 2(2) A 8 × AC 230 V 1(1) A
Dimensions (W x H x D)	144 x 96 x 109 mm

Range overview RVD26..

Product Title	Stock no.	Product no.
Controller, 14 programmed plant types, instructions in de, en, fr, it, da, fi, sv	S55370-C129	RVD260-A

Sensor and room units for RVD..

Product Title	Data sheet	Stock no.	Product no.
Pressure sensor for neutral and slightly aggressive liquids and gases (0...10 V)	A6V10432494	BPZ:QBE2003-P..	QBE2003-P..
Pressure sensor for refrigerants (0...10 V)	A6V10434676	BPZ:QBE2004-P..U	QBE2004-P..U
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	QAE9120.010
Multifunctional room operator unit	N1637	BPZ:QAW70..	QAW70..
Room unit with PPS interface	N2281	BPZ:QAA50.110/101	QAA50.110/101
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	QAC22
Outside sensor NTC 575 Ohm	N1811	BPZ:QAC32	QAC32
Web Server for LPB devices	N5712	BPZ:OZW672..	OZW672..
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	QAD22
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	QAE2120.010
Cable temperature sensor for high-temperature applications (180°C)	N1833	BPZ:QAP21.2	QAP21.2
Cable temperature sensor silicone 1.5 m, LG-Ni1000	N1831	BPZ:QAP21.3	QAP21.3

Application examples RVD2..

These are a few examples of applications that can be done with the controllers RVD2...

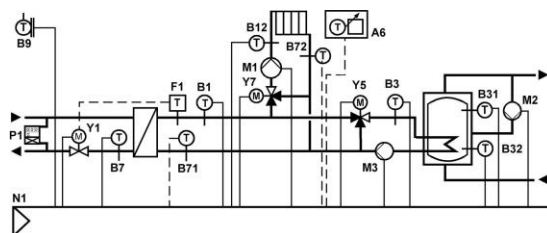
More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RVD2.. data sheet.

Indirect system, weather-compensated heating with mixing circuit and d.h.w.

RVD25..

DACB01 VD2 HQ a

- Demand-dependent flow temperature control acting on 3-position actuator with primary two-port valve
- Weather-compensated flow temperature control with 3-position actuator acting on mixing valve
- D.h.w. temperature control - storage tank with mixing valve
- Maximum limitation of primary return temperature depending on the outside temperature
- Frost protection for building and plant
- 2 time switch programs, each with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on the outside temperature
- Room temperature-dependent quick setback (with room sensor only or with building model)
- Control of d.h.w. circulation pump

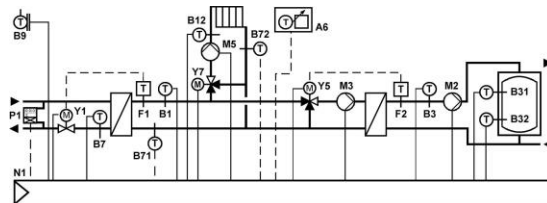


Demand-dependent control of heat exchanger with indirect district heat substation with 2-port valve

RVD25..

DACC01 VD2 HQ

- Demand-dependent flow temperature control acting on 3-position actuator with primary two-port valve
- Weather-compensated flow temperature control with 3-position actuator acting on mixing valve
- D.h.w. temperature control - storage tank with exchanger and mixing valve
- Maximum limitation of primary return temperature depending on the outside temperature
- Frost protection for building and plant
- 2 time switch programs, each with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on the outside temperature
- Room temperature-dependent quick setback (with room sensor only or with building model)

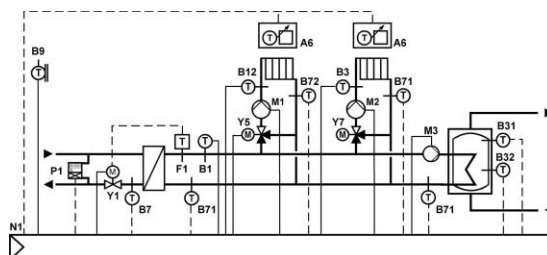


Weather-compensated flow temperature control of 2 heating circuits with mixing valves

RVD26..

DADA01 VD2 HQ

- Demand-dependent flow temperature control with 3-position actuator acting on primary two-port valve
- Weather-compensated flow temperature control with 3-position actuator acting on mixing valve
- D.h.w. temperature control - storage tank
- Maximum limitation of primary return temperature depending on the outside temperature
- Frost protection for building and plant
- 3 time switch programs, each with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on the outside temperature
- Room temperature-dependent quick setback (with room sensor only or with building model)



RLM162



Air duct temperature controller, AC 24 V, 2 outputs DC 0...10 V

Compact electronic controller with integral duct mounted temperature sensor and setting unit combined in one device. It is designed for installation directly onto the plant. Only the wires for power supply connection and controller output need to be laid. Supplied complete with mounting flange.

Application:

Modulating temperature controller, with 1 or 2 continuous DC 0...10V output signals. The RLM162 is used for control and limiting of extract or supply air temperatures in small HVAC plants:

- Restaurants, conference rooms, store rooms
- Lecture theatres, classrooms
- In conjunction with central air handling units

The following units can be controlled:

- Heating (or cooling) valve actuators
- Air damper actuators
- Step controllers or current valves for electric heating
- Signal converters
- DX cooling units

Features:

- Auxiliary digital output
- Compensation via outside sensor
- Connection for remote setting unit
- P or PI control (selectable)
- Service modes
- Heating and cooling modes available
- Setpoint changeover via external contact or time switch
- Heating/cooling changeover via external contact

Data sheet	N3332
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	2 VA
Setpoint readjustment range	0...10 K
Setpoint setting range	0...50 °C
Analog input, signal	LG-Ni1000 0...1000 Ohm DC 0...10 V
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Digital input, contact query	DC 3...6 mA DC 6...15 V
Relay outputs	N.O. contact, potential-free
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	2 A
Probe length	400 mm
Type of fixing	Flange
Degree of protection	IP65
Dimensions (W x H x D)	125 x 152 x 78 mm

Stock no. Product no.

BPZ:RLM162 **RLM162**

Field devices for RLM162

Product Title	Data sheet	Stock no.	Product no.
Setpoint adjuster, passive, scale 0...50 °C (exchangeable)	N1991	BPZ:BSG21.1	BSG21.1
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	QAC22

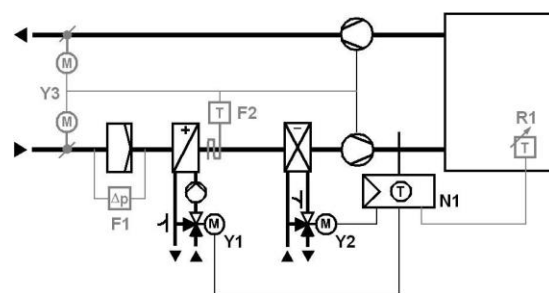
Application examples Synco™ 100

These are only a few examples of many applications that can be done with the with Synco™ 100 controllers: RLE..

More Synco™ 100 applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RLE.. data sheet.

Partial Air Conditioning Plant, Heating / Cooling - Supply air temperature control

- Controller (N1) with built-in sensor to control the room temperature via sequential control of the heating valve (Y1) or the cooling valve (Y2)
- Frost protection with frost thermostat F2 (independent of controller) to open the heating valve (Y1), close the outside air dampers (Y3) and deactivate the fans
- Air damper actuator with spring return (Y3) to control the fans with an auxiliary switch

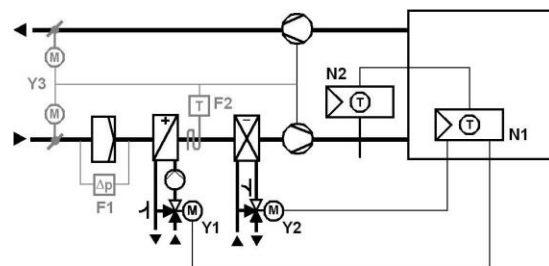


RLM162

ADC001 LM1 HQ

Room temperature control with limitation of supply air temperature

- Room temperature control via control of the heating valve and the cooling valve
- Limitation of supply air temperature
- Outside temperature compensation



RLM162

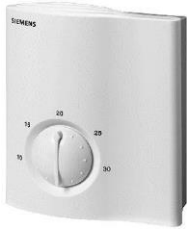
ADC001 LA1 DE

Standard controllers

Standalone HVAC controllers

Room temperature controllers RLA..

RLA162



Room temperature controller, AC 24 V, 2 outputs DC 0...10 V

Electronic controller designed for room mounting applications. It is configurable for heating and/or cooling applications and can operate as a single controller or together with duct mounted units (RLM) for limiting.

Application:

Modulating temperature controller, with 1 or 2 continuous DC 0...10 V output signals. The RLA162 is used for control and limiting of room temperatures in small HVAC plants.

The following units can be controlled:

- Heating (or cooling) valve actuators
- Air damper actuators
- Step controllers or current valves for electric heating
- Signal converters

Features:

- Low limitation input (supply air temperature)
- Compensation via outside sensor
- Connection for remote setting unit
- P or PI control (selectable)
- Service modes
- Heating and cooling modes available
- Setpoint changeover via external contact or time switch

Data sheet	N3331
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	2 VA
Setpoint readjustment range	0...10 K
Setpoint setting range	8...30 °C
Analog input, signal	LG-Ni1000 DC 0...10 V
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Digital inputs	Potential-free input signal
Digital input, contact query	DC 3...6 mA DC 6...15 V
Degree of protection	IP30
Dimensions (W x H x D)	97 × 114 × 43 mm

Stock no. Product no.

BPZ:RLA162 **RLA162**

Field devices for RLA162

Product Title	Data sheet	Stock no.	Product no.
Air duct temperature controller, AC 24 V, 2 outputs DC 0...10 V	N3332	BPZ:RLM162	RLM162
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	QAC22

RLU..



Universal controllers

- Tested, predefined applications
- Flexible configuration
- Suited for the controlled variables temperature, relative / absolute humidity, pressure / differential pressure, air flow rate, indoor air quality, etc.
- Autonomous sequence controllers with P, PI or PID mode
- Integrated operation
- No commissioning tool required (optional)

Data sheet	N3101
Operating voltage	AC 24 V
Frequency	50/60 Hz
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Digital input, contact query	5 mA
	DC 15 V
Universal input, signal	0...1000 Ohm
	1000...1175 Ohm
	DC 0...10 V
	Potential-free digital status contact
	LG-Ni1000
	Pt1000
	T1 (PTC)
	2 x LG-Ni1000
Relay output, switching voltage	AC 19...265 V
Relay output, switching current	4 (3) A
Degree of protection	IP20

Range overview RLU..

Digital inputs, number	Universal-inputs, number	Analog outputs, number	Relay outputs, number	Control loops, number	Stock no.	Product no.
1	4	0	2	1	BPZ:RLU202	RLU202
1	4	2	0	1	BPZ:RLU220	RLU220
1	4	2	2	2	BPZ:RLU222	RLU222
2	5	3	2	2	BPZ:RLU232	RLU232
2	5	3	6	2	BPZ:RLU236	RLU236

Accessories for RLU..

Product Title	Data sheet	Stock no.	Product no.
Front panel mounting frame	N3101	BPZ:ARG62.201	ARG62.201

Service tool

Product Title	Data sheet	Stock no.	Product no.
Service tool for KNX / LPB	N5655	BPZ:OCI700.1	OCI700.1

Standard controllers

Standalone HVAC controllers

Application examples RLU..

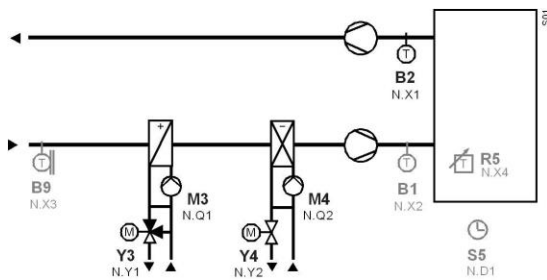
Application examples Synco™ 200

These are only a few examples of many applications that can be done with the with Synco™200 controllers: RLU..

More Synco™200 applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RLU.. data sheet..

RLU222

ADC002 LU2 HQ

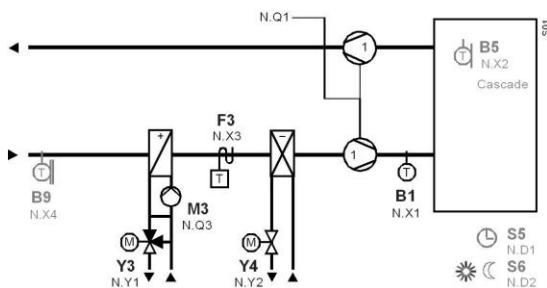


Partial Air Conditioning Plant, Heating / Cooling - Extract air (room) temperature control

- Extract air (room) temperature control via the heating coil valve and cooling coil valve in sequence
- Control of the heating coil and cooling coil pumps
- Operating mode selection Comfort/ Protection

RLU232

ADC015 LU3 HQ

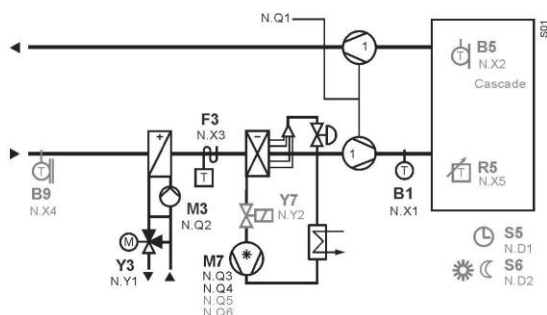


Partial Air Conditioning Plant, Heating / Cooling - Supply air temperature control with frost protection and release of fan

- Supply air temperature control via the heating coil valve and cooling coil valve in sequence
- Control of the heating coil and cooling coil pumps
- Fan release via relay output
- Frost protection with frost protection monitor
- Operating mode selection Comfort/ Protection
- Operating mode selection Comfort/Economy

RLU236

ADC017 LU3 HQ



Partial Air Conditioning Plant, Heating / Cooling - Supply air (room) temperature control with frost protection and release of fan

- Supply air temperature control via the heating coil valve and the direct expansion evaporator in sequence
- Control of the heating coil pump
- Fan release via relay output
- Frost protection with frost protection monitor
- Operating mode selection Comfort/ Protection
- Operating mode selection Comfort/Economy

Sensors, setpoint adjusters

Product Title	Data sheet	Stock no.	Product no.
Frost detector, modulating	A6V10432020	BPZ:QAF63..J	QAF63..J
Pressure sensor for neutral and slightly aggressive liquids and gases (0...10 V)	A6V10432494	BPZ:QBE2003-P..	QBE2003-P..
Pressure sensor for refrigerants (0...10 V)	A6V10434676	BPZ:QBE2004-P..U	QBE2004-P..U
Differential pressure sensor, DC0...10 V	N1910_01	BPZ:QBM2030..	QBM2030..
Setpoint adjuster, passive, scale 0...50 °C (exchangeable)	N1991	BPZ:BSG21.1	BSG21.1
Setpoint adjuster, passive, temperature ranges: -20...20 °C; 20...60 °C; -3...3 K	N1991	BPZ:BSG21.5	BSG21.5
Active setpoint adjuster 0...100 %, for flush panel mounting	N1992	BPZ:BSG61	BSG61
Flue gas temperature sensor Pt1000	N1846	BPZ:FGT-PT1000	FGT-PT1000
Immersion temperature sensor 100 mm DC0...10 V	N1782	BPZ:QAE2164.010	QAE2164.010
Immersion temperature sensor 150 mm DC0...10 V	N1782	BPZ:QAE2164.015	QAE2164.015
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	QAE9120.010
Duct temperature sensor 400 mm, LG-Ni1000	N1761	BPZ:QAM2120.040	QAM2120.040
Duct temperature sensor 2000 mm, LG-Ni1000	N1761	BPZ:QAM2120.200	QAM2120.200
Duct temperature sensor 6000 mm, LG-Ni1000	N1761	BPZ:QAM2120.600	QAM2120.600
Window pane temperature sensor	N1830	BPZ:QAT22	QAT22
Duct sensor for humidity (DC0...10 V)	N1864	BPZ:QFM2100	QFM2100
Duct sensor for humidity (0...10 V) and temperature (Ni1000)	N1864	BPZ:QFM2120	QFM2120
Duct sensor for humidity (DC0...10 V) and temperature (DC0...10 V)	N1864	BPZ:QFM2160	QFM2160
Duct sensor for humidity (0...10 V) and temperature (0...10 V) with calibration certificate	N1883	BPZ:QFM4160	QFM4160
Solar sensor	N1943	BPZ:QLS60	QLS60
Duct sensor for air velocity	N1932	BPZ:QVM62.1	QVM62.1
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	QAC22
Differential pressure sensor for liquids and gases	N1923	BPZ:QBE61.3-DP..	QBE61.3-DP..
Differential pressure sensors for liquids and gas (DC0...10 V)	N1920	BPZ:QBE63-DP..	QBE63-DP..
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	QAD22
Strap-on temperature sensor with cable LG-Ni1000	N1802	BPZ:QAD26.220	QAD26.220
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	QAE2120.010
Immersion temperature sensor Ø 6 mm with cable and fitting	N1790	BPZ:QAE26.9	QAE26.9
Duct temperature sensor 400 mm, Pt1000	N1761	BPZ:QAM2112.040	QAM2112.040
Differential pressure sensors for liquids and gas (0...10 V)	N1922	BPZ:QBE3000..	QBE3000..
Immersion temperature sensor 150 mm, LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.015	QAE2120.015
Immersion temperature sensor 100 mm, LG-Ni1000, without protection pocket	N1781	BPZ:QAE2121.010	QAE2121.010
Cable temperature sensor for high-temperature applications (180 °C)	N1833	BPZ:QAP21.2	QAP21.2
Cable temperature sensor silicone 1.5 m, LG-Ni1000	N1831	BPZ:QAP21.3	QAP21.3
Outside/room temperature sensor DC0...10 V	N1814	BPZ:QAC3161	QAC3161
Cable temperature sensor PVC 2 m, LG-Ni1000	N1831	BPZ:QAP22	QAP22
Duct sensor for humidity (DC0...10 V) for demanding requirements	N1882	BPZ:QFM3100	QFM3100
Duct air quality sensor CO ₂ / temperature / rel. humidity / VOC	N1962	BPZ:QPM21..	QPM..
Duct sensor for humidity (DC0...10 V) and temperature (DC0...10 V) for demanding requirements	N1882	BPZ:QFM3160	QFM3160
Duct air quality sensor CO ₂ / temperature / rel. humidity / VOC; Modbus	A6V11610641	BPZ:QPM21..-MO	QPM../MO

Monitors

Product Title	Data sheet	Stock no.	Product no.
Condensation monitor	A6V10741072	BPZ:QXA21..	QXA21..
Frost monitor, 2-point, capillary tube 3000 mm, -10...+15 °C	A6V12051788	S55700-P163	QAF65.3AR-J
Frost monitor, 2-point, capillary tube 6000 mm, -10...+15 °C	A6V12051788	S55700-P164	QAF65.6AR-J
Duct hygrostat, setpoint setting range 15...95 % r.h.	N1514	BPZ:QFM81.2	QFM81.2
Room hygrostat, setpoint setting range 15...95 % r.h., setpoint adjuster inside device	N1514	BPZ:QFM81.21	QFM81.21
Frost detector, air side, 2-point	A6V10432022	BPZ:QAF64..J	QAF64..J
Frost monitor, 2-point, capillary tube 3000 mm, -10...+15 °C	A6V11965899	S55700-P161	QAF65.3M-J

New Product

Standard controllers

Standalone HVAC controllers

Field devices for RLU..

Monitors

Product Title	Data sheet	Stock no.	Product no.
Frost monitor, 2-point	N1284	BPZ:QAF81..	QAF81..
Frost monitor, 2-point, capillary tube 6000 mm, -10...+15 °C	A6V11965899	S55700-P162	QAF65.6M-J
Room hygrostat, setpoint setting range 30...90 % r.h., setpoint adjuster inside device	N1518	BPZ:QFA1000	QFA1000
Room hygrostat, setpoint setting range 30...90 % r.h., external setpoint adjustment	N1518	BPZ:QFA1001	QFA1001
Differential pressure monitor	N1552	BPZ:QBM81..	QBM81..

Room units / sensors

Product Title	Data sheet	Stock no.	Product no.
Front module with passiv temperature measurement, LG-Ni1000	N1408	S55720-S133	AQR2531ANW
Room air quality sensor CO ₂ / temperature / rel. Humidity / VOC	N1961	BPZ:QPA20..	QPA..
Room sensor for humidity (DC0...10 V) for demanding requirements	N1858	BPZ:QFA3100	QFA3100
Room sensor for humidity (DC0..10V) and temperature (DC0..10V) with calibration certificate	N1859	BPZ:QFA4160	QFA4160
Room unit with room temperature sensor and setpoint adjuster	N1721	BPZ:QAA25	QAA25
Indoor air quality controller with integrated VOC sensor for mixed gas	N1571	BPZ:QPA84	QPA84
Room sensor for humidity (DC0...10 V) and temperature (DC0...10 V) for demanding requirements	N1858	BPZ:QFA3160	QFA3160
Room temperature sensor LG-Ni1000	N1721	BPZ:QAA24	QAA24
Room sensor for humidity (DC0...10 V)	N1857	BPZ:QFA2000	QFA2000
Room sensor for humidity (DC0...10 V) and temperature (LG-Ni1000)	N1857	BPZ:QFA2020	QFA2020
Room unit with room temperature sensor and setpoint readjuster -3...3 K	N1721	BPZ:QAA27	QAA27
Room sensor for humidity (DC0...10 V) and temperature (DC0...10 V)	N1857	BPZ:QFA2060	QFA2060
Room temperature sensor LG-Ni1000 for mounting on recessed conduit boxes	N1722	BPZ:QAA64	QAA64
Room hygrostat, setpoint setting range 30...90 % r.h., setpoint adjuster inside device	N1518	BPZ:QFA1000	QFA1000
Room hygrostat, setpoint setting range 30...90 % r.h., external setpoint adjustment	N1518	BPZ:QFA1001	QFA1001
Mounting plates for front modules with passiv temperature measurement	N1408	BPZ:AQR2500..	AQR2500..

Step switches, signal converters, transformers and display

Product Title	Data sheet	Stock no.	Product no.
Transformers	N5536	BPZ:SEM62..	SEM62..
Universal digital indicator	N5312	BPZ:BAU200	BAU200
Current valve	N4938	S55376-C160	SEA45.5
Digital time switch, 1-channel, with 7-day program	N5243	BPZ:SEH62.1	SEH62.1
Signal converter DC0...10V or DC 0 / 10 V in AC 0 / 24 V	N5102	BPZ:SEM61.4	SEM61.4
Variable Speed Drive for pumps and fans, IP55, Filter B (C1)	N5111	BPZ:G120P..AM..B..	G120P..5B
Variable Speed Drive for pumps and fans, IP55, Filter A (C2)	N5111	BPZ:G120P..AM..A..	G120P..5A
Variable Speed Drive for pumps and fans, IP20, Filter B (C1)	N5111	BPZ:G120P..AE..B..	G120P..2B
Variable Speed Drive for pumps and fans, IP20, Filter A (C2)	N5111	BPZ:G120P..AE..A..	G120P..2A
Signal converter with preprogrammed applications	N5146	BPZ:SEZ220	SEZ220

Universal controller for HVAC systems

RWD Universal..

Universal controller with P or PI action for heating, ventilation and air conditioning.



Auxiliary functions

- PI limiter function (absolute and relative limit)
- Remote setpoint
- Setpoint compensation
- Winter/summer mode changeover (analogue or digital input)
- Cascade control
- Maximum priority for cooling / dehumidifying

Frequency	50/60 Hz
Digital inputs	Potential-free input signal
Universal inputs, number	2
Universal input, signal	LG-Ni1000 DC 0...10 V Pt1000
Degree of protection	IP20

Range overview RWD..

Operating voltage [V]	Analog outputs, number	Relay outputs, number	Control loops, number	Stock no.	Product no.
AC 24	2		1	BPZ:RWD62	RWD62
AC 24	1	1	1	BPZ:RWD68	RWD68
AC 24		2	1	BPZ:RWD82	RWD82

Field devices for RWD..

Product Title	Data sheet	Stock no.	Product no.
Front module with passiv temperature measurement, LG-Ni1000	N1408	S55720-S133	AQR2531ANW
Setpoint adjuster, passive, scale 0...50 °C (exchangeable)	N1991	BPZ:BSG21.1	BSG21.1
Duct temperature sensor 400 mm, LG-Ni1000	N1761	BPZ:QAM2120.040	QAM2120.040
Thermal reset limit thermostat, 40...120 °C, protective pocket 100 mm, capillary tube 700 mm, clamping band	N1202	S55700-P117	RAK-TW.1200B-H
Switching and monitoring device	N3124	S55370-C100	RMS705B-1
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	QAC22
Room temperature sensor LG-Ni1000	N1721	BPZ:QAA24	QAA24
Mounting plates for front modules with passiv temperature measurement	N1408	BPZ:AQR2500..	AQR2500..

Accessories for RWD..

Product Title	Data sheet	Stock no.	Product no.
Transformers	N5536	BPZ:SEM62..	SEM62..

Standard controllers

Standalone HVAC controllers

Application examples RWD..

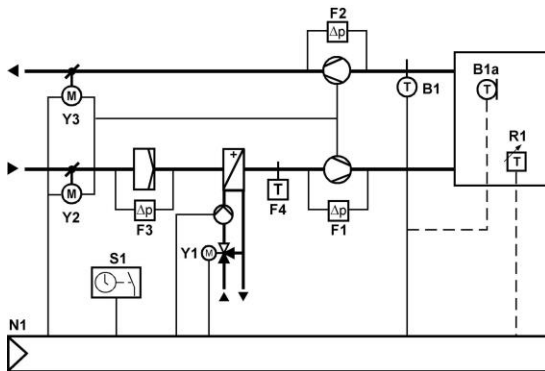
Application examples RWD..

These are only a few examples of many applications that can be done with the with controllers RWD..

More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RWD.. data sheet.

RWD62

ADA002 WC6 HQ a

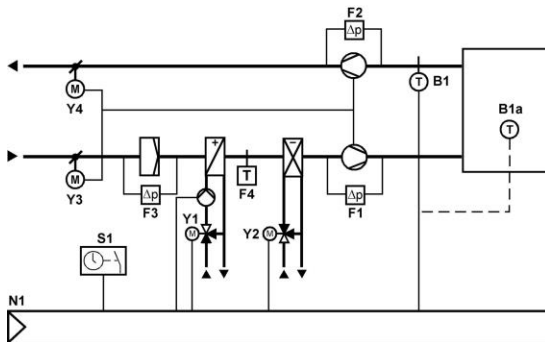


Return air temperature control

- Room temperature control by modulating the heater battery valve
- Frost protection with frost protection thermostat (independent of controller) when tripped, heater battery valve fully opens, dampers close, fan switches off

RWD62

ADC003 WC6 HQ a



Return air temperature control

- Return air temperature control by modulating the heater battery valve and the cooler battery valve in sequence
- Frost protection with frost protection thermostat (independent of controller): when tripped, heater battery valve fully opens, supply and extract fans switch off, outside air and extract air dampers close
- Use of an external time switch to provide day/night settings
- Summer compensation

Universal controller

RMU7..0B-1



- Universal controllers with integrated control and supervisory functions
- Suited for the controlled variables temperature, relative / absolute humidity, pressure / differential, air flow rate, indoor air quality, etc.
- Autonomous sequence controllers with P, PI or PID mode
- Tested, predefined applications (refer to Application Catalog)
- Flexible configuration
- Clear-text operation with separate operator unit (plug-in type or detached)
- Integrated KNX bus communication
- No commissioning tool required

The RMU7..0B-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish, Chinese.

Extension modules complement the universal controller and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously. The operation of the device from commissioning to enduser operation can be done via the operator unit.

Available extension modules:

- 1 universal module RMZ785
- 2 universal modules RMZ787
- 2 universal modules RMZ788

A total of 4 extension modules can simultaneously be used with the universal controller.

Available operator units:

- Plug-in type operator unit RMZ790
- Detached operator unit RMZ791
- Bus operating unit RMZ792

Data sheet	N3150
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal input, signal	LG-Ni1000
	T1 (PTC)
	Pt1000
	0...1000 Ohm
	1000...1175 Ohm
	DC 0...10 V
	Digital pulse contact
	Potential-free digital status contact
	2 x LG-Ni1000
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	173 x 90 x 80 mm

Range overview RMU7..0B..

Analog outputs, number	Universal inputs, number	Relay outputs, number	Control loops, number	Stock no.	Product no.
2	6	2	1	BPZ:RMU710B-1	RMU710B-1
3	8	4	2	BPZ:RMU720B-1	RMU720B-1
4	8	6	3	BPZ:RMU730B-1	RMU730B-1

Standard controllers

Communicating HVAC controllers

Application examples RMU7..0B..

BACS Energy Performance Classes – EN 15232

High energy performance
BACS and TBM

A

Advanced
BACS and TBM

B

Standard
BACS

C

Non-energy-efficient
BACS

D

BACS Building Automation and Control System
TBM Technical Building Management System

Application examples RMU710B..

These are only a few examples of many applications that can be done with the with Synco™700 controllers: RMU710B..

More Synco™700 applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RMU710B.. data sheet.

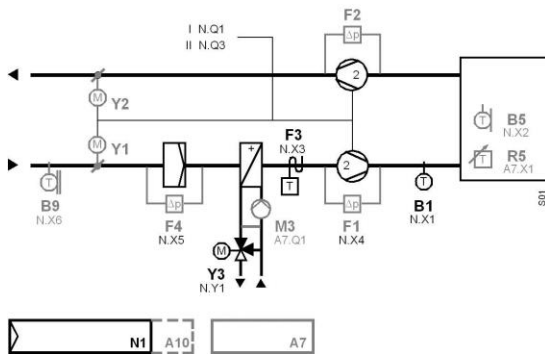
The evaluation of the energy efficiency classification is based on EN15232:2012. For a determination of the energy efficiency classification of the application, please use the "HIT Tool".

Further details are available in the manual "Building automation - impact on energy efficiency" in our HIT Online.

www.siemens.com/hit

Ventilation Plant, Heating - Room-supply air temperature cascade control

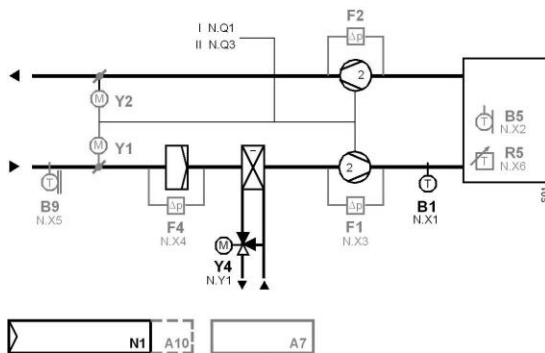
ADA001 U1B HQ



- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the heating coil valve
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor

RMU710B..

ADB001 U1B HQ



Ventilation Plant, Cooling - Room-supply air temperature cascade control

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the cooling coil valve
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor

The indicated energy efficiency classification can be attained only if the following functions are implemented:

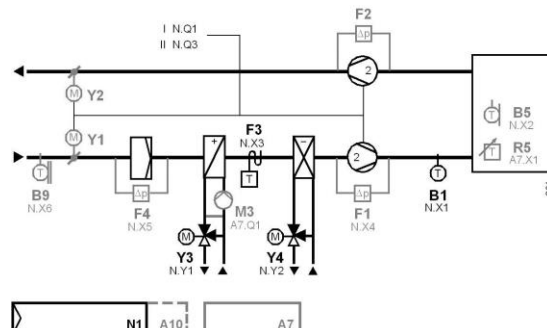
- Air flow control at the room level on demand (Air quality sensor must be integrated as an additional feature)
- Air flow control at the air handler level (Automatic fan step switching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- Free mechanical cooling (Outside air temperature and room temperature sensor required)
- Supply temperature control, variable set point with load dependant compensation
- Humidity control (Not applicable, as no humidity control)

To fulfill the classification, the plant must be equipped with all indicated functions.

Partial Air Conditioning Plant, Heating / Cooling - Room-supply air temperature cascade control

ADC001 U1B HQ

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the heating coil valve and the cooling coil valve in sequence
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor



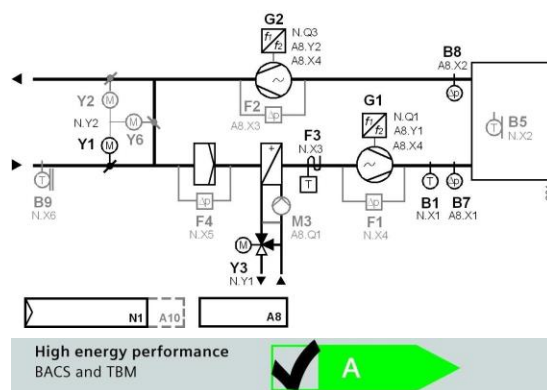
Ventilation Plant, Heating

AEA001 U1B DE

- 7-day time switch with holiday / special day program
- Control of a variable-speed fan
- Control of the supply air temperature via the mixed air dampers and the heating coil valve in sequence
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor

The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset
- With heat exchanger overheating control
- Free mechanical cooling (Not applicable due to lack of cooling sequence)
- Humidity control (Not applicable, as no humidity control)
- Home automation / building automation and control system and technical home/building management required satisfying Efficiency Class A



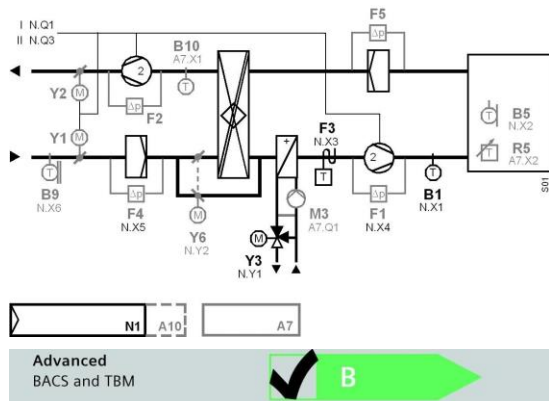
To fulfill the classification, the plant must be equipped with all indicated functions.

Standard controllers

Communicating HVAC controllers

Application examples RMU7..0B..

ADAE01 U1B HQ



To fulfill the classification, the plant must be equipped with all indicated functions.

Ventilation Plant, Heating - Room-supply air temperature cascade control

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the heat recovery system and the heating coil valve in sequence
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply and extract air filters with differential pressure sensors

The indicated energy efficiency classification can be attained only if the following functions are implemented:

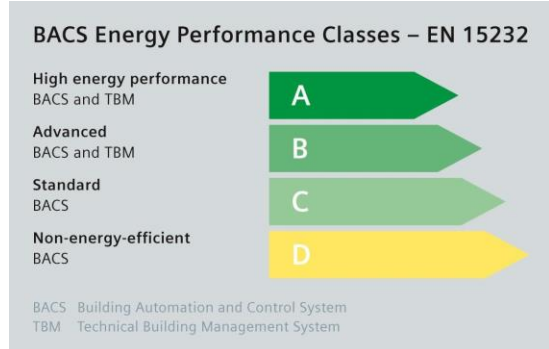
- Air flow control at the room level, demand control (Air quality sensor must be integrated as an additional feature)
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset (Automatic fan step switching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- Heat exchanger defrost control (Exhaust air temperature sensor required)
- Heat exchanger overheating control
- Supply Temperature control (Variable setpoint with load dependant compensation)

Application examples RMU720B..

These are only a few examples of many applications that can be done with the with Synco™700 controllers: RMU720B..
More Synco™700 applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RMU720B.. data sheet.

The evaluation of the energy efficiency classification is based on EN15232:2012. For a determination of the energy efficiency classification of the application, please use the "HIT Tool".
Further details are available in the manual "Building automation - impact on energy efficiency" in our HIT Online.

www.siemens.com/hit



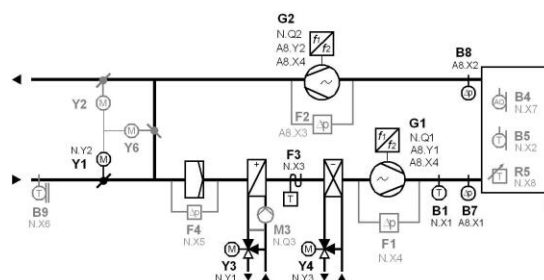
Partial Air Conditioning Plant, Heating / Cooling

AEC001 U2B DE

- 7-day time switch with holiday / special day program
- Control of a variable-speed fan
- Control of the supply air temperature via the mixed air dampers, the heating coil valve and cooling coil valve in sequence
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor
- Home automation / building automation and control system and technical home/building management required satisfying Efficiency Class A

The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset
- With heat exchanger overheating control
- Free mechanical cooling (Outside air temperature and room temperature sensor required)
- Supply temperature control, variable set point with load dependant compensation



To fulfill the classification, the plant must be equipped with all indicated functions.

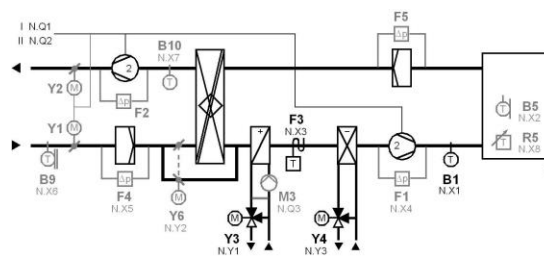
Partial Air Conditioning Plant, Heating / Cooling - Room-supply air temperature cascade control

ADCE01 U2B HQ

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the heating coil valve and the cooling coil valve in sequence
- Frost protection with the frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply and extract air filter with a differential pressure sensor

The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control (Air quality sensor must be integrated as an additional feature)
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset (Automatic fan stepswitching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- Heat exchanger defrost control (Exhaust air temperature sensor required)
- With heat exchanger overheating control
- Free mechanical cooling (Outside air temperature and room temperature sensor required)
- Supply Temperature control, variable set point with load dependant compensation



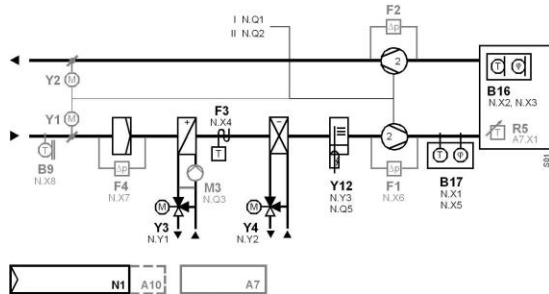
To fulfill the classification, the plant must be equipped with all indicated functions.

Standard controllers

Communicating HVAC controllers

Application examples RMU7..0B..

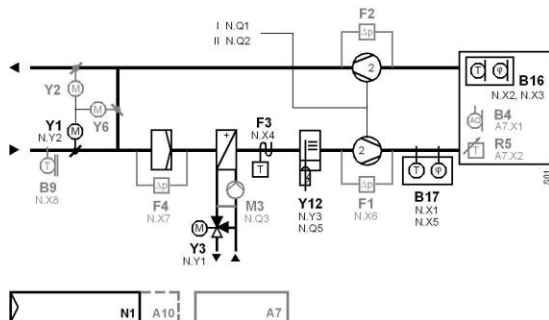
ADFB01 U2B HQ



Partial Air Conditioning Plant, Heating / Cooling / Humidifying - Room-supply air temperature cascade and humidity control

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the heating coil valve and cooling coil valve in sequence
- Control of room humidity via the air humidifier (on command and modulating positioning signal)
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with differential pressure sensors
- Limitation of supply air humidity

AEDB01 U2B HQ



Partial Air Conditioning Plant, Heating / Humidifying - Room-supply air temperature cascade and humidity control

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the mixed air dampers and the heating coil valve in sequence
- Control of room humidity via the air humidifier (on command and modulating positioning signal)
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor
- Limitation of supply air humidity

The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control (Air quality sensor required)
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset (Automatic fan stepswitching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- With heat exchanger overheating control
- Supply Temperature control, variable set point with load dependant compensation
- Room or exhaust air humidity control

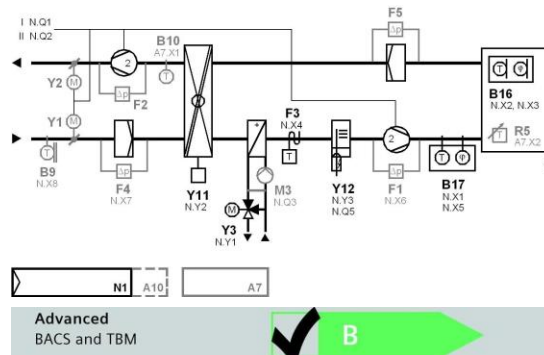


To fulfill the classification, the plant must be equipped with all indicated functions.

Partial Air Conditioning Plant, Heating / Humidifying - Room-supply air temperature cascade and humidity control

ADDP01 U2B HQ

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the heat recovery system and the heating coil valve in sequence
- Control of room humidity via the air humidifier (on command and modulating positioning signal)
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply and extract air filters with differential pressure sensors
- Limitation of supply air humidity



The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control (Air quality sensor must be integrated as an additional feature)
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset (Automatic fan stepswitching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- Heat exchanger defrost control (Exhaust air temperature sensor required)
- With heat exchanger overheating control
- Supply Temperature control, variable set point with load dependant compensation
- Room or exhaust air humidity control

To fulfill the classification, the plant must be equipped with all indicated functions.

Application examples RMU730B..

These are only a few examples of many applications that can be done with the with Synco™700 controllers: RMU730B..

More Synco™700 applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RMU730B.. data sheet.

The evaluation of the energy efficiency classification is based on EN15232:2012. For a determination of the energy efficiency classification of the application, please use the "HIT Tool".

Further details are available in the manual "Building automation - impact on energy efficiency" in our HIT Online.

www.siemens.com/hit

BACS Energy Performance Classes – EN 15232

High energy performance
BACS and TBM

A

Advanced
BACS and TBM

B

Standard
BACS

C

Non-energy-efficient
BACS

D

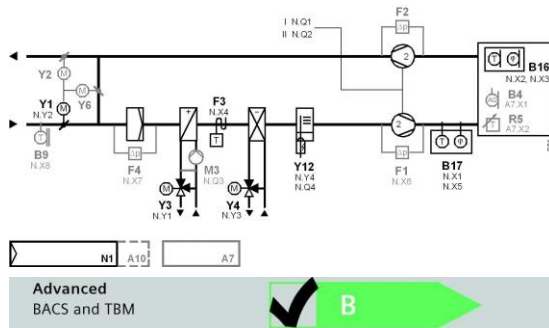
BACS Building Automation and Control System
TBM Technical Building Management System

Standard controllers

Communicating HVAC controllers

Application examples RMU7..0B..

AEFB01 U3B HQ



Partial Air Conditioning Plant, Heating / Cooling / Humidifying - Room-supply air temperature cascade and humidity control

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the mixed air dampers, the heating coil valve and cooling coil valve in sequence
- Control of room humidity via the air humidifier (on command and modulating positioning signal)
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor
- Limitation of supply air humidity

To fulfill the classification, the plant must be equipped with all indicated functions.

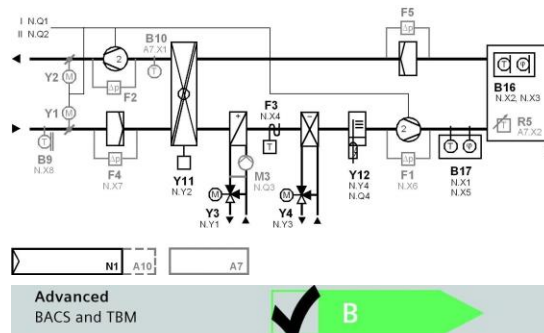
The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control (Air quality sensor required)
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset (Automatic fan stepswitching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- With heat exchanger overheating control
- Free mechanical cooling (Outside air temperature and room temperature sensor required)
- Supply Temperature control, variable set point with load dependant compensation
- Room or exhaust air humidity control

Air Conditioning Plant, Heating / Cooling / Humidifying / Dehumidifying - Room-supply air temperature cascade and humidity control

ADFP01 U3B HQ

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the heat recovery system, the heating coil valve and cooling coil valve in sequence
- Control of room humidity via the air humidifier (on command and modulating positioning signal)
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply and extract air filters with differential pressure sensors
- Limitation of the supply air humidity



To fulfill the classification, the plant must be equipped with all indicated functions.

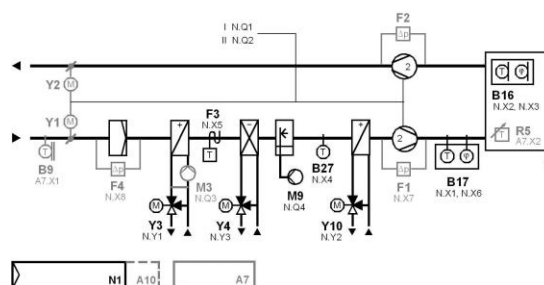
The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control (Air quality sensor must be integrated as an additional feature)
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset (Automatic fan stepswitching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- Heat exchanger defrost control (Exhaust air temperature sensor required)
- With heat exchanger overheating control
- Free mechanical cooling (Outside air temperature and room temperature sensor required)
- Supply Temperature control, variable set point with load dependant compensation
- Room or exhaust air humidity control

Air Conditioning Plant, Heating / Cooling / Humidifying / Dehumidifying - Room-supply air temperature cascade and humidity control

ADZA01 U3B HQ

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Room (extract air)-supply air temperature cascade control with minimum and maximum limitation of the supply air temperature
- Control of the supply air temperature via the reheater valve and the cooling coil valve in sequence
- Control of the dewpoint temperature via the preheater valve and the cooling coil valve in sequence
- Control of room humidification via the air humidifier (on command)
- Control of room dehumidification by changing the outputs of dewpoint temperature control
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor
- Limitation of supply air humidity by shutting down the preheater and by switching off the air humidifier in sequence

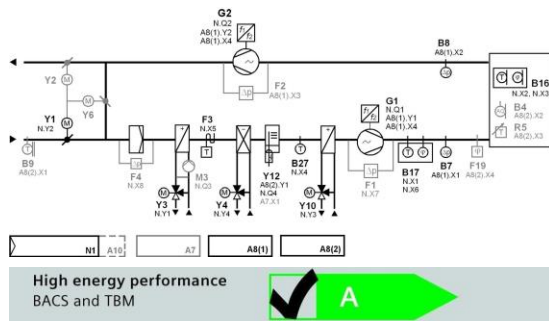


Standard controllers

Communicating HVAC controllers

Application examples RMU7..0B..

AEZH01 U3B DE



To fulfill the classification, the plant must be equipped with all indicated functions.

Air Conditioning Plant, Heating / Cooling / Humidifying / Dehumidifying

- 7-day time switch with holiday / special day program
- Control of variable speed fan
- Room (extract air)-supply air temperature cascade control with minimum and maximum limitation of the supply air temperature
- Control of the supply air temperature via the mixed air dampers, the reheater valve and cooling coil valve in sequence
- Control of the dewpoint temperature via the mixed air dampers, the preheater valve and cooling coil valve in sequence
- Control of room humidification via the air humidifier (on command)
- Control of room dehumidification by changing the outputs of dewpoint temperature control
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor
- Limitation of supply air humidity

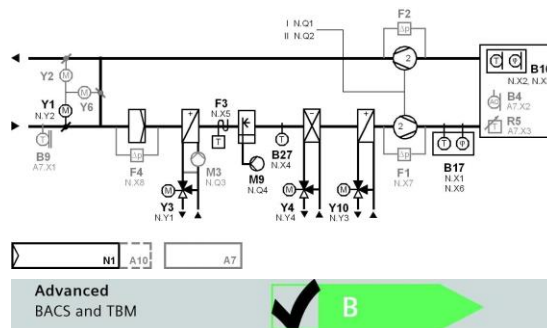
The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset
- With heat exchanger overheating control
- Free mechanical cooling
- Supply Temperature control, variable set point with load dependant compensation
- Room or exhaust air humidity control
- Home automation / building automation and control system and technical home/building management required satisfying Efficiency Class A

Air Conditioning Plant, Heating / Cooling / Humidifying / Dehumidifying - Room-supply air temperature cascade and humidity control

AEZH02 U3B HQ

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Room (extract air)-supply air temperature cascade control with minimum and maximum limitation of the supply air temperature
- Control of the supply air temperature via the mixed air dampers, the reheater valve and the cooling coil valve in sequence
- Control of the dewpoint temperature via the mixed air dampers and the preheater valve in sequence
- Control of room humidification via the air humidifier (on command) and the cooling coil valve in sequence
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor
- Limitation of supply air humidity by switching off the air humidifier in sequence



To fulfill the classification, the plant must be equipped with all indicated functions.

The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control (Air quality sensor required)
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset (Automatic fan stepswitching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- With heat exchanger overheating control
- Free mechanical cooling (Outside air temperature and room temperature sensor required)
- Supply Temperature control, variable set point with load dependant compensation
- With supply air humidity control

RWG1.M8

RWG1.M8 Universal controller

For monitor and control in FAU, AHU, heat exchange units, fans, pumps, lighting and other electromechanical equipments.

- High flexibility and economical efficiency
- Onboard RS485 and ethernet interface for flexible field data acquisition and communication
- Smart and graphical user interface
- Self-explanatory programming language
- Comprehensive Siemens reference application library
- Powerful offline simulator

Data sheet	A6V10733750
Operating voltage	AC 24 V DC 24 V
Frequency	48... 63 Hz
Power consumption	7 W / DC 4 V 14 VA / AC 24 V
Communication	Modbus RS485 and TCP
Max. cable length	30 m
Universal inputs/outputs, number	8
Interface	RS485
Degree of protection	IP20
Dimensions (W x H x D)	143 x 131 x 61 mm

Stock no.

Product no.

S55370-C172

RWG1.M8

Standard controllers

Communicating HVAC controllers

Switching and monitoring device RMS705B..

Switching and monitoring device

The RMS705B-1 complements the range of Synco700 products as a freely configurable unit for

- control and supervisory functions in heating, ventilation and refrigeration plant
- non-standard applications

and, for this reason, offers no predefined standard applications.

The RMS705B-1 is especially suited for the following functions:

- Connection of additional universal alarm inputs
- Adding free inputs for display and supervision
- Event logging (e.g. legionella function)
- Additional time programs (ON / OFF) for basic functions
- Calculation of enthalpy, enthalpy differential, absolute humidity, dewpoint and wet bulb temperature
- Logic function blocks for switching on / off depending on different conditions
- Lead / lag control of pumps, fans, motors, etc., with automatic changeover
- Step switch with linear, binary or flexible functionality

The RMS705B-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish, Chinese.

Extension modules complement the switching and monitoring device and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously. The operation of the device from commissioning to enduser operation can be done via the operator unit.

Available extension modules:

- 1 universal module RMZ785
- 2 universal modules RMZ787
- 2 universal modules RMZ788

A total of 4 extension modules can simultaneously be used with the switching and monitoring device.

Available operator units:

- Plug-in operator unit RMZ790
- Detached operator unit RMZ791
- Bus operating unit RMZ792

Data sheet	N3124
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog outputs, number	4
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal inputs, number	8
Universal input, signal	T1 (PTC) Pt1000 Potential-free digital status contact LG-Ni1000 Digital pulse contact DC 0...10 V 2 x LG-Ni1000 0...1000 Ohm
Relay outputs, number	6
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	173 x 90 x 80 mm

RMS705B-1



Stock no.	Product no.
S55370-C100	RMS705B-1

Standard controllers

Communicating HVAC controllers

Extension modules and operator units for RMU7..0B.. and RMS705B..

RMZ790**Plug-in type operator unit**

- Operator unit plugs into the Synco™ 700 controllers
- For displaying and changing plant data for service staff and enduser
- Clear-text operation
- Can be plugged in and removed during operation
- Power supply via the controller

Data sheet

N3111

Stock no.

Product no.

BPZ:RMZ790

RMZ790**RMZ791****Detached operator unit with 3 m cable**

Like plug-in type operator unit, but:

- Other mounting choices (typically for control panel door or wall mounting)
- Larger display
- Connection via a prefabricated 3 m cable, supplied as standard

Data sheet

N3112

Stock no.

Product no.

BPZ:RMZ791

RMZ791**RMZ792****Bus operator unit**

Communicating operator unit for operating up to 150 controllers, room units and central units from the Synco™ 700 range via KNX bus.

Favorite pages can be freely defined. Designed for fixed installation or mobile use.

Data sheet

N3113

Operating voltage

AC 24 V

Voltage supply

KNX bus

Power consumption

2.5 VA

Degree of protection

IP20

Dimensions (W x H x D)

145 x 96 x 34 mm

Stock no.

Product no.

BPZ:RMZ792

RMZ792

Extension modules and operator units for RMU7..0B.. and RMS705B..

Room unit with KNX bus

QAW740

Configurable unit with display of operating mode, timer, temperatures and fault.

With 3 operating elements:

- Knob for setpoint readjustments
- Operating mode button
- Timer button



Data sheet	N1633
Voltage supply	KNX bus
Measuring range, temperature	0...45 °C
Setpoint readjustment range	±3 K
Communication	KNX (KNX TP1)
Connection cable	2-wire
Degree of protection	IP20
Dimensions (W x H x D)	96 x 96 x 47 mm
Weight (net)	0.22 kg

Stock no.

Product no.

BPZ:QAW740

QAW740

Universal modules

RMZ78..

Additional inputs and outputs required by the Synco™ 700 controllers can be provided by these modules. A description of the functions is given with the relevant controller module.



Data sheet	N3146
Voltage supply	Supply from controller module
Power consumption	3 VA
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal input, signal	0...1000 Ohm
	1000...1175 Ohm
	DC 0...10 V
	Potential-free digital status contact
	LG-Ni1000
	Pt1000
	T1 (PTC)
	2 x LG-Ni1000
Relay outputs	switching contact, potential-free
Relay output, switching voltage	AC 19...265 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	117 x 90 x 75 mm

Range overview RMZ78..

Universal- inputs, number	Analog outputs, number	Relay outputs, number	Weight (net) [kg]	Stock no.	Product no.
4	2	2	0.322	BPZ:RMZ788	RMZ788
6	2	4	0.359	BPZ:RMZ789	RMZ789
8	0	0	0.3	BPZ:RMZ785	RMZ785
4	0	4	0.334	BPZ:RMZ787	RMZ787

RMZ780**Module connector**

Module connector for detached mounting of extension modules within the control panel.

Data sheet	N3138
Max. cable length	10 m
Dimensions (W x H x D)	18.5 x 87.5 x 22.5 mm

Stock no.	Product no.
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BPZ:RMZ780	RMZ780
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Standard controllers
Communicating HVAC controllers
 Field devices for RMU7..OB.. and RMS705B..

Sensors, setpoint adjusters

Product Title	Data sheet	Stock no.	Product no.
Frost detector, modulating	A6V10432020	BPZ:QAF63..J	QAF63..J
Differential pressure sensor, DC0...10 V	N1910_01	BPZ:QBM2030..	QBM2030..
Setpoint adjuster, passive, scale 0...50 °C (exchangeable)	N1991	BPZ:BSG21.1	BSG21.1
Setpoint adjuster, passive, temperature ranges: -20...20 °C; 20...60 °C; -3...3 K	N1991	BPZ:BSG21.5	BSG21.5
Active setpoint adjuster 0...100 %, for flush panel mounting	N1992	BPZ:BSG61	BSG61
Flue gas temperature sensor Pt1000	N1846	BPZ:FGT-PT1000	FGT-PT1000
Immersion temperature sensor 100 mm DC0...10 V	N1782	BPZ:QAE2164.010	QAE2164.010
Immersion temperature sensor 150 mm DC0...10 V	N1782	BPZ:QAE2164.015	QAE2164.015
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	QAE9120.010
Duct temperature sensor 400 mm, LG-Ni1000	N1761	BPZ:QAM2120.040	QAM2120.040
Duct temperature sensor 2000 mm, LG-Ni1000	N1761	BPZ:QAM2120.200	QAM2120.200
Duct temperature sensor 6000 mm, LG-Ni1000	N1761	BPZ:QAM2120.600	QAM2120.600
Window pane temperature sensor	N1830	BPZ:QAT22	QAT22
Duct sensor for humidity (DC0...10 V)	N1864	BPZ:QFM2100	QFM2100
Duct sensor for humidity (0...10V) and temperature (Ni1000)	N1864	BPZ:QFM2120	QFM2120
Duct sensor for humidity (DC0...10 V) and temperature (DC0...10 V)	N1864	BPZ:QFM2160	QFM2160
Duct sensor for humidity (0...10V) and temperature (0...10V) with calibration certificate	N1883	BPZ:QFM4160	QFM4160
Solar sensor	N1943	BPZ:QLS60	QLS60
Duct sensor for air velocity	N1932	BPZ:QVM62.1	QVM62.1
Frost detector, air side, 2-point	A6V10432022	BPZ:QAF64..J	QAF64..J
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	QAC22
Differential pressure sensor for liquids and gases	N1923	BPZ:QBE61.3-DP..	QBE61.3-DP..
Differential pressure sensors for liquids and gase (DC0...10 V)	N1920	BPZ:QBE63-DP..	QBE63-DP..
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	QAD22
Strap-on temperature sensor with cable LG-Ni1000	N1802	BPZ:QAD26.220	QAD26.220
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	QAE2120.010
Duct temperature sensor 400 mm, Pt1000	N1761	BPZ:QAM2112.040	QAM2112.040
Immersion temperature sensor Ø 4 mm with cable and fitting	N1790	BPZ:QAE26.9..	QAE26.9..
Differential pressure sensors for liquids and gase (0...10 V)	N1922	BPZ:QBE3000..	QBE3000..
Immersion temperature sensor 150 mm, LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.015	QAE2120.015
Immersion temperature sensor 100 mm, LG-Ni1000, without protection pocket	N1781	BPZ:QAE2121.010	QAE2121.010
Cable temperature sensor for high-temperature applications (180°C)	N1833	BPZ:QAP21.2	QAP21.2
Cable temperature sensor silicone 1.5 m, LG-Ni1000	N1831	BPZ:QAP21.3	QAP21.3
Immersion temperature sensor 150 mm LG-Ni1000, without protection pocket	N1781	BPZ:QAE2121.015	QAE2121.015
Outside/room temperature sensor DC0...10 V	N1814	BPZ:QAC3161	QAC3161
Cable temperature sensor PVC 2 m, LG-Ni1000	N1831	BPZ:QAP22	QAP22
Duct sensor for humidity (DC0...10 V) for demanding requirements	N1882	BPZ:QFM3100	QFM3100
Duct air quality sensor CO ₂ / temperature / rel. humidity / VOC	N1962	BPZ:QPM21..	QPM..
Duct sensor for humidity (DC0...10 V) and temperature (DC0...10 V) for demanding requirements	N1882	BPZ:QFM3160	QFM3160
Duct air quality sensor CO ₂ / temperature / rel. humidity / VOC; Modbus	A6V11610641	BPZ:QPM21..-MO	QPM../MO

Monitors

Product Title	Data sheet	Stock no.	Product no.
Condensation monitor	A6V10741072	BPZ:QXA21..	QXA21..
Frost monitor, 2-point, capillary tube 3000 mm, -10...+15 °C	A6V12051788	S55700-P163	QAF65.3AR-J
Frost monitor, 2-point, capillary tube 6000 mm, -10...+15 °C	A6V12051788	S55700-P164	QAF65.6AR-J
Duct hygostat, setpoint setting range 15...95 % r.h.	N1514	BPZ:QFM81.2	QFM81.2
Room hygostat, setpoint setting range 15...95 % r.h., setpoint adjuster inside device	N1514	BPZ:QFM81.21	QFM81.21
Frost detector, air side, 2-point	A6V10432022	BPZ:QAF64..J	QAF64..J
Frost monitor, 2-point, capillary tube 3000 mm, -10...+15 °C	A6V11965899	S55700-P161	QAF65.3M-J

New Product

Standard controllers

Communicating HVAC controllers

Field devices for RMU7..0B.. and RMS705B..

Monitors

Product Title	Data sheet	Stock no.	Product no.
Frost monitor, 2-point	N1284	BPZ:QAF81..	QAF81..
Frost monitor, 2-point, capillary tube 6000 mm, -10...+15 °C	A6V11965899	S55700-P162	QAF65.6M-J
Room hygrostat, setpoint setting range 30...90 % r.h., setpoint adjuster inside device	N1518	BPZ:QFA1000	QFA1000
Room hygrostat, setpoint setting range 30...90 % r.h., external setpoint adjustment	N1518	BPZ:QFA1001	QFA1001
Temperature controller	N1205	BPZ:RAK-TR.1..H	RAK-TR.1..H
Thermal reset limit thermostat	N1202	BPZ:RAK-TW.1..H	RAK-TW.1..H
Temperature limiter	N1206	BPZ:RAK-TB.1..M	RAK-TB.1..M
Safety limit thermostat	N1204	BPZ:RAK-ST..M	RAK-ST..M
Temperature controller/ thermal reset limit thermostat	N1212	BPZ:RAZ-TW.1..J	RAZ-TW.1..J
Differential pressure monitor	N1552	BPZ:QBM81..	QBM81..
Temperature controller/ safety limit thermostat	N1214	BPZ:RAZ-ST..J	RAZ-ST..J

Room units / sensors

Product Title	Data sheet	Stock no.	Product no.
Front module with passiv temperature measurement, LG-Ni1000	N1408	S55720-S133	AQR2531ANW
Room air quality sensor CO ₂ / temperature / rel. Humidity / VOC	N1961	BPZ:QPA20..	QPA..
Room sensor for humidity (DC0...10 V) for demanding requirements	N1858	BPZ:QFA3100	QFA3100
Room sensor for humidity (DC0..10V) and temperature (DC0..10V) with calibration certificate	N1859	BPZ:QFA4160	QFA4160
Front module for base modules, temperature (active)	N1411	S55720-S136	AQR2532NNW
Room unit with room temperature sensor and setpoint adjuster	N1721	BPZ:QAA25	QAA25
Indoor air quality controller with integrated VOC sensor for mixed gas	N1571	BPZ:QPA84	QPA84
Room sensor for humidity (DC0...10 V) and temperature (DC0...10 V) for demanding requirements	N1858	BPZ:QFA3160	QFA3160
Base module with KNX for temperature and humidity measurement	N1411	BPZ:AQR2570..	AQR2570..
Room temperature sensor LG-Ni1000	N1721	BPZ:QAA24	QAA24
Room sensor for humidity (DC0...10 V)	N1857	BPZ:QFA2000	QFA2000
Room sensor KNX for temperature, white	N1602	S55624-H103	QMX3.P30
Room sensor for humidity (DC0...10 V) and temperature (LG-Ni1000)	N1857	BPZ:QFA2020	QFA2020
Room unit with room temperature sensor and setpoint readjuster -3...3 K	N1721	BPZ:QAA27	QAA27
Room sensor for humidity (DC0...10 V) and temperature (DC0...10 V)	N1857	BPZ:QFA2060	QFA2060
Room temperature sensor LG-Ni1000 for mounting on recessed conduit boxes	N1722	BPZ:QAA64	QAA64
Room unit with KNX bus	N1633	BPZ:QAW740	QAW740
Room sensor KNX for temperature and humidity, white	N1602	S55624-H116	QMX3.P40
Room sensor KNX for temperature, humidity, CO ₂ , white	N1602	S55624-H104	QMX3.P70
Mounting plates for front modules with passiv temperature measurement	N1408	BPZ:AQR2500..	AQR2500..

Step switches, signal converter and transformers

Product Title	Data sheet	Stock no.	Product no.
Transformers	N5536	BPZ:SEM62..	SEM62..
Universal digital indicator	N5312	BPZ:BAU200	BAU200
Current valve	N4938	S55376-C160	SEA45.5
Signal converter DC0...10V or DC 0 / 10 V in AC 0 / 24 V	N5102	BPZ:SEM61.4	SEM61.4
Variable Speed Drive for pumps and fans, IP55, Filter B (C1)	N5111	BPZ:G120P..AM..B..	G120P..5B
Variable Speed Drive for pumps and fans, IP55, Filter A (C2)	N5111	BPZ:G120P..AM..A..	G120P..5A
Variable Speed Drive for pumps and fans, IP20, Filter B (C1)	N5111	BPZ:G120P..AE..B..	G120P..2B
Variable Speed Drive for pumps and fans, IP20, Filter A (C2)	N5111	BPZ:G120P..AE..A..	G120P..2A
Signal converter with preprogrammed applications	N5146	BPZ:SEZ220	SEZ220

Standard controllers
Communicating HVAC controllers
Field devices for RMU7..0B.. and RMS705B..

Service tool

Product Title	Data sheet	Stock no.	Product no.
Commissioning and plant operating software	N5649	S55800-Y100	ACS790
Service tool for KNX / LPB	N5655	BPZ:OCI700.1	OCI700.1
USB - KNX Service interface	A6V10438951	S55800-Y101	OCI702
Web server for Synco devices	N5701	BPZ:OZW772..	OZW772..

The software (ACS790) can be downloaded for free via <http://www.siemens.com/acs790>.

Standard controllers

Various electrical accessories

Interfaces

SEA45.5



Current valve

Current valve for AC 24 V pulse/pause control of electrical loads up to 30 kW

Mounting & local electrical regulations to be considered

SEA45.5 Current valve

Data sheet	N4938
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	0.24 VA
Degree of protection	IP20
Dimensions (W x H x D)	35.6 x 110 x 136 mm

Stock no. Product no.

S55376-C160

SEA45.5

SEM61.4



Signal converter DC 0...10 V or DC 0 / 10 V in AC 0 / 24 V

For converting a DC 0...10 V or DC 0 / 10 V input signal to a pulse-width modulated output signal AC 24 V for the control of maximum 20 current valves

Data sheet	N5102
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	1 VA
Analog input, signal	DC 0...10 V
Digital input, contact query	DC 0/10 V
Triac output, switching voltage	AC 24 V
Triac output, switching current	0.5 A
Degree of protection	IP20
Dimensions (W x H x D)	36 x 90 x 60 mm

Stock no. Product no.

BPZ:SEM61.4

SEM61.4

UA1T



Power amplifier for thermal actuators AC 24 V, PWM

The UA1T power amplifier is used to allow the connection of additional valve actuators to controllers with an AC 24 V output signal.

Indoor use

Data sheet	N3591
Operating voltage	AC 24 V
Current consumption	15 A
Digital outputs	AC 24V PWM, for max. 2x2 therm. Fan
Universal input, signal	AC 24 V
Weight (incl. packaging)	0.42 kg
Dimensions (W x H x D)	55 x 18 x 22 mm

Stock no. Product no.

BPZ:UA1T

UA1T

Signal converter with preprogrammed applications

SEZ220

- Maximum and minimum selection
- Calculation of average
- Calculation of enthalpy, enthalpy differential, absolute humidity, dewpoint
- Flexible adaptation, limitation, inversion and conversion of input signal
- Tested preselected applications
- Flexible configuration



Data sheet	N5146
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	5 VA
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal inputs, number	5
Universal input, signal	0...1000 Ohm DC 0...10 V LG-Ni1000 Pt1000 T1 (PTC) 2 x LG-Ni1000
Degree of protection	IP20
Dimensions (W x H x D)	123 x 90 x 86 mm

Stock no.

Product no.

BPZ:SEZ220

SEZ220

Signal converter DC 0...20 V Phs to DC 0...10 V

SEZ91.6

For the conversion of DC 0...20 VPh signals
to DC 0...10 V signals



Data sheet	N5143
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	0.5 VA
Analog input, signal	DC 0...20 V Phs
Analog output, signal	DC 0...10 V
Degree of protection	IP20
Dimensions (W x H x D)	57 x 22 x 18 mm

Stock no.

Product no.

BPZ:SEZ91.6

SEZ91.6

Standard controllers

Various electrical accessories

Setpoint adjuster

BSG21..



Passive setpoint adjusters, for flush panel mounting

Setpoint adjuster for flush panel mounting 48 x 48 mm, with 2 adjustable stops for setpoint limitation. With transparent plastic cover and scales according to the temperature ranges.

Data sheet	N1991
Degree of protection	IP42

Range overview BSG21..

Temperature range	Analog output, signal	Stock no.	Product no.
Various	0...1000 Ohm	BPZ:BSG21.1	BSG21.1
-20...20 °C	LG-Ni1000	BPZ:BSG21.5	BSG21.5
20...60 °C			
-3...3 K			

For BSG21.1: Scale 0...50 °C included as standard. For additional scales (BSG-Z) please contact your local Siemens branch.

BSG61



Active setpoint adjuster 0...100 %, for flush panel mounting

Setpoint adjuster for flush panel mounting 48 x 48 mm, with 2 adjustable stops, for setting or limiting a setpoint or positioning signal. With transparent front cover and exchangeable scales, depending on requirements. Supplied with 0...100 % scale (for additional scales (BSG-Z) please contact your local Siemens branch).

Data sheet	N1992
Operating voltage	AC 24 V DC 15...24 V
Frequency	50/60 Hz
Power consumption	0.3 W
Analog output, signal	DC 0...10 V
Degree of protection	IP42
Dimensions (W x H x D)	48 x 48 x 46 mm
Analog input, signal	DC 0...10 V
Ambient temperature, operation	-5...55 °C
Type of fixing	Mounting in a control panel front, control desk or on a concealed conduit box (on the cover plate)

Stock no.	Product no.
BPZ:BSG61	BSG61

Universal digital indicator

BAU200

Universal single point digital indicator

- Suitable for front-mounting in control panel
- With LED display
- Input signal (type of signal and measuring range) can be set with buttons
- For all Siemens Building Technologies sensors (LG-Ni 1000, T1, PT100, PT 1000, 0 ... 10 V)



Data sheet	N5312
Analog input, signal	DC 0...10 V LG-Ni1000 Pt100 Pt1000 T1 (PTC)
Analog output, signal	DC 0...10 V

Stock no.	Product no.
BPZ-BAU200	BAU200

SEH62.1



Digital time switch, 1-channel, with 7-day program

Programmable as 24-hour or 7-day time switch. Wall or DIN rail mounting.

Data sheet	N5243
Operating voltage	AC 230 V
Power consumption	3 VA
Frequency	50/60 Hz
Buffer time	72 h
Display	LCD
Digital inputs, number	1
Digital input, contact query	8 mA
	DC 24 V
Digital input, application	Countdown timer
Relay output, switching voltage	AC 24...250 V
	24 V
Relay output, switching current	AC 6 (3) A
	DC 0.1...4 A
Relay outputs	Change-over contact, potential-free
Connection cable	Max. 2.5 mm ²
Type of fixing	Wall mounting with screws
	DIN rail 60 mm long min.
Degree of protection	IP20
Ambient temperature, operation	0...50 °C
Dimensions (W x H x D)	79 x 106 x 56 mm

Stock no. Product no.

BPZ:SEH62.1

SEH62.1

Transformers

SEM62..

Transformer with housing, providing a reduction in voltage from AC 230 V to AC 24 V (output power 30 VA)

- Self-resetting fuse integrated on the primary side
- Secondary On/Off switch and replaceable fuse (SEM62.2 only)
- Plug-in screw terminals
- Two secondary output plug-in terminals



Data sheet	N5536
Primary voltage	AC 230 V
Secondary voltage	AC 24 V
Output rating	30 VA
Degree of protection	IP20
Dimensions (W x H x D)	114 x 106 x 57 mm

Range overview SEM62..

Product Title	Stock no.	Product no.
Transformer	BPZ:SEM62.1	SEM62.1
Transformer with switch and replaceable fuse	BPZ:SEM62.2	SEM62.2

Software, web server and system devices



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Overview standard systems

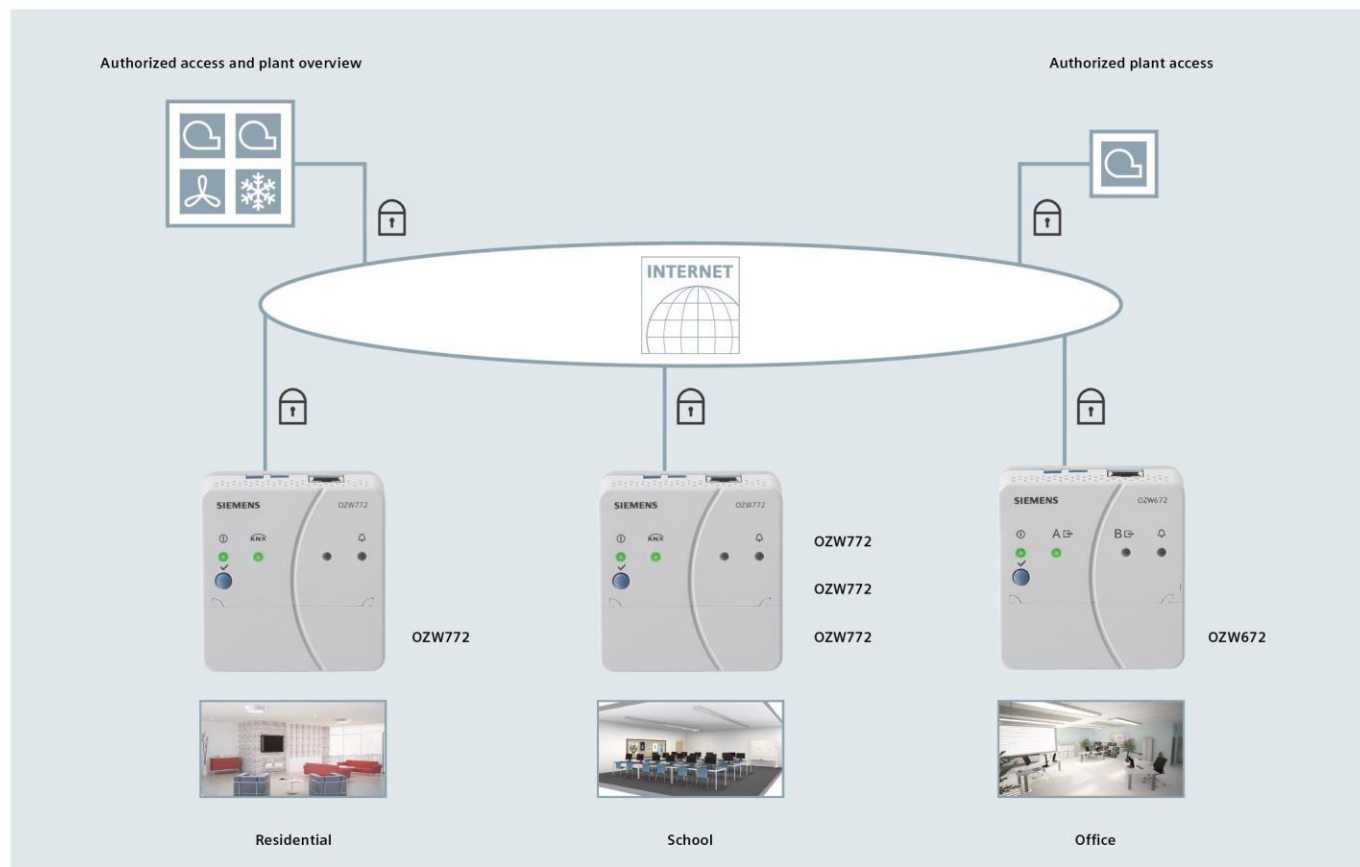
Communication	KNX (Konnex)	LPB (Local process bus)
Standard systems for:	Heating, ventilation or air conditioning	Heating plants
Web server	OZW772..	OZW672..
PC Tool	ACS790	ACS790
Service Tool	OCI700.1	OCI700.1
USB-KNX Interface with Bus Power supply	OCI702	
Heating controllers	Synco™ ■ RMH760B-1 Heating controller ■ RMK770-1 Boiler sequence controller	■ RVL4.. Heating controllers ■ RVP3.. Heating controllers ■ RVD2.. District heating controllers
Ventilation and air conditioning controllers	Synco™ ■ RMU7..0B.. Universal controllers	
Switching and Monitoring Device	Synco™ ■ RMS705B-1 Switching and monitoring device	
Room controllers	Synco™ ■ RMB795B-1 Central control unit ■ RXB Room controllers	
Home Automation System	Synco™ living ■ QAX903, QAX913	
Thermostats	Synco™ ■ RDF600KN, RDF600KN/S, RDF870KN, RDF880KN/NF ■ RDG100KN, RDG160KN, RDG165KN, RDG405KN ■ RDF600KN/VB, RDF800KN, RDF800KN/VB, RDG200KN, RDG260KN	
Flush-mount room sensor	■ AQR253.. ■ AQR257..	
Wall-mount room sensor	■ QMX3.P30 ■ QMX3.P70	

Synco IC

Easy and secure remote access and plant overview

Synco IC is a web-based Remote Access System. Setting-up Internet access to your plant is easy: just connect your web server OZW with the Internet, create your user account on the web page and enter the key for your web server OZW.

www.siemens-syncoic.com



Internet portal Synco IC offers simple and secure access to your plants

Simple and fast set up of access via the Internet:

- fixed net- or mobile router
- neither a fixed IP address, nor a dynamic IP address service, nor port forwarding (NAT/PAT) is required

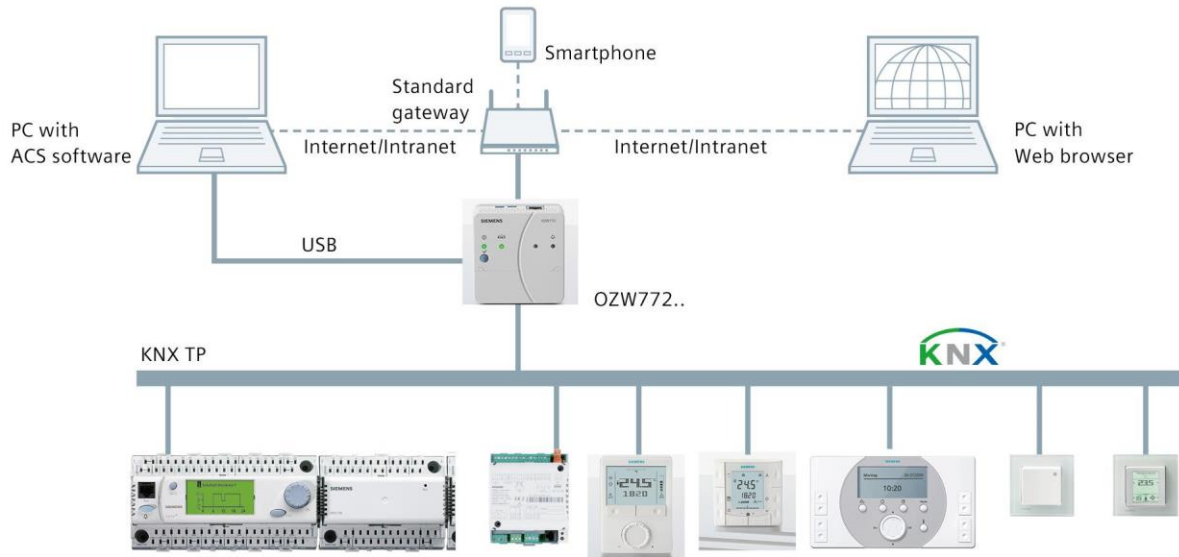
The portal provides additional functions:

- Manage one or multiple plants
- Central user management
- Display of plant overview, state of Energy indicators, and alarms
- Send alarm notifications per e-mail
- Secured communications through encryption (https)

Synco Webserver

Standard systems for heating, ventilation or air conditioning Synco™ (KNX)

Low engineering system to easily build complex applications with flexible and modular combinations of standard controllers Synco™ 700. Standard Systems for HVAC plants are capable to be remote operated and can generate alarms to service centers. Full control without extensive engineering.



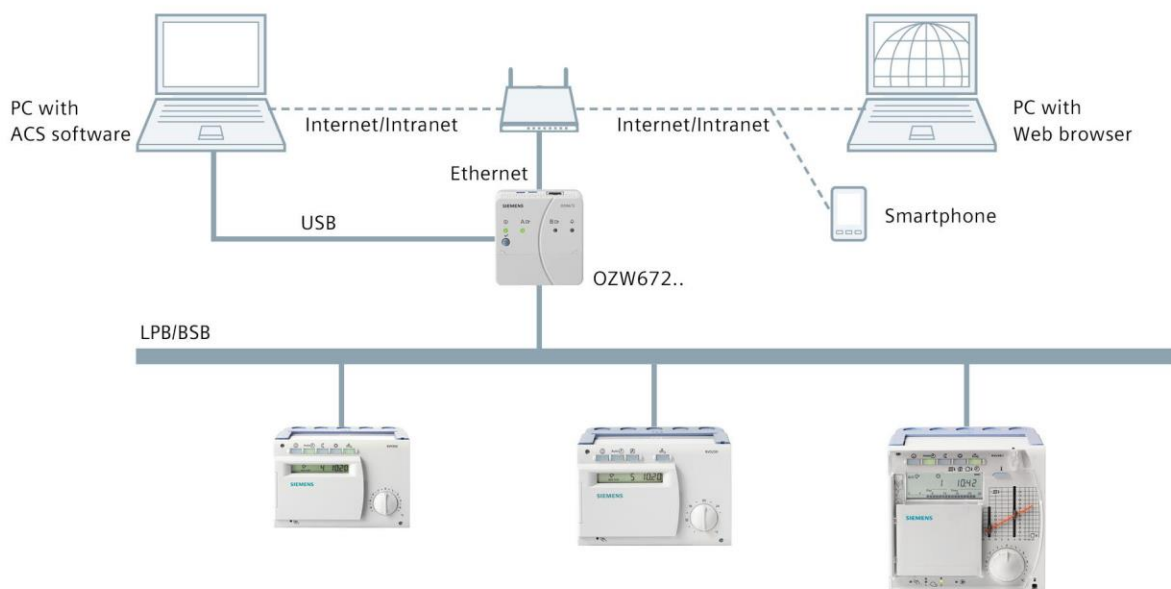
Webserver	OZW772			
Device versions	OZW772.01	OZW772.04	OZW772.16	OZW772.250
No. of Synco devices ¹⁾	1	4	16	250
KNX S-Mode data points	7	237	237	237
Plant operation				
ACS software	Yes			
Web Browser	Yes			
Interface	Ethernet, USB			
Alarming				
Max. message receivers	4			
ACS alarm via PC	No			
Fax	No			
Pager	No			
SMS	No			
e-Mail	Yes (Ethernet)			
Offline trend function	Yes			
Digital alarm inputs (potential free)	None			
Local device operation	Button			
Bus power supply	No			
General device data				
Operating voltage	AC 230 V ±15 %			
Frequency	50/60 Hz			
Power consumption	3 VA			
Degree of protection	IP30			

¹⁾ Synco™ controller series 700, QAW740, RXB., RDG., RDF., Synco™ living QAX9..

LPB Webservice

Standard system for heating plants (LPB)

Low engineering system to easily build complex applications with flexible combinations of standard controllers Series RVL4.., RVP3.., and RVD2... Standard Systems for heating plants are capable to be remote operated and can generate alarms to service centres: Full control without extensive engineering.







Webserver	OZW672		
Device versions	OZW672.01	OZW672.04	OZW672.16
No. of comm. devices ¹⁾	1	4	16
Plant operation			
ACS software		Yes	
Web Browser		Yes	
Interface		Ethernet, USB	
Alarming			
Max. message receivers		4	
ACS alarm via PC		No	
Fax		No	
Pager		No	
SMS		No	
e-Mail		Yes (Ethernet)	
Offline trend function		Yes	
Digital alarm inputs (potential free)		2	
Local device operation		Button	
Bus power supply		No	
General device data			
Operating voltage		AC 230 V ±15 %	
Frequency		50/60 Hz	
Power consumption		3 VA	
Degree of protection		IP30	

¹⁾ RVL4..,RVP3..,RVD2..

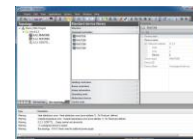
Interfaces

Different interfaces are available for the connection with a Microsoft Windows PC tool. The units OCI7... are designed for portable use and devices N 148/... for mounting on a DIN rail.

				
Interface	OCI700	OCI702	N 148/12	N 148/23
Type	USB	USB	USB	Ethernet RJ45
Long frames up to 64 Bytes	Yes	Yes	Yes	Yes
Tool (starting with version)				
ACS	V1	V10	V10	No
ETS	V3	V3	V3	V5
Desigo ABT Site	V6	V6	No	No
Devices				
Heating controller RVD, RVP, RVL	Yes	None	None	None
Synco 200 controller	Yes	None	None	None
Synco 700 and individual room controller	Yes	Yes	Yes	Yes
Synco living apartment unit	Yes	Yes	Yes	Yes
Gamma devices	Yes	Yes	Yes	Yes
Desigo TRA (DXR, PXC3)	None	Yes	None	None
KNX TP devices	Yes	Yes	Yes	Yes
Power supply				
Bus power supply (KNX TP)	No	25 mA, switchable	No	No
Power consumption from field bus	5 mA	5 mA	5 mA	5 mA
Operating voltage	USB	USB	USB	Power over Ethernet
Alternative power supply	No	No	No	24 VAC/DC
Mounting				
Mounting	portable	portable	DIN-Rail	DIN-Rail
Supplied accessories				
Cable for PC	USB	USB		
Cable for field bus	KNX RJ45 LPB RJ12	KNX RJ45 Jack plug Bus terminal		
Transport container	Service case	Bag		

Commissioning and plant operating software

ACS790



PC software for commissioning, operating and supervision of HVAC plants.
 Consists of 3 programs: ACS Tool, ACS Alarm and Remote Tool Access.

ACS Tool:

for plant commissioning, operating and service

- Popcard (standard and customized)
- Plant diagram (standard and customized)
- Plant view (standard and customized)
- Trend functions (online and offline)
- File transfer
- Parameter settings
- Commissioning protocol

ACS Alarm:

- For receiving and managing alarms

Remote Tool Access:

On web servers as of V7.0, you can establish a secure connection to the web server OZW672 or OZW772 with the ACS790 and the "Remote Tool Access" software via Synco IC portal.

Commissioning and service via OCI7.. service interface

Compatible devices see OCI700.1 and OCI702.

Plant operation and supervision for

KNX systems

- Web server: OZW772
- Synco™ living: QAX9...
- Controllers: Synco™700, Synco RXB
- Thermostats: RDF..., RDG...
- Sensors: QMX3.P30, QMX3.P70, AQR253.. and AQR257..

LPB/BSB systems

- Web server units: OZW672
- Sigmagyr controllers: RVD., RVL., RVP..
- Albatros controllers

The software can be downloaded for free via <http://www.siemens.com/acs790>.

Data sheet

N5649

Stock no.

Product no.

S55800-Y100

ACS790

Software, web server and system devices
Engineering and service tool (Synco / LPB)
 For HVAC plants

2

OCI700.1



Service tool for KNX / LPB

The service tool consists of:

- ACS790 CD-ROM
- OCI700 service interface
- USB cable
- Service cable for Synco™ controllers
- Service cable for SIGMAGYR® and ALBATROS controllers

Commissioning and diagnostics of the following devices:

Synco devices:

- Web Server OZW772
- Heating controller RMH760B-1
- Boiler sequence controller RMK770-1
- Universal controllers RMU7..0B-1
- Universal controllers RLU2..
- Switching and monitoring device RMS705B-1
- Room unit QAW740
- Central control unit RMB795B-1
- Individual room controllers RXB..
- Signal converter SEZ220
- Synco™ living central apartment unit QAX9..
- Synco™ thermostats RDF.., RDG.., RDU341
- Sensores: QMX3.P30, QMX3.P70, AQR253.. and AQR257..

LPB/BSB systems

- Web server units: OZW672
- Sigmagyr controllers: RVD.., RVL.., RVP..
- Albatros controllers

Data sheet

N5655

Stock no.	Product no.
BPZ:OCI700.1	OCI700.1

OCI702



USB - KNX Service interface

The service interface consists of:

- OCI702 service interface
- USB 2.0 cable (Type A / B)
- KNX service cable for Synco™ controllers (RJ45 / RJ45)
- KNX service cable for Desigo™ TRA (RJ45 / jack plug 2.5 mm)
- KNX service cable (RJ45 / KNX bus terminal)

With the respective PC software, the interfaces allows to commission and service devices with KNX communication, e.g. from the following ranges:

- Synco™ 700 controllers and room devices
- KNX room thermostats RDF..., RDG..
- Individual room controllers RXB..
- Synco™ living central apartment units QAX9...
- Desigo TRA
- GAMMA devices

Data sheet

A6V10438951

Stock no.	Product no.
S55800-Y101	OCI702

Web server for Synco devices

Web server OZW772 allows for remote plant control and monitoring via the web.

- Operate web browser via PC/laptop and Smartphone
- Operate ACS (PC/laptop with ACS plant operating software)
- Connections: USB and Ethernet
- Display fault messages in the web browser
- Send fault messages to a maximum of 4 e-mail recipients
- Periodically send system reports to e-mail recipients
- Visualize the plants in the web browser based on standard plant diagrams and customized plant web pages
- Acquire and display consumption data
- Send consumption data file to 2 email recipients
- Function "Energy indicator" to monitor data points for energy-related limit values, or "Green limits"
- Web services for external applications via Web API (Web Application Programming Interface)
- Encrypted with https and TLS for e-mails
- Record of trends, display and dispatch to 2 e-mail recipients
- Integration up to 237 S-Mode data points of KNX devices (not OZW772.01)
- Direct commissioning with webbrowser or ACS service tool
- Easy and secure remote access and plant overview with Synco IC Remote Access - a web-based service for secure remote access (www.siemens-syncoic.com)



Internet portal Synco IC offers simple and secure access to your plants

- Simple and fast set up of access via the Internet (fixed net- or mobile router)
- The portal provides additional functions:
 - Manage one or multiple plants
 - Central user management
 - Display of plant overview, state of Energy indicators and alarms
 - Send alarm notifications per e-mail
 - Secured communications through encryption (https)

Web servers OZW772.01, OZW772.04, OZW772.16, OZW772.250 can connect 1, 4, 16, or 250 KNX devices from the product ranges Synco 700, Synco RXB, and RDG/RDF room thermostats, and the QAX Synco living central apartment units.

Data sheet	N5701
Operating voltage	Power pack: AC 230 V Web server: DC 24 V
Communication	KNX TP (twisted pair) Ethernet, RJ45 plug socket (shielded) USB V2.0
Mounting	On DIN rails With Screws
Mounting	DIN rail
Degree of protection	IP30
Dimensions (W x H x D)	87.5 x 90 x 40 mm

Range overview OZW772..

Product Title	Stock no.	Product no.
Web server for 1 Synco device	BPZ:OZW772.01	OZW772.01
Web server for 4 Synco devices	BPZ:OZW772.04	OZW772.04
Web server for 16 Synco devices	BPZ:OZW772.16	OZW772.16
Web server for 250 Synco devices	BPZ:OZW772.250	OZW772.250

Synco standard system main components

Product Title	Data sheet	Stock no.	Product no.
VAV compact controller KNX	N3547	BPZ:G..B181.1E/KN	G..B181.1E/KN
Room thermostats with KNX communications	A6V11545853	BPZ: RDG2..KN	RDG2..KN
Flush-mount room thermostat with KNX communications, 2-/4-pipe fan coils or DX type equipment	N3076	S55770-T293	RDF600KN

Synco standard system main components

Product Title	Data sheet	Stock no.	Product no.
Central control unit for room controllers and room thermostats	N3122	S55370-C162	RMB795B-1
Heating controller	N3133	BPZ:RMH760B-1	RMH760B-1
Boiler sequence controller	N3132	BPZ:RMK770-1	RMK770-1
Switching and monitoring device	N3124	S55370-C100	RMS705B-1
Room controller for 3-speed fan	N3873	BPZ:RXB21.1/FC-10	RXB21.1/FC-10
Room controller for 3-speed fan	N3873	BPZ:RXB21.1/FC-11	RXB21.1/FC-11
Room controller with 3-speed fan and electric heating coil	N3873	BPZ:RXB22.1/FC-12	RXB22.1/FC-12
Room controller for chilled ceilings and radiators	N3874	BPZ:RXB24.1/CC-02	RXB24.1/CC-02
Room controller for fan-coil applications with KNX communication	N3875	S55373-C121	RXB39.1/FC-13
Base module with KNX for temperature and humidity measurement	N1411	BPZ:AQR2570..	AQR2570..
Room thermostat for temperature and air quality control with KNX communications, AC 24 V, VAV heating and cooling systems	N3192	S55770-T348	RDG405KN
Room sensor KNX for temperature, white	N1602	S55624-H103	QMX3.P30
Touch screen room thermostat with KNX communications, for 2-/4- pipe fan coil, universal applications or compressors in DX-type equipment	N3174	S55770-T350	RDF800KN
Universal controller	N3150	BPZ:RMUB..	RMU7..0B-1
Web server for Synco devices	N5701	BPZ:OZW772..	OZW772..
Touch Screen Flush-mount PM2.5 & IAQ Controller with KNX	A6V11439454	S55770-T407	RDF870KN
Room unit with KNX bus	N1633	BPZ:QAW740	QAW740
Touch Screen Flush-mount PM2.5 & IAQ Controller with RS485 Modbus	A6V11439454	S55770-T408	RDF870MB
Room sensor KNX for temperature, humidity, CO2, white	N1602	S55624-H104	QMX3.P70
Front modules for base module	N1411	BPZ:AQR253..	AQR253..
Base modules with KNX for CO ₂ measurement	N1411	BPZ:AQR2576..	AQR2576..

Web Server for LPB devices

OZW672..



Web server OZW672 allows for remote plant control and monitoring via the web

- Operate web browser via PC/laptop and Smartphone
- Operate via ACS790 PC tool
- Connections: USB and Ethernet
- 2 digital inputs for fault messages
- Display fault messages in the web browser
- Send fault messages to a maximum of 4 email recipients
- Periodically send system reports to email recipients
- Visualize the plants in the web browser based on standard plant diagrams and customized plant web pages
- Function "Energy indicator" to monitor data points for energy-related limit values, or "Green limits"
- Web services for external applications via Web API (Web Application Programming Interface)
- Encrypted with https and TLS for emails
- Record of trends, display and dispatch to 2 e-mail recipients

Internet portal Synco IC offers simple and secure access to your plants

- Simple and fast set up of access via the Internet (fixed net- or mobile router)
- The portal provides additional functions:
 - Manage one or multiple plants
 - Central user management
 - Display of plant overview, state of Energy indicators and alarms
 - Logging fault messages
 - Send alarm notifications per e-mail
 - Secured communications through encryption (https)

Package insert:

Mounting Instructions M5712
 Power pack AC 230 V / DC 24 V
 Ethernet-cable
 USB-cable
 2 cable ties

Web servers OZW672.. can connect 1 LPB/BSB device or 4 or 16 LPB devices from the product ranges Sigmagyr, Albatros and Albatros2.

Data sheet	N5712
Operating voltage	Power pack: AC 230 V Web server: DC 24 V
Communication	LPB/BSB (twisted pair) Ethernet, RJ45 plug socket (shielded) USB V2.0
Digital inputs, number	2
Degree of protection	IP30
Dimensions (W x H x D)	87.5 x 90 x 40 mm

Range overview OZW672..

Product Title	Stock no.	Product no.
Web Server for 1 LPB/BSB device	BPZ:OZW672.01	OZW672.01
Web Server for 4 LPB devices	BPZ:OZW672.04	OZW672.04
Web Server for 16 LPB devices	BPZ:OZW672.16	OZW672.16

LPB standard system main components

Product Title	Data sheet	Stock no.	Product no.
Web Server for LPB devices	N5712	BPZ:OZW672..	OZW672..
Heating controller for 1 heating circuit or boiler temperature control	N2540	BPZ:RVL480	RVL480
Heating controller for boiler temperature control and d.h.w. heating	N2541	BPZ:RVL481	RVL481
Heating controller for boiler temperature control for modulating or 2-stage burners with d.h.w. heating	N2542	BPZ:RVL482	RVL482

LPB standard system main components

Product Title	Data sheet	Stock no.	Product no.
Heating controller for a second heating circuit	N2543	BPZ:RVL479	RVL479
Heating controller for 1 heating circuit	N2545	S55370-C136	RVP340
Heating controller for 1 heating circuit and d.h.w.	N2545	S55370-C137	RVP350
Heating controller for 2 heating circuits and d.h.w.	N2546	S55370-C139	RVP360
District heating controller	N2513	BPZ:RVD25..	RVD25..
District heating controller	N2515	BPZ:RVD26..	RVD26..

IP Interface Secure

N 148/23

- For communication between KNX devices and PCs or other devices with Ethernet (10BaseT or 100BaseT) interface, for remote access to an KNX installation
- Uses the KNXnet/IP protocol or secured access and data transmission via KNXnet/IP Secure
- Up to five KNXnet/IP Tunneling connections for parallel bus access by ETS and further PC software
- Assignment of the network parameters by the installer using ETS, automatically by a DHCP server in the network
- 5 LEDs for display of availability, KNX communication and IP communication
- Electronics powered via "Power over Ethernet" according to IEEE 802.3af or alternatively by an external safety extra low voltage power supply for AC/DC 24V
- Pluggable terminal block for connection of external power supply unit (not included)
- Ethernet connection via RJ45 socket
- Housing: plastic, color RAL 7035 (light grey), N-system
- DIN rail mounted device for mounting on rail TH35 according to DIN EN 60715
- Type of protection: IP 20



Data sheet A6V11689764
 Dimension width (1 MW = 18 mm) 2 MW

Stock no. Product no.
 5WG1148-1AB23 N 148/23

IP Router Secure

N 146/03

- For interconnection of bus lines or bus areas via a fast data network (Ethernet 10BaseT or 100BaseT) with Internet Protocol (IP)
- To be used as line, area and system coupler
- Uses the KNXnet/IP protocol or secured access and data transmission via KNXnet/IP Secure
- Up to five KNXnet/IP Tunneling connections for parallel bus access by ETS and further PC software
- Assignment of the network parameters by the installer using ETS, automatically by a DHCP server in the network
- 5 LEDs for display of availability, KNX communication and IP communication
- Electronics powered via "Power over Ethernet" according to IEEE 802.3af or alternatively by an external safety extra low voltage power supply for AC/DC 24 V
- Pluggable terminal block for connection of external power supply unit (not included)
- Ethernet connection via RJ45 socket
- Housing: plastic, color RAL 7035 (light grey), N-system
- DIN rail mounted device for mounting on rail TH35 according to DIN EN 60715
- Type of protection: IP 20



Data sheet A6V11656735
 Dimension width (1 MW = 18 mm) 2 MW

Stock no. Product no.
 5WG1146-1AB03 N 146/03

N 148/12



USB Interface

- Compatible with USB 2.0 and USB 3.0
- For isolated access to the bus line over the built-in USB socket (type B)
- For connection of a PC for addressing, parameterization, visualization, logging and diagnosis of bus devices
- Access to all bus devices in the whole bus system
- Support of bus telegrams with up to 64 bytes length
- Power supply over the bus line and over USB through the connected PC
- Integrated bus coupling unit, bus connection over bus terminal
- Transmission at USB 2.0 speed (max. 12 Mbit/s) between PC and USB interface
- Modular installation device for mounting on TH35 DIN EN 60715 mounting rail

Data sheet A6V11535346
 Dimension width (1 MW = 18 mm) 1 MW

Stock no. Product no.
 5WG1148-1AB12 **N 148/12**

N 143/01



IP Gateway KNX/BACnet

- BACnet Application Specific Controller (B-ASC) as Gateway between KNX TP and BACnet IP
- BTL certified
- Up to 250 BACnet objects
- Up to 455 BACnet COV subscriptions
- Automatic translation of KNX communication objects into BACnet objects according to the configuration with ETS
- For communication between KNX EIB devices and PCs or other devices with Ethernet (10BaseT) interface, as well as in conjunction with a LAN modem or DSL router for remote access to an KNX EIB installation
- For use as an interface e.g. for ETS3 or for visualization software
- Use the KNXnet/IP protocol
- KNXnet/IP Tunneling connection for parallel bus access by ETS and further PC software
- ObjectServer connection for visualization via network connections with long signal transmission duration
- Assignment of the network parameters by the installer using ETS, or automatically by a DHCP server in the network
- 2 LEDs for display of operational availability and IP communication
- Additional power supply by an external safety extra low voltage power supply for AC/DC 24 V, 40 mA
- Pluggable terminal block for connection of external power supply unit (not included)
- Integrated bus coupling unit with bus connection via bus terminal
- Ethernet connection via RJ45 socket
- Mounting on DIN rail EN 60715-TH35-7.5

Data sheet A6V10466141
 Dimension width (1 MW = 18 mm) 4 MW

Stock no. Product no.
 5WG1143-1AB01 **N 143/01**

IP Control Center

Visualisation controller for full-graphic visualizations on web-compatible end devices such as PCs, tablets and smart phones with a standard web browser.

For communication between KNX devices and PCs and, in connection with a LAN-/WLAN modem or DSL router, for remote access to a KNX installation, for usage as an interface for the ETS 3/4/5 and as an interface for a visualization, with usage of the KNXnet/IP protocol, with the following simultaneously usable functions:

- Web server for operating and monitoring up to 1250 statuses and values transmitted by the KNX network, which can be displayed using a standard browser on PCs, tablets, or smartphones connected to the IP network
- Special web-configuration page for a firmware update, to set the IP configuration, SMTP server, security settings, password protection, certificates, Sonos module, API connection and restart
- Graphical web editor for a creation of fully graphical visualization with control and display elements, configurable in various styles
- Smart editor for the creation of a visualisation, tuned for mobile browsers, smartphones, tablets with control and display elements, configurable in various styles and layouts
- Annual timer, with astronomical calendar, for 300 time switch schedules with up to 30 time switch commands per time switch schedule
- Scene module with up to 5000 scenes or events
- Chart module for recording and reporting of up to 10 data points
- Monitoring module for monitoring and storage of up to 1000 events into a ring buffer
- IP interface for control of up to 20 IP-devices via up to 20 TCP/UDP commands per IP-device
- Fully graphical logic module with up to 1000 logic functions
- Alarm function for up to 250 different alarms
- E-mail function, with up to 20 contacts, for transmission of chart data from chart module, logged data from monitoring module or alarm data
- Data point management for viewing, managing, editing and categorizing all available data points
- Module for controlling SONOS loudspeakers
- Module for controlling the Philips HUE LED lighting system
- Ethernet interface 10/100 Mbits/s with RJ45 socket for connection to the IP network using the Internet Protocol
- 2 LED displays for IP connection/communication and for error messages
- Integrated bus connector and bus terminal for connection to a KNX network
- Power supply of the electronics by an external voltage source for AC/DC 24 V, 50 mA
- Series installation device for mounting on support rails TH35 DIN EN 60715

Data sheet A6V10417875
 Dimension width (1 MW = 18 mm) 4 MW



Stock no.	Product no.
5WG1152-1AB01	N 152/01

N 140/13



Line/backbone coupler

- For data exchange between two KNX bus lines with telegrams of up to 64 byte
- For use as line coupler for connecting a line to the main line or as backbone coupler for connecting a main line to the backbone line or as repeater for connecting two segments of the same line, with electrical isolation of the two bus lines
- Loadable filter table for control of the data exchange between the two bus lines
- Additional loadable filter table for telegrams with LTE addressing
- Detection of a communication fault on the lower-level line and signaling to the higher-level line
- 3 LEDs for display of availability and receipt of a telegram per line
- Power supply from the main line
- Modular installation devices for mounting on TH35 EN 60715 mounting rail
- With bus connection to the line and to the main line via bus terminal.

Data sheet

A6V10416071

Dimension width (1 MW = 18 mm)

2 MW

Stock no.

Product no.

5WG1140-1AB13

N 140/13

Power supply unit

N 125/..2

- Integrated chokes
- Bus connection via bus terminal
- Parallel operating mode power supplies
- Rated operational voltage AC 120...230 V, 50...60 Hz, DC 220 V
- Output voltage DC 29 V
- Additional unchoked output for DC 29 V, for powering a second bus line via an external choke N 120/2
- Modular installation devices for mounting on TH35 EN 60715 mounting rail



Data sheet

A6V10416488

Range overview N 125/..2

Product Title	Dimension width (1 MW = 18 mm)	Stock no.	Product no.
Power supply unit DC 29 V, 160 mA with additional unchoked output, N 125/02	4 MW	5WG1125-1AB02	N 125/02
Power supply unit DC 29 V, 320 mA with additional unchoked output, N 125/12	4 MW	5WG1125-1AB12	N 125/12
Power supply unit DC 29 V, 640 mA with additional unchoked output, N 125/22	4 MW	5WG1125-1AB22	N 125/22

Choke, 640 mA

N 120/02

- For operation with a KNX power supply without integrated choke or for connection to the unchoked output of the KNX N 125/x2 power supplies
- Low-voltage terminal for unchoked voltage and bus
- Modular installation devices for mounting on TH35 EN 60715 mounting rail



Data sheet

A6V10416067

Dimension width (1 MW = 18 mm)

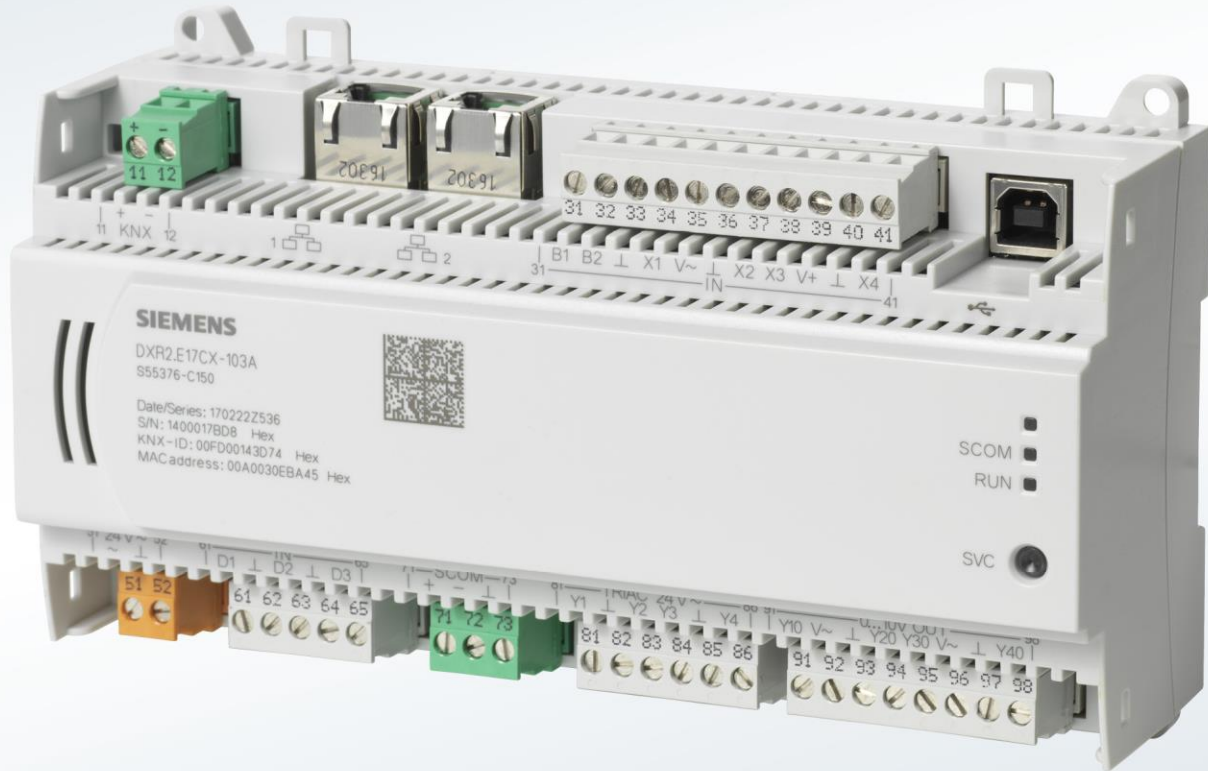
2 MW

Stock no.

Product no.

		5WG1120-1AB02	N 120/02
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Room automation



Overview and selection tools		160
Room automation RXB (KNX)	Room controllers RXB	173
	Room operator units QAX3.. / QAX8.. (PPS2)	176
	Central control unit RMB	179
Room automation DXR (BACnet)	Room automation station DXR	180
	Room units with KNX PL-Link	187
	Field devices with KNX PL-Link	198

Room automation

Overview and selection tools

3

RXB applications

RXB hardware

The product range comprises compact controllers and corresponding room units for comfortable control. The compact room controllers are optimized to the respective application with regard to input/output configuration. HVAC functions are operated via standard room units. Communication is based on KNX S-mode. The fan coil room controllers communicate also in KNX LTE mode. KNX LTE mode is used to communicate with control equipment from the Synco™ 700 product range.

RXB software

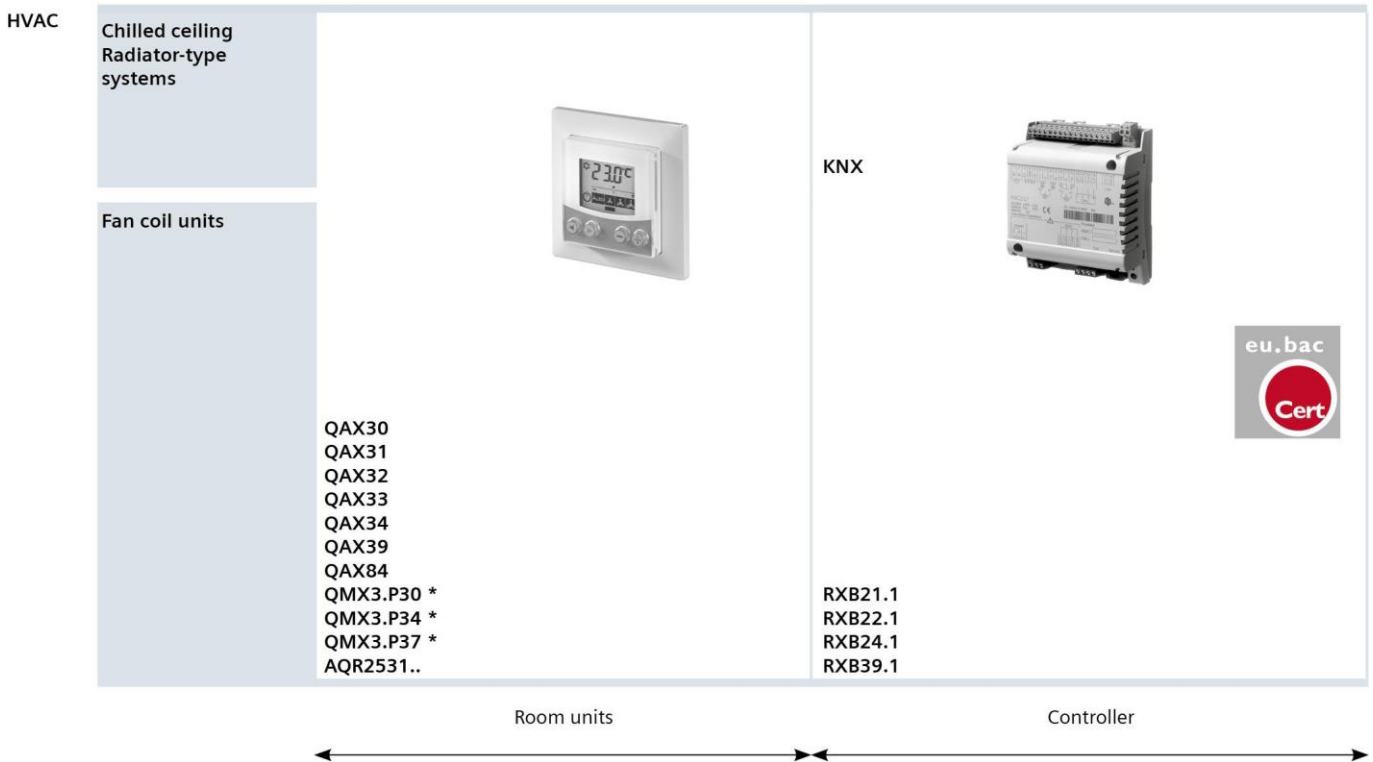
Each RXB unit comes with preloaded application software featuring one or several applications (see next page). The ETS software helps engineer and commission a network with RXB units. In addition, the Synco™ tool and room unit QAX34.3 by Siemens can be used for commissioning and parameterization. To use QMX3 room operating units or sensors ETS-software must be used in every case.

Integration into Synco™

The central control unit RMB795B-1 is used for controlling and monitoring the RXB controllers in a Synco™ system.

Connection to the Desigo building automation and control system

Desigo PX KNX allow for flexibly connecting RXB controllers to the Desigo building automation and control system, and hence acts as a gateway to BACnet. The connection provides access to other functions such as time schedules and central control of setpoints. RXB thus fits into the overall expandable modular system, and ensures long-term cost-efficiency.



* ETS-software must be used

Fields of application

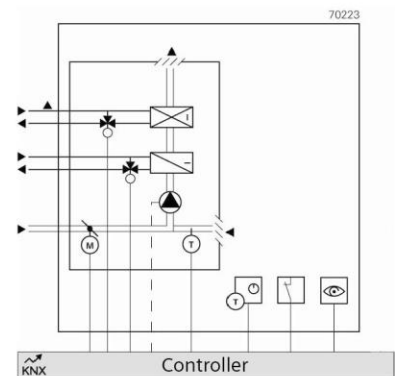
The scope of RXB is defined by the preprogrammed application software. The following pages provide an overview of the options and the corresponding devices, divided into different areas of application. The devices are supplied preprogrammed with the applications. The required application can be selected by means of the ETS, Synco™ tool or the Handy tool QAX34.3.

Due to the fact that the applications are predefined, engineering simply involves the definition of a small number of parameters, e. g.:

- PWM or 3-point control of the valves and actuators (RXB39.1: 0-10 V DC control of motoric actuator)
- Temperature setpoints
- Manual or automatic fan control

Fan coil systems

Application	Description	Devices
FNC02	2-pipe system with changeover	RXB21.1/FC-10
FNC03	2-pipe system with changeover and electrical reheater	RXB22.1/FC-12
FNC04	4-pipe system	RXB21.1/FC-10
FNC05	4-pipe system with electrical reheater	RXB22.1/FC-12
FNC08	4-pipe system with supply air temperature limitation	RXB21.1/FC-10
FNC10	2-pipe system with changeover and outside air damper	RXB21.1/FC-11
FNC12	4-pipe system with outside damper	RXB21.1/FC-11
FNC18	2-pipe system with change over and radiator	RXB21.1/FC-11
FNC20	4-pipe system with air-side control	RXB21.1/FC-10
FNC02/03/04/08	2-pipe/4-pipe system with EC fan-coil support	RXB39.1/FC-13

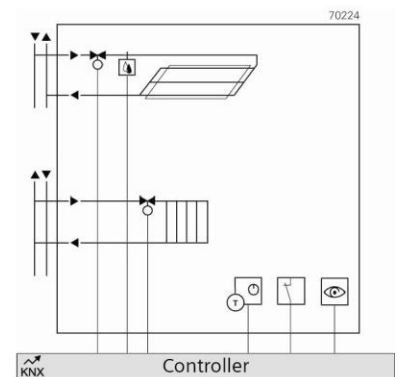


Common functions

- Window contact, occupancy detector, 4 operating modes
- Manual fan control with room unit
- Automatic fan control (RXB21.1/RXB22.1 three speed; RXB39.1 continuous speed 0...10 V)
- Options for 2-pipe systems: heating only, cooling only or change-over, via KNX bus

Heated/chilled ceilings and radiators

Application	Description	Devices
CLC01	Chilled ceiling with dewpoint monitoring	RXB24.1/CC-02
CLC02	Chilled ceiling with dewpoint monitoring and radiator	RXB24.1/CC-02
RAD01	Radiator with downdraft compensation	RXB24.1/CC-02



Common functions

- Window contact, occupancy detector, 4 operating modes

Room automation

Overview and selection tools

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Room operation



Features	30.1	31.1	32.1	QAX.. 33.1	34.3	39.1	84.1
Display					■		■
Mode selection			■	■	■		■
Fan switch				■	■		■
Setpoint adjuster		■	■	■	■	■	■
Temperature sensor	■	■	■	■	■		■
Mounting							
Flush-mounted						■	■
Directly on wall	■	■	■	■	■		
Control panel(door)						■	
Communication							
PPS2	■	■	■	■	■	■	■
KNX							

Room units KNX



Features	P30	QMX3.. P34	P37	AQR.. 2570.. & 253..
Display		■	■	
Mode selection		■	■	
Fan switch		■	■	
Setpoint adjuster		■	■	
Temperature sensor	■	■	■	■
Mounting				
Flush-mounted				■
Directly on wall	■	■	■	
Communication				
EnOcean				
KNX	■	■	■	■

¹⁾ LED for air quality indicator

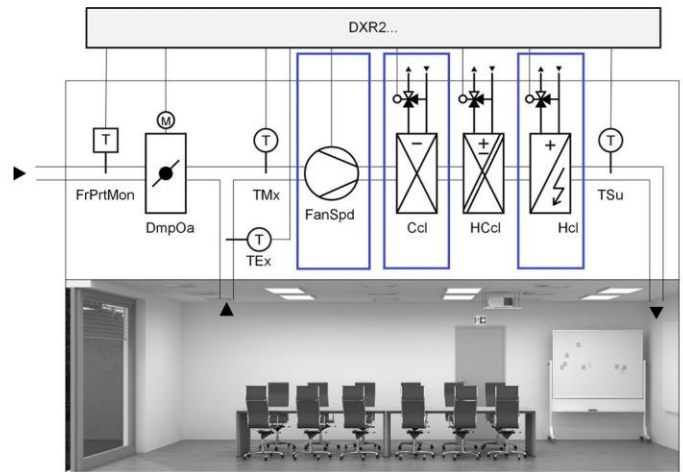
²⁾ Suitable receiver: RXZ97.1/KNX

Usage of DXR

1. Check application requirements

Requirements

- Fan coil
- 4-pipe system
- 3-speed fan
- 2 valves with electrothermal actuators (2-point control signal)
- Voltage AC 230 V
- Presence detector
- Room unit with built-in temperature sensor



3

	Frost protection (FrPrtMon)	Outside air damper (DmpOa)	Extract air temperature (TEx)	Mixed air temperature (TMx)	Fan speed (FanSpd)	Cooling coil (Ccl)	Heating/cooling coil (HCcl)	Heating coil (Hcl)	Supply air temperature (TSu)
DI									
AI									
Relais					3				
Triac						1		1	
0..10 V									
Relais + 0..10 V									

2. Find matching products in overview tables

Products matching application requirements above:

Product Number	Description	Qty
DXR2.E10	Compact room automation stations, BACnet/IP, 230 V	1
QMX3.P34	Room operator unit KNX with temperature sensor, segmented backlit display, touchkeys	1
UP 258D11	Passive infrared presence detector	1
STP73	Electrothermal actuator, AC/DC 24 V, NO, 2P, 1 m	2
VMP47.10-1.6	3-port seat valve with bypass, external thread, PN16, DN10, kvs 1.6	2

Note:

Product overview tables provide quick overview and show main features, nevertheless, we recommend checking technical parameters of each product.

3. Check total data points and bus load

Used DXR2.. on-board data points:	5
KNX PL-link data points:	5
Total used data points:	10 < 30
Total KNX PL-link bus load:	17.5 mA < 50 mA

Correct, total values do not exceed maximum configuration.

Room automation

Overview and selection tools

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Application configuration

Applications can be configured by combining functions from one or several application types:

- Room sensor and operating
- Radiant (heated/chilled) ceiling and Radiator
- Fan coil
- VAV system or Fan powered box
- Radiant (heated/chilled) ceiling and Radiator
- Lighting
- Shading

Configuration is limited by total number of data points.




Application group Central functions requires dedicated room automation station.

Room Automation Station



	DXR1.E09PDZ-11	DXR1.E09PDZ-11	DXR1.E10PL-112	DXR1.E10PL-113	DXR2.E10PL(X)-102B
Communication					
BACnet/IP	DXR1.E09PDZ-11	DXR1.E09PDZ-11	DXR1.E10PL-112	DXR1.E10PL-113	DXR2.E10PL(X)-102B
Application types					
Room operating	■ (QMX1 only)	■ (QMX1 only)	■	■	■
Heated / Chilled ceiling and Radiator			■	■	■
Fan coil					
VAV system or fan powered box	■	■	■	■	■
Pressurized and fume hood					
Lighting					■
Shading					■
Central functions					
Damper actuator torque	5 Nm	5 Nm	10 Nm	10 Nm	10 Nm
Operating voltage					
230 V					
24 V	■	■	■	■	■
Inputs and outputs onboard					
Resistor inputs	0	0	0	0	0
Digital inputs	0	0	1	1	1
Universal inputs	2	2	2	2	2
Relay outputs					
Triac outputs	4	4	4	4	4
Analog outputs (DC 0...10 V)	1	1	1	1	1
Pressure sensor	1	1	1	1	1
SCOM communication for sensors					
Maximum configuration					
Total data points	n/a	n/a	n/a	n/a	30 (60)
Integrated power supply for KNX (mA)			50	50	50

Configurable controllers

							
Communication							
BACnet/IP	DXR2.E09-101A	DXR2.E09T-101A	DXR2.E10-101A	DXR2.E12P(X)-102A	DXR2.E18-101A	DXR2.E18-102A	DXR2.E17C(X)-103A
Application types							
Room operating	■	■	■	■	■	■	■
Heated / Chilled ceiling and Radiator	■	■	■	■	■	■	■
Fan coil	■	■	■		■		
VAV system or fan powered box				■		■	■
Pressurized and fume hood							■
Lighting	■	■	■	■	■	■	■
Shading	■	■	■	■	■	■	■
Central functions					■*	■*	
Housing							
DIN				■	■	■	
Flat	■	■	■				
Operating voltage							
230 V	■	■	■				
24 V				■	■	■	■
Inputs and outputs onboard							
Resistor inputs	0	0	0	0	0	0	2
Digital inputs	1	1	1	1	2	2	2
Universal inputs	2	2	2	2	4	4	4
Relay outputs	3	1	3				
Triac outputs		4	4	6	8	8	4
Analog outputs (DC 0...10 V)	3	1		2	4	4	4
Pressure sensor				1			
SCOM communication for sensors							■
Maximum configuration							
Total data points	30	30	30	30 (60)	60	60	30 (60)
Integrated power supply for KNX (mA)	50	50	50	50	50	50	50

* Cannot be combined with other applications

Configuration Tool

DXR2.. comes with set of standard applications that can be flexibly configured with the tool ABT Site.

	Product No.	SSN	Description
	CTX-LSI	S55802-Y153	ABT Site Engineering License – 1 Year

Room automation

Overview and selection tools

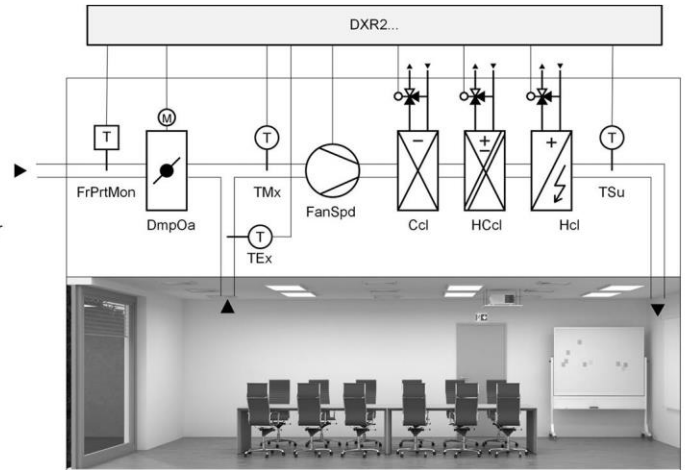
HVAC applications

Application types

Fan coil

Application can be configured from these functions:

- Outside Air Damper
- Single Speed Fan, Multi Speed Fan or Variable Speed Fan
- Chilled water cooling coil
- Direct expansion evaporator cooling coil
- Heating/Cooling coil
- Hot water heating coil
- Electric heating coil modulating, single stage or two stage
- Room temperature control by two-pipe system with change-over
- Room temperature control by four-pipe system
- Supply air temperature cascade control
- Room dehumidification control
- Air volume flow control
- Rapid ventilation
- Green leaf



	Frost protection monitor (FrPrtMon)	Outside air damper (DmpOa)	Extract air temperature (TEx)	Mixed air temperature (TMx)	Fan speed (FanSpd)	Cooling coil (Ccl)	Heating/cooling coil (HCcl)	Heating coil (Hcl)	Supply air temperature (TSu)
DI	1								
AI			1	1					1
Relais					1-3				
Triac		2			1-2	1-2	1, 2, 4, 8	1-2	
0..10 V		1			1*	1	1, 4	1**	

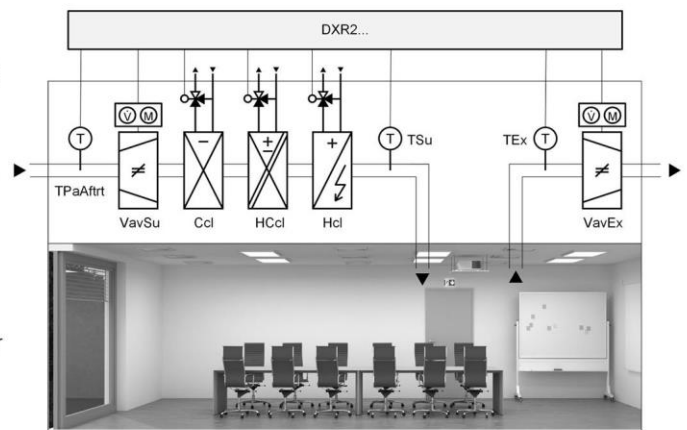
* Requires additional relays or triac for enable signal

** Requires additional triac for electric heating enable signal

VAV (Variable Air Volume system)

Application can be configured from these functions:

- Supply and extract air control
- External flow control for VAV with integrated flow controller and differential pressure sensor
- Internal flow controller and differential pressure sensor for damper actuator control
- Internal flow controller and velocity sensor for damper actuator control
- Chilled water cooling coil
- Heating/Cooling coil
- Hot water heating coil
- Electric heating coil modulating, single stage or two stage
- Room temperature control by two-pipe system with change-over
- Room temperature control by four-pipe system
- Supply air temperature cascade control
- Air flow tracking for under/overpressure
- Room dehumidification control
- Room air quality control
- Rapid ventilation
- Green leaf



	Primary air temperature for air after-treatment (TPaAftt)	Supply air VAV (VavSu)	Cooling coil (Ccl)	Heating/cooling coil (HCcl)	Heating coil (Hcl)	Supply air temperature (TSu)	Extract air temperature (TEx)	Extract air VAV (VavEx)
DI								
AI	1						1	
Relais								
Triac		2**	1-2	1, 2, 4, 8	1-2			2**
0..10 V		1	1	1, 4	1*			1
Actuator for VAV (KNX PL-Link)		1						1

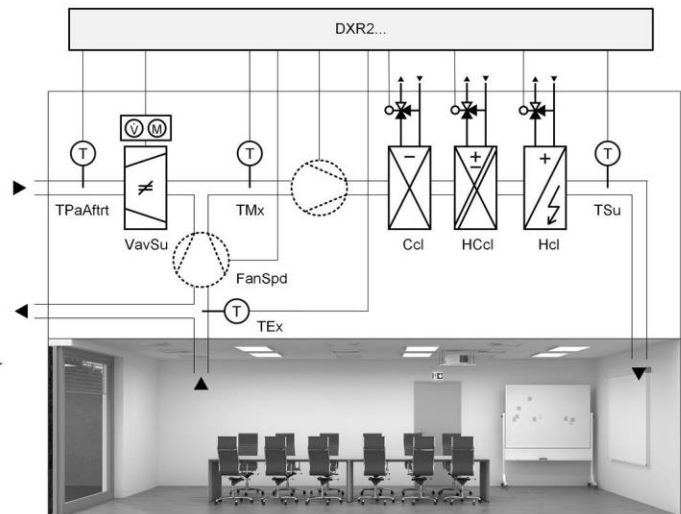
* Requires additional triac for electric heating enable signal

** When using DXR2.. with AC 24 V power supply in combination with GDB181.1E/3 or GLB181.1E/3, use 0..10V signals.

Fan powered box

Application can be configured from these functions:

- Supply air control
- External flow control for VAV with integrated flow controller and differential pressure sensor
- Internal flow controller and differential pressure sensor for damper actuator control
- Internal flow controller and velocity sensor for damper actuator control
- Single Speed Fan, 2 speed Fan or Variable Speed Fan
- Chilled water cooling coil
- Heating/Cooling coil
- Hot water heating coil
- Electric heating coil modulating, single stage or two stage
- Room temperature control by two-pipe system with change-over
- Room temperature control by four-pipe system
- Supply air temperature cascade control
- Room air quality control
- Rapid ventilation
- Green leaf



	Primary air temperature for air after-treatment (TPaAfrt)	Supply air VAV (VavSu)	Extract air temperature (TEx)	Mixed air temperature (TMx)	Fan speed (FanSpd)	Cooling coil (Ccl)	Heating/cooling coil (HCcl)	Heating coil (Hcl)	Supply air temperature (TSu)
DI									
AI	1		1	1					1
Relais									
Triac		2			1-2	1-2	1, 2, 4, 8	1-2	
0..10 V		1			1*	1	1, 4	1**	
Actuator for VAV (KNX PL-Link)		1*							

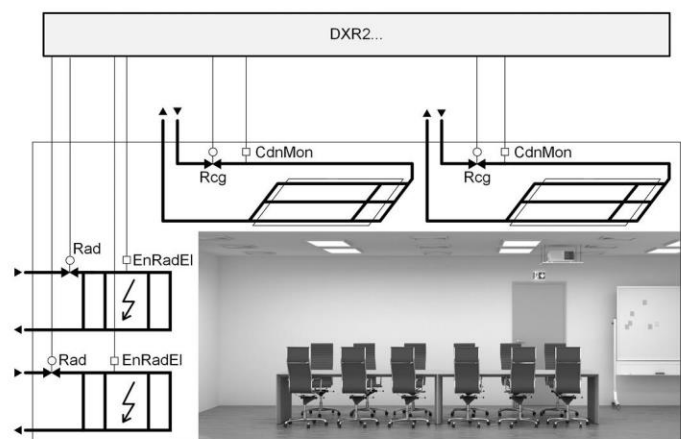
* Requires additional triac for enable signal

** Requires additional triac for electric heating enable signal

Radiant ceiling and Radiator

Application can be configured from these functions:

- Chilled ceiling with chilled water
- Heated/chilled ceiling by two-pipe system with change-over
- Heated/chilled ceiling by four-pipe system with 6 way valves
- Heating ceiling with hot water
- Hot water radiator
- Electric radiator modulating or staged
- Dnndraft compensation for radiators
- Condensation monitor
- Room temperature control
- Green leaf



	Radiator (Rad)	Radiator overtemperature (RadOvrT)	Radiant ceiling (Rcg)	Condensation monitor (CdnMon)
DI		1		1
AI				
Relais				
Triac	1-4		1-4	
0..10 V	1-2*		1-2	

* Requires additional triac or relais for electric heating enable signal

Room automation

Overview and selection tools

Pressurized rooms and fume hoods

Desigo room pressurization and fume hood control is a range of dedicated reliable air volume flow controllers and supplementary components for secure, precise and fast measurement, control and monitoring of air volume flows and room pressures in highly specialized working spaces. It is part of the Desigo building automation and control system.

As a result, the overall system maximizes security, efficiency and cost effectiveness.

Locations:

- Highly specialized research and manufacturing spaces requiring dedicated high speed control solutions for room pressurization & fume hood control

Rooms in:

- Research facilities
- Pharma/Biotech
- Healthcare
- Hi-tech manufacturing
- Vivariums
- Higher education customers etc.



Applications:





- Room ventilation and general extraction, measuring, controlling and monitoring air volume flows
- Room balancing and room pressurization control
- Laboratory fume hood air volume flow control and monitoring
- Room air conditioning together with lighting & shading control
- Room and fume hood emergency functions
- Demand-controlled ventilation support for energy savings opportunities

ASN	Description	Product picture
DXR2.E17C-103A	BACnet/IP, 24VAC, 17 I/O Room Pressurization & Fume Hood Automation Station, 30 data-points	
DXR2.E17CX-103A	BACnet/IP, 24VAC, 17 I/O Room Pressurization & Fume Hood Automation Station, 60 data-points	
QMX3.P87-1WSC	Operating Display Panel – Wall mounted (KNX)	
QMX3.P88-1WSC	Operating Display Panel – Thin & Flush mounted (KNX)	
DXA.S04P1	Air Flow Pressure Sensor (SCOM)	
DXA.S04P1-B	Air Flow Pressure Sensor with IP54 box (SCOM)	
DXA.B130	Sash Sensor 130mm (50")	
DXA.B200	Sash Sensor 200mm (80")	
RPM.S00-SD	Room Condition Monitor	
QVE3001	Flow Sensor	



Room sensor and operating

Application can be configured from these functions:

- Room operating units QMX3 on KNX PL-Link
- Sensors for onboard IO's or KNX PL-Link
- Presence/brightness sensors for onboard IO's or KNX PL-Link

	 Temperature sensor	 Air quality Sensor	 Humidity sensor	 Presence detector
DI				2
AI	1	1	1	
HVAC Sensor (KNX PL-Link)	1	1	1	
Presence and brightness sensor (KNX PL-Link)				1-4*
Room unit (KNX PL-Link)	1	1	1	

* Must be the same device









	 Window contact	 Room operator unit
DI	1	
Room unit (KNX PL-Link)		2*

* Must be the same device

Central functions

Application can be configured from these functions:

- Central operation group including room operating mode and start optimization, setpoints and seasonal compensation
- Demand controlled hot water supply system, includes temperature setpoint
- Demand controlled chilled water supply system, includes temperature setpoint, shift to avoid condensation by collecting condensation monitors, free cooling calculation
- Demand controlled 2 pipe heating / cooling water supply system includes temperature setpoint, changeover, free cooling calculation
- Demand controlled air handling unit (supply and extract air) includes temperature setpoint, maximum humidity setpoint, pressure setpoint, maintain minimal central air volume, flow deviation calculation, summed air volume setpoints
- Variable air volume (VAV) emergency group includes shut down, extract, pressurization or purge
- Central weather station information includes outside temperature, outside brightness, outside solar radiation, outside wind speed, outside precipitation







	Central Weather Station Controller					Central Emergency Controller		
	 Outside temperature	 Relative outside humidity	 Atmospheric pressure	 Wind speed	 Precipitation detector	 Forced Emergency shut down air supply	 Forced Smoke extraction (exhaust air)	 Forced Smoke pressurization (supply air)
DI					1	1-2	1-2	1-2
AI	1	1	1	1				
Push button (KNX PL-Link)								
DXR2.. Type	DXR2..18..					DXR2..18..		

Room automation










Overview and selection tools

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Room units

	 QMX3.. P35H	 P33	 QMX2.. P43	 P36	 QMX3.. P34	 P74
Features						
Mode selection	■	■	■	■	■	■
Fan switch	■	■	■	■	■	■
Setpoint adjuster	■	■	■	■	■	■
Temperature sensor	■	■	■	■	■	■
Humidity sensor			■			■
Air quality sensor						■
Green Leaf	■			■	■	■
Mounting						
Flush mounted	■		■	■		
Direct on wall		■	■		■	■
Integration into DXR2...						
Data points	3	3	3	3	3	5
KNX PL-Link bus load (mA)	15	7.5	7.5	12.5	7.5	15

HVAC Sensor (KNX PL-Link)



	 AQR2570... and AQR2532NNW	 AQR2570... and AQR2535NNW	 AQR2576... and AQR2530NNW	 AQR2576... and AQR2532NNW	 AQR2576... and AQR2535NNW	 AQR2576... and AQR2533NNWQ	 QMX3.P30	 QMX3.P40	 QMX3.P70
Features									
LED indication air quality						■			■
Temperature sensor	■	■		■	■	■	■	■	■
Humidity sensor		■			■	■		■	■
Air quality sensor			■	■	■	■			■
Mounting									
Flush mounted	■	■	■	■	■	■			
Direct on wall							■	■	■
Integration into DXR2...									
Data points	1	2	1	2	3	3	1	2	3
KNX PL-Link bus load (mA)	5	5	15	15	15	15	7.5	7.5	15

Physical Sensors with KNX connection



				
Type	UP 258D31	UP 258D41	UP 258D51	UP 258D61
Features				
Mounting ¹⁾	UP/AP	UP/AP	UP/AP	UP/AP
Degree of protection	IP54	IP20	IP20	IP20
Presence detector	■	■	■	■
Detection capability	PIR	PIR	PIR	Ultrasound/PIR
Detection area at mounting height 2.5 m (m)	320 m ²	320 m ²	320 m ²	70 m ²
Brightness sensor	■	■	■	■
Temperature sensor	■	■	■	■
Humidity sensor		■	■	
CO ₂ sensor			■	
Infrared (IR) receiver	■	■	■	■
Data points	3	4	5	3
KNX PL-link bus load (mA)	12.5	12.5	30	20

¹⁾ AP surface mounted, UP flush mounted

Presence and brightness sensor (KNX PL-link)

		
Type	UP 255D21	UP 258D12
Features		
Presence detector	■	■
Detection area at mounting height 2.5 m (m)	4.5	4.5
Brightness sensor		■
Integration into DXR2..		
Data points	2	2
KNX PL-link bus load (mA)	10	10

Actuator for VAV (KNX PL-Link)

		
Type	GDB181.1E/KN	GLB181.1E/KN
Features		
Torque (Nm)	5	10
Air damper area (m ²)	0.8	1.5
Operating range (Pa)	0...300	0...300
Operating voltage (V AC)	24	24
Integration into DXR2..		
Data points	2	2
KNX PL-link bus load (mA)	5	5

Room controller with KNX communication

The controllers are used for temperature control in individual rooms.

- For 2-pipe with changeover or 4-pipe fan coil systems
- For radiator and chilled ceiling (RXB24.1 only)
- Control of thermal valve actuators AC 24 V, PWM, valve actuators AC 24 V (3-position) as well as KNX bus actuators
- Potential-free relay contacts for fan speed control
- Connecting relay for electric heating (RXB22.1 und RXB39.1)
- KNX bus communication
- Connection to Desigo building automation and control system via PXXNX
- Commissioning with "Handy Tool" QAX34.3 or Synco ACS

Application description fan coil: CM110672

Application description RAD/CLC: CM110671



Operating voltage	AC 230 V
Frequency	50/60 Hz
Power consumption	Max. 12 VA
Control algorithm	PI
Communication	Bus: KNX (S-mode and LTE mode) Room unit: PPS2
Service plug	RXT20.1
Digital inputs, number	2
Relay output, switching voltage	AC 250 V
Relay output, switching current	5 (4) A
Triac outputs	PWM 3-position
Triac output, switching voltage	AC 24 V
Triac output, switching current	0.5 A
Interface type	KNX-bus
Mounting	DIN rail
Mounting location	Ceiling voids with cover Fan coil Panel
Degree of protection	IP30
Dimensions (W x H x D)	113 x 167 x 62 mm

Range overview RXB2..

Product Title	Triac outputs, number	Relay outputs, number	Data sheet	Stock no.	Product no.
Room controller for 3-speed fan	4	3	N3873	BPZ:RXB21.1/FC-10	RXB21.1/FC-10
Room controller for 3-speed fan	4	3	N3873	BPZ:RXB21.1/FC-11	RXB21.1/FC-11
Room controller with 3-speed fan and electric heating coil	2	4	N3873	BPZ:RXB22.1/FC-12	RXB22.1/FC-12
Room controller for chilled ceilings and radiators	4	0	N3874	BPZ:RXB24.1/CC-02	RXB24.1/CC-02

The application determines the usable actuator (PWM /3-position) with the triac output.

RXB39.1/FC-13



Room controller for fan-coil applications with KNX communication

The RXB39.1 room controller is used for temperature control in individual rooms.

- For 2-pipe and 4-pipe fan coil systems with or without changeover
- PI control
- KNX bus communication
- Connection to Desigo building automation and control system via PXKNX
- DC 0...10 V control of valve and actuators, fan (ECM), and electric heater
- 2 Potential-free relay contacts to release fan and electric heating
- Commissioning with ETS Professional, "Handy Tool" QAX34.3 or Synco ACS
- Operating voltage AC 230 V
- Plug-in screw terminals

Data sheet	N3875
Operating voltage	AC 230 V
Frequency	50/60 Hz
Power consumption	12 VA
Control algorithm	PI
Communication	Bus: KNX Room unit: PPS2
Service plug	ETS Professional, ACS, HandyTool
Analog inputs, number	2
Analog outputs, number	3
Analog output, signal	DC 0...10 V
Digital inputs, number	4
Relay outputs, number	1
Electric reheater relay	1
Relay output, switching voltage	AC 250 V
Relay output, switching current	5 (4) A
Mounting	DIN rail For screw fixing
Mounting location	Ceiling voids with cover Fan coil Panel
Degree of protection	IP20
Dimensions (W x H x D)	152 x 120 x 62 mm

Stock no.	Product no.
S55373-C121	RXB39.1/FC-13

Accessories for RXB..

Product Title	Data sheet	Stock no.	Product no.
Power supply unit DC 29 V, 160 mA with additional unchoked output, N 125/02	A6V10416069	5WG1125-1AB02	N 125/02
Power supply unit DC 29 V, 320 mA with additional unchoked output, N 125/12	A6V10416069	5WG1125-1AB12	N 125/12
Power supply unit DC 29 V, 640 mA with additional unchoked output, N 125/22	A6V10416069	5WG1125-1AB22	N 125/22
Terminal cover for RXB2../RXC2../RXM2..	N3834	BPZ:RXZ20.1	RXZ20.1
Power amplifier for thermal actuators AC 24 V, PWM	N3591	BPZ:UA1T	UA1T
Terminal cover for RXB3../RXC3../RXM3..	N3840	BPZ:RXZ30.1	RXZ30.1

Temperature sensors for RXB..

Product Title	Data sheet	Stock no.	Product no.
Duct temperature sensor 400 mm, LG-Ni1000	N1761	BPZ:QAM2120.040	QAM2120.040
Room temperature sensor LG-Ni1000	N1721	BPZ:QAA24	QAA24
Room sensor KNX for temperature, white	N1602	S55624-H103	QMX3.P30

Temperature sensors for RXB..

Product Title	Data sheet	Stock no.	Product no.
Room temperature sensor LG-Ni1000 for mounting on recessed conduit boxes	N1722	BPZ:QAA64	QAA64
Front modules with passiv temperature measurement	N1408	BPZ:AQR2531..	AQR2531..
Cable temperature sensor PVC 2 m, LG-Ni1000	N1831	BPZ:QAP22	QAP22

Dewpoint sensor for RXB..

Product Title	Data sheet	Stock no.	Product no.
Condensation monitor	A6V10741072	BPZ:QXA21..	QXA21..

Damper actuators for RXB..

Product Title	Data sheet	Stock no.	Product no.
Rotary air damper actuators 5 Nm, without spring return	A6V10636149 / A6V10881141	BPZ:GDB..1E	GDB..1E
Linear air damper actuators 125 N, without spring return	N4664	BPZ:GDB..2E	GDB..2E
Rotary air damper actuators 10 Nm, without spring return	A6V10636202 / A6V10881141	BPZ:GLB..1E	GLB..1E
Linear air damper actuators 250 N, without spring return	N4664	BPZ:GLB..2E	GLB..2E
Mounting Bracket, BG		S55859-Z115	ASK71.04

Valve actuators for RXB..

Product Title	Data sheet	Stock no.	Product no.
Electromotoric actuator, 200 N, 5.5 mm, AC 24 V, 1.5 m, 3P	N4891	BPZ:SSB81	SSB81
Electrothermal actuator, AC/DC 24 V, NO, 2P, PDM, PR	N4884	S55174-A116	STP73PR/00
Electromotoric actuator, 160 N, 2.5 mm, 1.5 m, AC 24 V, 3P	N4864	BPZ:SSP81	SSP81
Electrothermal actuator, AC/DC 24 V, NC, 2P, PDM, PR	N4884	S55174-A115	STA73PR/00



3

QAX3..

Room unit with PPS2 interface

Room units for acquiring the room temperature and operation of individual room control.

Voltage supply	PPS2
Power consumption	0.10 VA
Time constant	≤8 min
Measuring range, temperature	0...40 °C
Sensing element, temperature	NTC
Measurement accuracy	±0.25 K at 25 °C
	±0.5 K at 5...30 °C
Setpoint readjustment range	±12 K
Mounting location	Indoors
Degree of protection	IP30

QAX30.1



Room unit with sensor and PPS2 interface

- Acquisition of room temperature

Data sheet	N1741
Dimensions (W x H x D)	90 x 100 x 32 mm

Stock no.	Product no.
BPZ:QAX30.1	QAX30.1

QAX31.1



Room unit with sensor, setpoint adjuster and PPS2 interface

- Acquisition of room temperature
- Setpoint adjuster for room temperature

Data sheet	N1741
Dimensions (W x H x D)	90 x 100 x 36 mm

Stock no.	Product no.
BPZ:QAX31.1	QAX31.1

QAX32.1



Room unit with sensor, setpoint and operating mode selector and PPS2 interface

- Acquisition of room temperature
- Setpoint adjuster for room temperature
- Rocker switch for mode selection (Off / Auto)

Data sheet	N1641
Dimensions (W x H x D)	90 x 100 x 36 mm

Stock no.	Product no.
BPZ:QAX32.1	QAX32.1

Room unit with sensor, setpoint and operating mode selector, fan speed selection, and PPS2 interface

QAX33.1



- Acquisition of room temperature
- Setpoint adjuster for room temperature
- Rocker switch for mode selection (Off/Auto) and for manual fan control with fan coil systems (up to 3 speeds)

Data sheet N1642
 Dimensions (W x H x D) 90 x 100 x 36 mm

Stock no.	Product no.
BPZ:QAX33.1	QAX33.1

Room unit with sensor, setpoint and operating mode selector, display and PPS2 interface

QAX34.3



- Acquisition of room temperature
- Rocker switch for adjustment of room temperature setpoint
- Rocker switch for mode selection (Off/Auto) and for manual fan control with fan coil systems (up to 3 speeds)
- LCD with display of room temperature and control mode
- Together with the RXB controllers for parameter setting

Data sheet N1640
 Dimensions (W x H x D) 96 x 119 x 24 mm

Stock no.	Product no.
BPZ:QAX34.3	QAX34.3

Universal setpoint adjuster with PPS2 interface

QAX39.1



- Setpoint adjuster for room temperature

Data sheet N1646
 Dimensions (W x H x D) 48 x 48 x 15 mm

Stock no.	Product no.
BPZ:QAX39.1	QAX39.1



Room automation

Room automation RXB (KNX)

Room operator units QAX3.. / QAX8.. (PPS2)

QAX84.1/PPS2

Flush-mounted room unit complete with PPS2 interface and design frame



The set consists of:

- Operator unit,
- PPS2 bus coupling unit and
- Design frame DELTA line in titanium white.

Functionality:

- Acquisition of room temperature
- Switch for adjustment of room temperature setpoint
- Switch for mode selection (Off/Auto) and for manual fan control with fan coil systems (up to 3 speeds)
- LCD with display of room temperature and control mode

Data sheet	N1649
Voltage supply	PPS2
Measuring range, temperature	0...40 °C
Sensing element, temperature	NTC
Degree of protection	IP30
Dimensions (W x H x D)	80 x 80 x 30.5 mm

Stock no. Product no.

BPZ:QAX84.1/PPS2 **QAX84.1/PPS2**

3

Central control unit for room controllers and room thermostats

RMB795B-1



3

- Central control unit with integrated control and supervisory functions for individual room control with RXB room controllers and room thermostats RDG/RDF
- Central collection of heating and cooling demands from any KNX room controllers
- Control of any HVAC primary controllers in dependence on the received and calculated heating/cooling demands
- Individual time programs for room groups
- Preselected operating modes and setpoints, minimum / maximum temperature supervision and supervision of RXB room controllers and room thermostats RDG/RDF
- Trend and fault reporting functions for the input variables temperature, relative / absolute humidity, pressure / differential pressure, volumetric air flow, indoor air quality, etc.
- Heating / cooling changeover function for operation with 2-pipe systems
- Flexible configuration
- Clear-text operation with separate operator unit (plug-in type or detached)
- Integrated KNX bus communication
- No commissioning tool required

The RMB795B-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish, Chinese.

Extension modules complement the central control unit and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously. The operation of the device from commissioning to enduser operation can be done via the operator unit.

Available extension modules:

- 1 universal module RMZ785
- 2 universal modules RMZ787

A total of 3 extension modules can simultaneously be used with the central control unit.

Available operator units:

- Plug-in type operator unit RMZ790
- Detached operator unit RMZ791
- Bus operator unit RMZ792

Data sheet	N3122
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal inputs, number	6
Universal input, signal	2 x LG-Ni1000 DC 0...10 V Potential-free digital status contact LG-Ni1000 Pt1000 T1 (PTC)
Relay outputs, number	4
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	173 x 90 x 80 mm

Stock no.	Product no.
S55370-C162	RMB795B-1

Room automation

Room automation DXR (BACnet)

Room automation station DXR

DXR2.E12P..



Compact room automation station, BACnet/IP, 24 V, DIN housing, 1 DI, 2 UI, 2 AO, 6 triac, pressure sensor

Compact room automation stations for HVAC, lighting, and shading:

- BACnet/IP communications
- KNX PL-Link bus to connect sensors, actuators, and operator units (including bus power)
- KNX S-Mode device integration
- 2-port Ethernet switch
- USB interface for Tool



Data sheet	N9205
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	70 VA
Communication	BACnet/IP KNX PL-Link KNX S-Mode
Universal inputs, number	2
Digital inputs, number	1
Analog outputs, number	2
Analog output, current	1 mA
Analog output, signal	DC 0...10 V
Triac outputs, number	6
Triac output, switching voltage	AC 24 V
Triac output, switching current	250 mA
Degree of protection	IP20
Dimensions (W x H x D)	180 x 60 x 105 mm

Range overview DXR2.E12P..

Product Title	Stock no.	Product no.
Compact room automation station, BACnet/IP, 24 V, DIN housing, 1 DI, 2 UI, 2 AO, 6 triac, pressure sensor, 30 data points	S55376-C108	DXR2.E12P-102A
Compact room automation station, BACnet/IP, 24 V, DIN housing, 1 DI, 2 UI, 2 AO, 6 triac, pressure sensor, 30 data points	S55376-C163	DXR2.E12P-102A/BP
Compact room automation station, BACnet/IP, 24 V, DIN housing, 1 DI, 2 UI, 2 AO, 6 triac, pressure sensor, 60 data points	S55376-C143	DXR2.E12PX-102A

Compact room automation station, BACnet/IP, 24 V, DIN housing, 2 DI, 4 UI, 4 AO, 8 triac

DXR2.E18..



Compact room automation stations for HVAC, lighting, and shading:

- BACnet/IP communications
- KNX PL-Link bus to connect sensors, actuators, and operator units (including bus power)
- KNX S-Mode device integration
- 2-port Ethernet switch
- USB interface for Tool



Data sheet	N9205
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	78 VA
Communication	BACnet/IP KNX PL-Link KNX S-Mode
Analog output, signal	DC 0...10 V
Triac output, switching voltage	AC 24 V
Triac output, switching current	250 mA
Mounting	DIN rail Wall mounting
Degree of protection	IP20
Dimensions (W x H x D)	180 x 105 x 60 mm

Range overview DXR2.E18..

Product Title	Stock no.	Product no.
Compact room automation station, BACnet/IP, 24 V, DIN housing, 2 DI, 4 UI, 4 AO, 8 triac, (Fancoil, Radiant ceiling, Radiator, 4 Lights & 2 Shades)	S55376-C107	DXR2.E18-101A
Compact room automation station, BACnet/IP, 24 V, DIN housing, 2 DI, 4 UI, 4 AO, 8 triac	S55376-C162	DXR2.E18-101A/BP
Compact room automation station, BACnet/IP, 24 V, DIN housing, 2 DI, 4 UI, 4 AO, 8 triac, (Variable air volume, Fan-powered box, Radiant ceiling, Radiator, 4 Lights & 2 Shades)	S55376-C128	DXR2.E18-102A
Compact room automation station, BACnet/IP, 24 V, DIN housing, 2 DI, 4 UI, 4 AO, 8 triac, 18 pcs.	S55376-C167	DXR2.E18-102A/BP

Room automation

Room automation DXR (BACnet)

Room automation station DXR

DXR2.E09..



Compact room automation station, BACnet/IP, 230 V, flat housing, 1 DI, 2 UI, 3 relay, 3 AO

Compact room automation stations for HVAC, lighting, and shading:

- BACnet/IP communications
- KNX PL-Link bus to connect sensors, actuators, and operator units (including bus power)
- KNX S-Mode device integration
- 2-port Ethernet switch
- USB interface for Tool

Data sheet	N9204
Operating voltage	AC 230 V
Frequency	50/60 Hz
Power consumption	24 VA
Communication	BACnet/IP KNX PL-Link KNX S-Mode
Universal inputs, number	2
Digital inputs, number	1
Analog outputs, number	3
Analog output, signal	DC 0...10 V
Analog output, current	1 mA
Relay outputs, number	3
Relay output, switching voltage	AC 250 V
Relay output, switching current	4 (3) A
Mounting	DIN rail Wall mounting
Degree of protection	IP20
Dimensions (W x H x D)	112 x 165 x 49 mm

Range overview DXR2.E09..

Product Title	Stock no.	Product no.
Compact room automation station, BACnet/IP, 230 V, flat housing, 1 DI, 2 UI, 3 relay, 3 AO	S55376-C110	DXR2.E09-101A
Compact room automation station, BACnet/IP, 230 V, flat housing, 1 DI, 2 UI, 3 relay, 3 AO, 18 pcs.	S55376-C165	DXR2.E09-101A/BP

Compact room automation station, BACnet/IP, 230 V, flat housing, 1 DI, 2 UI, 1 relay, 1 AO, 4 triac

DXR2.E09T..



Compact room automation stations for HVAC, lighting, and shading:

- BACnet/IP communications
- KNX PL-Link bus to connect sensors, actuators, and operator units (including bus power)
- KNX S-Mode device integration
- 2-port Ethernet switch
- USB interface for Tool

Data sheet	N9204
Operating voltage	AC 230 V
Frequency	50/60 Hz
Power consumption	24 VA
Communication	BACnet/IP KNX PL-Link KNX S-Mode
Universal inputs, number	2
Digital inputs, number	1
Analog outputs, number	1
Analog output, signal	DC 0...10 V
Analog output, current	1 mA
Relay outputs, number	1
Relay output, switching voltage	AC 250 V
Relay output, switching current	4 (3) A
Triac outputs, number	4
Triac output, switching voltage	AC 24 V
Triac output, switching current	150 mA
Mounting	DIN rail Wall mounting
Degree of protection	IP20
Dimensions (W x H x D)	112 x 165 x 49 mm

Range overview DXR2.E09T..

Product Title	Stock no.	Product no.
Compact room automation station, BACnet/IP, 230 V, flat housing, 1 DI, 2 UI, 1 relay, 1 AO, 4 triac	S55376-C111	DXR2.E09T-101A
Compact room automation station, BACnet/IP, 230 V, flat housing, 1 DI, 2 UI, 1 relay, 1 AO, 4 triac, 18 pcs.	S55376-C166	DXR2.E09T-101A/BP

Room automation

Room automation DXR (BACnet)

Room automation station DXR

DXR2.E10..



Compact room automation station, BACnet/IP, 230 V, flat housing, 1 DI, 2 UI, 3 relay, 4 triac

Compact room automation stations for HVAC, lighting, and shading:

- BACnet/IP communications
- KNX PL-Link bus to connect sensors, actuators, and operator units (including bus power)
- KNX S-Mode device integration
- 2-port Ethernet switch
- USB interface for Tool

Operating voltage	AC 230 V
Frequency	50/60 Hz
Power consumption	24 VA
Communication	BACnet/IP KNX PL-Link KNX S-Mode
Digital inputs, number	1
Relay outputs, number	3
Relay output, switching voltage	AC 250 V
Relay output, switching current	4 (3) A
Triac outputs, number	4
Triac output, switching voltage	AC 24 V
Triac output, switching current	150 mA
Universal inputs, number	2
Mounting	DIN rail Wall mounting
Degree of protection	IP20
Dimensions (W x H x D)	112 x 165 x 49 mm

Range overview DXR2.E10..

Product Title	Stock no.	Product no.
Compact room automation station, BACnet/IP, 230 V, flat housing, 1 DI, 2 UI, 3 relay, 4 triac, 18 pcs.	S55376-C164	DXR2.E10-101A/BP
Compact room automation station, BACnet/IP, 230 V, flat housing, 1 DI, 2 UI, 3 relay, 4 triac	S55376-C109	DXR2.E10-101A

Compact room automation stations, BACnet/IP, 24 V

DXR2.E10PL..

Compact room automation stations for HVAC, lighting, and shading:

- BACnet/IP communications
- KNX PL-Link bus to connect sensors, actuators, and operator units (including bus power)
- KNX S-Mode device integration
- 2-port Ethernet switch
- USB interface for Tool



Data sheet	A6V11259958
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	Max. 66 VA
Communication	BACnet/IP KNX PL-Link KNX S-Mode
Universal inputs, number	3
Triac outputs, number	4
Triac output, switching voltage	AC 24 V
Triac output, switching current	150 mA
Degree of protection	IP20
Dimensions (W x H x D)	201 x 137 x 82 mm

Range overview DXR2.E10PL..

Product Title	Stock no.	Product no.
Compact room automation station and actuator combination, BACnet/IP, 24 V, 1 DI, 2 UI, 1 AO, 4 triac, pressure sensor, 30 data points	S55376-C145	DXR2.E10PL-102B
Compact room automation station, BACnet/IP, 24 V, DIN housing, 1 DI, 2 UI, 1 AO, 4 triac, pressure sensor, 60 data points	S55376-C146	DXR2.E10PLX-102B

Compact Room Automation Station (30DP) DXR.E17C

DXR2.E17C-103A

Compact Room Automation Station (30DP) DXR.E17C



Applications: Pressurized room, fume hood control, variable and constant volume flow, chilled beam, radiant ceiling, radiator, 4 lights & 2 shades

Data sheet	N9205
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	78 VA
Communication	BACnet/IP KNX PL-Link KNX S-Mode SCOM
Universal inputs, number	4 UI, 2 resistive
Digital inputs, number	3
Analog outputs, number	4
Analog output, signal	DC 0...10 V
Analog output, current	1 mA
Triac outputs, number	4
Triac output, switching voltage	AC 24 V
Triac output, switching current	250 mA
Mounting	DIN rail Wall mounting
Degree of protection	IP20
Dimensions (W x H x D)	180 x 105 x 60 mm

	Stock no.	Product no.
	S55376-C134	DXR2.E17C-103A

Room automation

Room automation DXR (BACnet)

Room automation station DXR

DXR2.E17CX-103A

Compact Room Automation Station (60DP) DXR.E17CX



Compact Room Automation Station (60DP) DXR.E17CX

Applications: Variable air volume, Fan-powered box, Radiant ceiling, Radiator, 4 Lights & 2 Shades



Data sheet	N9205
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	78 VA
Communication	BACnet/IP KNX PL-Link KNX S-Mode SCOM
Universal inputs, number	4 UI, 2 resistive
Digital inputs, number	3
Analog outputs, number	4
Analog output, signal	DC 0...10 V
Analog output, current	1 mA
Triac outputs, number	4
Triac output, switching voltage	AC 24 V
Triac output, switching current	250 mA
Mounting	DIN rail Wall mounting
Degree of protection	IP20
Dimensions (W x H x D)	180 x 105 x 60 mm

Stock no.	Product no.
S55376-C150	DXR2.E17CX-103A

Accessories for Desigo DXR2..

Product Title	Data sheet	Stock no.	Product no.
Terminal cover for DXR..., 110 mm, 2 pieces		S55376-C119	DXA.H110
Terminal cover for DXR..., 180 mm, 2 pieces		S55376-C120	DXA.H180

Room operator unit for KNX PL-Link, room temperature sensor

QMX2.P33

Functionality:

- Room temperature sensor
- LCD display of room temperature, operating modes, etc.
- Operation with 8 push buttons
- Interface KNX PL-Link (for TRA, with plug and play functionality)
- Powered over KNX PL-Link



Data sheet	A6V10733768
Operating voltage	KNX PL-Link DC 21...30 V
Power consumption	Max. 7...10 mA
Measuring range, temperature	0...50°C
Communication	KNX PL-Link
Mounting	Wall mounting
Degree of protection	Housing Protection: IP30 Protection standard as per EN 60529: IP33 for surface part
Dimensions (W x H x D)	89 x 133 x 21 mm
Weight (net)	0.146 kg

Stock no.	Product no.
S55624-H118	QMX2.P33

Room operator unit for KNX PL-Link, room temperature sensor and humidity sensor

QMX2.P43

Functionality:

- Room temperature sensor
- Humidity sensor
- LCD display of room temperature, operating modes, etc.
- Operation with 8 push buttons
- Interface KNX PL-Link (for TRA, with plug and play functionality)
- Powered over KNX PL-Link



Data sheet	A6V10733768
Operating voltage	KNX PL-Link DC 21...30 V
Power consumption	Max. 7...10 mA
Measuring range, temperature	0...50°C
Communication	KNX PL-Link
Mounting	Wall mounting
Degree of protection	Housing Protection: IP30 Protection standard as per EN 60529: IP33 for surface part
Dimensions (W x H x D)	89 x 133 x 21 mm
Weight (net)	0.146 kg

Stock no.	Product no.
S55624-H117	QMX2.P43



3

QMX3.P..H..



Room operator unit KNX PL-Link with temperature sensor, Dot matrix backlit display, touchscreen

- Functions:
- * Temperature sensor
 - * Dot matrix backlit display and touch screen
 - * PM2.5 and CO2 display

Data sheet	A6V11521633
Operating voltage	DC 21...30 V
Voltage supply	KNX PL-Link
Power consumption	Max. 15 mA at DC 24 V
Operating range	DC 21...30 V
Measuring range	0...50 °C
Degree of protection	IP30

QMX3.P35H



Room operator unit KNX PL-Link with temperature sensor, Dot matrix backlit display, touchscreen, white

- Functions:
- * Temperature sensor
 - * Dot matrix backlit display and touch screen
 - * PM2.5 and CO2 display

Data sheet	A6V11521633
Color	White
Dimensions (W x H x D)	86.2 x 88.2 x 17.2 mm



Stock no.	Product no.
S55624-H137	QMX3.P35H

QMX3.P35H-BSC



Room operator unit KNX PL-Link with temperature sensor, Dot matrix backlit display, touchscreen, black

- Functions:
- * Temperature sensor
 - * Dot matrix backlit display and touch screen
 - * PM2.5 and CO2 display

Data sheet	A6V11521633
Color	Black
Dimensions (W x H x D)	86.2 x 88.2 x 17.2 mm



Stock no.	Product no.
S55624-H139	QMX3.P35H-BSC

Room operator unit KNX PL-Link with temperature sensor, Dot matrix backlit display, touchscreen, Lighting/Blinds, white

QMX3.P38H

Functions:

- Temperature sensor
- Dot matrix backlit display and touch screen
- PM2.5 and CO2 display
- Lighting/Blinds Control



Data sheet A6V11521633
 Color White
 Dimensions (W x H x D) 86.2 x 88.2 x 17.2 mm



Stock no. Product no.

S55624-H138 QMX3.P38H

Room operator unit KNX PL-Link with temperature sensor, Dot matrix backlit display, touchscreen, Lighting/Blinds, black

QMX3.P38H-BSC

Functions:

- * Temperature sensor
- * Dot matrix backlit display and touch screen
- * PM2.5 and CO2 display
- * Lighting/Blinds Control



Data sheet A6V11521633
 Color Black
 Dimensions (W x H x D) 86.2 x 88.2 x 17.2 mm



Stock no. Product no.

S55624-H140 QMX3.P38H-BSC

3

QMX3.P36..



Room sensor and unit for KNX PL-Link, freely configurable, flush-mounted

The flush-mounted room unit QMX3.. consists of:

- Operator unit
- Bezel, titanium white
- Base plate and KNX plug.

Functionality:

- Freely configurable user interface (keys and visual items) as part of Total Room Automation
- RoomOptiControl energy efficiency function
- Room temperature measurement
- Display of room temperature, control mode, scenes etc. (dot matrix LCD)
- Backlit display, white or blue selection
- KNX PL-Link interface to the room automation station with plug & play functionality
- Can be combined with different standard and design bezels

Data sheet	N1601
Voltage supply	KNX bus
Measuring range, temperature	0...50 °C
Sensing element, temperature	NTC
Communication	KNX PL-Link
Dimensions (W x H x D)	55 x 55 x 38 mm

Range overview QMX3..

Product Title	Stock no.	Product no.
Room unit for KNX PL-Link, freely configurable, flush-mounted with square bezel	S55624-H100	QMX3.P36F
Room unit for KNX PL-Link, freely configurable, flush-mounted with landscape bezel (3 modules landscape)	S55624-H101	QMX3.P36G

QMX3.P44



Room operator unit KNX with sensors for temperature, humidity, segmented backlit display, touchkeys, white

Functions:

- multisensor for temperature and humidity
- Segmented backlit display and touchkeys

Data sheet	N1602
Voltage supply	KNX bus
Measuring range	NTC: 0...50 °C Humidity: 10%...95 % r.F.
Measuring range, temperature	0...50 °C
Sensing element, temperature	NTC
Communication	KNX PL-Link KNX S-Mode
Color	White
Mounting	Wall mounting with screws
Degree of protection	IP30
Dimensions (W x H x D)	88.4 x 133.4 x 18 mm
Weight (net)	0.21 kg

Stock no.	Product no.
S55624-H143	QMX3.P44

Room operator unit KNX with sensors for temperature, humidity, segmented backlit display, touchkeys, black

QMX3.P44-1BSC

Functions:

- Multisensor for temperature and humidity
- Segmented backlit display and touchkeys

Data sheet	N1602
Voltage supply	KNX bus
Measuring range	NTC: 0...50 °C Humidity: 10%...95 % r.F.
Measuring range, temperature	0...50 °C
Sensing element, temperature	NTC
Communication	KNX PL-Link KNX S-Mode
Color	Black
Mounting	Wall mounting with screws
Degree of protection	IP30
Dimensions (W x H x D)	88.4 x 133.4 x 18 mm
Weight (net)	0.21 kg



Stock no.	Product no.
S55624-H144	QMX3.P44-1BSC

Wall-mounted room sensors and operator units for KNX



The wall-mounted room unit QMX3.. consists of:

- Base plate
- Sensor or room operator unit

The following functions are (depending on type):

- Temperature sensor or multisensor (T, r.h., CO2)
- Backlit display or LED display
- Touchkeys
- Switching and control of lighting, blinds, scenes

Data sheet	N1602
Voltage supply	KNX bus
Measuring range, temperature	0...50 °C
Sensing element, temperature	NTC
Communication	KNX PL-Link KNX S-Mode
Degree of protection	IP30

Room operator unit KNX with temperature sensor, configurable touchkeys, LED display, white

QMX3.P02

Functions:

- Temperature sensor
- Configurable touchkeys with LED display
- Switching and control of lighting, blinds, scenes
- Window for labels

Data sheet	N1602
Dimensions (W x H x D)	88.4 x 133.4 x 18 mm



Stock no.	Product no.
S55624-H107	QMX3.P02

New Product

Room automation

Room automation DXR (BACnet)

Room units with KNX PL-Link

3

QMX3.P02-1BSC

Room operator unit KNX with temperature sensor, configurable touchkeys, LED display, black



Functions:

- Temperature sensor
- Configurable touchkeys with LED display
- Switching and control of lighting, blinds, scenes
- Window for labels

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock no.

Product no.

S55624-H128

QMX3.P02-1BSC

QMX3.P30

Room sensor KNX for temperature, white



Functions:

- Temperature sensor

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock no.

Product no.

S55624-H103

QMX3.P30

QMX3.P30-1BSC

Room sensor KNX for temperature, black



Functions:

- Temperature sensor

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock no.

Product no.

S55624-H123

QMX3.P30-1BSC

Room operator unit KNX with temperature sensor, segmented backlit display, touchkeys, white

QMX3.P34

Functions:

- Temperature sensor
- Segmented backlit display and touchkeys

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm



	Stock no.	Product no.
	S55624-H105	QMX3.P34

Room operator unit KNX with temperature sensor, segmented backlit display, touchkeys, black

QMX3.P34-1BSC

Functions:

- Temperature sensor
- Segmented backlit display and touchkeys

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm



	Stock no.	Product no.
	S55624-H126	QMX3.P34-1BSC

Room operator unit KNX with temperature sensor, segmented backlit display, configurable touchkeys, LED display, white

QMX3.P37

Functions:

- Temperature sensor
- Segmented backlit display and touchkeys
- Configurable touchkeys with LED display
- Switching and control of lighting, blinds, scenes
- Window for labels

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm



	Stock no.	Product no.
	S55624-H108	QMX3.P37

Room automation

Room automation DXR (BACnet)

Room units with KNX PL-Link

3

QMX3.P37-1BSC



Room operator unit KNX with temperature sensor, segmented backlit display, configurable touchkeys, LED display, black

Functions:

- Temperature sensor
- Segmented backlit display and touchkeys
- Configurable touchkeys with LED display
- Switching and control of lighting, blinds, scenes
- Window for labels

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock no.

Product no.

S55624-H129

QMX3.P37-1BSC

QMX3.P40



Room sensor KNX for temperature and humidity, white

Functions:

- Multisensor for temperature and humidity

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock no.

Product no.

S55624-H116

QMX3.P40

QMX3.P40-1BSC



Room sensor KNX for temperature and humidity, black

Functions:

- Multisensor for temperature and humidity

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock no.

Product no.

S55624-H124

QMX3.P40-1BSC



Room sensor KNX for temperature, humidity, CO2, white

QMX3.P70

Functions:

- Multisensor for temperature, humidity and CO2
- Air quality indicator with LED

Data sheet N1602
 Dimensions (W x H x D) 88.4 x 133.4 x 18 mm



Stock no.	Product no.
S55624-H104	QMX3.P70

Room sensor KNX for temperature, humidity, CO2, black

QMX3.P70-1BSC

Functions:

- multisensor for temperature, humidity and CO2
- Air quality indicator with LED

Data sheet N1602
 Dimensions (W x H x D) 88.4 x 133.4 x 18 mm



Stock no.	Product no.
S55624-H125	QMX3.P70-1BSC

Room operator unit KNX with sensors for temperature, humidity, CO2, segmented backlit display, touchkeys, white

QMX3.P74

Functions:

- multisensor for temperature, humidity and CO2
- Segmented backlit display and touchkeys

Data sheet N1602
 Dimensions (W x H x D) 88.4 x 133.4 x 18 mm



Stock no.	Product no.
S55624-H106	QMX3.P74

Room automation

Room automation DXR (BACnet)

Room units with KNX PL-Link

3

QMX3.P74-1BSC



Room operator unit KNX with sensors for temperature, humidity, CO2, segmented backlit display, touchkeys, black

Functions:

- Multisensor for temperature, humidity and CO2
- Segmented backlit display and touchkeys

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock no.

Product no.

S55624-H127

QMX3.P74-1BSC

AQR2570..



Base module with KNX for temperature and humidity measurement

- Base module without sensor for plugging onto a front module
- 1 analog input to connect temperature sensors with NTC 10k sensing element to measure room, floor, or ceiling temperature
- 2 multifunctional binary inputs to connect window contacts or buttons
- Power supply via KNX bus, bus load < 5 mA
- Communication: KNX S-Mode, KNX LTE-Mode (Synco)

Data sheet

N1411

Voltage supply

KNX bus

Analog inputs, number

1

Analog inputs

Passive temperature sensor NTC 10k

Digital inputs, number

2

Digital inputs

Potential-free contacts

Warranty

5 Years

Range overview AQR2570..

Mechanical design	Dimensions (WxHxD) [mm]	Stock no.	Product no.
EU (CEE/VDE)	70.8 x 70.8 x 45	S55720-S203	AQR2570NF
IT (3 Modular)	71 x 71 x 45	S55720-S205	AQR2570NG
UK (British Standard)	71 x 71 x 45	S55720-S204	AQR2570NH
US (UL)	64 x 110 x 45	S55720-S206	AQR2570NJ

Front modules for base module

AQR253..

- Front module with sensors

Data sheet	N1411
Color	Titanium white
Degree of protection	IP30
Warranty	5 Years



Range overview AQR253..

Measuring range, temperature [°C]	Signal output temperature	Measurement range humidity [% r.h.]	Display	Dimensions (WxHxD) [mm]	Stock no.	Product no.
0...50	Active LG-Ni1000	0...100		55 x 55 x 12	S55720-S138	AQR2534ANW
				55 x 55 x 12	S55720-S137	AQR2530NNW
0...50	Active			55 x 55 x 12	S55720-S136	AQR2532NNW
0...50	Active	0...100		55 x 55 x 12	S55720-S141	AQR2535NNW
0...50	Active	0...100	CO ₂ indicator by LED	55 x 55 x 38	S55720-S219	AQR2535NNWQ

The matching design frame must be ordered separately.

Base modules with KNX for CO₂ measurement

AQR2576..

- Base module with maintenance and recalibration-free CO₂ sensor to plug onto a front module
- 1 analog input to connect temperature sensors with NTC 10k sensing element to measure room, floor, or ceiling temperature
- 2 multifunctional binary inputs to connect window contacts or buttons
- Power supply via KNX bus, bus load < 5 mA
- Communication: KNX S-Mode, KNX LTE-Mode (Synco)



Data sheet	N1411
Voltage supply	KNX bus
Measuring range	CO ₂ : 0...5000 ppm
Analog inputs, number	1
Analog inputs	Passive temperature sensor NTC 10k
Digital inputs, number	2
Digital inputs	Potential-free contacts
Warranty	5 Years

Range overview AQR2576..

Mechanical design	Dimensions (WxHxD) [mm]	Stock no.	Product no.
EU (CEE/VDE)	70.8 x 70.8 x 45	S55720-S207	AQR2576NF
IT (3 Modular)	71 x 71 x 45	S55720-S209	AQR2576NG
UK (British Standard)	71 x 71 x 45	S55720-S208	AQR2576NH
US (UL)	64 x 110 x 45	S55720-S210	AQR2576NJ

UP 258D..1

Presence Detector WIDE

- Passive infrared detector for ceiling installation
- Horizontal 360° motion detection area
- Presence/motion detection up to 64 m² / 400 m² (depending on mounting or room height)
- A 7-level setting to adjust the presence detection range
- Brightness and temperature measurement
- Integrated IR receiver and IR decoder for IR remote control with six pairs of buttons
- LED for display of detected motions in the delivery state for easy commissioning
- Programming button operable from the front
- Integrated bus coupler, bus connection via bus terminal, operation of electronics with bus voltage
- Mounting on the ceiling on a flush-mounting box with diameter of 60 mm, in a separately ordered housing for surface mounting or mounting plate for 4 x 4 boxes
- Color white (similar to RAL 9016)

UP 258D31



Presence Detector WIDE with temperature measurement

- Passive infrared detector for ceiling installation
- Horizontal 360° motion detection area
- Presence/motion detection up to 64 m² / 400 m² (depending on mounting or room height)
- A 7-level setting to adjust the presence detection range
- Brightness and temperature measurement
- Integrated IR receiver and IR decoder for IR remote control with six pairs of buttons
- LED for display of detected motions in the delivery state for easy commissioning
- Programming button operable from the front
- Integrated bus coupler, bus connection via bus terminal, operation of electronics with bus voltage
- Mounting on the ceiling on a flush-mounting box with diameter of 60 mm, in a separately ordered housing for surface mounting or mounting plate for 4 x 4 boxes
- Color white (similar to RAL 9016)

Data sheet

A6V11895382

Dimensions (W x H x D)

120 x 41 x 120 mm

Stock no.

Product no.

5WG1258-2DB31

UP 258D31

UP 258D41



Presence Detector WIDE pro with temperature and relative humidity measurement

- Passive infrared detector for ceiling installation
- Horizontal 360° motion detection area
- Presence/motion detection up to 64 m² / 400 m² (depending on mounting or room height)
- A 7-level setting to adjust the presence detection range
- Brightness and temperature measurement
- Integrated IR receiver and IR decoder for IR remote control with six pairs of buttons
- LED for display of detected motions in the delivery state for easy commissioning
- Programming button operable from the front
- Integrated bus coupler, bus connection via bus terminal, operation of electronics with bus voltage
- Mounting on the ceiling on a flush-mounting box with diameter of 60 mm, in a separately ordered housing for surface mounting or mounting plate for 4 x 4 boxes
- Color white (similar to RAL 9016)

Data sheet

A6V11895382

Dimensions (W x H x D)

120 x 41 x 120 mm

Stock no.

Product no.

5WG1258-2DB41

UP 258D41

Presence Detector WIDE multi with temperature, humidity and CO2 measurement

UP 258D51



- Passive infrared detector for ceiling installation
- Horizontal 360° motion detection area
- Presence/motion detection up to 64 m² / 400 m² (depending on mounting or room height)
- A 7-level setting to adjust the presence detection range
- Brightness and temperature measurement
- Integrated IR receiver and IR decoder for IR remote control with six pairs of buttons
- LED for display of detected motions in the delivery state for easy commissioning
- Programming button operable from the front
- Integrated bus coupler, bus connection via bus terminal, operation of electronics with bus voltage
- Mounting on the ceiling on a flush-mounting box with diameter of 60 mm, in a separately ordered housing for surface mounting or mounting plate for 4 x 4 boxes
- Color white (similar to RAL 9016)

Data sheet A6V11895382
 Dimensions (W x H x D) 120 x 41 x 120 mm

Stock no.	Product no.
5WG1258-2DB51	UP 258D51

Presence Detector WIDE DualTech with temperature measurement

UP 258D61



- Ultrasound for reliable detection for ceiling installation indoors even behind objects
- Additional detection options through PIR technology
- Horizontal 360° motion detection area
- Presence/motion detection up to 28 m² / 79 m² (depending on mounting or room height)
- Brightness and temperature measurement
- Integrated IR receiver and IR decoder for IR remote control with six pairs of buttons
- LED for display of detected motions in the delivery state for easy commissioning
- Programming button operable from the front
- Integrated bus coupler, bus connection via bus terminal, operation of electronics with bus voltage
- Mounting on the ceiling on a flush-mounting box with diameter of 60 mm, in a separately ordered housing for surface mounting or mounting plate for 4 x 4 boxes
- Color white (similar to RAL 9016)

Data sheet A6V11895378
 Dimensions (W x H x D) 120 x 41 x 120 mm

Stock no.	Product no.
5WG1258-2DB61	UP 258D61

UP 258D12



Presence detector with brightness sensor

- Passive infrared detector for ceiling mounting indoors
 - Adjustable sensitivity of detection
 - Mixed light measurement
 - Ceiling mounting on a flush-mounting box with 60 mm diameter and min. 40 mm depth or in a housing for surface-mounting AP 258E01 (to be ordered separately)
 - Integrated IR decoder for S 255/11
 - Programming button reachable from front
 - Monitoring range horizontal 360°, vertical approx. 105°
 - Monitoring motion of an area of diameter 8 m (depending on mounting/room height)
 - Optional blinding of parts of the detection area
 - Power supply via KNX bus
 - Integrated bus coupling unit, bus connection via bus terminal
-
- Monitoring motion range horizontal 360°, vertical approx. 105°
 - Optional blinding of parts of the detection area
 - UP mounting with fixing claws in suspended ceiling
 - Power supply via bus line
 - Integrated bus coupling unit, bus connection via bus terminal

Data sheet A6V10489482
Dimension (Ø x H) 88 x 63 mm

Stock no. Product no.
5WG1258-2DB12 UP 258D12

UP 255D21



Brightness sensor with constant light level controller

- Mixed light measurement
- Ceiling mounting on a flush-mounting box with 60 mm diameter and min. 40 mm depth or in a housing for surface-mounting (to be ordered separately)
- Programming button reachable from front
- Integrated IR decoder for S 255/11

Data sheet A6V10489482
Dimension (Ø x H) 88 x 63 mm

Stock no. Product no.
5WG1255-2DB21 UP 255D21

VAV compact controller KNX

G..B181.1E/KN

- Compact controller with KNX communication for plants with variable or constant air volume flow
- Integrated, highly precise differential pressure sensor, damper actuator and digitally configurable air volume controller
- Nominal torque 5 or 10 Nm
- Air damper rotation angle mechanically adjustable between 0 and 90°
- Configurable as single device per room or for cascade control with pressure ratio 1:1, positive pressure, or negative pressure
- Prewired with a 0.9 m cable and a 0.9 m cable



Data sheet	N3547
Positioning time	150 s
Communication	KNX S-Mode KNX LTE-Mode KNX PL-Link
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	71 x 158 x 61 mm
Warranty	5 Years

Range overview G..B181.1E/KN

Torque [Nm]	Operating voltage [V]	Air damper area [m ²]	Power consumption	Stock no.	Product no.
5	AC 24	0.8	3 VA 2.5 W	S55499-D134	GDB181.1E/KN
5	AC 24	0.8	3 VA 2.5 W	S55499-D505	GDB181.1EMKN
10	AC 24	1.5	3 VA 2.5 W	S55499-D135	GLB181.1E/KN

GDB181.EMKN packaging unit 18 pieces.
 Basic Documentation No.: P3547

GDB111.9E/KN

Electromotoric rotary actuator KNX for control ball valves up to DN25



- Electromotoric rotary actuator
- for KNX S-Mode or KNX PL-Link communication
 - for 2-/3-port control ball valves up to DN25
 - for 6-port control ball valves up to DN25
 - without spring-return
 - pre-wired with two 0.9 m connection cables

Data sheet	A6V10725318
Torque	5 Nm
Angular rotation	90°
Power consumption	3 VA 2.5 W
Positioning time	150 s
Cable length	0.9 m
Communication	KNX S-Mode or KNX PL-Link
Positioning signal	KNX S-Mode or KNX PL-Link
Spring return function	No
Degree of protection	IP54
Medium temperature	5...90 °C
Ambient humidity, operation	95 % r.h.
Dimensions (W x H x D)	88 x 112 x 43 mm
Mounting position	Horizontal or vertical
Operating voltage	AC 24...24 V 24 V
Position feedback	KNX S-Mode or KNX PL-Link
Auxiliary switch	0
Warranty	5 Years

Stock no. Product no.

S55499-D203 **GDB111.9E/KN**

Home automation system



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Central apartment unit (1)



The heart and brain of the system. From here you can control all different functions for up to 12 rooms quickly and easily and monitor them via the display.

Room unit / room temperature sensor (2)



The room unit measures the room temperature and allows the settings entered into the central apartment unit, such as temperature and operating parameters, to be adjusted for individual rooms. The comfort settings can be extended at the push of a button. The room temperature sensor measures the room temperature and communicates this by radio to the central apartment unit.

Radiator control actuator (3)



Receives the pre-set desired temperature for this room by radio signal from the central apartment unit and regulates room temperature by adjusting the radiator valve. It can also be regulate up to 5 additional radiators per room, thereby ensuring an even temperature between radiators.

Heating circuit controller / Multicontroller (4)



The heating circuit controller compares the actual values and setpoints for each room communicated from the central apartment unit via RF and regulates the temperature by adjusting the valve settings of the heat distributor. The multicontroller is for precontrol of up to 2 independent hydraulic room groups (e.g. radiators, floor heating) or for control of ventilation plant with up to 3 stages.

Web server (5)



The web server connects the home automation system to the internet. It allows you to access and operate the system from a remote location via Smartphone, tablet or PC. With the HomeControl app from Siemens, you have an intuitive and simple control for your heating, air conditioning and ventilation system, as well as light and shading control. Alarm messages, reports and consumption data can be sent to email recipients as required.

Consumption data interface (6)



The consumption data interface collects consumption data of heat/cool energy, electricity, water and gas.

Meteo sensor (7)



Acquires the outside temperature and atmospheric pressure and communicates this via RF to the central apartment unit.

Lighting and blind control (8)



Convenient control of lighting and blinds – centrally, locally in the room, or as a scene. Naturally, the components can also be operated automatically, e.g. via time programs or simulation of presence.

Door / window contact (9)



Monitors the status of windows, doors and gates and transmits the relevant data to the central apartment unit. In the case of deviations from the norm, the system can alert you in a variety of ways. In addition, it saves energy and stay comfortable.

Use Synco™ living – and technology becomes your valued companion in the house

Synco™ living is the outstanding modular Homeautomation system from Siemens. It offers central operation and adapts all parameters for comfortable living, such as optimum room temperatures, air and light conditions, safety and security, plus economical use of energy and financial resources, to individual needs. The system can be dynamically matched to changing living conditions. Information within the system is transmitted either wire-bound (KNX TP) or via radio (KNX RF).

To be able to satisfy all kinds of requirements in the residential sector, today's Homeautomation systems must be compatible with a large number of systems on the market. Synco™ living offers absolute openness. This means that – now or later – you can integrate almost any type of system into your Synco™ living configuration conforming to international KNX standard.

More information about Synco living see www.siemens.com/syncoliving



Home automation system

Overview and selection tools

Synco living – more comfort at home

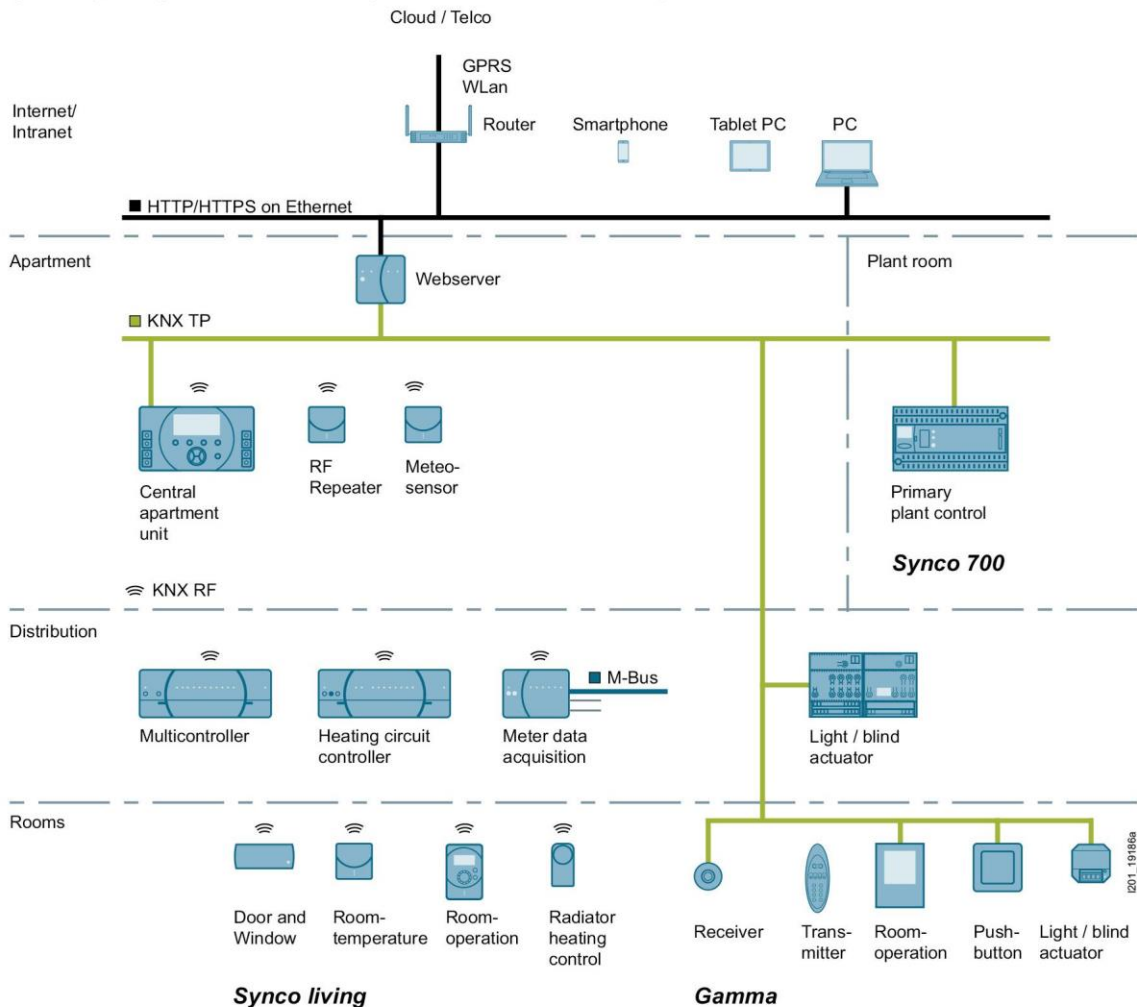
Synco living is specially tailored to the needs of private areas. The unique home automation system unites all functions such as heating, ventilation, lighting, blinds, security technology as well as consumption data acquisition. All components can be integrated wired or wireless in a flexible way. The control in line with the demand allows up to 30% less heating energy use – and lower CO₂ emissions for your home. Synco living fulfils all requirements to achieve energy efficiency class A in accordance with EN 15232. In addition the eu.bac certification demonstrates proven quality and energy efficiency according to European standards and directives.

Synco operating – efficient operation of plant with straightforward remote control

Thanks to Synco's Web server, plant operation and monitoring can be effected from a PC or Smartphone at any time and from any location. An alarm system delivers fault status or maintenance messages in due time, also via SMS or e-mail, if required. The app allows operation from underway or from the sofa.

Monitored energy efficiency

The energy indicator monitors end user settings, shows exceeded limit values and reports them to the residents periodically via e-mail or app. A leaf symbol shows the energy status for each setting: Green means that the setting is correct from an energetic point of view; orange signals that a setting is energetically unfavorable. This way, each deviation is made transparent and visible at all times.



Synco living

Gamma

Gamma – The tried-and-tested building control

Gamma building control enables all components in house and building control systems to be networked flexibly via the two wires of the bus cable. Whether you want to realize highly complex multi-utility systems or are looking for small solutions – this technology can be adapted to your individual requirements.

Synco 700 – versatile HVAC controller range of modular design

Being the heart for manages the primary energy plant. This modular product range controls and monitors the HVAC plant. Installation and commissioning work can be performed quickly and efficiently: The extension modules simply click onto the controllers. Thanks to standard applications integrated in the controllers, there is no need for programming. The documentation gives you an overview of all integrated applications. Also, customized configurations can be made very straightforwardly.

Central apartment unit for HVAC and energy consumption data collection

QAX903-9



The central apartment unit serves as an operator and display unit for an apartment. It manages individual room control (heating/cooling) of up to 12 rooms, comfort ventilation, precontrol, control of air conditioning equipment, and acquires the consumption data of heat, water, electricity and gas.

- Management of heating and cooling control for one apartment
 - Suited for heating and cooling plants with central distribution (e.g. underfloor heating) and radiators with decentral connections
 - Selection of operating mode, timer and holidays / special day function for the apartment
 - Independent time switches and operating modes for 12 rooms
 - Flow temperature control of 2 independent room groups including limitation (min. / max.) and maintained return temperature (high / low)
 - Increase of economy room temperature setpoint and minimum flow temperature setpoint depending on the composite outside temperature
 - Collection of heat / cooling requests from the individual rooms and forwarding the requests to the heat/cooling sources via wired bus, heat/cooling demand relay or DC 0...10 V output to the RRV912 or RRV934
- Absence function (heating, cooling, ventilation)
- Management of 3-stage ventilation plant via RRV934 multicontroller, incl. night cooling
- Control of air conditioners (split units) via universal outputs (locally and RRV91x) or via S-Mode (KNX TP)
- Collection of meter data (heat / cool, electricity, water, gas) to support automated meter reading & billing
- Display of meteorological data
- Presentation of key data on info pages
- Plain text output in bg, cs, de, dk, el, en, es, fi, fr, hr, hu, it, nl, no, pl, pt, ro, ru, sk, sl, sr, sv, tr
- Wireless communication with the devices of Synco living product ranges
- Remote access via Siemens web server OZW772.xx
- Intuitive and simple control with Android or IOS App

Data sheet	N2741
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Display	Full graphic backlit display
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF) and KNX TP (wired bus)
Indoor wireless range	30 m
Universal inputs, number	1
Universal inputs	Digital 0/1 LG-Ni1000
Universal input, signal	Digital 0/1 LG-Ni1000
Relay outputs, number	1
Relay output, switching voltage	AC 24...230 V
Relay outputs, type	Normally open contact
Relay output, switching current	AC 0.02...2 (2) A
Mounting	For screw fixing
Degree of protection	IP20D
Dimensions (W x H x D)	230 x 130 x 29.7 mm

Stock no. Product no.

S55621-H125 **QAX903-9**



QAX913-9



Central apartment unit with energy consumption data collection

The central apartment unit serves as an operator and display unit for an apartment. It manages individual room control (heating/cooling) of up to 12 rooms, comfort ventilation, precontrol and DHW control, control of air conditioning equipment, and acquires the consumption data of heat, water, electricity and gas. Additional functions include the control of lights and blinds. Door and window contacts plus smoke detectors and water monitors can be integrated for monitoring purposes.

- Management of heating and cooling control for one apartment
 - Suited for heating and cooling plants with central distribution (e.g. underfloor heating) and radiators with decentral connections
 - Selection of operating mode, timer and holidays / special day function for the apartment
 - Independent time switches and operating modes for 12 rooms
 - Flow temperature control of 2 independent room groups including limitation (min. / max.) and maintained return temperature (high / low)
 - Increase of economy room temperature setpoint and minimum flow temperature setpoint depending on the composite outside temperature
 - Collection of heat / cooling requests from the individual rooms and forwarding the requests to the heat/cooling sources via wired bus, heat/cooling demand relay or DC0...10 V output to the RRV912 or RRV934
- Absence function (heating, cooling, ventilation, lights) with simulation of presence (lights)
- DHW heating with time switch and selection of operating mode
- Management of 3-stage ventilation plant via RRV934 multicontroller, incl. night cooling
- Control of air conditioners (split units) via universal outputs (locally and RRV91x) or via S-Mode (KNX TP)
- Collection of meter data (heat / cool, electricity, water, gas) to support automated meter reading & billing
- Operation of lights and blinds via 4 softkeys, time switch and events
- Monitoring door contacts, window contacts and smoke detectors
- Display of meteorological data
- Presentation of key data on info pages
- Plain text output in bg, cs, de, dk, el, en, es, fi, fr, hr, hu, it, nl, no, pl, pt, ro, ru, sk, sl, sr, sv, tr
- Remote access via Siemens web server OZW772.xx
- Intuitive and simple control with Android or IOS App

Data sheet	N2740
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Display	Full graphic backlit display
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF) and KNX TP (wired bus)
Indoor wireless range	30 m
Universal inputs, number	1
Universal inputs	Digital 0/1 LG-Ni1000
Universal input, signal	Digital 0/1 LG-Ni1000
Relay outputs, number	1
Relay output, switching voltage	AC 24...230 V
Relay outputs, type	Normally open contact
Relay output, switching current	AC 0.02...2 (2) A
Mounting	For screw fixing
Degree of protection	IP20D
Dimensions (W x H x D)	230 x 130 x 29.7 mm

Stock no. Product no.

S55621-H126

QAX913-9

Web server for QAX9..

Product Title	Data sheet	Stock no.	Product no.
Web server for 1 Synco device	N5701	BPZ:OZW772.01	OZW772.01
Web server for 4 Synco devices	N5701	BPZ:OZW772.04	OZW772.04
Web server for 16 Synco devices	N5701	BPZ:OZW772.16	OZW772.16
Web server for 250 Synco devices	N5701	BPZ:OZW772.250	OZW772.250

QAW910



Room unit

Wireless room unit.

The QAW910 is used for the operation and display of basic space heating functions. It also forwards the acquired room temperature to the central apartment unit QAX9.., either periodically or when changes occur. The room temperature is shown on the display of the QAW910.

- Operation and display of space heating functions
- Selection of room operating mode, timer function and room temperature setpoint readjustment
- Display of space heating function and status messages
- Acquisition of the room temperature
- Battery-powered by commercially available 1.5 V batteries (contained in the scope of delivery)
- Especially suited for:
 - Renovation projects (old buildings, museums, churches, historical buildings, etc.)
 - Difficult wall-mounting situations (sandstone, glass, etc.)
 - Variable floor plans (different décors, furniture changes)
 - New houses and buildings
- RF communication based on KNX standard (868 MHz, bidirectional)

Data sheet	N2703
Voltage supply	Mignon (2xAA) LR6
Battery capacity	2.5 Ah
Battery life	3 years
Measuring range, temperature	0...50 °C
Display	Segment LCD
Display size	Resolution 0.1 °C
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF)
Indoor wireless range	30 m
Degree of protection	IP40
Dimensions (W x H x D)	84 x 130 x 23.6 mm

Stock no.	Product no.
BPZ:QAW910	QAW910

QAA910



Room temperature sensor

Wireless room temperature sensor for acquiring the room temperature.

During operation, the QAA910 forwards the acquired room temperature to the central apartment unit QAX9.., either periodically or in the case of changes.

- Battery-powered by commercially available 1.5 V batteries (contained in the scope of delivery)
- Especially suited for:
 - Renovation projects (old buildings, museums, churches, historical buildings, etc.)
 - Difficult wall-mounting situations (sandstone, glass, etc.)
 - Variable floor plans (different décors, furniture changes)
- New construction projects
- RF communication based on KNX standard (868 MHz, unidirectional)

Data sheet	N2701
Voltage supply	Mignon (2xAA) LR6
Battery capacity	2.5 Ah
Battery life	3 years
Measuring range, temperature	0...50 °C
Communication	KNX RF-compatible, 868.3 MHz unidirectional (RF)
Indoor wireless range	30 m
Degree of protection	IP40
Dimensions (W x H x D)	84 x 84 x 23 mm

Stock no.	Product no.
BPZ:QAA910	QAA910

SSA955



Radiator control actuator

RF-based actuator for radiator valves.

The SSA955 controls the room temperature based on the data forwarded by the central apartment unit QAX9...

- Battery-powered by commercially available 1.5 V batteries (contained in the scope of delivery)
- Silent mode (e.g. for use in sleeping rooms)
- Automatic identification of valve stroke
- Parallel connection of multiple actuators possible
- Integrated temperature sensor
- For direct mounting with coupling nut (no tools required)
- Manual adjustment
- RF communication based on KNX standard (868 MHz, bidirectional)

Suitable adaptors for valves of other manufacturers refer to AV5.. and AV6..

Data sheet	N2700
Voltage supply	Mignon (3xAA) LR6
Battery life	3 years (2 years in silent mode)
Battery capacity	2.5 Ah
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF)
Indoor wireless range	30 m
Sound power level	Silent mode: <25 dB (A) Normal mode: <30 dB (A)
Stroke	2.5 mm
Positioning force	110 N
Medium temperature	1... 110 °C
Measuring range, temperature	0...50 °C
Ambient temperature, operation	1...50 °C
Connecting thread	M30 x 1.5
Mounting position	Upright to 90° inclined
Degree of protection	IP40
Dimensions (W x H x D)	48 x 95 x 80.6 mm
Warranty	5 Years

Stock no. Product no.

BPZ:SSA955 SSA955

RRV912



Heating circuit controller, 2 heating circuits

RF-based heating circuit controller for up to 2 heating circuits and DHW heating.

In operation, the RRV912 maintains the required room temperature of the individual heating circuits. The central apartment unit QAX9.. forwards the relevant data via RF.

- Suited for use in heating and cooling plants
- With central distributors (e.g. underfloor heating or soft steel piping system)
- For use with motorized radiator valves (e.g. with sill covers)
- Heating circuit control with 2- or 3-position actuators
- 2 universal relay outputs, e.g. for control of the room group pump and DHW heating
- 1 universal input, e.g. for connection of a DHW temperature sensor or an alarm
- 1 universal output DC 0...10 V for forwarding the heat / cooling demand signal
- RF communication based on KNX standard (868 MHz, bidirectional)

Data sheet	N2705
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Control algorithm	2-position: PID, 3-position: PID
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF)
Universal inputs, number	1
Universal input, signal	Digital 0/1 LG-Ni1000
Measuring range, temperature	0...120 °C
Universal outputs, number	1
Universal output, signal	DC 0...10 V
Universal output, current	max. DC 1 mA
Relay outputs, number	2
Relay output, switching voltage	AC 24...230 V NO - contact
Relay output, switching current	AC 0.02...2 (2) A
Triac outputs, number	2
Triac output, switching voltage	AC 230 V
Triac output, switching current	30 mA
Degree of protection	IP30
Dimensions (W x H x D)	180 x 98 x 50 mm

Stock no. Product no.

BPZ:RRV912 **RRV912**

RRV918



Heating circuit controller, 8 heating circuits

RF-based heating circuit controller for up to 8 heating circuits.

In operation, the RRV918 maintains the required room temperature of the individual heating circuits. The central apartment unit QAX9.. forwards the relevant data via RF.

- Suited for use in heating and cooling plants
- With central distributors (e.g. underfloor heating or soft steel piping system)
- For use with motorized radiator valves (e.g. with sill covers)
- Connection facility for up to eight 2-position actuators
- 1 Universal relay output, e.g. for control of the room group pump and DHW heating
- 1 Universal input, e.g. for connection of a DHW temperature sensor or an alarm
- RF communication based on KNX standard (868 MHz, bidirectional)

Data sheet	N2706
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Control algorithm	2-position PID
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF)
Universal inputs, number	1
Universal input, signal	Digital 0/1 LG-Ni1000
Measuring range, temperature	0...120 °C
Universal outputs, number	1
Relay outputs, number	1
Relay output, switching voltage	AC 24...230 V NO - contact
Relay output, switching current	AC 0.02...2 (2) A
Triac outputs, number	8
Triac output, switching voltage	AC 230 V
Triac output, switching current	30 mA
Degree of protection	IP30
Dimensions (W x H x D)	245 x 98 x 50 mm

Stock no.	Product no.
BPZ:RRV918	RRV918



Home automation system
Synco™ living
Multi controller RRV93..

RRV934



Multicontroller

RF-based multicontroller for precontrol of up to 2 room groups or control of ventilation plant with up to 3 stages. All inputs and outputs are also suited for universal use. The relevant data are forwarded wirelessly by the central apartment unit QAX9...

- Suited for use in heating and cooling plants for precontrol of up to 2 room groups
- 2 primary controllers each with a DC 0...10 V actuator
- 1 primary controller with a DC 0...10 V actuator and 1 primary controller with a 3-position actuator
- Flow and return temperature limitation, optional control of room group pumps and DHW heating
- Suited for control of 3-stage ventilation plant incl. HR bypass, with impact from humidity, indoor air quality or CO₂- level, incl. fault monitoring
- Forwarding the heat / cooling demand signal to primary energy plant
- RF communication based on KNX standard (868 MHz, bidirectional)

Data sheet	N2709
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Control algorithm	Precontroller: PI
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF)
Indoor wireless range	30 m
Universal inputs, number	4
Universal input, signal	Digital 0/1
	LG-Ni1000
	DC 0...10 V
Measuring range, temperature	0...120 °C
Universal outputs, number	2
Universal output, signal	DC 0...10 V
Universal output, current	max. DC 1 mA
Relay outputs, number	4
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	AC 0,02...2 (2) A
Mounting	DIN rail
	For screw fixing
Degree of protection	IP30
Dimensions (W x H x D)	245 x 98 x 50 mm

Stock no.	Product no.
BPZ:RRV934	RRV934

Consumption data interface

WRI982



The consumption data interface collects consumption (meter) data and communicates these data using KNX RF directly to the central apartment unit (QAX913 or QAX903). Meters may be connected either via Impulse inputs or via M-Bus (wired). There is an additional interface for communication with the Synergry central communication device, OZW30, for the purpose system migration.

- M-Bus MiniMaster for up to 3 M-Bus meters
- 2 Impulse inputs for impulse meters
- BatiBus communication to Synergry OZW30
- KNX RF communication to QAX913 or QAX903

Data sheet	N2735
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF) BatiBus communication to Synergry OZW30
Indoor wireless range	30 m
Mounting	DIN rail For screw fixing
Degree of protection	IP30
Dimensions (W x H x D)	120 x 90 x 50 mm

Stock no.	Product no.
S55621-H112	WRI982

QAC910



Meteo sensor

Wireless sensor for acquiring outside temperature and atmospheric pressure. In operation, the QAC910 forwards the acquired outside temperature and atmospheric pressure to the central apartment unit QAX9.., either periodically or when changes occur.

- Battery-powered by commercially available 1.5 V batteries (contained in the scope of delivery)
- Especially suited for:
 - Renovation projects (old buildings, museums, churches, historical buildings, etc.)
 - Difficult wall-mounting situations (sandstone, glass, etc.)
 - Variable floor plans (different décors, other furniture)
 - New houses or buildings
- RF communication based on KNX standard (868 MHz, unidirectional)
- 2-Wire cable between meteo sensor and transmitter required

- Dimensions (W x H x D):
 - Outside sensor: 80 x 92 x 50 mm
 - RF transmitter: 84 x 84 x 23 mm

Data sheet	N2702
Voltage supply	Mignon (2xAA) LR6
Battery capacity	2.5 Ah
Battery life	3 years
Measuring range, temperature	-50...50 °C
Communication	KNX RF-compatible, 868.3 MHz unidirectional (RF)
Indoor wireless range	30 m

Stock no.	Product no.
BPZ:QAC910	QAC910

RF repeater

ERF910



Wireless RF repeater for extending plant.

In operation, the ERF910 repeats the RF telegrams from the devices attuned to it.

- Extending and ensuring RF coverage in the Siemens Synco living system
- Especially suited for:
 - Renovation projects (old buildings, museums, churches, historical buildings, etc.)
 - Difficult wall-mounting situations (sandstone, glass, etc.)
 - Variable floor plans (different décors, furniture changes)
- New houses and buildings
- External power pack
- RF communication based on KNX standard (868 MHz, bidirectional)

Data sheet	N2704
Operating voltage	AC 230 V
Power consumption	0.2 VA
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF)
Indoor wireless range	30 m
Degree of protection	IP40
Dimensions (W x H x D)	84 x 84 x 23 mm

Stock no.	Product no.
BPZ:ERF910	ERF910



Home automation system
Synco™ living
Door/window contact AP 260

AP 260/11



Door/window contact with battery, titanium white

- For detecting the state (closed/open) of a door or window via the reed contact integrated in the device, with actuation of the reed contact through the supplied magnet for attachment to the moving part of the door or window
- Connection for an external floating contact
- 4 plug-in terminals for wire cross-sections (solid or finely stranded) of 0.14...0.5 mm² for connection of the external contact and to allow setting via a wire jumper, whether monitoring is to cover internal contact only, external contact only, or both contacts
- KNX-RF transmitter for 868.3 MHz
- Electronics powered by a lithium battery (1/2 AA 3.6 V), with a battery service life of approx. 5 years, with signaling of battery status every 24 hours, and with an LED that flashes every 10 seconds to indicate that the battery needs replacing
- Commissioning using a pushbutton located on the front of the sensor – no additional aids required
- Surface mounting
- Comprising one mounting plate for screw or adhesive fastening, clip-on radio sensor with integrated reed contact and trigger solenoid. Battery included in delivery.

Data sheet

A6V10416211

Dimensions (W x H x D)

87 x 36 x 27 mm

Stock no.

Product no.

5WG3260-3AB11

AP 260/11

4

Thermostats



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Thermostats

Overview and selection tools

Room thermostats

Siemens is a leading supplier of room temperature controllers for a wide range of heating, ventilation and cooling applications in residential buildings, hotels, office and commercial buildings.

Siemens solutions meet every budget: Basic electromechanical on/off units, RF-based or with infrared remote control, as well as thermostats with modulating outputs. Programmable thermostats with 24-hour or 7-day programs and non-programmable room temperature thermostats are available as analog or digital products with displays.

Quality, reliability, outstanding functionality, ease of installation and use: Our room controls satisfy your needs. The unique and acclaimed Siemens design is an additional stylish feature.

Proudly made around the world.

- Quality really is the issue
- Product lifecycles and environment in partnership
- Standards are not negotiable

Heating / Cooling applications

Type	Basic		With display					With time switch					
	RAA	RCU	RDD	RDD 310/EH	RDD810..	RDH	RDF800..	RDE	RDE 410/EH	RDG	RDJ	REV	RDS
Housing													
Setpoint knob	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		
Setpoint buttons			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
LED indicators	<input checked="" type="checkbox"/>												
Digital display			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Programming slider											<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Touch screen					<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>
Wiring													
Mains-independent	<input checked="" type="checkbox"/>												
Battery-powered			<input type="checkbox"/>					<input type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Mains-powered	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	*	*	<input checked="" type="checkbox"/>
Radio frequency transmission			<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
Modulating heating valve control		<input checked="" type="checkbox"/>								<input type="checkbox"/>		<input type="checkbox"/>	
Multifunctional input					<input checked="" type="checkbox"/>			<input type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Remote control input											<input checked="" type="checkbox"/>		
Analog output	<input type="checkbox"/>	<input type="checkbox"/>											
Relay output	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Functionalities													
Heating plants	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cooling plants	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										<input type="checkbox"/>	<input type="checkbox"/>
Domestic hot water control			<input type="checkbox"/>					<input type="checkbox"/>					<input checked="" type="checkbox"/>
Humidity control										<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Air quality monitoring													<input checked="" type="checkbox"/>
Green leaf										<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Remote operation (mobile app)													<input checked="" type="checkbox"/>
Commissioning mobile app										<input checked="" type="checkbox"/>			
Time switch	Daily								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Weekly								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Operating mode	Comf. mode	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Eco mode		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Standby.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Frost protect.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Holidays											<input type="checkbox"/>	<input type="checkbox"/>
Control loop	2-point	2-point/PI	2-point	2-point	2-point	2-point/PID	2-point/PI	2-point/PID	2-point	2-point/PI	2-point/PID	2-point/PID or PI	2-point/PID
Communication					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

■ Valid for all variants □ Depending on variants ★ Main feature
 RDD810.../NF only compatible with square conduit box and Arina frame ARG800.1

* Radio frequency receiver only







Fan-coils application									
Type	Basic		With display				With time switch		
	RAB	RCC	RDG1xx RDG2xxKN	RDF3xx RDF6xx	RDF5...	RDF800..	RDG1..T	RDF6xxT	
Housing									
Setpoint knob	■	■	■				■		
LED indicators	□	★							
Digital display			★	■	■	■	■	■	
Auto fan speed			■	■	■	■	■	■	
Flush mounting				★	★			★	
Touch screen						★			
Wiring									
Mains-independent	★								
Mains-powered		■	□	□	■	■	□	■	
Multifunctional input			■	□		■	■	■	
Sensor input		□	■	□		■	■	■	
Changeover input		■	■	□		■	■	■	
Analog output			□	□			□		
Relay output (on/off)	■	□	□	□	■	■	□	■	
Triac 2-p/3-p/PWM			□				□		
DC-fan			□	□			□	□	
Functionalities									
2-pipe-system	□	□	■	■	□	■	■	■	
4-pipe-system	□	□	■	□	□	■	■	□	
Electric heater		□	□	□		■	■	□	
Radiator			■			■	■		
Humidity control			★						
Green leaf			★						
Commissioning mobile app			★						
Time switch weekly							★	★	
Operating mode Comfort	■	■	■	■	■	■	■	■	
Economy		■	■	■		■	■	■	
Standby/Prot.	□	■	■	■	■	■	■	■	
Frost protect.		□	■	■		■	■	■	
Control loop	2-point	2-point/PI	2-point/PI	2-point/PI	2-point	2-point/PI	2-point/PI	2-point/PI	
Infrared remote control				□			■	□	
Communication			□ KNX	□ KNX, Modbus		□ KNX			

Thermostats

Overview and selection tools




5

Heat Pumps applications

	With display				With time switch	
Type						
	RDG110, RDG160T	RDG260KN	RDF3xx/ RDF800..	RDF6xx	RDF6xxT	RDG160T
Housing						
Digital display	■	■	■	■	■	■
Fan speed command	- / 1 / 3 / DC	- / 1 / 3 / DC	1 / 3	1 / 3 / DC	1 / 3 / DC	- / 1 / 3 / DC
Wiring						
Mains-powered	■	■	■	■	■	■
Sensor input	■	■	■	■	■	■
Relay output	■	■	■	■	■	■
Functionalities						
Electric heater	■	■	■	■	■	■
DX compressor	■	■	□	□	□	■
Manuel Heat / Cool changeover	■	■	■	■	■	■
Weekly time clock					■	
Operating mode	Comf. mode	■	■	■	■	■
	Eco mode	■	■	■	■	■
	Standby.	■	■	■	■	■
	Frost protect.	■	■	■	■	■
Control loop	2-point	2-point	2-point	2-point	2-point	2-point
Green leaf		⊕				
Commissioning mobile app		⊕				
Communication		■ KNX	□ KNX, Modbus	□ KNX, Modbus		

■ Valid for all variants □ Depending on variants ⊕ Main feature

VAV applications

	Basic	With display	
Type			
	RCU50.2	RDU340	RDG40..
Housing			
Setpoint knob	■		■
Digital display		■	■
Flush mounting		■	
Wiring			
Mains-powered	■	■	■
Senor input		■	■
Changeover input		■	■
Analog output	■	■	■
Relay output		■	
Functionalities			
Indoor air quality			□
Manuel Heat / Cool changeover	■	■	■
External setpoint shift			
Vmin Cooling	■	■	■
Operating mode	Comf. mode	■	■
	Eco mode	■	■
	Sandby/Prot.	■	■
	Frost protect.	■	■
Control loop	2-point	P/PI	P/PI
Communication			□ KNX

■ Valid for all variants □ Depending on variants

RDS110



Smart Room Thermostat

Room thermostat for the control of heating applications in apartments, single family homes, dormitories and other residential-type as well as light commercial spaces. With remote access via computer, tablet, or smartphone using the Siemens Comfort Cloud service.

Room thermostat features

- Backlit, auto-dimming 90 mm color LCD touch screen for intuitive local operation
- Mobile app for smartphones
- Air quality indication via built-in sensor
- Operate automatically following a scheduler
- Direct temperature and operating mode selection
- RoomOptiControl function with Green leaf button for energy-optimized operation
- Temperature setting limitation for use in public spaces
- Screen lock protection against unauthorized access
- Manual switchover between "Home", "Away" and "OFF" on touch screen
- Room temperature control using the built-in temperature sensor or an optional remote sensor
- Optional temperature averaging using an additional remote temperature sensor
- Patented self-learning algorithm with PID response (patent pending) guaranteeing optimum temperature control performance in all room types
- Optimum start control function that advances the switch-on time to ensure the selected setpoint is reached as required
- Floor temperature limitation using a remote sensor in electric floor-heating applications
- Humidity control using the built-in humidity sensor or an optional remote sensor
- Presence detection using a built-in PIR sensor or approach sensor
- Two multifunctional inputs, optional and configurable for operating mode switchover contact (e.g. window contact), remote room temperature sensor, floor temperature sensor, outside air temperature sensor, remote humidity sensor
- Two relay outputs for heating equipment, extra output for domestic hot water (DHW) boiler, humidifier or dehumidifier
- Periodic pump/valve operation to protect against seizing
- Navigation wizard for guided, fast commissioning
- Remote firmware upgrade capability

Remote operation and monitoring

- Mobile App for smartphones and tablets based on iOS and Android
- Individual time program for each day of the week
- Energy consumption indication
- Manual switchover between "Home", "Away" and "OFF" operating modes on mobile app
- Individual scheduler for domestic hot water boiler
- User account management

Data sheet	A6V10807602
Operating voltage	AC/DC 230 V
Power consumption	Max. 9 VA
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Communication	Connectable with a WLAN (802.11b/g/n) compatible router
Analog inputs, number	2
Relay outputs	Potential-free
Relay outputs, number	2
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	5 (2) A
Type of fixing	Wall mounting with screws
Degree of protection	IP30
Dimensions (W x H x D)	91 x 91 x 26 mm

Stock no.	Product no.
S55772-T100	RDS110

Thermostats

Smart thermostats

Heating

RDS110.R



Smart Thermostat Wireless

Wireless room thermostat for the control of heating applications in apartments, single family homes, dormitories and other residential-type as well as light commercial spaces. With remote access via computer, tablet, or smartphone using the Siemens Comfort Cloud service.

Room thermostat features

- Backlit, auto-dimming 90 mm color LCD touch screen for intuitive local operation
- Air quality indication via built-in sensor
- Presence detection via geo-fencing
- Direct temperature and operating mode selection
- Temperature setting limitation for use in public spaces
- Screen lock protection against unauthorized access
- Room temperature control using the built-in temperature sensor or an optional remote sensor
- Optional temperature averaging using an additional remote temperature sensor
- Patented self-learning algorithm with PID response (patent pending) guaranteeing optimum temperature control performance in all room types
- Optimum start control function that advances the switch-on time to ensure the selected setpoint is reached as required
- Viewing temperature, humidity and heat demand trends
- Floor temperature limitation using a remote sensor in electric floor-heating applications
- Humidity control using the built-in humidity sensor or an optional remote sensor
- Multifunctional inputs for remote sensors
- Navigation wizard for guided, fast commissioning
- Remote firmware upgrade capability

Remote operation and monitoring

- Mobile App for smartphones and tablets based on iOS and Android
- Individual time program for each day of the week
- Energy consumption indication
- Manual switchover between "Home", "Away" and "OFF" operating modes on mobile app
- Wireless communication with receiver and radiator valve
- Support Dark and Light background colors on mobile app

Data sheet	A6V11562461
Operating voltage	AC 230 V
Power consumption	Max. 9 VA
Setpoint setting range	0...50 °C
Switching differential	0.5...6 K
Communication	Connectable with a WLAN (802.11b/g/n) compatible router
Analog inputs, number	2
Relay outputs	Potential-free
Relay outputs, number	2
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	5 (2) A
Type of fixing	Wall mounting with screws
Degree of protection	IP30
Dimensions (W x H x D)	91 x 91 x 26 mm

Stock no.	Product no.
S55772-T103	RDS110.R

Wireless accessory smart thermostats

Product Title	Data sheet	Stock no.	Product no.
Theft protection kit	A6V11739247	S55845-Z244	ATN5
Smart Thermostat Receiver	A6V11562464	S55772-T104	RCR114.1
Radiator valve actuator	A6V11739247	S55181-A101	SSA911.01TH

Smart Room Thermostat

RDS120

Room thermostat for the control of Conventional & Heat Pumps HVAC systems in apartments, single family homes, dormitories and other residential-type as well as light commercial spaces. With remote access via tablet & smartphone using the Siemens Comfort Cloud service.



Room thermostat features

- (1) Controls conventional HVAC systems up to 3H/2C and heat pumps up to 4H/2C,
- (2) Easy to read, backlit, auto-dimming 3.5" color LCD touch,
- (3) One-touch green leaf button to maximize energy efficiency,
- (4) Built-in Volatile Organic Compounds (VOC) sensor enables ventilation strategies for optimum indoor air quality,
- (5) Built-in humidity sensor,
- (6) Built-in occupancy sensor and window / door contact enables smart occupancy control

Remote operation and monitoring

- (1) Mobile App for smartphones and tablets based on iOS and Android,
- (2) Individual time program for each day of the week,
- (3) Manual switchover between "Home", "Away" and "OFF" operating modes on mobile app,
- (4) User account management

Data sheet	A6V10807603
Operating voltage	AC 24 V
Power consumption	9 VA
Color	Black
Dimensions (W x H x D)	91 x 91 x 26 mm

Stock no.	Product no.
S55772-T101	RDS120



Thermostats

Communicating room thermostats

Fan coils – KNX

RDG2..KN

Room thermostats with KNX communications

Data sheet	A6V11545853
Analog inputs, number	3
Digital inputs, number	3
Relay outputs	Fan: 1- or 3-speed
Relay outputs, number	3
Type of fixing	Wall mounting with screws
Degree of protection	IP30
Dimensions (W x H x D)	92 x 134 x 25 mm

RDG200KN



KNX communicating room thermostat. Outputs modulating (PWM / 3-pos.) or on/off. Fan coil (3-speed / DC fan), universal applications

- KNX communications
- Built-in temperature and humidity sensors and control
- For applications with 2-position (on/off or PWM) or 3-position control outputs
- AC 230V or AC 24V power supply.
- 3 multifunctional inputs for keycard contact, external room / return air temperature (NTC3K; QAH11.1, QAA32 or LG-Ni1000 sensors), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, presence detector
- Operating modes: Comfort, Economy and Protection
- Automatic or manual DC fan or 1-/3-speed
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Backlit display
- Green leaf function
- Commissioning via Smartphone APP "PCT Go", local HMI or KNX tools.

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 2-pipe system and radiator / floor heating
- 4-pipe system
- 2-stage heating or cooling system

Data sheet	A6V11545853
Operating voltage	AC 24 V AC 230 V
Color	White

Stock no.

S55770-T409

Product no.

RDG200KN

5

KNX communicating room thermostat. Outputs modulating (DC) or on/off. Fan coil (3-speed / DC fan) or universal applications

RDG260KN



- KNX communications
- Built-in temperature and humidity sensors and control
- For applications with DC control outputs and DC or 3-speed fan output
- For applications with 2-position control output with DC fan output
- AC or DC 24V power supply
- 3 multifunctional inputs for keycard contact, external room / return air temperature (NTC3K; QAH11.1, QAA32 or LG-Ni1000 sensors), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, presence detector
- Operating modes: Comfort, Economy and Protection
- Automatic or manual DC fan or 1-/3-speed
- Automatic or manual heating / cooling changeover
- Minimum and maximum setpoint limitation
- Backlit display
- Green leaf function
- Adjustable commissioning and control parameters
- Commissioning via Smartphone APP "PCT Go", local HMI or KNX tools

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 2-pipe system and radiator / floor heating
- 4-pipe system
- 2-stage heating or cooling system
- Heating / cooling with 6-port ball valves

Data sheet A6V11545853
 Operating voltage AC 24 V
 Color White

Stock no. S55770-T412
 Product no. **RDG260KN**

RDF8..KNX Flush Mount

Touch screen room thermostat for 2-/4- pipe fan coil, universal applications or compressors in DX-type equipment



- Operating modes: Comfort, Economy and Protection
- For heating and/or cooling applications
- 2 or 3-position control outputs
- Output for 1-speed or 3-speed fan
- 2 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, presence detector
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: Ivory white
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Data sheet	N3174
Power consumption	6 VA
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Communication	Bus: KNX (S-mode and LTE mode with Synco 700)
Analog inputs, number	2
Relay outputs	Fan: N.O. contacts, non-floating Valve: N.O. contacts, non-floating
Relay outputs, number	5
Relay output, switching voltage	AC 230 V
Relay output, switching current	5 (2) A
Degree of protection	IP30
Dimensions (W x H x D)	86 x 86 x 47 mm

Range overview RDF8..KNX Flush Mount

Product Title	Operating voltage [V]	Stock no.	Product no.
Touch screen room thermostat for 2-/4- pipe fan coil, universal applications or compressors in DX-type equipment , black	AC 230	S55770-T429	RDF800KN/VB
Touch screen room thermostat with KNX communications, for 2-/4- pipe fan coil, universal applications or compressors in DX-type equipment (for China frames)	AC 230	S55770-T335	RDF800KN/NF
Touch screen room thermostat with KNX communications, for 2-/4- pipe fan coil, universal applications or compressors in DX-type equipment	AC 230	S55770-T350	RDF800KN

Flush-mount room thermostat with KNX communications, 2-/4-pipe fan coils or DX type equipment for both round and square conduit boxes **RDF6..KNX Flush Mount**



Flush-mount room thermostat with LCD for fan coil units and compressors in DX-type equipment

- KNX communications
- For heating and/or cooling applications
- 2 or 3-position control outputs
- Output for 1-speed or 3-speed fan
- 2 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, presence detector
- Operating modes: Comfort, Economy and Protection
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Backlit display
- Color of housing: signal white (RAL 9003)
- Independent function for window contact, presence detector (standard presence and hotel presence)

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Data sheet	N3076
Power consumption	2 VA
Switching differential	0.5...6 K
Communication	KNX
Analog inputs, number	2
Relay outputs	Fan: N.O. contacts, non-floating Valve: N.O. contacts, non-floating
Relay outputs, number	5
Relay output, switching voltage	AC 230 V
Relay output, switching current	5 (2) A
Type of fixing	With screws on recessed round conduit box diameter min. 60 mm
Dimensions (W x H x D)	86 x 86 x 46 mm

Range overview RDF6..KNX Flush Mount

Product Title	Operating voltage [V]	Stock no.	Product no.
Flush-mount room thermostat with KNX communications, 2-/4-pipe fan coils or DX type equipment	AC 230	S55770-T293	RDF600KN
Flush-mount room thermostat with KNX communications, 2-/4-pipe fan coils or DX type equipment, with KNX switching group, four buttons for switching lights and blinds	AC 230	S55770-T400	RDF600KN/S
Flush-mount room thermostat with KNX communications, 2-/4-pipe fan coils or DX type equipment for both round and square conduit boxes, black	AC 230	S55770-T430	RDF600KN/VB

Thermostats

Communicating room thermostats

Fan coils - Modbus

RDF302/VB



Flush-mount room thermostat for rectangular conduit box with Modbus communications, 2-/4-pipe fan coils or DX type equipment

- Modbus communications
- For heating and/or cooling applications
- 2 or 3-position control outputs
- Output for 1-speed or 3-speed fan
- 2 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Operating modes: Comfort, Economy and Protection
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: black (RAL 9004)
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Black Color Housing

Data sheet	N3079
Operating voltage	AC 230 V
Power consumption	7 VA
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Communication	Bus: Modbus RTU (RS 485)
Analog inputs, number	2
Relay outputs	Fan: Normally open contact Valve: Normally open contact Non floating
Relay outputs, number	5
Relay output, switching voltage	230 V
Relay output, switching current	5 (2) A
Type of fixing	Recessed rectangular conduit box BS4662 with fixing centres of 60.3 mm
Degree of protection	IP30
Dimensions (W x H x D)	86 x 86 x 57 mm
Color	Black

Stock no. Product no.

S55770-T428 RDF302/VB

ARG70.3



Mounting bracket 10 mm thick

Data sheet	N3009
Dimensions (W x H x D)	82 x 82 x 10 mm

Stock no. Product no.

BPZ:ARG70.3 ARG70.3

Flush-mount basic room thermostat for rectangular conduit box with Modbus communications, 2-/4-pipe fan coils or DX type equipment

RDF302.B



- Modbus communications
- For heating and/or cooling applications
- 2 or 3-position control outputs
- Output for 1-speed or 3-speed fan
- Operating modes: Comfort, Economy and Protection
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: signal white (RAL 9003)
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Data sheet	N3079
Operating voltage	AC 230 V 230 V
Power consumption	7 VA
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Communication	Bus: Modbus RTU (RS 485)
Analog inputs, number	2
Relay outputs	Fan: N.O. contacts, non-floating Valve: N.O. contacts, non-floating
Relay outputs, number	5
Relay output, switching voltage	AC 230 V
Relay output, switching current	5 (2) A
Type of fixing	Recessed rectangular conduit box BS4662 with fixing centres of 60.3 mm
Degree of protection	IP30
Dimensions (W x H x D)	86.1 x 86.1 x 57 mm

Stock no.	Product no.
S55770-T416	RDF302.B

RDF302



Flush-mount room thermostat for rectangular conduit box with Modbus communications, 2-/4-pipe fan coils or DX type equipment

- Modbus communications
- For heating and/or cooling applications
- 2 or 3-position control outputs
- Output for 1-speed or 3-speed fan
- 2 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Operating modes: Comfort, Economy and Protection
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: signal white (RAL 9003)
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Data sheet	N3079
Operating voltage	AC 230 V
Power consumption	7 VA
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Communication	Bus: Modbus RTU (RS 485)
Analog inputs, number	2
Relay outputs	Fan: Normally open contact Valve: Normally open contact Non floating
Relay outputs, number	5
Relay output, switching voltage	230 V
Relay output, switching current	5 (2) A
Type of fixing	Recessed rectangular conduit box BS4662 with fixing centres of 60.3 mm
Degree of protection	IP30
Dimensions (W x H x D)	86 x 86 x 57 mm

Stock no.	Product no.
S55770-T238	RDF302

RDB1..



BACnet communicating room thermostat

- BACnet MS/TP communication
- For applications with DC control outputs and DC or 3-speed fan output
- For applications with 2-position, 3-position or DC control output with DC fan output
- 3 multifunctional inputs for keycard contact, external room / return air temperature, heat / cool changeover, window contact on/off, presence detector
- Operating modes: Comfort, Economy
- Automatic or manual DC fan or 1-/3-speed
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Backlit display
- On Off button

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Power consumption	3 W, class II construction
Measuring range	0...50 °C
Digital output, switching current	3 A
Communication	BACnet MS/TP
Analog outputs, number	2
Digital inputs, number	1
Relay outputs	Fan: 1-,2- or 3-speed
Triac outputs, number	2
Degree of protection	IP20
Dimensions (W x H x D)	102 x 120 x 29 mm

Range overview RDB1..

Operating voltage [V]	Color	Stock no.	Product no.
AC 230	White	S55770-T426	RDB160BN

5

**Communicating room thermostats
Variable air volumes (VAV) – KNX**

RDG405KN



Room thermostat for temperature and air quality control with KNX communications, AC 24 V, VAV heating and cooling systems

- KNX communications
- Output DC 0...10 V for VAV actuator and auxiliary output ON/OFF, PWM or 3-position or 3-position for VAV actuator and auxiliary output DC 0...10 V
- 2 multifunctional inputs for keycard contact, external room / return air temperature (1x, QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, presence detector
- 1 input DC 0...10 V for damper position feedback, for CO2 sensor
- Operating modes: Comfort, Economy and Protection
- Modulating PI control
- Control depending on the room or the return air temperature and air quality
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Minimum and maximum limitation of air flow signal
- Output signal inversion (DC 0...10 V) as an option
- Backlit display

Application selectable:

- Single-duct system
- Single-duct system with electrical heater
- Single-duct system and radiator / floor heating
- Single-duct system with heating / cooling coil

Data sheet	N3192
Operating voltage	AC 24 V
Power consumption	2 VA
Setpoint setting range	5...40 °C
Switching differential	Heating: 0.5...6 K; Cooling: 0.5...6 K
Communication	Bus: KNX (S-mode and LTE mode with Synco 700)
Analog inputs, number	2
Analog outputs	VAV actuator, electric heater, valve
Analog outputs, number	1
Analog output, signal	DC 0...10 V
Analog output, current	1 mA
Digital inputs, number	1
Triac outputs	VAV actuator, valve, el. heater
Triac outputs, number	2-position, PWM, 3-position
Triac output, switching voltage	24 V
Triac output, switching current	1 A
Type of fixing	Wall mounting with screws
Degree of protection	IP30
Dimensions (W x H x D)	93 x 128 x 30.8 mm

Stock no.	Product no.
S55770-T348	RDG405KN

Touch screen room thermostat with KNX communications, for heating application

RDD810KN



- KNX communications
- Operating modes: Comfort, Economy and Protection
- Control output: changeover contact (SPDT)
- 2 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), window contact on/off, presence detector, fault contact, presence detector
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: Ivory white
- Backlit display

Data sheet	N3175
Operating voltage	AC 230 V
Power consumption	6 VA
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Communication	Bus: KNX (S-mode and LTE mode with Synco 700)
Analog inputs, number	2
Relay outputs	Heating: contacts, floating
Relay outputs, number	1
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	5 (2) A
Degree of protection	IP30
Dimensions (W x H x D)	82 x 82 x 47 mm

Stock no.	Product no.
S55770-T444	RDD810KN

Touch screen room thermostat with KNX communications, for heating application (for China frames)

RDD810KN/NF



- KNX communications
- Operating modes: Comfort, Economy and Protection
- Control output: changeover contact (SPDT)
- 2 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), window contact on/off, presence detector, fault contact, presence detector
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: Ivory white
- Backlit display
- Mounting on chinese mounting frames

Data sheet	N3175
Operating voltage	AC 230 V
Power consumption	6 VA
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Communication	Bus: KNX (S-mode and LTE mode with Synco 700)
Analog inputs, number	2
Relay outputs	Heating: contacts, floating
Relay outputs, number	1
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	5 (2) A
Type of fixing	Only on China frames
Degree of protection	IP30
Dimensions (W x H x D)	82 x 82 x 47 mm

Stock no.	Product no.
S55770-T336	RDD810KN/NF

New Product

Thermostats

Communicating room thermostats

IAQ control - KNX / Modbus

RDF870KN



Touch Screen Flush-mount PM2.5 & IAQ Controller with KNX

- AC 230 V operating voltage, large, backlit display
- Display and setpoint adjustment for PM2.5 and CO2 control
- Display of room temperature, outside temperature, VOC (volatile organic compound) and RH (relative humidity)
- Support 1-/3-/4-speed On/Off fan or DC fan output
- Two multifunctional inputs for external passive and DC 0... 10 V sensors
- Operating modes: Comfort, Economy and Protection
- KNX S-Mode
- KNX commissioning via ETS or local control parameters
- KNX integration into Desigo via group (ETS) or individual addressing
- KNX integration into third-party system via group addressing (ETS)
- Mounting on recessed square 86 mm box or round 60 mm with 60 mm fixing centers and minimum 40 mm depth
- Color of housing: Ivory white (RAL 9001)

Application selectable:

- PM2.5 control only
- CO2 control only
- PM2.5 & CO2 controls (CO2 higher priority in control)
- Ventilation control

2x sensor inputs are selectable:

- 0: No function
- 1: Temperature (AI) (NTC 10k)
- 2: Temperature (AI) (0... 10 V)
- 3: PM2.5 (AI) $\mu\text{g}/\text{m}^3$ (0... 10 V)
- 4: CO2 (AI) ppm (0... 10 V)
- 5: VOC (AI) % (0... 10 V)
- 6: VOC (AI) mg/m^3 (0... 10 V)
- 7: RH (AI) % (0... 10 V)
- 8: Alarm input (DI)
- 9: Dummy AI (0... 10 V) (RU only)

Data sheet	A6V11439454
Operating voltage	AC 230 V 230 V
Power consumption	Max. 7.0 VA / 2.5 W
Communication	KNX S-Mode
Analog outputs	DC 0... 10 V for ECM fan output
Relay outputs	Fan: N.O. contacts, non-floating Valve: N.O. contacts, non-floating
Degree of protection	IP30
Dimensions (W x H x D)	86 x 86 x 46.8 mm
Color	White

Stock no.	Product no.
S55770-T407	RDF870KN

Touch Screen Flush-mount PM2.5 & IAQ Controller with RS485 Modbus

RDF870MB



- AC 230 V operating voltage, large, backlit display
- Display and setpoint adjustment for PM2.5 and CO2 control
- Display of room temperature, outside temperature, VOC (volatile organic compound) and RH (relative humidity)
- Support 1-/3-/4-speed On/Off fan or DC fan output
- Two multifunctional inputs for external passive and DC 0... 10 V sensors
- Operating modes: Comfort, Economy and Protection
- RS485 Modbus RTU slave mode
- Modbus commissioning via third-party tool, e.g. Modbus scan, Modbus poll, etc
- Mounting on recessed square 86 mm box or round 60 mm with 60 mm fixing centers and minimum 40 mm depth
- Color of housing: Ivory white (RAL 9001)

RDF870MB can be configured as a room unit via DIP switches.

It provides the following additional functions:

- Setpoint adjustment and display for room temperature, VOC, RH and display of outside temperature
- Four remote digital outputs via bus and controlled by a master controller

Application selectable:

- PM2.5 control only
- CO2 control only
- PM2.5 & CO2 controls (CO2 higher priority in control)
- Ventilation control

2x sensor inputs are selectable:

- 0: No function
- 1: Temperature (AI) (NTC 10k)
- 2: Temperature (AI) (0... 10 V)
- 3: PM2.5 (AI) µg/m³ (0... 10 V)
- 4: CO2 (AI) ppm (0... 10 V)
- 5: VOC (AI) % (0... 10 V)
- 6: VOC (AI) mg/m³ (0... 10 V)
- 7: RH (AI) % (0... 10 V)
- 8: Alarm input (DI)
- 9: Dummy AI (0... 10 V) (RU only)

Data sheet	A6V11439454
Operating voltage	AC 230 V
Power consumption	Max. 6.0 VA / 2.1 W
Communication	RS485 Modbus
Analog outputs	DC 0... 10 V for ECM fan output
Relay outputs	Fan: N.O. contacts, non-floating Valve: N.O. contacts, non-floating
Degree of protection	IP30
Dimensions (W x H x D)	86 x 86 x 47 mm
Color	White

Stock no. Product no.

S55770-T408 **RDF870MB**

Thermostats

Communicating room thermostats

VRF room unit - KNX

RDF880KN



Touch Screen Flush-mount Room Thermostats with KNX Communications

- Large display, touch screen with backlight
- VRF HMI: temperature setpoint, fan speed and operating mode selections
- 2-position (ON/OFF) temperature control with potential free output for UFH via build-in / external temperature sensor
- Display room temperature value (↓ C) and relative humidity value (% r.h.) via a build-in temperature and humidity sensor
- One setpoint adjustment for both VRF HMI and UFH controls
- Fan auto and manual speed setting from 1 up to 7 speed
- Operating mode selection for VRF: AUTO, COOL, HEAT, FAN and DRY
- Operating mode selection for UFH: Comfort and Protection
- Economy operating mode for both VRF and UFH to save energy
- 2 multifunctional inputs (see details in functional descriptions)
- Adjustable control parameters for alternative settings
- KNX bus communications via S-mode
- Integration to VRF system via S-mode and third party gateways
- Commissioning via ETS download
- Wizard function for fast commissioning via HMI
- Alarm / Error information
- AC 230 V operating voltage
- Mounting on round box, with min 60 mm diameter or recessed square 86 mm box with 60.3 mm fixing centers and min 40 mm depth

User Application selections via dipswitches:

1. Under Floor Heating only (UFH)
2. VRF HMI only (note: interface to VRF indoor unit via a third party VRF/KNX gateway)
3. Both UFH and VRF HMI

When VRF HMI is selected, it covers most daily VRF operations and the following parameters can be set to fit different VRF brands:

- Setpoint adjustment: - maximum / minimum limitations
- Fan speed adjustment: - auto / manual speeds (up to 7 speeds)
- Operating mode selection: - AUTO, HEAT, COOL, FAN and DRY
- Economy mode: - energy saving
- Fan swing adjustment (optional): - auto swing or fix at any position (10)
- Delay off timer (optional): - allow up to 23 hours operations before off

Data sheet	A6V11282546
Power consumption	6 VA
Communication	Bus: KNX (S-mode with Synco 700)
Relay outputs	Heating: contacts, floating
Dimensions (W x H x D)	Together with as single mounting frame: 86 x 86 x 47 mm

Stock no. Product no.

S55770-T415

RDF880KN

5

Touch Screen Flush-mount Room Thermostats with KNX Communications

RDF880KN/NF



- Large display, touch screen with backlight
- VRF HMI: temperature setpoint, fan speed and operating mode selections
- 2-position (ON/OFF) temperature control with potential free output for UFH via build-in / external temperature sensor
- Display room temperature value (↓ C) and relative humidity value (% r.h.) via a build-in temperature and humidity sensor
- One setpoint adjustment for both VRF HMI and UFH controls
- Fan auto and manual speed setting from 1 up to 7 speed
- Operating mode selection for VRF: AUTO, COOL, HEAT, FAN and DRY
- Operating mode selection for UFH: Comfort and Protection
- Economy operating mode for both VRF and UFH to save energy
- 2 multifunctional inputs (see details in functional descriptions)
- Adjustable control parameters for alternative settings
- KNX bus communications via S-mode and LTE-mode
- Integration to VRF system via S-mode and third party gateways
- Commissioning via ETS download
- Wizard function for fast commissioning via HMI
- Alarm / Error information
- AC 230 V operating voltage
- Mounting on recessed square 86 mm box with 60.3 mm fixing centers and min 40 mm depth, requires additional mounting frame to complete installation
- Color of housing: Ivory white (RAL 9001)

- Fits DELTA arina mounting frame concept
- Additional mounting frame is required: ARG800.1

Data sheet	A6V11282546
Operating voltage	AC 230 V
Power consumption	6 VA
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Communication	Bus: KNX (S-mode with Synco 700)
Analog inputs, number	2
Relay outputs	Heating: contacts, floating
Relay outputs, number	1
Relay output, switching voltage	230 V
Relay output, switching current	5 (2) A
Type of fixing	Only on China frames
Degree of protection	IP30
Dimensions (W x H x D)	82 x 82 x 47 mm
Color	White

Stock no.	Product no.
S55770-T398	RDF880KN/NF

Thermostats

Communicating room thermostats

Accessories

ARG70



Mounting plate 120 x 120 mm for 4 x 4" housing

Accessories for use with room thermostats RAA.., RAB.., RCC.., RCU.., RDD.., RDE.., RDF..

Data sheet	N3009
Dimensions (W x H x D)	120 x 120 x 6 mm

Stock no.	Product no.
BPZ:ARG70	ARG70

ARG86.3



Changeover cable holder for QAH11..

Changeover mounting kit for QAH11.. sensor for universal use as a strap-on sensor

Data sheet	N3009
Packaging unit	10 pieces
Warranty	2 Years

Stock no.	Product no.
BPZ:ARG86.3	ARG86.3

QAP1030/UFH



Cable temperature sensor PVC 4 m, NTC 3k

Data sheet	N1854
Measuring range, temperature	-20...70 °C
Sensing element, temperature	NTC 3k
Measurement accuracy	At -20...70 °C: ±0.3 K
Time constant	1.5 min to air
Protection pocket	Non
Material, protection pocket	None
Cable length	4 m

Stock no.	Product no.
S55720-S289	QAP1030/UFH

ARG70.2



Mounting plate 112 x 130 mm for surface wiring

Accessories for use with room thermostats RAA.., RAB.., RCC.., RCU.., RDD.., RDE.., RDF..

Data sheet	N3009
Dimensions (W x H x D)	112 x 130 x 10 mm

Stock no.	Product no.
BPZ:ARG70.2	ARG70.2

Cable temperature sensor PVC 2.5 m, NTC 3 kOhm, without connectors

QAH11.1



For installation in fan coil units as

- a return air temperature sensor
- a changeover sensor

Packing size: 10 pcs

Data sheet	N1840
Measuring range	For fixed cable
Sensing element	NTC 3k
Measuring range, temperature	-20...70 °C
Sensing element, temperature	NTC 3k
Time constant	Air v=0 m/s: 90 s
Connection cable	2-wire Ferrules
Cable length	2.5 m
Warranty	5 Years

Stock no.	Product no.
BPZ:QAH11.1	QAH11.1

Room temperature sensor NTC 3 kOhm

QAA32



5

Data sheet	N1747
Sensing element	NTC 3k
Measuring range, temperature	0...40 °C
Sensing element, temperature	NTC 3k
Time constant	6 min
Measurement accuracy	At 25 °C: ±0.3 K
Connection, electrical	Screw terminals
Degree of protection	IP30
Dimensions (W x H x D)	97 × 100 × 36 mm
Warranty	5 Years

Stock no.	Product no.
BPZ:QAA32	QAA32

Thermostats

Standalone room thermostats

Heating and/or cooling

RDH100..

Room thermostat with large LCD

Mains independent, battery powered electronic room thermostat with TPI output control. The required temperature is adjusted with the large setting knob on the front of the unit.

- Easy operation by large setting knob and large display
- For heating only
- Color of housing front: signal white RAL9003
- Color of baseplate: light gray RAL7035

Battery life	1 year
Setpoint setting range	5...30 °C
Relay outputs	Change-over contact, potential-free
Relay outputs, number	1
Relay output, switching voltage	24...250 V
Dimensions (W x H x D)	120 x 90 x 26.9 mm

RDH100

Room thermostat RDH100



Mains independent, battery powered electronic room thermostat with PID output control. The required temperature is adjusted with the large setting knob on the front of the unit.

- Easy operation by large setting knob and large display
- For heating only
- Color of housing front: signal white RAL9003
- Color of baseplate: light gray RAL7035
- 2 x 1.5 V AA alkaline batteries included

Operating voltage	DC 3 V
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Stock no.	Product no.
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S55770-T377	RDH100
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RDH100RF/SET

Room thermostat radio frequency set (transmitter and receiver)



Radio frequency controller set consisting of:

RDH100RF: Electronic room thermostat with radio frequency transmitter, same controller functionality as RDH100.

Technical data:

- Transmission frequency: 433 MHz
- Dimensions (W x H x D): 90 x 120 x 26.9 mm
- Transmitter table stand
- 2 x 1.5 V AA alkaline batteries included

RCR100/433: Radio frequency receiver with operating mode indication (433 MHz),

- Switching unit with relay outputs
- Receiver override button for manual switch-on/switch-off
- Mounting adapter plate for receiver

Operating voltage	Receiver: AC 230 V, Transmitter: DC 3 V
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Stock no.	Product no.
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S55770-T378	RDH100RF/SET
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Room thermostat with 24-hour time switch and large LCD

RDJ100..

Mains independent, battery powered electronic room thermostat with TPI output control. The required temperature is adjusted with the large setting knob on the front of the unit.

- Easy operation by large setting knob and large display
- For heating
- 24-hour (1-day) time programming
- Color of housing front: signal white RAL9003
- Color of baseplate: light gray RAL7035

Battery life	1 year
Setpoint setting range	5...30°C
Relay outputs	Change-over contact, potential-free
Relay outputs, number	1
Relay output, switching voltage	AC 24...250 V
Dimensions (W x H x D)	120 x 90 x 26.9 mm

Room thermostat with 24-hour time switch and large LCD

RDJ100

Mains independent, time programming, battery powered electronic room thermostat with PID out control.

- With digital 24-hour time program
- Easy operation by large setting knob, large display and sliders
- Color of housing front: signal white RAL9003
- Color of baseplate: light gray RAL7035

Operating modes:

- Automatic operation with up to 2 heating periods per day
- Continuous Comfort
- Continuous Economy
- Frost Protection

Operating voltage	DC 3 V
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Stock no.	Product no.
S55770-T379	RDJ100

Room thermostat radio frequency set with 24-hour time switch (transmitter and receiver)

RDJ100RF/SET

Time programming radio frequency set consisting of room thermostat RDJ100RF (with integrated radio transmitter) and receiver unit RCR100/433. Same functionality as RDJ100.

RDJ100RF: Electronic radio frequency room temperature controller

Technical data:

- Transmission frequency: 433 MHz
- Dimensions (W x H x D): 90 x 120 x 26.9 mm
- Transmitter tablestand
- 2 x 1.5 V AA alkaline batteries included

RCR100/433: Radio frequency receiver with operating mode indication (433 MHz)

- Switching unit with relay outputs
- Receiver override button for manual switch-on/switch-off
- Mounting adapter plate for receiver

Operating voltage	Receiver: AC 230 V, Transmitter: DC 3 V
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Stock no.	Product no.
S55770-T380	RDJ100RF/SET

Thermostats

Standalone room thermostats Heating and/or cooling

RDD100..

Room thermostats with LCD

- 2-position control with on / off positioning signal output for heating
- Operating modes: Normal operation and energy saving mode
- Automatic operating mode changeover as an option
- Color of housing front and baseplate: signal white RAL9003 (NCS S 0502-G)

Setpoint setting range	5...35 °C
Switching differential	1 K
Relay outputs	Change-over contact, potential-free
Relay output, switching current	5 (2) A
Relay output, switching voltage	AC 24...230 V
Degree of protection	IP30

RDD100

Room thermostat with LCD, AC 230 V



- 2-position control with on / off positioning signal output for heating
- Operating modes: Normal operation and energy saving mode
- Automatic operating mode changeover as an option
- Color of housing front and baseplate: signal white RAL9003 (NCS S 0502-G)

Data sheet	N1420
Operating voltage	AC 230 V
Dimensions (W x H x D)	85 x 106 x 21.5 mm

Stock no.	Product no.
S55770-T275	RDD100

RDD100.1

Room thermostat with LCD, battery



- 2-position control with on / off positioning signal output for heating
- Operating modes: Normal operation and energy saving mode
- Automatic operating mode changeover as an option
- Color of housing front and baseplate: signal white RAL9003 (NCS S 0502-G)

Data sheet	N1420
Operating voltage	DC 3 V
Voltage supply	Micro (2xAAA)
Dimensions (W x H x D)	85 x 106 x 21.5 mm

Stock no.	Product no.
S55770-T276	RDD100.1

RDD100.1DHW

Room thermostat with LCD, battery, independent DHW



- 2-position control with on / off positioning signal output for heating
- Operating modes: Normal operation, economy mode and frostprotection
- Independent ON / OFF control for "Domestic Hot Water" boiler or equipment

Data sheet	N1421
Operating voltage	DC 3 V
Voltage supply	Micro (2xAAA)
Dimensions (W x H x D)	85 x 127 x 21.5 mm

Stock no.	Product no.
S55770-T277	RDD100.1DHW

Room thermostats with LCD

RDD100.1-XA

- 2-position control with on / off positioning signal output for heating
- Operating modes: Normal operation and energy saving mode
- Automatic operating mode changeover as an option
- Color of housing front and baseplate: signal white RAL9003 (NCS S 0502-G)



Stock no.	Product no.
S55770-T337	RDD100.1-XA

Room thermostats with auto time switch and LCD

RDE100..

- 2-position control with on/off output for heating
- Operating modes: Normal and energy-saving mode
- Auto time switch (individual day, 7 day or 5-2 day) and manual operation
- Color of housing front and baseplate: signal white RAL9003 (NCS S 0502-G)

Setpoint setting range	5...35 °C
Switching differential	1 K
Degree of protection	IP30
Dimensions (W x H x D)	85 x 127 x 21.5 mm

Room thermostat with auto time switch and LCD, AC 230 V

RDE100

- 2-position control with on/off output for heating
- Operating modes: Normal and energy-saving mode
- Auto time switch (individual day, 7 day or 5-2 day) and manual operation
- Color of housing front and baseplate: signal white RAL9003 (NCS S 0502-G)



Data sheet	N1422
Operating voltage	AC 230 V
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	5 (2) A
Relay outputs	Change-over contact Potential-free

Stock no.	Product no.
S55770-T278	RDE100

Room thermostat with auto time switch and LCD, battery

RDE100.1

- 2-position control with on/off output for heating
- Operating modes: Normal and energy-saving mode
- Auto time switch (individual day, 7 day or 5-2 day) and manual operation
- Color of housing front and baseplate: signal white RAL9003 (NCS S 0502-G)



Data sheet	N1422
Voltage supply	Micro (2xAAA)
Operating voltage	DC 3 V
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	5 (2) A
Relay outputs	Change-over contact Potential-free

Stock no.	Product no.
S55770-T279	RDE100.1

Thermostats

Standalone room thermostats

Heating and/or cooling

RDE100.1DHW



Room thermostat with auto time switch and LCD, battery, independent DHW

- 2-position control with ON / OFF output for heating
- Independent ON / OFF control of DHW
- Operating modes: Auto, normal operation, energy saving and frost protection
- Auto time switch (individual day, 7 day or 5-2 day) and manual operation

Data sheet	N1423
Voltage supply	Micro (2xAAA)
Operating voltage	DC 3 V
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	5 (2) A
Relay outputs	Change-over contact Potential-free

Stock no.	Product no.
S55770-T280	RDE100.1DHW

RDE100.1-XA



Room thermostats with auto time switch and LCD

- 2-position control with on/off output for heating
- Operating modes: Normal and energy-saving mode
- Auto time switch (individual day, 7 day or 5-2 day) and manual operation
- Color of housing front and baseplate: signal white RAL9003 (NCS S 0502-G)

Relay output, switching voltage	AC 24...230 V
Relay output, switching current	5 (2) A
Relay outputs	Change-over contact, potential-free

Stock no.	Product no.
S55770-T338	RDE100.1-XA

RDD100..RF..

Wireless room thermostat with LCD

- Battery-powered DC 3 V thermostat, no time switch
- 2-position control with on / off control output
 - Operating modes: Comfort, Economy and Protection mode
 - Adjustable commissioning and control parameters
 - Color of housing front: signal white RAL9003 (NCS S 0502-G)

Setpoint setting range	5...35 °C
Switching differential	1 K
Radio frequency	433 MHz
Degree of protection	IP30
Dimensions (W x H x D)	106 x 85 x 22 mm

RDD100.1RF



Wireless room thermostat with LCD

Battery-powered DC 3 V thermostat, no time switch

Data sheet	CB1N1424
Operating voltage	DC 3 V
Voltage supply	Micro (2xAAA)

Stock no.	Product no.
S55770-T319	RDD100.1RF

Thermostats
Standalone room thermostats
Heating and/or cooling

Wireless room thermostat with LCD, incl. receiver

RDD100.1RFS

Battery-powered DC 3V thermostat with mains-powered AC 230 V receiver, no time switch



Data sheet	CB1N1424
Operating voltage	DC 3 V
Voltage supply	Micro (2xAAA)
Relay outputs	Change-over contact Potential-free
Relay output, switching current	8 (2) A
Relay output, switching voltage	AC 24...230 V

Stock no.	Product no.
S55770-T281	RDD100.1RFS

Thermostats

Standalone room thermostats

Heating and/or cooling

RDE100..RF..

Wireless room thermostat with auto timer

Battery-powered DC 3 V thermostat, with time switch, optional external input

- 2-position control with on / off output for heating
- Operating modes: Comfort, Economy, Auto timer and Protection mode
- Auto time switch
- Adjustable commissioning and control parameters
- Multifunction input for external floor sensor, keycard contact, etc.
- Color of housing front: signal white RAL9003 (NCS S 0502-G)

Setpoint setting range	5..35 °C
Switching differential	1 K
Radio frequency	433 MHz
Degree of protection	IP30

RDE100.1RF

Wireless room thermostat with auto timer

Battery-powered DC 3 V thermostat, with time switch, optional external input

Data sheet	CB1N1425
Voltage supply	Micro (2xAAA)
Operating voltage	DC 3 V
Dimensions (W x H x D)	127 x 85 x 21.7 mm



Stock no.	Product no.
S55770-T320	RDE100.1RF

RDE100.1RFS

Wireless room thermostat with auto timer, incl. receiver

Battery-powered DC 3V thermostat with mains-powered AC 230 V receiver, with time switch, optional external input

Data sheet	CB1N1425
Voltage supply	Micro (2xAAA)
Operating voltage	DC 3 V
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	8 (2) A
Relay outputs	Change-over contact Potential-free
Dimensions (W x H x D)	127 x 85 x 21.7 mm

Stock no.	Product no.
S55770-T282	RDE100.1RFS



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Wireless accessory for RDD/E100

Receiver RF

RCR100RF

Standalone AC 230V receiver



Data sheet	N/A
Operating voltage	AC 230 V
Power consumption	10 VA
Relay outputs	Triac output on receiver
Relay outputs, number	1
Relay output, switching voltage	230 V
Relay output, switching current	Triac
Radio frequency	433 MHz
Type of fixing	Wall mounting for receiver
Degree of protection	IP30
Dimensions (W x H x D)	103 x 84 x 28 mm

Stock no.	Product no.
S55770-T418	RCR100RF

Wireless Multizone Receiver

RDE-MZ6

Mains-powered AC 230 V multizone receiver



Data sheet	CB1N1428
Operating voltage	AC 230 V
Power consumption	4 VA
Relay outputs	Change-over contact Potential-free
Relay outputs, number	6
Relay output, switching voltage	230 V
Relay output, switching current	8 (2) A
Radio frequency	433 MHz
Type of fixing	DIN rail wall mounting
Degree of protection	IP30
Dimensions (W x H x D)	280 x 76 x 36.5 mm

Stock no.	Product no.
S55770-T285	RDE-MZ6



Thermostats

Standalone room thermostats

Heating and/or cooling

RAV11.1



Room thermostat with 24-hour time switch

- Mains-independent, electronic PID controller with 2-position output, battery-powered
- With analog 24-hour time switch
- Self-learning 2-position controller with PID control (patented)
- Color of housing front: signal white RAL9003 (NCS S 0502-G)
- Color of baseplate: light grey RAL7035 (NCS 2801-Y43R)

- Operating modes:
 - 24-hour mode with heating periods according to the analog time switch
 - Continuous Comfort mode
 - Continuous Economy mode
 - Standby with frost protection

Operating voltage	DC 3 V
Voltage supply	Mignon (2xAA)
Setpoint setting range	5...30 °C
Relay outputs	Normally open contact Potential-free
Relay output, switching voltage	AC 24...250 V
Relay output, switching current	8 (3.5) A
Degree of protection	IP30
Dimensions (W x H x D)	128 x 104 x 37 mm

Stock no.	Product no.
BPZ:RAV11.1	RAV11.1

Room thermostats in bulk pack of 20 units, white

RDD510/BP



Heating/Cooling room thermostat in bulk pack of 20 units

- Output for on/off valve actuator, 3-wire on/off valve
- Cooling only / Heating only
- Operation modes: Comfort and Protection
- Adjustable commissioning and control parameters
- Optional display of room temperature or setpoint
- Minimum and maximum setpoint limitation
- Display temperature in increments of 0.5 °C or °F
- Color of housing: signal white (RAL 9003)
- LED backlit display
- Full or partial keylock
- Internal sensor calibration
- Timer with delay off function: preset or user selection from 1 to 23 hours
- Return to previous mode or Protection (Off) mode upon power down

- LED backlit display
- Keylock function
- Display either room temperature or setpoint
- Comfort and Protection(Off) operating modes
- Timer with delay Off function: preset or user selection from 1 to 23 hours
- Minimum and maximum setpoint limitation
- Return to previous operating mode or Protection(Off) upon power down
- Internal sensor calibration
- Adjustable commissioning and control parameters
- Fit into 86x86 conduit boxes
- Housing available in different colors

Wire, protect and earth in compliance with local regulations.
 Current loading is limited by a standard slow-blow 6.3 A fuse (replaceable).

Data sheet	A6V10889950
Operating voltage	AC 230 V
Power consumption	12 VA
Setpoint setting range	5...40 °C
Type of fixing	Recessed square conduit box BS4662 with fixing centres of 60.3 mm
Dimensions (W x H x D)	86 x 86 x 39 mm
Color	White

Stock no.	Product no.
S55770-T425	RDD510/BP

Standalone room thermostats

Heating and/or cooling

RDD510/BP.VS



Room thermostats in bulk pack of 20 units, silver

- Heating room thermostat in bulk pack of 20 units
- Output for on/off valve actuator, 3-wire on/off valve
- Heating only
- Operation modes: Comfort and Protection
- Adjustable commissioning and control parameters
- Optional display of room temperature or setpoint
- Minimum and maximum setpoint limitation
- Display temperature in increments of 0.5 °C or °F
- Color of housing: SILVER
- LED backlit display
- Full or partial keylock
- Internal sensor calibration
- Timer with delay off function: preset or user selection from 1 to 23 hours
- Return to previous mode or Comfort or Protection (Off) mode upon power down

- LED backlit display
- Keylock function
- Display either room temperature or setpoint
- Comfort and Protection(Off) operating modes
- Timer with delay Off function: preset or user selection from 1 to 23 hours
- Minimum and maximum setpoint limitation
- Return to previous operating mode or Protection(Off) upon power down
- Internal sensor calibration
- Adjustable commissioning and control parameters
- Fit into 86x86 conduit boxes
- Housing available in different colors

Wire, protect and earth in compliance with local regulations.
Current loading is limited by a standard slow-blow 6.3 A fuse (replaceable).

Data sheet	A6V10889950
Operating voltage	AC 230 V
Power consumption	12 VA
Setpoint setting range	5...40 °C
Type of fixing	Recessed square conduit box BS4662 with fixing centres of 60.3 mm
Dimensions (W x H x D)	86 x 86 x 39 mm
Color	Silver

Stock no. Product no.

S55770-T432

RDD510/BP.VS

Standalone touch screen room thermostat for heating application

RDD810

- Operating modes: Comfort, Economy and Protection
- Control output: changeover contact (SPDT)
- 2 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), window contact on/off, presence detector, fault contact, presence detector
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: Ivory white
- Backlit display



Operating voltage	AC 230 V
Power consumption	6 VA
Setpoint setting range	5...40°C
Switching differential	0.5...6 K
Analog inputs, number	2
Relay outputs	Heating: contacts, floating
Relay outputs, number	1
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	5 (2) A
Degree of protection	IP30
Dimensions (W x H x D)	82 x 82 x 47 mm

Stock no.

Product no.

S55770-T443

RDD810

Flush-mount room thermostat

RDD310/EH

- Operating voltage AC 230 V
- 2-position control with On/Off control output
- Input for cable temperature sensor NTC 3k (QAP1030/UFH) for the floor
- Floor temperature limitation with cable temperature sensor
- Operating modes: Comfort, Energy Saving and Frost Protection
- Minimum and maximum setpoint setting range
- Backlit white LCD
- Protection class IP31, suitable for installation in wet rooms



Data sheet	N1440
Operating voltage	AC 230 V
Power consumption	4 VA
Setpoint setting range	5...40°C
Digital output, switching voltage	230 V
Digital output, switching current	16 A
Degree of protection	IP31
Dimensions (W x H x D)	86 x 86 x 50 mm

Stock no.

Product no.

S55770-T296

RDD310/EH

Thermostats

Standalone room thermostats

Heating and/or cooling

RDE410/EH



Flush-mount room thermostats with auto timer

- Operating voltage AC 230 V
- 2-position control with On/Off control output
- Input for cable temperature sensor NTC 3k (QAP1030/UFH) for the floor
- Floor temperature limitation with cable temperature sensor
- Operating modes: Comfort, Energy Saving and Frost Protection
- Minimum and maximum setpoint setting range
- Backlit white LCD
- Protection class IP31, suitable for installation in wet rooms
- Auto Timer with 8 programmable timeswitches

Data sheet	N1440
Operating voltage	AC 230 V
Power consumption	4 VA
Setpoint setting range	5...40 °C
Digital output, switching voltage	230 V
Digital output, switching current	16 A
Degree of protection	IP31
Dimensions (W x H x D)	86 x 86 x 50 mm

Stock no. Product no.

S55770-T333 RDE410/EH

5

RDD310/MM



Flush Mount Heating room thermostat

- Operating voltage AC 230 V
- 2-position control with On/Off control output
- Operating modes: Comfort and Frost Protection
- Minimum and maximum setpoint setting range
- User and parameter settings are retained in case of power failure
- Mounting on recessed square conduit box, fixed centers 60.3 mm
- Color of housing: signal white (RAL 9003)

Data sheet	N3066.1
Operating voltage	AC 230 V
Power consumption	8 VA
Setpoint setting range	5...40 °C
Digital output, switching voltage	AC 24...230 V
Digital output, switching current	0.005...4 (2) A
Degree of protection	IP31
Dimensions (W x H x D)	86 x 86 x 40.5 mm
Color	White

Stock no. Product no.

S55770-T358 RDD310/MM

Standalone touch screen room thermostat for heating application (for China frames)

RDD810/NF



- Operating modes: Comfort, Economy and Protection
- Control output: changeover contact (SPDT)
- 2 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), window contact on/off, presence detector, fault contact, presence detector
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: Ivory white
- Backlit display
- Mounting on chinese mounting frames

Operating voltage	AC 230 V
Power consumption	6 VA
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Analog inputs, number	2
Relay outputs	Heating: contacts, floating
Relay outputs, number	1
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	5 (2) A
Type of fixing	Only on China frames
Degree of protection	IP30
Dimensions (W x H x D)	82 x 82 x 47 mm

Stock no.	Product no.
S55770-T406	RDD810/NF

Accessories for RDD310..

Product Title	Data sheet	Stock no.	Product no.
Cable temperature sensor PVC 4 m, NTC 3k	N1854	S55720-S289	QAP1030/UFH

Electromechanical room thermostats

RAA..1..

2-position controller for controlling the room temperature. The required temperature is adjusted with the setting knob on the front of the unit.

- Gas-filled diaphragm
- Color of housing front and baseplate: signal white RAL9003 (NCS S 0502-G)

Setpoint setting range	8...30 °C
Switching differential	≤1 K
Type of fixing	Wall mouting with screws
Degree of protection	IP30

Electromechanical room thermostat, public sector model

RAA11



- Heating only or cooling only
- No operating elements on the front of the unit

Data sheet	N3561
Dimensions (W x H x D)	96 x 97 x 36 mm

Stock no.	Product no.
S55770-T219	RAA11

Thermostats

Standalone room thermostats

Heating and/or cooling

RAA21



Electromechanical room thermostat, basic model

- Heating only or cooling only
- Setpoint adjustment with knob

Data sheet

N3562

Dimensions (W x H x D)

96 x 97 x 35.3 mm

Stock no.

Product no.

S55770-T220

RAA21

RAA31



Electromechanical room thermostat with on/off switch

- Heating only or cooling only
- Setpoint adjustment with knob
- On / off switch

Data sheet

N3563

Dimensions (W x H x D)

96 x 97 x 35.3 mm

Stock no.

Product no.

S55770-T221

RAA31

RAA31.16



Electromechanical room thermostat with on/off switch and LED

Same functionality as RAA31 plus mode indication (red LED, needed AC 230 V)

Data sheet

N3563

Operating voltage

AC 230 V

Power consumption

0.5 VA

Dimensions (W x H x D)

98 x 97 x 35.3 mm

Stock no.

Product no.

S55770-T222

RAA31.16

RAA31.26



Electromechanical room thermostat with on/off switch and LED, auxiliary switch and LED

Same functionality as RAA31 plus 2 mode indications (red LED, needed AC 230 V) and additional independent on / off switch.

Data sheet

N3563

Operating voltage

AC 230 V

Power consumption

0.5 VA

Dimensions (W x H x D)

99 x 110 x 35.3 mm

Stock no.

Product no.

S55770-T223

RAA31.26

Thermostats
Standalone room thermostats
Heating and/or cooling

Electromechanical room thermostat with selector heating/off/cooling, 1 output

RAA41

- Heating or cooling
- Setpoint adjustment with knob
- Switch for cooling / off / heating



Data sheet N3564
 Dimensions (W x H x D) 98 x 97 x 35.3 mm

Stock no.	Product no.
S55770-T224	RAA41

Accessories for RAA..1..

Product Title	Data sheet	Stock no.	Product no.
Mounting plate 120 x 120 mm for 4 x 4" housing	N3009	BPZ:ARG70	ARG70
Mounting plate 112 x 130 mm for surface wiring	N3009	BPZ:ARG70.2	ARG70.2

Thermostats

Standalone room thermostats

Heating and/or cooling

RCU.. Universal

Universal room thermostat for heating and cooling systems

- Electronic room temperature controller for heating and cooling operation
- PI control
- Operating mode changeover input for remote control
- Color of housing front: signal white RAL9003 (NCS S 0502-G)
- Color of baseplate: light grey RAL7035 (NCS 2801-Y43R)

Setpoint setting range	8...30 °C
Digital inputs, number	1
Digital input, contact query	DC 3...6 mA
	DC 6...15 V
Digital input, application	Night setback
Type of fixing	Wall mounting with screw
Degree of protection	IP30
Dimensions (W x H x D)	97 x 114 x 43 mm

RCU10



Universal room thermostat for 4-pipe systems, AC 230 V, positioning signal 2 pt or PWM

- Heating and cooling sequence
- 2nd heating sequence
- Selectable P-band (1 K heating, 0.5 K cooling, or 4 K heating, 2 K cooling)
- Selectable dead zone (2 K or 5 K)
- Frost protection function

Data sheet	N3041
Operating voltage	AC 230 V
Power consumption	6 VA
Triac outputs	PWM or ON/OFF
Triac output, switching voltage	230 V
Triac output, switching current	0.02...1 A

Stock no.	Product no.
BPZ:RCU10	RCU10

RCU15



Universal room thermostat for 4-pipe systems, AC 24 V, positioning signal 2 pt or PWM

Same functionality and technical data as RCU10

In addition:

- Optional control depending on the room or return air temperature (with sensor QAH11.1)

Data sheet	N3048
Operating voltage	AC 24 V
Power consumption	6 VA
Triac outputs	PWM or ON/OFF
Triac output, switching voltage	24 V
Triac output, switching current	0.02...1 A

Stock no.	Product no.
BPZ:RCU15	RCU15

Accessories for RCU..

Product Title	Data sheet	Stock no.	Product no.
Mounting plate 120 x 120 mm for 4 x 4" housing	N3009	BPZ:ARG70	ARG70
Mounting plate 112 x 130 mm for surface wiring	N3009	BPZ:ARG70.2	ARG70.2

Electronic room thermostat with time switch, LCD and selection slider

REV..

Mains-independent, battery-operated room temperature controllers featuring user-friendly operation, easy-to-read display and large numbers

- Self-learning two-position controller with PID response (REV.., REV13.., REV24..)
- 3-position controller with PI response (for REV34..)
- Remote operation (REV.., REV13.., REV24, REV24DC, REV34..)
- Override button
- Sensor calibration and reset function
- Frost protection function and minimum limitation of setpoint
- Color of housing front: signal white RAL9003 (NCS S 0502-G)
- Color of baseplate: grey RAL7038



Operating mode selection:

- Automatic modes with time switch program
- Automatic mode with one or two heating phases (REV13..)
- Automatic mode with up to three comfort phases (REV.., REV24.., REV34..)
- Exception day mode with up to three comfort phases (REV.., REV24.., REV34..)
- Continuous comfort mode
- Continuous energy saving mode
- Frost protection

Operating voltage	DC 3 V
Battery life	2 years
Setpoint setting range	3...35 °C
Relay output, switching voltage	AC 24...250 V
Relay output, switching current	0.1...6 (2.5) A
	For RF versions: 0.2...16 (2) A
Degree of protection	IP20

Range overview REV..

Product Title	Dimensions (WxHxD) [mm]	Data sheet	Stock no.	Product no.
Room thermostat with 2-point control and 24-hour time switch, batteries, only heating	130 x 94 x 30	N2201	BPZ:REV13	REV13
Room thermostat with 2-point control and 24-hour time switch, batteries, only heating, receive time signal DCF77	130 x 94 x 30	N2201	BPZ:REV13DC	REV13DC
24-hour room thermostat	130x94x30	N2201	BPZ:REV13-XA	REV13-XA
Room thermostat with 2-point control and 7-day time switch, batteries, heating and cooling	134.5 x 94 x 30	N2205	BPZ:REV24	REV24
Room thermostat with 2-point control and 7-day time switch, batteries, heating and cooling, receive time signal DCF77	134.5 x 94 x 30	N2205	BPZ:REV24DC	REV24DC
Room thermostat with 2-point control and 7-day time switch, receiver with relay outputs (RF set), batteries, heating or cooling	134.5 x 94 x 30	N2206	BPZ:REV24RF/SET	REV24RF/SET
Room thermostat with 2-point control and 7-day time switch, receiver with relay outputs (RF set), batteries, heating or cooling, receive time signal DCF77	134.5 x 94 x 30	N2206	BPZ:REV24RFDC/SET	REV24RFDC/SET
7-day room thermostat	134.5x94x30	N2205	BPZ:REV24-XA	REV24-XA
Room thermostat with 3-position control and 7-day time switch, batteries, heating and cooling	134.5 x 94 x 30	N2208	BPZ:REV34-XA	REV34-XA

Thermostats

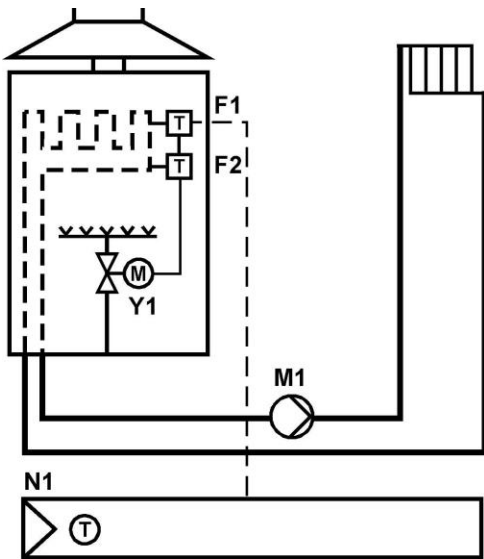
Standalone room thermostats Heating and/or cooling

Application examples REV..

These are only a few examples of many applications that can be done with the thermostat REV...
More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the REV.. data sheet..

REV24

HAA001 EV2 HQ

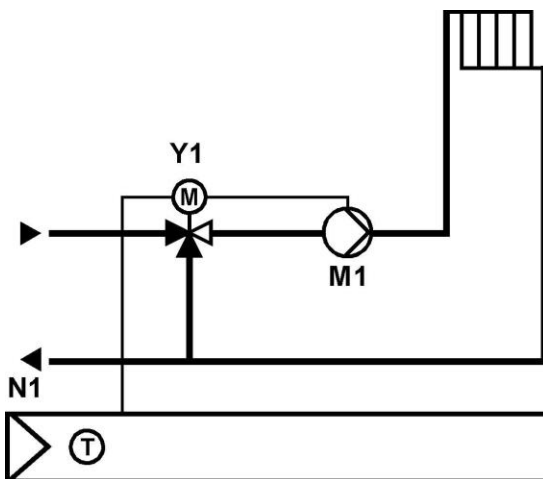


Room temperature controller with 7-day time switch, acting on on/off device

- 7-day time switch programme
- Three different 24-hour operating modes
- Continuous normal temperature mode
- Continuous economy temperature mode
- Standby with frost protection mode
- Holiday mode
- Override mode button
- Sensor calibration
- Installer parameter setting for pump kick and cooling
- Installer parameter setting for optimum start control in the morning
- Installer parameter setting for minimum limitation of set point
- Digital user interface
- Installer choice of algorithm: PID self learning; PID 12; PID 6; or 2-point

REV34

HOC002 EV3 HQ



Room temperature controller with 7-day time switch, acting on 3-position valve actuator

- 3-position controller with PI control
- 7-day time switch programme
- Three different 24-hour operating modes
- Continuous comfort temperature mode
- Continuous economy temperature mode
- Standby with frost protection mode
- Holiday mode
- Override mode button
- Digital user interface
- Sensor calibration
- Installer parameter setting for optimum start control in the morning
- Installer parameter setting for minimum limitation of set point
- Installer parameter setting for room size and heating capacity

Electromechanical room thermostats for fan coils

RAB..1..

Electromechanical room temperature controllers for fan coil for heating and/or cooling applications. Manual three-speed fan control. The required room temperature is adjusted with the setpoint knob on the front of the unit.

- Gas-filled diaphragm
- 2-position control
- Color of housing front and baseplate: signal white RAL9003 (NCS S 0502-G)

Setpoint setting range	8...30 °C
Switching differential	≤1 K
Switching voltage	AC 24...250 V
Switching current	0.2...6 (2) A
Degree of protection	IP30

Electromechanical room thermostat for 2-pipe fan coils, selector heating/cooling

RAB11

- Heating or cooling applications
- Selector for heating or cooling mode
- Selector for manual 3-speed fan operation
- Manual fan operation or automatic fan operation parallel with the valve can be configured inside the unit



Data sheet	N3015
Operating voltage	AC 230 V
Dimensions (W x H x D)	99 x 110 x 35.3 mm

Stock no.	Product no.
S55770-T225	RAB11

Electromechanical room thermostat for 2-pipe fan coils, selector heating/cooling/fan only

RAB11.1

Same functionality and technical data as RAB11. Additional selector position for ventilation (heating and cooling inactive).

Data sheet	N3015
Operating voltage	AC 230 V
Dimensions (W x H x D)	99 x 110 x 35.3 mm



Stock no.	Product no.
S55770-T226	RAB11.1

Electromechanical room thermostat for 2-pipe fan coils, basic model

RAB21

- Heating or cooling applications
- Selector for manual 3-speed fan operation
- Changeover function, heating or cooling (with external automatic aquastat)
- Manual fan operation or automatic fan operation parallel with cooling / heating mode can be configured inside the unit



Data sheet	N3016
Operating voltage	AC 230 V
Dimensions (W x H x D)	99 x 110 x 35.3 mm

Stock no.	Product no.
S55770-T227	RAB21



Thermostats

Standalone room thermostats

Fan coils

RAB31



Electromechanical room thermostat for 4-pipe fan coils, selector heating/cooling

- Heating or cooling applications
- Selector for heating or cooling mode
- Selector for 3-speed fan operation
- Manual fan operation or automatic fan operation parallel with heating / cooling mode (depending on the selector's position) can be configured inside the unit

Data sheet	N3017
Operating voltage	AC 230 V
Dimensions (W x H x D)	99 x 110 x 35.3 mm

Stock no.	Product no.
S55770-T229	RAB31

RAB31.1



Electromechanical room thermostat for 4-pipe fan coils, selector heating/cooling/fan only

Same functionality and technical data as RAB31. Additional selector position for ventilation (heating and cooling inactive).

Data sheet	N3017
Operating voltage	AC 230 V
Dimensions (W x H x D)	99 x 110 x 35.3 mm

Stock no.	Product no.
S55770-T230	RAB31.1

RAB91



Fan speed switch, 3-stage

Selector for 3-speed fan operation

Data sheet	N3018
Operating voltage	AC 230 V
Dimensions (W x H x D)	96 x 97 x 36 mm

Stock no.	Product no.
S55770-T231	RAB91

Thermostats

Standalone room thermostats

Fan coils

RCC20



Room thermostat for 2-pipe fan coils, AC 230 V, positioning signal 2 pt, return air sensor, el. heater

- Heating or cooling sequence
- Automatic heating/cooling changeover (with sensor QAH11.1)
- Operating mode changeover input for remote control
- Output for electrical heater
- 2-position control
- Selectable switching differential (1 K heating, 0.5 K cooling, or 4 K heating, 2 K cooling)
- Selectable dead zone (2 K or 5 K)
- Input for return air temperature sensor (QAH11.1)
- Frost protection mode
- Outputs for 3-speed fan (0 / I / II / III)

Data sheet	N3022
Operating voltage	AC 230 V
Relay output, switching voltage	230 V
Relay output, switching current	Fan: 0.1...2.6 A Valve: 0.1...1.3 A Electric heater: 0.1...5.4 A
Relay outputs	Fan: 3-position switch with normally open contacts Valve: Normally open contact Electric heater: Normally open contact Non floating
Dimensions (W x H x D)	97 x 114 x 43 mm

Stock no.	Product no.
BPZ:RCC20	RCC20

RCC30



Room thermostat for 4-pipe fan coils, AC 230 V, positioning signal 2pt, return air sensor

- Heating and cooling sequence
- Operating mode changeover input for remote control
- 2-position control
- Selectable switching differential (1 K heating, 0.5 K cooling, or 4 K heating, 2 K cooling)
- Input for return air temperature sensor (QAH11.1)
- Frost protection mode
- Selectable dead zone (2 K or 5 K)
- Outputs for 3-speed fan (0 / I / II / III)

Data sheet	N3023
Operating voltage	AC 230 V
Relay output, switching voltage	230 V
Relay output, switching current	Fan: 0.1...2.6 A Valve: 0.1...1.3 A
Relay outputs	Fan: 3-position switch with normally open contacts Valve: Normally open contact Non floating
Dimensions (W x H x D)	96.6 x 114.15 x 42.8 mm

Stock no.	Product no.
BPZ:RCC30	RCC30

Accessories for RAB.. / RCC..

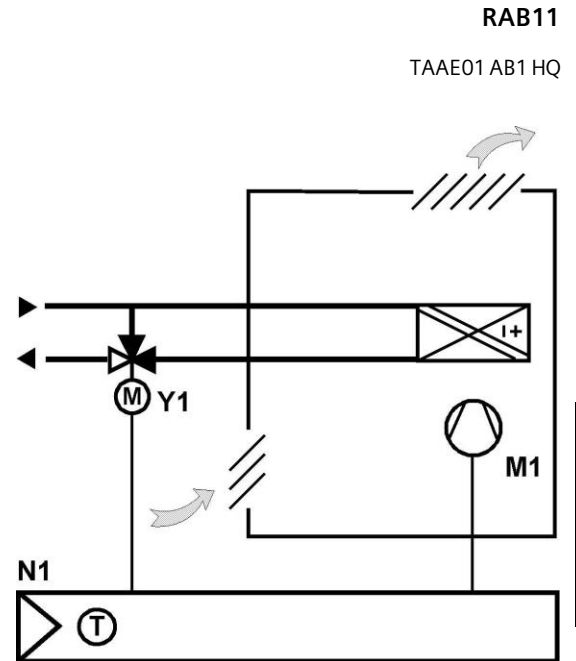
Product Title	Data sheet	Stock no.	Product no.
Mounting plate 120 x 120 mm for 4 x 4" housing	N3009	BPZ:ARG70	ARG70
Changeover cable holder for QAH11..	N3009	BPZ:ARG86.3	ARG86.3
Mounting plate 112 x 130 mm for surface wiring	N3009	BPZ:ARG70.2	ARG70.2
Cable temperature sensor PVC 2.5 m, NTC 3 kOhm, without connectors	N1840	BPZ:QAH11.1	QAH11.1

Application examples RAB..

These are only a few examples of many applications that can be done with the thermostat RAB...
 More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RAB.. data sheet.

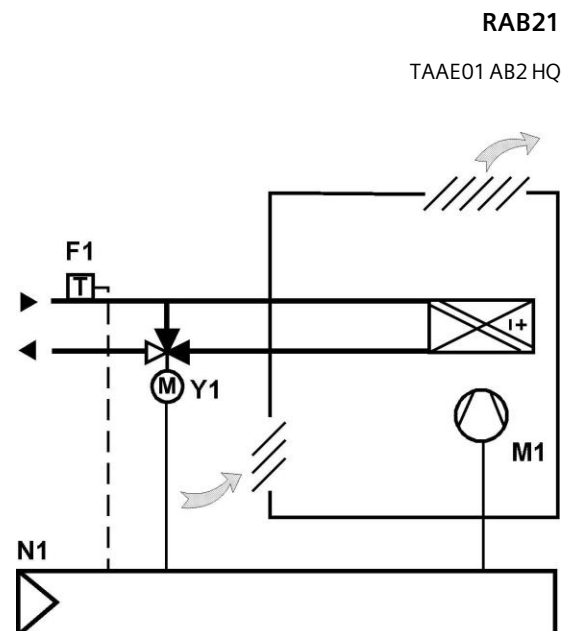
2-pipe fan coil, manual heating / cooling changeover

- 2-position control algorithm for heating or cooling systems
- Setting range of setpoint knob can be limited
- Operating mode selector for heating and cooling
- 4-position fan speed selector (I/II/III/off)



2-pipe fan coil, automatic heating / cooling changeover

- 2-position control for heating or cooling systems
- Setting range of setpoint knob can be limited
- 4-position fan speed selector (I/II/III/off)
- Heating/cooling changeover (aquastat)

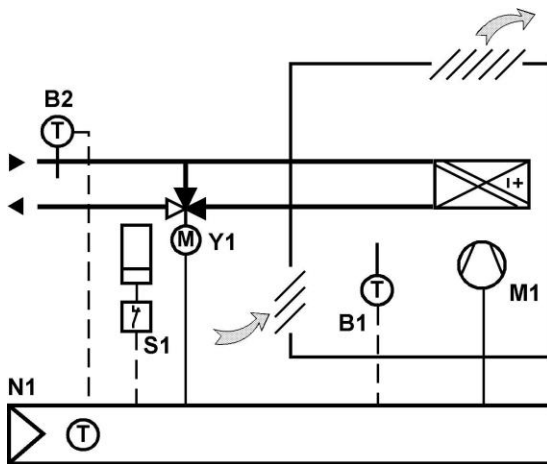


Application examples RCC..

These are only a few examples of many applications that can be done with the thermostat RCC...
 More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RCC.. data sheet.

RCC10

TAAE01 CC1 HQ

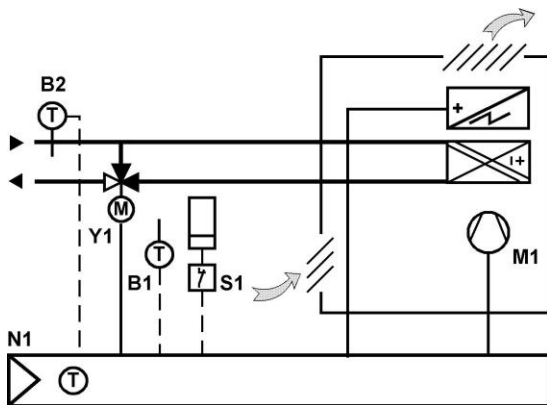


2-pipe fan coil, automatic heating / cooling changeover on/off output

- 2-position control algorithm for heating or cooling systems
- Output for ON/OFF valve actuator
- 4-position fan speed selector (I/II/III/standby)
- Status LED for heating, cooling and fan
- Setting range of setpoint knob can be limited
- Parameter setting by installer for: Fan control, operating mode changeover operating mode switch condition, frost protection, switching differential for heating or cooling
- Automatic heating/cooling changeover with external temperature sensor (QAH11.1)
- Operating mode changeover for remote control with external switch
- Temperature control according to integrated sensor or external temperature sensor QAH11.1 or QAA32)

RCC20

TAAZ01 CC2 HQ



2-pipe fan coil, automatic heating / cooling changeover and electrical heater

- 2-position control algorithm for heating or cooling systems
- Outputs for ON/OFF valve actuator and electrical heater
- 4-position fan speed selector (I/II/III/standby)
- Status LED for heating, cooling and fan
- Setting range of setpoint knob can be limited
- Parameter setting by installer for: Fan control, operating mode changeover operating mode switch condition, frost protection, switching differential for heating or cooling, dead zone, setpoint differential, operation of electrical heater in cooling or heating mode
- Automatic heating/cooling changeover with external temperature sensor (QAH11.1)
- Operating mode changeover for remote control with external switch
- Temperature control according to integrated sensor or external temperature sensor (QAH11.1 or QAA32)

5

Room thermostats for fan coil units, universal applications and heat pump applications

RDG1..

Data sheet	N3181
Setpoint setting range	5...40 °C
Type of fixing	Wall mounting with screws
Degree of protection	IP30

Room thermostat, AC 230 V, for fan coil units and universal applications

RDG100

- Operating modes: Comfort, Energy Saving and Protection
- 2-position, 3-position or PWM control outputs
- Automatic or manual fan speed
- 3 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Backlit display



Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 2-pipe system and radiator / floor heating
- 4-pipe system
- 4-pipe system with electrical heater
- 2-stage heating or cooling system

Data sheet	N3181
Operating voltage	AC 230 V
Relay outputs, number	3
Relay outputs	Fan: 1- or 3-speed
Relay output, switching voltage	230 V
Relay output, switching current	5 (4) A
Triac outputs, number	3
Triac outputs	Valve, el. heater
	2-position, PWM, 3-position
Triac output, switching voltage	230 V
Triac output, switching current	1 A
Switching differential	Heating: 0.5...6 K; Cooling: 0.5...6 K
Analog inputs, number	2
Digital inputs, number	1
Dimensions (W x H x D)	93 x 128 x 30.8 mm

Stock no.	Product no.
S55770-T158	RDG100



RDG110



Room thermostat, AC 230 V, for fan coil units and heat pump applications

- Operating modes: Comfort, Energy Saving and Protection
- 2-position control outputs
- Automatic or manual fan speed
- 3 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 2-pipe system and radiator / floor heating
- 4-pipe system
- 2-stage heating or cooling system

Data sheet	N3181
Operating voltage	AC 230 V
Relay outputs, number	5
Relay outputs	Valve, compressor or el. heater: 2 outputs (SPDT), 2-position Fan: 1- or 3-speed
Relay output, switching voltage	230 V
Relay output, switching current	Valve, compressor or el. heater: 5 (3) A Fan: 5 (4) A
Switching differential	Heating: 0.5...6 K; Cooling: 0.5...6 K
Analog inputs, number	2
Digital inputs, number	1
Dimensions (W x H x D)	93 x 128 x 30.8 mm

Stock no.	Product no.
S55770-T160	RDG110

Room thermostat for fan coil units and universal applications, 7-day time switch

RDG1..0T..

Data sheet	N3181
Setpoint setting range	5...40°C
Type of fixing	Wall mounting with screws
Degree of protection	IP30

Room thermostat, AC 230 V, for fan coil units and universal applications, 7-day time switch, vertical

RDG100T



- Operating modes: Auto timer, Comfort, Energy Saving and Protection
- Auto Timer mode with 8 programmable timers
- 2-position, 3-position or PWM control outputs
- Automatic or manual fan speed for 1-speed or 3-speed fan
- 3 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Infrared remote control receiver
- Backlit display
- Auto timer can be disabled

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 2-pipe system and radiator / floor heating
- 4-pipe system
- 4-pipe system with electrical heater
- 2-stage heating or cooling system

Data sheet	N3181
Operating voltage	AC 230 V
Switching differential	Heating: 0.5...6 K; Cooling: 0.5...6 K
Analog inputs, number	2
Analog input, signal	NTC 3k
Relay outputs, number	Switch
Relay outputs	3
Relay output, switching voltage	Fan: 1- or 3-speed
Relay output, switching current	230 V
Triac outputs, number	5 (4) A
Triac output, switching current	3
Triac outputs	1 A
Triac output, switching voltage	Valve, el. heater
Dimensions (W x H x D)	2-position, PWM, 3-position
	230 V
	93 x 128 x 30.8 mm

Stock no.	Product no.
S55770-T159	RDG100T

RDG160T



Room thermostat, AC 24 V, for fan coil units (3-speed or ECM fan), universal applications and heat pump applications. 7-day time switch. Outputs DC 0..10V or ON/OFF

- Operating modes: Auto timer, Comfort, Energy Saving and Protection
- Auto Timer mode with 8 programmable timers
- 2-position or DC 0...10V control outputs
- ECM fan or 3-speed fan outputs
- Automatic or manual fan speed
- 3 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, supply air temperature sensor
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Infrared remote control receiver
- Backlit display
- Auto timer can be disabled

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 2-pipe system and radiator / floor heating
- 4-pipe system
- 2-stage heating or cooling system

Data sheet	N3181
Operating voltage	AC/DC 24 V DC 24 V
Switching differential	Heating: 0.5...6 K; Cooling: 0.5...6 K
Analog inputs, number	2
Analog input, signal	NTC 3k Switch
Relay outputs, number	3
Relay outputs	Fan: 1- or 3-speed Valve: Normally open contact Electric heater: Normally open contact
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	5 (4) A
Analog outputs	Valve, el. heater: 2 Fan: 1 (ECM)
Analog output, signal	DC 0...10 V
Analog output, current	Valve, el. heater: Max. ±1 mA Fan: Max. ±5 mA
Dimensions (W x H x D)	93 x 128 x 30.8 mm

Stock no.	Product no.
S55770-T343	RDG160T

Room thermostat

RDF..

- Electronic room temperature controller with LCD for fan coil units for compressors in DX-type equipment
- For heating and/or cooling applications
- ON/OFF
- Operating mode changeover input for remote control
- Various operating modes (normal, energy saving and stand-by)
- Outputs for 3-speed fan
- Selectable installation and control parameters
- Color of housing front: signal white RAL9003 (NCS S 0502-G)
- Color of baseplate: light grey RAL7035 (NCS 2801-Y43R)

Operating voltage	AC 230 V
Setpoint setting range	5...40 °C
Relay outputs	Fan: N.O. contacts, non-floating Valve: change-over contact, non-floating
Relay output, switching voltage	AC 230 V
Relay output, switching current	4 (2) A
Degree of protection	IP30
Dimensions (W x H x D)	86 x 86 x 39 mm

Room thermostat for 2-pipe fan coils or DX-type equipment, return air temperature sensor

- Output for an on / off valve actuator or compressor
- Outputs for a 3-speed fan
- Control depending on the room or return air temperature (with sensor QAH11.1)
- 2-position control
- Sensor input either for automatic heating / cooling changeover or return air temperature (with sensor QAH11.1)
- Automatic or manual three-speed fan control
- Operating modes: normal, energy-saving and standby
- Operating mode changeover input for remote control

Data sheet	N3057
Degree of protection	IP30
Dimensions (W x H x D)	102 x 128 x 30 mm



5

Stock no.	Product no.
BPZ:RDF110	RDF110

Room thermostat for 2-pipe fan coils or DX-type equipment

- Output for an on / off valve actuator or compressor
- Outputs for a 3-speed fan
- Control depending on the room or return air temperature (with sensor QAH11.1)
- 2-position control
- Manual heating/Cooling change-over
- Automatic or manual three-speed fan control
- Operating modes: normal, energy-saving and standby

Data sheet	N3057
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Stock no.	Product no.
BPZ:RDF110.2	RDF110.2

Thermostats

Standalone room thermostats

Fan coils

RDG110U



Room thermostat, AC 24 V, for fan coil units and heat pump applications

- Operating modes: Comfort, Energy Saving and Protection
- 2-position control outputs
- Automatic or manual fan speed
- 3 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 2-pipe system and radiator / floor heating
- 4-pipe system
- 2-stage heating or cooling system

Operating voltage	AC 24 V
Power consumption	2 VA 1 W
Switching differential	Heating: 0.5... 6 K; Cooling: 0.5... 6 K
Analog inputs, number	2
Digital inputs, number	1
Relay outputs	Valve, compressor or el. heater: 2 outputs (SPDT), 2-position Fan: 1- or 3-speed
Relay outputs, number	5
Relay output, switching voltage	24 V
Relay output, switching current	Valve, compressor or el. heater: 5 (3) A Fan: 5 (4) A
Dimensions (W x H x D)	93 x 128 x 30.8 mm

Stock no.	Product no.
S55770-T361	RDG110U

Accessories for RDG.. / RDF..

Product Title	Data sheet	Stock no.	Product no.
Mounting plate 112 x 130 mm for surface wiring	N3009	BPZ:ARG70.2	ARG70.2
Cable temperature sensor PVC 2.5 m, NTC 3 kOhm, without connectors	N1840	BPZ:QAH11.1	QAH11.1
Infrared Remote Control for room thermostats	N3060	S55770-T166	IRA211

Touch screen room thermostat for 2-/4- pipe fan coil, universal applications or compressors in DX-type equipment

RDF8..Flush Mount



- Operating modes: Comfort, Economy and Protection
- For heating and/or cooling applications
- 2 or 3-position control outputs
- Output for 1-speed or 3-speed fan
- 2 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, presence detector
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: Ivory white
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Data sheet	N3174
Power consumption	6 VA
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Analog inputs, number	2
Relay outputs	Fan: N.O. contacts, non-floating Valve: N.O. contacts, non-floating
Relay outputs, number	5
Relay output, switching voltage	AC 230 V
Relay output, switching current	5 (2) A
Degree of protection	IP30
Dimensions (W x H x D)	86 x 86 x 47 mm

Range overview RDF8..Flush Mount

Product Title	Operating voltage [V]	Stock no.	Product no.
Touch screen room thermostat for 2-/4- pipe fan coil, universal applications or compressors in DX-type equipment	AC/DC 230	S55770-T396	RDF800
Touch screen room thermostat for 2-/4- pipe fan coil, universal applications or compressors in DX-type equipment (for China frames)	AC 230	S55770-T397	RDF800/NF

RDF300.02/VB



Flush-mount room thermostat for rectangular conduit box, for 2-/4-pipe fan coils or DX type equipment, backlit LCD, black

Flush-mount room thermostat for rectangular conduit box with LCD for fan coil units and compressors in DX-type equipment

- Output for 3-speed or 1-speed fan
- 2 or 3-position control outputs
- Two multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Operating modes: Comfort, Energy Saving and Protection
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: black (RAL 9004)
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Black Color Housing

Data sheet	N3076
Operating voltage	AC 230 V
Power consumption	8 VA
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Analog inputs, number	2
Relay outputs	Fan: Normally open contact Valve: Normally open contact Non floating
Relay outputs, number	5
Relay output, switching voltage	230 V
Relay output, switching current	5 (2) A
Type of fixing	Recessed rectangular conduit box BS4662 with fixing centres of 60.3 mm
Degree of protection	IP30
Dimensions (W x H x D)	86 x 86 x 57 mm
Color	Black

Stock no.	Product no.
S55770-T427	RDF300.02/VB

Thermostats

Standalone room thermostats

Fan coils

RDF300.02/VB



Flush-mount room thermostat for rectangular conduit box, for 2-/4-pipe fan coils or DX type equipment, backlit LCD, black

Flush-mount room thermostat for rectangular conduit box with LCD for fan coil units and compressors in DX-type equipment

- Output for 3-speed or 1-speed fan
- 2 or 3-position control outputs
- Two multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Operating modes: Comfort, Energy Saving and Protection
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: black (RAL 9004)
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Black Color Housing

Data sheet	N3076
Operating voltage	AC 230 V
Relay output, switching voltage	230 V
Relay output, switching current	5 (2) A
Relay outputs	Fan: Normally open contact Valve: Normally open contact Non floating
Analog inputs, number	2
Relay outputs, number	5
Type of fixing	Recessed rectangular conduit box BS4662 with fixing centres of 60.3 mm
Dimensions (W x H x D)	86 x 86 x 57 mm
Color	Black

Stock no.	Product no.
S55770-T427	RDF300.02/VB

RDF340



Flush-mount room thermostat for rectangular conduit box, for 2-/4-pipe fan coils

Flush-mount room thermostat for rectangular conduit box, with LCD for fan coil units

- Output for 3-speed or 1-speed fan
- Two multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Operating modes: Comfort, Energy Saving and Protection
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: signal white (RAL 9003)

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Data sheet	N3076
Operating voltage	AC 24 V
Analog output, signal	DC 0...10 V
Analog output, current	1 mA
Analog outputs	Heating/Cooling
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	5 (2) A
Relay outputs	Fan: Normally open contact Potential-free
Analog inputs, number	2
Analog outputs, number	2
Relay outputs, number	3
Type of fixing	Recessed rectangular conduit box BS4662 with fixing centres of 60.3 mm
Dimensions (W x H x D)	86.1 x 86.1 x 57 mm

Stock no.	Product no.
BPZ:RDF340	RDF340

Thermostats

Standalone room thermostats

Fan coils

RDF310.2/MM



Flush mount room thermostat for 2-pipe fan coils

- Flush-mount room temperature controller with LCD for fan coil units
- Output for on/off valve actuator, 3-wire on/off valve or 1-stage compressor
 - 3-speed fan control: Automatic or manual
 - Manual heating / cooling changeover or continuous Cooling only / Heating only
 - Operation modes: Comfort and Protection
 - Adjustable commissioning and control parameters
 - Optional display of room temperature or setpoint
 - Minimum and maximum setpoint limitation
 - Display temperature in increments of 0.5 °C or °F
 - Color of housing: signal white (RAL 9003)

Data sheet	N3066
Operating voltage	AC 230 V
Relay output, switching voltage	230 V
Relay output, switching current	4 (2) A
Relay outputs	Fan: Normally open contact Valve: Change-over contact Non floating
Relay outputs, number	4
Type of fixing	Recessed rectangular conduit box BS4662 with fixing centres of 60.3 mm
Dimensions (W x H x D)	86 x 86 x 40.5 mm

Stock no.	Product no.
S55770-T187	RDF310.2/MM

Flush-mount room thermostats for both round and square conduit boxes, with backlit LCD

RDF6..Flush Mount



Flush-mount room thermostat for round conduit box with LCD

- Output for 1-speed or 3-speed fan
- 2 or 3-position control outputs
- Two multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Operating modes: Comfort, Energy Saving and Protection
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: signal white (RAL 9003)
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Operating voltage	AC 230 V
Switching differential	0.5...6 K
Analog inputs, number	2
Relay outputs, number	5
Type of fixing	Recessed round conduit box diameter min. 60 mm
Dimensions (W x H x D)	86 x 86 x 46 mm

Range overview RDF6..Flush Mount

Product Title	Stock no.	Product no.
Flush-mount room thermostat for round conduit box for 2-/4-pipe fan coils or DX type equipment, backlit LCD	S55770-T291	RDF600
Flush-mount room thermostat for round conduit box, for 2-/4-pipe fan coils or DX type equipment, infrared remote control, 7-day time switch, backlit LCD	S55770-T292	RDF600T

RDF5..Flush Mount



Flush-mount room thermostats for square conduit boxes

Flush-mount thermostats

- Output for on/off valve actuator, 3-wire on/off valve
- 3-speed fan control: Automatic or manual
- Manual heating / cooling changeover or continuous Cooling only / Heating only
- Operation modes: Comfort and Protection
- Adjustable commissioning and control parameters
- Optional display of room temperature or setpoint
- Minimum and maximum setpoint limitation
- Display temperature in increments of 0.5 °C or °F
- Color of housing: signal white (RAL 9003)
- LED backlit display
- Full or partial keylock
- Internal sensor calibration
- Timer with delay off function: preset or user selection from 1 to 23 hours
- Return to previous mode or Protection (Off) mode upon power down
- Fan speed low or off in deadzone
- Fan minimum On-time
- Three standard color housings on bulk pack for project delivery
- Customization is also available by request

- LED backlit display
- Keylock function
- Display either room temperature or setpoint
- Comfort and Protection(Off) operating modes
- Automatic or manual heating/cooling changeover
- Automatic or manual 3-speed fan control
- Selectable fan operation in deadzone
- Timer with delay Off function: preset or user selection from 1 to 23 hours
- Minimum and maximum setpoint limitation
- Return to previous operating mode or Protection(Off) upon power down
- Internal sensor calibration
- Adjustable commissioning and control parameters
- Fit into 86x86 conduit boxes
- Housing available in different colors

Data sheet	A6V10889950
Operating voltage	AC 230 V
Power consumption	Max. 12 VA
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K (factory setting: 1 K)
Dimensions (W x H x D)	86 x 86 x 39 mm

Range overview RDF5..Flush Mount

Product Title	Stock no.	Product no.
Flush-mount room thermostat for 2-pipe fan coils	S55770-T382	RDF510
Room thermostats in bulk pack of 20 units	S55770-T383	RDF510/BP
Room thermostats in bulk pack of 20 units, silver	S55770-T403	RDF510/BP.VS
Room thermostats in bulk pack of 20 units, black	S55770-T404	RDF510/BP.VB
Room thermostats in bulk pack of 20 units, gold	S55770-T405	RDF510/BP.VG
Flush mount room thermostat for 4-pipe fan coils	S55770-T384	RDF530
Room thermostats in bulk pack of 20 units	S55770-T385	RDF530/BP
Room thermostats in bulk pack of 20 units, black	S55770-T417	RDF530/BP.VB
Room thermostats in bulk pack of 20 units, gold	S55770-T424	RDF530/BP.VG
Room thermostats in bulk pack of 20 units, silver	S55770-T423	RDF530/BP.VS

Accessories for RDF..

Product Title	Data sheet	Stock no.	Product no.
Mounting bracket 10 mm thick	N3009	BPZ:ARG70.3	ARG70.3
RDF8../NF, RDD8../NF Mounting Frames (DELTA arina)		S55770-T370	ARG800.1
Hotel Key Card ARG810.1		S55770-T446	ARG810.1
Door Bell with DND ARG820.1		S55770-T447	ARG820.1
Door Bell with DND & MUR ARG830.1		S55770-T448	ARG830.1
Cable temperature sensor PVC 2.5 m, NTC 3 kOhm, without connectors	N1840	BPZ:QAH11.1	QAH11.1
Infrared Remote Control for room thermostats	N3060	S55770-T166	IRA211
Room temperature sensor NTC 3 kOhm	N1747	BPZ:QAA32	QAA32

Thermostats

Standalone room thermostats

Variable air volumes (VAV)

RCU..VAV

Electronic room thermostat for VAV and CAV systems

- Electronic room thermostat for heating and cooling operation
- P control
- Setpoint shifting
- Color of housing front: signal white RAL9003 (NCS S 0502-G)
- Color of baseplate: light grey RAL7035 (NCS 2801-Y43R)

Power consumption	6 VA
Setpoint setting range	8...30 °C
Analog output, signal	DC 0...10 V
Analog output, current	Max. ±1 mA
Type of fixing	Wall mounting with screw
Degree of protection	IP30
Dimensions (W x H x D)	97 x 114 x 43 mm

RCU50.2



Room thermostat for VAV and CAV systems, AC 24 V, positioning signal DC 0...10 V, manual changeover heating/cooling/off

Same functionality and technical data as RCU50

- Manual heating / cooling changeover and OFF position
- Signal inversion of output signal
- No setpoint shift
- No operating mode changeover input for remote control
- No adjustable minimum limitation for cooling output
- No frost protection

Data sheet	N3045
Operating voltage	AC 24 V

Stock no.	Product no.
BPZ:RCU50.2	RCU50.2

RDU340



Flush-mount room thermostat for rectangular conduit box with LCD for VAV application

- Output for a DC 0...10V actuator and AC 230V electrical heater (ON-OFF)
- 2 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Operating modes: Comfort, Energy Saving and Protection
- Modulating PI control
- Control depending on the room or the return air temperature
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Adjustable minimum and maximum limitation for air flow signal DC 0...10V
- Output signal inversion as an option
- Mounting on recessed rectangular conduit box, 60.3 mm fixing centers
- Color of housing: signal white (RAL 9003)

Application selectable:

- Single-duct system
- Single-duct system with electrical heater

Data sheet	N3078
Operating voltage	AC 24 V
Power consumption	6 VA
Setpoint setting range	5...40 °C
Analog inputs, number	2
Analog outputs	VAV actuator
Analog outputs, number	1
Analog output, signal	DC 0...10 V
Analog output, current	1 mA
Relay outputs	Normally open contact Potential-free
Relay outputs, number	1
Relay output, switching voltage	230 V
Relay output, switching current	5 (2) A
Type of fixing	Recessed rectangular conduit box BS4662 with fixing centres of 60.3 mm
Degree of protection	IP30
Color	White
Dimensions (W x H x D)	86 x 86 x 57 mm

Stock no.	Product no.
BPZ:RDU340	RDU340

Accessories for RDU3.. flush mount

Product Title	Data sheet	Stock no.	Product no.
Mounting bracket 10 mm thick	N3009	BPZ:ARG70.3	ARG70.3

Thermostats

Standalone room thermostats

Variable air volumes (VAV)

RDG400



Room thermostat, AC 24 V, VAV heating and cooling systems

- Output DC 0...10 V for VAV actuator and auxiliary output ON/OFF, PWM or 3-position or 3-position for VAV actuator and auxiliary output DC 0...10 V
- 3 multifunctional inputs for keycard contact, external room / return air temperature (1x, QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Operating modes: Comfort, Energy Saving and Protection
- Modulating PI control
- Control depending on the room or the return air temperature
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Minimum and maximum limitation of air flow signal
- Output signal inversion (DC 0...10 V) as an option
- Backlit display

Application selectable:

- Single-duct system
- Single-duct system with electrical heater
- Single-duct system and radiator / floor heating
- Single-duct system with heating / cooling coil

Data sheet	N3182
Operating voltage	AC 24 V
Power consumption	2 VA
Setpoint setting range	5...40 °C
Switching differential	Heating: 0.5...6 K; Cooling: 0.5...6 K
Analog inputs, number	2
Analog outputs	VAV actuator, electric heater, valve
Analog outputs, number	1
Analog output, signal	DC 0...10 V
Analog output, current	1 mA
Digital inputs, number	1
Triac outputs	VAV actuator, valve, el. heater 2-position, PWM, 3-position
Triac outputs, number	1
Triac output, switching voltage	24 V
Triac output, switching current	1 A
Type of fixing	Wall mounting with screws
Degree of protection	IP30
Dimensions (W x H x D)	93 x 128 x 30.8 mm

Stock no. Product no.

S55770-T164

RDG400

Application examples RDG..

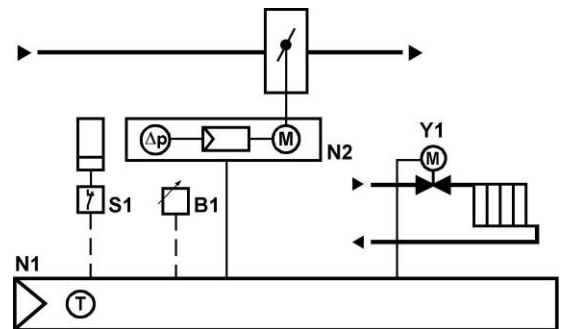
More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RDG.. data sheet

VAV box, automatic heating/cooling changeover with radiator, mod. PI-control, DC 0...10 V for cooling

RDG400

TCCE01 DG4 HQ

- Modulating PI control algorithm for heating and cooling systems
- Outputs for DC 0...10 V and ON/OFF, PWM, 3-position
- Setting range of setpoint knob can be limited
- Manual operating mode button
- Parameter setting by installer
- Temperature control according to integrated sensor
- Adjustable minimum limitation of cooling output (air flow)
- Operating mode changeover for remote control with external switch/sensor
- Operating voltage AC 24 V
- Backlit display



Thermostats

Standalone room thermostats

Accessories

ARG70



Mounting plate 120 x 120 mm for 4 x 4" housing

Accessories for use with room thermostats RAA.., RAB.., RCC.., RCU.., RDD.., RDE.., RDF..

Data sheet	N3009
Dimensions (W x H x D)	120 x 120 x 6 mm

Stock no.	Product no.
BPZ:ARG70	ARG70

ARG86.3



Changeover cable holder for QAH11..

Changeover mounting kit for QAH11.. sensor for universal use as a strap-on sensor

Data sheet	N3009
Packaging unit	10 pieces
Warranty	2 Years

Stock no.	Product no.
BPZ:ARG86.3	ARG86.3

QAP1030/UFH



Cable temperature sensor PVC 4 m, NTC 3k

Data sheet	N1854
Measuring range, temperature	-20...70 °C
Sensing element, temperature	NTC 3k
Measurement accuracy	At -20...70 °C: ±0.3 K
Time constant	1.5 min to air
Protection pocket	Non
Material, protection pocket	None
Cable length	4 m

Stock no.	Product no.
S55720-S289	QAP1030/UFH

ARG70.2



Mounting plate 112 x 130 mm for surface wiring

Accessories for use with room thermostats RAA.., RAB.., RCC.., RCU.., RDD.., RDE.., RDF..

Data sheet	N3009
Dimensions (W x H x D)	112 x 130 x 10 mm

Stock no.	Product no.
BPZ:ARG70.2	ARG70.2

Cable temperature sensor PVC 2.5 m, NTC 3 kOhm, without connectors

QAH11.1



For installation in fan coil units as

- a return air temperature sensor
- a changeover sensor

Packing size: 10 pcs

Data sheet	N1840
Measuring range	For fixed cable
Sensing element	NTC 3k
Measuring range, temperature	-20...70 °C
Sensing element, temperature	NTC 3k
Time constant	Air v=0 m/s: 90 s
Connection cable	2-wire Ferrules
Cable length	2.5 m
Warranty	5 Years

Stock no.	Product no.
BPZ:QAH11.1	QAH11.1

Room temperature sensor NTC 3 kOhm

QAA32



5

Data sheet	N1747
Sensing element	NTC 3k
Measuring range, temperature	0...40 °C
Sensing element, temperature	NTC 3k
Time constant	6 min
Measurement accuracy	At 25 °C: ±0.3 K
Connection, electrical	Screw terminals
Degree of protection	IP30
Dimensions (W x H x D)	97 × 100 × 36 mm
Warranty	5 Years

Stock no.	Product no.
BPZ:QAA32	QAA32

Thermostats

Capillary and clamp-on thermostats

Temperature

RAK-TR.1..H



Temperature controller

External scale, 1 changeover contact, immersion and strap-on thermostat in one.

Data sheet	N1205
Switching differential	6 K
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	0.1...16 (2.5) A
Digital outputs	1-pin
	Potential-free
	Changeover contact
Degree of protection	IP43
Dimensions (W x H x D)	55 x 156 x 72 mm

Range overview RAK-TR.1..H

Setpoint setting range [°C]	Protection pocket [LW7]	Capillary length [mm]	Stock no.	Product no.
15...95	PN 10, 100 mm, G 1/2"	700	S55700-P111	RAK-TR.1000B-H
15...95		700	S55700-P112	RAK-TR.1000S-H
15...82	PN 10, 100 mm, G 1/2"	700	S55700-P113	RAK-TR.1210B-H

Note to protection pocket: Brass, nickel-plated.

RAK-TW.1..H



Thermal reset limit thermostat

Internal scale, 1 changeover contact, immersion and strap-on thermostat in one.

Data sheet	N1202
Switching differential	6 K
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	Contact 1-2: 0.1...16 (2.5) A
	Contact 1-3: 0.1...6 (2.5) A
Digital outputs	1-pin
	Potential-free
	Changeover contact
Degree of protection	IP43
Dimensions (W x H x D)	55 x 156 x 64 mm

Range overview RAK-TW.1..H

Setpoint setting range [°C]	Protection pocket [LW7]	Capillary length [mm]	Stock no.	Product no.
15...95		700	S55700-P116	RAK-TW.1000S-H
40...120	PN 10, 100 mm, G 1/2"	700	S55700-P117	RAK-TW.1200B-H
40...120		700	S55700-P119	RAK-TW.1200S-H

Note to protection pocket: Brass, nickel-plated.

5

Thermal reset limit thermostat

RAK-TW.1..H..

Immersion, strap-on and remote thermostat in one

Data sheet	N1202
Switching differential	6 K
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	Contact connection 1-2: 0.1...16 (2.5) A Contact connection 1-3: 0.1...6(2.5) A
Digital outputs	1-pole Potential-free Changeover contact
Degree of protection	IP65
Dimensions (W x H x D)	55 x 156 x 64 mm



Range overview RAK-TW.1..H..

Setpoint setting range [°C]	Protection pocket [LW7]	Capillary length [mm]	Stock no.	Product no.
15...95	PN 10, 100 mm, G½"	700	S55700-P115	RAK-TW.1000HB
40...120	PN 10, 100 mm, G½"	700	S55700-P118	RAK-TW.1200HP

Note to protection pocket: Brass, nickel-plated.

Temperature limiter

RAK-TB.1..M

Internal scale, 1 changeover contact, immersion and strap-on thermostat in one.

Data sheet	N1206
Reset temperature	Min. 15 K under the switch-off point
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	Contact 11-12: 0.1...16 (2.5) A Contact 11-13: 2 (0.4) A
Digital outputs	1-pin Potential-free Switchover contact
Degree of protection	IP43
Dimensions (W x H x D)	55 x 156 x 67 mm



Range overview RAK-TB.1..M

Switch-off point [°C]	Protection pocket [LW7]	Capillary length [mm]	Stock no.	Product no.
45...60		700	S55700-P108	RAK-TB.1400S-M
50...70	PN 10, 100 mm, G½"	700	S55700-P109	RAK-TB.1410B-M
65...80		700	S55700-P110	RAK-TB.1420S-M

Note to protection pocket: Brass, nickel-plated.

Thermostats

Capillary and clamp-on thermostats

Temperature

RAK-ST..M



Safety limit thermostat

Internal scale, 1 changeover contact, failsafe capillary, immersion and strap-on thermostat in one, with ambient temperature compensation.

Data sheet	N1204
Reset temperature	Min. 15 K under the switch-off point
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	Contact 11-12: 0.1...16 (2.5) A Contact 11-13: 2 (0.4) A
Digital outputs	1-pin Potential-free Switchover contact
Degree of protection	IP43
Dimensions (W x H x D)	55 x 156 x 67 mm

Range overview RAK-ST..M

Switch-off point [°C]	Protection pocket [LW7]	Capillary length [mm]	Stock no.	Product no.
95	PN 10, 100 mm, G 1/2"	700	S55700-P100	RAK-ST.010FP-M
100	PN 10, 100 mm, G 1/2"	700	S55700-P101	RAK-ST.020FP-M
110	PN 10, 100 mm, G 1/2"	700	S55700-P102	RAK-ST.030FP-M
110...130	PN 10, 100 mm, G 1/2"	700	S55700-P103	RAK-ST.1300P-M
90...110	PN 10, 100 mm, G 1/2"	700	S55700-P104	RAK-ST.1310P-M
80...100		1600	S55700-P106	RAK-ST.1430S-M

Note to protection pocket: Brass, nickel-plated.

RAK-ST.1..M..



Safety limit thermostat

Immersion, strap-on and remote thermostat in one

Data sheet	N1204
Reset temperature	~7 K under the switch-off point
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	Contact 11-12: 16 (2,5) A Contact 11-13: 2 (0,4) A
Digital outputs	1-pole Potential-free Changeover contact
Degree of protection	IP65
Dimensions (W x H x D)	55 x 156 x 67 mm

Range overview RAK-ST.1..M..

Switch-off point [°C]	Protection pocket	Capillary length [mm]	Stock no.	Product no.
40...70		700	S55700-P105	RAK-ST.1385M
95...130	100 mm; G 1/2"; 7 mm; PN 10	700	S55700-P107	RAK-ST.1600MP

Note to protection pocket: Brass, nickel-plated.

Thermal reset limit thermostat for air ducts, 20...110 °C; perforated protection pocket 200mm

TKM2



Data sheet	N1291
Setpoint setting range	20...110 °C
Switching differential	2 K
Digital output, switching voltage	AC 250 V
Digital output, switching current	0.2...10 (2) A
Ambient temperature head	Max. 100 °C
Digital outputs	1-pin Potential-free Changover contact
Degree of protection	IP54
Dimensions (W x H x D)	60 x 120 x 55 mm

	Stock no.	Product no.
	BPZ:TKM2	TKM2

Thermostats

Capillary and clamp-on thermostats

Temperature

RAZ-TW.1..J



Temperature controller/ thermal reset limit thermostat

Combination of control thermostat (TR) and thermal reset limit thermostat (TW). Internal scale (TR), internal scale (TW), 2 changeover contacts. Immersion thermostat and wall mounting.

Data sheet	N1212
Immersion length	100 mm
Reset temperature	Min. 15 Kelvin under the switch-off point
Switching differential	6 K
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	0.1...16 (4) A
Digital outputs	1-pin
	Potential-free
	Changeover contact
Degree of protection	IP40
Dimensions (W x H x D)	120 x 106 x 70 mm

Range overview RAZ-TW.1..J

Setpoint setting range [°C]	Protection pocket [LW7]	Capillary length [mm]	Stock no.	Product no.
TR: 15...95 TW: 15...95	PN 10, 100 mm, G 1/2" 2x	700	S55700-P140	RAZ-TW.1000P-J
TR: 40...120 TW: 40...120	PN 10, 100 mm, G 1/2" 2x	700	S55700-P141	RAZ-TW.1200P-J

Double protection pocket 2x inner dia.7mm, brass nickel plated.

Temperature controller/ safety limit thermostat

Combination of control thermostat (TR) and safety limit thermostat (STB). Internal scale (TR), internal scale (STB), 2 changeover contacts, failsafe capillary, STB with ambient temperature compensation. Immersion thermostat and wall mounting.

RAZ-ST..J



Data sheet	N1214
Immersion length	100 mm
Capillary length	700 mm
Reset temperature	Min. 20 Kelvin under the switch-off point
Switching differential	TR: 6 K STB: ±5 K
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	TR: 0.1...16 (4) A STB:
	Contact 1-2 0.1...16 (1) A Contact 1-4 max. 0.5 A (alarm contact)
Digital outputs	1-pin Potential-free Changeover contact
Degree of protection	IP40
Dimensions (W x H x D)	120 x 106 x 70 mm

Range overview RAZ-ST..J

Setpoint setting range [°C]	Switch-off point [°C]	Protection pocket [LW7]	Stock no.	Product no.
15...95 100	100	PN 10, 100 mm, G ½"	S55700-P136	RAZ-ST.011FP-J
15...95 110	110	PN 10, 100 mm, G ½"	S55700-P137	RAZ-ST.030FP-J
TR: 15...95 STB: 110...130	110...130	PN 10, 100 mm, G ½"	S55700-P138	RAZ-ST.1500P-J
15...95 90...110	90...110	PN 10, 100 mm, G ½"	S55700-P139	RAZ-ST.1510P-J

Double protection pocket 2x inner dia.7mm, brass nickel plated.

Strap-on temperature controller, 20...90 °C, fixing spring, setpoint adjuster externally

Electromechanical temperature control (TR) with single-pole changeover microswitch:

- Set point externally adjustable
- Controlled medium: water, oil

Data sheet	N1198
Setpoint setting range	20...90 °C
Sensing element	Bimetall
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	0.2...16 A
Digital outputs	1-pin Potential-free Changeover contact
Degree of protection	IP20
Dimensions (W x H x D)	38 x 105 x 42 mm

RAM-TR.2000M



Stock no.	Product no.
BPZ:RAM-TR.2000M	RAM-TR.2000M

Thermostats

Capillary and clamp-on thermostats

Temperature

RAM-TW.2000M



Strap-on temperature limitation, 20...90 °C, fixing spring, setpoint adjuster internally

Electromechanical temperature limitation (TW) with single-pole changeover microswitch:

- Set point internally adjustable
- Controlled medium: water, oil

Data sheet	N1198
Setpoint setting range	20...90 °C
Sensing element	Bimetall
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	0.2...16 A
Digital outputs	1-pin
	Potential-free
	Changeover contact
Degree of protection	IP20
Dimensions (W x H x D)	38 x 105 x 42 mm

Stock no.

Product no.

BPZ:RAM-TW.2000M

RAM-TW.2000M

Protection pockets for RAK-T and RAK-S

Packaging unit	Protection pocket	Material	PN class	Data sheet	Stock no.	Product no.
1 pc	100 mm, G $\frac{1}{2}$ " LW7	Brass, nickel-plated	PN 10	N1194	BPZ:ALT-SB100	ALT-SB100
1 pc	150 mm, G $\frac{1}{2}$ " LW7	Brass, nickel-plated	PN 10	N1194	BPZ:ALT-SB150	ALT-SB150
1 pc	200 mm, G $\frac{1}{2}$ " LW7	Brass, nickel-plated	PN 10	N1194	BPZ:ALT-SB200	ALT-SB200
1 pc	280 mm, G $\frac{1}{2}$ " LW7	Brass, nickel-plated	PN 10	N1194	BPZ:ALT-SB280	ALT-SB280
1 pc	100 mm; G $\frac{1}{2}$ "; 7 mm	Stainless steel V4A	PN 16	N1194	BPZ:ALT-SS100	ALT-SS100
1 pc	150 mm, G $\frac{1}{2}$ " LW7	Stainless steel V4A	PN 16	N1194	BPZ:ALT-SS150	ALT-SS150
1 pc	280 mm, G $\frac{1}{2}$ " LW7	Stainless steel V4A	PN 16	N1194	BPZ:ALT-SS280	ALT-SS280
1 pc	450 mm, G $\frac{1}{2}$ " LW7	Stainless steel V4A	PN 16	N1194	BPZ:ALT-SS450	ALT-SS450
1 pc	100 mm, G $\frac{1}{2}$ " (with flange) LW7	Stainless steel V4A	PN 40	N1194	BPZ:ALT-SSF100	ALT-SSF100
1 pc	150 mm, G $\frac{1}{2}$ " (with flange) LW7	Stainless steel V4A	PN 40	N1194	BPZ:ALT-SSF150	ALT-SSF150
1 pc	200 mm, G $\frac{1}{2}$ " (with flange) LW7	Stainless steel V4A	PN 40	N1194	BPZ:ALT-SSF200	ALT-SSF200
1 pc	280 mm, G $\frac{1}{2}$ " (with flange) LW7	Stainless steel V4A	PN 40	N1194	BPZ:ALT-SSF280	ALT-SSF280
1 pc	450 mm, G $\frac{1}{2}$ " (with flange) LW7	Stainless steel V4A	PN 40	N1194	BPZ:ALT-SSF450	ALT-SSF450
1 pc	600 mm, G $\frac{1}{2}$ " (with flange) LW7	Stainless steel V4A	PN 40	N1194	BPZ:ALT-SSF600	ALT-SSF600

Accessories for RAZ-T., RAZ-S.. and RAK..

Product Title	Material	PN class	Data sheet	Stock no.	Product no.
Mounting kit for RAK../RAZ..			N1193	BPZ:ALT-C001	ALT-C001
Protection pocket, 100 mm, MS63 nickel-plated, G $\frac{1}{2}$ ", PN10, 2xLW7	Brass, nickel-plated	PN 10	N1194	S55700-P142	ALT-DB100J
Protection pocket, 150 mm, MS63 nickel-plated, G $\frac{1}{2}$ ", PN10, 2xLW7	Brass, nickel-plated	PN 10	N1194	S55700-P143	ALT-DB150J
Protection pocket, 280 mm, MS63 nickel-plated, G $\frac{1}{2}$ ", PN10, 2xLW7	Brass, nickel-plated	PN 10	N1194	S55700-P144	ALT-DB280J
Protection pocket, 450 mm, MS63 nickel-plated, G $\frac{1}{2}$ ", PN10, 2xLW7	Brass, nickel-plated	PN 10	N1194	S55700-P145	ALT-DB450J

Thermostats
Capillary and clamp-on thermostats
Temperature

Accessories for RAZ-T., RAZ-S. and RAK..

Product Title	Material	PN class	Data sheet	Stock no.	Product no.
Protection pocket, 100 mm, stainless steel V4A, G½" LW15	Stainless steel V4A	PN 16	N1194	S55700-P146	ALT-DS100J
Protection pocket, 150 mm, stainless steel V4A, G½" LW15	Stainless steel V4A	PN 16	N1194	S55700-P147	ALT-DS150J
Protection pocket, 280 mm, stainless steel V4A, G½" LW15	Stainless steel V4A	PN 16	N1194	S55700-P148	ALT-DS280J
Protection pocket, 450 mm, stainless steel V4A, G½" LW15	Stainless steel V4A	PN 16	N1194	S55700-P149	ALT-DS450J

Accessories for RAK-T and RAK-S

Product Title	Packaging unit	Material	Data sheet	Stock no.	Product no.
Protection pocket, perforated, 200 mm	1 pc	Steel, galvanized	N1193	BPZ:ALT-AB200	ALT-AB200
Mounting kit for RAK../RAZ..	1 bag		N1193	BPZ:ALT-C001	ALT-C001
Mounting flange, adjustable depth	1 pcs.	PA66GF35	N1193	BPZ:AQM63.0	AQM63.0
3 capillary supports and 3 spacers for QAF.. Mounting			N1821	BPZ:AQM63.2	AQM63.2
Terminal housing	1 box		N1207	S55700-P131	RAK-H-M

Thermostats

Capillary and clamp-on thermostats

Frost protection units

QAF63..J



Frost detector, modulating

- For fitting to the air duct
- Fully active capillary tube sensor
- With capillary tube entry

In addition to direct mounting, the frost sensor can be fitted to the air duct using the AQM63.0 snap-on mounting flange (accessory).

Data sheet	A6V10432020
Operating voltage	AC 24 V
Power consumption	5 VA
Min. active length	250 mm
Measuring range, temperature	0...15 °C
Ambient temperature, operation	-15...60 °C
Connection cable	3-wire
Analog output, signal	DC 0...10 V
Degree of protection	IP42
Dimensions (W x H x D)	96 x 136 x 67 mm

Range overview QAF63..J

Capillary length [mm]	Stock no.	Product no.
2000	S55700-P153	QAF63.2-J
6000	S55700-P154	QAF63.6-J

QAF65.3AR-J



Frost monitor, 2-point, capillary tube 3000 mm, -10...+15 °C

Monitoring of the temperature in ventilation and air conditioning plants to prevent damage from frost. Capillary tube for fitting on air heating coils

Factory setup 5 °C

Data sheet	A6V12051788
Operating voltage	AC 250 V
Setpoint setting range	-10... 15 °C
Sensing element, temperature	Liquid expansion sensor
Capillary length	3000 mm
Switching differential	2 K
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	Contact 1-2: 0.1... 16 (4)A; Contact 1-4 (STB, Alarm contact): 0.1... 16 (4) A
Digital outputs	Switchover contact
Degree of protection	IP65
Dimensions (W x H x D)	53 x 150 x 64 mm
Color	Gray

Stock no.	Product no.
S55700-P163	QAF65.3AR-J

5

Frost monitor, 2-point, capillary tube 6000 mm, -10...+15 °C

QAF65.6AR-J

Monitoring of the temperature in ventilation and air conditioning plants to prevent damage from frost. Capillary tube for fitting on air heating coils



Factory setup 5 °C

Data sheet	A6V12051788
Operating voltage	AC 250 V
Setpoint setting range	-10... 15 °C
Sensing element, temperature	Liquid expansion sensor
Capillary length	6000 mm
Switching differential	2 K
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	Contact 1-2: 0.1... 16 (4)A; Contact 1-4 (STB, Alarm contact): 0.1... 16 (4) A
Digital outputs	Switchover contact
Degree of protection	IP65
Dimensions (W x H x D)	53 x 150 x 64 mm
Color	Gray

Stock no.

Product no.

S55700-P164

QAF65.6AR-J

Thermostats

Capillary and clamp-on thermostats

Frost protection units

QAF64..J



Frost detector, air side, 2-point

- Modulating and 2-position
- Fully active capillary type sensing element
- Indication of frost with red LED
- Test switch for simulation of frost
- Selector for automatic or manual reset function
- Modulating P-controller for startup
- Limit value contact for plant control

In addition to direct mounting, the frost monitor can be fitted to the air duct using the AQM63.0 snap-on mounting flange (accessory).

Data sheet	A6V10432022
Operating voltage	AC 24 V
Power consumption	6.6 VA
Min. active length	250 mm
Setpoint setting range	1...10 °C
Measuring range, temperature	0...15 °C
Ambient temperature, operation	-15...55 °C
Connection cable	6 (8)-wire
Digital output, switching voltage	DC 5 V / AC 5...250 V
Digital output, switching current	6 (4) A
Analog inputs	Control input
Analog output, signal	DC 0...10 V
Digital outputs	Potential-free Switchover contact
Degree of protection	IP42
Dimensions (W x H x D)	96 x 136 x 67 mm

Range overview QAF64..J

Capillary length [mm]	Stock no.	Product no.
2000	S55700-P155	QAF64.2-J
6000	S55700-P156	QAF64.6-J

QAF65.3M-J



Frost monitor, 2-point, capillary tube 3000 mm, -10...+15 °C

Internal scale, 1 changeover contact, capillary tube for fitting on air heating coils

Factory setup 5 °C

Data sheet	A6V11965899
Operating voltage	AC 250 V
Setpoint setting range	-10...15 °C
Sensing element, temperature	Liquid expansion sensor
Capillary length	3000 mm
Switching differential	2 K
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	Contact 1-2: 0.1...16 (4)A; Contact 1-4 (STB, Alarm contact): 0.1...16 (4) A
Digital outputs	Switchover contact
Degree of protection	IP65
Dimensions (W x H x D)	53 x 150 x 64 mm
Color	Gray

Stock no.	Product no.
S55700-P161	QAF65.3M-J

Thermostats
Capillary and clamp-on thermostats
Frost protection units

Accessories for QAF63.. and QAF64..

Product Title	Data sheet	Stock no.	Product no.
Mounting flange, adjustable depth	N1193	BPZ:AQM63.0	AQM63.0
3 capillary supports and 3 spacers for QAF.. Mounting	N1821	BPZ:AQM63.2	AQM63.2

Thermostats

Capillary and clamp-on thermostats

Frost protection units

QAF81..



Frost monitor, 2-point

For temperature supervision on the air side of air heating coils in ventilation and air conditioning plants to provide protection against frost.

Data sheet	N1284
Setpoint setting range	-5...+15 °C
Min. active length	300 mm
Switching differential	2 K
Digital output, switching voltage	AC 250 V
Digital output, switching current	10 (2) A
Mounting position	Any
Digital outputs	1-pin Potential-free Switchover contact
Degree of protection	IP54
Dimensions (W x H x D)	106 x 113 x 37 mm

Range overview QAF81.

Capillary length [mm]	Stock no.	Product no.
3000	BPZ:QAF81.3	QAF81.3
6000	BPZ:QAF81.6	QAF81.6
6000	BPZ:QAF81.6M	QAF81.6M

QAF65.6M-J



Frost monitor, 2-point, capillary tube 6000 mm, -10...+15 °C

Internal scale, 1 changeover contact, capillary tube for fitting on air heating coils

Factory setup 5 °C

Data sheet	A6V11965899
Operating voltage	AC 250 V
Setpoint setting range	-10... 15 °C
Sensing element, temperature	Liquid expansion sensor
Capillary length	6000 mm
Switching differential	2 K
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	Contact 1-2: 0.1... 16 (4)A; Contact 1-4 (STB, Alarm contact): 0.1... 16 (4) A
Digital outputs	Switchover contact
Degree of protection	IP65
Dimensions (W x H x D)	53 x 150 x 64 mm
Color	Gray

Stock no.	Product no.
S55700-P162	QAF65.6M-J

Accessories for QAF81..

Product Title	Data sheet	Stock no.	Product no.
6 Capillary tube clamps for QAF../QAM.. mounting	N1284	BPZ:AQM63.3	AQM63.3

Frost protection monitor

RAK-TW.5..H

Internal scale, 1 changeover contact, immersion and strap-on thermostat in one.

Perforated protection pocket must be ordered as a separate item: ALT-AB200

Data sheet	N1203
Switching differential	5 K
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	Contact 1-2: 0.1...16 (2.5) A Contact 1-3: 0.1...6 (2.5) A
Digital outputs	1-pin Potential-free Switching contact
Degree of protection	IP43
Dimensions (W x H x D)	55 x 156 x 64 mm



Range overview RAK-TW.5..H

Setpoint setting range [°C]	Capillary length [mm]	Stock no.	Product no.
5...65	1600	S55700-P121	RAK-TW.5000S-H
-10...50	1600	S55700-P122	RAK-TW.5010S-H

Frost protection monitor

RAK-TW.5..H..

Immersion, strap-on and remote thermostat in one

Perforated protection pocket must be ordered as a separate item: ALT-AB200

Data sheet	N1203
Switching differential	5 K
Digital output, switching voltage	AC 24...250 V
Digital output, switching current	Contact connection 1-2: 0.1...16 (2.5) A Contact connection 1-3: 0.1...6 (2.5) A
Digital outputs	1-pole Potential-free Changeover contact
Degree of protection	IP65
Dimensions (W x H x D)	55 x 156 x 64 mm



Range overview RAK-TW.5..H..

Setpoint setting range [°C]	Capillary length [mm]	Stock no.	Product no.
5...65	1600	S55700-P120	RAK-TW.5000HS

Accessories for RAK-TW.5.. and RAK-TW.5..H..

Product Title	Data sheet	Stock no.	Product no.
Protection pocket, perforated, 200 mm	N1193	BPZ:ALT-AB200	ALT-AB200



Thermostats

Capillary and clamp-on thermostats

Coiled probe thermostats

TRG2



Room thermostat with helix sensor, TR -5..50 °C

For commercial and industrial applications.

Data sheet	N1329
Setpoint setting range	-5...50 °C
Switching differential	Adjustable: 0.7...6 K
Digital output, switching voltage	AC 250 V
Digital output, switching current	0.2...10 (2) A
Digital outputs	Changeover contact 1-pin Potential-free
Mounting position	Horizontal
Degree of protection	IP54
Dimensions (W x H x D)	98 x 95 x 63 mm

Stock no. Product no.

BPZ:TRG2 **TRG2**

TRG22



Room thermostat with helix sensor, TR -5..50 °C, 2 switches on 2 steps 2..12 K difference

For commercial and industrial applications.

Note on switching interval:
Adjustable temperature difference between step 1 and step 2.

Data sheet	N1329
Setpoint setting range	-5...50 °C
Switching differential	2 K
Switching interval	2...12 K
Digital outputs	CO: 2 Potential-free
Mounting position	Horizontal
Degree of protection	IP54
Dimensions (W x H x D)	98 x 135 x 67 mm

Stock no. Product no.








BPZ:TRG22 **TRG22**









Sensors











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Overview sensors







Temperature							
Model	Room sensors	Duct sensors	Immersion sensors	Outside sensors		Strap-on sensors	Cable sensors
Type reference	QAA	QAM	QAE	QAC	QAC	QAD	QAP
Category:	Standard	■	■		■	■	■
	High Quality			■			



Humidity								
Model	Room sensors				Duct sensors			Outside sensors
Type reference	QFA	QFA..D	QFA	QFA..D	QFM	QFM	QFM..D	QFA
Category:	Basic				■			
	Standard	■	■		■			
	High Quality			■		■	■	■
	Certified			■		■		

Air quality						
Model	Room sensors			Air duct sensors		
Type reference	QPA1..	QPA2..	QPA..D	QPM1..	QPM2..	QPM..D
Measured value:	VOC	■		■		
	CO ₂	■		■	■	
	CO ₂ / VOC		■		■	■
	CO ₂ / T	■	■	■	■	■
	CO ₂ / H / T		■		■	■
Display			■			■
Category:	Basic	■		■		
	Standard		■		■	■

Fine dust			
Model	Room sensors		Air duct sensors
Type reference	QSA..		QSA..D
Measured value:	PM2.5	■	■
	PM2.5 / H / T		■

Pressure						
Model	Differential pressure sensors			Absolute pressure sensors		
Medium	Air	Air	Liquids / gases	Liquids / gases	Liquids / gases	Refrigeration
Type reference	QBM3../4..	QBM2030	QBE63	QBE3x00-D	QBE2x03-P	QBE2x04-P
Category:	Standard	■	■		■	■
	High Quality	■		■		
	Certified	■				

Flow						
Model	Flow switch			Flow sensor		Air velocity sensor
Medium	Liquids	Liquids	Liquids	Liquids	Liquids	Air
Type reference	QVE1900	QVE1901	QVE1902	QVE2x00	QVE3x00	QVM62.1
Category	Basic	■	■			
	Standard			■		■
	High Quality				■	

Xtra				
Model	Solar sensors		Flue gas temperature sensors	
Type reference	QLS60		FGT-PT1000	
Medium			Air	
Measured value	Intensity of radiation		Flue gas temperature	
Category	Standard	■		■
	High Quality			



New: 5-year warranty on valves and actuators, damper actuators, and sensors.

Overview module combinations – room sensors for flush mounting

Active sensors		Measuring variables						Display	Selection tool controller range						
Basic module	+	Front module	CO ₂	VOC	Relative humidity	Active temp.	Passive temp.	CO ₂ -indicator	Desigo PX	RXL	RXB	RXC	RVL4, RVP3	Synco 200	Synco 700
AQR2540Nx	+	AQR2532NNW				■			■					■	■
AQR2540Nx	+	AQR2535NNW			■	■			■					■	■
AQR2546Nx	+	AQR2530NNW	■						■					■	■
AQR2546Nx	+	AQR2532NNW	■			■			■					■	■
AQR2546Nx	+	AQR2535NNW	■		■	■ ²⁾			■					■	■
AQR2546Nx	+	AQR2535NNWQ	■		■	■ ²⁾		■	■					■	■
AQR2547Nx	+	AQR2530NNW		■					■					■	■
AQR2547Nx	+	AQR2532NNW		■		■			■					■	■
AQR2547Nx	+	AQR2535NNW		■	■	■ ²⁾			■					■	■
AQR2548Nx	+	AQR2530NNW	■	■ ¹⁾					■					■	■
AQR2548Nx	+	AQR2532NNW	■	■ ¹⁾²⁾		■			■					■	■
AQR2548Nx	+	AQR2535NNW	■	■ ¹⁾²⁾	■	■ ²⁾			■					■	■
AQR2548Nx	+	AQR2535NNWQ	■	■ ¹⁾²⁾	■	■ ²⁾		■	■					■	■

For passive sensors see page 6-4

¹⁾ Here, the in-door air quality is calculated from the CO₂ and VOC measuring variables. VOC is not available as direct measuring variable.

²⁾ The measuring variable is solely available as switch output.

Sensors

Overview and selection tools

Passive sensors			Measuring variables					Selection tool controller range						
Mounting plate	+	Front module	CO ₂	VOC	Relative humidity	Active temp.	Passive temp.	Desigo PX	RXL	RXB	RXC	RVL4, RVP3	Synco 200	Synco 700
AQR2500Nx	+	AQR2531ANW					LG-Ni1000	■	■	■	■	■	■	■

Replace x with:

- F for VDE/CEE (70x70 mm)
- G for Italian Standard 3 modular (110x64 mm)
- J for UL Standard 2" x 4" (64x110 mm)

Power supply: AC 24 V, DC 15...36 V

Signal range active sensor: DC 0...5 V, DC 2...10 V, DC 0...10 V, DC 0...20 mA, DC 4...20 mA, and DC 0...10 mA

A freely selectable switching contact is available for every measuring variable.

Communicating sensors			Measuring variables			Display	Inputs	
Base modul	+	Front module	CO ₂	Relative humidity	Temperature	CO ₂ -indicator	Passive temperature NTC 10k	Two potential-free contacts
AQR2570Nx	+	AQR2532NNW			■		■	■
AQR2570Nx	+	AQR2535NNW		■	■		■	■
AQR2576Nx	+	AQR2530NNW	■				■	■
AQR2576Nx	+	AQR2532NNW	■		■		■	■
AQR2576Nx	+	AQR2535NNW	■	■	■		■	■
AQR2576Nx	+	AQR2535NNWQ	■	■	■	■	■	■

Replace x with:

- F for VDE/CEE (70x70 mm)
- H for British Standard (83x83 mm)
- G for Italian Standard 3 modular (110x64 mm)
- J for UL Standard 2" x 4" (64x110 mm)

The room sensors are KNX certified and can be used in conjunction with all devices capable of communicating over KNX.

Furthermore the sensors can be used with the following Siemens building automation systems:

- Desigo TRA (PL-Link)
- Synco 700 (KNX LTE-Mode)
- GAMMA (KNX S-Mode)

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Room temperature sensor, passive

Measuring range, temperature	0...50 °C
Connection, electrical	Screw terminals
Degree of protection	IP30
Dimensions (W x H x D)	90 x 100 x 32 mm
Warranty	5 Years

QAA2..



Range overview QAA2..

Sensing element, temperature	Time constant [min]	Measurement accuracy [K]	Stock no.	Product no.
LG-Ni1000	7	At 0...50 °C: ±0.8 °	BPZ:QAA24	QAA24
Pt100	7	At 0...50 °C: ±0.6	BPZ:QAA2010	QAA2010
Pt1000	7	At 0...50 °C: ±0.6	BPZ:QAA2012	QAA2012
NTC 10k	7	At 0...50 °C: ±0.8	BPZ:QAA2030	QAA2030

Room unit with room temperature sensor and setpoint adjuster

For Synco™ and Desigo™ PX applications

Data sheet	N1721
Sensing element	LG-Ni1000
Setpoint setting range	5...35 °C
Measuring range, temperature	0...50 °C
Sensing element, temperature	LG-Ni1000
Time constant	7 min
Connection, electrical	Screw terminals
Degree of protection	IP30
Dimensions (W x H x D)	90 x 100 x 36 mm
Warranty	5 Years

QAA25



Stock no.	Product no.
BPZ:QAA25	QAA25

Room unit with room temperature sensor and setpoint adjuster 5..30 °C

For Desigo™ PX applications

Data sheet	N1721
Time constant	7 min
Sensing element	LG-Ni1000
Setpoint setting range	5...30 °C
Measuring range, temperature	0...50 °C
Sensing element, temperature	LG-Ni1000
Degree of protection	IP30
Dimensions (W x H x D)	90 x 100 x 36 mm
Warranty	5 Years

QAA26



Stock no.	Product no.
BPZ:QAA26	QAA26



Sensors

Temperature

Room sensors - wall mounted QAA..

QAA27



Room unit with room temperature sensor and setpoint readjuster -3...3 K

For Synco™ and Desigo™ PX applications

Data sheet	N1721
Sensing element	LG-Ni1000
Setpoint readjustment range	-3...3 K
Measuring range, temperature	0...50 °C
Sensing element, temperature	LG-Ni1000
Time constant	7 min
Connection, electrical	Screw terminals
Degree of protection	IP30
Dimensions (W x H x D)	90 x 100 x 36 mm
Warranty	5 Years

Stock no.	Product no.
BPZ:QAA27	QAA27

QAA20..1



Room temperature sensors, active

Data sheet	N1749
Measuring range, temperature	0...50 °C
Time constant	7 min
Measurement accuracy	at AC 24 V in the range of -25 °C...+25 °C ±0.75 K -50 °C...+50 °C ±0.9 K
Connection, electrical	Screw terminals
Degree of protection	IP30
Dimensions (W x H x D)	90 x 100 x 36 mm
Warranty	5 Years

Range overview QAA20..1

Analog output, signal	Operating voltage [V]	Display	Stock no.	Product no.
DC 0...10 V	AC 24 DC 13.5...35		BPZ:QAA2061	QAA2061
DC 0...10 V	AC 24 DC 13.5...35	LCD	BPZ:QAA2061D	QAA2061D
DC 4...20 mA	DC 13.5...35		BPZ:QAA2071	QAA2071

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Room temperature sensor LG-Ni1000 for mounting on recessed conduit boxes

QAA64

For mounting on recessed conduit boxes.
Not suited for cooling in VAV installations.

Data sheet	N1722
Sensing element	LG-Ni1000
Measuring range, temperature	0...50 °C
Sensing element, temperature	LG-Ni1000
Time constant	6.5 min
Measurement accuracy	At 0...50 °C: ±0.8 K
Connection, electrical	Screw terminals
Degree of protection	IP40
Dimensions (W x H x D)	84 x 84 x 25 mm
Warranty	5 Years



Stock no.	Product no.
BPZ:QAA64	QAA64

Room temperature sensor NTC 3 kOhm

QAA32

Data sheet	N1747
Sensing element	NTC 3k
Measuring range, temperature	0...40 °C
Sensing element, temperature	NTC 3k
Time constant	6 min
Measurement accuracy	At 25 °C: ±0.3 K
Connection, electrical	Screw terminals
Degree of protection	IP30
Dimensions (W x H x D)	97 x 100 x 36 mm
Warranty	5 Years



Stock no.	Product no.
BPZ:QAA32	QAA32

Accessories for QAA32

Product Title	Data sheet	Stock no.	Product no.
Mounting plate 120 x 120 mm for 4 x 4" housing	N3009	BPZ:ARG70	ARG70



Sensors

Temperature

Room sensors - flush mounted AQR25..

Frames for front modules AQR253..

Product Title	Data sheet	Stock no.	Product no.
Frame DELTA line for front module	N1410	S55720-S158	AQR2510NFW
Frame DELTA azio for front module	N1410	S55720-S160	AQR2510NGW
Frame DELTA miro for front module	N1410	S55720-S159	AQR2510NHW

AQR2570..

Base module with KNX for temperature and humidity measurement



- Base module without sensor for plugging onto a front module
- 1 analog input to connect temperature sensors with NTC 10k sensing element to measure room, floor, or ceiling temperature
- 2 multifunctional binary inputs to connect window contacts or buttons
- Power supply via KNX bus, bus load < 5 mA
- Communication: KNX S-Mode, KNX LTE-Mode (Synco)



Data sheet	N1411
Voltage supply	KNX bus
Analog inputs, number	1
Analog inputs	Passive temperature sensor NTC 10k
Digital inputs, number	2
Digital inputs	Potential-free contacts
Warranty	5 Years

Range overview AQR2570..

Mechanical design	Dimensions (WxHxD) [mm]	Stock no.	Product no.
EU (CEE/VDE)	70.8 x 70.8 x 45	S55720-S203	AQR2570NF
IT (3 Modular)	71 x 71 x 45	S55720-S205	AQR2570NG
UK (British Standard)	71 x 71 x 45	S55720-S204	AQR2570NH
US (UL)	64 x 110 x 45	S55720-S206	AQR2570NJ

AQR253..

Front modules for base module



• Front module with sensors	
Data sheet	N1411
Color	Titanium white
Degree of protection	IP30
Warranty	5 Years

Range overview AQR253..

Measuring range, temperature [°C]	Signal output temperature	Measurement range humidity [% r.h.]	Display	Dimensions (WxHxD) [mm]	Stock no.	Product no.
0...50	Active LG-Ni1000	0...100		55 x 55 x 12	S55720-S138	AQR2534ANW
				55 x 55 x 12	S55720-S137	AQR2530NNW
0...50	Active			55 x 55 x 12	S55720-S136	AQR2532NNW
0...50	Active	0...100		55 x 55 x 12	S55720-S141	AQR2535NNW
0...50	Active	0...100	CO ₂ indicator by LED	55 x 55 x 38	S55720-S219	AQR2535NNWQ

The matching design frame must be ordered separately.

Front modules with passiv temperature measurement

AQR2531..

Front module with passiv sensor.

Data sheet	N1408
Measuring range, temperature	0...50°C
Connection, electrical	Screw terminals
Color	Titanium white
Degree of protection	IP30
Warranty	5 Years



Range overview AQR2531..

Sensing element, temperature	Dimensions (WxHxD) [mm]	Stock no.	Product no.
LG-Ni1000	55 x 55 x 38.5	S55720-S133	AQR2531ANW

Base modules for temperature and humidity measurement

AQR2540..

- Base module without sensor for plugging onto a front module

Data sheet	N1410
Operating voltage	AC 24 V DC 15...36 V
Connection, electrical	Screw terminals
Analog output, signal	DC 0...10 V DC 2...10 V DC 0...5 V DC 0...20 mA DC 4...20 mA DC 0...10 mA
Digital outputs	CO: 1 Potential-free
Warranty	5 Years



Range overview AQR2540..

Mechanical design	Dimensions (WxHxD) [mm]	Stock no.	Product no.
EU (CEE/VDE)	70.8 x 70.8 x 45	S55720-S142	AQR2540NF
IT (3 modular)	71 x 71 x 45	S55720-S144	AQR2540NG
UK (British Standard)	71 x 71 x 45	S55720-S143	AQR2540NH

Mounting plates for front modules AQR2531..

Product Title	Data sheet	Stock no.	Product no.
Mounting plate EU (CEE/VDE)	N1408	S55720-S161	AQR2500NF
Mounting plate IT (3 modular)	N1408	S55720-S163	AQR2500NG
Mounting plate US (UL)	N1408	S55720-S164	AQR2500NJ

Sensors

Temperature

Duct sensors QAM.. / FK-TP..

QAM21..



Duct temperature sensor, passive

Fully active, flexible probe for averaging.

Note on fixing:
Supplied complete with mounting flange.

Data sheet
Time constant
Warranty

N1761
At v = 2 m/s: 30 s
5 Years

Range overview QAM21..

Probe length [mm]	Sensing element, temperature	Measuring range, temperature [°C]	Measurement accuracy [K]	Stock no.	Product no.
400	Pt100	-50...80	At -50...80 °C: ±0.7	BPZ:QAM2110.040	QAM2110.040
2000	Pt1000	-50...80	At -50...80 °C: ±0.7	BPZ:QAM2112.200	QAM2112.200
400	LG-Ni1000	-50...80	At -50...80 °C: ±1.8	BPZ:QAM2120.040	QAM2120.040
2000	LG-Ni1000	-50...80	At -50...80 °C: ±1.8	BPZ:QAM2120.200	QAM2120.200
6000	LG-Ni1000	-50...80	At -50...80 °C: ±1.8	BPZ:QAM2120.600	QAM2120.600
400	NTC 10k	-40...80	At -40...80 °C: ±1.2	BPZ:QAM2130.040	QAM2130.040
400	Pt1000	-50...80	At -50...80 °C: ±0.7	BPZ:QAM2112.040	QAM2112.040

QAM21..1..



Duct temperature sensor active

Fully active, flexible probe for averaging.

Note on fixing:
Supplied complete with mounting flange.

Power consumption
Measuring range, temperature
Measurement accuracy
Time constant
Immersion length
Connection, electrical
Type of fixing
Degree of protection
Dimensions (W x H x D)
Warranty

≤ 1 VA
-50...50 °C
At -50...50 °C: ±0.9 K
30 s at v = 2 m/s
400 mm
Screw terminals
Flange
IP54
80 x 88 x 39 mm
5 Years

Range overview QAM21..1..

Signal output temperature	Operating voltage [V]	Probe length [mm]	Data sheet	Stock no.	Product no.
Modbus RTU	AC 24 DC 13.5...35	400	A6V11610632	S55720-S466	QAM2151.040/MO
DC 0...10 V	AC 24 DC 13.5...35	400	N1762	BPZ:QAM2161.040	QAM2161.040
DC 4...20 mA	DC 13.5...35	400	N1762	BPZ:QAM2171.040	QAM2171.040

Accessories for QAM21.. and QAM21..1

Product Title	Data sheet	Stock no.	Product no.
Mounting flange, adjustable depth	N1193	BPZ:AQM63.0	AQM63.0
3 capillary supports and 3 spacers for QAF.. Mounting	N1821	BPZ:AQM63.2	AQM63.2
6 Capillary tube clamps for QAF../QAM.. mounting	N1284	BPZ:AQM63.3	AQM63.3

Duct temperature sensor Pt100, for high temperature

FK-TP/200

With connecting head to DIN.
 No protection pocket required.

Supplied complete with mounting flange.



Data sheet	N1778
Measuring range, temperature	-70...+260 °C
Sensing element, temperature	Pt100
Sensing element	Pt100
Signal output temperature	Pt100
Measurement accuracy	-70...+260 °C: ±1.8 K
Time constant	<100 s at v = 1 m/s
Immersion length	200 mm
Material, immersion pocket	Stainless steel
Connection, mechanical	Flange
Connection, electrical	Screw terminals
Type of fixing	Flange
Degree of protection	IP65
Dimensions (W x H x D)	60 x 80 x 83 mm
Warranty	5 Years

Stock no.	Product no.
BPZ:FK-TP/200	FK-TP/200

Sensors

Temperature

Immersion sensors QAE.. / FT-TP..

QAE1612.010



Immersion temperature sensor

Passive sensor for acquiring the water temperature in pipes and tanks

Data sheet	Q3730
Measuring range, temperature	0... 100 °C
Measurement accuracy	±2 % FS
Immersion length	100 mm
Dimensions (W x H x D)	151 x 56 x 72 mm
Warranty	5 Years

Stock no.	Product no.
S55720-S197	QAE1612.010

QAE9120.010



Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket

Immersion temperature sensor 100 mm LG-Ni1000.
Multi-pack, MPQ=20pcs, without gift-box

Fixing is made by protection pocket or compression fitting. If for the nominal pressure no entry can be found in the table, no protection pocket is included as standard and the nominal pressure depends on the protection pocket used (see accessories). By using the compression fitting AQE2102 the nominal pressure is 16 bar (PN16).

Data sheet	N1781
Sensing element	LG-Ni1000
Measuring range, temperature	-30... 130 °C
Sensing element, temperature	LG-Ni1000
Measurement accuracy	At -30... 130 °C: ±1.3 K
Time constant	With protection pocket: 30 s Without protection pocket: 8 s
Immersion length	100 mm
Protection pocket	Protection pocket included; PN10
Material, immersion pocket	Stainless steel
Connection, electrical	Screw terminals
Dimensions (W x H x D)	80 x 60 x 31 mm
Packaging unit	20pcs/pack

Stock no.	Product no.
S55720-S516	QAE9120.010

QAE21..



Immersion temperature sensor, passive

Fixing is made by protection pocket or compression fitting. If for the nominal pressure no entry can be found in the table, no protection pocket is included as standard and the nominal pressure depends on the protection pocket used (see accessories). By using the compression fitting AQE2102 the nominal pressure is 16 bar (PN16).

Data sheet	N1781
Time constant	With protection pocket: 30 s Without protection pocket: 8 s
Connection, electrical	Screw terminals
Dimensions (W x H x D)	80 x 60 x 31 mm
Warranty	5 Years

Range overview QAE21..

Sensing element, temperature	Measuring range, temperature [°C]	Measurement accuracy [K]	Immersion length [mm]	Protection pocket	Stock no.	Product no.
Pt100	-30...130	At -30...130 °C: ±0,95	100	Not included	BPZ:QAE2111.010	QAE2111.010
Pt100	-30...130		100	Not included	S55720-S517	QAE2115.010
Pt100	-30...130		150	Not included	S55720-S518	QAE2115.015
Pt100	-30...130	At -30...130 °C: ±0.95	150	Not included	BPZ:QAE2111.015	QAE2111.015
Pt1000	-30...130	At -30...130 °C: ±0.95	100	Not included	BPZ:QAE2112.010	QAE2112.010
Pt1000	-30...130	At -30...130 °C: ±0.95	150	Not included	BPZ:QAE2112.015	QAE2112.015
LG-Ni1000	-30...130	At -30...130 °C: ±1.3	100	Protection pocket included, PN 10	BPZ:QAE2120.010	QAE2120.010
LG-Ni1000	-30...130	At -30...130 °C: ±1.3	150	Protection pocket included, PN 10	BPZ:QAE2120.015	QAE2120.015
LG-Ni1000	-30...130	At -30...130 °C: ±1.3	100	Not included	BPZ:QAE2121.010	QAE2121.010
LG-Ni1000	-30...130	At -30...130 °C: ±1,3	150	Not included	BPZ:QAE2121.015	QAE2121.015
NTC 10k	-30...125	At -30...125 °C: ±1.7	100	Not included	BPZ:QAE2130.010	QAE2130.010
NTC 10k	-30...125	At -30...125 °C: ±1.7	150	Not included	BPZ:QAE2130.015	QAE2130.015

Sensors

Temperature

Immersion sensors QAE.. / FT-TP..

QAE21..4



Immersion temperature sensor active

Fixing is made by protection pocket or compression fitting. No protection pocket is included as standard. The nominal pressure depends on the protection pocket used (see accessories). By using the compression fitting AQE2102 the nominal pressure is 16 bar (PN 16).

Power consumption	≤ 1 VA
Measuring range, temperature	-10...120 °C
Measurement accuracy	At 0...70 °C: ±1 K At -10...120 °C: ±1.4 K
Time constant	With protection pocket: 30 s
Material, immersion pocket	Stainless steel
Connection, electrical	Screw terminals
Degree of protection	IP54
Dimensions (W x H x D)	80 x 88 x 39 mm
Warranty	5 Years

Range overview QAE21..4

Signal output temperature	Operating voltage [V]	Immersion length [mm]	Data sheet	Stock no.	Product no.
Modbus RTU	AC 24 DC 13.5...35	100	A6V11610252	S55720-S465	QAE2154.010/MO
DC 0...10 V	AC 24 DC 13.5...35	100	N1782	BPZ:QAE2164.010	QAE2164.010
DC 0...10 V	AC 24 DC 13.5...35	150	N1782	BPZ:QAE2164.015	QAE2164.015
DC 4...20 mA	DC 13.5...35	100	N1782	BPZ:QAE2174.010	QAE2174.010
DC 4...20 mA	DC 13.5...35	150	N1782	BPZ:QAE2174.015	QAE2174.015

Protection pocket for QAE21..

Packaging unit	Protection pocket	Material	PN class	Data sheet	Stock no.	Product no.
1 pc	100 mm, G $\frac{1}{2}$ " LW7	Brass, nickel-plated	PN 10	N1194	BPZ:ALT-SB100	ALT-SB100
1 pc	150 mm, G $\frac{1}{2}$ " LW7	Brass, nickel-plated	PN 10	N1194	BPZ:ALT-SB150	ALT-SB150
1 pc	100 mm; G $\frac{1}{2}$ "; 7 mm	Stainless steel V4A	PN 16	N1194	BPZ:ALT-SS100	ALT-SS100
1 pc	150 mm, G $\frac{1}{2}$ " LW7	Stainless steel V4A	PN 16	N1194	BPZ:ALT-SS150	ALT-SS150
1 pc	100 mm, G $\frac{1}{2}$ " (with flange) LW7	Stainless steel V4A	PN 40	N1194	BPZ:ALT-SSF100	ALT-SSF100
1 pc	150 mm, G $\frac{1}{2}$ " (with flange) LW7	Stainless steel V4A	PN 40	N1194	BPZ:ALT-SSF150	ALT-SSF150

Accessories for QAE21..

Product Title	Data sheet	Stock no.	Product no.
Compression fitting with threaded nipple $\frac{1}{2}$ "	N1781	BPZ:AQE2102	AQE2102

Immersion temperature sensor Ø 6 mm with cable and fitting

QAE26.9

With connecting cable.

Data sheet	N1790
Sensing element	LG-Ni1000
Measuring range, temperature	-40...180 °C
Sensing element, temperature	LG-Ni1000
Time constant	<3 s
Immersion length	25...260 mm
Material, immersion pocket	Stainless steel
Cable length	1.2 m
Connecting thread	R 1/4"
PN class	PN 40
Diameter	6 mm
Warranty	5 Years



Stock no.	Product no.
BPZ:QAE26.9	QAE26.9

Immersion temperature sensur Ø 4 mm with cable and fitting

QAE26.9..

With connecting cable.

Other technical data identical to QAE26.9

Packaging unit QAE1020.024 100 pieces

Data sheet	N1790
Sensing element	LG-Ni1000
Sensing element, temperature	LG-Ni1000
Measurement accuracy	At -50...180 °C: ±1.75 K
Time constant	<2.5 s
Material, immersion pocket	Stainless steel
Cable length	2 m
Connecting thread	R 1/4"
PN class	PN 16
Diameter	4 mm
Warranty	5 Years



Range overview QAE26.9..

Immersion length [mm]	Measuring range, temperature [°C]	Connection cable	Stock no.	Product no.
15...65	-50...180	Silicone	BPZ:QAE26.90	QAE26.90
15...125	-50...180	Silicone	BPZ:QAE26.91	QAE26.91
15...240	-50...180	Silicone	BPZ:QAE26.93	QAE26.93
15...465	-50...180	Silicone	BPZ:QAE26.95	QAE26.95
15...240	-5...105	PVC	BPZ:QAE1020.024	QAE1020.024



Sensors

Temperature

Immersion sensors QAE.. / FT-TP..

QAE3..



Immersion temperature sensor for high temperature

With connection head made of die-cast aluminium.
No protection pocket required.

Data sheet	N1794
Sensing element	Pt100
Sensing element, temperature	Pt100
Time constant	25 s
Material, immersion pocket	Stainless steel
Connection, electrical	Screw terminals
Type of fixing	Protection pocket G½ "
PN class	PN 40
Material, housing	Die-cast aluminium
Degree of protection	IP65
Dimensions (W x H x D)	69 x 92 x 81 mm
Warranty	5 Years

Range overview QAE3..

Measuring range, temperature [°C]	Analog output, signal	Immersion length [mm]	Operating voltage [V]	Data sheet	Stock no.	Product no.
-50...200	Passive	100		N1794	BPZ:QAE3010.010	QAE3010.010
-50...200	Passive	160		N1794	BPZ:QAE3010.016	QAE3010.016
0...200	DC 4...20 mA	100	DC 7.5...30	N1794	BPZ:QAE3075.010	QAE3075.010
0...200	DC 4...20 mA	160	DC 7.5...30	N1794	BPZ:QAE3075.016	QAE3075.016

FT-TP/..



Immersion temperature sensor Pt100, short time constant, for high temperature

With connecting head to DIN.
No protection pocket required.

Data sheet	N1797
Sensing element	Pt100
Measuring range, temperature	-100...450 °C
Sensing element, temperature	Pt100
Time constant	Air v = 1 m/s: <100 s Water v = 0,4 m/s: <5 s
Material, immersion pocket	Stainless steel
Connection, electrical	Screw terminals
PN class	PN 40
Dimensions (W x H x D)	60 x 80 x 85 mm
Warranty	5 Years

Range overview FT-TP/..

Immersion length [mm]	Stock no.	Product no.
100	BPZ:FT-TP/100	FT-TP/100
100	S55720-S498	FT-TP/100-200
400	BPZ:FT-TP/400	FT-TP/400

6

Strap-on temperature sensor

Supplied complete with strap for pipe diameters from 15...140 mm.

Data sheet N1801
Warranty 5 Years

QAD2..



Range overview QAD2..

Sensing element, temperature	Measuring range, temperature [°C]	Time constant [s]	Dimensions (WxHxD) [mm]	Stock no.	Product no.
LG-Ni1000	-30...130	3	60 x 67 x 43	BPZ:QAD22	QAD22
Pt100	-30...130	3	60 x 67 x 43	BPZ:QAD2010	QAD2010
Pt1000	-30...130	3	60 x 67 x 43	BPZ:QAD2012	QAD2012
NTC 10k	-30...125	6	60 x 67 x 43	BPZ:QAD2030	QAD2030

Strap-on temperature sensor with cable LG-Ni1000

With cable, without housing

Supplied complete with strap for pipe diameters from 10...50 mm.

Data sheet N1802
Measuring range, temperature -35...90 °C
Time constant <10 s
Cable length 2 m
Warranty 5 Years

QAD26.220



Stock no.	Product no.
BPZ:QAD26.220	QAD26.220

Sensors

Temperature

Outside sensors QAC..

QAC..



Outside sensor, passive

For acquiring the outside temperature and – to a lesser degree – solar radiation, the effect of wind and the temperature of the wall.

Data sheet

N1811

Warranty

5 Years

Range overview QAC..

Measuring range, temperature [°C]	Sensing element, temperature	Measurement accuracy [K]	Time constant [s]	Dimensions (WxHxD) [mm]	Stock no.	Product no.
-50...70	Pt100	0 °C: ±0.3	840	80 x 92 x 50	BPZ:QAC2010	QAC2010
-50...70	LG-Ni1000	0 °C: ±0.4	840	80 x 92 x 50	BPZ:QAC22	QAC22
-50...70	NTC 575	At -10...20 °C: ±1	720	80 x 92 x 50	BPZ:QAC32	QAC32
-40...70	NTC 10k	25 °C: ±0.46	840	80 x 92 x 50	BPZ:QAC2030	QAC2030
-50...70	Pt1000	0 °C: ±0.3	840	80 x 92 x 50	BPZ:QAC2012	QAC2012

QAC31..



Outside temperature sensor active

Active sensor for acquiring the outside temperature. For use in heating, ventilation and air conditioning plants.

The QAC31.. may be used as an high-quality room sensor.

Data sheet

N1814

Sensing element, temperature

Pt1000

Measuring range, temperature

-50...50 °C

Time constant

20 min

Connection, electrical

Screw terminals

Degree of protection

IP65

Warranty

5 Years

Range overview QAC31..

Analog output, signal	Operating voltage [V]	Measurement accuracy [K]	Dimensions (WxHxD) [mm]	Stock no.	Product no.
DC 0...10 V	AC 24 DC 13.5...35	At -50...50 °C: ±0.9	80 x 88 x 39	BPZ:QAC3161	QAC3161
DC 4...20 mA	DC 13.5...35	At -50...50 °C: ±0.9	80 x 88 x 39	BPZ:QAC3171	QAC3171

6

Window pan and flue gas sensors: QAT.. / FGT..

Flue gas temperature sensor Pt1000

FGT-PT1000

For measuring the flue gas temperature in flueways.



Data sheet	N1846
Measuring range, temperature	-20...400 °C
Sensing element	Pt1000
Sensing element, temperature	Pt1000
Immersion length	65 mm
Material, immersion pocket	Sensor sleeve, stainless steel
Connection cable	2-wire, 1.5 m, teflon with steel wire mesh
Cable length	1.5 m
Material	Stainless steel V4A
Dimensions (W x H x D)	150 x 80 x 30 mm
Warranty	5 Years

Stock no.

Product no.

BPZ:FGT-PT1000

FGT-PT1000

Window pane temperature sensor

QAT22

Data sheet	N1830
Measuring range, temperature	-10...50 °C
Sensing element, temperature	LG-Ni1000
Sensing element	LG-Ni1000
Measurement accuracy	At 0 °C: ±0.4 K
Time constant	30 s
Connection cable	2-wire
Cable length	1.5 m
Degree of protection	IP65
Dimensions (W x H x D)	19 x 12 x 37 mm
Warranty	5 Years



Stock no.

Product no.

BPZ:QAT22

QAT22

Sensors

Temperature

Cable sensors QAP.. / QAZ.. / QAH..

QAP..



Cable temperature sensor (6 x 40.5 mm) for HVAC applications

Data sheet	N1831
Time constant	Fitted to pipe: <20 s
Protection pocket	40,5 x 6 mm
Material, protection pocket	Stainless steel
Type of fixing	Cable tie or with accessories
Degree of protection	IP65
Warranty	5 Years

Range overview QAP..

Cable length [m]	Sensing element, temperature	Connection cable	Measurement accuracy [K]	Measuring range, temperature [°C]	Dimensions (WxHxD) [mm]	Stock no.	Product no.
1.5	LG-Ni1000	Silicone	At -30...130 °C: ±1.3	-30...130		BPZ:QAP21.3	QAP21.3
8	LG-Ni1000	Silicone	At -30...130 °C: ±1.3	-30...130		BPZ:QAP21.3/8000	QAP21.3/8000
1.5	Pt100	Silicone	At -30...130 °C: ±0.95	-30...130	40.5 x 6 x 6	BPZ:QAP2010.150	QAP2010.150
1.5	Pt1000	Silicone	At -30...130 °C: ±0.95	-30...130		BPZ:QAP2012.150	QAP2012.150
2	LG-Ni1000	PVC	At -30...130 °C: ±1.3	-25...95		BPZ:QAP22	QAP22
2	NTC 10k	PVC	At -25...95 °C: ±1.4	-25...95		BPZ:QAP1030.200	QAP1030.200

Accessories for QAP..

Product Title	Packaging unit	Data sheet	Stock no.	Product no.
Changeover cable holder for QAP..	Set of 10 pieces	N1831	BPZ:ARG22.1	ARG22.1
Aluminium bar attachment for QAP..	Set of 5 pieces	N1831	BPZ:ARG22.2	ARG22.2
Terminal housing	1 box	N1207	S55700-P131	RAK-H-M
Cable holder for protection pocket mounting		N1831	BPZ:421314160	421314160

QAP21.2



Cable temperature sensor for high-temperature applications (180°C)

For acquiring the water temperature in flat solar collectors.

Data sheet	N1833
Measuring range, temperature	-30...180 °C
Sensing element, temperature	LG-Ni1000
Sensing element	LG-Ni1000
Measurement accuracy	At -30...180 °C: ±1.65 K
Time constant	Fitted to pipe: <20 s
Protection pocket	50 x 6 mm
Material, protection pocket	Stainless steel
Connection cable	Silicone
Cable length	1.5 m
Degree of protection	IP67
Warranty	5 Years

Stock no.	Product no.
BPZ:QAP21.2	QAP21.2

Cable temperature sensor for use in refrigeration plants (-50 °C)

QAZ21.68..

Supplied complete with 2 cable ties and sleeve coated with thermal conductive wax for fitting to pipework.



Data sheet	N1848
Measuring range, temperature	-50...80 °C
Sensing element, temperature	LG-Ni1000
Time constant	Fitted to pipework <20 s
Material, protection pocket	Stainless steel
Protection pocket	50 x 6 mm
Warranty	5 Years

Range overview QAZ21.68..

Cable length [m]	Packaging unit	Stock no.	Product no.
2	1 piece	BPZ:QAZ21.682/101	QAZ21.682/101
5	100 pieces	BPZ:QAZ21.685/101	QAZ21.685/101

Cable sensor for fan coil applications

QAH11..

For installation in fan coil units as

- a return air temperature sensor
- a changeover sensor



Data sheet	N1840
Measuring range	For fixed cable
Sensing element	NTC3k
Measuring range, temperature	-20...70 °C
Sensing element, temperature	NTC3k
Time constant	1.5 min at v = 0 m/s
Cable length	2.5 m
Warranty	5 Years

Range overview QAH11..

Connection cable	Packaging unit	Stock no.	Product no.
2-wire, cable complete with connectors	10 pieces	BPZ:QAH11	QAH11
2-wire Ferrules	10 pieces	BPZ:QAH11.1	QAH11.1

Accessories for QAH11..

Product Title	Packaging unit	Data sheet	Stock no.	Product no.
Changeover cable holder for QAH11..	10 pieces	N3009	BPZ:ARG86.3	ARG86.3



Sensors

Humidity and temperature

Room sensors QFA..

QFA20..



Room sensor for rel. humidity / temperature

For relative humidity and temperature.

Data sheet	N1857
Measurement range humidity	0...95 % r.h.
Measurement accuracy	At 0...95 % r.h. and 23 °C: ±5 % At 30...70 % r.h. and 23 °C: ±3 %
Time constant	Humidity <20 s Temperature <8.5 min
Warranty	5 Years

Range overview QFA20..

Signal output humidity	Signal output temperature	Operating voltage [V]	Measuring range, temperature [°C]	Display	Dimensions (WxHxD) [mm]	Stock no.	Product no.
DC 0...10 V		AC 24 DC 13.5...35			90 x 100 x 36	BPZ:QFA2000	QFA2000
DC 4...20 mA		DC 13.5...35 24 DC 13.5...35			90 x 100 x 36	S55720-S114	QFA2001
DC 0...10 V	LG-Ni1000	AC 24 DC 13.5...35	0...50		90 x 100 x 36	BPZ:QFA2020	QFA2020
DC 0...10 V	DC 0...10 V	AC 24 DC 13.5...35	0...50 -35...35 -40...70		90 x 100 x 36	BPZ:QFA2060	QFA2060
DC 0...10 V	DC 0...10 V	AC 24 DC 13.5...35	0...50 -35...35 -40...70	LCD	90 x 100 x 36	BPZ:QFA2060D	QFA2060D
DC 4...20 mA	DC 4...20 mA	DC 13.5...35	0...50 -35...35 -40...70		90 x 100 x 36	S55720-S115	QFA2071

Room sensor for humidity (DC 0...10 V) and temperature (DC 0...10 V)

QFA2068

For relative humidity and temperature

Data sheet	A6V11600411
Operating voltage	AC 24 V ±20 % or DC 13.5...35 V (SELV)
Power consumption	≤ 0.4 VA
Measuring range, temperature	-15...+50 °C
Measurement range humidity	0...100 % r.h.
Measurement accuracy	At 23 °C and AC/DC 24 V and at 0...95 % r.h.: ±5 % r.h. At 23 °C and AC/DC 24 V and at 30...70 % r.h.: ±3 % r.h. At AC/DC 24 V and 23 °C: ±0.3 K At AC/DC 24 V and 15...35 °C: ±0.7 K At AC/DC 24 V and -35...+50 °C: ±1 K
Time constant	< 20 s
Signal output temperature	DC 0...10 V DC 4...20 mA LG-Ni1000
Signal output humidity	DC 0...10 V DC 4...20 mA
Color	White/Gray
Dimensions (W x H x D)	90 x 100 x 36 mm
Warranty	5 Years



Stock no.	Product no.
S55720-S462	QFA2068

Room sensor for humidity (DC 0...10 V) and temperature (DC 0...10 V), with digital Display

QFA2068D

For relative humidity and temperature

Data sheet	A6V11600411
Operating voltage	AC 24 V ±20 % or DC 13.5...35 V (SELV)
Power consumption	≤ 0.4 VA
Measuring range, temperature	-15...+50 °C
Measurement range humidity	0...100 % r.h.
Measurement accuracy	At 23 °C and AC/DC 24 V and at 0...95 % r.h.: ±5 % r.h. At 23 °C and AC/DC 24 V and at 30...70 % r.h.: ±3 % r.h. At AC/DC 24 V and 23 °C: ±0.3 K At AC/DC 24 V and 15...35 °C: ±0.7 K At AC/DC 24 V and -35...+50 °C: ±1 K
Time constant	< 20 s
Signal output temperature	DC 0...10 V DC 4...20 mA LG-Ni1000
Signal output humidity	DC 0...10 V DC 4...20 mA
Color	White/Gray
Dimensions (W x H x D)	90 x 100 x 36 mm
Warranty	5 Years



Stock no.	Product no.
S55720-S463	QFA2068D

Sensors

Humidity and temperature

Room sensors QFA..

QFA2079

Room sensor for humidity (DC 4...20 mA) and temperature (DC 4...20 mA)



For relative humidity and temperature

Data sheet	A6V11600411
Operating voltage	AC 24 V $\pm 20\%$ or DC 13.5...35 V (SELV)
Power consumption	≤ 1.4 W
Measuring range, temperature	-15...+50 °C
Measurement range humidity	0...100 % r.h.
Measurement accuracy	At 23 °C and AC/DC 24 V and at 0...95 % r.h.: $\pm 5\%$ r.h. At 23 °C and AC/DC 24 V and at 30...70 % r.h.: $\pm 3\%$ r.h. At AC/DC 24 V and 23 °C: ± 0.3 K At AC/DC 24 V and 15...35 °C: ± 0.7 K At AC/DC 24 V and -35...+50 °C: ± 1 K
Time constant	< 20 s
Signal output temperature	DC 0...10 V DC 4...20 mA LG-Ni1000
Signal output humidity	DC 0...10 V DC 4...20 mA
Color	White/Gray
Dimensions (W x H x D)	90 x 100 x 36 mm
Warranty	5 Years

Stock no.

Product no.

S55720-S464

QFA2079

Room sensors for rel. humidity / temperature for demanding requirements

QFA31..

For relative humidity and temperature.
 Degree of protection: IP65, IP40 (measuring tip).



Data sheet	N1858
Measurement range humidity	0...100 % r.h.
Measurement accuracy	Humidity at 0...100 % r.h. and 23 °C: ±2 % r.h. Temperature, at 15...35 °C: ±0.6 K Temperature, at 40...70 °C: ±0.8 K
Time constant	Humidity: <20 s Temperature: <8.5 min
Connection, electrical	Screw terminals
Degree of protection	IP65 / IP40
Dimensions (W x H x D)	80 x 144 x 39 mm
Warranty	5 Years

Range overview QFA31..

Signal output humidity	Signal output temperature	Operating voltage [V]	Measuring range, temperature [°C]	Display	Stock no.	Product no.
DC 0...10 V		AC 24 DC 13.5...35			BPZ:QFA3100	QFA3100
DC 4...20 mA		DC 13.5...35			BPZ:QFA3101	QFA3101
DC 0...10 V	DC 0...10 V	AC 24 DC 13.5...35	0...50 -35...35 -40...70		BPZ:QFA3160	QFA3160
DC 0...10 V	DC 0...10 V	AC 24 DC 13.5...35	0...50 -35...35 -40...70	LCD	BPZ:QFA3160D	QFA3160D
DC 4...20 mA	DC 4...20 mA	DC 13.5...35	0...50 -35...35 -40...70		BPZ:QFA3171	QFA3171
DC 4...20 mA	DC 4...20 mA	DC 13.5...35	0...50 -35...35 -40...70	LCD	QFA3171D	QFA3171D



Sensors

Humidity and temperature

Room sensors QFA..

QFA41..



Room sensors for rel. humidity / temperature for demanding requirements, with calibration certificate

For relative humidity and temperature.
Degree of protection: IP65, IP40 (measuring tip).

Data sheet	N1859
Measurement range humidity	0...100 % r.h.
Measurement accuracy	Humidity at 0...100 % r.h. and 23 °C: ±2 % r.h. Temperature, at 15...35 °C: ±0.6 K Temperature, at 40...70 °C: ±0.8 K
Time constant	Humidity: <20 s Temperature: <8.5 min
Connection, electrical	Round connector
Degree of protection	IP65 / IP40
Dimensions (W x H x D)	80 x 144 x 39 mm
Warranty	5 Years

Range overview QFA41..

Signal output humidity	Signal output temperature	Operating voltage [V]	Measuring range, temperature [°C]	Display	Stock no.	Product no.
DC 0...10 V	DC 0...10 V	AC 24 DC 13.5...35	0...50 -35...35 -40...70	---	BPZ:QFA4160	QFA4160
DC 0...10 V	DC 0...10 V	AC 24 DC 13.5...35	0...50 -35...35 -40...70	LCD	QFA4160D	QFA4160D
DC 4...20 mA	DC 4...20 mA	DC 13.5...35	0...50 -35...35 -40...70	---	BPZ:QFA4171	QFA4171
DC 4...20 mA	DC 4...20 mA	DC 13.5...35	0...50 -35...35 -40...70	LCD	QFA4171D	QFA4171D

Accessories for QFA..

Product Title	Data sheet	Stock no.	Product no.
Radiation shield for exterior wall mounting	N1858	BPZ:AQF3100	AQF3100
Filter cap for humidity sensor	N1858	BPZ:AQF3101	AQF3101
Exchangeable measuring tip	N1858	AQF3150	AQF3150
Exchangeable measuring tip, with calibration certificate	N1859	BPZ:AQF4150	AQF4150
Remote sensing cable 3 m for sensor tip	N1859	AQY2010	AQY2010
Service-Set		AQF3153	AQF3153

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Frames for front modules AQR253..

Product Title	Color	Dimensions (W x H)	Data sheet	Stock no.	Product no.
Frame DELTA line for front module	Titanium white	80.2 x 80.2 mm	N1410	S55720-S158	AQR2510NFW
Frame DELTA azio for front module	Titanium white	80 x 120 mm / 120 x 80 mm	N1410	S55720-S160	AQR2510NGW
Frame DELTA miro for front module	Titanium white	90 x 90 mm	N1410	S55720-S159	AQR2510NHW

Base module with KNX for temperature and humidity measurement

AQR2570..

- Base module without sensor for plugging onto a front module
- 1 analog input to connect temperature sensors with NTC 10k sensing element to measure room, floor, or ceiling temperature
- 2 multifunctional binary inputs to connect window contacts or buttons
- Power supply via KNX bus, bus load < 5 mA
- Communication: KNX S-Mode, KNX LTE-Mode (Synco)



Data sheet	N1411
Voltage supply	KNX bus
Analog inputs, number	1
Analog inputs	Passive temperature sensor NTC 10k
Digital inputs, number	2
Digital inputs	Potential-free contacts
Warranty	5 Years

Range overview AQR2570..

Mechanical design	Dimensions (WxHxD) [mm]	Stock no.	Product no.
EU (CEE/VDE)	70.8 x 70.8 x 45	S55720-S203	AQR2570NF
IT (3 Modular)	71 x 71 x 45	S55720-S205	AQR2570NG
UK (British Standard)	71 x 71 x 45	S55720-S204	AQR2570NH
US (UL)	64 x 110 x 45	S55720-S206	AQR2570NJ

Front modules for base module

AQR253..

- Front module with sensors

Data sheet	N1411
Color	Titanium white
Degree of protection	IP30
Warranty	5 Years



Range overview AQR253..

Measuring range, temperature [°C]	Signal output temperature	Measurement range humidity [% r.h.]	Display	Dimensions (WxHxD) [mm]	Stock no.	Product no.
0...50	Active LG-Ni1000	0...100		55 x 55 x 12	S55720-S138	AQR2534ANW
0...50	Active			55 x 55 x 12	S55720-S137	AQR2530NNW
0...50	Active	0...100		55 x 55 x 12	S55720-S136	AQR2532NNW
0...50	Active	0...100		55 x 55 x 12	S55720-S141	AQR2535NNW
0...50	Active	0...100	CO ₂ indicator by LED	55 x 55 x 38	S55720-S219	AQR2535NNWQ

The matching design frame must be ordered separately.

Sensors

Humidity and temperature

Room sensors - flush mounted AQR25..

AQR2540..



Base modules for temperature and humidity measurement

- Base module without sensor for plugging onto a front module

Data sheet	N1410
Operating voltage	AC 24 V DC 15...36 V
Connection, electrical	Screw terminals
Analogue output, signal	DC 0...10 V DC 2...10 V DC 0...5 V DC 0...20 mA DC 4...20 mA DC 0...10 mA
Digital outputs	CO: 1 Potential-free
Warranty	5 Years

Range overview AQR2540..

Mechanical design	Dimensions (WxHxD) [mm]	Stock no.	Product no.
EU (CEE/VDE)	70.8 x 70.8 x 45	S55720-S142	AQR2540NF
IT (3 modular)	71 x 71 x 45	S55720-S144	AQR2540NG
UK (British Standard)	71 x 71 x 45	S55720-S143	AQR2540NH

Room hygrostat, setpoint setting range 30...90 % r.h., setpoint adjuster inside device

QFA1000



- 2-position controller with humidity sensor
- Setpoint adjuster inside device

Data sheet	N1518
Setpoint setting range	30...90 % r.h.
Switching differential	6 % r.h.
Time constant	At v = 0.2 m/s: 5 min
Digital outputs	CO: 1 Potential-free
Connection, electrical	Screw terminals
Degree of protection	IP20
Dimensions (W x H x D)	76 x 76 x 34 mm
Warranty	5 Years

Stock no.	Product no.
BPZ:QFA1000	QFA1000

Room hygrostat, setpoint setting range 30...90 % r.h., external setpoint adjustment

QFA1001



- 2-position controller with humidity sensor
- External setpoint adjustment

Data sheet	N1518
Setpoint setting range	30...90 % r.h.
Switching differential	6 % r.h.
Digital outputs	CO: 1 Potential-free
Connection, electrical	Screw terminals
Degree of protection	IP20
Dimensions (W x H x D)	76 x 76 x 34 mm
Warranty	5 Years

Stock no.	Product no.
BPZ:QFA1001	QFA1001



Sensors

Humidity and temperature

Duct sensors QFM..

QFM1660



Duct sensor for humidity (0...10 V) and temperature (0...10 V)

Active sensor for acquiring the air humidity and temperature in air duct

Data sheet	Q3731
Operating voltage	AC 24 V
Measurement range humidity	10...90 % r.h.
Measurement accuracy	25 °C: ±0.8 K At 20...25 % r.h., 10...90 % r.h.: ±5 % r.h.
Analog output, signal	DC 0...10 V
Signal output temperature	DC 0...10 V
Signal output humidity	DC 0...10 V
Warranty	5 Years

Stock no.	Product no.
S55720-S198	QFM1660

QFM21..



Duct sensor for rel. humidity / temperature

For relative humidity and temperature.

Measurement range humidity	0...95 % r.h.
Measurement accuracy	Humidity at 30...70 % r.h. and 23 °C: ±3 % r.h. Temperature, at 15...35 °C: ±0.8 K Temperature, at 35...50 °C: ±1.0 K
Time constant	Humidity: <20 s Temperature in with 2 m/s moved air: <3.5 min
Immersion length	90...154 mm
Connection, electrical	Screw terminals
Type of fixing	Flange
Degree of protection	IP54
Dimensions (W x H x D)	80 x 88 x 39 mm
Warranty	5 Years

Range overview QFM21..

Signal output humidity	Signal output temperature	Operating voltage [V]	Measuring range, temperature [°C]	Data sheet	Stock no.	Product no.
DC 0...10 V		AC 24 DC 13.5...35		N1864	BPZ:QFM2100	QFM2100
DC 4...20 mA		DC 13.5...35		N1864	BPZ:QFM2101	QFM2101
DC 0...10 V	LG-Ni1000	AC 24 DC 13.5...35	0...50 -35...35 -40...70	N1864	BPZ:QFM2120	QFM2120
Modbus RTU	Modbus RTU	AC 24 DC 13.5...35	-40...+70	A6V11610635	S55720-S467	QFM2150/MO
DC 0...10 V	DC 0...10 V	AC 24 DC 13.5...35	0...50 -35...35 -40...70	N1864	BPZ:QFM2160	QFM2160
DC 4...20 mA	DC 4...20 mA	DC 13.5...35	0...50 -35...35 -40...70	N1864	BPZ:QFM2171	QFM2171

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Duct sensors for rel. humidity / temperature for demanding requirements

QFM31..

For relative humidity and temperature.



Measurement range humidity	0...100 % r.h.
Measurement accuracy	Humidity at 0...100 % r.h. and 23 °C: ±2 % r.h. Temperature, at 15...35 °C: ±0.6 K Temperature, at 40...70 °C: ±0.8 K
Immersion length	90...206 mm
Connection, electrical	Screw terminals
Type of fixing	Flange
Degree of protection	IP65
Dimensions (W x H x D)	80 x 88 x 39 mm
Warranty	5 Years

Range overview QFM31..

Signal output humidity	Signal output temperature	Operating voltage [V]	Measuring range, temperature [°C]	Data sheet	Stock no.	Product no.
DC 0...10 V		AC 24 DC 13.5...35		N1882	BPZ:QFM3100	QFM3100
DC 4...20 mA		DC 13.5...35		N1882	BPZ:QFM3101	QFM3101
Modbus RTU	Modbus RTU	AC 24 DC 13.5...35	-40...+70	A6V11610638	S55720-S468	QFM3150/MO
DC 0...10 V	DC 0...10 V	AC 24 DC 13.5...35	0...50 -35...35 -40...70	N1882	BPZ:QFM3160	QFM3160
DC 4...20 mA	DC 4...20 mA	DC 13.5...35	0...50 -35...35 0...70	N1882	BPZ:QFM3171	QFM3171

Duct sensors for rel. humidity / temperature for demanding requirements

QFM31..D

For relative humidity and temperature.



Data sheet	N1882
Measurement range humidity	0...100 % r.h.
Measurement accuracy	Humidity at 0...100 % r.h. and 23 °C: ±2 % r.h. Temperature, at 15...35 °C: ±0.6 K Temperature, at 40...70 °C: ±0.8 K
Immersion length	90...206 mm
Connection, electrical	Screw terminals
Type of fixing	Flange
Degree of protection	IP65
Dimensions (W x H x D)	80 x 88 x 39 mm
Warranty	5 Years

Range overview QFM31..D

Signal output humidity	Signal output temperature	Operating voltage [V]	Measuring range, temperature [°C]	Display	Stock no.	Product no.
DC 0...10 V	DC 0...10 V	AC 24 DC 13.5...35	0...50 -35...35 -40...70	LCD	BPZ:QFM3160D	QFM3160D
DC 4...20 mA	DC 4...20 mA	DC 13,5...35	0...50 -35...35 -40...70	LCD	QFM3171D	QFM3171D

New Product

Sensors

Humidity and temperature

Duct sensors QFM..

QFM41..



Duct sensor for rel. humidity/temperature for demanding requirements, with calibration certificate

For relative humidity and temperature.

Data sheet	N1883
Measurement range humidity	0...100 % r.h.
Measurement accuracy	Humidity at 0...100 % r.h. and 23 °C: ±2 % r.h. Temperature, at 15...35 °C: ±0.6 K Temperature, at 40...70 °C: ±0.8 K
Time constant	Humidity: <20 s Temperature in with 2 m/s moved air: <3.5 min
Immersion length	90...206 mm
Connection, electrical	Round connector
Type of fixing	Flange
Degree of protection	IP65
Dimensions (W x H x D)	80 x 117 x 39 mm
Warranty	5 Years

Range overview QFM41..

Signal output humidity	Signal output temperature	Operating voltage [V]	Measuring range, temperature [°C]	Stock no.	Product no.
DC 0...10 V	DC 0...10 V	AC 24 DC 13.5...35	0...50 -35...35 -40...70	BPZ:QFM4160	QFM4160
DC 4...20 mA	DC 4...20 mA	DC 13.5...35	0...50 -35...35 -40...70	BPZ:QFM4171	QFM4171

Accessories for duct sensors QFM..

Product Title	Data sheet	Stock no.	Product no.
Filter cap for humidity sensor	N1858	BPZ:AQF3101	AQF3101
Exchangeable measuring tip	N1858	AQF3150	AQF3150
Exchangeable measuring tip, with calibration certificate	N1859	BPZ:AQF4150	AQF4150
Service-Set		AQF3153	AQF3153

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Duct hygrostat, setpoint setting range 15...95 % r.h.

QFM81.2

On / off hygrostat with humidity sensor.
 External setpoint adjustment.



Supplied complete with mounting flange.

Data sheet	N1514
Setpoint setting range	15...95 % r.h.
Switching differential	4 % r.h.
Digital outputs	CO: 1
	Potential-free
Immersion length	130...156 mm
Digital output, switching current	5 (3) A
Digital output, switching voltage	250 V
Degree of protection	IP30
Dimensions (W x H x D)	73 x 140 x 64 mm
Warranty	5 Years

Stock no.	Product no.
BPZ:QFM81.2	QFM81.2

Room hygrostat, setpoint setting range 15...95 % r.h., setpoint adjuster inside device

QFM81.21

On / off hygrostat with humidity sensor.
 Setpoint adjuster inside device.



Supplied complete with mounting flange.

Data sheet	N1514
Setpoint setting range	15...95 % r.h.
Switching differential	4 % r.h.
Digital outputs	CO: 1
	Potential-free
Immersion length	130...156 mm
Digital output, switching current	5 (3) A
Digital output, switching voltage	250 V
Degree of protection	IP55
Dimensions (W x H x D)	73 x 140 x 64 mm
Warranty	5 Years

Stock no.	Product no.
BPZ:QFM81.21	QFM81.21



Sensors

Humidity and temperature

Condensation monitor QXA..

QXA21..



Condensation monitor

For preventing condensation in buildings with chilled ceilings or in cooling plants.

Data sheet	A6V10741072
Operating voltage	AC 24 V DC 24 V
Power consumption	1 VA
Digital outputs	1-pin Potential-free Changeover contact
Switching point	95 ± 4 % r.h.
Connection, electrical	Screw terminals
Degree of protection	IP40
Dimensions (W x H x D)	60 x 83 x 37 mm
Warranty	5 Years

Range overview QXA21..

Product Title	Stock no.	Product no.
Condensation monitor	S55770-T375	QXA2100
Condensation monitor with remote sensor head (cable length 1 m)	S55770-T376	QXA2101

QPA..



Room air quality sensor CO₂/ temperature / rel. Humidity / VOC

Note: Not suited for safety-related applications!

Data sheet	N1961
Operating voltage	AC 24 V DC 15...35 V
Analog output, signal	DC 0...5 V DC 0...10 V DC 4...20 mA
Ambient temperature, operation	0...50 °C
Connection, electrical	Screw terminals
Degree of protection	IP30
Warranty	5 Years

Range overview QPA..

Measuring range	Measuring range, temperature [°C]	Measurement range humidity	Display	Dimensions (WxHxD) [mm]	Stock no.	Product no.
0...100 % VOC				90 x 100 x 36	S55720-S119	QPA1000
0...2000 ppm CO ₂				90 x 100 x 36	BPZ:QPA2000	QPA2000
0...2000 ppm CO ₂				90 x 100 x 36	BPZ:QPA2002	QPA2002
0...100 % VOC						
0...2000 ppm CO ₂			LCD	90 x 100 x 36	BPZ:QPA2002D	QPA2002D
0...100 % VOC						
0...2000 ppm CO ₂	0...50 -35...35			90 x 100 x 36	BPZ:QPA2060	QPA2060
0...2000 ppm CO ₂	0...50 -35...35		LCD	90 x 100 x 36	BPZ:QPA2060D	QPA2060D
CO ₂ : 0...2000 ppm	0...50 -35...35	0...95 % r.H.		90 x 100 x 36	BPZ:QPA2062	QPA2062
0...2000 ppm CO ₂	0...50 -35...35	0...95 % r.H.	LCD	90 x 100 x 36	BPZ:QPA2062D	QPA2062D
0...2000 ppm CO ₂				90 x 100 x 36	S55720-S121	QPA2080
0...2000 ppm CO ₂			LCD	90 x 100 x 36	S55720-S122	QPA2080D

With the QPA2080 and QPA2080D the passive temperature element is freely selectable, enclosed in the delivery are LG-Ni1000, Pt1000, Pt100, NTC 10kOhm.

Indoor air quality controller with integrated VOC sensor for mixed gas

QPA84



In ventilation plant to optimize indoor air quality and consumption of energy by means of demand-controlled ventilation.

Data sheet	N1571
Operating voltage	AC 230 V
Power consumption	0.5 VA
Measured variable	Mixed gas (VOC)
Digital outputs	Non-floating Switching contact
Digital output, switching current	8 (6.8) A
Digital output, switching voltage	AC 230 V
Connection, electrical	Screw terminals
Degree of protection	IP30
Dimensions (W x H x D)	96 x 101 x 39 mm
Warranty	5 Years

Stock no.	Product no.
BPZ:QPA84	QPA84

Sensors
Air quality
Room sensor QPA..

QPA1..4

Room air quality sensor CO₂/ temperature (Basic)



Note: Not suited for safety-related applications!

Data sheet	A6V101099173
Operating voltage	AC 24 V DC 15...35 V
Analog output, signal	DC 0...10 V DC 4...20 mA
Degree of protection	IP30
Warranty	5 Years

Range overview QPA1..4

Measuring range [ppm]	Measuring range, temperature [°C]	Dimensions (WxHxD) [mm]	Stock no.	Product no.
0...2000		90 x 100 x 36	S55720-S453	QPA1004
0...2000	0...50	90 x 100 x 36	S55720-S454	QPA1064

Frames for front modules AQR253..

Product Title	Data sheet	Stock no.	Product no.
Frame DELTA line for front module	N1410	S55720-S158	AQR2510NFW
Frame DELTA azio for front module	N1410	S55720-S160	AQR2510NGW
Frame DELTA miro for front module	N1410	S55720-S159	AQR2510NHW

Front modules for base module

- Front module with sensors

Data sheet	N1411
Color	Titanium white
Degree of protection	IP30
Warranty	5 Years



Range overview AQR253..

Measuring range, temperature [°C]	Signal output temperature	Measurement range humidity [% r.h.]	Display	Dimensions (WxHxD) [mm]	Stock no.	Product no.
0...50	Active LG-Ni1000	0...100		55 x 55 x 12	S55720-S138	AQR2534ANW
				55 x 55 x 12	S55720-S137	AQR2530NNW
0...50	Active			55 x 55 x 12	S55720-S136	AQR2532NNW
0...50	Active	0...100		55 x 55 x 12	S55720-S141	AQR2535NNW
0...50	Active	0...100	CO ₂ indicator by LED	55 x 55 x 38	S55720-S219	AQR2535NNWQ

The matching design frame must be ordered separately.

Base modules with integrated VOC measurement

- Base module with VOC sensing element to plug onto a front module

Data sheet	N1410
Operating voltage	AC 24 V DC 15...36 V
Analog output, signal	DC 0...10 V DC 2...10 V DC 0...5 V DC 0...20 mA DC 4...20 mA DC 0...10 mA
Connection, electrical	Screw terminals
Digital outputs	1-pin Potential-free Changeover contact
Warranty	5 Years



Range overview AQR2547..

Measuring range	Mechanical design	Dimensions (WxHxD) [mm]	Stock no.	Product no.
0...100% VOC	EU (CEE/VDE)	71 x 71 x 45	S55720-S146	AQR2547NF

Sensors

Air quality

Room sensor flush mounted AQR25..

Frames for front modules AQR253..

Product Title	Data sheet	Stock no.	Product no.
Frame DELTA line for front module	N1410	S55720-S158	AQR2510NFW
Frame DELTA azio for front module	N1410	S55720-S160	AQR2510NGW
Frame DELTA miro for front module	N1410	S55720-S159	AQR2510NHW

AQR253..



Front modules for base module

- Front module with sensors

Data sheet	N1411
Color	Titanium white
Degree of protection	IP30
Warranty	5 Years

Range overview AQR253..

Measuring range, temperature [°C]	Signal output temperature	Measurement range humidity [% r.h.]	Display	Dimensions (WxHxD) [mm]	Stock no.	Product no.
0...50	Active LG-Ni1000	0...100		55 x 55 x 12	S55720-S138	AQR2534ANW
				55 x 55 x 12	S55720-S137	AQR2530NNW
0...50	Active			55 x 55 x 12	S55720-S136	AQR2532NNW
0...50	Active	0...100		55 x 55 x 12	S55720-S141	AQR2535NNW
0...50	Active	0...100	CO ₂ indicator by LED	55 x 55 x 38	S55720-S219	AQR2535NNWQ

The matching design frame must be ordered separately.

AQR2546..



Base modules with integrated CO₂ measurement

- Base module with maintenance-free CO₂ sensing element to plug onto a front module

Data sheet	N1410
Operating voltage	AC 24 V DC 15...36 V
Analog output, signal	DC 0...10 V DC 2...10 V DC 0...5 V DC 0...20 mA DC 4...20 mA DC 0...10 mA
Connection, electrical	Screw terminals
Digital outputs	1-pin Potential-free Changeover contact
Warranty	5 Years

Range overview AQR2546..

Measuring range [ppm CO ₂]	Mechanical design	Dimensions (WxHxD) [mm]	Stock no.	Product no.
0...2000	EU (CEE/VDE)	70.8 x 70.8 x 45	S55720-S147	AQR2546NF
0...2000	IT (3 modular)	71 x 71 x 45	S55720-S153	AQR2546NG
0...2000	UK (British Standard)	71 x 71 x 45	S55720-S150	AQR2546NH

Base modules with KNX for CO₂ measurement

AQR2576..

- Base module with maintenance and recalibration-free CO₂ sensor to plug onto a front module
- 1 analog input to connect temperature sensors with NTC 10k sensing element to measure room, floor, or ceiling temperature
- 2 multifunctional binary inputs to connect window contacts or buttons
- Power supply via KNX bus, bus load < 5 mA

- Communication: KNX S-Mode, KNX LTE-Mode (Synco)



Data sheet	N1411
Voltage supply	KNX bus
Measuring range	CO ₂ : 0...5000 ppm
Analog inputs, number	1
Analog inputs	Passive temperature sensor NTC 10k
Digital inputs, number	2
Digital inputs	Potential-free contacts
Warranty	5 Years

Range overview AQR2576..

Mechanical design	Dimensions (WxHxD) [mm]	Stock no.	Product no.
EU (CEE/VDE)	70.8 x 70.8 x 45	S55720-S207	AQR2576NF
IT (3 Modular)	71 x 71 x 45	S55720-S209	AQR2576NG
UK (British Standard)	71 x 71 x 45	S55720-S208	AQR2576NH
US (UL)	64 x 110 x 45	S55720-S210	AQR2576NJ

Frames for front modules AQR253..

Product Title	Data sheet	Stock no.	Product no.
Frame DELTA line for front module	N1410	S55720-S158	AQR2510NFW
Frame DELTA azio for front module	N1410	S55720-S160	AQR2510NGW
Frame DELTA miro for front module	N1410	S55720-S159	AQR2510NHW

Front modules for base module

AQR253..

- Front module with sensors

Data sheet	N1411
Color	Titanium white
Degree of protection	IP30
Warranty	5 Years



Range overview AQR253..

Measuring range, temperature [°C]	Signal output temperature	Measurement range humidity [% r.h.]	Display	Dimensions (WxHxD) [mm]	Stock no.	Product no.
0...50	Active LG-Ni1000	0...100		55 x 55 x 12	S55720-S138	AQR2534ANW
				55 x 55 x 12	S55720-S137	AQR2530NNW
0...50	Active			55 x 55 x 12	S55720-S136	AQR2532NNW
0...50	Active	0...100		55 x 55 x 12	S55720-S141	AQR2535NNW
0...50	Active	0...100	CO ₂ indicator by LED	55 x 55 x 38	S55720-S219	AQR2535NNWQ

The matching design frame must be ordered separately.

Sensors

Air quality

Room sensor flush mounted AQR25..

AQR2548..



Base modules with integrated CO₂ and VOC measurement

- Base module with maintenance-free CO₂/VOC sensing element to plug onto a front module

Data sheet	N1410
Operating voltage	AC 24 V DC 15...36 V
Analog output, signal	DC 0...10 V
	DC 2...10 V
	DC 0...5 V
	DC 0...20 mA
	DC 4...20 mA
Connection, electrical	DC 0...10 mA
	Screw terminals
	CO: 1
Digital outputs	Potential-free
Warranty	5 Years

Range overview AQR2548..

Measuring range	Mechanical design	Dimensions (WxHxD) [mm]	Stock no.	Product no.
0...2000 ppm CO ₂ 0...100 % VOC	EU (CEE/VDE)	71 x 71 x 45	S55720-S148	AQR2548NF

Duct air quality sensor CO₂/ temperature / rel. humidity / VOC

QPM..

Note: Not suited for safety-related applications!

Data sheet	N1962
Operating voltage	AC 24 V DC 15...35 V
Power consumption	2 VA
Max. air velocity	≤ 10 m/s
Ambient temperature, operation	-5...45 °C
Connection, electrical	Screw terminals
Analog output, signal	DC 0...10 V DC 0...5 V DC 0...20 mA
Degree of protection	IP54
Dimensions (W x H x D)	80 x 88 x 274 mm
Warranty	5 Years



Range overview QPM..

Measuring range	Measuring range, temperature [°C]	Measurement range humidity [% r.h.]	Immersion length [mm]	Display	Stock no.	Product no.
0...100 % VOC			70...135		S55720-S123	QPM1100
0...2000 ppm CO ₂			70...135		BPZ:QPM2100	QPM2100
0...2000 ppm CO ₂			70...135		BPZ:QPM2102	QPM2102
0...100 % VOC						
0...2000 ppm CO ₂			70...135	LCD	BPZ:QPM2102D	QPM2102D
0...100 % VOC						
0...2000 ppm CO ₂	0...50 -35...35		100...165		BPZ:QPM2160	QPM2160
0...2000 ppm CO ₂	0...50 -35...35		100...165	LCD	BPZ:QPM2160D	QPM2160D
0...2000 ppm CO ₂	0...50 -35...35	0...95	100...165		BPZ:QPM2162	QPM2162
0...2000 ppm CO ₂	0...50 -35...35	0...95	100...165	LCD	BPZ:QPM2162D	QPM2162D
0...2000 ppm CO ₂			100...165		S55720-S124	QPM2180

The passive temperature element within the QPM2180 is freely selectable, enclosed in the delivery are LG-Ni1000, Pt1000, Pt100, NTC 10kOhm.



Sensors
Air quality
Duct sensor QPM..

QPM../MO



Duct air quality sensor CO₂/ temperature / rel. humidity / VOC; Modbus

Note: Not suited for safety-related applications!

Data sheet	A6V11610641
Operating voltage	AC 24 V DC 15...35 V
Power consumption	2 VA
Max. air velocity	≤ 10 m/s
Ambient temperature, operation	-5...+45 °C
Connection, electrical	Screw terminals
Degree of protection	IP54
Dimensions (W x H x D)	80 x 88 x 274 mm
Communication	Modbus RTU (RS-485)
Warranty	5 Years

Range overview QPM../MO

Measuring range	Measuring range, temperature [°C]	Measurement range humidity [% r.h.]	Immersion length [mm]	Stock no.	Product no.
0...2000 ppm CO ₂ 0...100% VOC			70...135	S55720-S469	QPM2102/MO
0...2000 ppm CO ₂	-35...+50		100...165	S55720-S470	QPM2150/MO
0...2000 ppm CO ₂	-35...+50	0...100	100...165	S55720-S471	QPM2152/MO

QPM1..4



Duct air quality sensor CO₂/ temperature (Basic)

Note: Not suited for safety-related applications!

Data sheet	A6V101101338
Operating voltage	AC 24 V DC 15...35 V
Analog output, signal	DC 0...10 V DC 4...20 mA
Degree of protection	IP54
Dimensions (W x H x D)	80 x 88 x 274 mm
Warranty	5 Years

Range overview QPM1..4

Measuring range [ppm]	Measuring range, temperature [°C]	Stock no.	Product no.
0...2000		S55720-S455	QPM1104
0...2000	0...50	S55720-S456	QPM1164

Sensor module for replacement

AQS2700

Sensor module for replacement for QSA2700 or QSA2700D



Data sheet A6V11160938
Warranty 5 Years

Stock no. S55720-S459
Product no. **AQS2700**

Fine dust sensor, 0-10V & Modbus

QSA2700

Room sensor for detection of PM2.5 and PM10



Data sheet A6V11160938
Operating voltage AC/DC 24 V
Connection cable Micro USB
Analog outputs DC 0...10 V
Display 3-color LED service indication
Communication Modbus RTU (RS-485)
Dimensions (W x H x D) 86 x 86 x 30 mm
Warranty 5 Years

Stock no. S55720-S457
Product no. **QSA2700**

Fine dust sensor +display, 0-10V, Modbus

QSA2700D

Room sensor with LCD display for detection of PM2.5 and PM10



Data sheet A6V11160938
Operating voltage AC 24 V
DC 24 V
Connection cable Micro USB
Analog outputs DC 0...10 V
Display LCD; 2.4 "
Communication Modbus RTU (RS-485)
Dimensions (W x H x D) 86 x 86 x 30 mm
Warranty 5 Years

Stock no. S55720-S458
Product no. **QSA2700D**



Sensors

Air quality

Duct sensor fine dust QSM..

QSM2100



Fine dust sensor duct, 0-10V/4-20mA

Duct sensor for detection of PM2.5 and PM10

Data sheet	A6V11893002
Operating voltage	AC 24 V DC 15...35 V
Analog output, signal	DC 0...10 V
Measuring range	0... 100% r.h.
Degree of protection	IP54
Dimensions (W x H x D)	298 x 80 x 88 mm
Warranty	5 Years

Stock no. Product no.

S55720-S491

QSM2100

QSM2162



PM2.5/H/T sensor duct, 0-10V/ 4-20mA

Duct multi-sensor for detection of PM2.5, Temperature and Humidity

Data sheet	A6V11893002
Operating voltage	AC 24 V DC 15...35 V
Analog output, signal	DC 0...10 V
Measuring range	0... 100% r.h.
Degree of protection	IP54
Dimensions (W x H x D)	328 x 80 x 88 mm
Warranty	5 Years

Stock no. Product no.

S55720-S492

QSM2162

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AQS2100

Sensor module for replacement

Sensor module for replacement for QSM216x

Warranty	5 Years
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Stock no. Product no.

S55720-S493

AQS2100

Differential pressure sensor air and non-aggressive gas QBM..

Differential pressure sensor, DC 0...10 V

QBM2030..

With pressure-linear characteristic.

For use with air or nonaggressive gases, for general HVAC applications. With diaphragm sensing element and selectable pressure measuring ranges.



Supplied complete with set of 2 air duct connectors and PVC tube of 2 m.

Data sheet	N1910_01
Operating voltage	AC 24 V DC 13.5...33 V
Power consumption	0.5 VA
Analog output, signal	DC 0...10 V
Time constant	1 s
Pressure connection	Connection branch, 6.2 mm dia.
Connection, electrical	Screw terminals
Degree of protection	IP42
Dimensions (W x H x D)	92 x 94 x 49 mm
Warranty	5 Years

Range overview QBM2030..

Measuring range, pressure [Pa]	Stock no.	Product no.
-50...50	S55720-S244	QBM2030-1U
-100...100		
0...100		
0...200	S55720-S245	QBM2030-5
0...250		
0...500		
0...1000	S55720-S246	QBM2030-30
0...1500		
0...3000		

Note on max. permissible pressure: overpressure on one side.

Sensors

Pressure

Differential pressure sensor air and non-aggressive gas QBM..

QBM3..



Air duct differential pressure sensor

For use with air or nonaggressive gases, for extremely demanding accuracy and high requirements. With diaphragm sensing element.

Available with switchable pressure-linear or extracting-the-root characteristic and digital display. With extracting-the-root characteristic, the pressure measuring range is adjustable.

CE-, UL listed.

Supplied complete with PVC connecting tube of 2 m.

Data sheet	N1916
Response time	<20 ms
Pressure connection	Connection branch, 6.2 mm dia.
Connection, electrical	Screw terminals
Degree of protection	IP54
Dimensions (W x H x D)	101 x 86 x 49 mm
Warranty	5 Years

Range overview QBM3..

Measuring range, pressure [Pa]	Analog output, signal	Operating voltage [V]	Display	Stock no.	Product no.
0...100	DC 0...10 V	AC 24 V / DC 13,5...33		S55720-S234	QBM3020-1
0...100	DC 4...20 mA	DC 8...33		S55720-S443	QBM3120-1
0...100	DC 0...10 V	AC 24 V / DC 13,5...33	LCD	S55720-S239	QBM3020-1D
0...100	DC 4...20 mA	DC 8...33	LCD	S55720-S448	QBM3120-1D
-50...50	DC 0...10 V	AC 24 V / DC 13,5...33		S55720-S233	QBM3020-1U
-50...50	DC 4...20 mA	DC 8...33		S55720-S442	QBM3120-1U
0...300	DC 0...10 V	AC 24 V / DC 13,5...33		S55720-S235	QBM3020-3
0...300	DC 4...20 mA	DC 8...33		S55720-S444	QBM3120-3
0...300	DC 0...10 V	AC 24 V / DC 13,5...33	LCD	S55720-S240	QBM3020-3D
0...300	DC 4...20 mA	DC 8...33	LCD	S55720-S449	QBM3120-3D
0...500	DC 0...10 V	AC 24 V / DC 13,5...33		S55720-S236	QBM3020-5
0...500	DC 4...20 mA	DC 8...33		S55720-S445	QBM3120-5
0...500	DC 0...10 V	AC 24 V / DC 13,5...33	LCD	S55720-S241	QBM3020-5D
0...500	DC 4...20 mA	DC 8...33	LCD	S55720-S450	QBM3120-5D
0...1000	DC 0...10 V	AC 24 V / DC 13,5...33		S55720-S237	QBM3020-10
0...1000	DC 4...20 mA	DC 8...33		S55720-S446	QBM3120-10
0...1000	DC 0...10 V	AC 24 V / DC 13,5...33	LCD	S55720-S242	QBM3020-10D
0...1000	DC 4...20 mA	DC 8...33	LCD	S55720-S451	QBM3120-10D
0...2500	DC 0...10 V	AC 24 V / DC 13,5...33		S55720-S238	QBM3020-25
0...2500	DC 4...20 mA	DC 8...33		S55720-S447	QBM3120-25
0...2500	DC 0...10 V	AC 24 V / DC 13,5...33	LCD	S55720-S243	QBM3020-25D
0...2500	DC 4...20 mA	DC 8...33	LCD	S55720-S452	QBM3120-25D

Differential pressure sensor air and non-aggressive gas QBM..

Modus differential pressure sensor with I/O extension

QBM3700..

Differential pressure sensor with I/O extension, designed for Modus (RTU) communication networks, 2 AI, 2 AO



Data sheet	A6V11684000
Operating voltage	AC/DC 24 V ±15 %
Power consumption	<2 VA
Analog output, signal	DC 0...10 V
Analog outputs, number	2
Analog inputs, number	2
Degree of protection	IP54 (Housing)
Dimensions (W x H x D)	146 x 81.9 x 60 mm
Communication	Modbus RTU (RS-485)
Warranty	5 Years

Range overview QBM3700..

Measuring range, pressure [Pa]	Stock no.	Product no.
0...500	S55720-S487	QBM3700-5/MO
0...1250	S55720-S485	QBM3700-13/MO
0...2500	S55720-S486	QBM3700-25/MO

Sensors

Pressure

Differential pressure sensor air and non-aggressive gas QBM..

QBM400..



Air duct differential pressure sensor with calibration certificate

Technical data and accessories identical to QBM3...
With plug-in connection.

Data sheet	N1919_01
Mounting position	Membrane vertical, pressure connection nipples at the bottom
Degree of protection	IP54
Dimensions (W x H x D)	186 x 86 x 49 mm
Warranty	5 Years

Range overview QBM400..

Measuring range, pressure [Pa]	Stock no.	Product no.
0...100	S55720-S247	QBM4000-1
0...300	S55720-S248	QBM4000-3
0...1000	S55720-S249	QBM4000-10
0...2500	S55720-S250	QBM4000-25

Note on max. permissible pressure: overpressure on one side.

Differential pressure sensor air and non-aggressive gas QBM..

QBM410..



Air duct differential pressure sensor, DC 4...20 mA, with calibration certificate

For use with air and nonaggressive gases. For extremely demanding accuracy and high requirements. With diaphragm sensing element.

CE-, UL listed.

Supplied complete with PVC connecting tube of 2 m.

Accessories for QBM41 are identical to those for QBM3...

Data sheet	N1919_01
Operating voltage	DC 8...33 V
Analog output, signal	DC 4...20 mA
Pressure connecton	Connecting branch, 6.2 mm dia.
Connection, electrical	Screw terminals
Mounting position	Membrane vertical, pressure connection nipples at the bottom
Degree of protection	IP54
Dimensions (W x H x D)	186 x 86 x 49 mm
Warranty	5 Years

Range overview QBM410..

Measuring range, pressure [Pa]	Display	Stock no.	Product no.
-50...50	no	S55720-S251	QBM4100-1U
0...100	LCD	S55720-S252	QBM4100-1D

Note on max. permissible pressure: overpressure on one side.

Accessories for QBM..

Product Title	Data sheet	Stock no.	Product no.
Mounting bracket for differential pressure sensor for air	N1590	BPZ:AQB2000	AQB2000
Top hat rail adapter for differential pressure sensor for air	N1590	BPZ:AQB21.2	AQB21.2
Air duct probe for simple, quick and airtight mounting	N1589	BPZ:FK-PZ1	FK-PZ1
Air duct probe for accurate measurements	N1589	BPZ:FK-PZ2	FK-PZ2
Air duct probe for differential pressure sensor, fixed length	N1589	BPZ:FK-PZ3	FK-PZ3

Sensors

Pressure

Differential pressure monitor QBM..

QBM81..



Differential pressure monitor

Used as a flow switch or filter monitor in air ducts.

Supplied complete with set of 2 air duct connectors (plastic) and 2 m long PVC tube.

Data sheet	N1552
Digital outputs	1-pin Potential-free Switchover contact
Permissible operating pressure	7500 Pa
Ambient temperature, operation	-30...85 °C
Mounting position	Diaphragm vertical, pressure connection pointing downward
Digital output, switching voltage	DC 24 V / AC 24...250 V
Digital output, switching current	0.01...5 (3) A
Pressure connection	Connection branch, 6.2 mm dia.
Degree of protection	IP54
Dimensions (Ø x L)	81 x 90 mm
Warranty	5 Years

Range overview QBM81..

Measuring range, pressure [Pa]	Stock no.	Product no.
20...300	BPZ:QBM81-3	QBM81-3
50...500	BPZ:QBM81-5	QBM81-5
100...1000	BPZ:QBM81-10	QBM81-10
500...2000	S55720-S125	QBM81-20
1000...5000	S55720-S126	QBM81-50

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Accessories for QBM81..

Product Title	Data sheet	Stock no.	Product no.
Air duct probe for simple, quick and airtight mounting	N 1589	BPZ:FK-PZ1	FK-PZ1
Air duct probe for accurate measurements	N 1589	BPZ:FK-PZ2	FK-PZ2
Air duct probe for differential pressure sensor, fixed length	N 1589	BPZ:FK-PZ3	FK-PZ3

Pressure sensors for liquids and gases QBE..

Pressure sensor for neutral and slightly aggressive liquids and gases (0...10 V)

QBE2003-P..

With threaded connection G $\frac{1}{2}$ " and plug DIN EN 175301-803A.

Suited for use with oil-containing media.

Data sheet	A6V10432494
Time constant	<2 ms
Pressure connection	External thread G $\frac{1}{2}$ "
Connection, electrical	Plug-in connection
Medium temperature	-15... 125 °C
Max. permissible pressure	2.5 x scale end value (FS)
Mounting position	Any
Degree of protection	IP65
Dimensions (Ø x L)	24 x 101 mm
Warranty	5 Years

**Range overview QBE2003-P..**

Analog output, signal [V]	Operating voltage [V]	Measuring range, pressure	Stock no.	Product no.
DC 0...10	AC 24 DC 12...33	0... 1 bar 0... 100 kPa	S55720-S290	QBE2003-P1
DC 0...10	AC 24 DC 12...33	0... 1.6 bar 0... 160 kPa	S55720-S291	QBE2003-P1.6
DC 0...10	AC 24 DC 12...33	0... 2.5 bar 0... 250 kPa	S55720-S292	QBE2003-P2.5
DC 0...10	AC 24 DC 12...33	0... 4 bar 0... 400 kPa	S55720-S293	QBE2003-P4
DC 0...10	AC 24 DC 12...33	0... 6 bar 0... 600 kPa	S55720-S294	QBE2003-P6
DC 0...10	AC 24 DC 12...33	0... 10 bar 0... 1 MPa	S55720-S295	QBE2003-P10
DC 0...10	AC 24 DC 12...33	0... 16 bar 0... 1.6 MPa	S55720-S296	QBE2003-P16
DC 0...10	AC 24 DC 12...33	0... 25 bar 0... 2.5 MPa	S55720-S297	QBE2003-P25
DC 0...10	AC 24 DC 12...33	0... 40 bar 0... 4 MPa	S55720-S298	QBE2003-P40
DC 0...10	AC 24 DC 12...33	0... 60 bar 0... 6 MPa	S55720-S299	QBE2003-P60

Sensors

Pressure

Pressure sensors for liquids and gases QBE..

QBE2103-P..



Pressure sensor for neutral and slightly aggressive liquids and gases (4...20 mA)

With threaded connection G $\frac{1}{2}$ " and plug DIN EN 175301-803A.

Suited for use with oil-containing media.

Data sheet	A6V10432494
Time constant	<2 ms
Pressure connection	External thread G $\frac{1}{2}$ "
Connection, electrical	Plug-in connection
Medium temperature	-15... 125 °C
Max. permissible pressure	2.5 x scale end value (FS)
Mounting position	Any
Degree of protection	IP65
Dimensions (Ø x L)	24 x 101 mm
Warranty	5 Years

Range overview QBE2103-P..

Analog output, signal [mA]	Operating voltage [V]	Measuring range, pressure	Stock no.	Product no.
DC 4...20	DC 7...33	0... 1 bar 0... 100 kPa	S55720-S300	QBE2103-P1
DC 4...20	DC 7...33	0... 1.6 bar 0... 160 kPa	S55720-S301	QBE2103-P1.6
DC 4...20	DC 7...33	0... 2.5 bar 0... 250 kPa	S55720-S302	QBE2103-P2.5
DC 4...20	DC 7...33	0... 400 kPa 0... 4 bar	S55720-S303	QBE2103-P4
DC 4...20	DC 7...33	0... 6 bar 0... 600 kPa	S55720-S304	QBE2103-P6
DC 4...20	DC 7...33	0... 10 bar 0... 1 MPa	S55720-S305	QBE2103-P10
DC 4...20	DC 7...33	0... 16 bar 0... 1.6 MPa	S55720-S306	QBE2103-P16
DC 4...20	DC 7...33	0... 25 bar 0... 2.5 MPa	S55720-S307	QBE2103-P25
DC 4...20	DC 7...33	0... 40 bar 0... 4 MPa	S55720-S308	QBE2103-P40
DC 4...20	DC 7...33	0... 60 bar 0... 6 MPa	S55720-S309	QBE2103-P60

Accessories for QBE200..-P.. and QBE210..-P..

Product Title	Data sheet	Stock no.	Product no.
Connection kit to mount QBE2x03..	A6V10434028	S55720-S116	AQB2001
Mounting bracket for pressure sensor QBE2x03..	A6V10434028	S55720-S318	AQB2004

Differential pressure sensor for liquids and gases**QBE61.3-DP..**

For slightly aggressive liquids and gases, highly resistant to overpressure. Suitable for use with hot water and chilled water.

With threaded connections G $\frac{1}{2}$ " and wall mounting bracket.

Not suitable for use with ammonia or freones.

For a smaller measuring range see QBE63-DP...

Note on max. permissible pressure: overpressure on one side.



Data sheet	N1923
Operating voltage	AC 24 V DC 18...33 V
Analog output, signal	DC 0...10 V
Pressure connection	External thread G $\frac{1}{2}$ "
Connection, electrical	Screw-free terminals
Medium temperature	-15...80 °C
PN class	PN 40
Mounting position	Any
Degree of protection	IP54
Dimensions (W x H x D)	126 x 135 x 60 mm
Warranty	5 Years

Range overview QBE61.3-DP..

Measuring range, pressure [bar]	Max. permissible pressure [bar]	Stock no.	Product no.
0...2	12	BPZ:QBE61.3-DP2	QBE61.3-DP2
0...5	20	BPZ:QBE61.3-DP5	QBE61.3-DP5
0...10	20	BPZ:QBE61.3-DP10	QBE61.3-DP10
0...			

Sensors

Pressure

Pressure sensors for liquids and gases QBE..

QBE63-DP..



Differential pressure sensors for liquids and gas (DC 0...10 V)

For slightly aggressive liquids and gases, highly resistant to overpressure. With threaded connections G1/8"

Supplied complete with mounting bracket.

Not suitable for use with ammonia or freones.

Data sheet	N1920
Operating voltage	AC 24 V DC 20...30 V
Analog output, signal	DC 0...10 V
Pressure connection	Internal thread G 1/8 "
Connection, electrical	Screw terminals
Medium temperature	-10...80 °C
Mounting position	any
Degree of protection	IP65
Dimensions (Ø x L)	65 x 94 mm
Warranty	5 Years

Range overview QBE63-DP..

Measuring range, pressure [kPa]	Max. permissible pressure [bar]	Stock no.	Product no.
0...10	10	BPZ:QBE63-DP01	QBE63-DP01
0...20	10	BPZ:QBE63-DP02	QBE63-DP02
0...50	20	BPZ:QBE63-DP05	QBE63-DP05
0...100	20	BPZ:QBE63-DP1	QBE63-DP1

Note on max. permissible pressure: pressure on one side.

Differential pressure sensors for liquids and gas (0...10 V)

QBE3000..

For slightly aggressive liquids and gases. With threaded connections G1/8".
Including mounting bracket and 2 screwed fittings for copper pipe, 6 mm dia.

Not suitable for use with ammonia or freones.



Data sheet	N1922
Operating voltage	AC 24 V DC 18...33 V
Analog output, signal	DC 0...10 V
Pressure connection	Internal thread G 1/8 "
Connection, electrical	Plug-in connection
Medium temperature	-15...80 °C
Degree of protection	IP65
Warranty	5 Years

Range overview QBE3000..

Measuring range, pressure	Max. permissible pressure [bar]	Stock no.	Product no.
0...1 bar 0...100 kPa	25	S55720-S173	QBE3000-D1
0...1.6 bar 0...160 kPa	25	S55720-S174	QBE3000-D1.6
0...2.5 bar 0...250 kPa	25	S55720-S175	QBE3000-D2.5
0...4 bar 0...400 kPa	25	S55720-S176	QBE3000-D4
0...6 bar 0...600 kPa	25	S55720-S186	QBE3000-D6
0...10 bar 0...1 MPa	50	S55720-S177	QBE3000-D10
0...16 bar 0...1.6 MPa	50	S55720-S178	QBE3000-D16

Note on max. permissible pressure: pressure on both sides.

Sensors

Pressure

Pressure sensors for liquids and gases QBE..

QBE3100..



Differential pressure sensors for liquids and gas (4...20 mA)

For slightly aggressive liquids and gases. With threaded connections G1/8". Including mounting bracket and 2 screwed fittings for copper pipe, 6 mm dia.

Not suitable for use with ammonia or freones.

Data sheet	N1922
Operating voltage	DC 11...33 V
Analog output, signal	DC 4...20 mA
Pressure connection	Internal thread G 1/8"
Connection, electrical	Plug-in connection
Medium temperature	-15...80 °C
Degree of protection	IP65
Warranty	5 Years

Range overview QBE3100..

Measuring range, pressure	Max. permissible pressure [bar]	Stock no.	Product no.
0...1 bar 0...100 kPa	25	S55720-S179	QBE3100-D1
0...1.6 bar 0...160 kPa	25	S55720-S180	QBE3100-D1.6
0...2.5 bar 0...250 kPa	25	S55720-S181	QBE3100-D2.5
0...4 bar 0...400 kPa	25	S55720-S182	QBE3100-D4
0...6 bar 0...600 kPa	25	S55720-S187	QBE3100-D6
0...10 bar 0...1 MPa	50	S55720-S183	QBE3100-D10
0...16 bar 0...1.6 MPa	50	S55720-S184	QBE3100-D16

Note on max. permissible pressure: pressure on both sides.

Accessories for QBE63-DP.. and QBE3..

Product Title	Data sheet	Stock no.	Product no.
Connection kit to mount QBE63../64.., QBE3..	N1922	S55720-S117	AQB2002

Pressure sensor for refrigerants (0...10 V)

QBE2004-P..U

With internally threaded pressure connection UNF7/16-20.

For use with all media, including ammonia.

Data sheet	A6V10434676
Current consumption	<4 mA
Time constant	<2 ms
Pressure connection	Internal thread UNF7/16-20
Connection cable	3-wire
Cable length	1.5 m
Connection, electrical	Cable
Medium temperature	-40...135 °C
Max. permissible pressure	3 x scale end value (FS)
Mounting position	Any
Degree of protection	IP67
Dimensions (Ø x L)	24 x 68 mm
Warranty	5 Years



Range overview QBE2004-P..

Analog output, signal [V]	Operating voltage [V]	Measuring range, pressure	Stock no.	Product no.
DC 0...10	AC 24 DC 16...33	-1...9 bar -100...900 kPa	S55720-S310	QBE2004-P10U
DC 0...10	AC 24 DC 16...33	-1...24 bar -100...2400 kPa	S55720-S311	QBE2004-P25U
DC 0...10	AC 24 DC 16...33	-1...29 bar -100...2900 kPa	S55720-S312	QBE2004-P30U
DC 0...10	AC 24 DC 16...33	-1...59 bar -100...5900 kPa	S55720-S313	QBE2004-P60U

Sensors

Pressure

Pressure sensors refrigerant QBE..

QBE2104-P..U



Pressure sensors for refrigerants (4...20 mA)

With internally threaded pressure connection UNF7/16-20.

For use with all media, including ammonia.

Data sheet	A6V10434676
Time constant	<2 ms
Pressure connection	Internal thread UNF7/16-20
Connection cable	2-wire
Cable length	1.5 m
Connection, electrical	Cable
Medium temperature	-40... 135 °C
Max. permissible pressure	3 x scale end value (FS)
Mounting position	Any
Degree of protection	IP67
Dimensions (Ø x L)	24 x 68 mm
Warranty	5 Years

Range overview QBE2104-P..

Analog output, signal [mA]	Operating voltage [V]	Measuring range, pressure	Stock no.	Product no.
DC 4...20	DC 8...33	-1...9 bar -100...900 kPa	S55720-S314	QBE2104-P10U
DC 4...20	DC 8...33	-1...24 bar -100...2400 kPa	S55720-S315	QBE2104-P25U
DC 4...20	DC 8...33	-1...29 bar -100...2900 kPa	S55720-S316	QBE2104-P30U
DC 4...20	DC 8...33	-1...59 bar -100...5900 kPa	S55720-S317	QBE2104-P60U

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Accessories for QBE200..-P..U and QBE210..-P..U

Product Title	Data sheet	Stock no.	Product no.
Connection set, thread 1/2" for pressure sensor for refrigerant	N 1907	BPZ:FT-PZ1	FT-PZ1

Flow sensor for liquids in DN 10...25 pipes (plastic fitting, DC 0...10V)

QVE2000.0..

For continuous flow measurement and monitoring of liquids such as hot water, heating water, or standard water-glycol mixes in HVAC plants

Data sheet	N1597
Operating voltage	DC 11.5...33 V
Connection cable	2 m, with 3 pin plug M12x1
Analog outputs	DC 0...10 V
Medium temperature	-15...125 °C
Ambient temperature, operation	-15...85 °C
Degree of protection	IP65
Warranty	5 Years



Range overview QVE2000.0..

Nominal size, piping	Measuring range [l/min]	Dimensions (WxHxD) [mm]	Stock no.	Product no.
DN 10	1.8...32	81 x 41 x 13	S55720-S189	QVE2000.010
DN 15	3.5...50	87 x 43 x 19	S55720-S190	QVE2000.015
DN 20	5.0...85	105 x 45 x 25	S55720-S191	QVE2000.020
Dn 25	9.0...150	120 x 47 x 32	S55720-S192	QVE2000.025

Flow sensor for liquids in DN 10...25 pipes (plastic fitting, DC 4...20 mA)

QVE2100.0..

For continuous flow measurement and monitoring of liquids such as hot water, heating water, or standard water-glycol mixes in HVAC plants

Data sheet	N1597
Operating voltage	DC 18...33 V
Connection cable	2 m, with 3 pin plug M12x1
Analog outputs	DC 4...20 mA
Medium temperature	-15...125 °C
Ambient temperature, operation	-15...85 °C
Degree of protection	IP65
Warranty	5 Years



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Range overview QVE2100.0..

Nominal size, piping	Measuring range [l/min]	Dimensions (WxHxD) [mm]	Stock no.	Product no.
DN 10	1.8...32	81 x 41 x 13	S55720-S193	QVE2100.010
DN 15	3.5...50	87 x 43 x 19	S55720-S194	QVE2100.015
DN 20	5.0...85	105 x 45 x 25	S55720-S195	QVE2100.020
DN 25	9.0...150	120 x 47 x 32	S55720-S196	QVE2100.025

Sensors

Flow

Flow sensors QVE..

QVE3000.0..



Flow sensor for liquids in DN 10...25 pipes (red brass fitting, DC 0...10V)

For continuous flow measurement and monitoring of liquids such as hot water, heating water, or standard water-glycol mixes in HVAC plants

Data sheet	N1598
Operating voltage	DC 11.5...33 V
Connection cable	2 m, with 3 pin plug M12x1
Analog outputs	DC 0...10 V
Medium temperature	-15...125 °C
Ambient temperature, operation	-15...85 °C
Degree of protection	IP65
Warranty	5 Years

Range overview QVE3000.0..

Nominal size, piping	Measuring range [l/min]	Dimensions (WxHxD) [mm]	Stock no.	Product no.
DN 10	1.8...32	65 x 57 x 19	S55720-S211	QVE3000.010
DN 15	3.5...50	75 x 59 x 19	S55720-S212	QVE3000.015
DN 20	5.0...85	86 x 65 x 25	S55720-S213	QVE3000.020
DN 25	9.0...150	109 x 71 x 32	S55720-S214	QVE3000.025

QVE3100.0..



Flow sensor for liquids in DN 10...25 pipes (red brass fitting, DC 4...20 mA)

For continuous flow measurement and monitoring of liquids such as hot water, heating water, or standard water-glycol mixes in HVAC plants

Data sheet	N1598
Operating voltage	DC 18...33 V
Connection cable	2 m, with 3 pin plug M12x1
Analog outputs	DC 4...20 mA
Medium temperature	-15...125 °C
Ambient temperature, operation	-15...85 °C
Degree of protection	IP65
Warranty	5 Years

Range overview QVE3100.0..

Nominal size, piping	Measuring range [l/min]	Dimensions (WxHxD) [mm]	Stock no.	Product no.
DN 10	1.8...32	65 x 57 x 19	S55720-S215	QVE3100.010
DN 15	3.5...50	75 x 59 x 19	S55720-S216	QVE3100.015
DN 20	5.0...85	86 x 65 x 25	S55720-S217	QVE3100.020
DN 25	9.0...150	109 x 71 x 32	S55720-S218	QVE3100.025

QVE1900



Flow switch for use in hydraulic systems, PN10, DN32...200

For monitoring operation of systems using liquids or gases.

Data sheet	N1592
Digital output, switching voltage	250 VAC
Digital output, switching current	15 (8) A
Connection, electrical	Screw terminals
Nominal size, piping	DN32 - DN200
Connecting thread	R 1"
Digital outputs	1-pin
	Potential-free
	Changeover contact
Medium temperature	-20...120 °C
PN class	PN 10
Ambient temperature, operation	-20...85 °C
Material, valve body	Brass
Degree of protection	IP65
Dimensions (W x H x D)	108 x 70 x 132 mm
Warranty	5 Years

Stock no.	Product no.
BPZ:QVE1900	QVE1900

QVE1901



Flow switch for use in hydraulic systems, PN25, DN20...200

For monitoring operation of systems using liquids or gases.

Maximum switching capacity AC 26 VA, DC 20 W

Data sheet	N1594
Digital output, switching voltage	230 VAC, 48 VDC
Digital output, switching current	1 A
Connection, electrical	Screw terminals
Type of fixing	Thread G 1/2 "
Nominal size, piping	DN20 - DN200
Connecting thread	G 1/2 "
Digital outputs	Potential-free
Medium temperature	-20...110 °C
PN class	PN 25
Ambient temperature, operation	-20...80 °C
Material, valve body	Brass
Degree of protection	IP65
Dimensions (W x H x D)	120 x 38 x 92 mm
Warranty	5 Years

Stock no.	Product no.
BPZ:QVE1901	QVE1901

Sensors

Flow

Flow switch QVE..

QVE1902.0..



Flow switch for liquids in piping DN 10...25

For monitoring the flow of liquid medium in HVAC plants

Maximum switching capacity AC 26 VA, DC 20 W

Data sheet	N1596
Digital output, switching voltage	AC 230 V, DC 48 V
Digital output, switching current	1 A
Type of fixing	Thread
Digital outputs	1-pin Potential-free reed contact
Medium temperature	-20...100 °C
Ambient temperature, operation	0...70 °C
Degree of protection	IP65
Warranty	5 Years

Range overview QVE1902.0..

Nominal size, piping	Connect. thread ["]	Qmax [l/min]	Stock no.	Product no.
DN 10	G $\frac{3}{8}$	20	S55720-S199	QVE1902.010
DN 15	G $\frac{1}{2}$	30	S55720-S200	QVE1902.015
DN 20	G $\frac{3}{4}$	80	S55720-S201	QVE1902.020
DN 25	G1	130	S55720-S202	QVE1902.025

Duct sensor for air velocity

QVM62.1

For measuring air velocities or volumetric flow in air ducts. Suited for primary plant (presetting the volumetric flow).



Sensor detached, ready wired, including pipe extension for different immersion lengths and mounting flange.

Data sheet	N1932
Operating voltage	AC 24 V
	DC 24 V
Power consumption	5 VA
Measuring range	0...10 m/s
	0...15 m/s
	0...5 m/s
Measurement accuracy	At 20 °C, 45% r.h., 1013 hPa: ±0.65 m/s
Connection, electrical	Screw terminals
Cable length	1 m
Immersion length	30...300 mm
Analog output, signal	DC 4...20 mA
	DC 0...10 V
Degree of protection	IP42
Dimensions (W x H x D)	86 x 43 x 117 mm
Warranty	5 Years

Stock no.

Product no.

BPZ:QVM62.1

QVM62.1

QLS60



Solar sensor

- For measuring the solar radiation intensity.

Data sheet	N1943
Operating voltage	AC 24 V DC 18...30 V
Power consumption	2.5 VA
Measuring range	0...1000 W/m ²
Time constant	2 s
Connection, electrical	Screw terminals
Analog output, signal	DC 0...10 V DC 4...20 mA
Degree of protection	IP65
Dimensions (W x H x D)	51 x 92 x 46 mm
Warranty	5 Years

Stock no.

Product no.

BPZ:QLS60

QLS60

Valves and actuators



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Valves and actuators

Overview and selection tools

									Recommended media															
		2-port valve	3-port valve	6-port valve	PN class	Type of connection	Silicon-free grease	Closed circuits	Open circuits	Permissible medium temperature [°C]	Chilled water	Cooling water ¹⁾	Drinking water	Low-temperature hot water	High-temperature hot water	Water glycol mixture	Saturated steam	Superheated steam	Wärmeträgeröl	Media containing mineral oils	Refrigerants	Refrigerants (ammonia)		
Int. Valves	EVG..	■			16	ET		■		1...120	■			■										
	EXG..		■		16	ET		■		1...120	■			■										
	EVF..	■			16	F		■		1...120	■			■										
	EXF..		■		16	F		■		1...120	■			■										
PICVs	VPD../VPE..	■			10	ET		■		1...90	■			■		■								
	VQI46../VQP46..	■			25	ET/IT		■		1...90	■			■		■								
	VPI46../VPP46..	■			25	ET/IT		■		1...120	■			■		■								
	VPF43../VPP44..	■			16	F	■	■		1...120	■			■		■								
	VPF53../VPP54..	■			25	F	■	■		1...120	■			■		■								
	VDN../VEN../VUN..	■			10	ET		■		1...120	■			■		■								
Globe valves	VD1..CLC	■			10	ET		■		1...110	■			■		■								
	VVP45..	■			16	ET		■		1...110	■			■		■								
	VXP45..		■		16	ET		■		1...110	■			■		■								
	VMP45..		■		16	ET		■		1...110	■			■		■								
	VVP47..	■			16	ET		■		1...110	■			■		■								
	VXP47..		■		16	ET		■		1...110	■			■		■								
	VMP47..		■		16	ET		■		1...110	■			■		■								
	VVG41..	■			16	ET	■	■	■	-25...150	■	■		■		■		■						
	VXG41..		■		16	ET	■	■	■	-25...150	■	■		■		■		■						
	VXG41..01 ⁴⁾		■		16	ET	■	■	■	-25...150	■	■	■	■		■		■						
	VVG44..	■			16	ET	■	■	■	1...120	■			■		■								
	VXG44..		■		16	ET	■	■	■	1...120	■			■		■								
	VVG549..	■			25	ET	■	■	■	1...130	■	■		■		■								
	VVI46../2	■			16	IT		■	■	1...110	■			■		■								
	VXI46../2		■		16	IT		■	■	1...110	■			■		■								
	VVF22..	■			6	F	■	■	■	-10...130	■			■		■								
	VXF22..		■		6	F	■	■	■	-10...130	■			■		■								
	VVF32..	■			10	F	■	■	■	-10...150	■			■		■								
	VXF32..		■		10	F	■	■	■	-10...150	■			■		■								
	VVF42..	■			16	F	■	■	■	-10...150	■			■		■								
	VXF42..		■		16	F	■	■	■	-10...150	■			■		■								
	VVF43..	■			16	F	■	■	■	-20...220	■	■		■		■		■	■	■				
	VXF43..		■		16	F	■	■	■	-20...220	■	■		■		■		■	■	■				
	VVF53..	■			25	F	■	■	■	-20...220	■	■		■		■		■	■	■				
	VXF53..		■		25	F	■	■	■	-20...220	■	■		■		■		■	■	■				
	VVF63..	■			40	F	■	■	■	-25...220	■	■		■		■		■	■	■				
VXF63..		■		40	F	■	■	■	-25...220	■	■		■		■		■	■	■					
Control ball valves	VET61..	■			40	ET	■	■		-10...120	■			■		■								
	VBG61..		■		40	ET	■	■		-10...120	■			■		■								
	VAI61..	■			40	IT	■	■		-10...120	■			■		■								
	VBI61..		■		40	IT	■	■		-10...120	■			■		■								
	VWG41..			■	16	ET/IT	■	■		1...90	■			■		■								
	Magnetic valves	MXG461..	■	■		16	ET		■		1...130	■			■		■							
MXG461..P		■	■		16	ET		■		1...130	■			■		■								
MXG461B..		■	■		16	ET		■		-20...130	■	■	■	■		■								
MXG461S..		■	■		16	ET		■		1...130	■	■	■	■		■								
MXG462S..		■	■		16	ET		■		-20...130	■	■	■	■		■								
MXF461..		■	■		16	F		■		1...130	■			■		■								
MXF461..P		■	■		16	F		■		1...130	■			■		■								
M3P..FY		■	■		16	F		■		1...120	■			■		■								
M3P..FYP		■	■		16	F		■		1...120	■			■		■								
MVF461H..	■			16	F		■		1...180	■			■		■		■	■						
Rotary valves	VBF21..		■		6	F		■		1...120	■			■		■								
	VKF41..	■			16	F		■		-10...120	■			■		■								
	VKF46..	■			16	F		■	■	-10...120	■	■		■		■								
	VET60..	■			40	ET	■	■		-10...120	■			■		■								
	VBG60..		■		40	ET	■	■		-10...120	■			■		■								
	VAI60..	■			40	IT	■	■		-10...120	■			■		■								
	VBI60..		■		40	IT	■	■		-10...120	■			■		■								
Refrigerant valves	M2FP03GX				32	-		■		-40...100											■	■		
	M3FK..LX..		■		32	S		■		-40...120											■	■		
	M3FB..LX..		■		PS 43	S		■		-40...120											■	■		
	MVL661..	■			PS 45	S		■		-40...120											■	■		
	MVS661..N	■			63	W/S		■		-40...120											■	■		

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Valves and actuators Overview and selection tools



New: 5-year warranty on valves and actuators, damper actuators, and sensors.

Generation				Distribution			Consumption / Use								
District heating	Boiler plants	Chiller plants	Cooling towers ¹⁾	Domestic hot water ²⁾	Heating groups	Air handling units	Floor heating	Radiators	Chilled ceilings	Heated and chilled ceilings	VAV ³⁾	Fan coil units	Zone control		
														EVG..	Int. Valves
														EXG..	
														EVF..	
														EXF..	
														VPD../VPE..	PICVs
														VQI46../VQP46..	
														VPI46../VPP46..	
														VPF43../VPP44..	
														VPF53../VPP54..	Globe valves
														VDN../VEN../VUN..	
														VD1..CLC	
														VVP45..	
														VXP45..	
														VMP45..	
														VVP47..	
														VXP47..	
														VMP47..	
														VVG41..	
														VXG41..	
														VXG41..01 ⁴⁾	
														VVG44..	
														VXG44..	
														VVG549..	
														VVI46../2	
														VXI46../2	
														VVF22..	
														VXF22..	
														VVF32..	
														VXF32..	
														VVF42..	
														VXF42..	
														VVF43..	
														VXF43..	
														VVF53..	
														VXF53..	
														VVF63..	
														VXF63..	
														VET61..	Control ball valves
														VBG61..	
														VAI61..	
														VBI61..	
														VWG41..	Magnetic valves
														MXG461..	
														MXG461..P	
														MXG461B..	
														MXG461S..	
														MXG462S..	
														MXF461..	
														MXF461..P	
														M3P..FY	
														M3P..FYP	
														MVF461H..	Rotary valves
														VBF21..	
														VKF41..	
														VKF46..	
														VET60..	
														VBG60..	
														VAI60..	
														VBI60..	Refrigerant valves
														M2FP03GX	
														M3FK..LX..	
														M3FB..LX..	
														MVL661..	
														MVS661..N	

Recommendation:
water treatment according to VDI 2035



- ¹⁾ Open circuits;
- ²⁾ Not for drinking water circuit (open circuit);
- ³⁾ Variable air volume;
- ⁴⁾ Sealed bypass;
- ⁵⁾ As zone valve for floor heating systems







IT = internally threaded connection,
ET = externally threaded connection,
F = flanged connection,
S = soldered connection,
W = welded connection









Valves and actuators

Overview and selection tools

Intelligent Valves							
Typical applications – Heating groups – Air handling units	Valve type	Operating voltage		Positioning signal		Interface	
	EVG4U10E.. DN15-50	AC/DC 24 V		0...10 V, 2...10 V, 4...20 mA		BACnet over UDP/IP Ethernet to building operator	
	EVF4U20E.. DN65-125	AC/DC 24 V		0...10 V, 2...10 V, 4...20 mA		BACnet over UDP/IP Ethernet to building operator	
PN 16	1...120°C	DN	k_{vs} [m ³ /h]	\dot{V}_{min} [m ³ /h]	\dot{V}_{100} [m ³ /h]	Δp_s [kPa]	Δp_{max} [kPa]
Data sheet	A6V11444716						
	EVG4U10E015	15	4	0.45	1.5	1400	350
	EVG4U10E020	20	5	0.9	3	1400	350
	EVG4U10E025	25	10	1.35	4.5	1400	350
	EVG4U10E032	32	11	2.1	7	1000	350
	EVG4U10E040	40	26	3.45	11.5	800	350
	EVG4U10E050	50	30	5.4	18	600	350
	EVF4U20E065	65	55	9	30	1600	500
	EVF4U20E080	80	80	14.5	48	1600	500
	EVF4U20E100	100	113	22.5	75	1600	500
	EVF4U20E125	125	142	36	120	1600	500
Typical applications – Heating groups – Air handling units	Valve type	Operating voltage		Positioning signal		Interface	
	EXG4U10E.. DN15-50	AC/DC 24 V		0...10 V, 2...10 V, 4...20 mA		BACnet over UDP/IP Ethernet to building operator	
	EXF4U20E.. DN65-100	AC/DC 24 V		0...10 V, 2...10 V, 4...20 mA		BACnet over UDP/IP Ethernet to building operator	
PN 16	1...120°C	DN	k_{vs} [m ³ /h]	\dot{V}_{min} [m ³ /h]	\dot{V}_{100} [m ³ /h]	Δp_{max} [kPa]	
Data sheet	A6V11444716						
	EXG4U10E015	15	3.7	0.36	1.2	200	
	EXG4U10E020	20	4	0.6	2	200	
	EXG4U10E025	25	8	0.96	3.2	200	
	EXG4U10E032	32	10	1.5	5	200	
	EXG4U10E040	40	18	2.4	8	200	
	EXG4U10E050	50	26	3.6	12	200	
	EXF4U20E065	65	55	6	20	150	
	EXF4U20E080	80	80	9.6	32	75	
	EXF4U20E100	100	113	15	50	125	

Threaded PICVs												
Typical applications – Radiators – Chilled ceilings – Fan coil units	Actuators		Data sheet				4.5 mm		5 mm			
	STA.. SUE21P		N4884 A6V11780777				100 N		100 N			
	Operating voltage		Positioning signal		Positioning time [s]							
	AC 230 V		2-position		210		12				STA23	SUE21P
AC/DC 24 V		2-position/PDM		270		–				STA73	–	
PN 25	1...90 °C	Without pressure testing points	With pressure testing points	DN	G [inch]	\dot{V}_{min} [l/h]	\dot{V}_{100} [l/h]	Δp_{min} [kPa]	Δp_{max} [kPa]	Δp_{min} [kPa]	Δp_{max} [kPa]	
Data sheet	A6V11877580											
 	VQP46.10L0.5	VQP46.10L0.5Q	10	½	30	520	30	600	30	600		
	VQP46.15L0.5	VQP46.15L0.5Q	15	¾	30	520	28	600	28	600		
	VQP46.15L1.3	VQP46.15L1.3Q	15	¾	300	1300	28	600	28	600		
	VQP46.20L1.5	VQP46.20L1.5Q	20	1	320	1500	35	600	35	600		
	VQP46.25L1.8	VQP46.25L1.8Q	25	1 ¼	620	1800	31	600	31	600		
PN 25	1...90 °C	Without pressure testing points	With pressure testing points	DN	Rp [inch]	\dot{V}_{min} [l/h]	\dot{V}_{100} [l/h]	Δp_{min} [kPa]	Δp_{max} [kPa]	Δp_{min} [kPa]	Δp_{max} [kPa]	
Data sheet	A6V11877580											
 	VQI46.15L0.5	VQI46.15L0.5Q	15	½	30	520	28	600	28	600		
	VQI46.15L1.3	VQI46.15L1.3Q	15	½	300	1300	28	600	28	600		
	VQI46.20L1.5	VQI46.20L1.5Q	20	¾	320	1500	35	600	35	600		
	VQI46.25L1.8	VQI46.25L1.8Q	25	1	620	1800	31	600	31	600		

Threaded PICVs													
Typical applications – Radiators – Chilled ceilings – Fan coil units	Actuators		Data sheet				4.5 mm		2.5 mm				
	RTN.. STA.. SSA..31/81/61.. SSA..HF SSA118..		N2111 N4884 A6V11858276 A6V11858278 A6V11858280				100 N		100 N				
	Operating voltage		Positioning signal		Positioning time [s]								
	AC 230 V		2-position		210		–		STA23		–		
			3-position		67.5		–		–		SSA331.00		
	AC 24 V		3-position		67.5		–		–		SSA131.00		
			0...10 V		270 ²⁾		–		STA63		–		
	AC/DC 24 V		2-position/PDM		270		–		STA73		–		
			0...10 V		25		–		–		SSA161.05		
			4...20 mA		25		–		–		SSA151.05HF		
		0...10 V		25		–		–		SSA161.05HF			
		0...10 V		25		–		–		SSA161E.05HF ¹⁾			
		KNX S-/LTE-Mode, KNX PL-Link		50		–		–		SSA118.09HKN			
								RTN51		–			
								RTN71		–			
								RTN81		–			
PN 10	1...90 °C	DIN	DN	Rp/R [inch]	\dot{V} [l/h]	\dot{V}_{nom} ³⁾ [l/h]		Δp_{min} [kPa]	Δp_{max} [kPa]	Δp_{min} [kPa]	Δp_{max} [kPa]		
Data sheet	N2185												
 	VPD110A-... ³⁾	10	Rp/R ¾	25...318	45	90	145	6 ⁴⁾	200	8 ⁴⁾	200	10 ⁴⁾	200
	VPD115A-...	15	Rp/R ½	25...318	45	90	145	6 ⁴⁾	200	8 ⁴⁾	200	10 ⁴⁾	200
	VPD110B-200	10	Rp/R ¾	95...483	200	20	200	20	200	20	200	20	200
	VPD115B-200	15	Rp/R ½	95...483	200	20	200	20	200	20	200	20	200
	 	VPE110A-...	10	Rp/R ¾	25...318	45	90	145	6 ⁴⁾	200	8 ⁴⁾	200	10 ⁴⁾
VPE115A-...		15	Rp/R ½	25...318	45	90	145	6 ⁴⁾	200	8 ⁴⁾	200	10 ⁴⁾	200
VPE110B-200		10	Rp/R ¾	95...483	200	20	200	20	200	20	200	20	200

¹⁾ Equal percentage valve characteristic

²⁾ In control mode (warm-up time) min. running time approx. 30 s/mm;












³⁾ .. = insert \dot{V}_{nom} \dot{V}_{nom} = factory setting = volumetric flow at 0.5 mm stroke or setting mark 3 of the presetting;

⁴⁾ Δp_{min} is valid for \dot{V}_{nom} 45/90/145 l/h;

VPP46.../VPI46...: Δp_{min} is for the \dot{V}_{100} . For lower flows please consult the data sheet.

Valves and actuators

Overview and selection tools

Threaded PICVs													
Typical applications – Heating groups – Air handling units – Chilled ceilings – VAV – Fan coil units – Zone control	Actuators		Data sheet				4.5 mm	2.5 / 5 mm	15 mm				
	STA.. SSA..31/81/61.. SSA..HF SSA118.. SAY..P..		N4884 A6V11858276 A6V11858278 A6V11858280 A6V10628469				100 N	100 N	200 N				
													
	Operating voltage		Positioning signal		Positioning time [s]								
					STA	SSA	SAY						
	AC 230 V		3-position		–	67.5/135	30	–	SSA331.00	SAY31P03			
			2-position		210	–	–	STA23	–		–		
	AC 24 V		0...10 V		270 ¹⁾	–	30	STA63	–		–		
	AC/DC 24 V		3-position		–	67.5/135	30	–	SSA131.00	SAY81P03			
			2-position/PDM		270	–	–	STA73	–		–		
		0...10 V		–	25/50	30	–	SSA161.05	SAY61P03				
		Modbus		–	–	30	–	–	SAY61P03/MO				
		4...20 mA		–	25	–	–	SSA151.05HF	–				
		0...10 V		–	25	–	–	SSA161.05HF	–				
		0...10 V		–	25	–	–	SSA161E.05HF ¹⁾	–				
		KNX S-/LTE-Mode, KNX PL-Link		–	50	–	–	SSA118.09HKN	–				
PN 25	1...120 °C	Without pressure-testing points	With pressure-testing points	DN	G [inch]	V _{min} [l/h]	V ₁₀₀ [l/h]	Δp _{min} [kPa]	Δp _{max} [kPa]	Δp _{min} [kPa]	Δp _{max} [kPa]	Δp _{min} [kPa]	Δp _{max} [kPa]
Data sheet		N4855											
		VPP46.10L0.2	VPP46.10L0.2Q	10	½	30	200	16	600	16	600	–	–
		VPP46.10L0.4	VPP46.10L0.4Q	10	½	65	333	16	600	–	–	–	–
		VPP46.15L0.2	VPP46.15L0.2Q	10	½	65	370	–	–	16	600	–	–
		VPP46.15L0.6	VPP46.15L0.6Q	15	¾	30	200	19	600	19	600	–	–
		VPP46.20F1.4	VPP46.20F1.4Q	15	¾	100	575	19	600	19	600	–	–
		VPP46.20F1.4	VPP46.20F1.4Q	20	1	200	1190	22	600	–	–	–	–
		VPP46.25F1.8	VPP46.25F1.8Q	20	1	220	1330	–	–	22	600	–	–
		VPP46.25F1.8	VPP46.25F1.8Q	25	1¼	204	1470	39	600	–	–	–	–
		VPP46.32F4	VPP46.32F4Q	25	1¼	250	1800	–	–	39	600	–	–
				32	1½	450	3270	28	600	–	–	–	–
				32	1½	550	4001	–	–	28	600	–	–
PN 25	1...120 °C	Without pressure-testing points	With pressure-testing points	DN	Rp [inch]	V _{min} [l/h]	V ₁₀₀ [l/h]	Δp _{min} [kPa]	Δp _{max} [kPa]	Δp _{min} [kPa]	Δp _{max} [kPa]	Δp _{min} [kPa]	Δp _{max} [kPa]
Data sheet		N4855											
		VPI46.15L0.2	VPI46.15L0.2Q	15	½	30	200	19	600	19	600	–	–
		VPI46.15L0.6	VPI46.15L0.6Q	15	½	100	575	19	600	19	600	–	–
		VPI46.20F1.4	VPI46.20F1.4Q	20	¾	200	1190	22	600	–	–	–	–
		VPI46.20F1.4	VPI46.20F1.4Q	20	¾	220	1330	–	–	22	600	–	–
		VPI46.25F1.8	VPI46.25F1.8Q	25	1¼	204	1470	39	600	–	–	–	–
		VPI46.25F1.8	VPI46.25F1.8Q	25	1¼	250	1800	–	–	39	600	–	–
		VPI46.32F4	VPI46.32F4Q	32	1½	450	3270	28	600	–	–	–	–
		–	–	32	1½	550	4001	–	–	28	600	–	–
		–	–	40	1½	1370	9500	–	–	–	–	25	600
		–	–	50	2	1400	11500	–	–	–	–	36	600



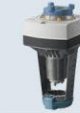




¹⁾ Equal percentage valve characteristic

²⁾ In control mode (warm-up time) min. running time approx. 30 s/mm;

³⁾ .. = insert V_{nom} V_{nom} = factory setting = volumetric flow at 0.5 mm stroke or setting mark 3 of the presetting;

⁴⁾ Δp_{min} is valid for V_{nom} 45/90/145 l/h;

VPP46../VPI46...: Δp_{min} is for the V₁₀₀. For lower flows please consult the data sheet.

Flanged PICVs										
Typical applications – District heating – Heating groups – Air handling units	Actuators	Data sheet				20 mm	20 / 40 mm	40 mm		
	SAX..P..	N4509				500 N	1100 N	1100 N		
	SQV91P..	N4833								
	SAV..P..	N4510								
	Operating voltage	Positioning signal	Positioning time [s]			Spring return function [s]				
	AC 230 V	3-position	SAX	SQV	SAV					
		3-position	30	–	120	–	SAX31P03	–	SAV31P00	
		3-position	–	40/80	–	30	–	SQV91P40 ¹⁾	–	
	AC/DC 24 V	3-position	–	40/80	–	30	–	SQV91P30 ²⁾	–	
		3-position	30	–	120	–	SAX81P03	–	SAV81P00	
3-position		–	40/80	–	30	–	SQV91P40 ¹⁾	–		
3-position		–	40/80	–	30	–	SQV91P30 ²⁾	–		
0...10 V, 4...20 mA		30	–	120	–	SAX61P03	–	SAV61P00		
0...10 V, 4...20 mA		–	40/80	–	30	–	SQV91P40 ¹⁾	–		
0...10 V, 4...20 mA		–	40/80	–	30	–	SQV91P30 ²⁾	–		
Modbus	30	–	120	–	SAX61P03/MO	–	SAV61P00/MO			
PN 16	1...120 °C									
Data sheet	A6V11466366	DN	\dot{V}_{min} [m ³ /h]	\dot{V}_{100} [m ³ /h]	Δp_{min} [kPa]	$\Delta p_s/\Delta p_{max}$ [kPa]	$\Delta p_s/\Delta p_{max}$ [kPa]	$\Delta p_s/\Delta p_{max}$ [kPa]		
 	VPF44.50F15	50	2.9	15.9	21.4	700/600	700/600	–		
	VPF44.50F25	50	4.2	26.2	52.6	700/600	700/600	–		
	VPF44.65F25	65	4	28	22	700/600	700/600	–		
	VPF44.65F35	65	5.1	35.8	42.6	700/600	700/600	–		
	VPF44.80F35	80	5.5	36.7	18	700/600	700/600	–		
	VPF44.80F45	80	7.2	47.9	36.4	700/600	700/600	–		
	VPF43.100F70 ³⁾	100	12.1	68	35	–	600	600		
	VPF43.100F90 ³⁾	100	14.8	90	75	–	600	600		
	VPF43.125F110	125	18.5	110	35	–	600	600		
	VPF43.125F135	125	23	135	53	–	600	600		
	VPF43.150F160	150	25.6	148	35	–	600	600		
	VPF43.150F200	150	32	195	65	–	600	600		
	VPF43.200F210 ⁴⁾	200	95	210	32	–	600	600		
	VPF43.200F280 ⁴⁾	200	130	280	78	–	600	600		
PN 25	1...120 °C									
Data sheet	N4316	DN	\dot{V}_{min} [m ³ /h]	\dot{V}_{100} [m ³ /h]	Δp_{min} [kPa]	$\Delta p_s/\Delta p_{max}$ [kPa]	$\Delta p_s/\Delta p_{max}$ [kPa]	$\Delta p_s/\Delta p_{max}$ [kPa]		
 	VPF53.50F16 ⁵⁾	50	2.3	15	20	600	600	–		
	VPF53.50F25 ⁵⁾	50	4.3	25	50	600	600	–		
	VPF53.65F24 ⁵⁾	65	4.4	24	25	600	600	–		
	VPF53.65F35 ⁵⁾	65	6	35	55	600	600	–		
	VPF53.80F35 ⁵⁾	80	5.3	34	25	600	600	–		
	VPF53.80F45 ⁵⁾	80	7	43	50	600	600	–		
	VPF53.100F70 ⁵⁾	100	12.1	68	35	–	600	600		
	VPF53.100F90 ⁵⁾	100	14.8	90	75	–	600	600		
	VPF53.125F110	125	18.5	110	35	–	600	600		
	VPF53.125F135	125	23	135	53	–	600	600		
	VPF53.150F160	150	25.6	148	35	–	600	600		
	VPF53.150F200	150	32	195	65	–	600	600		
	VPF53.200F210 ⁴⁾	200	95	210	32	–	600	600		
	VPF53.200F280 ⁴⁾	200	130	280	78	–	600	600		

¹⁾ Fail-safe function: valve closed

²⁾ Fail-safe function: valve open

³⁾ Over the course of 2021, these valves will be replaced by VPF44...

⁴⁾ max. medium temperature 110 °C













⁵⁾ Over the course of 2021, these valves will be replaced by VPF54...



VPF43../VPF53...: Δp_{min} is for the \dot{V}_{100} . For lower flows please consult the data sheet.



Valves and actuators

Overview and selection tools

Threaded globe valves										
Typical applications – Radiators	Actuators RTN..	Data sheet N2111								
					RTN51/RTN51G	RTN71	RTN81			
Typical applications – Radiators	Actuators STA.. SSA..31/81/61.. SSA..HF SSA118..	Data sheet N4884 A6V11858276 A6V11858278 A6V11858280								
					4.5 mm 100 N	2.5 mm 100 N	4.5 mm 90 N			
	Operating voltage	Positioning signal	Positioning time [s]							
	AC 230 V	2-position	210		STA23	–	STA23HD ¹⁾			
		3-position	67.5		–	SSA331.00	–			
	AC 24 V	3-position	67.5		–	SSA131.00	–			
		0...10 V	270 ²⁾		STA63	–	–			
	AC/DC 24 V	2-position/PDM	270		STA73	–	STA73HD ¹⁾			
		0...10 V	25		–	SSA161.05	–			
		4...20 mA	25		–	SSA151.05HF	–			
		0...10 V	25		–	SSA161.05HF	–			
		0...10 V	25		–	SSA161E.05HF ³⁾	–			
		KNX S-/LTE-Mode, KNX PL-Link	50		–	SSA118.09HKN	–			
	Normally Open/Normally Closed (for radiator valves)				NC	–	NC			
PN 10	1...120 °C	DIN	NF	DN	Rp/R	k _v	Δp _{max}	Δp _{max}	Δp _{max}	
Data sheet		N2105	N2106		[inch]	[m ³ /h]	[kPa]	[kPa]	[kPa]	
		VDN110	VDN210	10	Rp/R 3/8	0.09...0.63	60	60	60	
		VDN115	VDN215	15	Rp/R 1/2	0.10...0.89	60	60	60	
		VDN120	VDN220	20	Rp/R 3/4	0.31...1.41	60	60	60	
		VEN110	VEN210	10	Rp/R 3/8	0.09...0.63	60	60	60	
		VEN115	VEN215	15	Rp/R 1/2	0.10...0.89	60	60	60	
		VEN120	VEN220	20	Rp/R 3/4	0.31...1.41	60	60	60	
		–	VUN210	10	Rp/R 3/8	0.14...0.60	60	60	60	
		–	VUN215	15	Rp/R 1/2	0.13...0.77	60	60	60	

Presettings for radiator valves VEN... VDN... VUN..									
k _v values [m ³ /h] at the different preadjusted positions (XP=2K)									
Control range with electromotoric and electrothermic actuators SSA... STA..			■	■	■	■	■	■	–
Control range with thermostatic head RTN..			■	■	■	■	■	■	■
Reference numbers for preadjustment		1	2	3	4	5	N	N (k _{vs})	
VDN110/VDN210/VEN110/VEN210		0.072	0.17	0.24	0.28	0.37	0.43	0.63	
VDN115/VDN215/VEN115/VEN215		0.07	0.17	0.28	0.36	0.45	0.50	0.89	
VDN120/VDN220/VEN120/VEN220		0.22	0.35	0.44	0.52	0.60	0.71	1.41	
VUN210		0.14	0.26	0.34	0.39	0.40	0.43	0.60	
VUN215		0.13	0.22	0.30	0.39	0.45	0.50	0.77	





¹⁾ Optimized for floor heating systems

²⁾ In control mode (warm-up time) min. running time approx. 30 s/mm

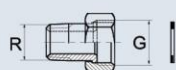
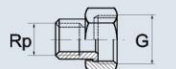
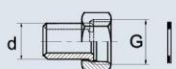
³⁾ Equal percentage valve characteristic

k_v = nominal flow rate of cold water (5...30 °C) through the valve at the respective stroke and a differential pressure of 100 kPa (1 bar)
The selected k_v values of the radiator valves can be easily and precisely set on the valve head in 5 steps + N (fully open)

Threaded globe valves

Typical applications		Actuators	Data sheet	4.5 mm 100 N	2.5 mm 100 N			
– Chilled ceilings		STA..	N4884					
		SSA..31/81/61..	A6V11858276					
		SSA..HF	A6V11858278					
		SSA118..	A6V11858280					
		Operating voltage	Positioning signal			Positioning time [s]		
		AC 230 V	2-position			210	STA23	–
			3-position			67.5	–	SSA331.00
		AC 24 V	3-position			67.5	–	SSA131.00
			0...10 V			270 ²⁾	STA63	–
		AC/DC 24 V	2-position/PDM			270	STA73	–
0...10 V	25		–	SSA161.05				
4...20 mA	25		–	SSA151.05HF				
0...10 V	25		–	SSA161.05HF				
0...10 V	25		–	SSA161E.05HF ¹⁾				
KNX S-/LTE-Mode, KNX PL-Link	50		–	SSA118.09HKN				
Normally Open/Normally Closed (for radiator valves)				NC	–			
PN 10	1...110 °C							
Data sheet	N2103	DN	Rp/R [inch]	k _v [l/h]	Δp _{max} [kPa]			
								
	VD115CLC	15	Rp/R ½	0.25...1.9	150			
	VD120CLC	20	Rp/R ¾	0.25...2.6	150			
	VD125CLC	25	Rp/R 1	0.25...2.6	150			

Union nuts for threaded valves ³⁾

	Type			R, Rp [inch]	Material	
	Set of 2	Set of 3	G [inch]			
 	ALG132	ALG133	G ½B	R ¾ (Outergewinde)	Brass	
	ALG142	ALG143	G ¾B	R ½ (Outergewinde)	Brass	
	ALG122	ALG123	G ¾B	Rp ¾	Malleable cast iron	
	ALG152	ALG153	G 1B	Rp ½	Malleable cast iron	
	ALG152B	ALG153B	G 1B	Rp ½	Brass	
	ALG202	ALG203	G 1¼B	Rp ¾	Malleable cast iron	
	ALG202B	ALG203B	G 1¼B	Rp ¾	Brass	
	ALG252	ALG253	G 1½B	Rp 1	Malleable cast iron	
	ALG252B	ALG253B	G 1½B	Rp 1	Brass	
	ALG322	ALG323	G 2B	Rp 1¼	Malleable cast iron	
	ALG322B	ALG323B	G 2B	Rp 1¼	Brass	
	ALG402	ALG403	G 2¼B	Rp 1½	Malleable cast iron	
	ALG402B	ALG403B	G 2¼B	Rp 1½	Brass	
	ALG502	ALG503	G 2¾B	Rp 2	Malleable cast iron	
	ALG502B	ALG503B	G 2¾B	Rp 2	Brass	
	Type			Ø d [mm]	Material	
	Set of 2					
	ALS152			G ¾B	21.3	Steel, weldable
	ALS202			G 1B	26.8	Steel, weldable
ALS252			G 1¼B	33.7	Steel, weldable	









¹⁾ Equal percentage valve characteristic

²⁾ In control mode (warm-up time) min. running time approx. 30 s/mm

³⁾ Valve side: cylindrical thread G according to ISO 228-1, pipe side: ALG.. with cylindrical Rp- or tapered R-thread according to ISO 7-1, pipe side: ALS.. with welded connection

Valves and actuators

Overview and selection tools

Threaded globe valves										
Typical applications – Floor heating – Chilled ceilings – VAV – Fan coil units – Zone control	Actuators		Data sheet				5.5 mm			
	SSB..		N4891				200 N		200 N	
	Operating voltage		Positioning signal		Positioning time [s]		Auxiliary switch			
	AC 230 V		3-position		150		SSB..1.1			
	AC 24 V		3-position		150		✓			
AC/DC 24 V		0...10 V		75		–				
 						SSB31		SSB31.1		
						SSB81		SSB81.1		
						SSB61		–		
PN 16 1...110 °C Data sheet N4845										
		DN	G [inch]	k_{vs} [m³/h]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
	VVP45.10-.. ¹⁾		10	G ½B	0.25 / 0.4 / 0.63 / 1 / 1.6	725	400	725	400	
	VVP45.15-2.5		15	G ¾B	2.5	350	350	350	350	
	VVP45.20-4		20	G 1B	4	350	350	350	350	
	VVP45.25-6.3		25	G 1¼B	6.3	300	300	300	300	
	VXP45.10-..		10	G ½B	0.25 / 0.4 / 0.63 / 1 / 1.6	–	400	–	400	
	VXP45.15-2.5		15	G ¾B	2.5	–	350	–	350	
	VXP45.20-4		20	G 1B	4	–	350	–	350	
	VXP45.25-6.3		25	G 1¼B	6.3	–	300	–	300	
	VMP45.10-..		10	G ½B	0.25 / 0.4 / 0.63 / 1	–	400	–	400	
	VMP45.10-1.6		10	G ½B	1.6	–	400	–	400	
	VMP45.15-2.5		15	G ¾B	2.5	–	350	–	350	
	VMP45.20-4		20	G 1B	4	–	350	–	350	
Typical applications – Chilled ceilings – VAV – Fan coil units										
Actuators		Data sheet				4.5 mm		2.5 mm		
STP..		N4884				100 N		135 N		160 N
SFP..		N4865								
SSP..		N4864								
Operating voltage		Positioning signal		Positioning time [s]		Spring return function [s]				
AC 230 V		2-position		210		–		STP23		
		2-position		10		30-50		–		
		3-position		150		–		SFP21/18		
AC 24 V		2-position		10		30-50		–		
		3-position		43		–		SFP71/18		
		3-position		150		–		–		
		0...10 V		270 ²⁾		–		SSP81.04		
AC/DC 24 V		2-position/PDM		270		–		SSP81		
		0...10 V		34		–		SSP61		
PN 16 1...110 °C Data sheet N4847										
		DN	G [inch]	k_{vs} [m³/h]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
	VVP47.10-.. ¹⁾		10	G ½B	0.25 / 0.4	700	400	1000	400	1000
	VVP47.10-..		10	G ½B	0.63 / 1	250	250	500	400	500
	VVP47.10-1.6		10	G ½B	1.6	150	150	300	300	300
	VVP47.15-2.5		15	G ¾B	2.5	150	150	300	300	300
	VVP47.20-4		20	G 1B	4	100	100	175	175	175
	VXP47.10-..		10	G ½B	0.25 / 0.4	–	400	–	400	–
	VXP47.10-..		10	G ½B	0.63 / 1	–	250	–	400	–
	VXP47.10-1.6		10	G ½B	1.6	–	150	–	300	–
	VXP47.15-2.5		15	G ¾B	2.5	–	150	–	300	–
	VXP47.20-4		20	G 1B	4	–	100	–	175	–
	VMP47.10-..		10	G ½B	0.25 / 0.4	–	400	–	400	–
	VMP47.10-..		10	G ½B	0.63 / 1	–	250	–	400	–
		VMP47.10-1.6		10	G ½B	1.6	–	150	–	300
		VMP47.15-2.5		15	G ¾B	2.5	–	150	–	300

VVP45..N with Serto compression fittings, $k_{vs} = 2.5 / 4 / 6.3$ m³/h
 VVP45..S, VMP45..S with Conex® compression fittings, $k_{vs} = 0.63 / 1 / 1.6 / 2.5$ m³/h
 VVP47..S, VMP47..S with Conex® compression fittings, $k_{vs} = 0.63 / 1 / 1.6 / 2.5$ m³/h

¹⁾ .. = k_{vs} value

²⁾ In control mode (warm-up time) min. running time approx. 30 s/mm

Threaded globe valves													
Typical applications – Floor heating – Fan coil units – Zone control	Actuators		Data sheet				2.5 mm		4.5 mm		2.5 mm		
	SFA.. SUA21/3 STA.. SSA31.04 ¹⁾		N4863 A6V10446174 N4884 N4860				200 N	170 N	100 N	160 N			
	Operating voltage		Positioning signal		Positioning time [s]		Spring return function [s]						
	AC 230 V		2-position		10		30-50		SFA21/18		-		
			2-position		210		-		-		STA23		
			2-position/SPST ²⁾		10		-		-		SUA21/3		
			3-position/SPDT ²⁾		43		-		-		-		
AC 24 V		2-position		10		30-50		SFA71/18		-			
0...10 V		270 ³⁾		-		-		-		STA63			
AC/DC 24 V		2-position/PDM		270		-		-		STA73			
PN 16		1...110 °C		DN		Rp [inch]		k _{vs} [m ³ /h]		Δp _s [kPa]		Δp _{max} [kPa]	
Data sheet		N4842											
				VVI46.15/2		15		Rp 1/2		2		300 300 400 400 200 200 200 200	
				VVI46.20/2		20		Rp 3/4		3.5		300 300 400 400 200 200 200 200	
				VVI46.25/2		25		Rp 1		5		250 250 250 250 150 150 200 200	
				VXI46.15/2 ⁴⁾		15		Rp 1/2		2		- 300 - 400 - 200 - 200	
				VXI46.20/2 ⁴⁾		20		Rp 3/4		3.5		- 300 - 400 - 200 - 200	
				VXI46.25/2 ⁴⁾		25		Rp 1		5		- 250 - 250 - 150 - 200	
				VXI46.25T ⁵⁾		25		Rp 1		5		- 200 - 200 - 200 - 200	








Thermal actuators and connecting cables for combinable range, STx..3..														
Color		White										Black		
Equipped with		-		Function module DC 0...10 V		Auxiliary switch for STA		Auxiliary switch for STP		LED		-		
Positioning signal		2-position (On/Off)		DC 0...10 V		2-position (On/Off)		2-position (On/Off)		2-position (On/Off)		2-position (On/Off)		
		[STA..., NC]		[STA..., NC]		[STA..., NC]		-		[STA..., NC]		[STA..., NC]		
		[STP..., NO]		-		[STP..., NO]		-		[STP..., NO]		[STP..., NO]		
Standard PVC cables	1 m					ASA23U10		ASP23U10						
	2 m	ASY23L20	ASY6AL20	ASY6PL20					ASY23L20LD					
	3 m											ASY23L30B		
	5 m	ASY23L50											ASY23L50B	
	7 m	ASY23L70												
	10 m	ASY23L100												
	15 m	ASY23L150												
Halogen-free cables	2 m	ASY23L20HF	ASY6AL20HF	ASY6PL20HF										
	5 m	ASY23L50HF												
	10 m	ASY23L100HF												
Actuator														
STA73/00		■		■		■		■		■		■		
STA23/00		■		■		■		■		■		■		
STP73/00		■		■		■		■		■		■		
STP23/00		■		■		■		■		■		■		
STA73PR/00 ⁶⁾		■		■		■		■		■		■		
STP73PR/00 ⁶⁾		■		■		■		■		■		■		
STA73MP/00 ⁷⁾		■		■		■		■		■		■		
STA23MP/00 ⁷⁾		■		■		■		■		■		■		
STA73B/00		■		■		■		■		■		■		
STA23B/00		■		■		■		■		■		■		

¹⁾ Not suited for radiator valves
²⁾ SPST = single-pole single-throw, SPDT = single-pole double-throw
³⁾ In control mode (warm-up time) min. running time approx. 30 s/mm
⁴⁾ 70% k_{vs} in bypass, leakage rate in bypass 2...5% of k_{vs} value
⁵⁾ 100% k_{vs} in bypass, leakage rate in bypass 0.05% of k_{vs} value. For noiseless operation, the value of 100 kPa should not be exceeded.
⁶⁾ Actuators ideal for parallel running. Pulse duration modulation (PDM) in connection with Siemens room controllers of the Desigo™ range and room thermostats.
⁷⁾ Multipack with 50 actuators (OEM) NC: normally closed, NO: normally open



Valves and actuators











Overview and selection tools

Gewinde-Hubventile													
Typical applications – District heating – Boiler plants – Chiller plants – Domestic hot water – Heating groups – Air handling units	Actuators		Data sheet					Spring return function [s]	20 mm				
	SAX..		N4501						800 N	1000 N	2800 N		
	SKD..		N4561										
	SKB..		N4564										
	Operating voltage		Positioning signal		Positioning time [s]								
	AC 230 V		3-position		SAX	SKD	SKB		SKD	SKB			
			3-position		–	120	120		8	10	SAX31.00	SKD32.50	SKB32.50
			3-position		–	120	120		–	–	–	SKD32.51	SKB32.51
			3-position		30	–	–		–	–	SAX31.03	–	–
			3-position		–	30	–		8	–	–	SKD32.21	–
AC 24 V ¹⁾		3-position		–	120	120	–	–	SAX81.00	SKD82.50	SKB82.50		
		3-position		–	120	120	8	10	–	SKD82.51	SKB82.51		
		3-position		30	–	–	–	–	SAX81.03	–	–		
		0...10 V, 4...20 mA		–	30	120	–	–	–	SKD60	SKB60		
		0...10 V, 4...20 mA		–	30	120	15	10	–	SKD62	SKB62		
AC/DC 24 V		0...10 V, 4...20 mA		30	–	–	–	–	SAX61.03	–	–		
		Modbus		30	30	120	–	–	SAX60.03/MO	SKD62/MO	SKB62/MO		
PN 16	-25...150 °C ²⁾				DN	G [inch]	k _{vs} [m ³ /h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]
Data sheet	N4363		N4463										
	VVG41.11..12		–	–	15	G 1B	0.63 / 1	1600	800	1600	800	1600	800
	VVG41.13		–	VXG41.1301	15	G 1B	1.6	1600	800	1600	800	1600	800
	VVG41.14		–	VXG41.1401	15	G 1B	2.5	1600	800	1600	800	1600	800
	VVG41.15		–	VXG41.1501	15	G 1B	4	1600	800	1600	800	1600	800
	VVG41.20		–	VXG41.2001	20	G 1¼B	6.3	1600	800	1600	800	1600	800
	VVG41.25		–	VXG41.2501	25	G 1½B	10	1550	800	1600	800	1600	800
	VVG41.32		–	VXG41.3201	32	G 2B	16	875	800	1275	800	1600	800
	VVG41.40		–	VXG41.4001	40	G 2¼B	25	525	525	775	775	1600	800
	VVG41.50		–	VXG41.5001	50	G 2¾B	40	300	300	450	450	1225	800

¹⁾ SAX81...: AC/DC 24 V

²⁾ SAX... max. 130 °C

VXG41.. valves contain only materials in contact with drinking water that comply with the UBA Positive List dated April 23, 2013, Categories B+C

Threaded globe valves												
Typical applications – Boiler plants – Domestic hot water – Heating groups – Air handling units	Actuators		Data sheet			Spring return function [s]	5.5 mm					
	SAS..		N4581				400N	400N	400N	400N	400N	400N
	Operating voltage		Positioning signal		Positioning time [s]							
	AC 230 V		3-position		120		SAS31.00	–	–	–	–	–
			3-position		30		SAS31.03	–	–	–	–	–
			3-position		120		–	SAS31.50	–	–	–	–
			3-position		30		–	SAS31.53	–	–	–	–
	AC/DC 24 V		0...10 V,		30		SAS61.03	–	–	–	–	–
			4...20 mA,		30		–	–	–	SAS61.33	–	–
			0...1000 Ω		30		–	SAS61.53	–	–	–	–
		3-position		120	SAS81.00	–	–	–	–	–		
		3-position		30	SAS81.03	–	–	–	–	–		
		3-position		30	–	–	–	–	SAS81.33	–		
		Modbus		30	SAS61.03/MO	SAS61.33/MO	–	–	–	–		
PN 16	1...120 °C											
Data sheet	N4364											
	VVG44.15-.. ¹⁾			VXG44.15-..	15 G 1B	0.25 / 0.4 / 0.63	1600	400	1600	400	1600	400
	VVG44.15-..			VXG44.15-..	15 G 1B	1 / 1.6	725	400	725	400	725	400
	VVG44.15-..			VXG44.15-..	15 G 1B	2.5 / 4	400	400	400	400	400	400
	VVG44.20-6.3			VXG44.20-6.3	20 G 1½B	6.3	750	400	750	400	750	400
	VVG44.25-10			VXG44.25-10	25 G 1½B	10	400	400	400	400	400	400
	VVG44.32-16			VXG44.32-16	32 G 2B	16	250	250	250	250	250	250
	VVG44.40-25			VXG44.40-25	40 G 2½B	25	125	125	125	125	125	125
Typical applications	Actuators		Data sheet			5.5 mm						
– Boiler plants	SSC..		N4895									
– Heating groups	Operating voltage		Positioning signal		Positioning time [s]	Spring return function [s]						
– Air handling units	AC 230 V		3-position		150	SSC31						
	AC 24 V		3-position		150	SSC81						
	AC/DC 24 V		0...10 V		30	SSC61						
			0...10 V		30	SSC61.5						
PN 16	1...110 °C											
Data sheet	N4845											
	VVP45.20-4			VXP45.20-4	20 G 1B	4	350		350			
	VVP45.25-6.3			VXP45.25-6.3	25 G 1½B	6.3	300		300			
	VVP45.25-10			VXP45.25-10	25 G 1½B	10	300		300			
	VVP45.32-16			VXP45.32-16	32 G 2B	16	175		175			
	VVP45.40-25			VXP45.40-25	40 G 2½B	25	75		75			
Typical applications	Actuators		Data sheet			5.5 mm						
– District heating	SAT..		N4584									
– Boiler plants	Operating voltage		Positioning signal		Positioning time [s]	Spring return function [s]						
	AC 230 V		3-position		8	SAT31.008						
			3-position		15	SAT31.51						
	AC/DC 24 V		0...10 V,		8	SAT61.008						
			4...20 mA,		15	SAT61.51						
			0...1000 Ω		8	SAT61.008/MO						
			Modbus		15	SAT61.51/MO						
PN 25	1...130 °C											
Data sheet	N4380											
	VVG549.15-.. ¹⁾			VXG549.15-..	15 G ¾B	0.25 / 0.4 / 0.63	2500	1200	2500	1200	2500	1200
	VVG549.15-..			VXG549.15-..	15 G ¾B	1 / 1.6 / 2.5	2000	1200	2000	1200	2000	1200
	VVG549.20-4K			VXG549.20-4K	20 G 1B	4	1600	1200	1600	1200	1600	1200
	VVG549.25-6.3K			VXG549.25-6.3K	25 G 1½B	6.3	1600	1200	1600	1200	1600	1200

¹⁾ .. = insert k_{vs} value



Valves and actuators

Overview and selection tools

Flanged globe valves

Typical applications	Actuators	Data sheet		Spring return function [s]	20 mm					40 mm			
					800 N	1000 N	2800 N	1600 N	2800 N				
- District heating	SAX..	N4501											
- Boiler plants	SKD..	N4561											
- Chiller plants	SKB..	N4564											
- Domestic hot water	SKC..	N4566											
- Heating groups	SAV..	CE1N4503											
- Air handling units	Operating voltage	Positioning signal	Positioning time [s]										
			SA..	SKD	SKB/C	SKD	SKB/C						
	AC 230 V	3-position	120	120	120	-	-	SAX31.00	SKD32.50	SKB32.50	SAV31.00	SKC32.60	
		3-position	-	120	120	8	10/18	-	SKD32.51	SKB32.51	-	SKC32.61	
		3-position	30	-	-	-	-	SAX31.03	-	-	-	-	
		3-position	-	30	-	8	-	-	SKD32.21	-	-	-	
	AC 24 V ¹⁾	3-position	120	120	120	-	-	SAX81.00	SKD82.50	SKB82.50	SAV81.00	SKC82.60	
		3-position	-	120	120	8	10/18	-	SKD82.51	SKB82.51	-	SKC82.61	
		3-position	30	-	-	-	-	SAX81.03	-	-	-	-	
		0...10 V, 4...20 mA	-	30	120	-	-	-	SKD60	SKB60	-	SKC60	
		0...10 V, 4...20 mA	-	30	120	15	10/20	-	SKD62	SKB62	-	SKC62	
	AC/DC 24 V	0...10 V, 4...20 mA	30	-	-	-	-	SAX61.03	-	-	SAV61.00	-	
		0...10 V, 4...20 mA	120	-	-	-	-	-	-	-	-	-	
		Modbus	30	30	120	15	10/20	SAX61.03/MO	SKD62/MO	SKB62/MO	SAV61.00/MO	SKC62/MO	
PN 6	-10...130 °C												
Data sheet	N4401		N4401	DN	k _{vs} [m³/h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]
	VVF22.25-.. ²⁾		VXF22.25-..	25	2.5/4/6.3/10	600	300	600	300	600	300	-	-
	VVF22.40-..		VXF22.40-..	40	16/25	550	300	600	300	600	300	600	300
	VVF22.50-40		VXF22.50-40	50	40	350	300	450	300	600	300	600	300
	VVF22.65-63		VXF22.65-63	65	63	200	150	250	200	600	300	450	300
	VVF22.80-100		VXF22.80-100	80	100	125	75	175	125	450	300	250	225
	VVF22.100-160		VXF22.100-160	100	160	-	-	-	-	-	-	160	125
												300	250
PN 10	-10...150 °C ³⁾												
Data sheet	N4402		N4402	DN	k _{vs} [m³/h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]
	VVF32.15-.. ²⁾		VXF32.15-..	15	1.6/2.5/4	1000	400	1000	400	1000	400	-	-
	VVF32.25-..		VXF32.25-..	25	6.3/10	1000	400	1000	400	1000	400	-	-
	VVF32.40-..		VXF32.40-..	40	16/25	550	400	750	400	1000	400	1000	400
	VVF32.50-40		VXF32.50-40	50	40	350	300	450	400	1000	400	750	400
	VVF32.65-63		VXF32.65-63	65	63	200	150	250	200	700	400	450	400
	VVF32.80-100		VXF32.80-100	80	100	125	75	175	125	450	400	250	225
	VVF32.100-160		VXF32.100-160	100	160	-	-	-	-	-	-	160	125
	VVF32.125-250		VXF32.125-250	125	250	-	-	-	-	-	-	125	90
	VVF32.150-400		VXF32.150-400	150	400	-	-	-	-	-	-	80	60
												125	100
PN 16	-10...150 °C ³⁾												
Data sheet	N4403		N4403	DN	k _{vs} [m³/h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]
	VVF42.15-.. ²⁾		VXF42.15-..	15	1.6/2.5/4	1600	400	1600	400	1600	400	-	-
	VVF42.20-6.3		VXF42.20-6.3	20	6.3	1600	400	1600	400	1600	400	-	-
	VVF42.25-..		VXF42.25-..	25	6.3/10	1600	400	1600	400	1600	400	-	-
	VVF42.32-16		VXF42.32-16	32	16	900	400	1200	400	1600	400	-	-
	VVF42.40-..		VXF42.40-..	40	16/25	550	400	750	400	1600	400	1250	400
	VVF42.50-..		VXF42.50-..	50	31.5/40	350	300	450	400	1200	400	750	400
	VVF42.65-..		VXF42.65-..	65	50/63	200	150	250	200	700	400	450	400
	VVF42.80-..		VXF42.80-..	80	80/100	125	75	175	125	450	400	250	225
	VVF42.100-..		VXF42.100-..	100	125/160	-	-	-	-	-	-	160	125
	VVF42.125-..		VXF42.125-..	125	200/250	-	-	-	-	-	-	125	90
	VVF42.150-..		VXF42.150-..	150	315/400	-	-	-	-	-	-	80	60
	VVF42.150-40K		VXF42.150-40K	50	40	1600	400	1600	400	1600	400	-	-
	VVF42.125-250K		VXF42.125-250K	125	250	1600	400	1600	400	1600	400	1600	400
	VVF42.150-360K		VXF42.150-360K	150	360	-	-	-	-	-	-	1600	400
												1600	400
PN 16	-20...220 °C												
Data sheet	N4404		N4404	DN	k _{vs} [m³/h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]
	VVF43.65-50		VXF43.65-50	65	50	-	-	-	-	-	-	450	400
	VVF43.65-63		VXF43.65-63	65	63	-	-	-	-	-	-	450	400
	VVF43.80-80		VXF43.80-80	80	80	-	-	-	-	-	-	250	225
	VVF43.80-100		VXF43.80-100	80	100	-	-	-	-	-	-	250	225
	VVF43.100-125		VXF43.100-125	100	125	-	-	-	-	-	-	160	125
	VVF43.100-160		VXF43.100-160	100	160	-	-	-	-	-	-	160	125
	VVF43.125-200		VXF43.125-200	125	200	-	-	-	-	-	-	125	90
	VVF43.125-250		VXF43.125-250	125	250	-	-	-	-	-	-	125	90
	VVF43.150-315		VXF43.150-315	150	315	-	-	-	-	-	-	80	60
	VVF43.150-400		VXF43.150-400	150	400	-	-	-	-	-	-	80	60
	VVF43.65-63K		VXF43.65-63K	65	63	-	-	-	-	-	-	1600	800
	VVF43.80-100K		VXF43.80-100K	80	100	-	-	-	-	-	-	1600	800
	VVF43.100-150K		VXF43.100-150K	100	150	-	-	-	-	-	-	1600	800
	VVF43.125-220K		VXF43.125-220K	125	220	-	-	-	-	-	-	1600	800
	VVF43.150-315K		VXF43.150-315K	150	315	-	-	-	-	-	-	1600	800
	VVF43.200-450K		VXF43.200-450K	200	450	-	-	-	-	-	-	1200	800
	VVF43.250-630K		VXF43.250-630K	250	630	-	-	-	-	-	-	1000	800

¹⁾ SAX81..: AC/DC 24 V ²⁾ .. = insert k_{vs} value

³⁾ SAX.. max. 130 °C; VVF43.., VXF43..: For DN 15...50 and k_{vs} values ≤ 40 m³/h see V..F53..

Flansch-Hubventile																									
Typical applications	Actuators	Data sheet		Spring return function [s]		20 mm					40 mm														
						800 N	1000 N	2800 N	1600 N	2800 N															
– District heating – Boiler plants – Chiller plants – Domestic hot water – Heating groups – Air handling units	SAX..	N4501	Positioning signal SA.. SKD SKB/C SKD SKB/C	Positioning time [s] SKD SKB/C	SKD SKB/C	SKD SKB/C	SKD SKB/C	SKD SKB/C	SKD SKB/C	SKD SKB/C	SKD SKB/C	SKD SKB/C	SKD SKB/C	SKD SKB/C											
	Operating voltage	AC 230 V													120	120	120	–	–	SAX31.00	SKD32.50	SKB32.50	SAV31.00	SKC32.60	
		3-position													–	120	120	8	10/18	–	SKD32.51	SKB32.51	–	SKC32.61	
		3-position													30	–	–	–	–	SAX31.03	–	–	–	–	
		3-position													–	30	–	8	–	–	SKD32.21	–	–	–	
		AC 24 V													120	120	120	–	–	SAX81.00	SKD82.50	SKB82.50	SAV81.00	SKC82.60	
		3-position													–	120	120	8	10/18	–	SKD82.51	SKB82.51	–	SKC82.61	
		3-position													30	–	–	–	–	SAX81.03	–	–	–	–	
		0...10 V, 4...20 mA													–	30	120	–	–	–	SKD60	SKB60	–	SKC60	
		0...10 V, 4...20 mA													–	30	120	15	10/20	–	SKD62	SKB62	–	SKC62	
		AC/DC 24 V													30	–	–	–	–	SAX61.03	–	–	–	–	
		0...10 V, 4...20 mA													120	–	–	–	–	–	–	–	SAV61.00	–	
		Modbus													30	30	120	–	–	SAX61.03/MO	SKD62/MO	SKB62/MO	SAV61.00/MO	SKC62/MO	
	PN 25	-20...220°C ²⁾													DN	k _{vs} [m³/h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]
Data sheet	N4405		N4405																						
		VVF53.15-.. ³⁾	–	15	0.16/0.2/0.25/0.32/0.4/0.5/0.63	2500	1200	2500	1200	2500	1200	–	–	–											
		VVF53.15-..	–	15	0.8/1/1.25/2/3.2	2500	1200	2500	1200	2500	1200	–	–	–											
		VVF53.15-..	–	15	1.6/2.5/4	2500	1200	2500	1200	2500	1200	–	–	–											
		VVF53.20-6.3	VXF53.20-6.3	20	6.3	2500	1200	2500	1200	2500	1200	–	–	–											
		VVF53.25-..	–	25	5/8	1600	1200	2100	1200	2500	1200	–	–	–											
		VVF53.25-..	VXF53.25-..	25	6.3/10	1600	1200	2100	1200	2500	1200	–	–	–											
		VVF53.32-16	VXF53.32-16	32	16	900	750	1200	1100	2500	1200	–	–	–											
		VVF53.40-..	–	40	12.5/20	550	500	750	650	2000	1200	–	–	–											
		VVF53.40-..	VXF53.40-..	40	16/25	550	500	750	650	2000	1200	1250	1150	–											
		VVF53.50-31.5	–	50	31.5	350	300	450	400	1200	1150	1250	1150	–											
		VVF53.50-40	VXF53.50-40	50	40	350	300	450	400	1200	1150	750	700	–											
		VVF53.65-63	VXF53.65-63	65	63	–	–	–	–	–	–	750	700	700											
		VVF53.80-100	VXF53.80-100	80	100	–	–	–	–	–	–	450	400	450											
		VVF53.100-160	VXF53.100-160	100	160	–	–	–	–	–	–	250	225	300											
		VVF53.125-250	VXF53.125-250	125	250	–	–	–	–	–	–	160	125	190											
		VVF53.150-400	VXF53.150-400	150	400	–	–	–	–	–	–	125	90	125											
		VVF53.50-40K	–	50	36	–	–	2500	1250	2500	1250	80	60	–											
		VVF53.65-63K	–	65	63	–	–	–	–	–	–	–	–	2500											
		VVF53.80-100K	–	80	100	–	–	–	–	–	–	–	–	2500											
		VVF53.100-150K	–	100	150	–	–	–	–	–	–	–	–	2500											
		VVF53.125-220K	–	125	220	–	–	–	–	–	–	–	–	2500											
		VVF53.150-315K	–	150	315	–	–	–	–	–	–	–	–	2500											
		VVF53.200-450K	–	200	450	–	–	–	–	–	–	–	–	1200											
		VVF53.250-630K	–	250	630	–	–	–	–	–	–	–	–	1200											
PN 40	-25...220°C		DN	k _{vs} [m³/h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]											
Data sheet	A6V11459527																								
		VVF63.15-0.2	–	15	0.2	–	–	4000	2000	4000	2000	–	–	–											
		VVF63.15-0.32	–	15	0.32	–	–	4000	2000	4000	2000	–	–	–											
		VVF63.15-0.5	–	15	0.5	–	–	4000	2000	4000	2000	–	–	–											
		VVF63.15-0.8	–	15	0.8	–	–	4000	2000	4000	2000	–	–	–											
		VVF63.15-1.25	–	15	1.25	–	–	4000	2000	4000	2000	–	–	–											
		VVF63.15-2	–	15	2	–	–	4000	2000	4000	2000	–	–	–											
		VVF63.15-3.2	–	15	3.2	–	–	4000	2000	4000	2000	–	–	–											
		VVF63.20-6.3	–	20	5	–	–	3500	2000	4000	2000	–	–	–											
		VVF63.25-5	–	25	5	–	–	2100	2000	4000	2000	–	–	–											
		VVF63.25-8	–	25	8	–	–	2100	2000	4000	2000	–	–	–											
		VVF63.32-16	–	32	15	–	–	1200	1100	3200	2000	–	–	–											
		VVF63.40-12.5	–	40	12.5	–	–	750	650	2000	1800	–	–	–											
		VVF63.40-20	–	40	20	–	–	750	650	2000	1800	–	–	–											
		VVF63.50-31.5	–	50	31.5	–	–	450	400	1200	1150	–	–	–											
		VVF63.65-50	–	65	50	–	–	–	–	–	–	–	–	700											
		VVF63.80-80	–	80	80	–	–	–	–	–	–	–	–	450											
		VVF63.100-125	–	100	125	–	–	–	–	–	–	–	–	300											
		VVF63.125-200	–	125	200	–	–	–	–	–	–	–	–	175											
		VVF63.150-315	–	150	315	–	–	–	–	–	–	–	–	125											







¹⁾ SAX81..: AC/DC 24 V

²⁾ SAX.. max. 130 °C


³⁾ .. = insert k_{vs} value

Valves and actuators

Overview and selection tools

Flanged globe valves											
Typical applications	Actuators	Data sheet		Spring return function [s]	20 mm			40 mm			
					1000 N	2800 N	2800 N				
<ul style="list-style-type: none"> - District heating - Boiler plants - Chiller plants - Domestic hot water - Heating groups - Air handling units 	SKD..	N4561	Positioning time [s]	SKD	SKB/C	SAV	SKD	SKB/C			
	SKB..	N4564									
	SAV..	CE1N4503									
	SKC..	N4566									
	Operating voltage	Positioning signal									
	AC 230 V	3-position	120	120	120	-	-	SKD32.50	SKB32.50	SKC32.60	
		3-position	120	120	-	8	10/18	SKD32.51	SKB32.51	SKC32.61	
		3-position	30	-	-	8	-	SKD32.21	-	-	
	AC 24 V	3-position	120	120	120	-	-	SKD82.50	SKB82.50	SKC82.60	
		3-position	120	120	-	8	10/18	SKD82.51	SKB82.51	SKC82.61	
0...10 V, 4...20 mA		30	120	120	-	-	SKD60	SKB60	SKC60		
0...10 V, 4...20 mA		30	120	-	15	10/20	SKD62	SKB62	SKC62		
Modbus		30	120	120	-	-	SKD62/MO	SKB62/MO	SKC62/MO		
PN 40	-25...220°C		DN	k _v [m³/h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	
Data sheet	A6V11459527										
		VVF63.50-40K	50	36	-	1500	4000	2000	-	-	
		VVF63.65-63K	65	63	-	-	-	-	4000	2000	
		VVF63.80-100K	80	100	-	-	-	-	4000	2000	
		VVF63.100-150K	100	150	-	-	-	-	4000	2000	
		VVF63.125-220K	125	220	-	-	-	-	4000	2000	
		VVF63.150-315K	150	315	-	-	-	-	4000	2000	
PN 40	-25...220°C		DN	k _v [m³/h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	
Data sheet	A6V11459527										
		VXF63.15-1.6	15	1.6	2000	200	2000	200	-	-	
		VXF63.15-2.5	15	2.5	2000	200	2000	200	-	-	
		VXF63.15-4	15	4	2000	200	2000	200	-	-	
		VXF63.20-6.3	20	6.3	2000	200	2000	200	-	-	
		VXF63.25-6.3	25	6.3	2000	200	2000	200	-	-	
		VXF63.25-10	25	10	2000	200	2000	200	-	-	
		VXF63.32-16	32	16	1100	200	2000	200	-	-	
		VXF63.40-16	40	16	650	200	2000	200	-	-	
		VXF63.40-25	40	25	650	200	2000	200	-	-	
		VXF63.50-31.5	50	31.5	400	200	1150	200	-	-	
		VXF63.65-50	65	50	-	-	-	-	650	200	
		VXF63.80-80	80	80	-	-	-	-	400	200	
		VXF63.100-125	100	125	-	-	-	-	250	150	
		VXF63.125-200	125	200	-	-	-	-	160	100	
VXF63.150-315	150	315	-	-	-	-	100	70			

Control ball valves

Typical applications	Actuators	Data sheet			Spring return function [s]	2 Nm	5 Nm	7 Nm	10 Nm GLB 8 Nm GLD	
		Positioning time [s]								
- Domestic hot water - Heating groups - Air handling units - Chilled ceilings - VAV - Fan coil units - Zone control	GQD..9A	N4659								
	GSD..9A	A6V10636056								
	GDB..9E	A6V10636150								
	GDB111.9E/KN	A6V10725318								
	GMA..9E	N4658								
	GLB..9E	A6V10636203								
	GLD..9E	A6V11171770								
	Operating voltage	Positioning signal	Positioning time [s]							
	AC 100...240 V	2/3-position	G..D	G..B						GMA
	AC 24 V	KNX S-LTE-Mode, KNX PL-Link	-	150						-
	Modbus	-	150	-						
AC/DC 24 V	3-position	30	-	90						
	2/3-position	-	150	-						
	0...10 V	30	-	90						
	0/2...10 V	30	150	-						
	0/2...10 V	30	-	-						
	Modbus	-	150	90						
					GQD131.9A	-	GMA131.9E	-		
					-	GDB141.9E	-	GLB141.9E		
					GQD161.9A	-	GMA161.9E	-		
					GSD161.9A	GDB161.9E	-	GLB161.9E		
					-	-	-	GLD161.9E		
					-	GDB161.9E/ MO	GMA161.9E/ MO	GLB161.9E/ MO		


PN 40	-10...120 °C			DN	G [inch]	k _{vs} [m³/h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]
Data sheet	N4211	N4211												
	VAG61.15-.. ¹⁾			15	G 1B	1.6/2.5/4/6.3	1400	350	1400	350	1400	350	1400	350
	VAG61.15-..			-	G 1B	1	1400	350	1400	350	1400	350	1400	350
	VAG61.20-..			20	G 1 ¼B	4/6.3	1400	350	1400	350	1400	350	1400	350
	VAG61.20-10			-	G 1 ¼B	10	1400	350	1400	350	1400	350	1400	350
	VAG61.25-10			25	G 1 ½B	10	1400	350	1400	350	1400	350	1400	350
	VAG61.25-..			-	G 1 ½B	6.3/16	1400	350	1400	350	1400	350	1400	350
	VAG61.32-10			32	G 2B	10	-	-	-	-	1000	350	1000	350
	VAG61.32-16			32	G 2B	16	-	-	-	-	1000	350	1000	350
	VAG61.32-25			-	G 2B	25	-	-	-	-	1000	350	1000	350
	VAG61.40-16			-	G 2 ¼B	16	-	-	-	-	800	350	800	350
	VAG61.40-25			-	G 2 ¼B	25	-	-	-	-	800	350	800	350
	VAG61.40-40			-	G 2 ¼B	40	-	-	-	-	800	350	800	350
	VAG61.50-25			-	G 2 ¾B	25	-	-	-	-	600	350	600	350
	VAG61.50-40			-	G 2 ¾B	40	-	-	-	-	600	350	600	350
	VAG61.50-63			-	G 2 ¾B	63	-	-	-	-	600	350	600	350

PN 40	-10...120 °C			DN	Rp [inch]	k _{vs} [m³/h]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]
Data sheet	N4211	N4211												
	VAI61.15-.. ¹⁾			15	Rp ½	1.6/2.5/4/6.3	1400	350	1400	350	1400	350	1400	350
	VAI61.15-..			-	Rp ½	1/10	1400	350	1400	350	1400	350	1400	350
	VAI61.20-..			20	Rp ¾	4/6.3	1400	350	1400	350	1400	350	1400	350
	VAI61.20-10			-	Rp ¾	10	1400	350	1400	350	1400	350	1400	350
	VAI61.25-10			25	Rp 1	10	1400	350	1400	350	1400	350	1400	350
	VAI61.25-..			-	Rp 1	6.3/16	1400	350	1400	350	1400	350	1400	350
	VAI61.32-10			32	Rp 1 ¼	10	-	-	-	-	1000	350	1000	350
	VAI61.32-16			32	Rp 1 ¼	16	-	-	-	-	1000	350	1000	350
	VAI61.32-25			-	Rp 1 ¼	25	-	-	-	-	1000	350	1000	350
	VAI61.40-16			-	Rp 1 ½	16	-	-	-	-	800	350	800	350
	VAI61.40-25			-	Rp 1 ½	25	-	-	-	-	800	350	800	350
	VAI61.40-40			-	Rp 1 ½	40	-	-	-	-	800	350	800	350
	VAI61.50-25			-	Rp 2	25	-	-	-	-	600	350	600	350
	VAI61.50-40			-	Rp 2	40	-	-	-	-	600	350	600	350
	VAI61.50-63			-	Rp 2	63	-	-	-	-	600	350	600	350

¹⁾ .. = insert k_{vs} value
 VBG61.. / VBI61...: For noiseless operation, the Δp_{max}-value of 200 kPa should not be exceeded
































Fittings for 6-port control ball valves

	Type	Description
	ALN15.152B	Fittings set made of brass for media temperatures up to 90°C, consisting of 2x cap nuts
	ALN15.202B	2x inserts with external threading per ISO 228-1 2x flat seals
	ALG13.152B	Fittings set made of brass for media temperatures up to 90°C, consisting of
	ALG15.152B	2x cap nuts with sleeves and insert per ISO 7-1
	ALG15.202B	2x flat seals
	ALG15.252B	

Magnetic valves

Typical applications	Valve type	Operating voltage	Positioning signal	Type suffix
- District heating	MXF461..	AC/DC 24 V	0...10 V, 2...10 V, 4...20 mA	P ¹⁾
- Boiler plants	M3P..FY..	AC 24 V	0...10 V, 4...20 mA	P ¹⁾
- Chiller plants	MVF461H..	AC/DC 24 V	0...10 V, 2...10 V, 0...20 mA, 4...20 mA	-
- Domestic hot water	MXG461..	AC/DC 24 V	0...10 V, 2...10 V, 4...20 mA	P ¹⁾
- Heating groups	MXG461B..	AC/DC 24 V	0...10 V, 2...10 V, 0...20 mA, 4...20 mA	-
- Air handling units	MXG461S..	AC/DC 24 V	0...10 V, 2...10 V, 4...20 mA	-
	MXG462S..	AC/DC 24 V	0...10 V, 2...10 V, 0...20 mA, 4...20 mA	-

PN 16	1...130 °C	DN	k_{vs} [m ³ /h]	Δp_s [kPa]	Δp_{max} [kPa]	Note		
Data sheet	N4455					To be used as 2-port or mixing valves, not as diverting valves. Selectable valve characteristic: equal-percentage or linear.		
	MXF461.15-.. ²⁾	15	0,6 / 1,5 / 3	300	300			
	MXF461.20-5.0	20	5	300	300			
	MXF461.25-8.0	25	8	300	300			
	MXF461.32-12	32	12	300	300			
	MXF461.40-20	40	20	300	300			
	MXF461.50-30	50	30	300	300			
	MXF461.65-50	65	50	300	300			
	1...120 °C							
	N4454							
	M3P80FY	80	80	300	300			
	M3P100FY	100	130	200	200			
PN 16	1...180 °C	DN	k_{vs} [m ³ /h]	Δp_s [kPa]	Δp_{max} [kPa]			
Data sheet	N4361							
	MVF461H15-.. ²⁾	15	0,6 / 1,5 / 3	1000	1000			
	MVF461H20-5	20	5	1000	1000			
	MVF461H25-8	25	8	1000	1000			
	MVF461H32-12	32	12	1000	1000			
	MVF461H40-20	40	20	1000	1000			
	MVF461H50-30	50	30	1000	1000			
PN 16	1...130 °C	DN	G [inch]	k_{vs} [m ³ /h]	Δp_s [kPa]	Δp_{max} [kPa]		
Data sheet	N4455							
	MXG461.15-.. ²⁾	15	G 1B	0,6 / 1,5 / 3	300	300		
	MXG461.20-5.0	20	G 1¼B	5	300	300		
	MXG461.25-8.0	25	G 1½B	8	300	300		
	MXG461.32-12	32	G 2B	12	300	300		
	MXG461.40-20	40	G 2¼B	20	300	300		
	MXG461.50-30	50	G 2¾B	30	300	300		
PN 16	-20...130 °C	DN	G [inch]	k_{vs} [m ³ /h]	Δp_s [kPa]	Δp_{max} [kPa]		
Data sheet	N4461							
	MXG461B15-.. ²⁾	15	G 1B	0,6 / 1,5 / 3	1000	1000		
	MXG461B20-5	20	G 1¼B	5	800	800		
	MXG461B25-8	25	G 1½B	8	700	700		
	MXG461B32-12	32	G 2B	12	600	600		
	MXG461B40-20	40	G 2¼B	20	600	600		
	MXG461B50-30	50	G 2¾B	30	600	600		
PN 16	1...130 °C	-20...130 °C	DN	G [inch]	k_{vs} [m ³ /h]	Δp_s [kPa]	Δp_{max} [kPa]	Note
Data sheet	N4465	N4466						To be used as 2-port or mixing valves, not as diverting valves. Selectable valve characteristic: equal-percentage or linear. ³⁾
	MXG461S15-1.5	-	15	G 1B	1,5	300	300	
	MXG461S20-5.0	-	20	G 1¼B	5	300	300	
	MXG461S25-8.0	-	25	G 1½B	8	300	300	
	MXG461S32-12	-	32	G 2B	12	300	300	
			50	G 2¾B	30	600	600	

¹⁾ P = media containing mineral oil

²⁾ .. = insert k_{vs} value





³⁾ Parts that are in contact with medium in stainless steel

MXG461B.. valves contain only materials in contact with drinking water that comply with the UBA Positive List dated April 23, 2013, Categories B+C



Valves and actuators

Overview and selection tools

Slipper valves						
Typical applications – Boiler plants – Heating groups	Actuators	Data sheet			10 Nm	10 Nm
	SAL..	N4502				
	Operating voltage	Positioning signal		Positioning time [s]		
	AC 230 V	3-position		120	SAL31.00T10	SAL31.00T10
		3-position		30	SAL31.03T10	SAL31.03T10
	AC/DC 24 V	3-position		120	SAL81.00T10	SAL81.00T10
		3-position		30	SAL81.03T10	SAL81.03T10
		0...10 V, 4...20 mA		120	SAL61.00T10	SAL61.00T10
0...10 V, 4...20 mA		30	SAL61.03T10	SAL61.03T10		
Mounting set				ASK32N	ASK31N	
PN 6	1...120 °C					
Data sheet	N4241	DN	k_{vs} [m ³ /h]	Δp_{max} [kPa]	Δp_{max} [kPa]	
 	VBF21.40	40	25	30	–	
	VBF21.50	50	40	30	–	
	VBF21.65	65	63	–	30	
	VBF21.80	80	100	–	30	
	VBF21.100	100	160	–	30	
	VBF21.125	125	550	–	30	
	VBF21.150	150	820	–	30	

Butterfly valves														
Typical applications	Actuators	Data sheet			Rotation angle 90°									
					10 Nm		40 Nm							
– Boiler plants – Chiller plants – Heating groups	SAL..	N4502												
		Operating voltage	Positioning signal	Positioning time [s]	SAL31.00T10		SAL31.00T40							
	AC 230 V	3-position	3-position	120	-		-							
		3-position	3-position	125	-		-							
		3-position	3-position	30	SAL31.03T10		-							
	AC/DC 24 V	3-position	3-position	120	SAL81.00T10		SAL81.00T40							
		3-position	3-position	30	SAL81.03T10		-							
0...10 V, 4...20 mA		0...10 V, 4...20 mA	120	SAL61.00T10		SAL61.00T40								
Mounting set				ASK33N		ASK33N								
PN 16	-10...120 °C			DN	k _{vs} [m³/h]	Δp _s [kPa]		Δp _s [kPa]						
Data sheet	N4131					500		500						
	VKF41.40			40	50	500		-						
	VKF41.50			50	80	500		-						
	VKF41.65			65	200	500		-						
	VKF41.80			80	400	500		-						
	VKF41.100			100	760	500		-						
	VKF41.125			125	1000	300		-						
	VKF41.150			150	2100	250		400						
VKF41.200			200	4000	125		300							
Typical applications	Actuators	Data sheet			Rotation angle 90°									
					20 Nm	40 Nm	40 Nm		100 Nm	400 Nm	1200 Nm			
– Boiler plants – Chiller plants – Cooling towers – Domestic hot water – Heating groups	SAL..	N4502												
		SQL36..	N4505			-		-		SQL36E65		-		-
	Operating voltage	AC 230 V	3-position	6 ¹⁾	-		-		-		-		-	
			3-position	12 ¹⁾	-		-		-		SQL36E110		-	
			3-position	24 ¹⁾	-		-		-		-		SQL36E160	
			3-position	25	-		-		SQL36E50F04 SQL36E50F05		-		-	
			3-position	120	SAL31.00T20	SAL31.00T40	-		-		-		-	
AC/DC 24 V	3-position	120	SAL81.00T20	SAL81.00T40	-		-		-		-			
	0...10 V, 4...20 mA	120	SAL61.00T20	SAL61.00T40	-		-		-		-			
PN 16	-10...120 °C			DN	k _{vs} [m³/h]	Δp _s [kPa]		Δp _s [kPa]		Δp _s [kPa]		Δp _s [kPa]		
Data sheet	N4136					1600		1600		1600		1600		1600
	VKF46.40			40	50	1600		-		-		-		
	VKF46.50			50	85	1600		-		-		-		
	VKF46.65			65	215	1600		-		-		-		
	VKF46.80			80	420	-		1600		-		-		
	VKF46.100			100	800	-		1200		-		-		
	VKF46.125			125	1010	-		800		-		-		
	VKF46.150			150	2100	-		-		1600		-		
	VKF46.200			200	4000	-		-		1000		-		
	VKF46.250			250	6400	-		-		-		1000		
	VKF46.300			300	8500	-		-		-		600		
	VKF46.350			350	11500	-		-		-		300		
	VKF46.400			400	14500	-		-		-		-		
	VKF46.450			450	20500	-		-		-		300		
VKF46.500			500	21000	-		-		-		300			
VKF46.600			600	29300	-		-		-		300			

¹⁾ With auxiliary module SEZ31.1 variable positioning time: SQL36E65: 30...180 s, SQL36E110: 60...360 s, SQL36E160: 120...720 s

Recommended maximum flow velocity:

VKF41...: < 4 m/s for water, see data sheet for details

VKF46...: 4.5 m/s for water, 60 m/s for gas

Valves and actuators

Overview and selection tools

Changeover and open/close ball valves														
Typical applications – Boiler plants – Chiller plants – Domestic hot water – Heating groups	Actuators GQD..9A GSD..9A GMA..9E GLB..9E	Data sheet N4659 N4655 N4658 A6V10636203				Spring return function [s]	2 Nm	5 Nm	7 Nm	10 Nm				
	Operating voltage AC 230 V AC 100...240 V AC/DC 24 V	Positioning signal 2-position 2-position 2/3-position 2-position 2-position 2/3-position KNX S-/LTE-Mode, KNX PL-Link Modbus	Positioning time [s] GQD/GSD GMA G..B	30	90		–	15	 GQD321.9A – GSD341.9A – – GDB341.9E – GQD121.9A – GSD141.9A – – GDB111.9E/KN – –	 – – GDB341.9E – – – – – GDB111.9E/KN – –	 GMA321.9E – – GMA121.9E – – – – – – –	 – – GLB341.9E – – GLB141.9E – – GLB111.9E/KN – GLB111.9E/MO		
	PN 40 Data sheet	-10...120°C	DN	G [inch]	k_{vs} [m³/h]		Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]
		VAG60.15-9	15	G 1B	9		1400	350	1400	350	1400	350	1400	350
		VAG60.20-17	20	G 1¼B	17		1400	350	1400	350	1400	350	1400	350
		VAG60.25-22	25	G 1½B	22		1400	350	1400	350	1400	350	1400	350
		VAG60.32-35	32	G 2B	35		–	–	–	–	1000	350	1000	350
		VAG60.40-68	40	G 2¼B	68		–	–	–	–	800	350	800	350
		VAG60.50-96	50	G 2¾B	96		–	–	–	–	600	350	600	350
	PN 40 Data sheet	-10...120°C	DN	G [inch]	k_{vs} [m³/h]		Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]
	VBG60.15-8T	15	G 1B	8	350	350	350	350	350	350	350			
	VBG60.20-13T	20	G 1¼B	13	350	350	350	350	350	350	350			
	VBG60.25-13T	25	G 1½B	13	350	350	350	350	350	350	350			
	VBG60.32-25T	32	G 2B	25	–	–	–	–	350	350	350	350		
	VBG60.40-49T	40	G 2¼B	49	–	–	–	–	350	350	350	350		
	VBG60.50-73T	50	G 2¾B	73	–	–	–	–	350	350	350	350		
PN 40 Data sheet	-10...120°C	DN	Rp [inch]	k_{vs} [m³/h]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]		
	VAI60.15-15	15	Rp ½	15	1400	350	1400	350	1400	350	1400	350		
	VAI60.20-22	20	Rp ¾	22	1400	350	1400	350	1400	350	1400	350		
	VAI60.25-22	25	Rp 1	22	1400	350	1400	350	1400	350	1400	350		
	VAI60.32-35	32	Rp 1¼	35	–	–	–	–	1000	350	1000	350		
	VAI60.40-68	40	Rp 1½	68	–	–	–	–	800	350	800	350		
	VAI60.50-96	50	Rp 2	96	–	–	–	–	600	350	600	350		
PN 40 Data sheet	-10...120°C	DN	Rp [inch]	k_{vs} [m³/h]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]		
	VBI60.15-12T	15	Rp ½	12	350	350	350	350	350	350	350			
	VBI60.20-16T	20	Rp ¾	16	350	350	350	350	350	350	350			
	VBI60.25-16T	25	Rp 1	16	350	350	350	350	350	350	350			
	VBI60.32-25T	32	Rp 1¼	25	–	–	–	–	350	350	350	350		
	VBI60.40-49T	40	Rp 1½	49	–	–	–	–	350	350	350	350		
	VBI60.50-73T	50	Rp 2	73	–	–	–	–	350	350	350	350		
PN 40 Data sheet	-10...120°C	DN	Rp [inch]	k_{vs} [m³/h]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]		
	VBL60.15-5L	15	Rp ½	5	350	350	350	350	350	350	350			
	VBL60.20-9L	20	Rp ¾	9	350	350	350	350	350	350	350			
	VBL60.25-9L	25	Rp 1	9	350	350	350	350	350	350	350			
	VBL60.32-13L	32	Rp 1¼	13	–	–	–	–	350	350	350	350		
	VBL60.40-25L	40	Rp 1½	25	–	–	–	–	350	350	350	350		
	VBL60.50-37L	50	Rp 2	37	–	–	–	–	350	350	350	350		

Refrigerant valves									
Typical applications		Valve	Operating voltage	Positioning signal			Auxiliary functions		
– Chiller plants		M2FP03GX	AC 24 V	0...10 V, 4...20 mA, 0...20 Phs			–		
		MVL661.. ¹⁾	AC/DC 24 V	0...10 V, 2...10 V, 0...20 mA, 4...20 mA			Minimum stroke setting		
		MVS661..N ¹⁾	AC/DC 24 V	0...10 V, 2...10 V, 0...20 mA, 4...20 mA			Minimum stroke setting		
		M3FB..LX..	AC 24 V	0...10 V, 4...20 mA, 0...20 Phs			–		
		M3FK..LX..	AC 24 V	0...10 V, 4...20 mA, 0...20 Phs			–		
PN 32	-40...100 °C				k _{vs}		Δp _{max}		
Data sheet	N4731				[m ³ /h]		[kPa]		
	M2FP03GX		Pilot valve		0.3		1800		
PS 45	-40...120 °C	DN	Connection	Inner Ø	k _{vs}	k _{vs} reduced	Δp _{max}		
Data sheet	N4714			[inch]	[m ³ /h]	[m ³ /h]	[kPa]		
	MVL661.15-0.4	15	Sleeve	5/8	0.4	0.25	2500		
	MVL661.15-1.0	15	Sleeve	5/8	1	0.63	2500		
	MVL661.20-2.5	20	Sleeve	7/8	2,5	1.6	2500		
	MVL661.25-6.3	25	Sleeve	1 1/8	6.3	4	2500		
	MVL661.32-10	32	Sleeve	1 3/8	10	6.3	1600		
	MVL661.32-12	32	Sleeve	1 3/8	12	7.6	200		
PN 63	-40...120 °C	DN	Connection	Inner Ø	Outer Ø	k _{vs}	k _{vs} reduced	Δp _{max}	
Data sheet	N4717			[mm]	[mm]	[m ³ /h]	[m ³ /h]	[kPa]	
	MVS661.25-016N	25	Weldable, solderable	22.4	33.7	0.16	0.1	2500	
	MVS661.25-0.4N	25	Weldable, solderable	22.4	33.7	0.4	0.25	2500	
	MVS661.25-1.0N	25	Weldable, solderable	22.4	33.7	1	0.63	2500	
	MVS661.25-2.5N	25	Weldable, solderable	22.4	33.7	2.5	1.6	2500	
	MVS661.25-6.3N	25	Weldable, solderable	22.4	33.7	6.3	4	2500	
PN 32	-40...120 °C	DN	Connection	Inner Ø		k _{vs}		Liquid	Gas
Data sheet	N4722			[inch]		[m ³ /h]		Δp _{max}	Δp _{max}
	M3FK15LX06	15	Sleeve	5/8		0.6		200	800
	M3FK15LX15	15	Sleeve	5/8		1.5		200	800
	M3FK15LX	15	Sleeve	5/8		3		200	800
	M3FK20LX	20	Sleeve	7/8		5		200	800
	M3FK25LX	25	Sleeve	1 1/8		8		200	800
	M3FK32LX	32	Sleeve	1 3/8		12		200	800
	M3FK40LX	40	Sleeve	1 5/8		20		200	800
	M3FK50LX	50	Sleeve	2 1/8		30		200	800
PS 43	-40...120 °C	DN	Connection	Inner Ø		k _{vs}		Δp _{max}	
Data sheet	N4721			[inch]		[m ³ /h]		[kPa]	
	M3FB15LX06/A	15	Sleeve	5/8		0.6		2200	
	M3FB15LX15/A	15	Sleeve	5/8		1.5		2200	
	M3FB15LX/A	15	Sleeve	5/8		3		2200	
	M3FB20LX/A	20	Sleeve	7/8		5		1800	
	M3FB25LX/A	25	Sleeve	1 1/8		8		1200	
	M3FB32LX	32	Sleeve	1 3/8		12		800	

¹⁾ Also available as ATEX Zone 2










Valves and actuators

Overview and selection tools

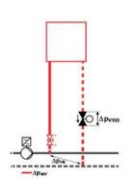
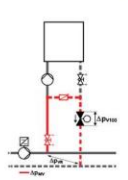
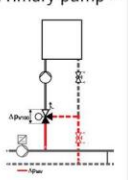
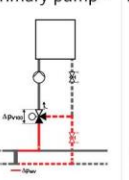
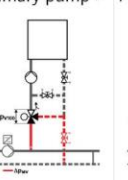
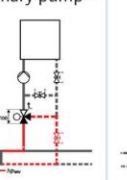
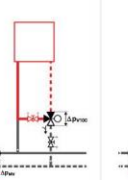
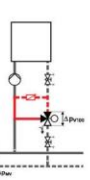
Definitions

Abbr.	Term	Unit	Definition
Δp	Differential pressure	kPa	Pressure differential between plant sections.
Δp_{\max}	Maximum differential pressure	kPa	Maximum permissible differential pressure across the valve's control path (when mixing), valid for the entire actuating range of the motorized valve.
$\Delta p_{\max V}$	Maximum differential pressure	kPa	Maximum permissible differential pressure across the valve's control path (when distributing), valid for the entire actuating range of the motorized valve.
Δp_{\min}	Minimum differential pressure	kPa	Minimum differential pressure required, so that the differential pressure regulator works reliably with combi valves. Δp_{\min} depends on presetting position, see data sheet for details.
Δp_{V0}		kPa	Maximum differential pressure across the valve's closed control path.
Δp_{V100}	Differential pressure at nominal flow rate	kPa	Differential pressure across the fully open valve and the valve's control path by a volumetric flow \dot{V}_{100} .
Δp_s	Closing pressure	kPa	For 2-port valves, maximum permissible differential pressure at which the motorized valve will close securely against the pressure (close off pressure). Only valid for 2-port valves.
Δp_{MV}		kPa	Differential pressure across the variable flow path. Often Δp_{MV} is not known, in which case typical values can be used.
Δp_{VR}		kPa	Differential pressure between flow and return.
ΔT	Temperature spread	K	Temperature differential between flow and return.
DN	Nominal size		Characteristic for matching parts of the piping system.
H_0	Shutoff head	m	The head generated by a pump at closed valve, at a given speed and a given pump medium.
H_{100}	Valve fully open		Stroke of fully open valve.
kPa	Unit of pressure	kPa	100 kPa = 1 bar = 10 mWC.
mWC	Meter water column	m	
k_V	Nominal flow	m ³ /h	Amount of cold water (5...30 °C) passing through the valve at the respective stroke and at a differential pressure of 100 kPa (1 bar).
k_{VS}	Nominal flow rate	m ³ /h	Nominal flow rate of cold water (5...30 °C) through the fully open valve (H_{100}) at a differential pressure of 100 kPa (1 bar).
	Spring return function		Shutoff in the event of a power failure.
PN	PN class		Characteristic relating to the combination of mechanical and dimensional properties of a component in the piping system.
PS	PS class		Maximum allowable pressure.
P_V	Valve authority		Ratio of differential pressure across fully open valve (H_{100}) and differential pressure across valve and variable flow path. To ensure control, a minimum valve authority of 0.25 is required. $P_V \geq 0.5$ is recommended for good controllability.
\dot{Q}_{100}	Rated capacity	kW	Plant's design capacity.
\dot{V}_{100}	Volumetric flow	m ³ /h	Volumetric flow with valve fully open (H_{100}).
\dot{V}_{\min}	Minimum volumetric flow	m ³ /h	Smallest presettable volumetric flow through the fully open combi valve (H_{100}).
c	Specific heat capacity	kJ/kgK	
ρ	Specific density	kg/m ³	

Symbols

	3-port valve, control path with equal-percentage valve characteristic, bypass with linear valve characteristic.
	3-port valve, control path with equal-percentage valve characteristic, bypass with linear valve characteristic with 70% of the kvs value. This compensates for the flow resistance of the heat exchanger, so that the total volumetric flow \dot{V}_{100} remains as constant as possible.
	2-port valve, control path with equal-percentage valve characteristic.
	2-port valve or 6-port control ball valve in the respective control path with linear valve characteristic.
	3-port, control path and bypass with linear valve characteristic. Bypass with 70% of the kvs value. This compensates for the flow resistance of the heat exchanger, so that the total flow amount \dot{V}_{100} remains as constant as possible.
	3-port valve, control path and bypass with linear valve characteristic.
	3-port valve, control path and bypass with equal-percentage valve characteristic.

Valve sizing and actuator selection

Basic hydronic circuit									
1	Determine the type of hydronic circuit	Throttling circuit	Injection circuit with 2-port valve	Mixing circuit		Mixing circuit with fixed premixing		Diverting circuit	Injection circuit with 3-port valve
For valve sizing relevant variable flow path				Primary pump ✓ 	Primary pump ✗ 	Primary pump ✓ 	Primary pump ✗ 		

HVAC plants and consumers

Heating									
Surface/floor heating	–	■	–	–	■	■	–	–	outdated
Heating plant (primary)	–	■	■	■	■	■	–	–	outdated
Zone control, heating	–	■	–	–	–	–	–	–	outdated
Heating groups	–	■	■	■	■	■	–	–	–
Generation of heat energy	–	–	–	■	–	■	–	–	–
Heat exchanger water-water	■	uncommon	uncommon	–	–	–	–	–	uncommon
Ventilation and air conditioning plants									
Air handling unit	■	■	■	■	–	–	–	–	outdated
Fan coil unit	■	–	–	–	–	–	–	–	outdated
Cooling coil	dehumidifying	■	–	–	–	–	–	–	uncommon
Reheating coil	■	■	uncommon	uncommon	uncommon	uncommon	–	–	outdated
Preheating coil	–	■	uncommon	uncommon	uncommon	uncommon	–	–	outdated
VAV	■	–	–	–	–	–	–	–	outdated
Zone control	■	–	–	–	–	–	–	–	outdated
Chiller plants									
Surface/floor cooling	–	■	–	–	–	–	–	–	outdated
Generation of cooling energy	–	–	–	■	–	■	–	–	–
Cooling towers	■	–	–	–	–	–	–	–	outdated
Zone control, cooling	–	■	–	–	–	–	–	–	outdated
District heating and cooling									
District heating, primary	■	uncommon	–	uncommon	–	uncommon	–	–	–
District heating, secondary	■	■	–	uncommon	–	uncommon	–	–	–
District cooling, primary	■	uncommon	–	uncommon	–	uncommon	–	–	–
District cooling, secondary	■	■	–	uncommon	–	uncommon	–	–	–
Hot water									
Hot water directly	–	■	–	■	–	–	–	–	–
Header									
Differential pressure header	pressurized	low-pressure	pressureless	low-pressure	pressureless	–	–	–	pressurized
Volumetric flow	variable	–	–	variable	–	–	–	–	constant



Valves and actuators

Overview and selection tools

Valve sizing and selection: k_{VS} valves and actuators

1	Determine the type of hydronic circuit	Throttling circuit 	Injection circuit with 2-port valve 	Mixing circuit Primary pump ✓ Primary pump ✗ 	Mixing circuit with fixed premixing Primary pump ✓ Primary pump ✗ 	Diverting circuit 	Injection circuit with 3-port valve
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Determine volumetric flow \dot{V}									
2	Δp_{VR} or Δp_{MV}	10...200 kPa	10...200 kPa	2...5 kPa	5...15 kPa	2...5 kPa	5...15 kPa	10...50 kPa	2...5 kPa
	typical range								
	typical value	Use effective Δp_{VR} value		3 kPa	8 kPa	3 kPa	8 kPa	eff. value Δp_{MV}	3 kPa
3	Determine Δp_{V100}	$\Delta p_{V100} \geq \frac{\Delta p_{VR}}{2}$ ($P_V \geq 0.5$)		$\Delta p_{V100} \geq \Delta p_{MV}$ ($P_V \geq 0.5$)					
4	Calculate \dot{V}_{100}	Water without anti-freeze $\dot{V}_{100} = \frac{\dot{Q}_{100}}{1.163 \cdot \Delta T}$			Water with anti-freeze $\dot{V}_{100} = \frac{\dot{Q}_{100} \cdot 3600}{c \cdot \rho \cdot \Delta T}$				
5	Determine k_{VS} value	$k_V = \frac{\dot{V}_{100}}{\sqrt{\frac{\Delta p_{V100}}{100 \text{ kPa}}}} \Rightarrow k_{VS} \geq 0.85 \cdot k_V \text{ value}$							
6	Check resulting Δp_{V100}	$\Delta p_{V100} = 100 \cdot \left(\frac{\dot{V}_{100}}{k_{VS}} \right)^2$							

Selection of valve and actuator								
7	Select suitable valve series	1. Type of valve (2-port, 3-port, 3-port with bypass) 2. Connections (flanged, threaded, soldered)			3. PN class	5. Max. / min. medium temperature		
					4. Nominal size DN	6. Medium		
8	Check valve authority P_V	$P_V = \frac{\Delta p_{V100}}{\Delta p_{VR}} \geq 0.25...0.8$			$P_V = \frac{\Delta p_{V100}}{\Delta p_{V100} + \Delta p_{MV}} \geq 0.25...0.8$			
9	Select actuator	1. Operating voltage	2. Positioning signal	3. Stellzeit	4. Notstellfunktion	5. Zusatzfunktionen		
10	Check working range	1. Differential pressure $\Delta p_{max} > \Delta p_{V0}$		2. Closing pressure $\Delta p_s > H_0$				
11	Selection	Valve and suitable actuator						

Valve sizing and selection: Intelligent Valves, PICVs and actuators

1	Determine the type of hydronic circuit	Throttle circuit or injection system with 2-port valve
---	--	--

Determine volumetric flow \dot{V}				
2	Determine \dot{Q}_{100}			
3	Determine ΔT			
4	Calculate \dot{V}			
	Water without anti-freeze $\dot{V}_{100} = \frac{\dot{Q}_{100}}{1.163 \cdot \Delta T}$	Water with anti-freeze $\dot{V}_{100} = \frac{\dot{Q}_{100} \cdot 3600}{c \cdot \rho \cdot \Delta T}$		
Select valve and actuator				
5	Select suitable valve			
	1. Type of valve (with / without P/T plugs) 4. Connection (flanged, threaded)	2. PN class 5. Nominal size DN	3. Max. / min. medium temperature 6. Medium	
6	Determine presetting	Determine presetting using the volumetric flow / dial table in data sheet of the respective PICV		
7	Select actuator for PICV	1. Operating voltage 2. Positioning signal 3. Positioning time 4. Auxiliary functions		
8	Check working range	1. $\Delta p < \Delta p_{max}$ – maximum permissible differential pressure across the valve's control path, valid for the entire actuating range of the motorized valve 2. $\Delta p > \Delta p_{min}$ – minimum differential pressure required across the valve's control path, so that the differential pressure regulator works reliably		

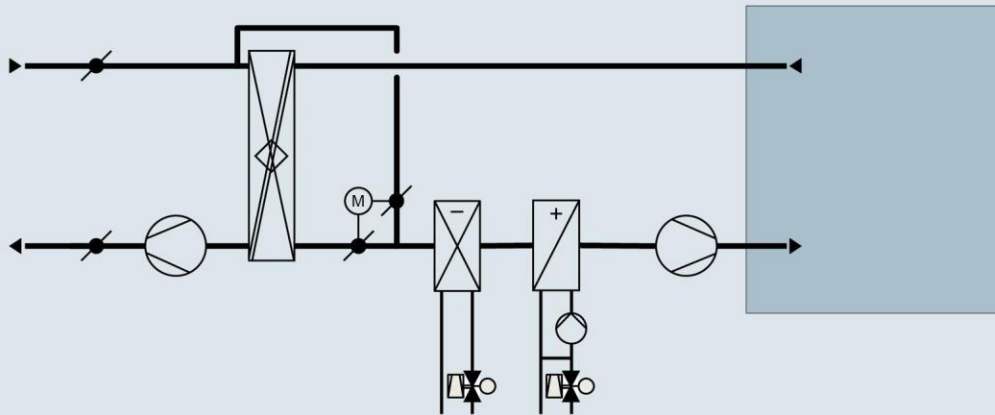
Or just use the Acvatix slide ruler, the online tool for simple valve sizing, to find the right valve with actuator.



Or just install the Combi Valve Sizer on your smartphone to find the right PICV with actuator.



Air handling unit with cooling coil (cooling/de-humidification) and reheating coil, with PICVs



Plant data	Cooling coil	Heating coil
Cooling/heating power \dot{Q}_{100}	75 kW	65 kW
Supply temperature producer θ_{Producer}	6 °C	55 °C
Temperatures Supply/Return $\theta_{\text{Supply}} / \theta_{\text{Return}}$	6/12 °C	50/35 °C
Temperature difference	6 K	20 K
Medium	Water	Water
Differential pressure Δp_{MV} without balancing valve	57 kPa	12 kPa
Shutoff head pump H_0 (resp. Δp_{v0})	18 mWC (180 kPa)	18 mWC (180 kPa)
Positioning signal	0...10 V	0...10 V

	Cooling coil	Reheating coil
1 Determine Volumetric flow \dot{V}_{100}		
$\dot{V}_{100} = \frac{\dot{Q}_{100}}{1.163 \cdot \Delta T}$ <p>decisive temperature difference</p> <p>Constant 1.163: with density $\rho = 1000 \text{ kg/m}^3$, 3600 s/h and specific heat capacity $c = 4.187 \text{ kJ/kg} \cdot \text{K}$</p>	$\dot{V}_{100} = \frac{75 \text{ kW}}{1.163 \cdot 6 \text{ K}} = 10.75 \text{ m}^3/\text{h}$ $\theta_{\text{Return cooling coil}} - \theta_{\text{Producer}} = (12 - 6) \text{ °C} = 6 \text{ K}$	$\dot{V}_{100} = \frac{65 \text{ kW}}{1.163 \cdot 20 \text{ K}} = 2.79 \text{ m}^3/\text{h}$ $\theta_{\text{Producer}} - \theta_{\text{Return heating coil}} = (55 - 35) \text{ °C} = 20 \text{ K}$
<p>Hydronic circuit</p> <p>— Δp_{MV} Differential pressure across variable flow path</p>	<p>Throttling circuit</p>	<p>Injection circuit with 2-port valve</p>
Distribution setup	Pressurized with variable volumetric flow (primary pump controlled)	

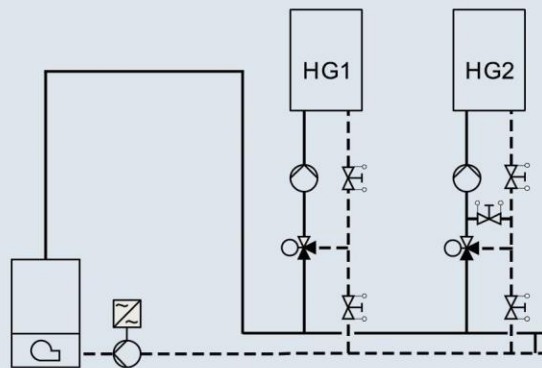
Valves and actuators

Overview and selection tools

	Cooling coil	Reheating coil
2 Determine minimally required differential pressure Δp_{\min} (from Data sheet)		
Cooling coil VPF43.50F16	VPP43.50F16 16 m³/h nominal	
	\dot{V} [m ³ /h]	2.5 3.2 3.8 4.5 5.3 6 6.8 7.5 8.3 9 9.8 10.5 11.3 12 12.8 13.5 14.3 15
	Dial	Min. 0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4
	Δp_{\min} [kPa]	6.5 6.5 6.5 6.8 7.1 7.4 7.7 8.0 8.8 9.6 10.4 11.2 12.0 13.5 15.2 16.8 18.5 20
Reheating coil VPP46.32F4Q	VPP46.32F4, VPP46.32F4Q, VPI46.32F4, VPI46.32F4Q 4000 l/h nominal	
	\dot{V} [l/h]	550 800 910 1110 1320 1520 1720 1930 2130 2330 2530 2740 2940 3140 3350 3550 3750 4001
	Dial	Min. 0.2 0.4 0.5 0.6 0.8 1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 Max.
	Δp_{\min} [kPa]	17.9 18 18.1 18.2 18.3 18.5 18.7 18.9 19.2 19.6 20.1 20.7 21.4 22.3 23.4 24.6 26 28
Δp_{\min}	$\Delta p_{\min} = 11.5$ kPa	$\Delta p_{\min} = 21$ kPa
Presetting	Dial = 2.85	Dial = 2.85
Total resistance Δp_{VR} for primary pump	$\Delta p_{VR} = \Delta p_{MV} + \Delta p_{\min} = 57$ kPa + 11.5 kPa $\Delta p_{VR} = 68.5$ kPa (6.8 mWC)	$\Delta p_{VR} = \Delta p_{MV} + \Delta p_{\min} = 12$ kPa + 21 kPa $\Delta p_{VR} = 33$ kPa (3.3 mWC)
3 Select suitable valve type		
Type of valve	PICV (with linear characteristic)	PICV (with linear characteristic)
Connection type	Flange	External thread
Nominal pressure level PN	PN 16	PN 16
Selected valve	VPF43.50F16 (with measuring points)/ piping size DN 50	VPP46.32F4Q (with measuring points)/ piping size DN 32
4 Select valve actuator		
Actuator type	SAX.. with 20 mm stroke	SSA.. with 5 mm stroke
Operating voltage	AC 24 V	AC 24 V
Positioning signal	0...10 V	0...10 V
Positioning time	30 s	34 s
Spring return function	no	no
Additional functions	none	none
Wahl Stellantrieb	SAX61P03, with selectable characteristic → equal percentage <i>fits well to cooling coil transfer characteristic</i>	SSA61EP → with equal percentage characteristic <i>fits well to reheating coil transfer characteristic</i>
Selection		
PICV	VPF43.50F16 (with measuring points)	VPP46.32F4Q (with measuring points)
Valve actuator	SAX61P03	SSA61EP

7

Heating plant with low-pressure distribution, with k_{VS} -valves (3-port)



Plant data	Heating group 1	Heating group 2
Heating group power \dot{Q}_{100}	90 kW	60 kW
Supply temperature producer θ_{Producer}	55 °C	55 °C
Temperatures Supply/Return $\theta_{\text{Supply}} / \theta_{\text{Return}}$	50/40 °C	35/28 °C
Temperature spread	see below	see below
Medium	Water	Water
Differential pressure Δp_{MV}	see below	see below
Shutoff head pump H_0 (resp. Δp_{v0})	4.5 mWC (45 kPa)	4.5 mWC (45 kPa)
Positioning signal	3-position	3-position

	Heating group 1	Heating group 2
1 Determine Volumetric flow \dot{V}_{100}		
$\dot{V}_{100} = \frac{\dot{Q}_{100}}{1.163 \cdot \Delta T}$	$\dot{V}_{100} = \frac{90 \text{ kW}}{1.163 \cdot 15 \text{ K}} = 5.16 \text{ m}^3/\text{h}$	$\dot{V}_{100} = \frac{60 \text{ kW}}{1.163 \cdot 27 \text{ K}} = 1.91 \text{ m}^3/\text{h}$
decisive temperature difference	$\theta_{\text{Producer}} - \theta_{\text{Return HG 1}} = (55 - 40) \text{ °C} = 15 \text{ K}$	$\theta_{\text{Producer}} - \theta_{\text{Return HG 2}} = (55 - 28) \text{ °C} = 27 \text{ K}$
Constant 1.163: with density $\rho = 1000 \text{ kg/m}^3$, 3600 s/h and specific heat capacity $c = 4.187 \text{ kJ/kg} \cdot \text{K}$		

	Heating group 1	Heating group 2
2 Determine Differential pressure Δp_{V100}		
Hydronic circuit	Mixing circuit with pump	Mixing circuit with fixed pre-mixing with pump
Δp_{MV} Differential pressure across variable flow path		
Distribution setup		low pressure
Δp_{MV} typical range		2...5 kPa
typical value		3 kPa
Δp_{V100}		$\Delta p_{V100} \geq \Delta p_{MV}$ (resp. $P_v \geq 0.5$)
Desired differential pressure		$\Delta p_{V100} \geq 3 \text{ kPa}$



Valves and actuators

Overview and selection tools

	Heating group 1	Heating group 2
3 Determine desired flow k_v		
$k_v = \frac{\dot{V}_{100}}{\sqrt{\frac{\Delta p_{V100}}{100 \text{ kPa}}}}$	$k_v = \frac{5.16 \text{ m}^3/\text{h}}{\sqrt{\frac{3 \text{ kPa}}{100 \text{ kPa}}}} = 29.8 \text{ m}^3/\text{h}$	$k_v = \frac{1.91 \text{ m}^3/\text{h}}{\sqrt{\frac{3 \text{ kPa}}{100 \text{ kPa}}}} = 11.0 \text{ m}^3/\text{h}$
4 Select valve nominal flow rate k_{VS} and determine resulting differential pressure $\Delta p_{V100 \text{ res}}$		
$k_{VS} \geq 0.85 \cdot k_v\text{-value}$	$k_{VS} \geq 0.85 \cdot 29.8 \text{ m}^3/\text{h} = 25.3 \text{ m}^3/\text{h}$ selected: $k_{VS} = 25 \text{ m}^3/\text{h}$	$k_{VS} \geq 0.85 \cdot 11.0 \text{ m}^3/\text{h} = 9.4 \text{ m}^3/\text{h}$ selected: $k_{VS} = 10 \text{ m}^3/\text{h}$
resulting $\Delta p_{V100 \text{ res}}$ $\Delta p_{V100 \text{ res}} = 100 \text{ kPa} \cdot \left(\frac{\dot{V}_{100}}{k_{VS}}\right)^2$	$\Delta p_{V100 \text{ res}} = 100 \text{ kPa} \cdot \left(\frac{5.16 \text{ m}^3/\text{h}}{25 \text{ m}^3/\text{h}}\right)^2$ $\Delta p_{V100 \text{ res}} = 4.3 \text{ kPa}$	$\Delta p_{V100 \text{ res}} = 100 \text{ kPa} \cdot \left(\frac{1.91 \text{ m}^3/\text{h}}{10 \text{ m}^3/\text{h}}\right)^2$ $\Delta p_{V100 \text{ res}} = 3.6 \text{ kPa}$
5 Check valve authority P_V (control stability)		
$P_V = \frac{\Delta p_{V100 \text{ res}}}{\Delta p_{V100 \text{ res}} + \Delta p_{MV}}$ and $0.3 < P_V < 0.6$	$P_V = \frac{4.3 \text{ kPa}}{4.3 \text{ kPa} + 3 \text{ kPa}}$ $P_V = 0.59$	$P_V = \frac{3.6 \text{ kPa}}{3.6 \text{ kPa} + 3 \text{ kPa}}$ $P_V = 0.55$
6 Select suitable valve type		
Type of valve	3-port valve	3-port valve
Connection type	External thread	External thread
Nominal pressure level PN	PN 16	PN 16
Possible valve type(s)	VXG44.., VXG41..	VXG44.., VXG41..
Selected valve	VXG44.40-25 with $k_{VS} = 25 \text{ m}^3/\text{h}$ piping size DN 40 with linear characteristic	VXG44.25-10 with $k_{VS} = 10 \text{ m}^3/\text{h}$ piping size DN 25 with linear characteristic
7 Check valve working range		
Medium	VXG44 suitable for water	VXG44 suitable for water
Medium temperature	40 °C > 1 °C min. medium temperature 50 °C < 120 °C max. medium temperature	28 °C > 1 °C min. medium temperature 35 °C < 120 °C max. medium temperature
8 Select actuator		
Actuator type	SAS.. with 5.5 mm stroke	
Operating voltage	AC 230 V	
Positioning signal	3-point (open – 0 – close)	
Positioning time	30...120 s	
Spring return function	No	
Additional functions	Auxiliary switches, potentiometer, feedback signal available or included	
Selected actuator	SAS31.00	SAS31.00
9 Check actuator working range		
Differential pressure $\Delta p_{\text{max}} \geq \Delta p_{v0} (H_0)$	$\Delta p_{\text{max}} = 125 \text{ kPa} \geq 45 \text{ kPa}$	$\Delta p_{\text{max}} = 400 \text{ kPa} \geq 45 \text{ kPa}$
Closing pressure $\Delta p_s \geq \Delta p_{v0} (H_0)$	Not with 3-port valves	
Selected actuator	SAS31.00 positioning time 120 s, no spring return function, no additional functions, AC 230 V	
Selection		
Valve	VXG44.40-25 with $k_{VS} = 25 \text{ m}^3/\text{h}$	VXG44.25-10 with $k_{VS} = 10 \text{ m}^3/\text{h}$
Actuator	SAS31.00	SAS31.00

Actuators for globe and pressure independent combi valves (PICV)

Thermostatic head

RTN..



Thermostatic actuators

Thermostatic actuators for controlling the room temperature. Setpoint adjustment with knob. Versions with shutoff and frost protection position.

Limit stops for minimum and maximum values or setpoint locking.

Mounts directly on Siemens radiator valves VDN../VEN../VUN../VPD../VPE..

Adapter for third-party valves, see overview AV..

The radiator valves can be closed with the thermostatic actuators RTN51.. and RTN71..

Data sheet N2111
 Warranty 5 Years

Range overview RTN..

Product Title	Design	Setpoint setting range [°C]	Surface treatment	Stock no.	Product no.
Thermostatic actuator, RAL 9016, matt	Frost protection position Closing position	12...28	RAL 9016, matt	BPZ:RTN51	RTN51
Thermostatic actuator, RAL 9016, glossy	Frost protection position Closing position	12...28	RAL 9016, glossy	BPZ:RTN51G	RTN51G
Thermostatic actuator with remote sensor	Remote sensor Frost protection position Closing position	12...28	RAL 9016, matt	BPZ:RTN71	RTN71
Thermostatic actuator with remote adjuster	Remote sensor Frost protection position	8...28	RAL 9016, matt	BPZ:RTN81	RTN81

Accessories for thermostatic actuators RTN..

Product Title	Data sheet	Stock no.	Product no.
Adapter for valves of other manufacture	N2179	BPZ:AV..	AV..

Actuators for globe and pressure independent combi valves (PICV)

Electrothermal

STA..3



Electrothermal actuators with/ without connecting cable for radiator, small, and zone valves

Electrothermal actuators, stem opened in a deenergized state, with or without connection cable for:

- Radiator valves VDN.., VEN.., VUN..
- MCV MiniCombiValves VPD.., VPE..
- Small valves VD1..CLC..
- Zone valves V..I46..
- Combi valves VPP46.., VPI46..
- Valves of other manufacturers

Actuators without connecting cable can be equipped with:

- Connecting cable up to 15 m, halogen-free up to 10 m
- Connecting cable with LED operation indicator
- Connecting cable with auxiliary switch or DC0... 10V module

The given positioning time refers to the maximum stroke of 4.5 m.m.

Data sheet	N4884
Stroke	4.5 mm
Degree of protection	IP54
Mounting position	Any, 360°
Power consumption	2.5 W
Warranty	5 Years

Range overview STA..3

Operating voltage [V]	Positioning time [s]	Positioning signal	Cable length [m]	Stock no.	Product no.
AC 230	210	2-position	1	S55174-A101	STA23
AC 24	270	DC 0... 10V	2	S55174-A104	STA63
AC 24 V DC 24	270	2-position PDM	1	S55174-A100	STA73
AC 230	210	2-position	0.8	S55174-A107	STA23HD
AC 24 DC 24	270	2-position	0.8	S55174-A106	STA73HD
AC 230	210	2-position		S55174-A110	STA23/00
AC 230	210	2-position		S55174-A118	STA23B/00
AC 230	210	2-position		S55174-A114	STA23MP/00
AC 24 DC 24	270	2-position PDM		S55174-A109	STA73/00
AC 24 DC 24	270	2-position PDM		S55174-A117	STA73B/00
AC 24 DC 24	270	2-position PDM		S55174-A113	STA73MP/00
AC 24 DC 24	270	2-position PDM/parallel operation		S55174-A115	STA73PR/00

The given positioning time is related to the maximum stroke of 4.5 mm.

/00 = without cable

xxB = color black

xxMP = multi pack 50 pce

Connection cable for STA..3

Positioning signal	Auxiliary switch	Display	Color	Cable length [m]	Material	Stock no.	Product no.
2-position	0		White	2	PVC	S55174-A123	ASY23L20
2-position	0		White	5	PVC	S55174-A126	ASY23L50
2-position	0		White	10	PVC	S55174-A129	ASY23L100

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)
Electrothermal

Connection cable for STA..3

Positioning signal	Auxiliary switch	Display	Color	Cable length [m]	Material	Stock no.	Product no.
2-position	0		White	15	PVC	S55174-A130	ASY23L150
2-position	0		White	2	Halogen-free	S55174-A134	ASY23L20HF
2-position	0		White	5	Halogen-free	S55174-A135	ASY23L50HF
2-position	0		White	10	Halogen-free	S55174-A136	ASY23L100HF
DC 0... 10 V	0		White	2	PVC	S55174-A137	ASY6AL20
DC 0... 10 V	0		White	2	Halogen-free	S55174-A147	ASY6AL20HF
2-position	1		White	1	PVC	S55174-A153	ASA23U10
2-position	0	LED	White	2	PVC	S55174-A157	ASY23L20LD
2-position	0		Black	3	PVC	S55174-A131	ASY23L30B
2-position	0		Black	5	PVC	S55174-A132	ASY23L50B

Accessories for STA..3

Product Title	Data sheet	Stock no.	Product no.
Third-party valve adapter on Danfoss RA-N (RA2000)	N2100	BPZ:AV53	AV53
Adapter for Vaillant	N2100	BPZ:AV59	AV59
Adapter for Giacomini	N4884	S55174-A165	AV63
Adapter for Pettinaroli M28 x 1.5	N4884	S55174-A166	AV64
Adapter for valves with M30 x 1.5	N2179	S55174-A159	AV301
Adapter for valves with M28 x 1.5, Comap, Markaryd, Herz	N4884	S55174-A160	AV302
Adapter for valves with M30 x 1, TA	N4884	S55174-A161	AV303
Adapter various (5 pieces)	N4884	S55174-A167	AV304
Standard adapter, M30x1,5	N4884	S55174-A169	AV305
Higher sliding sleeve adapter (bayonet), 5 mm	N2100	S55174-A171	AV306
Theft protection	N4884	S55174-A168	AL431

STP..3



Electrothermal actuators with and without connecting cable for small valves

Electrothermal actuators, stem closed in a deenergized state, with or without connection cable for:

- Small valves V..P47..
- Valves of other manufacturers

Actuators without connecting cable can be equipped with:

- Connecting cable up to 15 m, halogen-free up to 10 m
- Connecting cable with LED operation indicator
- Connecting cable with auxiliary switch or DC 0... 10 V module

Data sheet	N4884
Stroke	4.5 mm
Degree of protection	IP54
Mounting position	Any, 360°
Power consumption	2.5 W
Warranty	5 Years

Range overview STP..3

Operating voltage [V]	Positioning time [s]	Positioning signal	Cable length [m]	Stock no.	Product no.
AC 230	210	2-position	1	S55174-A103	STP23
AC 24	270	DC 0... 10 V	2	S55174-A105	STP63
AC 24 DC 24	270	2-position PDM	1	S55174-A102	STP73
AC 230	210	2-position		S55174-A112	STP23/00
AC 24 DC 24	270	2-position PDM		S55174-A111	STP73/00
AC 24 DC 24	270	2-position PDM/parallel operation		S55174-A116	STP73PR/00

The given positioning time is related to the maximum stroke of 4.5 mm.

/00 = without cable

Connection cable for STP..3

Positioning signal	Auxiliary switch	Display	Color	Cable length [m]	Material	Stock no.	Product no.
2-position	0		White	2	PVC	S55174-A123	ASY23L20
2-position	0		White	5	PVC	S55174-A126	ASY23L50
2-position	0		White	10	PVC	S55174-A129	ASY23L100
2-position	0		White	15	PVC	S55174-A130	ASY23L150
2-position	0		White	2	Halogen-free	S55174-A134	ASY23L20HF
2-position	0		White	5	Halogen-free	S55174-A135	ASY23L50HF
2-position	0		White	10	Halogen-free	S55174-A136	ASY23L100HF
DC 0... 10 V	0		White	2	PVC	S55174-A140	ASY6PL20
DC 0... 10 V	0		White	2	Halogen-free	S55174-A150	ASY6PL20HF
2-position	1		White	1	PVC	S55174-A155	ASP23U10
2-position	0	LED	White	2	PVC	S55174-A157	ASY23L20LD
2-position	0		Black	3	PVC	S55174-A131	ASY23L30B
2-position	0		Black	5	PVC	S55174-A132	ASY23L50B

Accessories for STP..3

Product Title	Data sheet	Stock no.	Product no.
Third-party valve adapter on Danfoss RA-N (RA2000)	N2100	BPZ:AV53	AV53
Adapter for Vaillant	N2100	BPZ:AV59	AV59
Adapter for Giacomini	N4884	S55174-A165	AV63

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electrothermal

Accessories for STP..3

Product Title	Data sheet	Stock no.	Product no.
Adapter for Pettinaroli M28 x 1.5	N4884	S55174-A166	AV64
Adapter for valves with M30 x 1.5	N2179	S55174-A159	AV301
Adapter for valves with M28 x 1.5, Comap, Markaryd, Herz	N4884	S55174-A160	AV302
Adapter for valves with M30 x 1, TA	N4884	S55174-A161	AV303
Adapter various (5 pieces)	N4884	S55174-A167	AV304
Standard adapter, M30x1,5	N4884	S55174-A169	AV305
Higher sliding sleeve adapter (bayonet), 5 mm	N2100	S55174-A171	AV306
Theft protection	N4884	S55174-A168	AL431

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SSA..



Electromotoric actuators 100 N for valves with 2.5/5 mm stroke

For radiator valves, small valves and Combi valves

Electromotoric actuators for modulating or 3-position control of heating systems, chilled ceilings and terminal units. With automatic stroke adaption, force-dependent switching off in the end position, position indication, manual control and plug-in type connecting cable. Suited for use with Siemens radiator valves VDN../VEN../VUN../VPD../VPE.., Siemens small valves VD1..CLC and on radiator valves with M30 x 1.5 connection (Heimeier, Cazzaniga, Oventrop M30x1,5, Honeywell-Braukmann, MNG, Junkers, Beulco new). Further valves of other manufacture on request.

Suited for Siemens Combi valves VPP46../VPI46.. with 2.5 and 5 mm stroke.

For fitting to the valve: Cap nut M30 x 1.5

SSA61...: 1.5 mm minimal stroke required for self calibration

Data sheet	N4893
Stroke	2.5 mm 5 mm
Positioning force	100 N
Degree of protection	IP40
Medium temperature	1...110 °C
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview SSA..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Auxiliary switch	Cable length [m]	Stock no.	Product no.
AC 195.5...264.5 230	3-position	6	1	1.5	BPZ:SSA31.1	SSA31.1
AC 24	3-position	0.8	1	1.5	BPZ:SSA81.1	SSA81.1
AC 24	3-position	0.8	0	1.5	S55180-A106	SSA131.00
AC/DC 24	4...20 mA	2.5	0	1.5	S55180-A110	SSA151.05HF
AC/DC 24	DC 0...10 V	2.5	0	1.5	S55180-A107	SSA161.05
AC/DC 24	DC 0...10 V	2.5	0	1.5	S55180-A108	SSA161.05HF
AC/DC 24	DC 0...10 V	2.5	0	1.5	S55180-A109	SSA161E.05HF
230	3-position	7	0	1.5	S55180-A105	SSA331.00

Positioning time for 2.5 mm stroke.

7 Connection cable and terminal block connectors for SSA..

Product Title	Data sheet	Stock no.	Product no.
Conduit Connector, Product Groups SSB61U and SSB81U	155-192P25	BPZ:ASY97	ASY97
Connecting cable, 2.5 m, 3-position, AC 230 V		BPZ:ASY3L25	ASY3L25
Connecting cable, 4.5 m, 3-position, AC 230 V		BPZ:ASY3L45	ASY3L45
Connecting cable, 2.5 m, DC 0...10 V, AC/DC 24 V		BPZ:ASY6L25	ASY6L25
Connecting cable, 4.5 m, DC 0...10 V, AC/DC 24 V		BPZ:ASY6L45	ASY6L45
Connecting cable, 4.5 m, DC 0...10 V, AC/DC 24 V, halogen-free, VDE 0207-24		BPZ:ASY6L45HF	ASY6L45HF
Connecting cable, 2.5 m, 3-position, AC 24 V		BPZ:ASY8L25	ASY8L25
Connecting cable, 4.5 m, 3-position, AC 24 V		BPZ:ASY8L45	ASY8L45
Connecting cable, 4.5 m, 3-position, AC 24 V, halogen-free, VDE 0207-24		BPZ:ASY8L45HF	ASY8L45HF
Retaining screw for cable connector		BPZ:ASY98	ASY98
Terminal block connector 3 position, AC 24 V for SSA81../SSB81../SSD81../SSP81..		BPZ:ASY99	ASY99
Terminal block connector DC0...10 V, AC 24 V for SSA61../SSB61../SSP61../SSD61..	N4864	BPZ:ASY100	ASY100

Adapter for SSA.. actuators

Product Title	Data sheet	Stock no.	Product no.
Adapter for tamper-proof fitting for SSA.. actuators	N4893	BPZ:AL40	AL40

Adapter for valves of other manufacture

AV..

For fitting actuators to radiator valves of other manufacture.

Data sheet N2179
 Warranty 2 Years



Range overview AV..

Product Title	Stock no.	Product no.
Third-party valve adapter on Comap valve	BPZ:AV52	AV52
Third-party valve adapter on Danfoss RA-N (RA2000)	BPZ:AV53	AV53
Third-party valve adapter on Danfoss RAVL	BPZ:AV54	AV54
Third-party valve adapter on Danfoss RAV	BPZ:AV55	AV55
Third-party valve adapter on Giacomini valve	BPZ:AV56	AV56
Third-party valve adapter on Herz valve	BPZ:AV57	AV57
Third-party valve adapter on Oventrop M30x1	BPZ:AV58	AV58
Third-party valve adapter on TA to 2002	BPZ:AV60	AV60
Third-party valve adapter on MMA Markaryd	BPZ:AV61	AV61
Adapter for Vaillant	BPZ:AV59	AV59
Adapter for Giacomini	S55174-A165	AV63
Adapter for Pettinaroli M28 x 1.5	S55174-A166	AV64
Adapter for valves with M30 x 1.5	S55174-A159	AV301
Adapter for valves with M28 x 1.5, Comap, Markaryd, Herz	S55174-A160	AV302
Adapter for valves with M30 x 1, TA	S55174-A161	AV303
Adapter various (5 pieces)	S55174-A167	AV304

Note:

Beulco: Not to be used with RTN..., for old make of Beulco distributors only

Oventrop: Introduced M30 x 1.5 in 2001 and requires no adapter

TA (Heimeier): Introduced M30 x 1.5 in 2003 and requires no adapter

Fitting the actuators to valves of other manufacture (M30 x 1.5) without adapter:

- Heimeier
- Junkers
- Honeywell Braukmann
- MNG
- Cazzaniga
- Oventrop M30 x 1.5 (from 2001)
- Beulco new



Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SFP21../SFP71..

Electromotoric actuators 135 N for small valves V..P47..



For small valves VVP47.., VXP47.. and VMP47..

Together with VVP47.., VXP47.. and VMP47.., they offer high-quality on/off control. Versions for AC 24 V and AC 230 V available. For on/off control of terminal units and heating and cooling zones. The actuators offer a low noise level, have a manual lever, power fail reset function (NC valve closed) and 1.8 m connecting cable. 1 auxiliary switch is available as an accessory item. The combination with a 3-port valve is suited for applications requiring tight shutoff in both valve end positions.

For fitting to the valve: Cap nut M30 x 1.5

Data sheet	N4865
Positioning force	135 N
Stroke	2.5 mm
Positioning time	10 s
Degree of protection	IP30
Mounting position	Upright to 85° inclined
Positioning signal	2-position
Warranty	5 Years

Range overview SFP21../SFP71..

Operating voltage [V]	Power consumption [VA]	Auxiliary switch	Cable length [m]	Stock no.	Product no.
AC 230	9.8	Optional	1.8	BPZ:SFP21/18	SFP21/18
AC 24	9.8	Optional	1.8	BPZ:SFP71/18	SFP71/18

Auxiliary switch: Changeover contact AC 250 V, 3 A res., 2 A ind., adjustable switching point 50 %.

Accessories for SFP21../SFP71..

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SFA21.../ SFA71.../ SFP21.../ SFP71...	N4863	BPZ:ASC2.1/18	ASC2.1/18



Valves and actuators

Actuators for globe and pressure independent combi valves (PICV) Electromotoric

Electromotoric actuator, 160 N, 2.5 mm, 1.5 m, AC 230 V, 3P, SPDT

SSA31.04

For V..I46.. zone valves



Electromotoric actuators for 3-position or SPDT control of zone valves V..I46.. with internally threaded connections. For 3-position or SPDT (open/close) control of heating systems, domestic hot water storage tank charging as well as terminal units and zones. The actuators have automatic stroke adaption, force-dependent switching off in the end positions, position indication, manual control and 1.5 m connecting cable.

Not suitable for radiator valves (soft seal).

For fitting to the valve: Cap nut M30 x 1.5

Data sheet	N4860
Positioning force	160 N
Stroke	2.5 mm
Power consumption	6 VA
Positioning time	43 s
Cable length	1.5 m
Positioning signal	3-position SPDT
Degree of protection	IP40
Medium temperature	1... 110 °C
Ambient humidity, operation	5...85 % r.h.
Mounting position	Upright to 90° inclined
Operating voltage	AC 230 V
Warranty	5 Years

Stock no. Product no.

BPZ:SSA31.04 **SSA31.04**

Accessories for SSA31.04

Product Title	Data sheet	Stock no.	Product no.
Retaining screw for cable connector		BPZ:ASY98	ASY98

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SUA..



Electromotoric actuator 150 N for zone valves

Electromotoric actuators without spring return for VVI46.. and VXI46.. zone valves. Primarily used in heating, ventilation and air conditioning systems for water-based control of hot water and cold water.

- Heating and cooling zones
- Control valves for fan coil units
- Zone valve for floor heating via heating distributors (manifolds)
- Chilled ceiling units
- On/off control for domestic hot water boilers
- Shut off valve for wall mounted boiler applications

For fitting to the valve: plastic union nut M30 x 1.5

Positioning force	150 N
Stroke	2.5 mm
Degree of protection	IP40
Medium temperature	1...110 °C
Mounting position	Upright to 85 ° horizontal, do not suspend
Warranty	5 Years

Range overview SUA..

Operating voltage [V]	Positioning signal	Power consumption	Spring return function	Cable length [m]	Stock no.	Product no.
AC 230	2-position (SPST)	6 VA at 50 Hz	No	0.8	S55176-A104	SUA21/3
AC 230	2-position (SPST)	6 VA at 50 Hz	No	0.8	S55176-A105	SUA21/3P

SUE..



Electromotoric actuator 100 N for combi valves

For fitting to the valve: plastic union nut M30 x 1.5

Positioning force	100 N
Stroke	5 mm
Nominal stroke	5 mm
Degree of protection	IP40
Medium temperature	1...110 °C
Mounting position	Upright to 90°, horizontal; do not suspend
Warranty	5 Years

Range overview SUE..

Operating voltage [V]	Positioning signal	Power consumption	Spring return function	Cable length [m]	Stock no.	Product no.
AC 230	2-position (SPST)	6V VA at 50 Hz	No	0.8	S55176-A106	SUE21P

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV) Electromotoric

Electromotoric actuators 160 N for valves with 2.5 mm stroke

SSP..

- For small valves VVP47.., VXP47.. and VMP47..
- For retrofitting the small valves 2W.., 3W.. and 4W.. with adapter AL100.



Electromotoric actuators for modulating or 3-position control of small valves for terminal units and heating and cooling zones. With position indication, manual control, automatic stroke adaption, force-dependent switching off in the end positions and plug-in type connecting cable.

For fitting to the valve: Cap nut M30 x 1.5.
SSP81.., SSP61.. are CE, C-tick, UL and cUL listed.

Data sheet	N4864
Positioning force	160 N
Stroke	2.5 mm, max. 5.5 mm
Degree of protection	IP40
Medium temperature	1...110 °C
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview SSP..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Positioning time [s]	Cable length [m]	Stock no.	Product no.
AC 230	6	3-position	150	1.5	BPZ:SSP31	SSP31
AC 24 DC 24	2.5	DC 0...10 V	34	1.5	BPZ:SSP61	SSP61
AC 24	0.8	3-position	150	1.5	BPZ:SSP81	SSP81
AC 24	0.8	3-position	43	1.5	BPZ:SSP81.04	SSP81.04

Positioning time for 2.5 mm stroke.

Accessories for SSP..

Product Title	Stock no.	Product no.
Connecting cable, 2.5 m, 3-position, AC 230 V	BPZ:ASY3L25	ASY3L25
Connecting cable, 4.5 m, 3-position, AC 230 V	BPZ:ASY3L45	ASY3L45
Connecting cable, 2.5 m, DC 0...10 V, AC/DC 24 V	BPZ:ASY6L25	ASY6L25
Connecting cable, 4.5 m, DC 0...10 V, AC/DC 24 V	BPZ:ASY6L45	ASY6L45
Connecting cable, 4.5 m, DC 0...10 V, AC/DC 24 V, halogen-free, VDE 0207-24	BPZ:ASY6L45HF	ASY6L45HF
Connecting cable, 2.5 m, 3-position, AC 24 V	BPZ:ASY8L25	ASY8L25
Connecting cable, 4.5 m, 3-position, AC 24 V	BPZ:ASY8L45	ASY8L45
Connecting cable, 4.5 m, 3-position, AC 24 V, halogen-free, VDE 0207-24	BPZ:ASY8L45HF	ASY8L45HF
Retaining screw for cable connector	BPZ:ASY98	ASY98
Terminal block connector 3 position, AC 24 V for SSA81../SSB81../SSD81../SSP81..	BPZ:ASY99	ASY99
Terminal block connector DC0...10 V, AC 24 V for SSA61../SSB61../SSP61../SSD61..	BPZ:ASY100	ASY100

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Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SFA21.. / SFA71..

Electromotoric actuators 200 N for small valves V..I46..



For VVI46.. and VXI46.. zone valves, AC 24 V and AC 230 V versions.

Electromotoric actuators for on/off control of zone. For on/off control of terminal units and heating and cooling zones. The actuators are equipped with a manual lever, spring return facility (NO valve closed) and 1.8 m connecting cable. 1 auxiliary switch is available as an accessory item.

For fitting to the valve: Cap nut M30 x 1.5

Data sheet	N4863
Positioning force	200 N
Positioning signal	2-position
Positioning time	10 s
Stroke	2.5 mm
Degree of protection	IP30
Medium temperature	1...110 °C
Mounting position	Upright to 85° inclined
Warranty	5 Years

Range overview SFA21.. / SFA71..

Operating voltage [V]	Power consumption [VA]	Auxiliary switch	Cable length [m]	Stock no.	Product no.
AC 230	12	Optional	1.8	BPZ:SFA21/18	SFA21/18
AC 24	12	Optional	1.8	BPZ:SFA71/18	SFA71/18

Auxiliary switch: Changeover contact AC 250 V, 3 A res., 2 A ind., adjustable switching point 50 %.

Accessories for SFA21.. / SFA71..

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SFA21.../ SFA71.../ SFP21.../ SFP71...	N4863	BPZ:ASC2.1/18	ASC2.1/18

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV) Electromotoric

Electromotoric actuators 200 N for valves with 5.5 mm stroke

SSB..

For small valves V..P45..

Electromotoric actuators for modulating or 3-position control of small valves for terminal units and chilled ceilings. With position indication, manual control and plug-in type connecting cable 1.5 m. Automatic stroke adaption and force-dependent switching off in the end position.



For fitting to the valve: Cap nut G $\frac{3}{4}$ "
SSB61.., SSB81.. are CE, C-tick, UL and cUL listed.

Data sheet	N4891
Positioning force	200 N
Stroke	5.5 mm
Degree of protection	IP40
Medium temperature	1...110 °C
Ambient humidity, operation	5...85 % r.h.
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview SSB..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Auxiliary switch	Cable length [m]	Stock no.	Product no.
AC 230	3-position	6	0	1.5	BPZ:SSB31	SSB31
AC 230	3-position	6	1	1.5	BPZ:SSB31.1	SSB31.1
AC 24 DC 24	DC 0...10 V	2.5	0	1.5	BPZ:SSB61	SSB61
AC 24	3-position	0.8	0	1.5	BPZ:SSB81	SSB81
AC 24	3-position	0.8	1	1.5	BPZ:SSB81.1	SSB81.1

Auxiliary switch: Changeover contact AC 250 V, 1 A res., 0.5 A ind., adjustable switching point 0...100 %.

Accessories for SSB..

Product Title	Stock no.	Product no.
Conduit Connector, Product Groups SSB61U and SSB81U	BPZ:ASY97	ASY97
Connecting cable, 2.5 m, 3-position, AC 230 V	BPZ:ASY3L25	ASY3L25
Connecting cable, 4.5 m, 3-position, AC 230 V	BPZ:ASY3L45	ASY3L45
Connecting cable, 2.5 m, DC 0...10 V, AC/DC 24 V	BPZ:ASY6L25	ASY6L25
Connecting cable, 4.5 m, DC 0...10 V, AC/DC 24 V	BPZ:ASY6L45	ASY6L45
Connecting cable, 4.5 m, DC 0...10 V, AC/DC 24 V, halogen-free, VDE 0207-24	BPZ:ASY6L45HF	ASY6L45HF
Connecting cable, 2.5 m, 3-position, AC 24 V	BPZ:ASY8L25	ASY8L25
Connecting cable, 4.5 m, 3-position, AC 24 V	BPZ:ASY8L45	ASY8L45
Connecting cable, 4.5 m, 3-position, AC 24 V, halogen-free, VDE 0207-24	BPZ:ASY8L45HF	ASY8L45HF
Retaining screw for cable connector	BPZ:ASY98	ASY98
Terminal block connector 3 position, AC 24 V for SSA81../SSB81../SSD81../SSP81..	BPZ:ASY99	ASY99
Terminal block connector DC0...10 V, AC 24 V for SSA61../SSB61../SSP61../SSD61..	BPZ:ASY100	ASY100

7

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SSC..

Electromotoric actuator, 300 N, for valves with 5.5 mm stroke



Manual control with automatic reset to control mode. Overload-proof through force-dependent switching off in the end position. With plastic housing and cap nut for fitting on threaded valves with 5.5 mm stroke.

Data sheet	N4895
Positioning force	300 N
Stroke	5.5 mm
Degree of protection	IP40
Medium temperature	1...110 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SSC..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Spring return function	Stock no.	Product no.
AC 230	3-position	6	No	BPZ:SSC31	SSC31
AC 24 DC 24	DC 0...10 V	2	No	BPZ:SSC61	SSC61
AC 24 DC 24	DC 0...10 V	2	Yes (15 s)	BPZ:SSC61.5	SSC61.5
AC 24	3-position	0.8	No	BPZ:SSC81	SSC81

SSC61.5: Power consumption when connecting power for the first time 3 VA.

Accessories for SSC..

Product Title	Data sheet	Stock no.	Product no.
Adapter to upgrade older Landis&Gyr valves	N4573	BPZ:ASK30	ASK30

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV) Electromotoric

Electromotoric actuators 400 N for valves with 5.5 mm stroke

SAS..

Electromotoric actuator for the operation of Siemens 2-port and 3-port valves, types VVG44.., VXG44.. and VVG549.. with 5.5 mm stroke as control and shut-off valves in heating, ventilation and air conditioning systems. With manual adjuster and position indicator, status indication per LED. Optional functions with auxiliary switches.



SA..81.., SA..61.. are UL listed.

Data sheet	N4581
Positioning force	400 N
Stroke	5.5 mm
Degree of protection	IP54
Medium temperature	1... 130 °C
Mounting position	Upright to horizontal
Position feedback	DC 0... 10 V (SA..6..)
Warranty	5 Years

Range overview SAS..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Positioning time [s]	Spring return function	Stock no.	Product no.
AC/DC 24	5.9	Modbus RTU	30	Yes (14 s)	S55158-A122	SAS61.33/MO
AC 230	2.8	3-position	120	No	S55158-A106	SAS31.00
AC 230	3.5	3-position	30	No	S55158-A107	SAS31.03
AC 230	3.5	3-position	120	Yes (28 s)	S55158-A108	SAS31.50
AC 230	5.5	3-position	30	Yes (14 s)	S55158-A109	SAS31.53
AC 24	5.3	DC 0... 10 V	30	No	S55158-A100	SAS61.03
DC 24		DC 4... 20 mA 0... 1000 Ohm				
AC 24	6.0	Modbus RTU	30		S55158-A121	SAS61.03/MO
DC 24						
AC 24	5.9	DC 0... 10 V	30	Yes (14 s)	S55158-A101	SAS61.33
DC 24		DC 4... 20 mA 0... 1000 Ohm				
AC 24	5.8	DC 0... 10 V	30	Yes (14 s)	S55158-A102	SAS61.53
DC 24		DC 4... 20 mA 0... 1000 Ohm				
AC 24	2.2	3-position	120	No	S55158-A103	SAS81.00
DC 24						
AC 24	2.5	3-position	30	No	S55158-A104	SAS81.03
DC 24						
AC 24	3.4	3-position	30	Yes (14 s)	S55158-A105	SAS81.33
DC 24						

Accessories for SAS..

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	ASC10.51
Adapter to upgrade older Landis&Gyr valves	N4573	BPZ:ASK30	ASK30
Weathershild for SAS../SAT../SAK..		S55845-Z155	ASK39.2

New Product

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SAT..

Electromotoric actuators 300 N for valves with 5.5 mm stroke



Electromotoric actuators for the operation of Siemens 2-port valves VVG549..., kvs value 0.25-6.3 m³/h with 5.5 mm stroke as control valve in district heating applications. With manual adjuster and position indicator, status indication per LED. Optional functions with auxiliary switches.

SA..61.. are UL listed.

Data sheet	N4584
Positioning force	300 N
Stroke	5.5 mm
Degree of protection	IP54
Medium temperature	1...150 °C
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (SA..6..)
Warranty	5 Years

Range overview SAT..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Spring return function	Stock no.	Product no.
AC 230	3-position	5.0	8	No	S55158-A119	SAT31.008
AC/DC 24	Modbus RTU	7.1	8	No	S55158-A123	SAT61.008/MO
AC/DC 24	Modbus RTU	6.4	15	Yes (8 s)	S55158-A124	SAT61.51/MO
AC 230	3-position	5.5	15	Yes (8 s)	S55158-A120	SAT31.51
AC 24	DC 0...10V	7.1	8	No	S55158-A117	SAT61.008
DC 24	DC 4...20 mA 0...1000 Ohm					
AC 24	DC 0...10V	6.4	15	Yes (8 s)	S55158-A118	SAT61.51
DC 24	DC 4...20 mA 0...1000 Ohm					

Accessories for SAT..

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	ASC10.51
Adapter to upgrade older Landis&Gyr valves	N4573	BPZ:ASK30	ASK30
Weathershild for SAS../SAT../SAK..		S55845-Z155	ASK39.2

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV) Electromotoric

Electromotoric actuators for seat valves

SBX..

For operation with Siemens 2-port and 3-port valves, types VVF47.., VXF47.. with 20 mm stroke as control valves in heating, ventilation and air conditioning systems

Data sheet	N4519
Positioning force	700 N
Nominal stroke	20 mm
Positioning time	120 s
Degree of protection	IP54
Ambient temperature, operation	-10...55 °C
Medium temperature	1...95 °C
Mounting position	Upright to horizontal
Warranty	5 Years



Range overview SBX..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Stock no.	Product no.
AC 230	3-position	9	S55160-A102	SBX31
AC 24	DC 0...10 V	5	S55160-A100	SBX61
AC 24	3-position	4	S55160-A101	SBX81

Accessories for SBX..

Product Title	Data sheet	Stock no.	Product no.
Function module 4...20 mA for SBX61, SBV61	N4519	S55845-Z120	AZX420

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SAX..



Electromotoric actuators 800 N for valve with 20 mm stroke

Electromotoric actuator for the operation of Siemens 2-port and 3-port valves, types VVF.., VVG.., VXF.. and VXG.. with 20 mm stroke as control and safety shut-off valves in heating, ventilation and air conditioning systems.

With manual adjuster and position indicator, status indication per LED.

Optional functions with auxiliary switches, potentiometer, functional module and stem heater.

Data sheet	N4501
Positioning force	800 N
Stroke	20 mm
Degree of protection	IP54
Ambient temperature, operation	-5...55 °C
Medium temperature	-25...130 °C
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (SA..6..)
Spring return function	No
Warranty	5 Years

Range overview SAX..

Operating voltage	Positioning signal	Power consumption [VA]	Positioning time [s]	Cable length [m]	Stock no.	Product no.
AC 230 V	3-position	3.5	120		S55150-A105	SAX31.00
AC 230 V	3-position	6	30		S55150-A106	SAX31.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	8	30		S55150-A100	SAX61.03
AC 24 DC 24	Modbus RTU	8.7	30	0.9	S55150-A140	SAX61.03/MO
AC 24 V DC 24 V	3-position	3.5	120		S55150-A102	SAX81.00
AC 24 V DC 24 V	3-position	5	30		S55150-A103	SAX81.03

Accessories for SAX..

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	ASC10.51
Potentiometer 0...1000 Ohm for SA..31../SA..81..	N4501	S55845-Z106	ASZ7.5/1000
Funtion module for SA..61.., sequence control/changeover of acting direction	N4501	S55845-Z107	AZX61.1
Stem heating element for media <0 °C	N4501	S55845-Z108	ASZ6.6
Weathershield for SAX../SAL..	N4501	S55845-Z109	ASK39.1

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Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

Electromotoric actuators 500 N for Combi valves VPF43../53..

SAX..P..

Electromotoric actuator for the operation of Siemens Combi valves, types VPF43.. and VPF53.. with 20 mm stroke as control valves in ventilation, air conditioning, district heating and cooling systems. With manual adjuster and position indicator, status indication per LED. With manual adjuster and position indicator, status indication per LED. Optional functions with auxiliary switches, potentiometer, functional module and stem heater.



SA..81P.., SA..61P.. are UL listed.

Data sheet	N4509
Positioning force	500 N
Stroke	20 mm
Degree of protection	IP54
Ambient temperature, operation	5...55 °C
Medium temperature	1...120 °C
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (SAX6..)
Warranty	5 Years

Range overview SAX..P..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Stock no.	Product no.
AC 230	3-position	8	30	S55150-A118	SAX31P03
AC/DC 24	Modbus RTU	8	30	S55150-A143	SAX61P03/MO
AC 24	DC 0...10 V	8	30	S55150-A114	SAX61P03
DC 24	DC 4...20 mA 0...1000 Ohm				
AC 24	3-position	5	30	S55150-A116	SAX81P03
DC 24					

Accessories for SAX..P

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	ASC10.51
Potentiometer 0...1000 Ohm for SA..31../SA..81..	N4501	S55845-Z106	ASZ7.5/1000
Function module for SA..61.., sequence control/changeover of acting direction	N4501	S55845-Z107	AZX61.1
Weathershield for SAX../SAL..	N4501	S55845-Z109	ASK39.1

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SAY..P..



Electromotoric actuators 200 N for Combi valves VPI46 with a 15 mm stroke

Electromotoric actuator for the operation of Siemens Combi valves, types VPI46.40F9.5Q and VPI46.50F12Q with 15 mm stroke as control valves in ventilation, air conditioning, district heating and cooling systems. With manual adjuster and position indicator, status indication per LED. Optional functions with auxiliary switches, potentiometer, functional module and stem heater.

Data sheet	A6V10628469
Positioning force	200 N
Stroke	15 mm
Spring return function	No
Degree of protection	IP54
Ambient temperature, operation	5...55 °C
Medium temperature	1...120 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SAY..P..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Stock no.	Product no.
AC 230	3-position	6	30	S55150-A132	SAY31P03
AC 24	DC 0...10 V	8	30	S55150-A133	SAY61P03
DC 24	DC 4...20 mA				
	0...1000 Ohm				
AC/DC 24	Modbus RTU	8	30	S55150-A145	SAY61P03/MO
AC 24	3-position	5	30	S55150-A134	SAY81P03
DC 24					

Accessories for SAY..P..

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	ASC10.51
Funtion module for SA..61.., sequence control/changeover of acting direction	N4501	S55845-Z107	AZX61.1



Valves and actuators

Actuators for globe and pressure independent combi valves (PICV) Electromotoric

Electromotoric actuators 1600 N for valves with 20/40 mm stroke

SAV..

Electromotoric actuator for the operation of Siemens 2-port and 3-port valves, types VVF.. and VXF.. with 20/40 mm stroke as control and safety shut-off valves in heating, ventilation and air conditioning systems.

With manual adjuster and position indicator, status indication per LED.

Optional functions with auxiliary switches, potentiometer, functional module and stem heater.



Data sheet	N4503
Positioning force	1600 N
Stroke	40 mm
Degree of protection	IP54
Ambient temperature, operation	-5...55 °C
Medium temperature	-25...130 °C (150 °C)
Mounting position	Upright to horizontal, up to 150 °C with horizontal mounting position
Position feedback	DC 0...10 V (SA..6..)
Warranty	5 Years

Range overview SAV..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Spring return function	Positioning time [s]	Cable length [m]	Stock no.	Product no.
AC/DC 24	Modbus RTU	9.5	No	120	0.9	S55150-A141	SAV61.00/MO
AC 230	3-position	6.5	No	120		S55150-A112	SAV31.00
AC 24	DC 0...10 V	9.5	No	120		S55150-A110	SAV61.00
DC 24	DC 4...20 mA 0...1000 Ohm						
AC 24	3-position	7	No	120		S55150-A111	SAV81.00
DC 24							

Accessories for SAV..

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	ASC10.51
Potentiometer 0...1000 Ohm for SA..31../SA..81..	N4501	S55845-Z106	ASZ7.5/1000
Function module for SA..61.., sequence control/changeover of acting direction	N4501	S55845-Z107	AZX61.1
Stem heating element for media < 0 °C	N4501	S55845-Z108	ASZ6.6
Weathershield for SAX../SAL..	N4501	S55845-Z109	ASK39.1

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SAV..P..



Electromotoric actuators 1100 N for Combi valves VPF43../53..

Electromotoric actuators for the operation of Siemens combi valves of types VPF43.. and VPF53.. with 40 mm stroke as control and safety shut-off valves in ventilation, air conditioning, district heating and refrigerating systems. With manual adjuster and position indicator, status indication per LED. Optional functions with auxiliary switches, potentiometer and functional module.

SA..61P.., SA..81P.. are UL listed.

Data sheet	N4510
Positioning force	1100 N
Stroke	40 mm
Spring return function	No
Degree of protection	IP54
Ambient temperature, operation	5...55 °C
Medium temperature	1...120 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SAV..P..

Operating voltage	Positioning signal	Power consumption [VA]	Positioning time [s]	Stock no.	Product no.
AC/DC 24 V	Modbus RTU	9.5	120	S55150-A144	SAV61P00/MO
AC 230	3-position	6.5	120	S55150-A121	SAV31P00
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	9.5	120	S55150-A119	SAV61P00
AC 24 V DC 24 V	3-position	7	120	S55150-A120	SAV81P00

Accessories for SAV..P

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	ASC10.51
Potentiometer 0...1000 Ohm for SA..31../SA..81..	N4501	S55845-Z106	ASZ7.5/1000
Function module for SA..61.., sequence control/changeover of acting direction	N4501	S55845-Z107	AZX61.1
Weathershield for SAX../SAL..	N4501	S55845-Z109	ASK39.1

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV) Electromotoric

Electromotoric actuators 1100 N for Combi valves VPF43../53..

SQV..P..

Electromotoric actuators for the operation of Siemens Combi valves, types VPF43.. and VPF53.. with 20/40 mm stroke as control valves in ventilation, air conditioning, district heating and cooling systems. With manual adjuster and position indicator, status indication per LED and with selectable positioning time (20 mm: 40, 60, 90 or 120 s, 40 mm: 80, 120, 180 or 240 s). Optional functions with auxiliary switches, potentiometer and AC 230 V power module.



Actuators SQV..P.. are UL-listed

Data sheet	N4833
Positioning force	1100 N
Stroke	20 mm 40 mm 43 mm
Positioning time	20 mm: 40 s 40 mm: 80 s
Degree of protection	IP66
Ambient temperature, operation	0...55 °C
Medium temperature	1...120 °C
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V
Warranty	5 Years

Range overview SQV..P..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Spring return function	Stock no.	Product no.
AC 24 DC 24	3-position DC 0...10 V DC 4...20 mA	20	Yes (30 s) Stem retracted	S55150-A130	SQV91P30
AC 24 DC 24	3-position DC 0...10 V DC 4...20 mA	20	Yes (30 s) Stem extended	S55150-A131	SQV91P40

Accessories for SQV..P

Product Title	Data sheet	Stock no.	Product no.
Double auxiliary switch for SQV..P..	N4833	S55845-Z137	ASC10.42
Potentiometer 0...1000 Ohm for SQV..P..	N4833	S55845-Z136	ASZ7.6/1000
AC 230 V adapter for SQV..P..	N4833	S55845-Z138	ASP1.1

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV)

Electromotoric

SBV..



Electromotoric actuators for seat valves

For operation with Siemens 2-port and 3-port valves, types VVF47.., VXF47.. with 40 mm stroke as control valves in heating, ventilation and air conditioning systems

Data sheet	N4519
Positioning force	1600 N
Stroke	40 mm
Positioning time	180 s
Degree of protection	IP54
Ambient temperature, operation	-10...55 °C
Medium temperature	1...95 °C
Mounting position	Upright to horizontal
Warranty	5 Years

For customers in Asia / Australia

Range overview SBV..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Stock no.	Product no.
AC 230	3-position	9	S55160-A105	SBV31
AC 24	DC 0...10 V	7	S55160-A103	SBV61
AC 24	3-position	7	S55160-A104	SBV81

Accessories for SBV..

Product Title	Data sheet	Stock no.	Product no.
Function module 4...20 mA for SBX61, SBV61	N4519	S55845-Z120	AZX420

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV) Electrohydraulic

Electrohydraulic actuators 1000 N for valves with 20 mm stroke

SKD32../SKD82..

Overload-proof through travel-dependent, fixed switching off in end position. With die-cast aluminium housing and yoke for valves with 20 mm stroke. Optional functions: one auxiliary switch or one potentiometer. With manual control.

SKD..U are UL listed. Control devices MK..5.. are control devices with safety shut-off function per DIN EN 14597.

Data sheet	N4561
Positioning force	1000 N
Stroke	20 mm
Degree of protection	IP54
Medium temperature	-25...150 °C
Ambient temperature, operation	-15...50 °C
Mounting position	Upright to horizontal
Warranty	5 Years



Range overview SKD32../SKD82..

Operating voltage [V]	Power consumption [VA]	Positioning signal	Positioning time [s]	Spring return function	Stock no.	Product no.
AC 230	16	3-position	Open 30 Close 10	Yes (8 s)	BPZ:SKD32.21	SKD32.21
AC 230	11	3-position	120	No	BPZ:SKD32.50	SKD32.50
AC 230	17	3-position	120	Yes (8 s)	BPZ:SKD32.51	SKD32.51
AC 24	9	3-position	120	No	BPZ:SKD82.50	SKD82.50
AC 24	9	3-position	120	No	BPZ:SKD82.50U	SKD82.50U
AC 24	14	3-position	120	Yes (8 s)	BPZ:SKD82.51	SKD82.51
AC 24	14	3-position	120	Yes (8 s)	BPZ:SKD82.51U	SKD82.51U

Actuators for globe and pressure independent combi valves (PICV)

Electrohydraulic

SKD60/SKD62..



Electrohydraulic actuators 1000 N for valves with 20 mm stroke

Overload-proof through travel-dependent, electronic switching off in end position. With die-cast aluminium housing and yoke for valves with 20 mm stroke. Optional function with one auxiliary switch. With manual control.

SKD..U, SKD..UA are UL listed. Control devices MK..5.. are control devices with safety shut-off function per DIN EN 14597.

Data sheet	N4561
Positioning force	1000 N
Stroke	20 mm
Position feedback	DC 0...10 V DC 4...20 mA
Degree of protection	IP54
Medium temperature	-25...150 °C
Ambient temperature, operation	-15...50 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SKD60/SKD62..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Spring return function	Stock no.	Product no.
AC 24	Modbus RTU	14	Open 30 Close 15	No	S55195-A129	SKD62/MO
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	10	Open:30 Close:15	No	BPZ:SKD60	SKD60
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	10	Open 30 Close:15	No	BPZ:SKD60U	SKD60U
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	14	Open:30 Close:15	Yes (15 s)	BPZ:SKD62	SKD62
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	14	Open:30 Close:15	Yes (15 s)	BPZ:SKD62U	SKD62U
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	14	Open:30 Close:15	Yes (15 s)	BPZ:SKD62UA	SKD62UA

Actuators type ..UA provide additional functions: Signal inversion, stroke limitation, and adjustable starting point and operating range.

Valves and actuators

Actuators for globe and pressure independent combi valves (PICV) Electrohydraulic

Electrohydraulic actuators 2800 N for valves with 20 mm stroke

SKB32../SKB82..

Overload-proof through travel-dependent, fixed switching off in end position. With die-cast aluminium housing and yoke for valves with 20 mm stroke. Optional functions: one auxiliary switch or one potentiometer. With manual control.



SKB82..U are UL listed. Control devices MK..6.. are control devices with safety shut-off function per DIN EN 14597.

Data sheet	N4564
Positioning force	2800 N
Stroke	20 mm
Degree of protection	IP54
Medium temperature	-25...220 °C
Ambient temperature, operation	-15...<55 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SKB32../SKB82..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Spring return function	Stock no.	Product no.
AC 230	3-position	10	120	No	BPZ:SKB32.50	SKB32.50
AC 230	3-position	16	120	Yes (10 s)	BPZ:SKB32.51	SKB32.51
AC 24	3-position	8	120	No	BPZ:SKB82.50	SKB82.50
AC 24	3-position	12	120	Yes (10 s)	BPZ:SKB82.51	SKB82.51
AC 24	3-position	8	120	No	BPZ:SKB82.50U	SKB82.50U
AC 24	3-position	12	120	Yes (10 s)	BPZ:SKB82.51U	SKB82.51U

Actuators for globe and pressure independent combi valves (PICV)

Electrohydraulic

SKB60/62..



Electrohydraulic actuators 2800 N for valves with 20 mm stroke

Overload-proof through travel-dependent, electronic switching off in end position. With die-cast aluminium housing and yoke for valves with 20 mm stroke. Optional function with one auxiliary switch. With manual control.

SKB..U, SKB..UA are UL listed. Control devices MK..6.. are control devices with safety shut-off function per DIN EN 14597.

Data sheet	N4564
Stroke	20 mm
Position feedback	DC 0...10 V DC 4...20 mA
Degree of protection	IP54
Medium temperature	-25...220 °C
Ambient temperature, operation	-15...<55 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SKB60/SKB62..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Spring return function	Stock no.	Product no.
AC 24	Modbus RTU	14	Open 120 Close 10	No	S55195-A127	SKB62/MO
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	10	Open:120 Close:10	No	BPZ:SKB60	SKB60
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	14	Open:120 Close:10	Yes (10 s)	BPZ:SKB62	SKB62
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	14	Open:120 Close:10	Yes (10 s)	BPZ:SKB62U	SKB62U
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	14	Open:120 Close:10	Yes (10 s)	BPZ:SKB62UA	SKB62UA

Actuators type ..UA provide additional functions: Signal inversion, stroke limitation, and adjustable starting point and operating range.



Valves and actuators

Actuators for globe and pressure independent combi valves (PICV) Electrohydraulic

Electrohydraulic actuators 2800 N for valves with 40 mm stroke

SKC32../SKC82..

Overload-proof through travel-dependent, fixed switching off in end position. With die-cast aluminium housing and yoke for valves with 40 mm stroke. Optional functions: one auxiliary switch or one potentiometer. With manual control.



SKC..U are UL listed. Control devices MK..6.. are control devices with safety shut-off function per DIN EN 14597.

Data sheet	N4566
Positioning force	2800 N
Stroke	40 mm
Degree of protection	IP54
Medium temperature	-25...220 °C
Ambient temperature, operation	-15...<55 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SKC32../SKC82..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Spring return function	Stock no.	Product no.
AC 230	3-position	18	120	No	BPZ:SKC32.60	SKC32.60
AC 230	3-position	24	120	Yes (18 s)	BPZ:SKC32.61	SKC32.61
AC 24	3-position	15	120	No	BPZ:SKC82.60	SKC82.60
AC 24	3-position	19	120	Yes (18 s)	BPZ:SKC82.61	SKC82.61
AC 24	3-position	15	120	No	BPZ:SKC82.60U	SKC82.60U
AC 24	3-position	19	120	Yes (18 s)	BPZ:SKC82.61U	SKC82.61U

Actuators for globe and pressure independent combi valves (PICV)

Electrohydraulic

SKC60/SKC62..

Electrohydraulic actuators 2800 N for valves with 40 mm stroke



Overload-proof through travel-dependent, electronic switching off in end position. With die-cast aluminium housing and yoke for valves with 40 mm stroke. Optional function with one auxiliary switch. With manual control.

SKC..U, SKC..UA are UL listed. Control devices MK..6.. are control devices with safety shut-off function per DIN EN 14597.

Data sheet	N4566
Stroke	40 mm
Position feedback	DC 0...10 V DC 4...20 mA
Degree of protection	IP54
Medium temperature	-25...220 °C
Ambient temperature, operation	-15...<55 °C
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview SKC60/SKC62..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Spring return function	Stock no.	Product no.
AC 24	Modbus RTU	21	Open 120 Close 20	No	S55195-A128	SKC62/MO
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	17	Open:120 Close:20	No	BPZ:SKC60	SKC60
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	21	Open:120 Close:20	Yes (20 s)	BPZ:SKC62	SKC62
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	21	Open 120 Close 20	Yes (20 s)	BPZ:SKC62U	SKC62U
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	21	Open:120 Close:20	Yes (20 s)	BPZ:SKC62UA	SKC62UA

Actuators type ..UA provide additional functions: Signal inversion, stroke limitation, and adjustable starting point and operating range.

Accessories for SKD../SKB../SKC..

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SKB6../SKC6../SKD6..	N4566	BPZ:ASC1.6	ASC1.6
Double auxiliary switch for SKB/ C/ D32../82..	N4561	BPZ:ASC9.3	ASC9.3
Stroke inverter for SKD..	N4561	BPZ:ASK50	ASK50
Stroke inverter for SKB..	N4564	BPZ:ASK51	ASK51
Potentiometer 0... 1000 Ohm for SKB/ C/ D32../82..	N4564	BPZ:ASZ7.3	ASZ7.3
Stem heating element for media < 0 °C	N4501	S55845-Z108	ASZ6.6

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Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

2-port valves with flanged connections, PN6

VVF22..

- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits



Data sheet	N4401
Stroke	to DN80: 20 mm DN100: 40 mm
Leakage rate	0...0.02% of the kvs value
Medium temperature	-10...130 °C
Valve characteristic	Equal percentage
Rangeability	DN 25: >50 DN 40...100: >100
Permissible operating pressure	600 kPa
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN40: CrNi steel / bronze
PN class	PN 6
Warranty	5 Years

Range overview VVF22..

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	kvs	Stock no.	Product no.
Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s		[m ³ /h]		
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
300	600			300	600	300	600			25	2.5	S55200-V100	VVF22.25-2.5
300	600			300	600	300	600			25	4	S55200-V101	VVF22.25-4
300	600			300	600	300	600			25	6.3	S55200-V102	VVF22.25-6.3
300	600			300	600	300	600			25	10	S55200-V103	VVF22.25-10
300	550	300	600	300	600	300	600			40	16	S55200-V104	VVF22.40-16
300	550	300	600	300	600	300	600			40	25	S55200-V105	VVF22.40-25
300	350	300	600	300	450	300	600			50	40	S55200-V106	VVF22.50-40
150	200	300	450	200	250	300	600			65	63	S55200-V107	VVF22.65-63
75	125	225	250	125	175	300	450			80	100	S55200-V108	VVF22.80-100
		125	160					250	300	100	160	S55200-V109	VVF22.100-160

For media <0 °C, stem heating element ASZ6.6 is required.

Replacement sealing glands for VVF22..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290

Combinable actuator for VVF22..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V	DC 0...10 V	30	no	N4501	S55150-A100	SAX61.03
DC 24 V	DC 4...20 mA					
	0...1000 Ohm					
AC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
DC 24						
AC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
DC 24 V						
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00
AC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
DC 24 V						

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF22..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

2-port valves with flanged connections, PN 10

VVF32..

- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits



Data sheet	N4402
Stroke	to DN80: 20 mm from DN100: 40 mm
Leakage rate	0...0.02% of the kvs value
Medium temperature	-10...150 °C
Valve characteristic	Equal percentage kvs 250/400 linear
Rangeability	DN 15 .. 25: >50 DN 40...150: >100
Permissible operating pressure	1000 kPa
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN50: CrNi steel / bronze
PN class	PN 10
Warranty	5 Years

Range overview VVF32..

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	kvs	Stock no.	Product no.
Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s		[m ³ /h]		
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
400	1000			400	1000	400	1000			15	1.6	S55202-V100	VVF32.15-1.6
400	1000			400	1000	400	1000			15	2.5	S55202-V101	VVF32.15-2.5
400	1000			400	1000	400	1000			15	4	S55202-V102	VVF32.15-4
400	1000			400	1000	400	1000			25	6.3	S55202-V103	VVF32.25-6.3
400	1000			400	1000	400	1000			25	10	S55202-V104	VVF32.25-10
400	550	400	1000	400	750	400	1000			40	16	S55202-V105	VVF32.40-16
400	550	400	1000	400	750	400	1000			40	25	S55202-V106	VVF32.40-25
300	350	400	750	400	450	400	1000			50	40	S55202-V107	VVF32.50-40
150	200	400	450	200	250	400	700			65	63	S55202-V108	VVF32.65-63
75	125	225	250	125	175	400	450			80	100	S55202-V109	VVF32.80-100
		125	160					250	300	100	160	S55202-V110	VVF32.100-160
		90	125					160	190	125	250	S55202-V111	VVF32.125-250
		60	80					100	125	150	400	S55202-V112	VVF32.150-400

For media < 0° C, stem heating element ASZ 6.6 is required.

Replacement sealing glands for VVF32..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290

Combinable actuator for VVF32..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V	DC 0...10V	30	no	N4501	S55150-A100	SAX61.03
DC 24 V	DC 4...20 mA					
	0...1000 Ohm					
AC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
DC 24						
AC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
DC 24 V						
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00



Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF32..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

VVF42..



2-port valves with flanged connections, PN 16

- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	N4403
Stroke	to DN80: 20 mm from DN100: 40 mm
Leakage rate	0...0.02% of the kvs value
Medium temperature	-10...150 °C
Valve characteristic	Equal percentage kvs 250/400 linear
Rangeability	DN 15...25: >50 DN 32...150: >100
Permissible operating pressure	1600 kPa
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN50: CrNi steel / bronze
PN class	PN 16
Warranty	5 Years

Range overview VVF42..

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	kvs	Stock no.	Product no.
Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s		[m ³ /h]		
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
400	1600			400	1600	400	1600			15	1.6	S55204-V100	VVF42.15-1.6
400	1600			400	1600	400	1600			15	2.5	S55204-V101	VVF42.15-2.5
400	1600			400	1600	400	1600			15	4	S55204-V102	VVF42.15-4
400	1600			400	1600	400	1600			20	6.3	S55204-V103	VVF42.20-6.3
400	1600			400	1600	400	1600			25	6.3	S55204-V104	VVF42.25-6.3
400	1600			400	1600	400	1600			25	10	S55204-V105	VVF42.25-10
400	900			400	1200	400	1600			32	16	S55204-V106	VVF42.32-16
400	550	400	1250	400	750	400	1600			40	16	S55204-V107	VVF42.40-16
400	550	400	1250	400	750	400	1600			40	25	S55204-V108	VVF42.40-25
300	350	400	750	400	450	400	1200			50	31.5	S55204-V109	VVF42.50-31.5
300	350	400	750	400	450	400	1200			50	40	S55204-V110	VVF42.50-40
150	200	400	450	200	250	400	700			65	50	S55204-V111	VVF42.65-50
150	200	400	450	200	250	400	700			65	63	S55204-V112	VVF42.65-63
75	125	225	250	125	175	400	450			80	80	S55204-V113	VVF42.80-80
75	125	225	250	125	175	400	450			80	100	S55204-V114	VVF42.80-100
		125	160					250	300	100	125	S55204-V115	VVF42.100-125
		125	160					250	300	100	160	S55204-V116	VVF42.100-160
		90	125					160	190	125	200	S55204-V117	VVF42.125-200
		90	125					160	190	125	250	S55204-V118	VVF42.125-250
		60	80					100	125	150	315	S55204-V119	VVF42.150-315
		60	80					100	125	150	400	S55204-V120	VVF42.150-400

For media < 0° C, stem heating element ASZ 6.6 is required.

Replacement sealing glands for VVF42..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF42..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62

Valves and actuators
Globe and pressure independent combi valves (PICV)
2-port flanged valves

Combinable actuator for VVF42..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Globe and pressure independent combi valves (PICV)

2-port flanged valves

VVF42..C

2-port valves with flanged connections, PN 16



- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	A6V10794157
Stroke	to DN 80: 20 mm from DN 100: 40 mm
Leakage rate	0...0.02% of the kvs value
Medium temperature	-10... 150 °C
Valve characteristic	Equal percentage k _{vis} 250/400 linear
Rangeability	to DN 40: >50 from DN 50: >100
Permissible operating pressure	1600 kPa
Material, inside set	≤ DN 25: CrNi steel / brass ≥ DN 32: CrNi steel / CrNi steel
PN class	PN 16
Warranty	5 Years

For customers in Asia / Australia

Range overview VVF42..C

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	k _{vis}	Stock no.	Product no.
Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s		[m ³ /h]		
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
400	1600			400	1600	400	1600			25	6.3	S55204-V148	VVF42.25-6.3C
400	1600			400	1600	400	1600			25	10	S55204-V149	VVF42.25-10C
400	900			400	1200	400	1600			32	16	S55204-V150	VVF42.32-16C
400	550	400	1250	400	750	400	1600			40	16	S55204-V151	VVF42.40-16C
400	550	400	1250	400	750	400	1600			40	25	S55204-V152	VVF42.40-25C
300	350	400	750	400	450	400	1200			50	31.5	S55204-V153	VVF42.50-31.5C
300	350	400	750	400	450	400	1200			50	40	S55204-V154	VVF42.50-40C
150	200	400	450	200	250	400	700			65	50	S55204-V155	VVF42.65-50C
150	200	400	450	200	250	400	700			65	63	S55204-V156	VVF42.65-63C
75	125	225	250	125	175	400	450			80	80	S55204-V157	VVF42.80-80C
75	125	225	250	125	175	400	450			80	100	S55204-V158	VVF42.80-100C
		125	160					250	300	100	125	S55204-V159	VVF42.100-125C
		125	160					250	300	100	160	S55204-V160	VVF42.100-160C
		90	125					160	190	125	200	S55204-V161	VVF42.125-200C
		90	125					160	190	125	250	S55204-V162	VVF42.125-250C
		60	80					100	125	150	315	S55204-V163	VVF42.150-315C
		60	80					100	125	150	400	S55204-V164	VVF42.150-400C

Replacement sealing glands for VVF42..C

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290

Combinable actuator for VVF42..C

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V	DC 0...10 V	30	no	N4501	S55150-A100	SAX61.03
DC 24 V	DC 4...20 mA					
	0...1000 Ohm					

Valves and actuators
Globe and pressure independent combi valves (PICV)
2-port flanged valves

Combinable actuator for VVF42..C

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Globe and pressure independent combi valves (PICV)

2-port flanged valves

VVF42..K

2-port valves pressure compensated with flanged connections, PN 16



- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	N4403
Stroke	to DN80: 20 mm from DN100: 40 mm
Leakage rate	0...0.02% of the kvs value
Medium temperature	-5...150 °C
Valve characteristic	Equal percentage k _{vs} 250/360 linear
Rangeability	>100
Permissible operating pressure	1600 kPa
Material, inside set	≥ DN 50: CrNi steel / bronze
PN class	PN 16
Warranty	5 Years

Range overview VVF42..K

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	k _{vs}	Stock no.	Product no.
Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s		[m ³ /h]		
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
400	1600	400	1600	400	1600	400	1600			50	40	S55204-V121	VVF42.50-40K
400	1600	400	1600	400	1600	400	1600			65	63	S55204-V122	VVF42.65-63K
400	1600	400	1600	400	1600	400	1600			80	100	S55204-V123	VVF42.80-100K
		400	1600					400	1600	100	160	S55204-V124	VVF42.100-160K
		400	1600					400	1600	125	250	S55204-V125	VVF42.125-250K
		400	1400					400	1600	150	360	S55204-V126	VVF42.150-360K

For media < 0° C, stem heating element ASZ6.6 is required.

Replacement sealing glands for VVF42..K

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060

Combinable actuator for VVF42..K

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V	DC 0...10 V	30	no	N4501	S55150-A100	SAX61.03
DC 24 V	DC 4...20 mA					
	0...1000 Ohm					
AC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
DC 24						
AC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
DC 24 V						
AC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
DC 24 V						
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
	DC 4...20 mA					
	0...1000 Ohm					

Valves and actuators
Globe and pressure independent combi valves (PICV)
2-port flanged valves

Combinable actuator for VVF42..K

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

VVF42..KC



2-port valves pressure compensated with flanged connections, PN 16

- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	A6V10794157
Stroke	to DN80: 20 mm from DN100: 40 mm
Leakage rate	0...0.02% of the kvs value
Medium temperature	-10... 150 °C
Valve characteristic	Equal percentage
Rangeability	>100
Permissible operating pressure	1600 kPa
Material, valve body	Cast iron EN-GJL-250
Material, inside set	CrNi steel / CrNi Steel
PN class	PN 16
Warranty	5 Years

For customers in Asia / Australia

Range overview VVF42..KC

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	kvs	Stock no.	Product no.
Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s		[m ³ /h]		
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
800	1600			800	1600	800	1600			65	63	S55204-V182	VVF42.65KC
800	1600			800	1600	800	1600			80	100	S55204-V183	VVF42.80KC
		500	1600					800	1600	100	160	S55204-V184	VVF42.100KC
		500	1600					800	1600	125	220	S55204-V185	VVF42.125KC
		500	1400					800	1600	150	315	S55204-V186	VVF42.150KC

Replacement sealing glands for VVF42..KC

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290

Combinable actuator for VVF42..KC

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60

Valves and actuators
Globe and pressure independent combi valves (PICV)
2-port flanged valves

Combinable actuator for VVF42..KC

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

VVF43..



2-port seat valve PN16 with flanged connections

- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water, brine, heat transfer oils, saturated steam and superheated steam in open and closed circuits

Data sheet	N4404
Stroke	40 mm
Leakage rate	0...0.01 % of k_{vs} value
Medium temperature	-20...220 °C
Valve characteristic	Equal percentage k_{vs} 250/400 linear
Rangeability	>100
Permissible operating pressure	1600 kPa
Material, inside set	Stainless steel
PN class	PN 16
Absolute pressure p1 steam	1600 kPa abs
Warranty	5 Years

Range overview VVF43..

SAV.. Δp_{max} [kPa]	SAV.. Δp_s [kPa]	SKC.. Δp_{max} [kPa]	SKC.. Δp_s [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
400	450	650	700	65	50	S55206-V100	VVF43.65-50
400	450	650	700	65	63	S55206-V101	VVF43.65-63
225	250	400	450	80	80	S55206-V102	VVF43.80-80
225	250	400	450	80	100	S55206-V103	VVF43.80-100
125	160	250	300	100	125	S55206-V104	VVF43.100-125
125	160	250	300	100	160	S55206-V105	VVF43.100-160
90	125	160	175	125	200	S55206-V106	VVF43.125-200
90	125	160	175	125	250	S55206-V107	VVF43.125-250
60	80	100	125	150	315	S55206-V108	VVF43.150-315
60	80	100	125	150	400	S55206-V109	VVF43.150-400

Replacement sealing glands for VVF43..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Stem connection washer for SKB/SKC actuators, stem diameter 10 mm, set of 5		BPZ:7424200000	7424200000
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	7428400610

Combinable actuator for VVF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	No	N4503	S55150-A112	SAV31.00
AC 24	DC 0...10 V	120	No	N4503	S55150-A110	SAV61.00
DC 24	DC 4...20 mA 0...1000 Ohm					
AC 24	3-position	120	No	N4503	S55150-A111	SAV81.00
DC 24						
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62

Valves and actuators
Globe and pressure independent combi valves (PICV)
2-port flanged valves

Combinable actuator for VVF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Globe and pressure independent combi valves (PICV)

2-port flanged valves

VVF43..K

2-port seat valve PN16 with flanged connections, pressure compensated



- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water, brine, heat transfer oils, saturated steam and superheated steam in open and closed circuits

Data sheet	N4404
Stroke	40 mm
Leakage rate	0...0.01 % of k_{vs} value
Medium temperature	-5...220 °C
Valve characteristic	Equal percentage
	k_{vs} 250/360 linear
Rangeability	>100
Permissible operating pressure	1600 kPa
Material, inside set	CrNi steel
PN class	PN 16
Absolute pressure p1 steam	1600 kPa abs
Warranty	5 Years

Range overview VVF43..K

SKC.. Δp_{max} [kPa]	SKC.. Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
800	1600	65	63	S55206-V110	VVF43.65-63K
800	1600	80	100	S55206-V111	VVF43.80-100K
800	1600	100	150	S55206-V120	VVF43.100-150K
800	1600	125	220	S55206-V121	VVF43.125-220K
800	1600	150	315	S55206-V122	VVF43.150-315K
800	1200	200	450	S55206-V123	VVF43.200-450K
800	1000	250	630	S55206-V124	VVF43.250-630K

Replacement sealing glands for VVF43..K

Product Title	Data sheet	Stock no.	Product no.
Stem connection washer for SKB/SKC actuators, stem diameter 10 mm, set of 5		BPZ:7424200000	7424200000
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	7428400610
Sealing gland complete, stem diameter 14 mm, sealing material PTFE, up to 220 °C		BPZ:467956300	467956300

Combinable actuator for VVF43..K

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

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Valves and actuators

Globe and pressure independent combi valves (PICV) 2-port flanged valves

2-port seat valves PN16, flanged connections VVF47..

VVF47..

For use in heating, ventilating and air conditioning systems as a control valve for closed circuits

Data sheet	N4419
Leakage rate	0...0.1% of Kvs value
Medium temperature	1...95 °C
Valve characteristic	Equal percentage, Kvs 250/315 Linear
Rangeability	DN 50...150: > 50
Material, inside set	CrNi/bronze
PN class	PN 16
Warranty	5 Years



For customers in Asia / Australia

Range overview VVF47..

SBX.. Δp_{\max} [kPa]	SBX.. Δp_s [kPa]	SBV.. Δp_{\max} [kPa]	SBV.. Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
300	300			50	40	S55220-V106	VVF47.50
175	175	300	400	65	63	S55220-V107	VVF47.65
100	100	250	250	80	100	S55220-V108	VVF47.80
		300	400	100	160	S55220-V109	VVF47.100
		300	400	125	250	S55220-V110	VVF47.125
		300	400	150	315	S55220-V111	VVF47.150

Combinable actuator for VVF47..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	180	N4519	S55160-A105	SBV31
AC 230	3-position	120	N4519	S55160-A102	SBX31
AC 24	DC 0...10 V	180	N4519	S55160-A103	SBV61
AC 24	DC 0...10 V	120	N4519	S55160-A100	SBX61
AC 24	3-position	180	N4519	S55160-A104	SBV81
AC 24	3-position	120	N4519	S55160-A101	SBX81

Globe and pressure independent combi valves (PICV)

2-port flanged valves

VVF53..



2-port seat valve PN25 with flanged connections

- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water, brine, heat transfer oils, saturated and superheated steam in open and closed circuits

When using valves of the V..F43.., V..F53.. lines with a stem heating element and a medium temperature of below -5 °C, the stem sealing gland must be replaced.

Data sheet	N4405
Stroke	To DN 50: 20 mm From DN 65: 40 mm
Leakage rate	0...0.01 % of k_{vs} value
Medium temperature	-20...220 °C
Valve characteristic	Equal percentage k_{vs} 250/400 linear
Rangeability	DN 15, $k_{vs} \leq 1,25$ m ³ /h: >50 DN 15...150: >100
Permissible operating pressure	2500 kPa
Material, inside set	Stainless steel
PN class	PN 16 / PN 25
Absolute pressure p1 steam	1600 kPa abs
Warranty	5 Years

Range overview VVF53..

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	k_{vs}	Stock no.	Product no.
Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s		[m ³ /h]		
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
1200	2500			1200	2500	1200	2500			15	0.16	S55208-V100	VVF53.15-0.16
1200	2500			1200	2500	1200	2500			15	0.2	S55208-V101	VVF53.15-0.2
1200	2500			1200	2500	1200	2500			15	0.25	S55208-V102	VVF53.15-0.25
1200	2500			1200	2500	1200	2500			15	0.32	S55208-V103	VVF53.15-0.32
1200	2500			1200	2500	1200	2500			15	0.4	S55208-V104	VVF53.15-0.4
1200	2500			1200	2500	1200	2500			15	0.5	S55208-V105	VVF53.15-0.5
1200	2500			1200	2500	1200	2500			15	0.63	S55208-V106	VVF53.15-0.63
1200	2500			1200	2500	1200	2500			15	0.8	S55208-V107	VVF53.15-0.8
1200	2500			1200	2500	1200	2500			15	1	S55208-V108	VVF53.15-1
1200	2500			1200	2500	1200	2500			15	1.25	S55208-V109	VVF53.15-1.25
1200	2500			1200	2500	1200	2500			15	1.6	S55208-V110	VVF53.15-1.6
1200	2500			1200	2500	1200	2500			15	2	S55208-V111	VVF53.15-2
1200	2500			1200	2500	1200	2500			15	2.5	S55208-V112	VVF53.15-2.5
1200	2500			1200	2500	1200	2500			15	3.2	S55208-V113	VVF53.15-3.2
1200	2500			1200	2500	1200	2500			15	4	S55208-V114	VVF53.15-4
1200	2500			1200	2500	1200	2500			20	6.3	S55208-V116	VVF53.20-6.3
1200	1600			1200	2100	1200	2500			25	10	S55208-V120	VVF53.25-10
1200	1600			1200	2100	1200	2500			25	5	S55208-V117	VVF53.25-5
1200	1600			1200	2100	1200	2500			25	6.3	S55208-V118	VVF53.25-6.3
1200	1600			1200	2100	1200	2500			25	8	S55208-V119	VVF53.25-8
750	900			1100	1200	1200	2500			32	16	S55208-V122	VVF53.32-16
500	550	1150	1250	650	750	1200	2000			40	12.5	S55208-V123	VVF53.40-12.5
500	550	1150	1250	650	750	1200	2000			40	16	S55208-V124	VVF53.40-16
500	550	1150	1250	650	750	1200	2000			40	20	S55208-V125	VVF53.40-20
500	550	1150	1250	650	750	1200	2000			40	25	S55208-V126	VVF53.40-25
300	350	700	750	400	450	1150	1200			50	31.5	S55208-V127	VVF53.50-31.5
300	350	700	750	400	450	1150	1200			50	40	S55208-V128	VVF53.50-40
		400	450					650	700	65	63	S55208-V129	VVF53.65-63
		225	250					400	450	80	100	S55208-V130	VVF53.80-100

Valves and actuators

Globe and pressure independent combi valves (PICV) 2-port flanged valves

Range overview VVF53..

SAX..	SAX..	SAV..	SAV..	SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	k _{vs}	Stock no.	Product no.
Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s	Δp _{max}	Δp _s		[m ³ /h]		
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
		125	160					250	300	100	160	S55208-V131	VVF53.100-160
		90	125					160	175	125	250	S55208-V132	VVF53.125-250
		60	80					100	125	150	400	S55208-V133	VVF53.150-400

Replacement sealing glands for VVF53..

Product Title	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM	BPZ:428488060	428488060
Stem connection washer for SKB/SKC actuators, stem diameter 10 mm, set of 5	BPZ:7424200000	7424200000
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM	S55845-Z150	7428400610

Combinable actuator for VVF53..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF53..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

2-port seat valve PN25 with flanged connections, pressure compensated

VVF53..K

- With flanged connections to ISO 7005.
- For cooling, chilled, low and high temperature water, brine, heat transfer oils, saturated steam and superheated steam in open and closed circuits.



Data sheet	N4405
Stroke	DN 50: 20 mm From DN 65: 40 mm
Leakage rate	0...0.01 % of k_{vs} value
Medium temperature	-5...220 °C
Valve characteristic	Equal percentage k_{vs} 220/315 linear
Rangeability	> 100
Permissible operating pressure	2500 kPa
Material, inside set	CrNi steel
PN class	PN 25
Absolute pressure p1 steam	1600 kPa abs
Warranty	5 Years

Range overview VVF53..K

SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	k_{vs}	Stock no.	Product no.
Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s		[m ³ /h]		
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
1250	2500	1250	2500			50	40	S55208-V134	VVF53.50-40K
				1250	2500	65	63	S55208-V135	VVF53.65-63K
				1250	2500	80	100	S55208-V136	VVF53.80-100K
				1250	2500	100	150	S55208-V158	VVF53.100-150K
				1250	2500	125	220	S55208-V159	VVF53.125-220K
				1250	2500	150	315	S55208-V160	VVF53.150-315K
				800	1200	200	450	S55208-V161	VVF53.200-450K
				800	1000	250	630	S55208-V162	VVF53.250-630K

Replacement sealing glands for VVF53..K

Product Title	Stock no.	Product no.
Stem connection washer for SKB/SKC actuators, stem diameter 10 mm, set of 5	BPZ:7424200000	7424200000
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM	S55845-Z150	7428400610
Sealing gland complete, stem diameter 14 mm, sealing material PTFE, up to 220 °C	BPZ:467956300	467956300

Combinable actuator for VVF53..K

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	Open:30 Close:10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF53..K

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

2-port seat valves PN40 with flanged connections

VVF61..

- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water, brine, saturated and superheated steam in open and closed circuits



Control devices MK..6.. (water, steam) are TÜV tested control devices with safety shut-off function per DIN EN 14597.

Data sheet	N4382
Stroke	To DN 50: 20 mm From DN 65: 40 mm
Leakage rate	0...0.02 % of k_{vs} value
Medium temperature	-25...220 °C
Valve characteristic	Equal percentage
Rangeability	DN 15...40: >50 DN 50...150: >100
Permissible operating pressure	4000 kPa
Material, valve body	Cast stainless steel
Material, inside set	CrNi steel
PN class	PN 40
Warranty	2 Years

Range overview VVF61..

SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	k_{vs}	Stock no.	Product no.
Δp_{max}	Δp_s	Δp_{max}	Δp_s	Δp_{max}	Δp_s		[m ³ /h]		
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
1600	4000	1600	4000			15	0.45	BPZ:VVF61.11	VVF61.11
1600	4000	1600	4000			15	0.7	BPZ:VVF61.12	VVF61.12
1600	4000	1600	4000			15	1.2	BPZ:VVF61.13	VVF61.13
1600	4000	1600	4000			15	1.9	BPZ:VVF61.14	VVF61.14
1600	4000	1600	4000			15	3	BPZ:VVF61.15	VVF61.15
1600	2250	1600	4000			25	3	BPZ:VVF61.23	VVF61.23
1600	2250	1600	4000			25	5	BPZ:VVF61.24	VVF61.24
		1600	4000			40	12	BPZ:VVF61.39	VVF61.39
		1600	4000			40	19	BPZ:VVF61.40	VVF61.40
				1000	4000	65	49	BPZ:VVF61.65	VVF61.65
				200	4000	150	300	BPZ:VVF61.92	VVF61.92

Replacement sealing glands for VVF61..

Product Title	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material PTFE, up to 220 °C	BPZ:428488290	428488290
Sealing gland complete, stem diameter 14 mm, sealing material PTFE with silicon-free grease, up to 220 °C	BPZ:428495400	428495400
Sealing gland complete, stem diameter 14 mm, sealing material PTFE, up to 220 °C	BPZ:467956300	467956300

Combinable actuator for VVF61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

Combinable actuator for VVF61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port flanged valves

2-port valves, PN 40, with flanged connections

VVF63..

- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water, brine, heat transfer oils, saturated and superheated steam in open and closed circuits



Data sheet	A6V11459527
Stroke	To DN 50: 20 mm From DN 65: 40 mm
Leakage rate	0...0.01 % of kvs
Medium temperature	-20...220 °C
Valve characteristic	Equal percentage
Rangeability	Fluids - DN 15...40: > 50 Fluids - DN 50...150: > 100 Steam: > 50
Permissible operating pressure	4000 kPa
Material, inside set	Stainless steel
PN class	PN 40
Warranty	5 Years

Range overview VVF63..

SKD.. Δp_{\max} [kPa]	SKD.. Δp_s [kPa]	SKB.. Δp_{\max} [kPa]	SKB.. Δp_s [kPa]	SKC.. Δp_{\max} [kPa]	SKC.. Δp_s [kPa]	DN	kvs [m ³ /h]	Stock no.	Product no.
2000	4000	2000	4000			15	0.2	S55210-V100	VVF63.15-0.2
2000	4000	2000	4000			15	0.32	S55210-V101	VVF63.15-0.32
2000	4000	2000	4000			15	0.5	S55210-V102	VVF63.15-0.5
2000	4000	2000	4000			15	0.8	S55210-V103	VVF63.15-0.8
2000	4000	2000	4000			15	1.25	S55210-V104	VVF63.15-1.25
2000	4000	2000	4000			15	2	S55210-V105	VVF63.15-2
2000	4000	2000	4000			15	3.2	S55210-V106	VVF63.15-3.2
2000	3500	2000	4000			20	5	S55210-V107	VVF63.20-6.3
2000	2100	2000	4000			25	5	S55210-V108	VVF63.25-5
2000	2100	2000	4000			25	8	S55210-V109	VVF63.25-8
1100	1200	2000	3200			32	15	S55210-V110	VVF63.32-16
650	750	1800	2000			40	12.5	S55210-V111	VVF63.40-12.5
650	750	1800	2000			40	20	S55210-V112	VVF63.40-20
400	450	1150	1200			50	31.5	S55210-V113	VVF63.50-31.5
				650	700	65	50	S55210-V114	VVF63.65-50
				400	450	80	80	S55210-V115	VVF63.80-80
				250	300	100	125	S55210-V116	VVF63.100-125
				160	175	125	200	S55210-V117	VVF63.125-200
				100	125	150	315	S55210-V118	VVF63.150-315

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**Globe and pressure independent combi valves (PICV)
2-port flanged valves**

VVF63..K

2-port seat valve PN40 with flanged connections, pressure compensated



- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water, brine, heat transfer oils, saturated and superheated steam in open and closed circuits

Data sheet	A6V11459527
Stroke	DN 50: 20 mm From DN 65: 40 mm
Leakage rate	0...0.01 % of k_{vs} value
Medium temperature	-5...220 °C
Valve characteristic	Equal percentage
Rangeability	DN 50...100: > 100 DN 125...150: > 50
Permissible operating pressure	4000 kPa
Material, inside set	Stainless steel
PN class	PN 40
Warranty	5 Years

Range overview VVF63..K

SKD..	SKD..	SKB..	SKB..	SKC..	SKC..	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]				
1500	4000	2000	4000			50	36	S55210-V119	VVF63.50-40K
				2000	4000	65	63	S55210-V120	VVF63.65-63K
				2000	4000	80	100	S55210-V121	VVF63.80-100K
				2000	4000	100	150	S55210-V122	VVF63.100-150K
				2000	4000	125	220	S55210-V123	VVF63.125-220K
				2000	4000	150	315	S55210-V124	VVF63.150-315K

Accessories for VVF63..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290
Stem heating element for media < 0 °C	N4501	S55845-Z108	ASZ6.6

Replacement sealing glands for VVF63..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	7428400610
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290

Combinable actuator for VVF63..

Product Title	Data sheet	Stock no.	Product no.
Electrohydraulic actuator, 1000 N, 20 mm, AC 230 V, 3P, spring return	N4561	BPZ:SKD32.21	SKD32.21
Electrohydraulic actuator, 1000 N, 20 mm, AC 230 V, 3P	N4561	BPZ:SKD32.50	SKD32.50
Electrohydraulic actuator, 1000 N, 20 mm, AC 230 V, 3P, spring return	N4561	BPZ:SKD32.51	SKD32.51
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, DC 0...10V 4...20 mA	N4561	BPZ:SKD60	SKD60
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return	N4561	BPZ:SKD62	SKD62
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4561	BPZ:SKD62U	SKD62U
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4561	BPZ:SKD62UA	SKD62UA
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, 3P	N4561	BPZ:SKD82.50	SKD82.50
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, 3P, UL	N4561	BPZ:SKD82.50U	SKD82.50U
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, 3P, spring return	N4561	BPZ:SKD82.51	SKD82.51

Valves and actuators
Globe and pressure independent combi valves (PICV)
2-port flanged valves

Combinable actuator for VVF63..

Product Title	Data sheet	Stock no.	Product no.
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, 3P, spring return, UL	N4561	BPZ:SKD82.51U	SKD82.51U
Electrohydraulic actuator, 2800 N, 20 mm, AC 230 V, 3P	N4564	BPZ:SKB32.50	SKB32.50
Electrohydraulic actuator, 2800 N, 20 mm, AC 230 V, 3P, spring return	N4564	BPZ:SKB32.51	SKB32.51
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA	N4564	BPZ:SKB60	SKB60
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return	N4564	BPZ:SKB62	SKB62
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4564	BPZ:SKB62U	SKB62U
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4564	BPZ:SKB62UA	SKB62UA
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, 3P	N4564	BPZ:SKB82.50	SKB82.50
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, 3P, spring return	N4564	BPZ:SKB82.51	SKB82.51
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, 3P, UL	N4564	BPZ:SKB82.50U	SKB82.50U
Electrohydraulic actuator, 2800 N, 40 mm, AC 230 V, 3P	N4566	BPZ:SKC32.60	SKC32.60
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, 3P, spring return, UL	N4564	BPZ:SKB82.51U	SKB82.51U
Electrohydraulic actuator, 2800 N, 40 mm, AC 230 V, 3P, spring return	N4566	BPZ:SKC32.61	SKC32.61
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, DC 0...10 V/4...20 mA	N4566	BPZ:SKC60	SKC60
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return	N4566	BPZ:SKC62	SKC62
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4566	BPZ:SKC62U	SKC62U
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4566	BPZ:SKC62UA	SKC62UA
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, 3P	N4566	BPZ:SKC82.60	SKC82.60
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, 3P, spring return	N4566	BPZ:SKC82.61	SKC82.61
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, 3P, UL	N4566	BPZ:SKC82.60U	SKC82.60U
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, 3P, spring return, UL	N4566	BPZ:SKC82.61U	SKC82.61U

**Globe and pressure independent combi valves (PICV)
2-port flanged valves**

MVF461H..

Modulating control valves with magnetic actuator, PN16, flanged



2-port valves PN 16 with magnetic actuator for modulating control of high-temperature hot water or steam.

With positioning control, position feedback signal, spring return function and manual control.

Data sheet	N4361
PN class	PN 16
Operating voltage	AC 24 V DC 24 V
Positioning signal	DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA DC 0...20 V Phs
Positioning time	< 2 s
Spring return function	A-> AB closed
Position feedback	DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA
Degree of protection	IP31
Ambient temperature, operation	-5...45 °C
Mounting position	Upright to horizontal
Permissible operating pressure	Water < 120 °C: 1600 kPa Water > 120 °C: 1300 kPa Saturated steam: 900 kPa
Leakage rate	< 0.05% of k_{vs} value
Absolute pressure p1 steam	900 kPa abs
Medium temperature	1...180 °C
Valve characteristic	Equal-percentage Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, valve body	Cast iron EN-GJS-400-18-LT
Material, inside set	CrNi steel
Warranty	5 Years

Scope of delivery: 1 blanking flange, 1 seal, screws, spring washers and nuts.

Range overview MVF461H..

Δp_{max} [kPa]	Δp_s [kPa]	k_{vs} [m ³ /h]	DN	Stock no.	Product no.
1000	1000	0.6	15	BPZ:MVF461H15-0.6	MVF461H15-0.6
1000	1000	1.5	15	BPZ:MVF461H15-1.5	MVF461H15-1.5
1000	1000	3	15	BPZ:MVF461H15-3	MVF461H15-3
1000	1000	5	20	BPZ:MVF461H20-5	MVF461H20-5
1000	1000	8	25	BPZ:MVF461H25-8	MVF461H25-8
1000	1000	12	32	BPZ:MVF461H32-12	MVF461H32-12
1000	1000	20	40	BPZ:MVF461H40-20	MVF461H40-20
1000	1000	30	50	BPZ:MVF461H50-30	MVF461H50-30

MVF.. valves with magnetic actuators are UL-listed.

Accessories for MVF461..

Product Title	Data sheet	Stock no.	Product no.
Replacement electronic for MXG461B.., MVF461H.. and MXG462S..		BPZ:ASE12	ASE12

Valves and actuators

Globe and pressure independent combi valves (PICV) 2-port threaded valves

2-port valves PN10, to DIN

VDN1..

Radiator valves for 2-pipe heating systems for room temperature control. Adjustable flow.
Permissible media: water (to VDI 2035), water with anti-freeze



The valves can be combined with Siemens actuators RTN../SSA../STA..

Data sheet	N2105
Stroke	>1.2 mm
Medium	Water with anti-freeze
Medium temperature	1...120 °C
Permissible operating pressure	1000 kPa
PN class	PN 10
ΔP_{v100}	5...20 kPa
Warranty	5 Years

Range overview VDN1..

kv relation of Xp	Δp_{max} [kPa]	DN	Stock no.	Product no.
0.072...0.43 m ³ /h / 2 K 0.057...0.33 m ³ /h / 1.5 K 0.037...0.22 m ³ /h / 1 K	60	10	BPZ:VDN110	VDN110
0.073...0.5 m ³ /h / 2 K; 0.058...0.4 m ³ /h / 1.5 K; 0.038...0.27 m ³ /h / 1 K	60	15	BPZ:VDN115	VDN115
0.22...0.7 m ³ /h / 2 K; 0.17...0.55 m ³ /h / 1.5 K; 0.11...0.36 m ³ /h / 1 K	60	20	BPZ:VDN120	VDN120

Angle valves PN10, to DIN

VEN1..

Radiator valves for 2-pipe heating systems for room temperature control. Adjustable flow.
Permissible media: water (to VDI 2035), water with anti-freeze



The valves can be combined with Siemens actuators RTN../SSA../STA..

Data sheet	N2105
Stroke	>1.2 mm
Medium	Water with anti-freeze
Medium temperature	1...120 °C
Permissible operating pressure	1000 kPa
PN class	PN 10
ΔP_{v100}	5...20 kPa
Warranty	5 Years

Range overview VEN1..

kv relation of Xp	Δp_{max} [kPa]	DN	Stock no.	Product no.
0.072...0.43 m ³ /h / 2 K; 0.057...0.33 m ³ /h / 1.5 K; 0.037...0.22 m ³ /h / 1 K	60	10	BPZ:VEN110	VEN110
0.073...0.5 m ³ /h / 2 K; 0.058...0.4 m ³ /h / 1.5 K; 0.038...0.27 m ³ /h / 1 K	60	15	BPZ:VEN115	VEN115
0.22...0.7 m ³ /h / 2 K; 0.17...0.55 m ³ /h / 1.5 K; 0.11...0.36 m ³ /h / 1 K	60	20	BPZ:VEN120	VEN120

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

Combinable actuator for VDN1../VEN1..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.
				N2111	BPZ:RTN51	RTN51
				N4211	BPZ:RTN51G	RTN51G
				N2111	BPZ:RTN71	RTN71
				N2111	BPZ:RTN81	RTN81
AC 195.5...264.5 230	3-position	150	1.5	N4893	BPZ:SSA31.1	SSA31.1
AC 24	3-position	150	1.5	N4893	BPZ:SSA81.1	SSA81.1
AC 230	2-position	210	1	N4884	S55174-A101	STA23
AC 24	DC 0...10 V	270	2	N4884	S55174-A104	STA63
AC 24 V DC 24	2-position PDM	270	1	N4884	S55174-A100	STA73
AC 230	2-position	210		N4884	S55174-A110	STA23/00
AC 230	2-position	210		N4884	S55174-A118	STA23B/00
AC 230	2-position	210		N4884	S55174-A114	STA23MP/00
AC 24 DC 24	2-position PDM	270		N4884	S55174-A109	STA73/00
AC 24 DC 24	2-position PDM	270		N4884	S55174-A117	STA73B/00
AC 24 DC 24	2-position PDM	270		N4884	S55174-A113	STA73MP/00
AC 24 DC 24	2-position PDM/parallel operation	270		N4884	S55174-A115	STA73PR/00

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

2-port seat valves PN10, to NF

Radiator valves for 2-pipe heating systems for room temperature control. Adjustable flow.
Permissible media: water (to VDI 2035), water with anti-freeze

VDN2..



The valves can be combined with Siemens actuators RTN../SSA../STA..

Data sheet	N2106
Stroke	>1.2 mm
Medium	Water with anti-freeze
Medium temperature	1...120 °C
Permissible operating pressure	1000 kPa
Material, valve body	Brass, nickel-plated
PN class	PN 10
ΔP_{v100}	5...20 kPa
Warranty	5 Years

Range overview VDN2..

kv relation of Xp	Connect. thread	Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
0.072...0.43 m ³ /h / 2 K 0.057...0.33 m ³ /h / 1.5 K 0.037...0.22 m ³ /h / 1 K	Rp/R 3/8"	60	10	0.63	BPZ:VDN210	VDN210
0.073...0.50 m ³ /h / 2 K 0.058...0.40 m ³ /h / 1.5 K 0.038...0.27 m ³ /h / 1 K	Rp/R 1/2"	60	15	0.89	BPZ:VDN215	VDN215
0.22...0.7 m ³ /h / 2 K; 0.17...0.55 m ³ /h / 1.5 K; 0.11...0.36 m ³ /h / 1 K	Rp/R 3/4"	60	20	1.41	BPZ:VDN220	VDN220

Angle valves PN10, to NF

Radiator valves for 2-pipe heating systems for room temperature control. Adjustable flow.
Permissible media: water (to VDI 2035), water with anti-freeze

VEN2..



The valves can be combined with Siemens actuators RTN../SSA../STA..

Data sheet	N2106
Stroke	>1.2 mm
Medium	Water with anti-freeze
Medium temperature	1...120 °C
Permissible operating pressure	1000 kPa
Material, valve body	Brass, nickel-plated
PN class	PN 10
ΔP_{v100}	5...20 kPa
Warranty	5 Years

Range overview VEN2..

kv relation of Xp	Connect. thread	Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
0.072...0.43 m ³ /h / 2 K 0.057...0.33 m ³ /h / 1.5 K 0.037...0.22 m ³ /h / 1 K	Rp/R 3/8"	60	10	0.63	BPZ:VEN210	VEN210
0.073...0.5 m ³ /h / 2 K; 0.058...0.4 m ³ /h / 1.5 K; 0.038...0.27 m ³ /h / 1 K	Rp/R 1/2"	60	15	0.89	BPZ:VEN215	VEN215
0.22...0.7 m ³ /h / 2 K; 0.17...0.55 m ³ /h / 1.5 K; 0.11...0.36 m ³ /h / 1 K	Rp/R 3/4"	60	20	1.41	BPZ:VEN220	VEN220

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

VUN2..

Reverse angle valves PN10, to NF

Radiator valves for 2-pipe heating systems for room temperature control. Adjustable flow.
Permissible media: water (to VDI 2035), water with anti-freeze



The valves can be combined with Siemens actuators RTN../SSA../STA..

Data sheet	N2106
Stroke	>1.2 mm
Medium	Water with anti-freeze
Medium temperature	1...120 °C
Permissible operating pressure	1000 kPa
Material, valve body	Brass, nickel-plated
PN class	PN 10
ΔP_{v100}	5...20 kPa
Warranty	5 Years

Range overview VUN2..

kv relation of Xp	Connect. thread	Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
0.14...0.43 m³/h/ 2 K; 0.12...0.37 m³/h/ 1.5 K; 0.08...0.24 m³/h/ 1 K	Rp/R 3/8"	60	10	0.6	BPZ:VUN210	VUN210
0.13...0.5 m³/h/ 2 K; 0.11...0.43 m³/h/ 1.5 K; 0.07...0.28 m³/h/ 1 K	Rp/R 1/2"	60	15	0.77	BPZ:VUN215	VUN215

Combinable actuator for VDN2../VEN2../VUN2..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.
				N2111	BPZ:RTN51	RTN51
				N4211	BPZ:RTN51G	RTN51G
				N2111	BPZ:RTN71	RTN71
				N2111	BPZ:RTN81	RTN81
AC 195.5...264.5 230	3-position	150	1.5	N4893	BPZ:SSA31.1	SSA31.1
AC 24	3-position	150	1.5	N4893	BPZ:SSA81.1	SSA81.1
AC 230	2-position	210	1	N4884	S55174-A101	STA23
AC 24	DC 0...10 V	270	2	N4884	S55174-A104	STA63
AC 24 V DC 24	2-position PDM	270	1	N4884	S55174-A100	STA73
AC 230	2-position	210		N4884	S55174-A110	STA23/00
AC 230	2-position	210		N4884	S55174-A118	STA23B/00
AC 230	2-position	210		N4884	S55174-A114	STA23MP/00
AC 24 DC 24	2-position PDM	270		N4884	S55174-A109	STA73/00
AC 24 DC 24	2-position PDM	270		N4884	S55174-A117	STA73B/00
AC 24 DC 24	2-position PDM	270		N4884	S55174-A113	STA73MP/00
AC 24 DC 24	2-position PDM/parallel operation	270		N4884	S55174-A115	STA73PR/00

Valves and actuators

Globe and pressure independent combi valves (PICV) 2-port threaded valves

Manual knob, white, for VDN../VEN../VUN../VPD../VPE..

ATN4

For manual adjustment of valve.
The manual knobs are suited for use with all types of valves of the VDN../VEN../VUN../VPD... and VPE.. ranges.
ATN4 package contains 50 pieces



Data sheet N2100
Warranty 2 Years

Stock no.	Product no.
BPZ:ATN4	ATN4

ATN4 package contains 50 pieces

Compression fittings for copper and soft steel pipes

AVN1..-1..

For connecting copper or soft steel pipes to valves of the VDN../VEN../VUN.. ranges and lockshield valves of the ADN../AEN... ranges



Data sheet N2100
Warranty 2 Years

Range overview AVN1..-1..

Pipe diameter [mm]	Stock no.	Product no.
15	BPZ:AVN15-15	AVN15-15

Compression fittings plastic pipes with aluminum foil

AVN15A..

For connecting plastic pipes to valves of the VDN../VEN../VUN.. ranges and lockshield valves of the ADN../AEN... ranges



Data sheet N2100
Warranty 5 Years

Range overview AVN15A..

Pipe diameter [mm]	Stock no.	Product no.
16	BPZ:AVN15A16	AVN15A16



Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

ADN..

Two-port seat lockshield valves



Lockshield valves with throttling function for hydraulic balancing and shut-off function when removing / replacing radiator.

Adjustable flow capacity

Data sheet	N2107
Medium	Water with anti-freeze
Medium temperature	1...120 °C
Permissible operating pressure	1000 kPa
PN class	PN 10
Valve design	Throughput
Warranty	5 Years

Range overview ADN..

K_v [m ³ /h]	Con- nect. thread	Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
0...1.8	Rp/R 3/8"	60	10	0...1.8	BPZ:ADN10	ADN10
0...2.5	Rp/R 1/2"	60	15	0...2.5	BPZ:ADN15	ADN15
0...3	Rp/R 3/4"	60	20	0...3	BPZ:ADN20	ADN20

AEN..

Angle lockshield valves



Lockshield valves with throttling function for hydraulic balancing and shut-off function when removing / replacing radiator.

Adjustable flow capacity

Data sheet	N2107
Medium	Water with anti-freeze
Medium temperature	1...120 °C
Permissible operating pressure	1000 kPa
PN class	PN 10
Valve design	Angle
Warranty	5 Years

Range overview AEN..

K_v [m ³ /h]	Con- nect. thread	Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
0...1.8	Rp/R 3/8"	60	10	0...1.8	BPZ:AEN10	AEN10
0...2.5	Rp/R 1/2"	60	15	0...2.5	BPZ:AEN15	AEN15
0...3	Rp/R 3/4"	60	20	0...3	BPZ:AEN20	AEN20

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

2-port small valves PN10, DIN, 2.5 mm stroke

VD1..CLC..

Small valves with higher k_v -values, for use in ventilation and air conditioning systems for water-side control of chilled ceilings and terminal units in closed circuits. Adjustable flow capacity.
Permissible media: water (to VDI 2035), water with anti-freeze.



The valves can be combined with Siemens actuators SSA.../STA..

Data sheet	N2103
Stroke	2.5 mm
Medium temperature	1...110 °C
Permissible operating pressure	1000 kPa
PN class	PN 10
ΔP_{v100}	5...20 kPa
Warranty	5 Years

Range overview VD1..CLC..

K_v [m ³ /h]	Con- nect. thread	Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
0.25...1.9	Rp/R 1/2"	150	15	1.9	BPZ:VD115CLC	VD115CLC
0.25...2.6	Rp/R 3/4"	150	20	2.6	BPZ:VD120CLC	VD120CLC
0.25...2.6	Rp/R 1"	150	25	2.6	BPZ:VD125CLC	VD125CLC

Combinable actuator for VD1..CLC..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.
AC 195.5...264.5 230	3-position	150	1.5	N4893	BPZ:SSA31.1	SSA31.1
AC 24	3-position	150	1.5	N4893	BPZ:SSA81.1	SSA81.1
AC 230	2-position	210	1	N4884	S55174-A101	STA23
AC 24	DC 0...10V	270	2	N4884	S55174-A104	STA63
AC 24 V DC 24	2-position PDM	270	1	N4884	S55174-A100	STA73
AC 230	2-position	210		N4884	S55174-A110	STA23/00
AC 230	2-position	210		N4884	S55174-A118	STA23B/00
AC 230	2-position	210		N4884	S55174-A114	STA23MP/00
AC 24 DC 24	2-position PDM	270		N4884	S55174-A109	STA73/00
AC 24 DC 24	2-position PDM	270		N4884	S55174-A117	STA73B/00
AC 24 DC 24	2-position PDM	270		N4884	S55174-A113	STA73MP/00
AC 24 DC 24	2-position PDM/parallel operation	270		N4884	S55174-A115	STA73PR/00

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Globe and pressure independent combi valves (PICV) 2-port threaded valves

VVP45..

2-port seat valves, PN16



2-port valves with threaded connections for the control of terminal units, chilled ceilings or heating zones.

Suitable media: Water (to VDI 2035), water with anti-freeze.

V..P45.. valves are only used as mixing or 2-port valves, not as diverting valves.

V..P45..S are suitable for Conex® compression fittings.

VVP45..S and VMP45..S for k_{vs} values 0.63, 1, 1.6, 2.5 m³/h, datasheet N4854.

Data sheet	N4845
Stroke	5.5 mm
Leakage rate	0...0.02 % of k_{vs} value
Medium temperature	1...110 °C
Valve characteristic	Throughport up to k_{vs} 6.3: equal-percentage Throughport from k_{vs} 10: linear
Rangeability	From $k_{vs}>6.3$: >100 To $k_{vs}=6.3$: >50
Permissible operating pressure	1600 kPa
PN class	PN 16
Material, inside set	CrNi steel / Rg5 / brass
Warranty	5 Years

Range overview VVP45..

Con-nect. thread	SSB.. Δp_{max} [kPa]	SSB.. Δp_s [kPa]	SSC.. Δp_s [kPa]	SSC.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
G 1/2" B	400	725			10	0.25	BPZ:VVP45.10-0.25	VVP45.10-0.25
G 1/2" B	400	725			10	0.4	BPZ:VVP45.10-0.4	VVP45.10-0.4
G 1/2" B	400	725			10	0.63	BPZ:VVP45.10-0.63	VVP45.10-0.63
G 1/2" B	400	725			10	1	BPZ:VVP45.10-1	VVP45.10-1
G 1/2" B	400	725			10	1.6	BPZ:VVP45.10-1.6	VVP45.10-1.6
G 3/4" B	350	350			15	2.5	BPZ:VVP45.15-2.5	VVP45.15-2.5
G 1" B	350	350	350	350	20	4	BPZ:VVP45.20-4	VVP45.20-4
G 1 1/4" B	300	300	300	300	25	6.3	BPZ:VVP45.25-6.3	VVP45.25-6.3
G 1 1/2" B			300	300	25	10	BPZ:VVP45.25-10	VVP45.25-10
G 2" B			175	175	32	16	BPZ:VVP45.32-16	VVP45.32-16
G 2 1/4" B			75	75	40	25	BPZ:VVP45.40-25	VVP45.40-25

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Combinable actuator for VVP45..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	150	N4891	BPZ:SSB31	SSB31
AC 24	DC 0...10 V	75	N4891	BPZ:SSB61	SSB61
DC 24					
AC 24	3-position	150	N4891	BPZ:SSB81	SSB81
AC 230	3-position	150	N4895	BPZ:SSC31	SSC31
AC 24	DC 0...10 V	30	N4895	BPZ:SSC61	SSC61
DC 24					
AC 24	DC 0...10 V	30	N4895	BPZ:SSC61.5	SSC61.5
DC 24					
AC 24	3-position	150	N4895	BPZ:SSC81	SSC81

Valves and actuators

Globe and pressure independent combi valves (PICV) 2-port threaded valves

Threaded 2-port seat valves, PN16

VVP45..N

In ventilation and air-conditioning systems for water-side terminal unit control in closed circuits, e.g. induction units, fan coil units, small reheaters and small re-coolers, for use in

- 2-pipe systems with one heat exchanger for heating and cooling
- 4-pipe systems with two separate heat exchangers for heating and cooling

With threaded connections to ISO 228-1.

For low temperature hot water, chilled water, water with anti-freeze.



Data sheet	N4840
Stroke	5.5 mm
Leakage rate	0...0.1 % of k_{vs} value
Medium	Water Water with anti-freeze
Medium temperature	1... 110 °C
Valve characteristic	Equal percentage
Rangeability	> 50
Permissible operating pressure	1600 kPa
Material, inside set	CrNi steel, brass
PN class	PN 16
Warranty	5 Years

Range overview VVP45..N

Δp_{max} [kPa]	Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
400	550	15	2.5	BPZ:VVP45.15-2.5N	VVP45.15-2.5N
400	550	20	4	BPZ:VVP45.20-4N	VVP45.20-4N
400	500	25	6.3	BPZ:VVP45.25-6.3N	VVP45.25-6.3N

Combinable actuator for VVP45..N

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	150	N4895	BPZ:SSC31	SSC31
AC 24 DC 24	DC 0...10 V	30	N4895	BPZ:SSC61	SSC61
AC 24 DC 24	DC 0...10 V	30	N4895	BPZ:SSC61.5	SSC61.5
AC 24	3-position	150	N4895	BPZ:SSC81	SSC81

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

VVP47..



2-port valves, PN16

2-port valves with threaded connections for the control of terminal units, chilled ceilings or heating zones.

Suitable media: Water (to VDI 2035), water with anti-freeze.

VXP47.. and VMP47.. 3-port valves are only used as mixing valves.

They are also suitable for SERTO® compression fittings.

Data sheet	N4847
Stroke	2.5 mm
Leakage rate	0...0.05 % of k_{vs} value
Medium	Water with anti-freeze
Medium temperature	1...110 °C
Valve characteristic	Throughport: linear Bypass: linear
Permissible operating pressure	1600 kPa
PN class	PN 16
Material, inside set	CrNi steel, brass
Warranty	5 Years

Range overview VVP47..

STP.. Δp_{max} [kPa]	STP.. Δp_s [kPa]	SFP../SSP.. Δp_{max} [kPa]	SFP../SSP.. Δp_s [kPa]	Con- nect. thread	DN	k_{vs} [m³/h]	Stock no.	Product no.
400	700	400	1000	G ½" B	10	0.25	BPZ:VVP47.10-0.25	VVP47.10-0.25
400	700	400	1000	G ½" B	10	0.4	BPZ:VVP47.10-0.4	VVP47.10-0.4
250	250	400	500	G ½" B	10	0.63	BPZ:VVP47.10-0.63	VVP47.10-0.63
250	250	400	500	G ½" B	10	1	BPZ:VVP47.10-1	VVP47.10-1
150	150	300	300	G ½" B	10	1.6	BPZ:VVP47.10-1.6	VVP47.10-1.6
150	150	300	300	G ¾" B	15	2.5	BPZ:VVP47.15-2.5	VVP47.15-2.5
100	100	175	175	G 1" B	20	4	BPZ:VVP47.20-4	VVP47.20-4
250	250	400	500	G ½" B	10	1	BPZ:VVP47.10-1S	VVP47.10-1S
150	150	300	300	G ½" B	10	1.6	BPZ:VVP47.10-1.6S	VVP47.10-1.6S

VVP47..S for Conex compression fittings.

Combinable actuator for VVP47..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	2-position	10	N4865	BPZ:SFP21/18	SFP21/18
AC 24	2-position	10	N4865	BPZ:SFP71/18	SFP71/18
AC 230	2-position	210	N4884	S55174-A103	STP23
AC 24	2-position	270	N4884	S55174-A102	STP73
DC 24	PDM				
AC 230	2-position	210	N4884	S55174-A112	STP23/00
AC 24	2-position	270	N4884	S55174-A111	STP73/00
DC 24	PDM				
AC 24	2-position	270	N4884	S55174-A116	STP73PR/00
DC 24	PDM/parallel operation				
AC 230	3-position	150	N4864	BPZ:SSP31	SSP31
AC 24	DC 0...10 V	34	N4864	BPZ:SSP61	SSP61
DC 24					
AC 24	3-position	150	N4864	BPZ:SSP81	SSP81

Valves and actuators

Globe and pressure independent combi valves (PICV) 2-port threaded valves

2-port zone valves, internally threaded, PN16, on/off characteristic

VVI46../2

2-port valves, internally threaded connections, for the control of zones or terminal units. Suitable media: water (to VDI 2035), water with anti-freeze.



Stroke	2.5 mm
Leakage rate	0...0.05% of rated valve capacity
Medium	Water Water with anti-freeze
Medium temperature	1...110 °C
Valve characteristic	Non-linear (on/off)
Permissible operating pressure	1600 kPa
Material, inside set	Stainless steel, brass
PN class	PN 16
Warranty	5 Years

Range overview VVI46..

Con-nect. thread	STA.. Δp_{max} [kPa]	STA.. Δp_s [kPa]	SFA.. Δp_{max} [kPa]	SFA.. Δp_s [kPa]	SSA Δp_s [kPa]	SSA Δp_{max} [kPa]	DN	k_{vis} [m ³ /h]	Stock no.	Product no.
Rp 1/2"	200	200	300	300	200	200	15	2.15	S55249-V106	VVI46.15/2
Rp 3/4"	200	200	300	300	200	200	20	3.5	S55249-V107	VVI46.20/2
Rp 1"	150	150	250	250	200	200	25	5	S55249-V108	VVI46.25/2

To ensure noiseless operation, Δp_{max} should not exceed 100 kPa.

Combinable actuator for VVI46..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	2-position	10	N4863	BPZ:SFA21/18	SFA21/18
AC 24	2-position	10	N4863	BPZ:SFA71/18	SFA71/18
AC 230	2-position (SPST)	50 Hz:10 60 Hz:8.3	A6V10446174	S55176-A104	SUA21/3
AC 230	2-position	210	N4884	S55174-A101	STA23
AC 24 V DC 24	2-position PDM	270	N4884	S55174-A100	STA73
AC 230	2-position	210	N4884	S55174-A110	STA23/00
AC 230	2-position	210	N4884	S55174-A118	STA23B/00
AC 230	2-position	210	N4884	S55174-A114	STA23MP/00
AC 24 DC 24	2-position PDM	270	N4884	S55174-A109	STA73/00
AC 24 DC 24	2-position PDM	270	N4884	S55174-A117	STA73B/00
AC 24 DC 24	2-position PDM	270	N4884	S55174-A113	STA73MP/00

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Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

CVVI41..

2-port seat valves PN16 with internally threaded connections



- With internally threaded connections Rp.. to ISO 7-1
- For chilled water, low pressure hot water and saturated steam in open and closed circuits

Data sheet	N4362
Stroke	20 mm
Leakage rate	0...0.02 % of k_{vs} value
Medium temperature	-25...150 °C
Valve characteristic	Equal-percentage
Rangeability	DN 15: >50 DN 20...50: >100
Permissible operating pressure	1600 kPa
Material, inside set	CrNi Steel/ Rg 5 brass
PN class	PN 16
Absolute pressure p1 steam	150 kPa abs
Warranty	5 Years

For customers in Asia / Australia

Range overview CVVI41..

Con-nect. thread	SAX.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SKD.. Δp_{max} [kPa]	SKD.. Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
Rp 1/2"	400	1600	400	1600	15	2.5	BPZ:CVVI41.15-2.5	CVVI41.15-2.5
Rp 1/2"	400	1600	400	1600	15	4	BPZ:CVVI41.15-4	CVVI41.15-4
Rp 3/4"	400	1600	400	1600	20	6.3	BPZ:CVVI41.20-6.3	CVVI41.20-6.3
Rp 1"	400	1550	400	1600	25	10	BPZ:CVVI41.25-10	CVVI41.25-10
Rp 1 1/4"	400	875	400	1275	32	16	BPZ:CVVI41.32-16	CVVI41.32-16
Rp 1 1/2"	400	525	400	775	40	25	BPZ:CVVI41.40-25	CVVI41.40-25
Rp 2"	300	300	400	450	50	40	BPZ:CVVI41.50-40	CVVI41.50-40

Replacement sealing glands for CVVI41..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM, up to 150 °C		BPZ:428488740	428488740

Combinable actuator for CVVI41..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60

Valves and actuators
**Globe and pressure independent combi valves (PICV)
 2-port threaded valves**

Combinable actuator for C/VI41..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51

Globe and pressure independent combi valves (PICV)

2-port threaded valves

VVG41..

2-port seat valves PN16 with externally threaded connections



- With threaded connections to ISO 228/1
- For cooling, chilled, low and high temperature water, brine and saturated and superheated steam in open and closed circuits

Data sheet	N4363
Stroke	20 mm
Leakage rate	0...0.02 % of k_{vs} value
Medium temperature	-25... 150 °C
Valve characteristic	Equal percentage
Rangeability	DN 15: >50 DN 20...50: >100
Permissible operating pressure	1600 kPa
Material, inside set	CrNi steel
PN class	PN 16
Absolute pressure p1 steam	300 kPa abs
Warranty	5 Years

Range overview VVG41..

Con-nect. thread	SAX.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SKD.. Δp_{max} [kPa]	SKD.. Δp_s [kPa]	SKB.. Δp_{max} [kPa]	SKB.. Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
G 1" B	800	1600	800	1600	800	1600	15	0.63	BPZ:VVG41.11	VVG41.11
G 1" B	800	1600	800	1600	800	1600	15	1	BPZ:VVG41.12	VVG41.12
G 1" B	800	1600	800	1600	800	1600	15	1.6	BPZ:VVG41.13	VVG41.13
G 1" B	800	1600	800	1600	800	1600	15	2.5	BPZ:VVG41.14	VVG41.14
G 1" B	800	1600	800	1600	800	1600	15	4	BPZ:VVG41.15	VVG41.15
G 1¼" B	800	1600	800	1600	800	1600	20	6.3	BPZ:VVG41.20	VVG41.20
G 1½" B	800	1550	800	1600	800	1600	25	10	BPZ:VVG41.25	VVG41.25
G 2" B	800	875	800	1275	800	1600	32	16	BPZ:VVG41.32	VVG41.32
G 2¼" B	525	525	775	775	800	1600	40	25	BPZ:VVG41.40	VVG41.40
G 2¾" B	300	300	450	450	800	1225	50	40	BPZ:VVG41.50	VVG41.50

ALG..2 fittings must be ordered as individual items and will be delivered separately.

Replacement sealing glands for VVG41..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM, up to 150 °C		BPZ:428488740	428488740

Accessories for VVG41..

Product Title	Data sheet	Stock no.	Product no.
Fittings, pipe-side with threaded connection		BPZ:ALG..2	ALG..2

Combinable actuator for VVG41..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00

Valves and actuators
Globe and pressure independent combi valves (PICV)
2-port threaded valves

Combinable actuator for VVG41..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
AC 230 V	3-position	Open:30 Close:10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

VVG44..

2-port seat valves PN16 with externally threaded connections



- With threaded connections to ISO 228/1
- For chilled water and low-temperature hot water in closed circuits

Data sheet	N4364
Stroke	5.5 mm
Leakage rate	0...0.02 % of k_{vs} value
Medium temperature	1...120 °C
Valve characteristic	Linear
Rangeability	From DN 20: >100 DN 15: >50...100
Permissible operating pressure	1600 kPa
Material, inside set	CrNi steel / Rg5, brass
PN class	PN 16
Warranty	5 Years

Range overview VVG44..

DN	Connect. thread	SAS.. Δp_s [kPa]	SAS.. Δp_{max} [kPa]	k_{vs} [m ³ /h]	Stock no.	Product no.
15	G 1" B	1600	400	0.25	BPZ:VVG44.15-0.25	VVG44.15-0.25
15	G 1" B	1600	400	0.4	BPZ:VVG44.15-0.4	VVG44.15-0.4
15	G 1" B	1600	400	0.63	BPZ:VVG44.15-0.63	VVG44.15-0.63
15	G 1" B	725	400	1	BPZ:VVG44.15-1	VVG44.15-1
15	G 1" B	725	400	1.6	BPZ:VVG44.15-1.6	VVG44.15-1.6
15	G 1" B	400	400	2.5	BPZ:VVG44.15-2.5	VVG44.15-2.5
15	G 1" B	400	400	4	BPZ:VVG44.15-4	VVG44.15-4
20	G 1¼" B	750	400	6.3	BPZ:VVG44.20-6.3	VVG44.20-6.3
25	G 1½" B	400	400	10	BPZ:VVG44.25-10	VVG44.25-10
32	G 2" B	250	250	16	BPZ:VVG44.32-16	VVG44.32-16
40	G 2¼" B	125	125	25	BPZ:VVG44.40-25	VVG44.40-25

Fittings ALG..2 must be ordered as separate items and are also supplied as such.

Accessories for VVG44..

Product Title	Data sheet	Stock no.	Product no.
Fittings, pipe-side with threaded connection		BPZ:ALG..2	ALG..2

Combinable actuator for VVG44..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	120	N4581	S55158-A106	SAS31.00
AC 230	3-position	30	N4581	S55158-A107	SAS31.03
AC 230	3-position	120	N4581	S55158-A108	SAS31.50
AC 230	3-position	30	N4581	S55158-A109	SAS31.53
AC 24	DC 0...10 V	30	N4581	S55158-A100	SAS61.03
DC 24	DC 4...20 mA 0...1000 Ohm				
AC 24	Modbus RTU	30	N4581	S55158-A121	SAS61.03/MO
DC 24					
AC 24	DC 0...10 V	30	N4581	S55158-A101	SAS61.33
DC 24	DC 4...20 mA 0...1000 Ohm				
AC 24	DC 0...10 V	30	N4581	S55158-A102	SAS61.53
DC 24	DC 4...20 mA 0...1000 Ohm				

Valves and actuators
**Globe and pressure independent combi valves (PICV)
 2-port threaded valves**

Combinable actuator for VVG44..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 24 DC 24	3-position	120	N4581	S55158-A103	SAS81.00
AC 24 DC 24	3-position	30	N4581	S55158-A104	SAS81.03
AC 24 DC 24	3-position	30	N4581	S55158-A105	SAS81.33

Valves and actuators

Globe and pressure independent combi valves (PICV)

2-port threaded valves

VVG549..

2-port seat valves, externally threaded, PN25



- With threaded connections to ISO 228/1
- For chilled water and low-temperature hot water in closed circuits, especially for district heat applications

Data sheet	CA1Q4380
Medium temperature	1...150 °C
PN class	PN 25
Warranty	5 Years

Range overview VVG549..

Con-nect. thread	SAT.. Δp_s [kPa]	SAT.. Δp_{max} [kPa]	SAS.. Δp_s [kPa]	SAS.. Δp_{max} [kPa]	DN	K_{vs} [m ³ /h]	Stock no.	Product no.
G 3/4" B	2500	1200	2500	1200	15	0.25	BPZ:VVG549.15-0.25	VVG549.15-0.25
G 3/4" B	2500	1200	2500	1200	15	0.4	BPZ:VVG549.15-0.4	VVG549.15-0.4
G 3/4" B	2500	1200	2500	1200	15	0.63	BPZ:VVG549.15-0.63	VVG549.15-0.63
G 3/4" B	1500	1200	2000	1200	15	1	BPZ:VVG549.15-1	VVG549.15-1
G 3/4" B	1500	1200	2000	1200	15	1.6	BPZ:VVG549.15-1.6	VVG549.15-1.6
G 3/4" B	1500	1200	2000	1200	15	2.5	BPZ:VVG549.15-2.5	VVG549.15-2.5
G 1" B	1600	1200	1600	1200	20	4	BPZ:VVG549.20-4K	VVG549.20-4K
G 1 1/4" B	1600	1200	1600	1200	25	6.3	BPZ:VVG549.25-6.3K	VVG549.25-6.3K

Accessories for VVG549..

Product Title	Data sheet	Stock no.	Product no.
Fittings, pipe-side with threaded connection		BPZ:ALG..2	ALG..2
Fittings, pipeside with welding connection		BPZ:ALS..	ALS..

Combinable actuator for VVG549..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	8	N4584	S55158-A119	SAT31.008
AC 230	3-position	15	N4584	S55158-A120	SAT31.51
AC 24	DC 0...10 V	8	N4584	S55158-A117	SAT61.008
DC 24	DC 4...20 mA				
	0...1000 Ohm				
AC 24	DC 0...10 V	15	N4584	S55158-A118	SAT61.51
DC 24	DC 4...20 mA				
	0...1000 Ohm				

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Valves and actuators

Globe and pressure independent combi valves (PICV) 2-port threaded valves

Fittings, pipe-side with threaded connection

ALG..2

Cylindric thread to ISO 228-1 on the valve side. Tapered R-externally or cylindrical Rp-internally threaded to ISO 7-1 on the pipe side.

Each fitting set ALG..2 consists of 2 cap nuts, 2 insert nuts and 2 flat seals.



Warranty 2 Years

Range overview ALG..2

Connecting thread, valve side	Connecting thread, pipe side ["]	Material	Stock no.	Product no.
G 3/4 "	Rp 3/8	Malleable cast iron, phosphated	BPZ:ALG122	ALG122
G 1/2 "	R 3/8	Brass	BPZ:ALG132	ALG132
G 3/4 "	R 1/2	Brass	BPZ:ALG142	ALG142
G 1 "	Rp 1/2	Malleable cast iron, phosphated	BPZ:ALG152	ALG152
G 1 1/4 "	Rp 3/4	Malleable cast iron, phosphated	BPZ:ALG202	ALG202
G 1 1/2 "	Rp 1	Malleable cast iron, phosphated	BPZ:ALG252	ALG252
G 2 "	Rp 1 1/4	Malleable cast iron, phosphated	BPZ:ALG322	ALG322
G 2 1/4 "	Rp 1 1/2	Malleable cast iron, phosphated	BPZ:ALG402	ALG402
G 2 3/4 "	Rp 2	Malleable cast iron, phosphated	BPZ:ALG502	ALG502
G 1 "	Rp 1/2	Brass	S55846-Z100	ALG152B
G 1 1/4 "	Rp 3/4	Brass	S55846-Z102	ALG202B
G 1 1/2 "	Rp 1	Brass	S55846-Z104	ALG252B
G 2 "	Rp 1 1/4	Brass	S55846-Z106	ALG322B
G 2 1/4 "	Rp 1 1/2	Brass	S55846-Z108	ALG402B
G 2 3/4 "	Rp 2	Brass	S55846-Z110	ALG502B

ALG132 and ALG142: pipe connecting thread externally threaded.

For the VMP45.. and VMP47.. valves, 2 sets of 2 fittings must be ordered

Fittings, pipeside with welding connection

ALS..

Cylindric thread to ISO 228-1 on valve side. Welded connection on the pipe side.

Each ALS.. set consists of 2 cap nuts, 2 inserts and 2 flat seals.

Warranty 5 Years



Fittings with weldable connections: Set of 2

Pipe diameter [mm]	Connecting thread, valve side ["]	Stock no.	Product no.
21.3	G 3/4	BPZ:ALS152	ALS152
26.8	G 1	BPZ:ALS202	ALS202
33.7	G 1 1/4	BPZ:ALS252	ALS252

7

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

VXF22..



3-port valves with flanged connections, PN 6

- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	N4401
Stroke	to DN80: 20 mm DN 100: 40 mm
Leakage rate	0...0.02% of the kvs value
Leakage rate bypass	0.5...2 % of the kvs-value
Medium temperature	-10...130 °C
Valve characteristic	Through-port: equal percentage Through-port: kvs 250/400 linear Bypass: linear
Rangeability	DN 25: >50 DN 40...100: >100
Permissible operating pressure	600 kPa
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN50: CrNi steel / bronze
PN class	PN 6
Warranty	5 Years

Range overview VXF22..

SAX..	SAV..	SKD..	SKB..	SKC..	DN	kvs	Stock no.	Product no.
Δp_{max}	Δp_{max}	Δp_{max}	Δp_{max}	Δp_{max}		[m ³ /h]		
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
300		300	300		25	2.5	S55200-V110	VXF22.25-2.5
300		300	300		25	4	S55200-V111	VXF22.25-4
300		300	300		25	6.3	S55200-V112	VXF22.25-6.3
300		300	300		25	10	S55200-V113	VXF22.25-10
300	300	300	300		40	16	S55200-V114	VXF22.40-16
300	300	300	300		40	25	S55200-V115	VXF22.40-25
300	300	300	300		50	40	S55200-V116	VXF22.50-40
150	300	200	300		65	63	S55200-V117	VXF22.65-63
75	225	125	300		80	100	S55200-V118	VXF22.80-100
	125			250	100	160	S55200-V119	VXF22.100-160

Δp_{max} -ratings are valid for mixing applications.

Replacement sealing glands for VXF22..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290

Combinable actuator for VXF22..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port flanged valves

Combinable actuator for VXF22..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61



Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

VXF32..



3-port valves with flanged connections, PN10

- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	N4402
Stroke	to DN80: 20 mm from DN100: 40 mm
Leakage rate	0...0.02% of the kvs value
Leakage rate bypass	0.5...2 % of the kvs-value
Medium temperature	-10...150 °C
Valve characteristic	Through-port: equal percentage Through-port: kvs 250/400 linear Bypass: linear
Rangeability	DN 15 .. 25: >50 DN 40...150: >100
Permissible operating pressure	1000 kPa
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN50: CrNi steel / bronze
PN class	PN 10
Warranty	5 Years

Range overview VXF32..

SAX..	SAV..	SKD..	SKB..	SKC..	DN	kvs	Stock no.	Product no.
Δp_{max}	Δp_{max}	Δp_{max}	Δp_{max}	Δp_{max}		[m ³ /h]		
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
400		400	400		15	1.6	S55202-V113	VXF32.15-1.6
400		400	400		15	2.5	S55202-V114	VXF32.15-2.5
400		400	400		15	4	S55202-V115	VXF32.15-4
400		400	400		25	6.3	S55202-V116	VXF32.25-6.3
400		400	400		25	10	S55202-V117	VXF32.25-10
400	400	400	400		40	16	S55202-V118	VXF32.40-16
400	400	400	400		40	25	S55202-V119	VXF32.40-25
300	400	400	400		50	40	S55202-V120	VXF32.50-40
150	400	200	400		65	63	S55202-V121	VXF32.65-63
75	225	125	400		80	100	S55202-V122	VXF32.80-100
	125			250	100	160	S55202-V123	VXF32.100-160
	90			160	125	250	S55202-V124	VXF32.125-250
	60			100	150	400	S55202-V125	VXF32.150-400

Δp_{max} -ratings are valid for mixing applications.

Replacement sealing glands for VXF32..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290

Combinable actuator for VXF32..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port flanged valves

Combinable actuator for VXF32..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
AC 24 V DC 24 V	DC 0...10V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Globe and pressure independent combi valves (PICV)

3-port flanged valves

VXF42..

3-port valves with flanged connections, PN 16



- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits

Data sheet	N4403
Stroke	to DN80: 20 mm from DN100: 40 mm
Leakage rate	0...0.02% of the kvs value
Leakage rate bypass	0.5...2 % of the kvs-value
Medium temperature	-10... 150 °C
Valve characteristic	Through-port: equal percentage Through-port: kvs 250/400 linear Bypass: linear
Rangeability	DN 15...25: >50 DN 32...150: >100
Permissible operating pressure	1600 kPa
Material, inside set	≤ DN40: CrNi steel / brass ≥ DN50: CrNi steel / bronze
PN class	PN 16
Warranty	5 Years

Range overview VXF42..

SAX..	SAV..	SKD..	SKB..	SKC..	DN	kvs	Stock no.	Product no.
Δp_{max}	Δp_{max}	Δp_{max}	Δp_{max}	Δp_{max}		[m ³ /h]		
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
400		400	400		15	1.6	S55204-V127	VXF42.15-1.6
400		400	400		15	2.5	S55204-V128	VXF42.15-2.5
400		400	400		15	4	S55204-V129	VXF42.15-4
400		400	400		20	6.3	S55204-V130	VXF42.20-6.3
400		400	400		25	6.3	S55204-V131	VXF42.25-6.3
400		400	400		25	10	S55204-V132	VXF42.25-10
400		400	400		32	16	S55204-V133	VXF42.32-16
400	400	400	400		40	16	S55204-V134	VXF42.40-16
400	400	400	400		40	25	S55204-V135	VXF42.40-25
300	400	400	400		50	31.5	S55204-V136	VXF42.50-31.5
300	400	400	400		50	40	S55204-V137	VXF42.50-40
150	400	200	400		65	50	S55204-V138	VXF42.65-50
150	400	200	400		65	63	S55204-V139	VXF42.65-63
75	225	125	400		80	80	S55204-V140	VXF42.80-80
75	225	125	400		80	100	S55204-V141	VXF42.80-100
	125			250	100	125	S55204-V142	VXF42.100-125
	125			250	100	160	S55204-V143	VXF42.100-160
	90			160	125	200	S55204-V144	VXF42.125-200
	90			160	125	250	S55204-V145	VXF42.125-250
	60			100	150	315	S55204-V146	VXF42.150-315
	60			100	150	400	S55204-V147	VXF42.150-400

Δp_{max} -ratings are valid for mixing applications.

Replacement sealing glands for VXF42..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port flanged valves

Combinable actuator for VXF42..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

Combinable actuator for VXF42..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

3-port valves with flanged connections, PN 16

VXF42..C

- With flanged connections to ISO 7005
- For chilled, low and high temperature water and brine in closed circuits



Data sheet	A6V10794157
Stroke	to DN 80: 20 mm from DN 100: 40 mm
Leakage rate	0...0.02% of the kvs value
Leakage rate bypass	0.5...2 % of the kvs-value
Medium temperature	-10...150 °C
Valve characteristic	Through-port: equal percentage Through-port: kvs 250/400 linear Bypass: linear
Rangeability	to DN 40: >50 from DN 50: >100
Permissible operating pressure	1600 kPa
Material, inside set	≤ DN 25: CrNi steel / brass ≥ DN 32: CrNi steel / CrNi steel
PN class	PN 16
Warranty	5 Years
For customers in Asia / Australia	

Range overview VXF42..C

SAX..	SAV..	SKD..	SKB..	SKC..	DN	kvs	Stock no.	Product no.
Δp_{max}	Δp_{max}	Δp_{max}	Δp_{max}	Δp_{max}		[m ³ /h]		
[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
400		400	400		25	6.3	S55204-V165	VXF42.25-6.3C
400		400	400		25	10	S55204-V166	VXF42.25-10C
400		400	400		32	16	S55204-V167	VXF42.32-16C
400	400	400	400		40	16	S55204-V168	VXF42.40-16C
400	400	400	400		40	25	S55204-V169	VXF42.40-25C
300	400	400	400		50	31.5	S55204-V170	VXF42.50-31.5C
300	400	400	400		50	40	S55204-V171	VXF42.50-40C
150	400	200	400		65	50	S55204-V172	VXF42.65-50C
150	400	200	400		65	63	S55204-V173	VXF42.65-63C
75	225	125	400		80	80	S55204-V174	VXF42.80-80C
75	225	125	400		80	100	S55204-V175	VXF42.80-100C
	125			250	100	125	S55204-V176	VXF42.100-125C
	125			250	100	160	S55204-V177	VXF42.100-160C
	90			160	125	200	S55204-V178	VXF42.125-200C
	90			160	125	250	S55204-V179	VXF42.125-250C
	60			100	150	315	S55204-V180	VXF42.150-315C
	60			100	150	400	S55204-V181	VXF42.150-400C

Replacement sealing glands for VXF42..C

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

Combinable actuator for VXF42..C

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port flanged valves

Combinable actuator for VXF42..C

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Globe and pressure independent combi valves (PICV)

3-port flanged valves

VXF43..



3-port seat valves PN16 with flanged connections

- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water, brine, heat transfer oils in open and closed circuits

When using valves of the V..F43.., V..F53.. lines with a stem heating element and a medium temperature of below -5 °C, the stem sealing gland must be replaced.

Data sheet	N4404
Stroke	40 mm
Leakage rate	0...0.01 % of k_{vs} value
Leakage rate bypass	0.5...2 % of k_{vs} value
Medium temperature	-20...220 °C
Valve characteristic	Through-port: equal percentage Through-port: k_{vs} 250/400 linear Bypass: linear
Rangeability	>100
Permissible operating pressure	1600 kPa
Material, inside set	Stainless steel
PN class	PN 16
Warranty	5 Years

Range overview VXF43..

SAV.. Δp_{max} [kPa]	SKC.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
400	650	65	50	S55206-V125	VXF43.65-50
400	650	65	63	S55206-V115	VXF43.65-63
225	400	80	80	S55206-V126	VXF43.80-80
225	400	80	100	S55206-V116	VXF43.80-100
125	250	100	125	S55206-V127	VXF43.100-125
125	250	100	160	S55206-V117	VXF43.100-160
90	160	125	200	S55206-V128	VXF43.125-200
90	160	125	250	S55206-V118	VXF43.125-250
60	100	150	315	S55206-V129	VXF43.150-315
60	100	150	400	S55206-V119	VXF43.150-400

Replacement sealing glands for VXF43..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Stem connection washer for SKB/SKC actuators, stem diameter 10 mm, set of 5		BPZ:7424200000	7424200000
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	7428400610

Combinable actuator for VXF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120	No	N4503	S55150-A112	SAV31.00
AC 24	DC 0...10 V	120	No	N4503	S55150-A110	SAV61.00
DC 24	DC 4...20 mA 0...1000 Ohm					
AC 24	3-position	120	No	N4503	S55150-A111	SAV81.00
DC 24						
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port flanged valves

Combinable actuator for VXF43..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Bypass extension for VXF43..

Product Title	Data sheet	Stock no.	Product no.
Bypass extension, flanged connections, DN65	N4404	S55845-Z114	ALF41B65
Bypass extension, flanged connections, DN80	N4404	S55845-Z115	ALF41B80
Bypass extension, flanged connections, DN100	N4404	S55845-Z116	ALF41B100
Bypass extension, flanged connections, DN125	N4404	S55845-Z117	ALF41B125
Bypass extension, flanged connections, DN150	N4404	S55845-Z118	ALF41B150

**Globe and pressure independent combi valves (PICV)
3-port flanged valves**

VXF47..

3-port seat valves PN16, flanged connections VXF47..



For use in heating, ventilating and air conditioning systems as a control valve for closed circuits

Data sheet	N4419
Leakage rate	0...0.1% of Kvs value
Leakage rate bypass	0.5...2% of Kvs value
Medium temperature	1...95 °C
Valve characteristic	Throughport: equal percentage, Kvs 250/315 Linear Bypass: linear
Rangeability	DN 50... 150: > 50
Material, inside set	CrNi Steel/Bronze
PN class	PN 16
Warranty	5 Years

For customers in Asia / Australia

Range overview VXF47..

SBX.. Δp_{max} [kPa]	SBV.. Δp_{max} [kPa]	DN	Kvs [m ³ /h]	Stock no.	Product no.
300		50	40	S55220-V100	VXF47.50
175	300	65	63	S55220-V101	VXF47.65
100	250	80	100	S55220-V102	VXF47.80
	200	100	160	S55220-V103	VXF47.100
	100	125	250	S55220-V104	VXF47.125
	75	150	315	S55220-V105	VXF47.150

Combinable actuator for VXF47..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	180	N4519	S55160-A105	SBV31
AC 230	3-position	120	N4519	S55160-A102	SBX31
AC 24	DC 0...10 V	180	N4519	S55160-A103	SBV61
AC 24	DC 0...10 V	120	N4519	S55160-A100	SBX61
AC 24	3-position	180	N4519	S55160-A104	SBV81
AC 24	3-position	120	N4519	S55160-A101	SBX81

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

VXF53..



3-port seat valves PN25 with flanged connections

- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water, brine, heat transfer oils in open and closed circuits

When using valves of the V..F43.., V..F53.. lines with a stem heating element and a medium temperature of below -5 °C, the stem sealing gland must be replaced.

Data sheet	N4405
Stroke	To DN 50: 20 mm From DN 65: 40 mm
Leakage rate	0...0.01 % of k_{vs} value
Leakage rate bypass	0.5...2 % of k_{vs} value; SAX...: 0.05 % of k_{vs} value
Medium temperature	-20...220 °C
Valve characteristic	Through-port: equal percentage Through-port: k_{vs} 250/400 linear Bypass: linear
Rangeability	>100
Permissible operating pressure	2500 kPa
Material, inside set	Stainless steel
PN class	PN 16 / PN 25
Warranty	5 Years

Range overview VXF53..

SAX..	SAV..	SKD..	SKB..	SKC..	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]				
1200		1200	1200		15	1.6	S55208-V140	VXF53.15-1.6
1200		1200	1200		15	2.5	S55208-V141	VXF53.15-2.5
1200		1200	1200		15	4	S55208-V142	VXF53.15-4
1200		1200	1200		20	6.3	S55208-V144	VXF53.20-6.3
1200		1200	1200		25	6.3	S55208-V145	VXF53.25-6.3
1200		1200	1200		25	10	S55208-V146	VXF53.25-10
750		1100	1200		32	16	S55208-V148	VXF53.32-16
500	1150	650	1200		40	16	S55208-V149	VXF53.40-16
500	1150	650	1200		40	25	S55208-V150	VXF53.40-25
300	700	400	1150		50	40	S55208-V152	VXF53.50-40
	400			650	65	63	S55208-V153	VXF53.65-63
	225			400	80	100	S55208-V154	VXF53.80-100
	125			250	100	160	S55208-V155	VXF53.100-160
	90			160	125	250	S55208-V156	VXF53.125-250
	60			100	150	400	S55208-V157	VXF53.150-400

Accessories for VXF53..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Stem connection washer for SKB/SKC actuators, stem diameter 10 mm, set of 5		BPZ:7424200000	7424200000
Replacement sealing gland, stem diameter 10 mm, sealing material FEPM		S55845-Z150	7428400610

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

Combinable actuator for VXF53..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
AC 230 V	3-position	120	No	N4503	S55150-A112	SAV31.00
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	No	N4503	S55150-A110	SAV61.00
AC 24 V DC 24 V	3-position	120	No	N4503	S55150-A111	SAV81.00
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230 V	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port flanged valves

Combinable actuator for VXF53..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24 V	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24 V	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

Bypass extension for VXF53..

Product Title	Data sheet	Stock no.	Product no.
Bypass extension, flanged connections, DN15	N4404	S55845-Z110	ALF41B15
Bypass extension, flanged connections, DN25	N4404	S55845-Z111	ALF41B25
Bypass extension, flanged connections, DN40	N4404	S55845-Z112	ALF41B40
Bypass extension, flanged connections, DN50	N4404	S55845-Z113	ALF41B50

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port flanged valves

VXF61..

3-port seat valves PN40 with flanged connections



- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water and brine in open and closed circuits

Data sheet	N4482
Stroke	To DN 50: 20 mm From DN 65: 40 mm
Leakage rate	0...0.02 % of k_{vs} value
Leakage rate bypass	0.5...2 % of k_{vs} value
Medium temperature	-25...220 °C
Valve characteristic	Throughport: equal-percentage Bypass: linear
Rangeability	DN 15...40: >50 DN 50...150: >100
Permissible operating pressure	4000 kPa
Material, valve body	Cast stainless steel
Material, inside set	CrNi steel
PN class	PN 40
Warranty	2 Years

Range overview VXF61..

SKD.. Δp_{max} [kPa]	SKB.. Δp_{max} [kPa]	SKC.. Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
1200	1600		15	1.9	BPZ:VXF61.14	VXF61.14
1200	1600		15	3	BPZ:VXF61.15	VXF61.15
1200	1600		25	5	BPZ:VXF61.24	VXF61.24
1200	1600		25	7.5	BPZ:VXF61.25	VXF61.25
	1200		40	19	BPZ:VXF61.40	VXF61.40
	1000		50	19	BPZ:VXF61.49	VXF61.49
		800	65	49	BPZ:VXF61.65	VXF61.65
		500	80	78	BPZ:VXF61.80	VXF61.80
		125	150	300	BPZ:VXF61.92	VXF61.92

Δp_{max} -ratings are valid for mixing applications.

Replacement sealing glands for VXF61..

Product Title	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material PTFE, up to 220 °C	BPZ:428488290	428488290
Sealing gland complete, stem diameter 14 mm, sealing material PTFE with silicon-free grease, up to 220 °C	BPZ:428495400	428495400
Sealing gland complete, stem diameter 14 mm, sealing material PTFE, up to 220 °C	BPZ:467956300	467956300

Combinable actuator for VXF61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port flanged valves

Combinable actuator for VXF61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51
AC 230	3-position	120	No	N4566	BPZ:SKC32.60	SKC32.60
AC 230	3-position	120	Yes (18 s)	N4566	BPZ:SKC32.61	SKC32.61
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	No	N4566	BPZ:SKC60	SKC60
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62	SKC62
AC 24	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:20	Yes (20 s)	N4566	BPZ:SKC62UA	SKC62UA
AC 24	3-position	120	No	N4566	BPZ:SKC82.60	SKC82.60
AC 24	3-position	120	Yes (18 s)	N4566	BPZ:SKC82.61	SKC82.61

**Globe and pressure independent combi valves (PICV)
3-port flanged valves**

VXF63..

3-port valves, PN40, with flanged connections



- With flanged connections to ISO 7005
- For cooling, chilled, low and high temperature water, brine, heat transfer oils in open and closed circuits

Data sheet	A6V11459527
Stroke	To DN 50: 20 mm From DN 65: 40 mm
Leakage rate	0...0.01 % of k_{vs} value
Medium temperature	-25...220 °C
Valve characteristic	Equal percentage
Rangeability	>100
Permissible operating pressure	4000 kPa
Material, inside set	Stainless steel
PN class	PN 40
Warranty	5 Years

Range overview VXF63..

SKD..	SKB..	SKC..	DN	k_{vs} [m³/h]	Stock no.	Product no.
Δp_{max} [kPa]	Δp_{max} [kPa]	Δp_{max} [kPa]				
200	200		15	1.6	S55210-V131	VXF63.15-1.6
200	200		15	2.5	S55210-V132	VXF63.15-2.5
200	200		15	4	S55210-V133	VXF63.15-4
200	200		20	6.3	S55210-V134	VXF63.20-6.3
200	200		25	10	S55210-V136	VXF63.25-10
200	200		25	6.3	S55210-V135	VXF63.25-6.3
200	200		32	16	S55210-V137	VXF63.32-16
200	200		40	16	S55210-V138	VXF63.40-16
200	200		40	25	S55210-V139	VXF63.40-25
200	200		50	31.5	S55210-V140	VXF63.50-31.5
		200	65	50	S55210-V141	VXF63.65-50
		200	80	80	S55210-V142	VXF63.80-80
		150	100	125	S55210-V143	VXF63.100-125
		100	125	200	S55210-V144	VXF63.125-200
		70	150	315	S55210-V145	VXF63.150-315

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Accessories for VXF63..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290
Stem heating element for media < 0 °C	N4501	S55845-Z108	ASZ6.6

Replacement sealing glands for VXF63..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM		BPZ:428488060	428488060
Replacement sealing gland, stem diameter 10 mm, sealing material FEPDM		S55845-Z150	7428400610
Sealing gland complete, stem diameter 14 mm, sealing material EPDM, up to 150 °C		BPZ:467956290	467956290

Combinable actuator for VXF63..

Product Title	Data sheet	Stock no.	Product no.
Electrohydraulic actuator, 1000 N, 20 mm, AC 230 V, 3P, spring return	N4561	BPZ:SKD32.21	SKD32.21
Electrohydraulic actuator, 1000 N, 20 mm, AC 230 V, 3P	N4561	BPZ:SKD32.50	SKD32.50
Electrohydraulic actuator, 1000 N, 20 mm, AC 230 V, 3P, spring return	N4561	BPZ:SKD32.51	SKD32.51
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, DC 0...10V 4...20 mA	N4561	BPZ:SKD60	SKD60

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port flanged valves

Combinable actuator for VXF63..

Product Title	Data sheet	Stock no.	Product no.
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return	N4561	BPZ:SKD62	SKD62
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4561	BPZ:SKD62U	SKD62U
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4561	BPZ:SKD62UA	SKD62UA
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, 3P	N4561	BPZ:SKD82.50	SKD82.50
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, 3P, UL	N4561	BPZ:SKD82.50U	SKD82.50U
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, 3P, spring return	N4561	BPZ:SKD82.51	SKD82.51
Electrohydraulic actuator, 1000 N, 20 mm, AC 24 V, 3P, spring return, UL	N4561	BPZ:SKD82.51U	SKD82.51U
Electrohydraulic actuator, 2800 N, 20 mm, AC 230 V, 3P	N4564	BPZ:SKB32.50	SKB32.50
Electrohydraulic actuator, 2800 N, 20 mm, AC 230 V, 3P, spring return	N4564	BPZ:SKB32.51	SKB32.51
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA	N4564	BPZ:SKB60	SKB60
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return	N4564	BPZ:SKB62	SKB62
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4564	BPZ:SKB62U	SKB62U
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4564	BPZ:SKB62UA	SKB62UA
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, 3P	N4564	BPZ:SKB82.50	SKB82.50
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, 3P, spring return	N4564	BPZ:SKB82.51	SKB82.51
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, 3P, UL	N4564	BPZ:SKB82.50U	SKB82.50U
Electrohydraulic actuator, 2800 N, 40 mm, AC 230 V, 3P	N4566	BPZ:SKC32.60	SKC32.60
Electrohydraulic actuator, 2800 N, 20 mm, AC 24 V, 3P, spring return, UL	N4564	BPZ:SKB82.51U	SKB82.51U
Electrohydraulic actuator, 2800 N, 40 mm, AC 230 V, 3P, spring return	N4566	BPZ:SKC32.61	SKC32.61
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, DC 0...10 V/4...20 mA	N4566	BPZ:SKC60	SKC60
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return	N4566	BPZ:SKC62	SKC62
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4566	BPZ:SKC62U	SKC62U
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, DC 0...10 V/4...20 mA, spring return, UL	N4566	BPZ:SKC62UA	SKC62UA
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, 3P	N4566	BPZ:SKC82.60	SKC82.60
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, 3P, spring return	N4566	BPZ:SKC82.61	SKC82.61
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, 3P, UL	N4566	BPZ:SKC82.60U	SKC82.60U
Electrohydraulic actuator, 2800 N, 40 mm, AC 24 V, 3P, spring return, UL	N4566	BPZ:SKC82.61U	SKC82.61U

**Globe and pressure independent combi valves (PICV)
3-port flanged valves**

MXF461..



Modulating control valves with magnetic actuator, PN16, flanged

Mixing and 2-port valves PN 16 with magnetic actuator for modulating control of chilled or low-temperature hot water systems in closed circuits. With positioning control, position feedback signal, spring return function and manual control.

When used as a 2 port valve, inlet B (2) must be closed off with the Z155/.. blanking flange.
MXF461..P valves for media containing mineral oils (data sheet N4455)
MXF461.. valves are UL listed

CAUTION!

Use valve only as a mixing or 2-port valve, not as a diverting valve.

Data sheet	N4455
PN class	PN 16
Operating voltage	AC / DC 24 V
Positioning signal	DC 0...10 V DC 2...10 V DC 4...20 mA
Positioning time	<2 s
Spring return function	A->AB closed
Position feedback	DC 0...10 V
Degree of protection	IP54
Ambient temperature, operation	-5...45 °C
Mounting position	Upright to horizontal
Permissible operating pressure	1000 kPa
Leakage rate	< 0.02 % of k_{vs} value
Leakage rate bypass	< 0.2 % of k_{vs} value
Medium temperature	1...130 °C
Valve characteristic	Equal-percentage Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, valve body	Cast iron EN-GJL-250
Material, inside set	CrNi steel/brass
Warranty	5 Years

Scope of delivery: 1 blanking flange, 1 seal, screws, spring washers and nuts.

Range overview MXF461..

Δp_{max} [kPa]	Δp_s [kPa]	k_{vs} [m³/h]	DN	Stock no.	Product no.
300	300	0.6	15	BPZ:MXF461.15-0.6	MXF461.15-0.6
300	300	1.5	15	BPZ:MXF461.15-1.5	MXF461.15-1.5
300	300	3	15	BPZ:MXF461.15-3.0	MXF461.15-3.0
300	300	5	20	BPZ:MXF461.20-5.0	MXF461.20-5.0
300	300	8	25	BPZ:MXF461.25-8.0	MXF461.25-8.0
300	300	12	32	BPZ:MXF461.32-12	MXF461.32-12
300	300	20	40	BPZ:MXF461.40-20	MXF461.40-20
300	300	30	50	BPZ:MXF461.50-30	MXF461.50-30
300	300	50	65	BPZ:MXF461.65-50	MXF461.65-50

Δp_s for use as 2-port valve.

Accessories for MXF461..

Product Title	Data sheet	Stock no.	Product no.
Replacement electronic for MXG461.., MXF461.. and MXG461S.., DN15...32	N4455	BPZ:ASE1	ASE1
Replacement electronic for MXG461.., MXF461.., DN40...65	N4455	BPZ:ASE2	ASE2
Signal converter DC0...20 V Phs to DC 0...10 V	N5143	BPZ:SEZ91.6	SEZ91.6

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port flanged valves

Blanking flanges for MXF461..

Product Title	Stock no.	Product no.
Blanking flange, DN15	BPZ:Z155/15F	Z155/15F
Blanking flange, DN20	BPZ:Z155/20F	Z155/20F
Blanking flange, DN25	BPZ:Z155/25F	Z155/25F
Blanking flange, DN32	BPZ:Z155/32F	Z155/32F
Blanking flange, DN40	BPZ:Z155/40	Z155/40
Blanking flange, DN50	BPZ:Z155/50	Z155/50
Blanking flange, DN65	BPZ:Z155/65	Z155/65

**Globe and pressure independent combi valves (PICV)
3-port flanged valves**

M3P..FY..



Modulating control valves with magnetic actuator, PN16, flanged

Mixing and 2-port valves with magnetic actuator for modulating control of chilled or low-pressure hot water systems with closed circuits. Flanged connections, with positioning control, position feedback signal, spring return function, manual control.

When used as a 2 port valve, inlet B (2) must be closed off with the Z155/.. blanking flange. M3P..FYP for media containing mineral oils (data sheet N4454)

CAUTION!

Valve may only be used as a mixing or 2-port valve, not as a diverting valve.

Data sheet	N4454
PN class	PN 16
Operating voltage	AC 24 V
Positioning signal	DC 0...10 V DC 4...20 mA
Positioning time	Close: <2 s
Spring return function	1->3 closed
Position feedback	DC 0...10 V
Degree of protection	IP31
Ambient temperature, operation	2...50 °C
Mounting position	Upright to horizontal
Leakage rate	< 0.05 % of k_{vs} value
Leakage rate bypass	ca. 2 % of k_{vs} value
Medium temperature	1...120 °C
Valve characteristic	Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, valve body	Cast iron EN-GJL-HB215
Material, inside set	CrNi steel/brass
Warranty	5 Years

Scope of delivery: 1 blanking flange, 1 seal, screws, spring washers and nuts.

Range overview M3P..FY

Δp_{max} [kPa]	Δp_s [kPa]	k_{vs} [m ³ /h]	DN	Stock no.	Product no.
300	300	80	80	BPZ:M3P80FY	M3P80FY
200	200	130	100	BPZ:M3P100FY	M3P100FY

Δp_s for use as 2-port valve.

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Accessories for M3P..FY..

Product Title	Data sheet	Stock no.	Product no.
Replacement electronic for M3P..GY, M3P..FY, M2H..FY., M3B..GY., M2S..FY and M2FE..	N4348	BPZ:ZM150	ZM150
Replacement electronic for M3P..FY..	N4454	BPZ:ZM250	ZM250
Signal converter DC 0...20 V Phs to DC 0...10 V	N5143	BPZ:SEZ91.6	SEZ91.6

Blanking flanges for M3P..FY..

Product Title	Stock no.	Product no.
Blanking flange, DN100	BPZ:Z155/100	Z155/100
Blanking flange, DN80	BPZ:Z155/80	Z155/80

Valves and actuators

Globe and pressure independent combi valves (PICV) 3-port threaded valves

3-port seat valves, PN16

VXP45..

3-port valves with threaded connections for the control of terminal units, chilled ceilings or heating zones.

Suitable media: Water (to VDI 2035), water with anti-freeze.



V..P45.. valves are only used as mixing or 2-port valves, not as diverting valves.

Data sheet	N4845
Stroke	5.5 mm
Leakage rate	0...0.02 % of k_{vs} value
Leakage rate bypass	0...0.02 % of k_{vs} value
Medium temperature	1...110 °C
Valve characteristic	Throughport up to k_{vs} 6.3: equal-percentage Throughport from [k_{vs} /] 10: linear Bypass: linear
Rangeability	From $k_{vs}>6,3$: >100 To $k_{vs}=6,3$: >50
Permissible operating pressure	1600 kPa
Material, inside set	CrNi steel / Rg5 / brass
PN class	PN 16
Warranty	5 Years

Range overview VXP45..

Con-nect. thread	SSB.. Δp_{max} [kPa]	SSC.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
G 1/2" B	400		10	0.25	BPZ:VXP45.10-0.25	VXP45.10-0.25
G 1/2" B	400		10	0.4	BPZ:VXP45.10-0.4	VXP45.10-0.4
G 1/2" B	400		10	0.63	BPZ:VXP45.10-0.63	VXP45.10-0.63
G 1/2" B	400		10	1	BPZ:VXP45.10-1	VXP45.10-1
G 1/2" B	400		10	1.6	BPZ:VXP45.10-1.6	VXP45.10-1.6
G 3/4" B	350		15	2.5	BPZ:VXP45.15-2.5	VXP45.15-2.5
G 1" B	350		20	4	BPZ:VXP45.20-4	VXP45.20-4
G 1 1/4" B	300		25	6.3	BPZ:VXP45.25-6.3	VXP45.25-6.3
G 1 1/2" B		300	25	10	BPZ:VXP45.25-10	VXP45.25-10
G 2" B		175	32	16	BPZ:VXP45.32-16	VXP45.32-16
G 2 1/4" B		75	40	25	BPZ:VXP45.40-25	VXP45.40-25

70 % k_{vs} in bypass for all types.

Combinable actuator for VXP45..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	150	N4891	BPZ:SSB31	SSB31
AC 24 DC 24	DC 0...10 V	75	N4891	BPZ:SSB61	SSB61
AC 24	3-position	150	N4891	BPZ:SSB81	SSB81
AC 230	3-position	150	N4895	BPZ:SSC31	SSC31
AC 24 DC 24	DC 0...10 V	30	N4895	BPZ:SSC61	SSC61
AC 24 DC 24	DC 0...10 V	30	N4895	BPZ:SSC61.5	SSC61.5
AC 24	3-position	150	N4895	BPZ:SSC81	SSC81

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Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

VMP45..

3-port seat valves with bypass, PN16



3-port seat valves with bypass, with threaded connections for the control of terminal units, chilled ceilings or heating zones.

Suitable media: Water (to VDI 2035), water with anti-freeze.

V..P45.. valves are only used as mixing valves, not as diverting valves.

Data sheet	N4845
Stroke	5.5 mm
Leakage rate	0...0.02 % of k_{vs} value
Leakage rate bypass	0...0.02 % of k_{vs} value
Medium	Water with anti-freeze
Medium temperature	1... 110 °C
Valve characteristic	Equal-percentage: Bypass: linear
Permissible operating pressure	1600 kPa
Material, inside set	CrNi steel, brass
PN class	PN 16
Warranty	5 Years

Range overview VMP45..

Con-nect. thread	SSB.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
G 1/2" B	400	10	0.25	BPZ:VMP45.10-0.25	VMP45.10-0.25
G 1/2" B	400	10	0.4	BPZ:VMP45.10-0.4	VMP45.10-0.4
G 1/2" B	400	10	0.63	BPZ:VMP45.10-0.63	VMP45.10-0.63
G 1/2" B	400	10	1	BPZ:VMP45.10-1	VMP45.10-1
G 1/2" B	400	10	1.6	BPZ:VMP45.10-1.6	VMP45.10-1.6
G 3/4" B	350	15	2.5	BPZ:VMP45.15-2.5	VMP45.15-2.5
G 1" B	350	20	4	BPZ:VMP45.20-4	VMP45.20-4

70 % k_{vs} in bypass for all types.

Combinable actuator for VMP45..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	150	N4891	BPZ:SSB31	SSB31
AC 24 DC 24	DC 0...10 V	75	N4891	BPZ:SSB61	SSB61
AC 24	3-position	150	N4891	BPZ:SSB81	SSB81

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

3-port valves, PN16

VXP47..

3-port valves with threaded connections for the control of terminal units, chilled ceilings or heating zones.

Suitable media: Water (to VDI 2035), water with anti-freeze.



VXP47.. and VMP47.. 3-port valves are only used as mixing valves. They are also suitable for SERTO® compression fittings.

Data sheet	N4847
Stroke	2.5 mm
Leakage rate	0...0.05 % of k_{vs} value
Leakage rate bypass	0...0.05 % of k_{vs} value
Medium	Water with anti-freeze
Medium temperature	1...110 °C
Valve characteristic	Throughport: linear Bypass: linear
Permissible operating pressure	1600 kPa
PN class	PN 16
Material, inside set	CrNi steel, brass
Warranty	5 Years

Range overview VXP47..

Con-nect. thread	SFP../SSP.. Δp_{max} [kPa]	STP.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
G 1/2" B	400	400	10	0.25	BPZ:VXP47.10-0.25	VXP47.10-0.25
G 1/2" B	400	250	10	0.4	BPZ:VXP47.10-0.4	VXP47.10-0.4
G 1/2" B	400	250	10	0.63	BPZ:VXP47.10-0.63	VXP47.10-0.63
G 1/2" B	400	250	10	1	BPZ:VXP47.10-1	VXP47.10-1
G 1/2" B	300	150	10	1.6	BPZ:VXP47.10-1.6	VXP47.10-1.6
G 3/4" B	300	150	15	2.5	BPZ:VXP47.15-2.5	VXP47.15-2.5
G 1" B	175	100	20	4	BPZ:VXP47.20-4	VXP47.20-4

70 % k_{vs} in bypass for all types.

Combinable actuator for VXP47..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	2-position	10	N4865	BPZ:SFP21/18	SFP21/18
AC 24	2-position	10	N4865	BPZ:SFP71/18	SFP71/18
AC 230	2-position	210	N4884	S55174-A103	STP23
AC 24	DC 0...10 V	270	N4884	S55174-A105	STP63
AC 24	2-position	270	N4884	S55174-A102	STP73
DC 24	PDM				
AC 230	2-position	210	N4884	S55174-A112	STP23/00
AC 24	2-position	270	N4884	S55174-A111	STP73/00
DC 24	PDM				
AC 24	2-position	270	N4884	S55174-A116	STP73PR/00
DC 24	PDM/parallel operation				
AC 230	3-position	150	N4864	BPZ:SSP31	SSP31
AC 24	DC 0...10 V	34	N4864	BPZ:SSP61	SSP61
DC 24					
AC 24	3-position	150	N4864	BPZ:SSP81	SSP81

Valves and actuators

Globe and pressure independent combi valves (PICV) 3-port threaded valves

VMP47..



3-port seat valves with bypass, PN16

3-port valves with bypass and threaded connections for the control of terminal units, chilled ceilings or heating zones.

Suitable media: Water (to VDI 2035), water with anti-freeze.

VXP47.. and VMP47.. 3-port valves are only used as mixing valves.

They are also suitable for SERTO® compression fittings.

Data sheet	N4847
Stroke	2.5 mm
Leakage rate	0...0.05 % of k_{vs} value
Leakage rate bypass	0...0.05 % of k_{vs} value
Medium	Water with anti-freeze
Medium temperature	1...110 °C
Valve characteristic	Throughport: linear Bypass: linear
Permissible operating pressure	1600 kPa
PN class	PN 16
Material, inside set	CrNi steel, brass
Warranty	5 Years

Range overview VMP47..

Con-nect. thread	SFP../SSP.. Δp_{max} [kPa]	STP.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
G 1/2" B	400	400	10	0.25	BPZ:VMP47.10-0.25	VMP47.10-0.25
G 1/2" B	400	400	10	0.4	BPZ:VMP47.10-0.4	VMP47.10-0.4
G 1/2" B	400	250	10	0.63	BPZ:VMP47.10-0.63	VMP47.10-0.63
G 1/2" B	400	250	10	0.63	BPZ:VMP47.10-0.63S	VMP47.10-0.63S
G 1/2" B	400	250	10	1	BPZ:VMP47.10-1	VMP47.10-1
G 1/2" B	300	150	10	1.6	BPZ:VMP47.10-1.6	VMP47.10-1.6
G 3/4" B	300	150	15	2.5	BPZ:VMP47.15-2.5	VMP47.15-2.5
W 1 1/8-14"	300	150	15	2.5	BPZ:VMP47.15-2.5S	VMP47.15-2.5S

70 % k_{vs} in bypass for all types.

Combinable actuator for VMP47..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	2-position	10	N4865	BPZ:SFP21/18	SFP21/18
AC 24	2-position	10	N4865	BPZ:SFP71/18	SFP71/18
AC 230	2-position	210	N4884	S55174-A103	STP23
AC 24	DC 0...10 V	270	N4884	S55174-A105	STP63
AC 24	2-position	270	N4884	S55174-A102	STP73
DC 24	PDM				
AC 230	2-position	210	N4884	S55174-A112	STP23/00
AC 24	2-position	270	N4884	S55174-A111	STP73/00
DC 24	PDM				
AC 24	2-position	270	N4884	S55174-A116	STP73PR/00
DC 24	PDM/parallel operation				
AC 230	3-position	150	N4864	BPZ:SSP31	SSP31
AC 24	DC 0...10 V	34	N4864	BPZ:SSP61	SSP61
DC 24					
AC 24	3-position	150	N4864	BPZ:SSP81	SSP81

Valves and actuators

Globe and pressure independent combi valves (PICV) 3-port threaded valves

3-port zone valves, PN16 with on/off characteristic

VXI46../2

3-port valves, internally threaded connections, for the control of zones or terminal units. Suitable media: water (to VDI 2035), water with anti-freeze.



Stroke	2.5 mm
Leakage rate	0...0.05% of k_{vs} value
Leakage rate bypass	2...5% of k_{vs} value
Medium	Water Water with anti-freeze
Medium temperature	1...110 °C
Valve characteristic	Non-linear (on/off)
Permissible operating pressure	1600 kPa
Material, inside set	Stainless steel, brass
PN class	PN 16
Warranty	5 Years

Range overview VXI46..

Con-nect. thread	SFA.. Δp_{max} [kPa]	STA.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
Rp 1"	200	140	25	5.5	S55249-V112	VXI46.25T/2
Rp 1/2"	300	200	15	2.15	S55249-V109	VXI46.15/2
Rp 3/4"	300	200	20	3.5	S55249-V110	VXI46.20/2
Rp 1"	250	150	25	5	S55249-V111	VXI46.25/2

To ensure noiseless operation, Δp_{max} should not exceed 100 kPa.

Combinable actuator for VXI46..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	2-position	10	N4863	BPZ:SFA21/18	SFA21/18
AC 24	2-position	10	N4863	BPZ:SFA71/18	SFA71/18
AC 230	2-position (SPST)	50 Hz:10 60 Hz:8.3	A6V10446174	S55176-A104	SUA21/3
AC 230	2-position	210	N4884	S55174-A101	STA23
AC 24 V DC 24	2-position PDM	270	N4884	S55174-A100	STA73
AC 230	2-position	210	N4884	S55174-A110	STA23/00
AC 230	2-position	210	N4884	S55174-A118	STA23B/00
AC 230	2-position	210	N4884	S55174-A114	STA23MP/00
AC 24 DC 24	2-position PDM	270	N4884	S55174-A109	STA73/00
AC 24 DC 24	2-position PDM	270	N4884	S55174-A117	STA73B/00
AC 24 DC 24	2-position PDM	270	N4884	S55174-A113	STA73MP/00

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New Product

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

CVXI41..



3-port seat valves PN16 with internally threaded connections

- With internally threaded connections Rp.. to ISO 7-1
- For chilled water, low pressure hot water in open and closed circuits

Data sheet	N4362
Stroke	20 mm
Leakage rate	0...0.02 % of k_{vs} value
Leakage rate bypass	0.5...2 % of k_{vs} value
Medium temperature	-25...150 °C
Valve characteristic	Throughport: equal-percentage Bypass: linear
Rangeability	DN 15: >50 DN 20...50: >100
Permissible operating pressure	1600 kPa
Material, inside set	CrNi Steel/ Rg 5 brass
PN class	PN 16
Warranty	5 Years

For customers in Asia / Australia

Range overview CVXI41..

Con-nect. thread	SAX.. Δp_{max} [kPa]	SKD.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
Rp 1/2"	400	400	15	2.5	BPZ:CVXI41.15-2.5	CVXI41.15-2.5
Rp 1/2"	400	400	15	4	BPZ:CVXI41.15-4	CVXI41.15-4
Rp 3/4"	400	400	20	6.3	BPZ:CVXI41.20-6.3	CVXI41.20-6.3
Rp 1"	400	400	25	10	BPZ:CVXI41.25-10	CVXI41.25-10
Rp 1 1/4"	400	400	32	16	BPZ:CVXI41.32-16	CVXI41.32-16
Rp 1 1/2"	400	400	40	25	BPZ:CVXI41.40-25	CVXI41.40-25
Rp 2"	300	400	50	40	BPZ:CVXI41.50-40	CVXI41.50-40

Δp_{max} -ratings in kPa are valid for mixing applications.

Replacement sealing glands for CVXI41..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM, up to 150 °C		BPZ:428488740	428488740

Combinable actuator for CVXI41..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V	DC 0...10 V	30	no	N4501	S55150-A100	SAX61.03
DC 24 V	DC 4...20 mA					
	0...1000 Ohm					
AC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
DC 24						
AC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
DC 24 V						
AC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
DC 24 V						
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port threaded valves

Combinable actuator for CNXI41..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51

**Globe and pressure independent combi valves (PICV)
3-port threaded valves**

VXG41..

3-port seat valves PN16 with externally threaded connections



- With threaded connections to ISO 228-1
- For drinking, cooling and chilled water, low and high temperature hot water and brine in open and closed circuits

VXG41..01 are DVGW approved

Data sheet	N4463
Stroke	20 mm
Leakage rate	0...0.02 % of k_{vs} value
Leakage rate bypass	Standard version: 0.5...2 % of k_{vs} value Special version: 0...0.02 % of k_{vs} value (VXG41..01)
Medium temperature	-25...150 °C
Valve characteristic	Throughport: equal-percentage Bypass: linear
Rangeability	DN 15: > 50 DN 20...50: > 100
Permissible operating pressure	1600 kPa
Material, inside set	CrNi steel
PN class	PN 16
Warranty	5 Years

Range overview VXG41..

Con-nect. thread	SAX.. Δp_{max} [kPa]	SKD.. Δp_{max} [kPa]	SKB.. Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
G 1" B	800	800	800	15	1.6	BPZ:VXG41.1301	VXG41.1301
G 1" B	800	800	800	15	2.5	BPZ:VXG41.1401	VXG41.1401
G 1" B	800	800	800	15	4	BPZ:VXG41.15	VXG41.15
G 1" B	800	800	800	15	4	VXG41.1501	VXG41.1501
G 1¼" B	800	800	800	20	6.3	BPZ:VXG41.20	VXG41.20
G 1¼" B	800	800	800	20	6.3	VXG41.2001	VXG41.2001
G 1½" B	800	800	800	25	10	BPZ:VXG41.25	VXG41.25
G 1½" B	800	800	800	25	10	VXG41.2501	VXG41.2501
G 2" B	800	800	800	32	16	BPZ:VXG41.32	VXG41.32
G 2" B	800	800	800	32	16	VXG41.3201	VXG41.3201
G 2¼" B	525	775	800	40	25	BPZ:VXG41.40	VXG41.40
G 2¼" B	525	775	800	40	25	VXG41.4001	VXG41.4001
G 2¾" B	300	450	800	50	40	BPZ:VXG41.50	VXG41.50
G 2¾" B	300	450	800	50	40	VXG41.5001	VXG41.5001

VXG41..01 are DVGW (drinking water) approved.

VXG41..01 are supplied with tight bypass

Δp_{max} -ratings are valid for mixing applications.

ALG..3 fittings must be ordered as individual items and will be delivered separately.

Replacement sealing glands for VXG41..

Product Title	Data sheet	Stock no.	Product no.
Sealing gland complete, stem diameter 10 mm, sealing material EPDM, up to 150 °C		BPZ:428488740	428488740

Accessories for VXG41..

Product Title	Data sheet	Stock no.	Product no.
Fittings, pipe-side with threaded connection		BPZ:ALG..3	ALG..3

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port threaded valves

Combinable actuator for VXG41..

Operating voltage	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230 V	3-position	120	no	N4501	S55150-A105	SAX31.00
AC 230 V	3-position	30	no	N4501	S55150-A106	SAX31.03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	no	N4501	S55150-A100	SAX61.03
AC 24 DC 24	Modbus RTU	30	No	N4501	S55150-A140	SAX61.03/MO
AC 24 V DC 24 V	3-position	120	no	N4501	S55150-A102	SAX81.00
AC 24 V DC 24 V	3-position	30	no	N4501	S55150-A103	SAX81.03
AC 230 V	3-position	Open 30 Close 10	Yes (8 s)	N4561	BPZ:SKD32.21	SKD32.21
AC 230 V	3-position	120	No	N4561	BPZ:SKD32.50	SKD32.50
AC 230 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD32.51	SKD32.51
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	No	N4561	BPZ:SKD60	SKD60
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62	SKD62
AC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	Open:30 Close:15	Yes (15 s)	N4561	BPZ:SKD62UA	SKD62UA
AC 24 V	3-position	120	No	N4561	BPZ:SKD82.50	SKD82.50
AC 24 V	3-position	120	Yes (8 s)	N4561	BPZ:SKD82.51	SKD82.51
AC 230 V	3-position	120	No	N4564	BPZ:SKB32.50	SKB32.50
AC 230 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB32.51	SKB32.51
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	No	N4564	BPZ:SKB60	SKB60
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62	SKB62
AC 24 V	DC 0...10 V 4...20 mA 0...1000 Ohm	Open:120 Close:10	Yes (10 s)	N4564	BPZ:SKB62UA	SKB62UA
AC 24 V	3-position	120	No	N4564	BPZ:SKB82.50	SKB82.50
AC 24 V	3-position	120	Yes (10 s)	N4564	BPZ:SKB82.51	SKB82.51

**Globe and pressure independent combi valves (PICV)
3-port threaded valves**

VXG44..

3-port seat valves PN16 with externally threaded connections



- With threaded connections to ISO 228/1
- For chilled water or low-temperature hot water in closed circuits

Data sheet	N4464
Stroke	5.5 mm
Leakage rate	0...0.02 % of k_{vs} value
Leakage rate bypass	0...0.02 % of k_{vs} value
Medium temperature	1... 120 °C
Valve characteristic	Throughport: linear Bypass: linear
Rangeability	From DN 20: >100 DN 15: >50
Permissible operating pressure	1600 kPa
Material, valve body	Bronze CC491K (Rg5)
Material, inside set	CrNi steel/Rg5/brass
PN class	PN 16
Warranty	5 Years

Range overview VXG44..

Con-nect. thread	SAS.. Δp_{max} [kPa]	DN	k_{vs} [m³/h]	Stock no.	Product no.
G 1" B	400	15	0.25	BPZ:VXG44.15-0.25	VXG44.15-0.25
G 1" B	400	15	0.4	BPZ:VXG44.15-0.4	VXG44.15-0.4
G 1" B	400	15	0.63	BPZ:VXG44.15-0.63	VXG44.15-0.63
G 1" B	400	15	1	BPZ:VXG44.15-1	VXG44.15-1
G 1" B	400	15	1.6	BPZ:VXG44.15-1.6	VXG44.15-1.6
G 1" B	400	15	2.5	BPZ:VXG44.15-2.5	VXG44.15-2.5
G 1" B	400	15	4	BPZ:VXG44.15-4	VXG44.15-4
G 1¼" B	400	20	6.3	BPZ:VXG44.20-6.3	VXG44.20-6.3
G 1½" B	400	25	10	BPZ:VXG44.25-10	VXG44.25-10
G 2" B	250	32	16	BPZ:VXG44.32-16	VXG44.32-16
G 2¼" B	125	40	25	BPZ:VXG44.40-25	VXG44.40-25

Accessories for VXG44..

Product Title	Data sheet	Stock no.	Product no.
Fittings, pipe-side with threaded connection		BPZ:ALG..3	ALG..3

Combinable actuator for VXG44..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	120	N4581	S55158-A106	SAS31.00
AC 230	3-position	30	N4581	S55158-A107	SAS31.03
AC 230	3-position	120	N4581	S55158-A108	SAS31.50
AC 230	3-position	30	N4581	S55158-A109	SAS31.53
AC 24 DC 24	DC 0...10V DC 4...20 mA 0...1000 Ohm	30	N4581	S55158-A100	SAS61.03
AC 24 DC 24	Modbus RTU	30	N4581	S55158-A121	SAS61.03/MO
AC 24 DC 24	DC 0...10V DC 4...20 mA 0...1000 Ohm	30	N4581	S55158-A101	SAS61.33

Valves and actuators
**Globe and pressure independent combi valves (PICV)
 3-port threaded valves**

Combinable actuator for VXG44..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4581	S55158-A102	SAS61.53
AC 24 DC 24	3-position	120	N4581	S55158-A103	SAS81.00
AC 24 DC 24	3-position	30	N4581	S55158-A104	SAS81.03
AC 24 DC 24	3-position	30	N4581	S55158-A105	SAS81.33

Globe and pressure independent combi valves (PICV)

3-port threaded valves

MXG461..



Modulating control valves with magnetic actuator, PN16, external thread

Mixing and 2-port valves PN 16 with magnetic actuator for modulating control of chilled or low-temperature hot water systems in closed circuits. With positioning control, position feedback signal, spring return function and manual control.

When used as a 2-port valve, port B must be closed off with the accessories (nut, cover, gasket) provided with the valve.

MXG461..P valves for media containing mineral oils (data sheet N4455)

MXG461.. valves are UL listed

CAUTION!

Valve may only be used as a mixing or 2-port valve, not as a diverting valve.

Data sheet	N4455
PN class	PN 16
Operating voltage	AC / DC 24 V
Positioning signal	DC 0...10 V
	DC 2...10 V
	DC 4...20 mA
Positioning time	<2 s
Spring return function	A->AB closed
Position feedback	DC 0...10 V
Degree of protection	IP54
Ambient temperature, operation	-5...45 °C
Mounting position	Upright to horizontal
Permissible operating pressure	1000 kPa
Leakage rate	< 0.02 % of k_{vs} value
Leakage rate bypass	< 0.2 % of k_{vs} value
Medium temperature	1...130 °C
Valve characteristic	Equal-percentage
	Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, valve body	Cast iron EN-GJL-250
Material, inside set	CrNi steel/brass
Warranty	5 Years

Range overview MXG461..

Δp_{max} [kPa]	Δp_s [kPa]	Con- nect. thread	k_{vs} [m ³ /h]	DN	Stock no.	Product no.
300	300	G 1" B	0.6	15	BPZ:MXG461.15-0.6	MXG461.15-0.6
300	300	G 1" B	1.5	15	BPZ:MXG461.15-1.5	MXG461.15-1.5
300	300	G 1" B	3	15	BPZ:MXG461.15-3.0	MXG461.15-3.0
300	300	G 1¼" B	5	20	BPZ:MXG461.20-5.0	MXG461.20-5.0
300	300	G 1½" B	8	25	BPZ:MXG461.25-8.0	MXG461.25-8.0
300	300	G 2" B	12	32	BPZ:MXG461.32-12	MXG461.32-12
300	300	G 2¼" B	20	40	BPZ:MXG461.40-20	MXG461.40-20
300	300	G 2¾" B	30	50	BPZ:MXG461.50-30	MXG461.50-30

Fittings ALG..3 must be ordered as separate items and are also supplied as such.

Δp_s for use as 2-port valve

Accessories for MXG461..

Product Title	Data sheet	Stock no.	Product no.
Replacement electronic for MXG461.., MXF461.. and MXG461S.., DN15...32	N4455	BPZ:ASE1	ASE1
Replacement electronic for MXG461.., MXF461.., DN40...65	N4455	BPZ:ASE2	ASE2
Signal converter DC 0...20 V Phs to DC 0...10 V	N5143	BPZ:SEZ91.6	SEZ91.6
Malleable cast iron fitting G 1" / Rp ½", set of 3	N4463	BPZ:ALG153	ALG153
Malleable cast iron fitting G 1¼" / Rp ¾", set of 3	N4463	BPZ:ALG203	ALG203

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port threaded valves

Accessories for MXG461..

Product Title	Data sheet	Stock no.	Product no.
Malleable cast iron fitting G 1½" / Rp 1", set of 3	N4463	BPZ:ALG253	ALG253
Malleable cast iron fitting G 2" / Rp 1¼", set of 3	N4463	BPZ:ALG323	ALG323
Malleable cast iron fitting G 2¼" / Rp 1½", set of 3	N4463	BPZ:ALG403	ALG403
Malleable cast iron fitting G 2¾" / Rp 2", set of 3	N4463	BPZ:ALG503	ALG503

Fittings: Set of 3

Product Title	Data sheet	Stock no.	Product no.
Malleable cast iron fitting G 1" / Rp ½", set of 3	N4463	BPZ:ALG153	ALG153
Malleable cast iron fitting G 1¼" / Rp ¾", set of 3	N4463	BPZ:ALG203	ALG203
Malleable cast iron fitting G 1½" / Rp 1", set of 3	N4463	BPZ:ALG253	ALG253
Malleable cast iron fitting G 2" / Rp 1¼", set of 3	N4463	BPZ:ALG323	ALG323
Malleable cast iron fitting G 2¼" / Rp 1½", set of 3	N4463	BPZ:ALG403	ALG403
Malleable cast iron fitting G 2¾" / Rp 2", set of 3	N4463	BPZ:ALG503	ALG503

**Globe and pressure independent combi valves (PICV)
3-port threaded valves**

MXG461B..



Modulating control valves with magnetic actuator, PN16, external thread, DVGW

Mixing and 2-port valves PN 16 with magnetic actuator for modulating control of DHW (mains water, water in open circuits), chilled water or low-temperature hot water.
With positioning control, position feedback signal, spring return function and manual control.

MXG461B... valves are UL listed

CAUTION!

Valve may only be used as a mixing or 2-port valve, not as a diverting valve.

Data sheet	N4461
PN class	PN 16
Operating voltage	AC 24 V DC 20...30 V DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA DC 0...20 V Phs
Positioning signal	
Positioning time	<2 s
Spring return function	A->AB closed
Position feedback	DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA
Degree of protection	IP31
Ambient temperature, operation	-5...45 °C
Mounting position	Upright to horizontal
Permissible operating pressure	1600 kPa
Leakage rate	< 0.05 % of k_{vs} value
Leakage rate bypass	< 0.2 % of k_{vs} value
Medium temperature	-20...130 °C
Medium	Water
Valve characteristic	Equal-percentage Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, valve body	Red brass CC491K (Rg5)
Material, inside set	CrNi steel
Product conformity	DVGW approved
Warranty	5 Years

Range overview MXG461B..

Δp_{max} [kPa]	Δp_s [kPa]	Con- nect. thread	k_{vs} [m³/h]	DN	Stock no.	Product no.
1000	1000	G 1" B	0.6	15	BPZ:MXG461B15-0.6	MXG461B15-0.6
1000	1000	G 1" B	1.5	15	BPZ:MXG461B15-1.5	MXG461B15-1.5
1000	1000	G 1" B	3	15	BPZ:MXG461B15-3	MXG461B15-3
800	800	G 1¼" B	5	20	BPZ:MXG461B20-5	MXG461B20-5
700	700	G 1½" B	8	25	BPZ:MXG461B25-8	MXG461B25-8
600	600	G 2" B	12	32	BPZ:MXG461B32-12	MXG461B32-12
600	600	G 2¼" B	20	40	BPZ:MXG461B40-20	MXG461B40-20
600	600	G 2¾" B	30	50	BPZ:MXG461B50-30	MXG461B50-30

The fittings are made of bronze / brass and supplied with the valve.

Δp_s for use as 2-port valve.

MXG461B.. valves with magnetic actuators are UL-listed.

Valves and actuators
Globe and pressure independent combi valves (PICV)
3-port threaded valves

Accessories for MXG461B..

Product Title	Data sheet	Stock no.	Product no.
Stem heating element for media temperatures 0°C, 30 W, AC 24 V		BPZ:Z366	Z366
Replacement electronic for MXG461B.., MVF461H.. and MXG462S..		BPZ:ASE12	ASE12

Globe and pressure independent combi valves (PICV)

3-port threaded valves

MXG461S..



Modulating control valves with magnetic actuator, PN16, external thread, stainless steel

Mixing and 2-port valves with magnetic actuator for modulating control of general and industrial HVAC plants. For open and closed circuits. With positioning control, position feedback signal, spring return function and manual control.

MXG461S... valves are UL listed.

CAUTION!

Valve may only be used as a mixing or 2-port valve, not as a diverting valve. When used as a 2-port seat valve, port B must be closed off by means of the supplied cover and the cap nut for the fitting.

Data sheet	N4465
PN class	PN 16
Operating voltage	AC / DC 24 V
Positioning signal	DC 0...10 V DC 2...10 V DC 4...20 mA
Positioning time	< 2 s
Spring return function	A -> AB closed
Position feedback	DC 0...10 V
Degree of protection	IP54
Ambient temperature, operation	-5...45 °C
Mounting position	Upright to horizontal
Leakage rate	< 0.02 % of k_{vs} value
Leakage rate bypass	< 0.2 % of k_{vs} value
Medium temperature	1...130 °C
Valve characteristic	Equal-percentage Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, inside set	CrNi steel
Warranty	5 Years

Range overview MXG461S..

Δp_{max} [kPa]	Δp_s [kPa]	k_{vs} [m³/h]	DN	Stock no.	Product no.
300	300	1.5	15	BPZ:MXG461S15-1.5	MXG461S15-1.5
300	300	5.0	20	BPZ:MXG461S20-5.0	MXG461S20-5.0
300	300	8.0	25	BPZ:MXG461S25-8.0	MXG461S25-8.0
300	300	12	32	BPZ:MXG461S32-12	MXG461S32-12

Union fittings made of stainless steel must delivered by thirds.

Δp_s for use as 2-port valve.

MXG461S.. valves with magnetic actuators are UL-listed.

Accessories for MXG461S..

Product Title	Data sheet	Stock no.	Product no.
Replacement electronic for MXG461.., MXF461.. and MXG461S.., DN15...32	N4455	BPZ:ASE1	ASE1
Replacement electronic for MXG461.., MXF461.., DN40...65	N4455	BPZ:ASE2	ASE2
Signal converter DC 0...20 V Phs to DC 0...10 V	N5143	BPZ:SEZ91.6	SEZ91.6

Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

Modulating control valves with magnetic actuator, PN16, external thread, stainless steel

MXG462S..



Mixing and 2-port valves with magnetic actuator for modulating control of general and industrial HVAC plants. For open and closed circuits. With positioning control, position feedback signal, spring return function and manual control.

MXG462S.. valves are UL listed

CAUTION!

Valve may only be used as a mixing or 2-port valve, not as a diverting valve. When used as a 2-port valve, port B must be closed off with the cover supplied with the valve and a cap nut of the fitting.

Data sheet	N4466
PN class	PN 16
Operating voltage	AC 24 V DC 20...30 V
Positioning signal	DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA DC 0...20 V Phs
Positioning time	<2 s
Spring return function	A->AB closed
Position feedback	DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA
Degree of protection	IP31
Ambient temperature, operation	-5...45 °C
Mounting position	Upright to horizontal
Permissible operating pressure	1600 kPa
Leakage rate	< 0.05 % of k_{vs} value
Leakage rate bypass	< 0.2 % of k_{vs} value
Medium temperature	-20...130 °C
Valve characteristic	Equal-percentage Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, inside set	CrNi steel
Warranty	5 Years

Range overview MXG462S..

Δp_{max} [kPa]	Δp_s [kPa]	k_{vs} [m ³ /h]	DN	Stock no.	Product no.
600	600	30	50	BPZ:MXG462S50-30	MXG462S50-30

Union fittings made of stainless steel must be delivered by thirds.

Δp_s for use as 2-port valve.

MXG462S.. valves with magnetic actuators are UL-listed.

Accessories for MXG462S..

Product Title	Data sheet	Stock no.	Product no.
Stem heating element for media temperatures 0 °C, 30 W, AC 24 V		BPZ:Z366	Z366

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Valves and actuators

Globe and pressure independent combi valves (PICV)

3-port threaded valves

ALG..3



Fittings, pipe-side with threaded connection

Cylindric thread to ISO 228-1 on the valve side. Tapered R-externally or cylindrical Rp-internally threaded to ISO 7-1 on the pipe side.

Each fitting set ALG..3 consists of 3 cap nuts, 3 insert nuts and 3 flat seals.

Warranty

2 Years

Range overview ALG..3

Connecting thread, valve side	Connecting thread, pipe side ["]	Material	Stock no.	Product no.
G 3/4 "	Rp 3/8	Malleable cast iron, phosphated	BPZ:ALG123	ALG123
G 1/2 "	R 3/8	Brass	BPZ:ALG133	ALG133
G 3/4 "	R 1/2	Brass	BPZ:ALG143	ALG143
G 1 "	Rp 1/2	Malleable cast iron, phosphated	BPZ:ALG153	ALG153
G 1 1/4 "	Rp 3/4	Malleable cast iron, phosphated	BPZ:ALG203	ALG203
G 1 1/2 "	Rp 1	Malleable cast iron, phosphated	BPZ:ALG253	ALG253
G 2 "	Rp 1 1/4	Malleable cast iron, phosphated	BPZ:ALG323	ALG323
G 2 1/4 "	Rp 1 1/2	Malleable cast iron, phosphated	BPZ:ALG403	ALG403
G 2 3/4 "	Rp 2	Malleable cast iron, phosphated	BPZ:ALG503	ALG503
G 1 "	Rp 1/2	Brass	S55846-Z101	ALG153B
G 1 1/4 "	Rp 3/4	Brass	S55846-Z103	ALG203B
G 1 1/2 "	Rp 1	Brass	S55846-Z105	ALG253B
G 2 "	Rp 1 1/4	Brass	S55846-Z107	ALG323B
G 2 1/4 "	Rp 1 1/2	Brass	S55846-Z109	ALG403B
G 2 3/4 "	Rp 2	Brass	S55846-Z111	ALG503B

ALS..



Fittings, pipeside with welding connection

Cylindric thread to ISO 228-1 on valve side. Welded connection on the pipe side.

Each ALS.. set consists of 2 cap nuts, 2 inserts and 2 flat seals.

Warranty

5 Years

7 Fittings with weldable connections: Set of 2

Pipe diameter [mm]	Connecting thread, valve side ["]	Stock no.	Product no.
21.3	G 3/4	BPZ:ALS152	ALS152
26.8	G 1	BPZ:ALS202	ALS202
33.7	G 1 1/4	BPZ:ALS252	ALS252

Valves and actuators

Globe and pressure independent combi valves (PICV)

Flanged pressure independent combi valves

EVF..



Intelligent Valve as a sensor controlled pressure independent control valve PN16 with flanged connection including flow and capacity measurement.

- Ethernet Daisychain for BACnet IP integration into Designo
- Cloud connectivity to extend functionality with various Software-as-a-Service (SaaS) packages such as Building Operator - a cloud-based application to manage fleet of sites
 - Power supply AC/DC 24 V
 - Control signal analog DC0/2..10V or 4..20mA
 - With flanged connections to ISO 7005/1
- For use in heating, ventilating, air conditioning systems as a control valve and for dynamic hydraulic balancing
- For use with cooling, chilled, low and high temperature water in closed circuits
 - Volumetric flow 10'000...120'000 l/h

Data sheet	A6V11444716
PN class	PN 16
Operating voltage	AC 24 V DC 24 V
Frequency	50 Hz
Communication	Ethernet - BACnet IP Ethernet - Cloud
Universal inputs	2
Universal input, signal	Pt1000 LG-Ni1000 DC 0...10 V DC 2...10 V 4...20 mA
Analog output, signal	DC 2...10 V DC 0...10 V DC 4...20 mA
Analog inputs, number	2
Analog input, signal	Pt1000
Measurement accuracy	Volume flow: +/- 2% (25...100% V100) Temperature difference (at 20 °C): +/- 0.2 K
Control accuracy, volume flow	+/- 6% (25...100% V100)
Rangeability	1:100
Leakage rate	0.03 % of kvs-value
Valve characteristic	selectable
Medium	Low-temperature hot water High-temperature hot water Chilled water
Medium temperature	1...120 °C
Material, inside set	Stainless steel
Warranty	5 Years

Range overview EVF..

DN	Vol. flow V [m ³ /h]	Vol. flow Vmin [m ³ /h]	kvs [m ³ /h]	SAV.. Δp_{max} [kPa]	SAV.. Δp_s [kPa]	SAX.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	Stock no.	Product no.
65	30	10	55			500	1600	S55300-M106	EVF4U20E065
80	48	16	80			500	1600	S55300-M107	EVF4U20E080
100	75	25	100	500	1600			S55300-M108	EVF4U20E100
125	120	40	142	500	1600			S55300-M109	EVF4U20E125



Valves and actuators

Globe and pressure independent combi valves (PICV)

Flanged pressure independent combi valves

Accessories for EVF..

Product Title	Data sheet	Stock no.	Product no.
Pair of temperature sensors Pt1000, length 100 mm, ø 6 mm, type PL, cable length 6 m	A6V11444716	S55845-Z237	EZU10-10060
Wall mount socket for Intelligent Valve Controller Box ASE4U10E		S55845-Z234	EZU-WA
Spacer for mounting Intelligent Valve Controller Box ASE4U10E with a 25 mm distance on the flow sensor		S55845-Z236	EZU-WB
Welding sleeve G ½", 45° to the pipe axis, with threaded hole G ½"		S55563-F122	WZT-G12
Welding sleeve G ½", 90° to the pipe axis, with threaded hole G ½"		LYU:WZT-GLG	WZT-GLG

Valves and actuators

Globe and pressure independent combi valves (PICV)

Flanged pressure independent combi valves

EXF..



Intelligent Valve 3-Port configuration as a sensor controlled pressure independent control valve PN16 with flanged connection including flow and capacity measurement

- Ethernet Daisychain for BACnet IP integration into Desigo
- Cloud connectivity to extend functionality with various Software-as-a-Service (SaaS) packages such as Building Operator – a cloud-based application to manage fleet of sites
 - Power supply AC/DC 24 V
 - Control signal analog DC0/2..10V or 4..20mA
 - With flanged connections to ISO 7005/1
- For use in heating, ventilating, air conditioning systems as a control valve and for dynamic hydraulic balancing
- For use with cooling, chilled, low and high temperature water in closed circuits
 - Volume flow 6000...50'000 l/h.

Data sheet	A6V11444716
PN class	PN 16
Operating voltage	AC 24 V DC 24 V
Frequency	50 Hz
Communication	Ethernet - BACnet IP Ethernet - Cloud
Universal inputs	2
Universal input, signal	Pt1000 LG-Ni1000 DC 0...10 V DC 2...10 V 4...20 mA
Analog outputs, number	1
Analog outputs	1
Analog output, signal	DC 2...10 V DC 0...10 V DC 4...20 mA
Analog inputs, number	2
Analog input, signal	Pt1000
Measurement accuracy	Volume flow: +/- 2% (25...100% V100) Temperature difference (at 20°C): +/- 0.2 K
Control accuracy, volume flow	+/- 6% (25...100% V100)
Rangeability	1:100
Leakage rate	0.03 % of kvs Bypass: 1...3 % of kvs
Valve characteristic	selectable
Medium	Low-temperature hot water High-temperature hot water Chilled water
Medium temperature	1...120 °C
Material, inside set	Stainless steel
Packaging unit	Unit
Warranty	5 Years

Range overview EXF..

DN	Vol. flow V [m³/h]	Vol. flow Vmin [m³/h]	kvs [m³/h]	SAX.. Δp _{max} [kPa]	Stock no.	Product no.
65	20	6	54	150	S55300-M117	EXF4U20E065
80	32	9.6	79	75	S55300-M118	EXF4U20E080
100	50	15	116	125	S55300-M119	EXF4U20E100

New Product



Valves and actuators

Globe and pressure independent combi valves (PICV)

Flanged pressure independent combi valves

VPF43..

Combi valves (PICV) PN16 with flanged connections



For use in heating, ventilating, air conditioning systems and district heating as a control valve in closed circuits.

Data sheet	N4315
Leakage rate	Class IV (0...0.01% of volumetric flow)
PN class	PN 16
Medium	Water Water with anti-freeze
Valve characteristic	Linear
Rangeability	1:100
Permissible operating pressure	1600 kPa
Material, valve body	Cast iron
Material, inside set	Stainless steel, Brass (DZR)
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview VPF43..

DN	Vol. flow Vmin [m³/h]	Vol. flow V [m³/h]	ΔP_{min} [kPa]	SAX..P Δp_{max} [kPa]	SAX..P Δp_s [kPa]	SQV..P Δp_{max} [kPa]	SQV..P Δp_s [kPa]	Stock no.	Product no.
50	2.3	15	20	600	600	600	600	S55266-V100	VPF43.50F16
50	4.3	25	50	600	600	600	600	S55266-V101	VPF43.50F25
65	4.4	25	25	600	600	600	600	S55266-V102	VPF43.65F24
65	6	35	55	600	600	600	600	S55266-V103	VPF43.65F35
80	5.3	34	25	600	600	600	600	S55266-V104	VPF43.80F35
80	7	43	50	600	600	600	600	S55266-V105	VPF43.80F45
100	12.1	68	35			600	600	S55266-V106	VPF43.100F70
100	14.8	90	75			600	600	S55266-V107	VPF43.100F90
125	18.5	110	35			600	600	S55266-V108	VPF43.125F110
125	23	135	53			600	600	S55266-V109	VPF43.125F135
150	25.6	148	35			600	600	S55266-V110	VPF43.150F160
150	32	195	65			600	600	S55266-V111	VPF43.150F200
200	95	210	32			600	600	S55266-V148	VPF43.200F210
200	130	280	78			600	600	S55266-V149	VPF43.200F280

Further information to the actuators please see "Actuators for combi valves".
Check the datasheet for detailed dP_{min} values per presetting

Accessories for VPF43..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	ALE10
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	ALE11
Blanking plug for P/T ports	CE1N4853	S55264-V115	ALP46
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	ALP47
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	ALP48
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	ALP49

Valves and actuators

Globe and pressure independent combi valves (PICV) Flanged pressure independent combi valves

Combinable actuator for VPF43..

Operating voltage	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230 V	3-position	30	N4509	S55150-A118	SAX31P03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4509	S55150-A114	SAX61P03
AC 24 V DC 24 V	3-position	30	N4509	S55150-A116	SAX81P03
AC 230	3-position	120	N4510	S55150-A121	SAV31P00
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	N4510	S55150-A119	SAV61P00
AC 24 V DC 24 V	3-position	120	N4510	S55150-A120	SAV81P00
AC 24 V DC 24 V	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A130	SQV91P30
AC 24 V DC 24 V	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A131	SQV91P40

Accessories for VPF44..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	ALE10
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	ALE11
Blanking plug for P/T ports	CE1N4853	S55264-V115	ALP46
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	ALP47
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	ALP48
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	ALP49

Combinable actuator for VPF44..

Operating voltage	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230 V	3-position	30	N4509	S55150-A118	SAX31P03
AC/DC 24 V	Modbus RTU	30	N4509	S55150-A143	SAX61P03/MO
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4509	S55150-A114	SAX61P03
AC 24 V DC 24 V	3-position	30	N4509	S55150-A116	SAX81P03
AC 230	3-position	120	N4510	S55150-A121	SAV31P00
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	N4510	S55150-A119	SAV61P00
AC 24 V DC 24 V	3-position	120	N4510	S55150-A120	SAV81P00
AC 24 V DC 24 V	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A130	SQV91P30
AC 24 V DC 24 V	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A131	SQV91P40



Globe and pressure independent combi valves (PICV)

Flanged pressure independent combi valves

VPF44..



Pressure independent control valves (PICVs) PN16 with flanged connections

For use in heating, ventilation, air conditioning systems and district heating as a control valve in closed circuits.

Data sheet	A6V11466366
Leakage rate	Class IV (0...0.01% of volumetric flow)
PN class	PN 16
Medium	Water
	Water with anti-freeze
Valve characteristic	Linear
Rangeability	1:100
Permissible operating pressure	1600 kPa
Material, valve body	Cast iron
Material, inside set	Stainless steel, Brass (DZR)
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview VPF44..

DN	Vol. flow V [m³/h]	Vol. flow Vmin [m³/h]	ΔP_{min} [kPa]	SAX..P Δp_{max} [kPa]	SAX..P Δp_s [kPa]	SQV..P Δp_{max} [kPa]	SQV..P Δp_s [kPa]	Stock no.	Product no.
50	15.9	2.9	21.4	600	700	600	700	S55266-V136	VPF44.50F15
50	26.2	4.2	52.6	600	700	600	700	S55266-V137	VPF44.50F25
65	28	4	22	600	700	600	700	S55266-V138	VPF44.65F25
65	35.8	5.1	42.6	600	700	600	700	S55266-V139	VPF44.65F35
80	36.7	5.5	18	600	700	600	700	S55266-V140	VPF44.80F35
80	47.9	7.2	36.4	600	700	600	700	S55266-V141	VPF44.80F45

Valves and actuators

Globe and pressure independent combi valves (PICV) Flanged pressure independent combi valves

Combi valves (PICV) PN25 with flanged connections

VPF53..

For use in heating, ventilating, air conditioning systems and district heating as a control valve in closed circuits



Data sheet	N4316
Leakage rate	Class IV (0...0.01% of volumetric flow)
PN class	PN 25
Medium	Water Water with anti-freeze
Valve characteristic	Linear
Rangeability	1:100
Permissible operating pressure	2500 kPa
Material, valve body	Cast iron EN-GJS-400-15
Material, inside set	Stainless steel, Brass (DZR)
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview VPF53..

DN	Vol. flow Vmin [m³/h]	Vol. flow V [m³/h]	ΔP_{min} [kPa]	SAX.. Δp_{max} [kPa]	SAX.. Δp_s [kPa]	SAX..P Δp_{max} [kPa]	SAX..P Δp_s [kPa]	SAV.. Δp_{max} [kPa]	SAV.. Δp_s [kPa]	SQV.. Δp_{max} [kPa]	SQV.. Δp_s [kPa]	SQV.. P Δp_{max} [kPa]	SQV.. P Δp_s [kPa]	Stock no.	Product no.
50	2.3	15	20			600	600					600	600	S55266-V112	VPF53.50F16
50	4.3	25	50	600	600					600	600			S55266-V113	VPF53.50F25
65	4.4	25	25	600	600					600	600			S55266-V114	VPF53.65F24
65	6	35	55	600	600					600	600			S55266-V115	VPF53.65F35
80	5.3	34	25	600	600					600	600			S55266-V116	VPF53.80F35
80	7	43	50	600	600					600	600			S55266-V117	VPF53.80F45
100	12.1	68	35					600	600	600	600			S55266-V118	VPF53.100F70
100	14.8	90	75					600	600	600	600			S55266-V119	VPF53.100F90
125	18.5	110	35					600	600	600	600			S55266-V120	VPF53.125F110
125	23	135	53					600	600	600	600			S55266-V121	VPF53.125F135
150	25.6	148	35					600	600	600	600			S55266-V122	VPF53.150F160
150	32	195	65					600	600	600	600			S55266-V123	VPF53.150F200
200	95		32					600	600	600	600			S55266-V150	VPF53.200F210
200	130		78					600	600	600	600			S55266-V151	VPF53.200F280

Further information to the actuators please see "Actuators for combi valves".

Check the datasheet for detailed ΔP_{min} values per presetting

Accessories for VPF53..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	ALE10
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	ALE11
Blanking plug for P/T ports	CE1N4853	S55264-V115	ALP46
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	ALP47
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	ALP48
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	ALP49

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Valves and actuators

Globe and pressure independent combi valves (PICV)

Flanged pressure independent combi valves

Combinable actuator for VPF53..

Operating voltage	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230 V	3-position	30	N4509	S55150-A118	SAX31P03
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30	N4509	S55150-A114	SAX61P03
AC 24 V DC 24 V	3-position	30	N4509	S55150-A116	SAX81P03
AC 230	3-position	120	N4510	S55150-A121	SAV31P00
AC 24 V DC 24 V	DC 0...10 V DC 4...20 mA 0...1000 Ohm	120	N4510	S55150-A119	SAV61P00
AC 24 V DC 24 V	3-position	120	N4510	S55150-A120	SAV81P00
AC 24 V DC 24 V	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A130	SQV91P30
AC 24 V DC 24 V	3-position DC 0...10 V DC 4...20 mA	20 mm: 40 40 mm: 80	N4833	S55150-A131	SQV91P40

Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

EVG..



Intelligent Valve - as a sensor controlled pressure independent control valve PN16 with threaded connection including flow and capacity measurement.

- Ethernet Daisychain for BACnet IP integration into Design
- Cloud connectivity to extend functionality with various Software-as-a-Service (SaaS) packages such as Building Operator – a cloud-based application to manage fleet of sites
 - Power supply AC/DC 24 V
 - Control signal analog DC 0/2...10 V or 4...20 mA
 - With threaded connections to ISO 228/1
- For use in heating, ventilating, air conditioning systems as a control valve and for dynamic hydraulic balancing
- For use with cooling, chilled, low and high temperature water in closed circuits
 - Volumetric flow 500...18'000 l/h

Data sheet	A6V11444716
PN class	PN 16
Operating voltage	AC 24 V DC 24 V
Frequency	50 Hz
Power consumption	8.5 VA 5 W
Communication	Ethernet - BACnet IP Ethernet - Cloud
Universal inputs	2
Universal input, signal	Pt1000 LG-Ni1000 DC 0...10 V DC 2...10 V 4...20 mA
Analog outputs	1
Analog output, signal	DC 2...10 V DC 0...10 V DC 4...20 mA
Analog inputs, number	2
Analog input, signal	Pt1000
Δp_{max}	350 kPa
Measurement accuracy	Volume flow: +/- 2% (25...100% V100) Temperature difference (at 20 °C): +/- 0.2 K
Control accuracy, volume flow	+/- 6% (25...100% V100)
Rangeability	1:100
Leakage rate	"Watertight" as per EN 60534-4 L/1, better than class 5
Valve characteristic	selectable
Medium	Low-temperature hot water High-temperature hot water Chilled water
Medium temperature	1...120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Brass
Material, inside set	Brass
Warranty	5 Years

Range overview EVG..

DN	Vol. flow V [m³/h]	Vol. flow Vmin [m³/h]	k_{vs} [m³/h]	GLA.. Δp_{max} [kPa]	GLA.. Δp_s [kPa]	Stock no.	Product no.
15	1.5	0.45	3.7	350	1400	S55300-M100	EVG4U10E015
20	3	0.9	5	350	1400	S55300-M101	EVG4U10E020
25	4.5	1.35	10	350	1400	S55300-M102	EVG4U10E025



Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

Range overview EVG..

DN	Vol. flow V [m³/h]	Vol. flow Vmin [m³/h]	k _{vs} [m³/h]	GLA.. Δp _{max} [kPa]	GLA.. Δp _s [kPa]	Stock no.	Product no.
32	7	2.1	11	350	1000	S55300-M103	EVG4U10E032
40	11.5	3.5	26	350	800	S55300-M104	EVG4U10E040
50	18	5.4	30	350	600	S55300-M105	EVG4U10E050

Accessories for EVG..

Product Title	Data sheet	Stock no.	Product no.
Fittings, pipe-side with threaded connection		BPZ:ALG..2	ALG..2
Protection pocket G ½B", M10x1, brass, Ø 5.2x40 mm, for temperature sensor Ø 5.2x26 mm	A6V11444716	S55845-Z231	EZT-M40
Wall mount socket for Intelligent Valve Controller Box ASE4U10E		S55845-Z234	EZU-WA
Spacer for mounting Intelligent Valve Controller Box ASE4U10E with a 25 mm distance on the flow sensor		S55845-Z236	EZU-WB
Ball valve Rp ½" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm		S55563-F104	WZT-K12
Ball valve Rp ¾" for sensor DS M10x1 mm, length = 27.5 mm or Ø 5.2x45 mm		S55563-F120	WZT-K34
Ball valve Rp 1" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm		S55563-F119	WZT-K1
Welding sleeve with threaded hole for temperature sensor DS M10x1 mm		S55563-F121	WZT-G10
Strainer, inside threaded		BPZ:ALX..	ALX..
Insulation covers for ball valves		BPZ:ALI..	ALI..

Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

2-port seat MiniCombiValves (PICV)

VPD..

Combi valves with presetting, PN 10, with connections according to EN215 for

- ventilation and air conditioning plants for control on the water side and automatic hydraulic balancing of terminal units, such as fan coils, induction units, and in heat exchangers for heating or cooling.
- heating zones like self-contained heating systems, apartments, individual rooms, etc.
- closed circuits



Suitable media: Water (to VDI 2035), water with anti-freeze.

The valves can be operated with Siemens actuators type SSA.. / STA.. and thermostatic actuators RTN..

Data sheet	N2185
Stroke	2.5 mm
PN class	PN 10
Medium	Water with anti-freeze
Medium temperature	1...90 °C
Permissible operating pressure	1000 kPa
Material, valve body	Brass, nickel-plated
Material, inside set	EPDM
Warranty	5 Years

Range overview VPD..

DN	Con-nect. thread	Vol. flow V [l/h]	kv at 0.5 mm stroke [m ³ /h]	ΔP_w [kPa]	Δp_{max} [kPa]	ΔP_{min} [kPa]	Stock no.	Product no.
10	Rp/R 3/8"	45	0.05	5	200	6	BPZ:VPD110A-45	VPD110A-45
10	Rp/R 3/8"	90	0.09	5	200	8	BPZ:VPD110A-90	VPD110A-90
10	Rp/R 3/8"	145	0.15	5	200	10	BPZ:VPD110A-145	VPD110A-145
15	Rp/R 1/2"	45	0.05	5	200	6	BPZ:VPD115A-45	VPD115A-45
15	Rp/R 1/2"	90	0.09	5	200	8	BPZ:VPD115A-90	VPD115A-90
15	Rp/R 1/2"	145	0.15	5	200	10	BPZ:VPD115A-145	VPD115A-145
15	Rp/R 1/2"	200	0.2	10	200	20	BPZ:VPD115B-200	VPD115B-200

Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

VPE..



Angle MiniCombiValves (PICV)

Combi valves with presetting, PN 10, with connections according to EN215 for

- ventilation and air conditioning plants for control on the water side and automatic hydraulic balancing of terminal units, such as fan coils, induction units, and in heat exchangers for heating or cooling.
- heating zones like self-contained heating systems, apartments, individual rooms, etc.
- closed circuits

Suitable media: Water (to VDI 2035), water with anti-freeze.

The valves can be operated with Siemens actuators type SSA.. / STA.. and thermostatic actuators RTN..

Data sheet	N2185
Stroke	2.5 mm
PN class	PN 10
Medium	Water with anti-freeze
Medium temperature	1...90 °C
Permissible operating pressure	1000 kPa
Material, valve body	Brass, nickel-plated
Material, inside set	EPDM
Warranty	5 Years

Range overview VPE..

DN	Connect. thread	Vol. flow V [l/h]	kv at 0.5 mm stroke [m³/h]	ΔP_w [kPa]	Δp_{max} [kPa]	ΔP_{min} [kPa]	Stock no.	Product no.
10	Rp/R 3/8"	45	0.05	5	200	6	BPZ:VPE110A-45	VPE110A-45
10	Rp/R 3/8"	90	0.09	5	200	8	BPZ:VPE110A-90	VPE110A-90
10	Rp/R 3/8"	145	0.15	5	200	10	BPZ:VPE110A-145	VPE110A-145
15	Rp/R 1/2"	45	0.05	5	200	6	BPZ:VPE115A-45	VPE115A-45
15	Rp/R 1/2"	90	0.09	5	200	8	BPZ:VPE115A-90	VPE115A-90
15	Rp/R 1/2"	145	0.15	5	200	10	BPZ:VPE115A-145	VPE115A-145
10	Rp/R 3/8"	200	0.2	10	200	20	BPZ:VPE110B-200	VPE110B-200
15	Rp/R 1/2"	200	0.2	10	200	20	BPZ:VPE115B-200	VPE115B-200

Combinable actuator for VPD.. / VPE..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.
				N2111	BPZ:RTN51	RTN51
				N4211	BPZ:RTN51G	RTN51G
				N2111	BPZ:RTN71	RTN71
				N2111	BPZ:RTN81	RTN81
AC 195.5...264.5 230	3-position	150	1.5	N4893	BPZ:SSA31.1	SSA31.1
AC 24	3-position	150	1.5	N4893	BPZ:SSA81.1	SSA81.1
AC 230	2-position	210	1	N4884	S55174-A101	STA23
AC 24	DC 0...10 V	270	2	N4884	S55174-A104	STA63
AC 24 V DC 24	2-position PDM	270	1	N4884	S55174-A100	STA73
AC 230	2-position	210		N4884	S55174-A110	STA23/00
AC 230	2-position	210		N4884	S55174-A118	STA23B/00
AC 230	2-position	210		N4884	S55174-A114	STA23MP/00
AC 24 DC 24	2-position PDM	270		N4884	S55174-A109	STA73/00

Valves and actuators

Globe and pressure independent combi valves (PICV) Threaded pressure independent combi valves

Combinable actuator for VPD.. / VPE..

Operating voltage [V]	Positioning signal	Positioning time [s]	Cable length [m]	Data sheet	Stock no.	Product no.
AC 24 DC 24	2-position PDM	270		N4884	S55174-A117	STA73B/00
AC 24 DC 24	2-position PDM	270		N4884	S55174-A113	STA73MP/00
AC 24 DC 24	2-position PDM/parallel operation	270		N4884	S55174-A115	STA73PR/00

Seal insertion for VPD.. and VPE.. MiniCombiValves (MCV)

Valve insert for use with all types of valves of the VPD.. and VPE.. ranges.

Data sheet N2100
Warranty 2 Years

AV100-VP1



Stock no. Product no.

BPZ:AV100-VP1 **AV100-VP1**

Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

VPP46..



Combi valves (PICV) PN25, externally threaded

Pre-adjustable Combi valves, PN 25, externally threaded for

- ventilation and air conditioning plants for control on the water side and automatic hydraulic balancing of terminal units, such as fan coils, induction units, and in heat exchangers for heating or cooling.
- heating zones like self-contained heating systems, apartments, individual rooms, etc.
- closed circuits

Volumetric flow 30...4000 l/h. With or without differential pressure test points.

Data sheet	N4855
Stroke	Up to DN 15: 2.5 mm DN 20: 5 mm DN 25-32: 5.5 mm
Leakage rate	Class IV (0...0.01% of volumetric flow V_{100})
PN class	PN 25
Medium	Water Water with anti-freeze
Medium temperature	1...120 °C
Ambient temperature, operation	1...50 °C
Valve characteristic	Linear
Permissible operating pressure	2500 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Dezincification resistant brass (DR), CW602N, stainless steel, PPS
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview VPP46..

DN	Connect. thread	Vol. flow V [l/h]	Vol. flow V_{min} [l/h]	STA...3.. Δp_{max} [kPa]	STA...3.. Δp_{min} [kPa]	SSA.. Δp_{max} [kPa]	SSA.. Δp_{min} [kPa]	Stock no.	Product no.
10	G 1/2"	200	30	600	16	600	16	S55264-V101	VPP46.10L0.2
10	G 1/2"	200	30	600	16	600	16	S55264-V105	VPP46.10L0.2Q
10	G 1/2"	370	65	600	17	600	17	S55264-V131	VPP46.10L0.4
10	G 1/2"	370	65	600	17	600	17	S55264-V132	VPP46.10L0.4Q
15	G 3/4"	200	30	600	16	600	16	S55264-V102	VPP46.15L0.2
15	G 3/4"	200	30	600	16	600	16	S55264-V106	VPP46.15L0.2Q
15	G 3/4"	575	100	600	19	600	19	S55264-V103	VPP46.15L0.6
15	G 3/4"	575	100	600	19	600	19	S55264-V107	VPP46.15L0.6Q
20	G 1"	1330	220	600	21	600	22	S55264-V104	VPP46.20F1.4
20	G 1"	1330	220	600	21	600	22	S55264-V108	VPP46.20F1.4Q
25	G 1 1/4"	1800	280	600	39	600	39	S55264-V121	VPP46.25F1.8
25	G 1 1/4"	1800	280	600	39	600	39	S55264-V123	VPP46.25F1.8Q
32	G 1 1/2"	4000	550	600	24	600	28	S55264-V122	VPP46.32F4
32	G 1 1/2"	4000	550	600	24	600	28	S55264-V124	VPP46.32F4Q

Further information to the actuators please see "Actuators for combi valves with 2.5 mm stroke" and "Actuators for combi valves with 2.5 / 5 mm stroke and radiator valves".

VPP46..Q: with testpoint

Check the datasheet for detailed dP_{min} values per presetting

Accessories for VPP46..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	ALE10
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	ALE11
Black spare valve protection cap (set of 2 pieces)	A6V11877580	S55264-V153	ALP53
Blanking plug for P/T ports	CE1N4853	S55264-V115	ALP46

Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

Accessories for VPP46..

Product Title	Data sheet	Stock no.	Product no.
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	ALP47
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	ALP48
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	ALP49

Combinable actuator for VPP46..

Operating voltage [V]	Positioning signal	Positioning time	Data sheet	Stock no.	Product no.
AC 195.5...264.5 230	3-position	150 s	N4893	BPZ:SSA31.1	SSA31.1
AC 24	3-position	150 s	N4893	BPZ:SSA81.1	SSA81.1
AC 24	3-position	67.5 s	A6V11858276	S55180-A106	SSA131.00
AC/DC 24	4...20 mA	25 s	A6V11858278	S55180-A110	SSA151.05HF
AC/DC 24	DC 0...10 V	25 s	A6V11858276	S55180-A107	SSA161.05
AC/DC 24	DC 0...10 V	25 s	A6V11858278	S55180-A108	SSA161.05HF
AC/DC 24 230	DC 0...10 V	25 s	A6V11858278	S55180-A109	SSA161E.05HF
230	3-position	67.5 s	A6V11858276	S55180-A105	SSA331.00
AC 230	2-position (SPST)	50 Hz:10 s 60 Hz:8.3 s	A6V10446174	S55176-A104	SUA21/3
AC 230	2-position (SPST)	10 s at 50 Hz 8.3 s at 60 Hz	A6V11780780	S55176-A105	SUA21/3P
AC 230	2-position (SPST)	12 s at 50 Hz 10 s at 60 Hz	A6V11780777	S55176-A106	SUE21P
AC 230	2-position	210 s	N4884	S55174-A101	STA23
AC 24	DC 0...10 V	270 s	N4884	S55174-A104	STA63
AC 24 V DC 24	2-position PDM	270 s	N4884	S55174-A100	STA73
AC 230	2-position	210 s	N4884	S55174-A110	STA23/00
AC 230	2-position	210 s	N4884	S55174-A118	STA23B/00
AC 230	2-position	210 s	N4884	S55174-A114	STA23MP/00
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A109	STA73/00
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A117	STA73B/00
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A113	STA73MP/00
AC 24 DC 24	2-position PDM/parallel operation	270 s	N4884	S55174-A115	STA73PR/00

Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

VPI46..



Combi valves (PICV) PN25, internally threaded

Pre-adjustable Combi valves, PN 25, internally threaded for

- ventilation and air conditioning plants for control on the water side and automatic hydraulic balancing of terminal units, such as fan coils, induction units, and in heat exchangers for heating or cooling.
- heating zones like self-contained heating systems, apartments, individual rooms, etc.
- closed circuits

Volumetric flow 30...11500 l/h. With or without differential pressure test points.

Data sheet	N4855
Stroke	Up to DN 15: 2.5 mm DN 20: 5 mm DN 25-32: 5.5 mm DN 40-50: 15 mm
Leakage rate	Class IV (0...0.01% of volumetric flow V_{100})
PN class	PN 25
Medium	Water Water with anti-freeze
Medium temperature	1...120 °C
Ambient temperature, operation	1...50 °C
Valve characteristic	Linear
Permissible operating pressure	2500 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Dezincification resistant brass (DR), CW602N, stainless steel, PPS
Mounting position	Upright to 90° inclined
Warranty	5 Years

Range overview VPI46..

DN	Con-nect. thread	Vol. flow V [l/h]	Vol. flow V_{min} [l/h]	SUA.. Δp_{max} [kPa]	SUA.. Δp_{min} [kPa]	SSA.. Δp_{max} [kPa]	SSA.. Δp_{min} [kPa]	STA..3.. Δp_{max} [kPa]	STA..3.. Δp_{min} [kPa]	SAY..P.. Δp_{max} [kPa]	SAY..P.. Δp_{min} [kPa]	Stock no.	Product no.
15	Rp 1/2"	200	30	600	16	600	16	600	16			S55264-V109	VPI46.15L0.2
15	Rp 1/2"	200	30	600	16	600	16	600	16			S55264-V112	VPI46.15L0.2Q
15	Rp 1/2"	575	100	600	19	600	19	600	19			S55264-V110	VPI46.15L0.6
15	Rp 1/2"	575	100	600	19	600	19	600	19			S55264-V113	VPI46.15L0.6Q
20	Rp 3/4"	1330	220			600	22	600	21			S55264-V111	VPI46.20F1.4
20	Rp 3/4"	1330	220			600	22	600	21			S55264-V114	VPI46.20F1.4Q
25	Rp 1"	1800	280			600	39	600	39			S55264-V125	VPI46.25F1.8
25	Rp 1"	1800	280			600	39	600	39			S55264-V127	VPI46.25F1.8Q
32	Rp 1 1/4"	4000	550			600	28	600	24			S55264-V126	VPI46.32F4
32	Rp 1 1/4"	4000	550			600	28	600	24			S55264-V128	VPI46.32F4Q
40	Rp 1 1/2"	9500	1370							600	25	S55264-V129	VPI46.40F9.5Q
50	Rp 1 1/2"	11500	1400							600	36	S55264-V130	VPI46.50F12Q

Further information to the actuators please see "Actuators for combi valves with 2.5 mm stroke" and "Actuators for combi valves with 2.5 / 5 mm stroke and radiator valves".

VPI46..Q: with testpoint.

Check the datasheet for detailed dP_{min} values per presetting

Accessories for VPI46..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	ALE10
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	ALE11
Black spare valve protection cap (set of 2 pieces)	A6V11877580	S55264-V153	ALP53
Blanking plug for P/T ports	CE1N4853	S55264-V115	ALP46
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	ALP47
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	ALP48
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	ALP49

Valves and actuators

Globe and pressure independent combi valves (PICV) Threaded pressure independent combi valves

Combinable actuator for VPI46..

Operating voltage [V]	Positioning signal	Positioning time	Data sheet	Stock no.	Product no.
AC 195.5...264.5 230	3-position	150 s	N4893	BPZ:SSA31.1	SSA31.1
AC 24	3-position	150 s	N4893	BPZ:SSA81.1	SSA81.1
AC 24	3-position	67.5 s	A6V11858276	S55180-A106	SSA131.00
AC/DC 24	4...20 mA	25 s	A6V11858278	S55180-A110	SSA151.05HF
AC/DC 24	DC 0...10 V	25 s	A6V11858276	S55180-A107	SSA161.05
AC/DC 24	DC 0...10 V	25 s	A6V11858278	S55180-A108	SSA161.05HF
AC/DC 24 230	DC 0...10 V 3-position	25 s 67.5 s	A6V11858278 A6V11858276	S55180-A109 S55180-A105	SSA161E.05HF SSA331.00
AC 230	2-position (SPST)	50 Hz:10 s 60 Hz:8.3 s	A6V10446174	S55176-A104	SUA21/3
AC 230	2-position (SPST)	10 s at 50 Hz 8.3 s at 60 Hz	A6V11780780	S55176-A105	SUA21/3P
AC 230	2-position (SPST)	12 s at 50 Hz 10 s at 60 Hz	A6V11780777	S55176-A106	SUE21P
AC 230	2-position	210 s	N4884	S55174-A101	STA23
AC 24	DC 0...10 V	270 s	N4884	S55174-A104	STA63
AC 24 V DC 24	2-position PDM	270 s	N4884	S55174-A100	STA73
AC 230	2-position	210 s	N4884	S55174-A110	STA23/00
AC 230	2-position	210 s	N4884	S55174-A118	STA23B/00
AC 230	2-position	210 s	N4884	S55174-A114	STA23MP/00
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A109	STA73/00
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A117	STA73B/00
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A113	STA73MP/00
AC 24 DC 24	2-position PDM/parallel operation	270 s	N4884	S55174-A115	STA73PR/00
AC 230	3-position	30 s	A6V10628469	S55150-A132	SAY31P03
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	30 s	A6V10628469	S55150-A133	SAY61P03
AC 24 DC 24	3-position	30 s	A6V10628469	S55150-A134	SAY81P03

Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

VQP46..



Presetable PICVs, PN 25, externally threaded for

- ventilation and air conditioning systems for water side control and automatic hydraulic balancing of air after-treatment devices, such as fan convectors, induction units, and in heat exchangers for heating or cooling.
- heating systems for heating zones such as floor heating systems, apartments, individual rooms, etc.
- closed circuits

Volumetric flow 30... 1800 l/h. With or without pressure measuring points P/T.

Data sheet	A6V11877580
Stroke	4 mm
Leakage rate	Class IV, 0...0.01 % of kvs
PN class	PN 25
Medium	Low-temperature hot water Chilled water Water with anti-freeze
Medium temperature	1...90 °C
Ambient temperature, operation	1...50 °C
Valve characteristic	On/Off
Permissible operating pressure	2500 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Dezincification resistant hot-pressed brass (DZR), CW602N, stainless steel, PPS
Mounting position	SUE21P: Horizontally up to 90° and not hanging STA...3...: Any position
Warranty	5 Years

DN	Connect. thread	Vol. flow V [l/h]	Vol. flow V _{min} [l/h]	Δp _{max} [kPa]	Δp _{min} [kPa]	STA...3... Δp _{max} [kPa]	STA...3... Δp _{min} [kPa]	Stock no.	Product no.
10	G 1/2"	520	30	600	30	600	30	S55264-V134	VQP46.10L0.5
10	G 1/2"	520	30	600	30	600	30	S55264-V133	VQP46.10L0.5Q
15	G 3/4"	1300	300	600	28	600	28	S55264-V142	VQP46.15F1.3
15	G 3/4"	1300	300	600	28	600	28	S55264-V141	VQP46.15F1.3Q
15	G 3/4"	520	30	600	28	600	28	S55264-V138	VQP46.15L0.5
15	G 3/4"	520	30	600	28	600	28	S55264-V137	VQP46.15L0.5Q
20	G 1"	1500	320	600	35	600	35	S55264-V146	VQP46.20F1.5
20	G 1"	1500	320	600	35	600	35	S55264-V145	VQP46.20F1.5Q
25	G 1 1/4"	1800	620	600	31	600	31	S55264-V150	VQP46.25F1.8
25	G 1 1/4"	1800	620	600	31	600	31	S55264-V149	VQP46.25F1.8Q

Accessories for VQP46..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	ALE10
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	ALE11
		S55264-V154	ALP54
Blanking plug for P/T ports	CE1N4853	S55264-V115	ALP46
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	ALP47
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	ALP48
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	ALP49

Valves and actuators

Globe and pressure independent combi valves (PICV) Threaded pressure independent combi valves

Combinable actuator for VQP46..

Operating voltage [V]	Positioning signal	Positioning time	Data sheet	Stock no.	Product no.
AC 230	2-position (SPST)	12 s at 50 Hz 10 s at 60 Hz	A6V11780777	S55176-A106	SUE21P
AC 230	2-position	210 s	N4884	S55174-A101	STA23
AC 24 V DC 24	2-position PDM	270 s	N4884	S55174-A100	STA73
AC 230	2-position	210 s	N4884	S55174-A110	STA23/00
AC 230	2-position	210 s	N4884	S55174-A118	STA23B/00
AC 230	2-position	210 s	N4884	S55174-A114	STA23MP/00
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A109	STA73/00
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A117	STA73B/00
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A113	STA73MP/00

Valves and actuators

Globe and pressure independent combi valves (PICV)

Threaded pressure independent combi valves

VQI46..



Presetable PICVs, PN 25, internally threaded for

- ventilation and air conditioning systems for water side control and automatic hydraulic balancing of air after-treatment devices, such as fan convectors, induction units, and in heat exchangers for heating or cooling.
- heating systems for heating zones such as floor heating systems, apartments, individual rooms, etc.
- closed circuits

Volumetric flow 30... 1800 l/h. With or without pressure measuring points P/T.

Data sheet	A6V11877580
Stroke	4 mm
Leakage rate	Class IV, 0...0.01 % of kvs
PN class	PN 25
Medium	Low-temperature hot water Chilled water Water with anti-freeze
Medium temperature	1...90 °C
Ambient temperature, operation	1...50 °C
Valve characteristic	On/Off
Permissible operating pressure	2500 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Dezincification resistant hot-pressed brass (DZR), CW602N, stainless steel, PPS
Mounting position	SUE21P: Horizontally up to 90° and not hanging STA...3...: Any position
Warranty	5 Years

Range overview VQI46..

DN	Con-nect. thread	Vol. flow V [l/h]	Vol. flow V _{min} [l/h]	Δp _{max} [kPa]	ΔP _{min} [kPa]	STA...3... ΔP _{min} [kPa]	STA...3.../STP ...3... Δp _{max} [kPa]	Stock no.	Product no.
15	Rp 1/2"	520	30	600	28	28	600	S55264-V136	VQI46.15L0.5
15	Rp 1/2"	520	30	600	28	28	600	S55264-V135	VQI46.15L0.5Q
15	Rp 1/2"	1300	300	600	28	28	600	S55264-V140	VQI46.15F1.3
15	Rp 1/2"	1300	300	600	28	28	600	S55264-V139	VQI46.15F1.3Q
20	Rp 3/4"	1500	320	600	35	35	600	S55264-V144	VQI46.20F1.5
20	Rp 3/4"	1500	320	600	35	35	600	S55264-V143	VQI46.20F1.5Q
25	G 1 1/4"	1800	620	600	31	31	600	S55264-V148	VQI46.25F1.8
25	Rp 1"	1800	620	600	31	31	600	S55264-V147	VQI46.25F1.8Q

Accessories for VQI46..

Product Title	Data sheet	Stock no.	Product no.
Electronic manometer for Siemens combi valves	CE1N4853	BPZ:ALE10	ALE10
Measuring lines and tips for Siemens combi valves	CE1N4853	BPZ:ALE11	ALE11
		S55264-V154	ALP54
Blanking plug for P/T ports	CE1N4853	S55264-V115	ALP46
Drain ball valve inclusive O-ring	CE1N4853	S55264-V116	ALP47
Combined P/T port and drain ball valve with red ribbon	CE1N4853	S55264-V117	ALP48
Long P/T ports (set of 2 pieces)	CE1N4853	S55264-V118	ALP49

Valves and actuators

Globe and pressure independent combi valves (PICV) Threaded pressure independent combi valves

Combinable actuator for VQI46..

Operating voltage [V]	Positioning signal	Positioning time	Data sheet	Stock no.	Product no.
AC 230	2-position (SPST)	12 s at 50 Hz 10 s at 60 Hz	A6V11780777	S55176-A106	SUE21P
AC 230	2-position	210 s	N4884	S55174-A101	STA23
AC 24 V DC 24	2-position PDM	270 s	N4884	S55174-A100	STA73
AC 230	2-position	210 s	N4884	S55174-A110	STA23/00
AC 230	2-position	210 s	N4884	S55174-A118	STA23B/00
AC 230	2-position	210 s	N4884	S55174-A114	STA23MP/00
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A109	STA73/00
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A117	STA73B/00
AC 24 DC 24	2-position PDM	270 s	N4884	S55174-A113	STA73MP/00

Valves and actuators
Actuators for rotary valves
Rotary actuators

GQD..9A

Rotary actuators 2 Nm with spring return for ball valves



Electromotoric actuators for 3-position and modulating control, with spring-return, pre-wired with 0.9 m long connection cables, for the operation of Siemens 2-port and 3-port valves, types VAI61../VBI61.., VAG61../VVG61.., VAI60../VBI60.. and VAG60../VVG60..

Data sheet	N4659
Torque	2 Nm
Positioning time	Opening with motor: 30 s Closing with spring: 15 s
Degree of protection	IP40
Dimensions (W x H x D)	75 x 113 x 136 mm
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (GQD161.9A)
Warranty	5 Years

Range overview GQD..9A

Operating voltage [V]	Positioning signal	Power consumption	Spring return function	Stock no.	Product no.
AC 24...48 24 DC 24	2-position	6.5 VA 4.5 W	Yes	BPZ:GQD121.9A	GQD121.9A
AC 24...48 24 DC 24	3-position	4 VA 2.5 W	Yes	BPZ:GQD131.9A	GQD131.9A
AC 24...48 24 DC 24	DC 0...10 V	4.5 VA 3 W	Yes	BPZ:GQD161.9A	GQD161.9A
AC 230 DC 24	2-position	10 VA 4.5 W	Yes	BPZ:GQD321.9A	GQD321.9A

Electromotoric rotary actuators without spring return for ball valves, 2 Nm, 30s

GSD..9A

Electromotoric rotary actuators without spring return, for On-Off (2 wire SPDT) and modulating control, pre-wired with 0.9 m long connection cable, for the operation of Siemens 2-port and 3-port valves, types VAG61..., VAI61..., VBG61... and VBI61...



Data sheet	A6V10636056
Torque	2 Nm
Positioning time	30 s
Degree of protection	IP40
Dimensions (W x H x D)	75 x 113 x 136 mm
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview GSD..9A

Operating voltage [V]	Positioning signal	Power consumption	Spring return function	Stock no.	Product no.
AC 19.2...28.8 24 DC 24	On-Off (2 wire SPDT)	2 VA 1.5 W	No	BPZ:GSD141.9A	GSD141.9A
AC 24 DC 24	DC 0/2..10 V	2.4 VA 1.4 W	No	S55499-D232	GSD161.9A
AC 19.2...28.8 230	On-Off (2 wire SPDT)	12 VA 2 W	No	BPZ:GSD341.9A	GSD341.9A

Valves and actuators
Actuators for rotary valves
Rotary actuators

GDB..9E

Electromotoric rotary actuators 5 Nm without spring return for ball valves



Electromotoric actuators for 2-position/3-position and modulating control, without spring return, pre-wired with 0.9 m long connection cables, for the operation of Siemens 6-port control ball valve VWG41.. and Siemens 2-port and 3-port valves, types VAG61.., VAI61.., VBG61.. and VBI61..

Data sheet	A6V10636150 / A6V10725318 / N4657
Torque	5 Nm
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	88 x 112 x 143 mm
Mounting position	Upright to horizontal
Warranty	5 Years

Range overview GDB..9E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Spring return function	Cable length [m]	Stock no.	Product no.
AC 24...24 24	KNX S-Mode or KNX PL-Link	3 VA 2.5 W	0	No	0.9	S55499-D203	GDB111.9E/KN
AC 24 DC 24	2-position/3- position	2 VA 1 W	0	No	0.9	S55499-D200	GDB141.9E
AC 24 DC 24	DC 0/2...10 V	3 VA 1.5 W	0	No	0.9	S55499-D275	GDB161.9E
AC 230	2-position/3- position	5 VA 1.6 W	0	No	0.9	S55499-D201	GDB341.9E

Rotary actuators 7 Nm with spring return for ball valves

GMA..9E

Electromotoric actuators for 2-position, 3-position and modulating control, with spring-return, pre-wired with 0.9 m long connection cables, for the operation of Siemens 2-port and 3-port valves, types VAG60../VBG60.., VAI60../VBI60.., VAG61../VBG61.. and VAI61../VBI61..

Data sheet	N4658
Torque	7 Nm
Positioning time	Opening with motor: 90 s Closing with spring: 15 s
Degree of protection	IP54
Dimensions (W x H x D)	93 x 112 x 184 mm
Mounting position	Upright to horizontal
Warranty	5 Years



Range overview GMA..9E

Operating voltage [V]	Positioning signal	Power consumption	Spring return function	Stock no.	Product no.
AC 29.2...28.8 24 DC 24	2-position	5 VA 3.5 W	Yes	BPZ:GMA121.9E	GMA121.9E
AC 24 DC 24	2-position	5 VA 3.5 W	Yes	S55499-D680	GMA121.9H
AC 29.2...28.8 24 DC 24	3-position	5 VA 3.5 W	Yes	BPZ:GMA131.9E	GMA131.9E
AC 29.2...28.8 24 DC 24	DC 0...10 V	5 VA 3.5 W	Yes	BPZ:GMA161.9E	GMA161.9E
AC 24 DC 24	DC 0...10 V	5 VA 3.5 W	Yes	S55499-D679	GMA161.9H
AC 230 DC 24	2-position	7 VA 4.5 W	Yes	BPZ:GMA321.9E	GMA321.9E

Rotary actuators for ball valves

- For 2-port and 3-port control ball valves, internally threaded connections or externally threaded connections
- Connection cable 0.9 m

Data sheet	A6V11171770
Torque	8 Nm
Positioning time	30 s
Degree of protection	IP54
Dimensions (W x H x D)	101.2 x 112.4 x 143.2 mm
Warranty	5 Years

GLD..9E



7

Range overview GLD..9E

Operating voltage [V]	Positioning signal	Power consumption	Cable length [m]	Stock no.	Product no.
AC 24 DC 24	DC 0/2...10 V	4.9 VA 1.8 W	0.9	S55499-D278	GLD161.9E

Valves and actuators
Actuators for rotary valves
Rotary actuators

GLB..9E

Electromotoric rotary actuators 10 Nm without spring return for ball valves



Electromotoric actuators for 2-position/3-position and modulating control, without spring return, pre-wired with 0.9 m long connection cables, for the operation of Siemens 2-port and 3-port valves, types VAG60../VVG60.., VAI60../VBI60.., VAG61../VVG61.., VAI61../VBI61.. and VWG41...

Torque	10 Nm
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	88 x 112 x 143 mm
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (GLB161.9E)
Warranty	5 Years

Range overview GLB..9E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Spring return function	Cable length [m]	Stock no.	Product no.
AC 24	Modbus RTU	3 VA 2.5 W	0	No	0.9	S55499-D206	GLB111.9E/MO
AC 24 DC 24	2-position/3-position	3 VA 1.3 W	0	No	0.9	S55499-D204	GLB141.9E
AC 24 DC 24	DC 0/2...10 V	2.5 VA 1.5 W	0	No	0.9	S55499-D277	GLB161.9E
AC 230	2-position/3-position	5.8 VA 1.9 W	0	No	0.9	S55499-D205	GLB341.9E
AC 24	KNX S-Mode or KNX PL-Link	3 VA 2.5 W	0	No	0.9	S55499-D207	GLB111.9E/KN

Rotary air damper actuators 25 Nm, without spring return

GBB..1E

- With self-centering shaft adapter for shaft dia. 8..25.6 mm, square 6...18 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual control
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4626
Torque	25 Nm
Air damper area	4 m ²
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	100 x 300 x 75 mm
Warranty	5 Years



Rotary actuators 25 Nm for ball valves VAF41..

Range overview GBB..1E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Stock no.	Product no.
AC 29.2...28.8 24	3-position	7 VA 7 W	0	BPZ:GBB131.1E	GBB131.1E
AC 29.2...28.8 24	3-position	7 VA 7 W	2	BPZ:GBB135.1E	GBB135.1E
AC 29.2...28.8 24	3-position	7 VA 7 W	2	BPZ:GBB136.1E	GBB136.1E
AC 29.2...28.8 24	DC 0...10 V	8 VA 8 W	0	BPZ:GBB161.1E	GBB161.1E
AC 29.2...28.8 24	DC 0...35 V Adjustable	8 VA 8 W	0	BPZ:GBB163.1E	GBB163.1E
AC 29.2...28.8 24	DC 0...35 V Adjustable	8 VA 8 W	2	BPZ:GBB164.1E	GBB164.1E
AC 29.2...28.8 24	DC 0...10 V	8 VA 8 W	2	BPZ:GBB166.1E	GBB166.1E
AC 207...253 230	3-position	5 VA 5 W	0	BPZ:GBB331.1E	GBB331.1E
AC 207...253 230	3-position	5 VA 5 W	2	BPZ:GBB335.1E	GBB335.1E
AC 207...253 230	3-position	5 VA 5 W	2	BPZ:GBB336.1E	GBB336.1E

Types GBB135.1E and GBB335.1E have a feedback potentiometer.
Basic Documentation No.: Z4626

Accessories for GBB..1E

Product Title	Data sheet	Stock no.	Product no.
Accessory Kit, GIB/GBB/GCA		S55859-Z102	ASK71.02
Mounting Bracket, GM		S55859-Z114	ASK71.03

Valves and actuators

Actuators for rotary valves

Rotary actuators

GIB..1E



Rotary air damper actuators 35 Nm, without spring return

- With self-centering shaft adapter for shaft dia. 8..25.6 mm, square 6...18 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual override
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4626 / A6V101037253
Torque	35 Nm
Air damper area	6 m ²
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	100 x 300 x 75 mm
Warranty	5 Years

Rotary actuators 35 Nm for ball valves VAF41..

Range overview GIB..1E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Stock no.	Product no.
AC 29.2...28.8 24	3-position	7 VA 7 W	0	BPZ:GIB131.1E	GIB131.1E
AC 29.2...28.8 24	3-position	7 VA 7 W	2	BPZ:GIB135.1E	GIB135.1E
AC 29.2...28.8 24	3-position	7 VA 7 W	2	BPZ:GIB136.1E	GIB136.1E
AC 29.2...28.8 24	DC 0...10 V	8 VA 8 W	0	BPZ:GIB161.1E	GIB161.1E
AC 24	Modbus RTU	8 VA 8 W	0	S55499-D299	GIB161.1E/MO
AC 29.2...28.8 24	DC 0...35 V Adjustable	8 VA 8 W	0	BPZ:GIB163.1E	GIB163.1E
AC 29.2...28.8 24	DC 0...35 V Adjustable	8 VA 8 W	2	BPZ:GIB164.1E	GIB164.1E
AC 29.2...28.8 24	DC 0...10 V	8 VA 8 W	2	BPZ:GIB166.1E	GIB166.1E
AC 207...253 230	3-position	5 VA 5 W	0	BPZ:GIB331.1E	GIB331.1E
AC 207...253 230	3-position	5 VA 5 W	2	BPZ:GIB335.1E	GIB335.1E
AC 207...253 230	3-position	5 VA 5 W	2	BPZ:GIB336.1E	GIB336.1E

Types GIB135.1E and 335.1E have a feedback potentiometer.
Basic Documentation No.: Z4626

Accessories for GIB..1E

Product Title	Data sheet	Stock no.	Product no.
Accessory Kit, GIB/GBB/GCA		S55859-Z102	ASK71.02
Mounting Bracket, GM		S55859-Z114	ASK71.03

SAL..



Electromotoric actuators 10...40 Nm for slipper and butterfly valves

Rotary actuator for the operation of 3-port slipper valves VBF21.. and butterfly valves VKF41.. + VKF46.. as control and safety shut-off valves in heating, ventilation and air conditioning systems.

With manual adjuster and position indicator, status indication per LED.

Optional functions with auxiliary switches, potentiometer, functional module and stem heater.

SA..81.., SA..61.. are UL listed.

Data sheet	N4502
Degree of protection	IP54
Medium temperature	-10...120 °C
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (SA..6..)
Warranty	5 Years

Range overview SAL..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Torque [Nm]	Stock no.	Product no.
AC 230	3-position	3.5	120	10	S55162-A108	SAL31.00T10
AC 230	3-position	4.5	120	20	S55162-A110	SAL31.00T20
AC 230	3-position	5.5	30	10	S55162-A109	SAL31.03T10
AC 230	3-position	7	120	40	S55162-A111	SAL31.00T40
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	6	120	20	S55162-A102	SAL61.00T20
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	9	120	40	S55162-A103	SAL61.00T40
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	5	120	10	S55162-A100	SAL61.00T10
AC 24 DC 24	3-position	4	120	20	S55162-A106	SAL81.00T20
AC 24 DC 24	3-position	6	120	40	S55162-A107	SAL81.00T40
AC 24 DC 24	DC 0...10 V DC 4...20 mA 0...1000 Ohm	7.5	30	10	S55162-A101	SAL61.03T10
AC 24 DC 24	3-position	3	120	10	S55162-A104	SAL81.00T10
AC 24 DC 24	3-position	5	30	10	S55162-A105	SAL81.03T10

Accessories for SAL..

Product Title	Data sheet	Stock no.	Product no.
Auxiliary switch for SA..31../SA..61../SA..81..	N4501	S55845-Z103	ASC10.51
Potentiometer 0...1000 Ohm for SA..31../SA..81..	N4501	S55845-Z106	ASZ7.5/1000
Function module for SA..61.., sequence control/changeover of acting direction	N4501	S55845-Z107	AZX61.1
Weathershield for SAX../SAL..	N4501	S55845-Z109	ASK39.1

Valves and actuators

Actuators for rotary valves

Rotary actuators

Mounting sets for SAL..

Product Title	Data sheet	Stock no.	Product no.
Mounting set for SAL.. onto VBF21..	N4502	S55845-Z100	ASK31N
Mounting set for SAL.. onto VBF21..	N4502	S55845-Z211	ASK32N
Mounting set for SAL.. onto VKF41..	N4502	S55845-Z101	ASK33N
Mounting set for SAL.. onto VKF45..	N4502	S55845-Z102	ASK35N

Mounting kits

Product Title	Data sheet	Stock no.	Product no.
Mounting set for SQK33.. / SQL33.. / 83.. and slipper valves VBI31.. / VBG31.. / VCI31.. / VBF21.. up to DN50	N4506	BPZ:ASK32	ASK32

Electromotoric actuators 40...1200 Nm for butterfly valves

SQL36..

With reversible asynchronous motor. Direct-acting manual control. Die-cast aluminium housing and plastic manual knob. For VKF46 butterfly valves from DN40 mm, no mounting kits required.

The actuators have built-in end switches. 1 double auxiliary switch, 1 potentiometer and 1 positioning time module (without SQL36E50..) can be retrofitted.



Data sheet	N4505
Degree of protection	IP67
Medium temperature	≤120 °C
Mounting position	Any
Warranty	5 Years

Range overview SQL36..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Positioning time [s]	Torque [Nm]	Stock no.	Product no.
AC 230	3-position	25	25	40	BPZ:SQL36E50F04	SQL36E50F04
AC 230	3-position	25	25	40	BPZ:SQL36E50F05	SQL36E50F05
AC 218.5...253 230	3-position	166	6	100	BPZ:SQL36E65	SQL36E65
AC 230	3-position	235	12	400	BPZ:SQL36E110	SQL36E110
AC 230	3-position	235	24	1200	BPZ:SQL36E160	SQL36E160

Running time with auxiliary module SEZ31.1: variable positioning time 30...180 s (SQL36E65), 60...360 s (SQL36E110) resp. 120...720 s (SQL36E160).

Accessories for SQL36E..

Product Title	Data sheet	Stock no.	Product no.
Double auxiliary switch for SQL36E	N4505	BPZ:ASC36	ASC36
Potentiometer 1000 Ohm for SQL36E..	N4505	BPZ:ASZ36	ASZ36
Auxiliary module, variable positioning time for SQL36E..	N4505	BPZ:SEZ31.1	SEZ31.1

Valves and actuators

Actuators for rotary valves

Rotary actuators

SQL..B..



Electromotoric actuators 25...2650 Nm for butterfly valves VKF42..

Electromotoric actuator for operation of VKF42.. butterfly valves as shutoff and control valves in heating, ventilation and air conditioning plants. No mounting kits required.
Flange connection to EN ISO 5211.

The actuators have built-in end switches. 1 double auxiliary switch.

Data sheet	N4520
Degree of protection	IP67
Medium temperature	-10...80 °C
Mounting position	Upright to horizontal
Position feedback	DC 0...10 V (SQL361..)
Warranty	5 Years

For customers in Asia / Australia

Range overview SQL..B..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Spring return function	Stock no.	Product no.
AC 220	2-position (SPDT)	45	No	S55164-A100	SQL321B25
AC 220	2-position (SPDT)	45	No	S55164-A101	SQL321B50
AC 220	DC 0...10 V	45	No	S55164-A102	SQL361B50
AC 220	2-position (SPDT)	91	No	S55164-A103	SQL321B150
AC 220	DC 0...10 V	91	No	S55164-A104	SQL361B150
AC 220	2-position (SPDT)	165	No	S55164-A105	SQL321B270
AC 220	DC 0...10 V	165	No	S55164-A106	SQL361B270
AC 220	2-position (SPDT)	194	No	S55164-A107	SQL321B570
AC 220	DC 0...10 V	194	No	S55164-A108	SQL361B570
AC 220	2-position (SPDT)	390	No	S55164-A109	SQL321B1400
AC 220	DC 0...10 V	390	No	S55164-A110	SQL361B1400
AC 220	2-position (SPDT)	436	No	S55164-A111	SQL321B2650
AC 220	DC 0...10 V	436	No	S55164-A112	SQL361B2650

Accessories for SQL..B..

Product Title	Data sheet	Stock no.	Product no.
Double auxiliary switch	N4520	S55845-Z122	ASC10.21

2-port control ball valves for flanged connection

VAF41..

Ball valves for use in heating, cooling, ventilating and air conditioning systems as a control or shutoff valve.

Do not operate GBB331.1E, GBB131.1E, GIB331.1E and GIB131.1E actuators with 2-position control signal. It will damage these rotary actuators.



Data sheet	A6V11168935
Leakage rate	0...0.01 % of k_{vs} value
Medium	Water
	Water with anti-freeze
Medium temperature	2...80 °C
Ambient temperature, operation	-15...+55 °C
Rangeability	≥ 200
Permissible operating pressure	1600 kPa
Material, inside set	Stainless steel (SS304)
PN class	PN 16
Warranty	5 Years

Range overview VAF41..

GIB..1E Δp_{max} [kPa]	GIB..1E Δp_s [kPa]	2 x GIB..1E Δp_{max} [kPa]	2 x GIB..1E Δp_s [kPa]	GEB..1E Δp_{max} [kPa]	GEB..1E Δp_s [kPa]	GCA.. Δp_{max} [kPa]	GCA.. Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
				400	400	400	400	65	63	S55232-V110	VAF41.65-63/1
						400	400	80	100	S55232-V111	VAF41.80-100/1
400	400							100	160	S55232-V107	VAF41.100-160
400	400							125	250	S55232-V108	VAF41.125-250
		400	400					150	360	S55232-V109	VAF41.150-360

Accessories for VAF41..

Product Title	Data sheet	Stock no.	Product no.
Ball valve mounting set, DN 65, DN 80, DN 100, DN 125	A6V11168935	S55845-Z203	ASK77.21
Ball valve mounting set, DN65, DN80	A6V11168935	S55845-Z252	ASK77.23
Ball valve mounting set, DN 150	A6V11168935	S55845-Z204	ASK77.22

Combinable actuator for VAF41..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 29.2...28.8 24	3-position	150		N4626	BPZ:GBB131.1E	GBB131.1E
AC 29.2...28.8 24	DC 0...10 V	150		N4626	BPZ:GBB161.1E	GBB161.1E
AC 207...253 230	3-position	150		N4626	BPZ:GBB331.1E	GBB331.1E
AC 29.2...28.8 24	3-position	150		N4626	BPZ:GIB131.1E	GIB131.1E
AC 29.2...28.8 24	DC 0...10 V	150		N4626	BPZ:GIB161.1E	GIB161.1E
AC 207...253 230	3-position	150		N4626	BPZ:GIB331.1E	GIB331.1E

VAI61..

2-port control ball valves, internally threaded, PN40



Internally threaded connections Rp.. as per ISO 7-1.
For use in heating, ventilating and air conditioning plants as a control valve.
For closed circuits.

Data sheet	N4211
Leakage rate	„Waterproof“ as per EN 60534-4 L/1, better than class 5
Medium	Water Water with anti-freeze
Medium temperature	-10...120 °C
Valve characteristic	Equal-percentage
Rangeability	> 500
Permissible operating pressure	1600 kPa
Material, valve body	Brass
Material, inside set	Brass UNS C35330 (DZR), chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VAI61..

Con-nect. thread	GQD../GSD../9A	GQD../GSD../9A	GDB../9E	GDB../9E	GMA../GLB../9E	GMA../GLB../9E	GLD../9E	GLD../9E	DN	k _{vs} [m³/h]	Stock no.	Product no.
	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]	Δp _{max} [kPa]	Δp _s [kPa]				
Rp 1/2"	350	1400	350	1400	350	1400	350	1400	15	1	BPZ:VAI61.15-1	VAI61.15-1
Rp 1/2"	350	1400	350	1400	350	1400	350	1400	15	1.6	BPZ:VAI61.15-1.6	VAI61.15-1.6
Rp 1/2"	350	1400	350	1400	350	1400	350	1400	15	2.5	BPZ:VAI61.15-2.5	VAI61.15-2.5
Rp 1/2"	350	1400	350	1400	350	1400	350	1400	15	4	BPZ:VAI61.15-4	VAI61.15-4
Rp 1/2"	350	1400	350	1400	350	1400	350	1400	15	6.3	BPZ:VAI61.15-6.3	VAI61.15-6.3
Rp 1/2"	350	1400	350	1400	350	1400	350	1400	15	10	BPZ:VAI61.15-10	VAI61.15-10
Rp 3/4"	350	1400	350	1400	350	1400	350	1400	20	4	BPZ:VAI61.20-4	VAI61.20-4
Rp 3/4"	350	1400	350	1400	350	1400	350	1400	20	6.3	BPZ:VAI61.20-6.3	VAI61.20-6.3
Rp 3/4"	350	1400	350	1400	350	1400	350	1400	20	10	BPZ:VAI61.20-10	VAI61.20-10
Rp 1"	350	1400	350	1400	350	1400	350	1400	25	6.3	BPZ:VAI61.25-6.3	VAI61.25-6.3
Rp 1"	350	1400	350	1400	350	1400	350	1400	25	10	BPZ:VAI61.25-10	VAI61.25-10
Rp 1"	350	1400	350	1400	350	1400	350	1400	25	16	BPZ:VAI61.25-16	VAI61.25-16
Rp 1 1/4"					350	1000	350	1000	32	10	BPZ:VAI61.32-10	VAI61.32-10
Rp 1 1/4"					350	1000	350	1000	32	16	BPZ:VAI61.32-16	VAI61.32-16
Rp 1 1/4"					350	1000	350	1000	32	25	BPZ:VAI61.32-25	VAI61.32-25
Rp 1 1/2"					350	800	350	800	40	16	BPZ:VAI61.40-16	VAI61.40-16
Rp 1 1/2"					350	800	350	800	40	25	BPZ:VAI61.40-25	VAI61.40-25
Rp 1 1/2"					350	800	350	800	40	40	BPZ:VAI61.40-40	VAI61.40-40
Rp 2"					350	600	350	600	50	25	BPZ:VAI61.50-25	VAI61.50-25
Rp 2"					350	600	350	600	50	40	BPZ:VAI61.50-40	VAI61.50-40
Rp 2"					350	600	350	600	50	63	BPZ:VAI61.50-63	VAI61.50-63

Accessories for VAI61..

Product Title	Data sheet	Stock no.	Product no.
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3
Insulation cover for VAI60/61, DN15	CE1N4213	BPZ:ALI15VAI60/61	ALI15VAI60/61
Insulation cover for VAI60/61, DN20	CE1N4213	BPZ:ALI20VAI60/61	ALI20VAI60/61
Insulation cover for VAI60/61, DN25	CE1N4213	BPZ:ALI25VAI60/61	ALI25VAI60/61
Insulation cover for VAI60/61, DN32	CE1N4213	BPZ:ALI32VAI60/61	ALI32VAI60/61
Insulation cover for VAI60/61, DN40	CE1N4213	BPZ:ALI40VAI60/61	ALI40VAI60/61
Insulation cover for VAI60/61, DN50	CE1N4213	BPZ:ALI50VAI60/61	ALI50VAI60/61

Accessories for VAI61..

Product Title	Data sheet	Stock no.	Product no.
Strainer, inside threaded, DN15		S55845-Z174	ALX15
Strainer, inside threaded, DN20		S55845-Z175	ALX20
Strainer, inside threaded, DN25		S55845-Z176	ALX25
Strainer, inside threaded, DN32		S55845-Z177	ALX32
Strainer, inside threaded, DN40		S55845-Z178	ALX40
Strainer, inside threaded, DN50		S55845-Z179	ALX50

Combinable actuator for VAI61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 DC 24	2-position/3-position	150	No	A6V10636203	S55499-D204	GLB141.9E
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636203	S55499-D277	GLB161.9E
AC 230	2-position/3-position	150	No	A6V10636203	S55499-D205	GLB341.9E
AC 29.2...28.8 24 DC 24	3-position	Open:90 Close:15	Yes	N4658	BPZ:GMA131.9E	GMA131.9E
AC 29.2...28.8 24 DC 24	DC 0...10 V	Open:90 Close:15	Yes	N4658	BPZ:GMA161.9E	GMA161.9E
AC 24 DC 24	2-position/3-position	150	No	A6V10636150	S55499-D200	GDB141.9E
AC 24...48 24 DC 24	3-position	Open:30 Close:15	Yes	N4659	BPZ:GQD131.9A	GQD131.9A
AC 24 DC 24	DC 0/2...10 V	30	No	A6V10636056	S55499-D232	GSD161.9A
AC 24...48 24 DC 24	DC 0...10 V	Open:30 Close:15	Yes	N4659	BPZ:GQD161.9A	GQD161.9A
AC 230	2-position/3-position	150	No	A6V10636150	S55499-D201	GDB341.9E
AC 24 DC 24	DC 0/2...10 V	30		A6V11171770	S55499-D278	GLD161.9E

VBI61..

3-port control ball valves, internally threaded, PN40



Internally threaded connections Rp.. as per ISO 7-1.
For use in heating, ventilating and air conditioning plants as a control.
For closed circuits.

Data sheet	N4211
Leakage rate	„Waterproof“ as per EN 60534-4 L/1, better than class 4
Leakage rate bypass	< 1 % of k_{vs} value
Medium	Water
	Water with anti-freeze
Medium temperature	-10...120 °C
Valve characteristic	Throughport: equal-percentage
	Bypass: linear
Rangeability	> 500
Permissible operating pressure	1600 kPa
Material, valve body	Brass
Material, inside set	Brass UNS C35330 (DZR), chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VBI61..

Con-nect. thread	GDB..9E Δp_{max} [kPa]	GQD../ GSD..9A Δp_{max} [kPa]	GMA../ GLB..9E Δp_{max} [kPa]	GLD..9E Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
Rp 1/2"	350	350	350	350	15	1.6	BPZ:VBI61.15-1.6	VBI61.15-1.6
Rp 1/2"	350	350	350	350	15	2.5	BPZ:VBI61.15-2.5	VBI61.15-2.5
Rp 1/2"	350	350	350	350	15	4	BPZ:VBI61.15-4	VBI61.15-4
Rp 1/2"	350	350	350	350	15	6.3	BPZ:VBI61.15-6.3	VBI61.15-6.3
Rp 3/4"	350	350	350	350	20	4	BPZ:VBI61.20-4	VBI61.20-4
Rp 3/4"	350	350	350	350	20	6.3	BPZ:VBI61.20-6.3	VBI61.20-6.3
Rp 1"	350	350	350	350	25	10	BPZ:VBI61.25-10	VBI61.25-10
Rp 1 1/4"			350	350	32	16	BPZ:VBI61.32-16	VBI61.32-16
Rp 1 1/2"			350	350	40	25	BPZ:VBI61.40-25	VBI61.40-25
Rp 2"			350	350	50	40	BPZ:VBI61.50-40	VBI61.50-40
Rp 2"			350	350	50	63	BPZ:VBI61.50-63	VBI61.50-63

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Accessories for VBI61..

Product Title	Data sheet	Stock no.	Product no.
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3
Insulation cover for VBI60/61, DN15	CE1N4213	BPZ:ALI15VBI60/61	ALI15VBI60/61
Insulation cover for VBI61, DN20	CE1N4213	BPZ:ALI20VBI61	ALI20VBI61
Insulation cover for VBI60/61, DN25	CE1N4213	BPZ:ALI25VBI60/61	ALI25VBI60/61
Insulation cover for VBI60/61, DN32	CE1N4213	BPZ:ALI32VBI60/61	ALI32VBI60/61
Insulation cover for VBI60/61, DN40	CE1N4213	BPZ:ALI40VBI60/61	ALI40VBI60/61
Insulation cover for VBI60/61, DN50	CE1N4213	BPZ:ALI50VBI60/61	ALI50VBI60/61
Strainer, inside threaded, DN15		S55845-Z174	ALX15
Strainer, inside threaded, DN20		S55845-Z175	ALX20
Strainer, inside threaded, DN25		S55845-Z176	ALX25
Strainer, inside threaded, DN32		S55845-Z177	ALX32
Strainer, inside threaded, DN40		S55845-Z178	ALX40
Strainer, inside threaded, DN50		S55845-Z179	ALX50

Combinable actuator for VBI61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 DC 24	2-position/3-position	150	No	A6V10636203	S55499-D204	GLB141.9E
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636203	S55499-D277	GLB161.9E
AC 230	2-position/3-position	150	No	A6V10636203	S55499-D205	GLB341.9E
AC 29.2...28.8 24 DC 24	3-position	Open:90 Close:15	Yes	N4658	BPZ:GMA131.9E	GMA131.9E
AC 29.2...28.8 24 DC 24	DC 0...10 V	Open:90 Close:15	Yes	N4658	BPZ:GMA161.9E	GMA161.9E
AC 24 DC 24	2-position/3-position	150	No	A6V10636150	S55499-D200	GDB141.9E
AC 24...48 24 DC 24	3-position	Open:30 Close:15	Yes	N4659	BPZ:GQD131.9A	GQD131.9A
AC 24 DC 24	DC 0/2...10 V	30	No	A6V10636056	S55499-D232	GSD161.9A
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636150	S55499-D275	GDB161.9E
AC 24...48 24 DC 24	DC 0...10 V	Open:30 Close:15	Yes	N4659	BPZ:GQD161.9A	GQD161.9A
AC 230	2-position/3-position	150	No	A6V10636150	S55499-D201	GDB341.9E
AC 24 DC 24	DC 0/2...10 V	30		A6V11171770	S55499-D278	GLD161.9E

Valves and actuators

Rotary valves

Ball valves

VAI60..



2-port ball open/close valves, internally threaded, PN40

Internally threaded connections Rp.. as per ISO 7-1.

For use in heating, ventilating and air conditioning plants as open/close ball valves. For closed circuits.

Data sheet	N4213
Leakage rate	„Waterproof“ as per EN 60534-4 L/1, better than class 5
Medium	Cooling water Chilled water Water with anti-freeze Low-temperature hot water High-temperature hot water
Medium temperature	-10... 120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Dezincification resistant hot-pressed brass (DZR), CW602N, chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VAI60..

Con-nect. thread	GQD../GSD../9A Δp_{max} [kPa]	GQD../GSD../9A Δp_s [kPa]	GDB../9E Δp_{max} [kPa]	GDB../9E Δp_s [kPa]	GMA../GLB../9E Δp_{max} [kPa]	GMA../GLB../9E Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
Rp 1/2"	350	1400	350	1400	350	1400	15	15	BPZ:VAI60.15-15	VAI60.15-15
Rp 3/4"	350	1400	350	1400	350	1400	20	22	BPZ:VAI60.20-22	VAI60.20-22
Rp 1"	350	1400	350	1400	350	1400	25	22	BPZ:VAI60.25-22	VAI60.25-22
Rp 1 1/4"					350	1000	32	35	BPZ:VAI60.32-35	VAI60.32-35
Rp 1 1/2"					350	800	40	68	BPZ:VAI60.40-68	VAI60.40-68
Rp 2"					350	600	50	96	BPZ:VAI60.50-96	VAI60.50-96

Accessories for VAI60..

Product Title	Data sheet	Stock no.	Product no.
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3
Insulation cover for VAI60/61, DN15	CE1N4213	BPZ:ALI15VAI60/61	ALI15VAI60/61
Insulation cover for VAI60/61, DN20	CE1N4213	BPZ:ALI20VAI60/61	ALI20VAI60/61
Insulation cover for VAI60/61, DN25	CE1N4213	BPZ:ALI25VAI60/61	ALI25VAI60/61
Insulation cover for VAI60/61, DN32	CE1N4213	BPZ:ALI32VAI60/61	ALI32VAI60/61
Insulation cover for VAI60/61, DN40	CE1N4213	BPZ:ALI40VAI60/61	ALI40VAI60/61
Insulation cover for VAI60/61, DN50	CE1N4213	BPZ:ALI50VAI60/61	ALI50VAI60/61
Strainer, inside threaded, DN15		S55845-Z174	ALX15
Strainer, inside threaded, DN20		S55845-Z175	ALX20
Strainer, inside threaded, DN25		S55845-Z176	ALX25
Strainer, inside threaded, DN32		S55845-Z177	ALX32
Strainer, inside threaded, DN40		S55845-Z178	ALX40
Strainer, inside threaded, DN50		S55845-Z179	ALX50

Combinable actuator for VAI60..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 DC 24	2-position/3-position	150	No	A6V10636203	S55499-D204	GLB141.9E
AC 230 DC 24	2-position/3-position	150	No	A6V10636203	S55499-D205	GLB341.9E
AC 29.2...28.8 24 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA121.9E	GMA121.9E
AC 230 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA321.9E	GMA321.9E
AC 24...48 24 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD121.9A	GQD121.9A
AC 19.2...28.8 24 DC 24	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD141.9A	GSD141.9A
AC 19.2...28.8 230 DC 24	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD341.9A	GSD341.9A
AC 230 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD321.9A	GQD321.9A

VBI60..

3-port changeover ball valve, internally threaded, PN40



Internally threaded connections Rp.. as per ISO 7-1.

For use in heating, ventilating and air conditioning plants as changeover ball valves. For closed circuits.

Data sheet	N4213
Leakage rate	„Waterproof“ as per EN 60534-4 L/1, better than class 4
Leakage rate bypass	< 1 % of k_{vs} value
Medium	Cooling water Chilled water Water with anti-freeze Low-temperature hot water High-temperature hot water
Medium temperature	-10... 120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Dezincification resistant hot-pressed brass (DZR), CW602N, chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VBI60..

Con-nect. thread	GDB..9E Δp_{max} [kPa]	GQD../ GSD..9A Δp_{max} [kPa]	GMA../ GLB..9E Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
Rp 1/2"	350	350	350	15	5	BPZ:VBI60.15-5L	VBI60.15-5L
Rp 1/2"	350	350	350	15	12	BPZ:VBI60.15-12T	VBI60.15-12T
Rp 3/4"	350	350	350	20	9	BPZ:VBI60.20-9L	VBI60.20-9L
Rp 3/4"	350	350	350	20	16	BPZ:VBI60.20-16T	VBI60.20-16T
Rp 1"	350	350	350	25	9	BPZ:VBI60.25-9L	VBI60.25-9L
Rp 1"	350	350	350	25	16	BPZ:VBI60.25-16T	VBI60.25-16T
Rp 1 1/4"			350	32	13	BPZ:VBI60.32-13L	VBI60.32-13L
Rp 1 1/4"			350	32	25	BPZ:VBI60.32-25T	VBI60.32-25T
Rp 1 1/2"			350	40	25	BPZ:VBI60.40-25L	VBI60.40-25L
Rp 1 1/2"			350	40	49	BPZ:VBI60.40-49T	VBI60.40-49T
Rp 2"			350	50	37	BPZ:VBI60.50-37L	VBI60.50-37L
Rp 2"			350	50	73	BPZ:VBI60.50-73T	VBI60.50-73T

Accessories for VBI60..

Product Title	Data sheet	Stock no.	Product no.
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3
Insulation cover for VBI60/61, DN15	CE1N4213	BPZ:ALI15VBI60/61	ALI15VBI60/61
Insulation cover for VBI60, DN20	CE1N4213	BPZ:ALI20VBI60	ALI20VBI60
Insulation cover for VBI60/61, DN25	CE1N4213	BPZ:ALI25VBI60/61	ALI25VBI60/61
Insulation cover for VBI60/61, DN32	CE1N4213	BPZ:ALI32VBI60/61	ALI32VBI60/61
Insulation cover for VBI60/61, DN40	CE1N4213	BPZ:ALI40VBI60/61	ALI40VBI60/61
Insulation cover for VBI60/61, DN50	CE1N4213	BPZ:ALI50VBI60/61	ALI50VBI60/61
Strainer, inside threaded, DN15		S55845-Z174	ALX15
Strainer, inside threaded, DN20		S55845-Z175	ALX20
Strainer, inside threaded, DN25		S55845-Z176	ALX25
Strainer, inside threaded, DN32		S55845-Z177	ALX32
Strainer, inside threaded, DN40		S55845-Z178	ALX40
Strainer, inside threaded, DN50		S55845-Z179	ALX50

Combinable actuator for VBI60..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 DC 24	2-position/3-position	150	No	A6V10636203	S55499-D204	GLB141.9E
AC 230 DC 24	2-position/3-position	150	No	A6V10636203	S55499-D205	GLB341.9E
AC 29.2...28.8 24 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA121.9E	GMA121.9E
AC 230 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA321.9E	GMA321.9E
AC 24...48 24 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD121.9A	GQD121.9A
AC 19.2...28.8 24 DC 24	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD141.9A	GSD141.9A
AC 19.2...28.8 230 DC 24	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD341.9A	GSD341.9A
AC 230 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD321.9A	GQD321.9A

VAG61..



2-port control ball valves, externally threaded, PN40

For use in heating, ventilating and air conditioning plants as a control valve. For closed circuits.

- Brass CW602N (DZR) ball valve body
- Flat sealing connections with external thread G..B to ISO 228-1
- Applications with auxiliary functions (e.g., switch, potentiometer) can also be combined with standard rotary actuators belonging to the DAC range

Data sheet	N4212
Leakage rate	„Waterproof“ as per EN 60534-4 L/1, better than class 5
Medium	Water Chilled water Cooling water Low-temperature hot water High-temperature hot water Water with anti-freeze
Medium temperature	-10...120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Brass CW602N (DZR), chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VAG61..

Con-nect. thread	GQD../GSD../9A	GQD../GSD../9A	GDB../9E	GDB../9E	GMA../GLB../9E	GMA../LB../9E	GLD../9E	GLD../9E	DN	k _{vs} [m ³ /h]	Stock no.	Product no.
	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]	Δp_{max} [kPa]	Δp_s [kPa]				
G 1" B	350	1400	350	1400	350	1400	350	1400	15	1	S55230-V100	VAG61.15-1
G 1" B	350	1400	350	1400	350	1400	350	1400	15	1.6	S55230-V101	VAG61.15-1.6
G 1" B	350	1400	350	1400	350	1400	350	1400	15	2.5	S55230-V102	VAG61.15-2.5
G 1" B	350	1400	350	1400	350	1400	350	1400	15	4	S55230-V103	VAG61.15-4
G 1" B	350	1400	350	1400	350	1400	350	1400	15	6.3	S55230-V104	VAG61.15-6.3
G 1¼" B	350	1400	350	1400	350	1400	350	1400	20	4	S55230-V105	VAG61.20-4
G 1¼" B	350	1400	350	1400	350	1400	350	1400	20	6.3	S55230-V106	VAG61.20-6.3
G 1½" B	350	1400	350	1400	350	1400	350	1400	20	10	S55230-V107	VAG61.20-10
G 1½" B	350	1400	350	1400	350	1400	350	1400	25	6.3	S55230-V108	VAG61.25-6.3
G 1½" B	350	1400	350	1400	350	1400	350	1400	25	10	S55230-V109	VAG61.25-10
G 1½" B	350	1400	350	1400	350	1400	350	1400	25	16	S55230-V110	VAG61.25-16
G 2" B					350	1000	350	1000	32	10	S55230-V111	VAG61.32-10
G 2" B					350	1000	350	1000	32	16	S55230-V112	VAG61.32-16
G 2" B					350	1000	350	1000	32	25	S55230-V113	VAG61.32-25
G 2¼" B					350	800	350	800	40	16	S55230-V114	VAG61.40-16
G 2¼" B					350	800	350	800	40	25	S55230-V115	VAG61.40-25
G 2¼" B					350	800	350	800	40	40	S55230-V116	VAG61.40-40
G 2¾" B					350	600	350	600	50	25	S55230-V117	VAG61.50-25
G 2¾" B					350	600	350	600	50	40	S55230-V118	VAG61.50-40
G 2¾" B					350	600	350	600	50	63	S55230-V119	VAG61.50-63

Accessories for VAG61..

Product Title	Data sheet	Stock no.	Product no.
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3
Insulation Cover for VAG60/61, DN15		S55845-Z162	ALI15VAG60/61
Insulation Cover for VAG60/61, DN20		S55845-Z163	ALI20VAG60/61
Insulation Cover for VAG60/61, DN25		S55845-Z164	ALI25VAG60/61
Insulation Cover for VAG60/61, DN32		S55845-Z165	ALI32VAG60/61

Accessories for VAG61..

Product Title	Data sheet	Stock no.	Product no.
Insulation Cover for VAG60/61, DN40		S55845-Z166	ALI40VAG60/61
Insulation Cover for VAG60/61, DN50		S55845-Z167	ALI50VAG60/61
Strainer, inside threaded, DN15		S55845-Z174	ALX15
Strainer, inside threaded, DN20		S55845-Z175	ALX20
Strainer, inside threaded, DN25		S55845-Z176	ALX25
Strainer, inside threaded, DN32		S55845-Z177	ALX32
Strainer, inside threaded, DN40		S55845-Z178	ALX40
Strainer, inside threaded, DN50		S55845-Z179	ALX50

Combinable actuator for VAG61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 DC 24	2-position/3-position	150	No	A6V10636203	S55499-D204	GLB141.9E
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636203	S55499-D277	GLB161.9E
AC 230	2-position/3-position	150	No	A6V10636203	S55499-D205	GLB341.9E
AC 29.2...28.8 24 DC 24	3-position	Open:90 Close:15	Yes	N4658	BPZ:GMA131.9E	GMA131.9E
AC 29.2...28.8 24 DC 24	DC 0...10 V	Open:90 Close:15	Yes	N4658	BPZ:GMA161.9E	GMA161.9E
AC 24 DC 24	2-position/3-position	150	No	A6V10636150	S55499-D200	GDB141.9E
AC 24...48 24 DC 24	3-position	Open:30 Close:15	Yes	N4659	BPZ:GQD131.9A	GQD131.9A
AC 24 DC 24	DC 0/2...10 V	30	No	A6V10636056	S55499-D232	GSD161.9A
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636150	S55499-D275	GDB161.9E
AC 24...48 24 DC 24	DC 0...10 V	Open:30 Close:15	Yes	N4659	BPZ:GQD161.9A	GQD161.9A
AC 230	2-position/3-position	150	No	A6V10636150	S55499-D201	GDB341.9E
AC 24 DC 24	DC 0/2...10 V	30		A6V11171770	S55499-D278	GLD161.9E

VBG61..



3-port control ball valves, externally threaded, PN40

For use in heating, ventilating and air conditioning plants as a control valve. For closed circuits.

- Brass CW602N (DZR) ball valve body
- Flat sealing connections with external thread G..B to ISO 228-1
- Applications with auxiliary functions (e.g., switch, potentiometer) can also be combined with standard rotary actuators belonging to the DAC range

Data sheet	N4212
Leakage rate	„Waterproof“ as per EN 60534-4 L/1, better than class 4
Leakage rate bypass	< 1 % of k_{vs} value
Medium	Water Chilled water Cooling water Low-temperature hot water High-temperature hot water Water with anti-freeze
Medium temperature	-10...120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Brass CW602N (DZR)
Material, inside set	Brass CW602N (DZR), chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VBG61..

Con-nect. thread	GDB..9E Δp_{max} [kPa]	GQD../ GSD..9A Δp_{max} [kPa]	GMA../ GLB..9E Δp_{max} [kPa]	GLD..9E Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
G 1"	350	350	350	350	15	1.6	S55230-V120	VBG61.15-1.6
G 1"	350	350	350	350	15	2.5	S55230-V121	VBG61.15-2.5
G 1"	350	350	350	350	15	4	S55230-V122	VBG61.15-4
G 1"	350	350	350	350	15	6.3	S55230-V123	VBG61.15-6.3
G 1¼"	350	350	350	350	20	4	S55230-V124	VBG61.20-4
G 1¼"	350	350	350	350	20	6.3	S55230-V125	VBG61.20-6.3
G 1½"	350	350	350	350	25	10	S55230-V126	VBG61.25-10
G 2"			350	350	32	16	S55230-V127	VBG61.32-16
G 2¼"			350	350	40	25	S55230-V128	VBG61.40-25
G 2¾"			350	350	50	40	S55230-V129	VBG61.50-40

Accessories for VBG61..

Product Title	Data sheet	Stock no.	Product no.
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3
Insulation Cover for VBG60/61, DN15		S55845-Z168	ALI15VBG60/61
Insulation Cover for VBG60/61, DN20		S55845-Z169	ALI20VBG60/61
Insulation Cover for VBG60/61, DN25		S55845-Z170	ALI25VBG60/61
Insulation Cover for VBG60/61, DN32		S55845-Z171	ALI32VBG60/61
Insulation Cover for VBG60/61, DN40		S55845-Z172	ALI40VBG60/61
Insulation Cover for VBG60/61, DN50		S55845-Z173	ALI50VBG60/61
Strainer, inside threaded, DN15		S55845-Z174	ALX15
Strainer, inside threaded, DN20		S55845-Z175	ALX20
Strainer, inside threaded, DN25		S55845-Z176	ALX25
Strainer, inside threaded, DN32		S55845-Z177	ALX32
Strainer, inside threaded, DN40		S55845-Z178	ALX40
Strainer, inside threaded, DN50		S55845-Z179	ALX50

Combinable actuator for VBG61..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 DC 24	2-position/3-position	150	No	A6V10636203	S55499-D204	GLB141.9E
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636203	S55499-D277	GLB161.9E
AC 230	2-position/3-position	150	No	A6V10636203	S55499-D205	GLB341.9E
AC 29.2...28.8 24 DC 24	3-position	Open:90 Close:15	Yes	N4658	BPZ:GMA131.9E	GMA131.9E
AC 29.2...28.8 24 DC 24	DC 0...10 V	Open:90 Close:15	Yes	N4658	BPZ:GMA161.9E	GMA161.9E
AC 24 DC 24	2-position/3-position	150	No	A6V10636150	S55499-D200	GDB141.9E
AC 24...48 24 DC 24	3-position	Open:30 Close:15	Yes	N4659	BPZ:GQD131.9A	GQD131.9A
AC 24 DC 24	DC 0/2...10 V	30	No	A6V10636056	S55499-D232	GSD161.9A
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636150	S55499-D275	GDB161.9E
AC 24...48 24 DC 24	DC 0...10 V	Open:30 Close:15	Yes	N4659	BPZ:GQD161.9A	GQD161.9A
AC 230	2-position/3-position	150	No	A6V10636150	S55499-D201	GDB341.9E
AC 24 DC 24	DC 0/2...10 V	30		A6V11171770	S55499-D278	GLD161.9E

VWG41.10..

6-port control ball valves, externally threaded, PN16, DN10



Used in heated/chilled ceilings as control ball valve. For closed circuits.

- Control ball valve body made of hot-pressed brass CW617N
- Flat sealing, external threaded connections G..B, as per ISO 228-1
- Can be combined with standard electromotoric rotary actuators from the DAC product range for applications with additional functions (such as auxiliary switches, potentiometers)

Data sheet	A6V10564480
Leakage rate	"Air tight" per EN 12266-1, class A
Medium	Water with anti-freeze Water Low-temperature hot water
Medium temperature	5...90 °C
Permissible operating pressure	1600 kPa
Material, inside set	Brass CW614N, chrome plated
PN class	PN 16
Warranty	5 Years

Range overview VWG41.10..

DN	k _{vs} right [m³/h]	k _{vs} left [m³/h]	GDB..9E Δp _{max} [kPa]	Stock no.	Product no.
10	0.4	0.25	200	S55230-V158	VWG41.10-0.25-0.4
10	0.65	0.25	200	S55230-V159	VWG41.10-0.25-0.65
10	1	0.25	200	S55230-V160	VWG41.10-0.25-1.0
10	1.3	0.25	200	S55230-V175	VWG41.10-0.25-1.3
10	1.6	0.25	200	S55230-V176	VWG41.10-0.25-1.6
10	1.9	0.25	200	S55230-V177	VWG41.10-0.25-1.9
10	0.4	0.4	200	S55230-V178	VWG41.10-0.4-0.4
10	0.65	0.4	200	S55230-V161	VWG41.10-0.4-0.65
10	1	0.4	200	S55230-V162	VWG41.10-0.4-1.0
10	1.3	0.4	200	S55230-V163	VWG41.10-0.4-1.3
10	1.6	0.4	200	S55230-V164	VWG41.10-0.4-1.6
10	1.9	0.4	200	S55230-V179	VWG41.10-0.4-1.9
10	0.65	0.65	200	S55230-V180	VWG41.10-0.65-0.65
10	1	0.65	200	S55230-V165	VWG41.10-0.65-1.0
10	1.3	0.65	200	S55230-V166	VWG41.10-0.65-1.3
10	1.6	0.65	200	S55230-V167	VWG41.10-0.65-1.6
10	1.9	0.65	200	S55230-V181	VWG41.10-0.65-1.9
10	1.0	1.0	200	S55230-V182	VWG41.10-1.0-1.0
10	1.3	1	200	S55230-V168	VWG41.10-1.0-1.3
10	1.6	1	200	S55230-V169	VWG41.10-1.0-1.6
10	1.9	1	200	S55230-V170	VWG41.10-1.0-1.9
10	1.3	1.3	200	S55230-V183	VWG41.10-1.3-1.3
10	1.6	1.3	200	S55230-V171	VWG41.10-1.3-1.6
10	1.9	1.3	200	S55230-V172	VWG41.10-1.3-1.9
10	1.6	1.6	200	S55230-V184	VWG41.10-1.6-1.6
10	1.9	1.6	200	S55230-V173	VWG41.10-1.6-1.9
10	1.9	1.9	200	S55230-V174	VWG41.10-1.9-1.9

Accessories for VWG41.10..

Product Title	Data sheet	Stock no.	Product no.
Insulation covers for ball valves		BPZ:ALI..	ALI..
Brass fittings, set of 2		BPZ:ALG15..2..	ALG1..2B

6-port control ball valves, externally threaded, PN16, DN20**VWG41.20..**

Used in heated/chilled ceilings as control ball valve. For closed circuits.

- Control ball valve body made of hot-pressed brass CW617N
- Flat sealing, external threaded connections G..B, as per ISO 228-1
- Can be combined with standard electromotoric rotary actuators from the DAC product range for applications with additional functions (such as auxiliary switches, potentiometers)



Data sheet	A6V10564480
Leakage rate	"Air tight" per EN 12266-1, class A
Medium	Water with anti-freeze Water Low-temperature hot water
Medium temperature	5...90 °C
Permissible operating pressure	1600 kPa
Material, inside set	Brass CW614N, chrome plated
PN class	PN 16
Warranty	5 Years

Range overview VWG41.20..

DN	k_{vs} right [m ³ /h]	k_{vs} left [m ³ /h]	GDB..9E Δp_{max} [kPa]	Stock no.	Product no.
20	2.5	0.25	200	S55230-V185	VWG41.20-0.25-2.5
20	3.45	0.25	200	S55230-V186	VWG41.20-0.25-3.45
20	4.25	0.25	200	S55230-V187	VWG41.20-0.25-4.25
20	2.5	0.4	200	S55230-V188	VWG41.20-0.4-2.5
20	3.45	0.4	200	S55230-V189	VWG41.20-0.4-3.45
20	4.25	0.4	200	S55230-V190	VWG41.20-0.4-4.25
20	2.5	0.65	200	S55230-V150	VWG41.20-0.65-2.5
20	3.45	0.65	200	S55230-V191	VWG41.20-0.65-3.45
20	4.25	0.65	200	S55230-V192	VWG41.20-0.65-4.25
20	2.5	1	200	S55230-V152	VWG41.20-1.0-2.5
20	3.45	1.0	200	S55230-V193	VWG41.20-1.0-3.45
20	4.25	1.0	200	S55230-V194	VWG41.20-1.0-4.25
20	2.5	1.3	200	S55230-V195	VWG41.20-1.3-2.5
20	3.45	1.3	200	S55230-V196	VWG41.20-1.3-3.45
20	4.25	1.3	200	S55230-V197	VWG41.20-1.3-4.25
20	2.5	1.6	200	S55230-V153	VWG41.20-1.6-2.5
20	3.45	1.6	200	S55230-V154	VWG41.20-1.6-3.45
20	4.25	1.6	200	S55230-V198	VWG41.20-1.6-4.25
20	2.5	2.5	200	S55230-V200	VWG41.20-2.5-2.5
20	3.45	2.5	200	S55230-V155	VWG41.20-2.5-3.45
20	4.25	2.5	200	S55230-V156	VWG41.20-2.5-4.25
20	3.45	3.45	200	S55230-V201	VWG41.20-3.45-3.45
20	4.25	4.25	200	S55230-V157	VWG41.20-4.25-4.25

Accessories for VWG41.20..

Product Title	Data sheet	Stock no.	Product no.
Brass fitting G 1" / G ½", 5 °C - 90 °C, set of 2	A6V10564480	S55845-Z156	ALN15.152B
Brass fitting G 1" / G ¾", 5 °C - 90 °C, set of 2	A6V10564480	S55845-Z157	ALN15.202B
Brass fitting G 1" / Rp ½", set of 2		S55845-Z158	ALG15.152B
Brass fitting G 1" / Rp ¾", set of 2		S55845-Z159	ALG15.202B
Brass fitting G 1" / Rp 1", set of 2		S55845-Z160	ALG15.252B
Insulation cover for VWG41.20 6-Way ball valve	A6V10564480	S55845-Z161	ALI20VWG41

Valves and actuators

Rotary valves

Ball valves

Accessories for VWG41.20..

Product Title	Data sheet	Stock no.	Product no.
Strainer, inside threaded, DN15		S55845-Z174	ALX15
Strainer, inside threaded, DN20		S55845-Z175	ALX20
Strainer, inside threaded, DN25		S55845-Z176	ALX25

Combinable actuator for VWG41..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24...24 24	KNX S-Mode or KNX PL-Link	150	No	A6V10725318	S55499-D203	GDB111.9E/KN
AC 24 DC 24	DC 0/2...10 V	30	No	A6V10636056	S55499-D232	GSD161.9A
AC 24 DC 24	DC 0/2...10 V	150	No	A6V10636150	S55499-D275	GDB161.9E
AC 19.2...28.8 230	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD341.9A	GSD341.9A
AC 230	2-position/3- position	150	No	A6V10636150	S55499-D201	GDB341.9E

2-port open/close ball valves, externally threaded, PN40

VAG60..



For use in heating, ventilating and air conditioning plants as open/close ball valve. For closed circuits.

- Brass CW602N (DZR) ball valve body
- Flat sealing connections with external thread G..B to ISO 228-1
- Applications with auxiliary functions (e.g., switch, potentiometer) can also be combined with standard rotary actuators belonging to the DAC range

Data sheet	N4214
Leakage rate	„Waterproof“ as per EN 60534-4 L1, better than class 5
Medium	Water Chilled water Cooling water Low-temperature hot water High-temperature hot water Water with anti-freeze
Medium temperature	-10...120 °C
Permissible operating pressure	1600 kPa
Material, inside set	Dezincification resistant hot-pressed brass (DZR), CW602N, chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VAG60..

Con-nect. thread	GQD../GSD..9A Δp_{\max} [kPa]	GQD../GSD..9A Δp_s [kPa]	GDB..9E Δp_{\max} [kPa]	GDB..9E Δp_s [kPa]	GMA../GLB..9E Δp_{\max} [kPa]	GMA../GLB..9E Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
G 1" B	350	1400	350	1400	350	1400	15	9	S55230-V130	VAG60.15-9
G 1¼" B	350	1400	350	1400	350	1400	20	17	S55230-V131	VAG60.20-17
G 1½" B	350	1400	350	1400	350	1400	25	22	S55230-V132	VAG60.25-22
G 2" B					350	1000	32	35	S55230-V133	VAG60.32-35
G 2¼" B					350	800	40	68	S55230-V134	VAG60.40-68
G 2¾" B					350	600	50	96	S55230-V135	VAG60.50-96

Accessories for VAG60..

Product Title	Data sheet	Stock no.	Product no.
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3
Insulation Cover for VAG60/61, DN15		S55845-Z162	ALI15VAG60/61
Insulation Cover for VAG60/61, DN20		S55845-Z163	ALI20VAG60/61
Insulation Cover for VAG60/61, DN25		S55845-Z164	ALI25VAG60/61
Insulation Cover for VAG60/61, DN32		S55845-Z165	ALI32VAG60/61
Insulation Cover for VAG60/61, DN40		S55845-Z166	ALI40VAG60/61
Insulation Cover for VAG60/61, DN50		S55845-Z167	ALI50VAG60/61
Strainer, inside threaded, DN15		S55845-Z174	ALX15
Strainer, inside threaded, DN20		S55845-Z175	ALX20
Strainer, inside threaded, DN25		S55845-Z176	ALX25
Strainer, inside threaded, DN32		S55845-Z177	ALX32
Strainer, inside threaded, DN40		S55845-Z178	ALX40
Strainer, inside threaded, DN50		S55845-Z179	ALX50

Valves and actuators

Rotary valves

Ball valves

Combinable actuator for VAG60..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 DC 24	2-position/3-position	150	No	A6V10636203	S55499-D204	GLB141.9E
AC 230	2-position/3-position	150	No	A6V10636203	S55499-D205	GLB341.9E
AC 29.2...28.8 24 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA121.9E	GMA121.9E
AC 230 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA321.9E	GMA321.9E
AC 24...48 24 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD121.9A	GQD121.9A
AC 19.2...28.8 24 DC 24	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD141.9A	GSD141.9A
AC 19.2...28.8 230	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD341.9A	GSD341.9A
AC 230 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD321.9A	GQD321.9A

3-port changeover ball valves, externally threaded, PN40

VBG60..



For use in heating, ventilating and air conditioning plants as changeover ball valve. For closed circuits.

- Brass CW602N (DZR) ball valve body
- Flat sealing connections with external thread G..B to ISO 228-1
- Applications with auxiliary functions (e.g., switch, potentiometer) can also be combined with standard rotary actuators belonging to the DAC range

Data sheet	N4214
Leakage rate	„Waterproof“ as per EN 60534-4 L1, better than class 4
Medium	Water Chilled water Cooling water Low-temperature hot water High-temperature hot water Water with anti-freeze
Medium temperature	-10...120 °C
Permissible operating pressure	1600 kPa
Material, inside set	Dezincification resistant hot-pressed brass (DZR), CW602N, chromium-plated
PN class	PN 40
Warranty	5 Years

Range overview VBG60..

Con-nect. thread	GDB..9E Δp_{\max} [kPa]	GQD../ GSD..9A Δp_{\max} [kPa]	GMA../ GLB..9E Δp_{\max} [kPa]	DN	k_{vs} [m ³ /h]	Stock no.	Product no.
G ¾"	350	350	350	20	8	S55230-V202	VBG60.20-8L
G 1"	350	350	350	15	8	S55230-V136	VBG60.15-8T
G 1¼"	350	350	350	20	13	S55230-V137	VBG60.20-13T
G 1½"	350	350	350	25	13	S55230-V138	VBG60.25-13T
G 2"			350	32	25	S55230-V139	VBG60.32-25T
G 2¼"			350	40	49	S55230-V140	VBG60.40-49T
G 2¾"			350	50	73	S55230-V141	VBG60.50-73T

Accessories for VBG60..

Product Title	Data sheet	Stock no.	Product no.
Mounting kit for rotary actuators GMA..1E with spring-return		BPZ:ASK77.2	ASK77.2
Mounting kit for rotary actuators GDB..1E and GLB..1E without spring-return		BPZ:ASK77.3	ASK77.3
Insulation Cover for VBG60/61, DN15		S55845-Z168	ALI15VBG60/61
Insulation Cover for VBG60/61, DN20		S55845-Z169	ALI20VBG60/61
Insulation Cover for VBG60/61, DN25		S55845-Z170	ALI25VBG60/61
Insulation Cover for VBG60/61, DN32		S55845-Z171	ALI32VBG60/61
Insulation Cover for VBG60/61, DN40		S55845-Z172	ALI40VBG60/61
Insulation Cover for VBG60/61, DN50		S55845-Z173	ALI50VBG60/61
Strainer, inside threaded, DN15		S55845-Z174	ALX15
Strainer, inside threaded, DN20		S55845-Z175	ALX20
Strainer, inside threaded, DN25		S55845-Z176	ALX25
Strainer, inside threaded, DN32		S55845-Z177	ALX32
Strainer, inside threaded, DN40		S55845-Z178	ALX40
Strainer, inside threaded, DN50		S55845-Z179	ALX50

Valves and actuators

Rotary valves

Ball valves

Combinable actuator for VBG60..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 24 DC 24	2-position/3-position	150	No	A6V10636203	S55499-D204	GLB141.9E
AC 230	2-position/3-position	150	No	A6V10636203	S55499-D205	GLB341.9E
AC 29.2...28.8 24 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA121.9E	GMA121.9E
AC 230 DC 24	2-position	Open:90 Close:15	Yes	N4658	BPZ:GMA321.9E	GMA321.9E
AC 24...48 24 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD121.9A	GQD121.9A
AC 19.2...28.8 24 DC 24	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD141.9A	GSD141.9A
AC 19.2...28.8 230	On-Off (2 wire SPDT)	30	No	A6V10636056	BPZ:GSD341.9A	GSD341.9A
AC 230 DC 24	2-position	Open:30 Close:15	Yes	N4659	BPZ:GQD321.9A	GQD321.9A

3-port slipper valves PN 6 with flanged connections

- With flanged connections to ISO 7005
- For chilled or low-temperature hot water in closed circuits

VBF21..



VBF21.40 / VBF21.50 are shipped with manual adjuster.
 VBF21..., DN40/50, with SQK34..., SQK84...: Direct mounting
 VBF21..., DN40/50, with SQK33.00 requires mounting set ASK32

Data sheet	N4241
Medium temperature	1...120 °C
Valve characteristic	Linear
Permissible operating pressure	600 kPa
Material, inside set	< DN 100: CrNi steel/brass > DN 125: CrNi steel/Rg5
PN class	PN 6
Leakage rate	DN40...100: 0...0.1 % of k_{vs} value DN125...150: 0...0,5 % of k_{vs} value
Warranty	5 Years

Range overview VBF21..

SAL...T10 Δp_{max} [kPa]	DN	k_{vs} [m ³ /h]	Required mounting set	Stock no.	Product no.
30	40	25	ASK32N	BPZ:VBF21.40	VBF21.40
30	50	40	ASK32N	BPZ:VBF21.50	VBF21.50
30	65	63	ASK31N	BPZ:VBF21.65	VBF21.65
30	80	100	ASK31N	BPZ:VBF21.80	VBF21.80
30	100	160	ASK31N	BPZ:VBF21.100	VBF21.100
30	125	550	ASK31N	BPZ:VBF21.125	VBF21.125
30	150	820	ASK31N	BPZ:VBF21.150	VBF21.150

DN40...50, series 02

DN65...150, series 01

Combinable actuator for VBF21..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 230	3-position	120		N4502	S55162-A108	SAL31.00T10
AC 230	3-position	30		N4502	S55162-A109	SAL31.03T10
AC 24 DC 24	DC 0...10V DC 4...20 mA 0...1000 Ohm	120		N4502	S55162-A100	SAL61.00T10
AC 24 DC 24	DC 0...10V DC 4...20 mA 0...1000 Ohm	30		N4502	S55162-A101	SAL61.03T10
AC 24 DC 24	3-position	120		N4502	S55162-A104	SAL81.00T10
AC 24 DC 24	3-position	30		N4502	S55162-A105	SAL81.03T10

VKF41..



Butterfly valves PN6/10/16 for flanged connections

- With metallic tight-closing for mounting between 2 flanges PN6, PN10 or PN16 to ISO 7005
- For chilled and low-temperature hot water in closed circuits

SAL..T10, SAL..T40 require mounting set ASK33N

Data sheet	N4131
Material, inside set	Stainless steel
Medium temperature	-10...120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Cast iron EN-GJL-250
PN class	PN 16
Warranty	5 Years

Range overview VKF41..

SAL..T10 Δp_s [kPa]	SAL..T40 Δp_s [kPa]	DN	k_{vs} [m ³ /h]	Leakage rate	Required mounting set	Stock no.	Product no.
500		40	50	0.22% of k_{vs}	ASK33N	BPZ:VKF41.40	VKF41.40
500		50	80	0.14% of k_{vs}	ASK33N	BPZ:VKF41.50	VKF41.50
500		65	200	0.09% of k_{vs}	ASK33N	BPZ:VKF41.65	VKF41.65
500		80	400	0.06% of k_{vs}	ASK33N	BPZ:VKF41.80	VKF41.80
500		100	760	0.04% of k_{vs}	ASK33N	BPZ:VKF41.100	VKF41.100
300		125	1000	0.04% of k_{vs}	ASK33N	BPZ:VKF41.125	VKF41.125
250	400	150	2100	0.02% of k_{vs}	ASK33N	BPZ:VKF41.150	VKF41.150
125	300	200	4000	0.01% of k_{vs}	ASK33N	BPZ:VKF41.200	VKF41.200

Combinable actuator for VKF41..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	120	N4502	S55162-A108	SAL31.00T10
AC 230	3-position	30	N4502	S55162-A109	SAL31.03T10
AC 230	3-position	120	N4502	S55162-A111	SAL31.00T40
AC 24	DC 0...10 V	120	N4502	S55162-A103	SAL61.00T40
DC 24	DC 4...20 mA 0...1000 Ohm				
AC 24	DC 0...10 V	120	N4502	S55162-A100	SAL61.00T10
DC 24	DC 4...20 mA 0...1000 Ohm				
AC 24	3-position	120	N4502	S55162-A107	SAL81.00T40
DC 24					
AC 24	DC 0...10 V	30	N4502	S55162-A101	SAL61.03T10
DC 24	DC 4...20 mA 0...1000 Ohm				
AC 24	3-position	120	N4502	S55162-A104	SAL81.00T10
DC 24					
AC 24	3-position	30	N4502	S55162-A105	SAL81.03T10
DC 24					

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Butterfly valves PN16 for flanged connections, with tight shutoff

VKF42..

Butterfly valve is used as motorized or shut-off valves in heating, ventilation and air conditioning systems applications.

- In open and closed circuits
- For 2-position (SPDT) or DC 0... 10V control signals
- For chiller and cooling tower sequencing circuits
- To open or close the flow to a heat exchanger or to complete plant sections



Data sheet	N4119
Angular rotation	90°
Leakage rate	A to ISO 5208 (tight-closing)
Medium	Water Water with anti-freeze
Medium temperature	-10...80 °C
Valve characteristic	Non-linear
Material, valve body	Cast iron
Material, inside set	Stainless steel Nodular cast iron EN-GJS-450-10 (QT450-10) Nylon coating
PN class	PN 16
Mounting position	Upright to horizontal
Required mounting set	Direct
Warranty	5 Years

Range overview VKF42..

SQL321 B25/ SQL361 B50 Δp _s [kPa]	SQL..B50 Δp _s [kPa]	SQL..B150 Δp _s [kPa]	SQL..B270 Δp _s [kPa]	SQL..B570 Δp _s [kPa]	SQL..B140 0 Δp _s [kPa]	SQL..B265 0 Δp _s [kPa]	DN	k _{vs} [m ³ /h]	Stock no.	Product no.
700							50	65	S55237-V100	VKF42.50
700							65	140	S55237-V101	VKF42.65
700							80	210	S55237-V102	VKF42.80
	700						100	470	S55237-V103	VKF42.100
	700						125	750	S55237-V104	VKF42.125
		700					150	1250	S55237-V105	VKF42.150
		700					200	3100	S55237-V106	VKF42.200
			700				250	4050	S55237-V107	VKF42.250
				700			300	7500	S55237-V108	VKF42.300
				700			350	10250	S55237-V109	VKF42.350
					700		400	14100	S55237-V110	VKF42.400
					700		450	18500	S55237-V111	VKF42.450
						700	500	24000	S55237-V112	VKF42.500
						700	600	37000	S55237-V113	VKF42.600

Combinable actuator for VKF42..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 220	2-position (SPDT)	11	No	N4520	S55164-A100	SQL321B25
AC 220	2-position (SPDT)	19	No	N4520	S55164-A101	SQL321B50
AC 220	DC 0... 10V	19	No	N4520	S55164-A102	SQL361B50
AC 220	2-position (SPDT)	39	No	N4520	S55164-A103	SQL321B150
AC 220	DC 0... 10V	39	No	N4520	S55164-A104	SQL361B150
AC 220	2-position (SPDT)	39	No	N4520	S55164-A105	SQL321B270
AC 220	DC 0... 10V	39	No	N4520	S55164-A106	SQL361B270



Valves and actuators

Rotary valves

Butterfly valves

Combinable actuator for VKF42..

Operating voltage [V]	Positioning signal	Positioning time [s]	Spring return function	Data sheet	Stock no.	Product no.
AC 220	2-position (SPDT)	47	No	N4520	S55164-A107	SQL321B570
AC 220	DC 0...10 V	47	No	N4520	S55164-A108	SQL361B570
AC 220	2-position (SPDT)	47	No	N4520	S55164-A109	SQL321B1400
AC 220	DC 0...10 V	47	No	N4520	S55164-A110	SQL361B1400
AC 220	2-position (SPDT)	105	No	N4520	S55164-A111	SQL321B2650
AC 220	DC 0...10 V	105	No	N4520	S55164-A112	SQL361B2650

Butterfly valves PN6/10/16 for flanged connections, with tight shutoff

VKF46..

- With EPDM seal for mounting between 2 flanges PN6, PN10 or NP16 to ISO 7005
- For chilled water, low-temperature hot water, DHW, cold water and fresh water in closed or open circuits

VKF46.450...600 PN 16 only

Data sheet	N4136
Material, inside set	From DN350: Nickel-plated steel To DN300: Stainless steel
Medium temperature	-10...120 °C
Permissible operating pressure	1600 kPa
Material, valve body	Cast iron EN-GJS-400-15
PN class	PN 16
Warranty	5 Years

**Range overview VKF46..**

SAL..T20	SAL..T40	SQL36	SQL36	SQL36	SQL36	SQL36	DN	k_{vs}	Stock no.	Product no.
Δp_s	Δp_s	E50F04	E50F05	E65	E110	E160		[m ³ /h]		
[kPa]	[kPa]	Δp_s	Δp_s	Δp_s	Δp_s	Δp_s				
		[kPa]	[kPa]	[kPa]	[kPa]	[kPa]				
1600		1600					40	50	BPZ:VKF46.40	VKF46.40
1600		1600					50	85	BPZ:VKF46.50	VKF46.50
1600		1600					65	215	BPZ:VKF46.65	VKF46.65
	1600		1600				80	420	BPZ:VKF46.80	VKF46.80
	1200		1600				100	800	BPZ:VKF46.100	VKF46.100
	800		1000				125	1010	BPZ:VKF46.125	VKF46.125
				1600			150	2100	BPZ:VKF46.150	VKF46.150
				1000			200	4000	BPZ:VKF46.200	VKF46.200
					1000		250	6400	BPZ:VKF46.250	VKF46.250
					1000		300	8500	BPZ:VKF46.300	VKF46.300
					600		350	11500	BPZ:VKF46.350	VKF46.350
					300		400	14500	BPZ:VKF46.400	VKF46.400
						300	450	20500	BPZ:VKF46.450	VKF46.450
						300	500	21000	BPZ:VKF46.500	VKF46.500
						300	600	29300	BPZ:VKF46.600	VKF46.600

Combinable actuator for VKF46..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 230	3-position	120	N4502	S55162-A110	SAL31.00T20
AC 230	3-position	120	N4502	S55162-A111	SAL31.00T40
AC 24	DC 0...10 V	120	N4502	S55162-A102	SAL61.00T20
DC 24	DC 4...20 mA				
	0...1000 Ohm				
AC 24	DC 0...10 V	120	N4502	S55162-A103	SAL61.00T40
DC 24	DC 4...20 mA				
	0...1000 Ohm				
AC 24	3-position	120	N4502	S55162-A106	SAL81.00T20
DC 24					
AC 24	3-position	120	N4502	S55162-A107	SAL81.00T40
DC 24					
AC 230	3-position	25	N4505	BPZ:SQL36E50F04	SQL36E50F04
AC 230	3-position	25	N4505	BPZ:SQL36E50F05	SQL36E50F05

Valves and actuators

Rotary valves

Butterfly valves

Combinable actuator for VKF46..

Operating voltage [V]	Positioning signal	Positioning time [s]	Data sheet	Stock no.	Product no.
AC 218.5...253 230	3-position	6	N4505	BPZ:SQL36E65	SQL36E65
AC 230	3-position	12	N4505	BPZ:SQL36E110	SQL36E110
AC 230	3-position	24	N4505	BPZ:SQL36E160	SQL36E160

Manual adjuster for VKF46..

Product Title	Data sheet	Stock no.	Product no.
Manual adjuster for VKF46.., DN40 to DN65	N4136	BPZ:ASK46.1	ASK46.1
Manual adjuster for VKF46.., DN80 to DN125	N4136	BPZ:ASK46.2	ASK46.2
Manual adjuster for VKF46.., DN150 to DN200	N4136	BPZ:ASK46.3	ASK46.3
Manual adjuster for VKF46.., DN250 to DN400	N4136	BPZ:ASK46.4	ASK46.4

Accessories for VKF..

Product Title	Data sheet	Stock no.	Product no.
Ball valve mounting set, DN 65, DN 80, DN 100, DN 125	A6V11168935	S55845-Z203	ASK77.21
Ball valve mounting set, DN 150	A6V11168935	S55845-Z204	ASK77.22

Modulating refrigerant valves with magnetic actuator, PS45, hermetically sealed, for safety refrigerants

MVL661...-



Hermetically sealed 2-port valves for modulating control of chillers and heat pumps.

- Expansion, hot-gas and suction throttle applications with one type of valve
- PS45, stainless steel with soldering connections
- Integrated power electronic with precise position feedback signal
- For safety refrigerants such as R22, R134a, R404A, R407C, R410A, R507, and R744 (CO₂). Not suitable for inflammable refrigerants.

The MVL661...- refrigerant valve is used in conjunction with PolyCool for superheat control or Climatix for chiller control.

MVL661...- replaces M2FS..LX.., M2FE..L.. and MVL661.25.

MVL661...- are UL listed.

ASR61: Replacement electronics in the event of defective valve electronics.

Data sheet	N4714
Operating voltage	AC 24 V DC 20...30 V
Positioning signal	DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA
Positioning time	< 1 s
Spring return function	A->AB closed
Position feedback	DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA
Degree of protection	IP65
Ambient temperature, operation	-25...55 °C
Mounting position	Upright to horizontal
Permissible operating pressure	4500 kPa
Leakage rate	< 0.002 % of k_{vs} value
Medium temperature	-40...120 °C
Valve characteristic	Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, valve body	Steel / CrNi steel
Material, inside set	CrNi steel/brass
Warranty	5 Years

Range overview MVL661..

Δp_{max} [kPa]	k_{vs} [m ³ /h]	k_{vs} reduced [m ³ /h]	DN	Stock no.	Product no.
2500	0.4	0.25	15	BPZ:MVL661.15-0.4	MVL661.15-0.4
2500	1	0.63	15	BPZ:MVL661.15-1.0	MVL661.15-1.0
2500	2.5	1.6	20	BPZ:MVL661.20-2.5	MVL661.20-2.5
2500	6.3	4	25	BPZ:MVL661.25-6.3	MVL661.25-6.3
1600	10	6.3	32	S55320-M105	MVL661.32-10
200	12	8	32	BPZ:MVL661.32-12	MVL661.32-12

k_{vs} -reduced selectable with DIP switch.

MVL661.32-12 can only be used as a suction throttle valve.

MVS661..N



Modulating refrigerant valves with magnetic actuator, PN 63, hermetically sealed

Hermetically sealed 2-port valves for modulating control of refrigerant circuits including chillers and heat pumps.

- Expansion gas, flash gas and suction throttle applications with one type of valve
- PN 63, stainless steel with welding connections
- Integrated power electronic with precise position feedback signal
- For ammonia R717 and all standard refrigerants, noncorrosive gases/liquids and CO₂ (R744). It is not suited for use with inflammable refrigerants.

"An exchangeable ASR..N valve insert allows for different k_{vs} -values with the same type of DN25 valve. In the event of service, this insert can also be replaced on the plant. MVS661..N are UL listed."

Data sheet	N4717
Operating voltage	AC 24 V DC 20...30 V
Power consumption	22 VA
Positioning signal	DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA
Positioning time	<1 s
Spring return function	Closed
Position feedback	DC 0...10 V DC 2...10 V DC 0...20 mA DC 4...20 mA
Degree of protection	IP65
Ambient temperature, operation	-25...55 °C
Mounting position	Upright to horizontal
Permissible operating pressure	6300 kPa
Leakage rate	v_s -value
Medium temperature	-40...120 °C
Valve characteristic	Linear
Stroke resolution $\Delta H/H_{100}$	1:1000
Material, valve body	Steel / CrNi steel
Material, inside set	CrNi steel
Warranty	5 Years

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Range overview MVS661..N

Δp_{max} [kPa]	k_{vs} [m ³ /h]	k_{vs} reduced [m ³ /h]	DN	Stock no.	Product no.
2500	0.16	0.1	25	BPZ:MVS661.25-016N	MVS661.25-016N
2500	0.4	0.25	25	BPZ:MVS661.25-0.4N	MVS661.25-0.4N
2500	1	0.63	25	BPZ:MVS661.25-1.0N	MVS661.25-1.0N
2500	2.5	1.6	25	BPZ:MVS661.25-2.5N	MVS661.25-2.5N
2500	6.3	4	25	BPZ:MVS661.25-6.3N	MVS661.25-6.3N

k_{vs} -reduced selectable with DIP switch.

Accessories for MVL661.../ MVS661..N

Product Title	Data sheet	Stock no.	Product no.
Valve insert, k_{vs} 0.16 m ³ /h	N4716	BPZ:ASR0.16N	ASR0.16N
Valve insert, k_{vs} 0.4 m ³ /h	N4716	BPZ:ASR0.4N	ASR0.4N
Valve insert, k_{vs} 1 m ³ /h	N4716	BPZ:ASR1.0N	ASR1.0N
Valve insert, k_{vs} 2.5 m ³ /h	N4716	BPZ:ASR2.5N	ASR2.5N

Valves and actuators
Refrigerant valves
For expansion, hotgas and suction throttle applications

Accessories for MVL661...-/ MVS661..N

Product Title	Data sheet	Stock no.	Product no.
Valve insert, kvs 6.3 m ³ /h	N4716	BPZ:ASR6.3N	ASR6.3N
Replacement electronic for MVL661.. and MVS661..N	N4714	BPZ:ASR61	ASR61
PTC conductive heating element		S55845-Z241	ASR70

Valves and actuators

Refrigerant valves

2-port modulating pilot valve

M2FP03GX



2-port modulating pilot valve with magnetic actuator, PN32, AC 24 V, DC 0...10 V / 4...20 mA / 0...20 Phs to control main valves

Hermetically sealed 2-port valve as a control valve for main valves from 2" to 5".

- PN32 with threaded connections
- For use with refrigerants such as R22, R134a, R404A, R407C, R507 and ammonia R717
- ZM electronics must be ordered separately (see below)

Data sheet	N4731
PN class	PN 32
Operating voltage	AC 24 V
Power consumption	13 VA
Positioning signal	DC 0...10 V DC 4...20 mA DC 0...20 V Phs
Positioning time	1 s
Spring return function	Closed
Degree of protection	IP54
Ambient temperature, operation	-40...50 °C
Mounting position	Any
Permissible operating pressure	3200 kPa
Leakage rate	0.25 % of kvs
Medium temperature	-40...100 °C; -40...212 °F
Valve characteristic	Linear
Stroke resolution $\Delta H/H_{100}$	1:200
Material, valve body	Steel
Material, inside set	CrNi steel
Δp_{max}	1800 kPa
k_{vs}	0.3 m ³ /h
Warranty	5 Years

Stock no.	Product no.
BPZ:M2FP03GX	M2FP03GX

With types ZM101/A and ZM121/A, the DC 0...20 V Phs positioning signal is also possible without operating voltage.

Matching ZM.. electronics

Product Title	Data sheet	Stock no.	Product no.
Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	BPZ:ZM100/A	ZM100/A
Terminal housing for valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	BPZ:ZM101/A	ZM101/A
Terminal housing for control of valves with magnetic actuator, 0...20 V Phs		BPZ:ZM110	ZM110
Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	BPZ:ZM120/A	ZM120/A
Terminal housing for valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	BPZ:ZM121/A	ZM121/A
Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	BPZ:ZM200/A	ZM200/A
Terminal housing for control of valves with magnetic actuator, 0...20 V Phs		BPZ:ZM210	ZM210
Terminal housing for control of valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	BPZ:ZM220/A	ZM220/A

M3FB..LX..



Modulating refrigerant valves with magnetic actuator, PS43, soldered connection, hermetically sealed

Hermetically sealed control valves for modulating capacity control of refrigeration units and for heat recovery.

- PN40 with soldered CrNi steel connections
- For organic safety refrigerants such as R22, R134a, R404A, R407C, R410A, R507, etc. Not suitable for flammable refrigerants
- ZM electronics must be ordered separately (see accessories)

Modulating control valves for hot-gas control, without ZM.. electronics housing
For use with Staefa controllers (working range 4...8V)

Data sheet	N4721
Operating voltage	AC 24 V
Positioning signal	DC 0...10 V DC 4...20 mA DC 0...20 V Phs
Positioning time	< 1 s
Spring return function	AB-> A closed
Degree of protection	IP54
Ambient temperature, operation	-40...50 °C
Mounting position	Any
Permissible operating pressure	4300 kPa
Leakage rate	< 0.05% of k_{vs} -value
Medium temperature	-40...120 °C
Valve characteristic	Linear
Stroke resolution $\Delta H/H_{100}$	1:200
Material, valve body	Steel
Material, inside set	CrNi steel/brass
Warranty	5 Years

Range overview M3FB..LX..

Power consumption [VA]	Δp_{max} [kPa]	k_{vs} [m ³ /h]	DN	Stock no.	Product no.
26	2200	0.6	15	BPZ:M3FB15LX06/A	M3FB15LX06/A
26	2200	1.5	15	BPZ:M3FB15LX15/A	M3FB15LX15/A
26	2200	3	15	BPZ:M3FB15LX/A	M3FB15LX/A
26	1800	5	20	BPZ:M3FB20LX/A	M3FB20LX/A
40	1200	8	25	BPZ:M3FB25LX/A	M3FB25LX/A
40	800	12	32	BPZ:M3FB32LX	M3FB32LX

Δp_{max} across control port AB -> A.

Matching ZM.. electronics

Product Title	Data sheet	Stock no.	Product no.
Terminal housing for valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	BPZ:ZM101/A	ZM101/A
Terminal housing for valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	BPZ:ZM121/A	ZM121/A

Valves and actuators

Refrigerant valves

For condensate control

M3FK..LX..



Modulating refrigerant valves with magnetic actuator, PN32, solder connection, hermetically sealed

Hermetically sealed mixing or straight-through valves for modulating capacity control of condensers.

- PN32 with copper soldering connection
- For safety refrigerants such as R22, R134a, R404A, R407C, R507, etc.
- ZM electronics must be ordered separately (see below)

For use with Staefa controllers (working range 4...8 V)

Data sheet	N4722
PN class	PN 32
Operating voltage	AC 24 V
Positioning signal	DC 0...10 V DC 4...20 mA DC 0...20 V Phs
Positioning time	< 1 s
Spring return function	1-> 3 closed
Degree of protection	IP54
Ambient temperature, operation	-40...50 °C
Mounting position	Any
Permissible operating pressure	3200 kPa
Leakage rate	< 0.05% of k_{vs} -value
Leakage rate bypass	< 0.5% of k_{vs} -value
Medium temperature	-40...120 °C
Valve characteristic	Linear
Stroke resolution $\Delta H/H_{100}$	1:200
Material, valve body	Steel
Material, inside set	CrNi steel/brass
Warranty	5 Years

Range overview M3FK..LX..

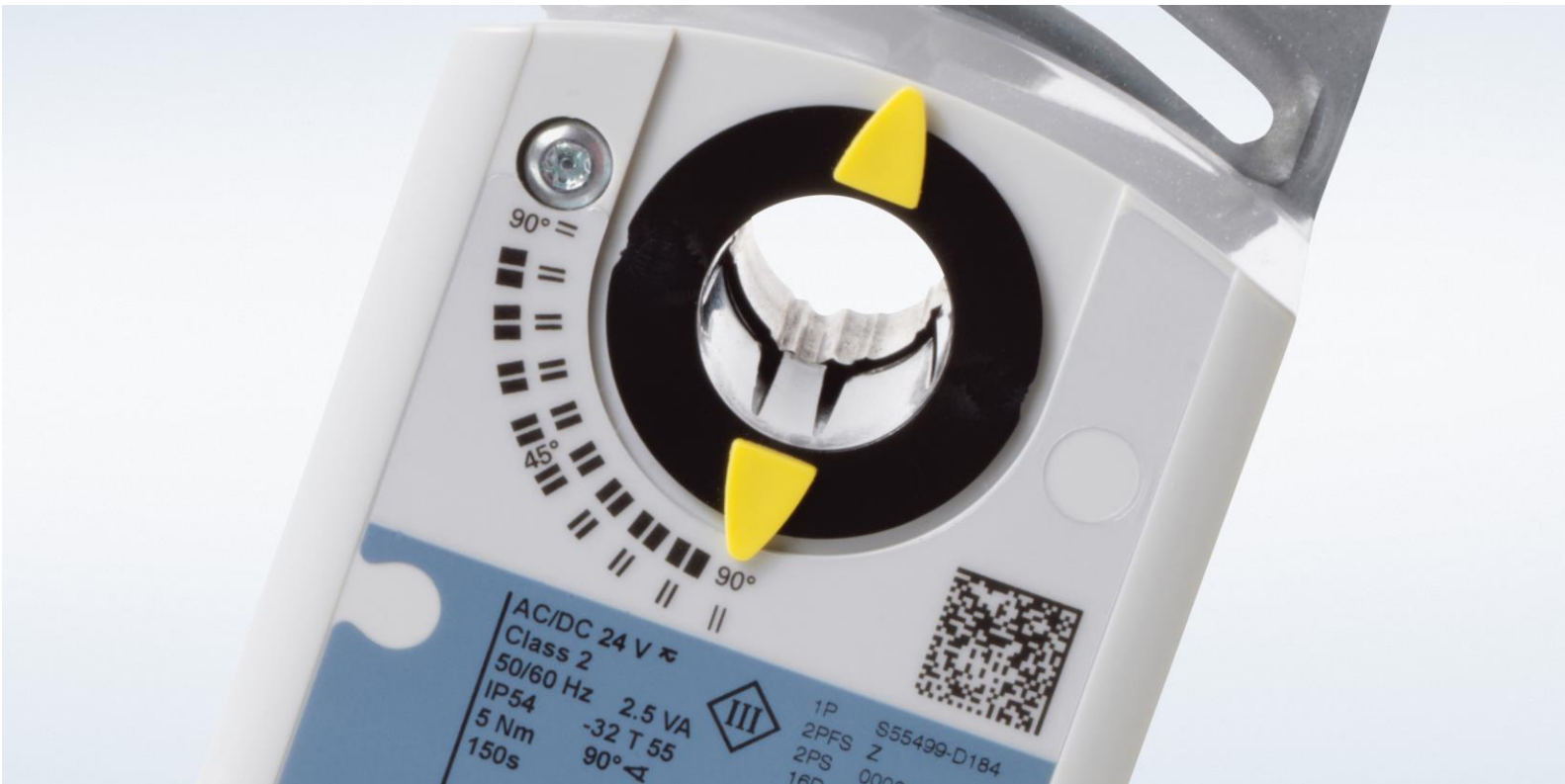
Power consumption [VA]	k_{vs} [m ³ /h]	DN	Stock no.	Product no.
13	0.6	15	BPZ:M3FK15LX06	M3FK15LX06
13	1.5	15	BPZ:M3FK15LX15	M3FK15LX15
13	3	15	BPZ:M3FK15LX	M3FK15LX
16	5	20	BPZ:M3FK20LX	M3FK20LX
16	8	25	BPZ:M3FK25LX	M3FK25LX
20	12	32	BPZ:M3FK32LX	M3FK32LX
40	20	40	BPZ:M3FK40LX	M3FK40LX
40	30	50	BPZ:M3FK50LX	M3FK50LX

With types ZM101/A and ZM121/A, the DC 0...20 V Phs positioning signal is also possible without operating voltage.

Matching ZM.. electronics

Product Title	Data sheet	Stock no.	Product no.
Terminal housing for valves with magnetic actuator, AC 24 V, DC 0...10 V / 0...20 V Phs	N4591	BPZ:ZM101/A	ZM101/A
Terminal housing for valves with magnetic actuator, AC 24 V, DC 4...20 mA / 0...20 V Phs	N4591	BPZ:ZM121/A	ZM121/A

Damper actuators



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Damper actuators

Overview and selection tools












New: 5-year warranty on valves and actuators, damper actuators, and sensors.

Actuators for HVAC applications

Actuators for HVAC applications	Control signal	Operating voltage	Standard model	Feedback potentiometer (1 kOhm)	Adjustable offset/span	Adjustable offset/span with two auxiliary switches	Feedback (1 kOhm) with two auxiliary switches	Two auxiliary switches	Dimensions, round damper shaft (mm)	Dimensions, square damper shaft (mm)
 GQD series 2 Nm for approx. 0.3 m ² damper area 30 s run time 15 s SR time	2-position	AC/DC 24 V	GQD121.1A	–	–	–	–	GQD126.1A	8...15	6...11
		AC 230 V	GQD321.1A	–	–	–	–	GQD326.1A		
	3-position	AC/DC 24 V	GQD131.1A	–	–	–	–	GQD136.1A		
	Modulating DC 0...10 V	AC/DC 24 V	GQD161.1A	–	–	–	–	GQD166.1A		
 GPC series 4 Nm for approx. 0.6 m ² damper area 60 s run time 15 s SR time	2-position	AC/DC 24 V	GPC121.1A	–	–	–	–	GPC126.1A	8...15	6...11
		AC 230 V	GPC321.1A	–	–	–	–	GPC326.1A		
	3-position	AC/DC 24 V	GPC131.1A	–	–	–	–	GPC136.1A		
	Modulating DC 0...10 V	AC/DC 24 V	GPC161.1A	–	–	–	–	GPC166.1A		
	Modulating DC 0...10 V	AC 230 V	GPC361.1A	–	–	–	–	–		
 GNP series 6 Nm for approx. 1 m ² damper area 2 s run time el. fail-safe function	2-position	AC/DC 24 V	GNP191.1E	–	–	–	–	GNP196.1E	6.4...20.5	6.4...13
	3-position	AC/DC 24 V	GNP191.1E	–	–	–	–	GNP196.1E		
	Modulating DC 0/2...10 V	AC/DC 24 V	GNP191.1E	–	–	–	–	GNP196.1E		
	Modulating DC 0/4...20 mA	AC/DC 24 V	GNP191.1E	–	–	–	–	GNP196.1E		
 GMA series 7 Nm for approx. 1.5 m ² damper area 90 s run time 15 s SR time	2-position	AC/DC 24 V	GMA121.1E	–	–	–	–	GMA126.1E	6.4...20.5	6.4...13
		AC 230 V	GMA321.1E	–	–	–	–	GMA326.1E		
	3-position	AC/DC 24 V	GMA131.1E	GMA132.1E	–	–	–	GMA136.1E		
	Modulating DC 0...10 V	AC/DC 24 V	GMA161.1E	–	GMA163.1E	GMA164.1E	–	GMA166.1E		
	Modbus RTU	AC/DC 24 V	GMA161.1E/MO	–	–	–	–	–		
 GCA series 18 Nm for approx. 3 m ² damper area 90 s run time 15 s SR time	2-position	AC/DC 24 V	GCA121.1E	–	–	–	–	GCA126.1E	8...25.6	6...18
		AC 230 V	GCA321.1E	–	–	–	–	GCA326.1E		
	3-position	AC/DC 24 V	GCA131.1E	–	–	–	GCA135.1E	–		
	Modulating DC 0...10 V	AC/DC 24 V	GCA161.1E	–	GCA163.1E	GCA164.1E	–	GCA166.1E		
	Modbus RTU	AC/DC 24 V	GCA161.1E/MO	–	–	–	–	–		

Actuators for HVAC applications





Actuators for HVAC applications	Control signal	Operating voltage	Standard model	Feedback potentiometer (5 kOhm)	Adjustable offset/span	Adjustable offset/span with two auxiliary switches	Feedback (1 kOhm) with two auxiliary switches	Two auxiliary switches	Dimensions, round damper shaft (mm)	Dimensions, square damper shaft (mm)
 GSD series 2 Nm for approx. 0.3 m ² damper area 30 s run time	2-position	AC/DC 24 V	GSD141.1A	–	–	–	–	GSD146.1A	8...15	6...11
	3-position	AC 230 V	GSD341.1A	–	–	–	–	GSD346.1A		
	Modulating DC 0...10 V	AC/DC 24 V	GSD161.1A	–	–	–	–	GSD166.1A		
 GDB series 5 Nm for approx. 0.8 m ² damper area 150 s run time	2-position	AC/DC 24 V	GDB141.1E	GDB142.1E	–	–	–	GDB146.1E	8...16	6...12.8
	3-position	AC 230 V	GDB341.1E	–	–	–	–	GDB346.1E		
	Modulating DC 0...10 V	AC/DC 24 V	GDB161.1E	–	GDB163.1E	GDB164.1E	–	GDB166.1E		
	Modbus RTU	AC 230 V	GDB361.1E	–	–	–	–	–		
	Modbus RTU	AC 24 V	GDB111.1E/MO	–	–	–	–	–		
 GLB series 10 Nm for approx. 1.5 m ² damper area 150 s run time	2-position	AC/DC 24 V	GLB141.1E	GLB142.1E	–	–	–	GLB146.1E	8...16	6...12.8
	3-position	AC 230 V	GLB341.1E	–	–	–	–	GLB346.1E		
	Modulating DC 0...10 V	AC/DC 24 V	GLB161.1E	–	GLB163.1E	GLB164.1E	–	GLB166.1E		
	Modbus RTU	AC 230 V	GLB361.1E	–	–	–	–	–		
 GAP series 6 Nm for approx. 1 m ² damper area 2 s run time	2-position	AC/DC 24 V	GAP191.1E	–	–	–	–	GAP196.1E	6.4...20.5	6.4...13
	3-position Modulating DC 0/2...10 V	AC/DC 24 V	GAP191.1E	–	–	–	–	GAP196.1E		
 GEB series 20 Nm for approx. 4 m ² damper area 150 s run time	2-position	AC/DC 24 V	GEB141.1E	GEB142.1E	–	–	–	GEB146.1E	8...20.5	8...14.5
	3-position	AC 230 V	GEB341.1E	–	–	–	–	GEB346.1E		
	Modulating DC 0...10 V	AC/DC 24 V	GEB161.1E	–	GEB163.1E	GEB164.1E	–	GEB166.1E		
 GBB series 25 Nm for approx. 4 m ² damper area 150 s run time	3-position	AC 24 V	GBB131.1E	–	–	–	GBB135.1E	GBB136.1E	8...25.6	6...18
	3-position	AC 230 V	GBB331.1E	–	–	–	GBB335.1E	GBB336.1E		
 GIB series 35 Nm for approx. 6 m ² damper area 150 s run time	3-position	AC 24 V	GIB131.1E	–	–	–	GIB135.1E	GIB136.1E	8...25.6	6...18
	3-position	AC 230 V	GIB331.1E	–	–	–	GIB335.1E	GIB336.1E		
	Modulating DC 0...10 V	AC 24 V	GIB161.1E	–	GIB163.1E	GIB164.1E	–	GIB166.1E		
 GDB series 125 N for approx. 0.8 m ² damper area 150 s run time	3-position	AC 24 V	GDB131.2E	–	–	–	–	GDB136.2E	–	–
	3-position	AC 230 V	GDB331.2E	–	–	–	–	GDB336.2E		
 GLB series 250 N for approx. 1.5 m ² damper area 150 s run time	3-position	AC 24 V	GLB131.2E	–	–	–	–	GLB136.2E	–	–
	3-position	AC 230 V	GLB331.2E	–	–	–	–	GLB336.2E		
	Modulating DC 0...10 V	AC 24 V	GLB161.2E	–	GLB163.2E	–	–	–		



Damper actuators

Overview and selection tools

Actuators for air volume controllers

Actuators for air volume controllers 300 Pa application range	Control signal	Operating voltage	Standard model	Input/Output	Dimensions, round damper shaft (mm)	Dimensions, square damper shaft (mm)	
 <p>GDB 300 Pa VAV compact controller 5 Nm for approx. 0.8 m² damper area 150 s running time</p>	3-position	AC 24 V	GDB181.1E/3		8...16	6...12.8	
	Modulating DC 0/2...10 V						
	KNX S-Mode, KNX LTE-Mode, KNX PL-Link		GDB181.1E/KN				
	Modbus RTU		GDB181.1E/MO				
	BACnet MS/TP		GDB181.1E/BA				
 <p>GLB 300 Pa VAV compact controller 10 Nm for approx. 1.5 m² damper area 150 s running time</p>	3-position	AC 24 V	GLB181.1E/3		8...16	6...12.8	
	Modulating DC 0/2...10 V						
	KNX S-Mode, KNX LTE-Mode, KNX PL-Link		GLB181.1E/KN				
	Modbus RTU		GLB181.1E/MO				
	BACnet MS/TP		GLB181.1E/BA				
 <p>ASV 300 Pa VAV modular controller</p>	3-position	AC 24 V	ASV181.1E/3		-	-	
	Modulating DC 0/2...10 V						
 <p>DXR1..D.. Compact room automation station and 5 Nm actuator combination for HVAC application</p>	BACnet/IP	AC 24 V	DXR1.E09PDZ-112	2 UI, 4 DO, 1 AO	8...16	6...12.8	
	BACnet/IP		DXR1.E09PDZ-113				
	BACnet MS/TP		DXR1.M09PDZ-112				
	BACnet MS/TP		DXR1.M09PDZ-113				
	<p>DXR1..L.. Compact room automation station and 10 Nm actuator combination for HVAC application</p>	BACnet/IP	AC 24 V	DXR1.E02PLZ-112	2 UI, 1 DI, 4 DO, 1AO	8...16	6...12.8
		BACnet/IP KNX PL-Link		DXR1.E10PL-112			
		BACnet/IP KNX PL-Link		DXR1.E10PL-113			
	 <p>DXR2..L.. Compact room automation station and 10 Nm actuator combination for HVAC application with lighting and shading</p>	BACnet/IP KNX S-Mode KNX PL-Link	AC 24 V	DXR2.E10PL-102B	2 UI, 1 DI, 4 DO, 1 AO	8...16	6...12.8
BACnet/IP KNX S-Mode KNX PL-Link		DXR2.E10PLX-102B					
BACnet MS/TP KNX S-Mode KNX PL-Link		DXR2.M10PL-102B					
BACnet MS/TP KNX S-Mode KNX PL-Link		DXR2.M10PLX-102B					
BACnet MS/TP KNX S-Mode KNX PL-Link		DXR2.M10PLX-102B					

Actuators for fire and smoke protection dampers

Actuators for fire and smoke protection dampers	Control signal	Operating voltage	2 auxiliary switches	2 auxiliary switches and thermal cutout	Dimensions, square damper shaft (mm)
 GRA actuator 4 Nm for approx. 0.6 m ² damper area 90 s running time 15 s spring return time	2-position	AC/DC 24 V AC 230 V	GRA126.1E/... ¹⁾ GRA326.1E/... ¹⁾	GRA126.1E/T... ¹⁾ GRA326.1E/T... ¹⁾	10, 12
 GNA actuator 9/7 Nm for approx. 1 m ² damper area 90 s running time 15 s spring return time	2-position	AC/DC 24 V AC 230 V	GNA126.1E/... ¹⁾ GNA326.1E/... ¹⁾	GNA126.1E/T... ¹⁾ GNA326.1E/T... ¹⁾	10, 12
 GGA actuator 18 Nm for approx. 2.5 m ² damper area 90 s running time 15 s spring return time	2-position	AC/DC 24 V AC 230 V	GGA126.1E/... ¹⁾ GGA326.1E/... ¹⁾	GGA126.1E/T... ¹⁾ GGA326.1E/T... ¹⁾	10, 12

¹⁾ .. = insert dimension of square damper shaft (mm)








Actuators for railway applications

Actuators for railway applications	Control signal	Operating voltage	Standard model	Feedback potentiometer	2 integrated auxiliary switches	Rotary direction switch
 GDD series 5 Nm 30 s run time	Modulating DC 0/2...10 V	DC 24 V	GDD161.1E/RW	–	–	Yes
	2-position 3-position		GDD141.1E/RW	GDD142.1E/RW	GDD146.1E/RW	
 GDA series 5 Nm 90 s run time	Modulating DC 0/2...10 V	DC 24 V	GDA161.1E/RW	–	–	Yes
	2-position 3-position		GDA141.1E/RW	GDA142.1E/RW	GDA146.1E/RW	
 GLD series 8 Nm 30 s run time	Modulating DC 0/2...10 V	DC 24 V	GLD161.1E/RW	–	–	Yes
	2-position 3-position		GLD141.1E/RW	GLD142.1E/RW	GLD146.1E/RW	
 GLA series 10 Nm 90 s run time	Modulating DC 0/2...10 V	DC 24 V	GLA161.1E/RW	–	–	Yes
	2-position 3-position		GLA141.1E/RW	GLA142.1E/RW	GLA146.1E/RW	

Damper actuators

Overview and selection tools



Accessories for actuators

Description	GDB/ GLB	GEB/ GMA	GCA/GIB GBB	Type reference
 <p>Rotary-to-linear set with lever Allows a direct-coupled actuator to provide a linear drive; can be used to simultaneously drive a set of opposing or adjacent dampers with a single actuator.</p>	■			ASK71.5
 <p>Rotary-to-linear set with lever Allows a direct-coupled actuator to provide an auxiliary linear drive; can be used to simultaneously drive a set of opposing or adjacent dampers with a single actuator.</p>		■	■	ASK71.13 ASK71.3
 <p>Rotary-to-linear set with lever and angle bracket For use in applications where the actuator can be rigidly surface-mounted and a linear stroke output is required.</p>	■			ASK71.6
 <p>Rotary-to-linear set with lever and mounting plate For use in applications where the actuator can be rigidly surface-mounted and a linear stroke output is required.</p>		■	■	ASK71.14 ASK71.4
 <p>Universal lever For use with all OpenAir rotary-to-linear kits for linear applications requiring connection to damper louver shaft when joint connection is not possible. For 8 to 25.6 mm round.</p>	■	■	■	ASK71.9
 <p>Tandem mounting bracket Tandem mounting bracket for 2-position and 3-position GCA/GIB models Tandem mounting bracket for modulating GCA/GIB models</p>		■	■	ASK73.3 ASK73.1 ASK73.2
 <p>Rotary-to-linear set for duct mounting For airstream applications and where a foot-mounted actuator can be used. Includes crank arm, Teflon support-bearing ring and mounting fasteners. Rotary-to-linear set for duct and frame mounting</p>	■	■	■	ASK71.6 ASK71.1 ASK71.11

Description	GDB/ GLB	GEB/ GMA	GCA/GIB GBB	Type reference
 <p>Rotary-to-linear set for frame mounting For direct mounting to damper frame. Includes a crank arm to generate a linear stroke, a Teflon support-bearing ring to minimize side-loading on the actuator's output bearing and other mounting fasteners.</p> <p>Rotary-to-linear set for duct and frame mounting</p>			■	ASK71.2
 <p>Special shaft adapter</p> <ul style="list-style-type: none"> Up to 27 mm shaft diameter <p>Note: When used with a GIB, accepts shaft diameters from 19 to 27 mm</p>		■	■	ASK74.1
 <p>Actuator shaft insert for small shaft diameters</p> <ul style="list-style-type: none"> Up to 10 mm diameter 	■			ASK78.3
 <p>Weathershield Includes cover, gasket and screws.</p>	■	■	■ ■ ■	ASK75.3 ASK75.1 ASK75.4 ASK75.6 ASK75.5 ASK75.2
 <p>Shaft extension</p>		■	■	ASK74.7
 <p>Setting unit for VAV compact controller for GDB/GLB/ASV181.1E/..</p>	■			AST20
 <p>Interface converter (USB/PPS2) for VAV compact controller Interface converter for use with G..B181.1E/.. for series E and higher</p>	■			AST22

Damper actuators

Overview and selection tools

Description	GDB/ GLB	GEB/ GMA	GCA/GIB GBB	Type reference
 <p>External auxiliary switches External auxiliary switch kit, attachable to GCA, GMA, GEB, GBB and GIB rotary actuators - 1 external auxiliary switch - 2 external auxiliary switches</p>		<ul style="list-style-type: none"> ■ ■ 	<ul style="list-style-type: none"> ■ ■ 	<p>ASC77.1E ASC77.2E</p>
 <p>Shaft inserts for GDB/GLB...1 - Round 1/2" - Square 8 x 8 mm - Square 8 x 8 mm fix - Square 10 x 10 mm - Round 10 mm - Round 12 mm - D-profile fix</p>	<ul style="list-style-type: none"> ■ ■ ■ ■ ■ ■ ■ 			<p>ASK78.5 ASK78.6 ASK78.14 ASK78.7 ASK78.9 ASK78.10 ASK78.12</p>

For accessories and spare parts for air damper actuators, please order data sheet:
 N4697 (GMA/GEB)
 N4698 (GDB/GLB)
 N4699 (GCA/GBB/GIB)

GQD..1A



Rotary air damper actuators 2 Nm, with spring return

- For shaft dia 8...15 mm, square 6...11 mm, min. shaft length 20 mm
- With housing made of plastic and 0.9 m connecting cable

Data sheet	N4604
Torque	2 Nm
Air damper area	0.3 m ²
Positioning time	Open with motor: 30 s Closing with spring: 15 s
Cable length	0.9 m
Degree of protection	IP40
Dimensions (W x H x D)	73 x 122 x 63 mm
Warranty	5 Years

Range overview GQD..1A

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Stock no.	Product no.
AC 19.2...28.8 24 DC 24	2-position	6.5 VA 4.5 W	0	BPZ:GQD121.1A	GQD121.1A
AC 19.2...28.8 24 DC 24	2-position	6.5 VA 4.5 W	2	BPZ:GQD126.1A	GQD126.1A
AC 24...48 24 DC 24	3-position	4 VA 2.5 W	0	BPZ:GQD131.1A	GQD131.1A
AC 24...48 24 DC 24	3-position	4 VA 2.5 W	2	BPZ:GQD136.1A	GQD136.1A
AC 24...48 24 DC 24	DC 0...10 V	4.5 VA 3 W	0	BPZ:GQD161.1A	GQD161.1A
AC 24...48 24 DC 24	DC 0...10 V	4.5 VA 3 W	2	BPZ:GQD166.1A	GQD166.1A
AC 19.2...28.8 230	2-position	10 VA 4.5 W	0	BPZ:GQD321.1A	GQD321.1A
AC 19.2...28.8 230	2-position	10 VA 4.5 W	2	BPZ:GQD326.1A	GQD326.1A

Damper actuators

Air damper actuators

Rotary damper actuators with spring return

GPC..1



Rotary air damper actuators 4 Nm, with spring return

- With self-centering shaft adapter for shaft dia. 8...15 mm, square 6...11 mm, min. shaft length 20 mm
- With position indication
- Emergency function with spring return
- With 0.9 m connecting cable

Data sheet	A6V10636100
Torque	4 Nm
Air damper area	0.6 m ²
Positioning time	Open with motor: 60 s Closing with spring: 15 s
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	72 x 124 x 63 mm
Warranty	5 Years

Range overview GPC..1

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Spring return function	Stock no.	Product no.
AC 24 DC 24	2-position	4.3 VA 2.7 W	0	Yes	S55499-D233	GPC121.1A
AC 24 DC 24	2-position	4.3 VA 2.7 W	2	Yes	S55499-D234	GPC126.1A
AC 24 DC 24	3-position	4.3 VA 2.7 W	0	Yes	S55499-D235	GPC131.1A
AC 24 DC 24	3-position	4.3 VA 2.7 W	2	Yes	S55499-D236	GPC136.1A
AC 24 DC 24	DC 0...10 V	3.7 VA 2.2 W	0	Yes	S55499-D237	GPC161.1A
AC 24 DC 24	DC 0...10 V	3.7 VA 2.2 W	2	Yes	S55499-D238	GPC166.1A
AC 230	2-position	6.9 VA 2.9 W	0	Yes	S55499-D239	GPC321.1A
AC 230	2-position	6.9 VA 2.9 W	2	Yes	S55499-D240	GPC326.1A
AC 230	DC 0...10 V	6.7 VA 2.9 W	0	Yes	S55499-D241	GPC361.1A

GMA..1E

Rotary air damper actuators 7 Nm, with spring return

- With self-centering shaft adapter for shaft dia. 6.4...20.5 mm, square 6.4...13 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Manual override
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4614 / A6V101037201
Torque	7 Nm
Air damper area	1.5 m ²
Positioning time	Opening with motor: 90 s Closing with spring: 15 s
Degree of protection	IP54
Dimensions (W x H x D)	81 x 192 x 63 mm
Warranty	5 Years



Range overview GMA..1E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Spring return function	Stock no.	Product no.
AC 19.2...28.8 24 DC 24	2-position	5 VA 3.5 W	0	Yes	BPZ:GMA121.1E	GMA121.1E
AC 19.2...28.8 24 DC 24	2-position	5 VA 3.5 W	2	Yes	BPZ:GMA126.1E	GMA126.1E
AC 19.2...28.8 24 DC 24	3-position	5 VA 3.5 W	0	Yes	BPZ:GMA131.1E	GMA131.1E
AC 19.2...28.8 24 DC 24	3-position	5 VA 3.5 W	2	Yes	BPZ:GMA136.1E	GMA136.1E
AC 24 DC 24	Modbus RTU	5 VA 3.5 W	0	Yes	S55499-D608	GMA151.1E/IV
AC 19.2...28.8 24 DC 24	DC 0...10 V	5 VA 3.5 W	0	Yes	BPZ:GMA161.1E	GMA161.1E
AC 24 DC 24	Modbus RTU	5 VA 3.5 W	0	Yes	S55499-D300	GMA161.1E/MO
AC 19.2...28.8 24 DC 24	DC 0...35 V Adjustable	5 VA 3.5 W	0	Yes	BPZ:GMA163.1E	GMA163.1E
AC 19.2...28.8 24 DC 24	DC 0...35 V Adjustable	5 VA 3.5 W	2	Yes	BPZ:GMA164.1E	GMA164.1E
AC 19.2...28.8 24 DC 24	DC 0...10 V	5 VA 3.5 W	2	Yes	BPZ:GMA166.1E	GMA166.1E
AC 19.2...28.8 230	2-position	7 VA 4.5 W	0	Yes	BPZ:GMA321.1E	GMA321.1E
AC 19.2...28.8 230	2-position	7 VA 4.5 W	2	Yes	BPZ:GMA326.1E	GMA326.1E

Type GMA132.1E has a feedback potentiometer.
Basic Documentation No.: Z4614

Damper actuators

Air damper actuators

Rotary damper actuators with spring return

Accessories for rotary air damper actuators GMA..1E

Product Title	Data sheet	Stock no.	Product no.
External auxiliary switch assembly 1 switch	N4615	BPZ:ASC77.1E	ASC77.1E
External auxiliary switch assembly 2 switches	N4615	BPZ:ASC77.2E	ASC77.2E
Rotary/linear mounting kit for duct or frame mounting	N4697	BPZ:ASK71.11	ASK71.11
Rotary/linear mounting kit with lever	N4697	BPZ:ASK71.14	ASK71.14
Universal lever	N4697	BPZ:ASK71.9	ASK71.9
Shaft extension	N4699	BPZ:ASK74.7	ASK74.7
Weather shield	N4697	BPZ:ASK75.3	ASK75.3
Rotary/linear mounting kit with lever and bracket	N4697	BPZ:ASK71.13	ASK71.13
Weather shield for rotary-/linear-type actuator GMA/GEB...E	N4697	BPZ:ASK75.6	ASK75.6

Damper actuators
Air damper actuators
Rotary damper actuators with spring return

GCA..1E



Rotary air damper actuators 18 Nm, with spring return

- With self-centering shaft adapter for shaft dia. 8..25.6 mm, square 6...18 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Manual override
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4613 / A6V101037201
Torque	18 Nm
Air damper area	3 m ²
Positioning time	Opening with motor: 90 s Closing with spring: 15 s
Degree of protection	IP54
Dimensions (W x H x D)	100 x 300 x 75 mm
Warranty	5 Years

Range overview GCA..1E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Stock no.	Product no.
AC 19.2...28.8 24 DC 24	2-position	7 VA 5 W	0	BPZ:GCA121.1E	GCA121.1E
AC 19.2...28.8 24 DC 24	2-position	7 VA 5 W	2	BPZ:GCA126.1E	GCA126.1E
AC 19.2...28.8 24 DC 24	3-position	7 VA 5 W	0	BPZ:GCA131.1E	GCA131.1E
AC 19.2...28.8 24 DC 24	3-position	7 VA 5 W	2	BPZ:GCA135.1E	GCA135.1E
AC 24 DC 24	Modbus RTU	7 VA 5 W	0	S55499-D609	GCA151.1E/IV
AC 19.2...28.8 24 DC 24	DC 0...10 V	7 VA 5 W	0	BPZ:GCA161.1E	GCA161.1E
AC 24 DC 24	Modbus RTU	7 VA 5 W	0	S55499-D301	GCA161.1E/MO
AC 19.2...28.8 24 DC 24	DC 0...35 V Adjustable	7 VA 5 W	0	BPZ:GCA163.1E	GCA163.1E
AC 19.2...28.8 24 DC 24	DC 0...35 V Adjustable	7 VA 5 W	2	BPZ:GCA164.1E	GCA164.1E
AC 19.2...28.8 24 DC 24	DC 0...10 V	7 VA 5 W	2	BPZ:GCA166.1E	GCA166.1E
AC 207...253 230	2-position	8 VA 6 W	0	BPZ:GCA321.1E	GCA321.1E
AC 207...253 230	2-position	8 VA 6 W	2	BPZ:GCA326.1E	GCA326.1E

Type GCA135.1E has a feedback potentiometer.
Basic Documentation No.: Z4613

Damper actuators

Air damper actuators

Rotary damper actuators with spring return

Accessories for rotary air damper actuators GCA..1E

Product Title	Data sheet	Stock no.	Product no.
External auxiliary switch assembly 1 switch	N4615	BPZ:ASC77.1E	ASC77.1E
External auxiliary switch assembly 2 switches	N4615	BPZ:ASC77.2E	ASC77.2E
Rotary/linear mounting kit for duct mounting	N4699	BPZ:ASK71.1	ASK71.1
Rotary/linear mounting kit with lever and bracket	N4699	BPZ:ASK71.4	ASK71.4
Universal lever	N4697	BPZ:ASK71.9	ASK71.9
Bracket for power pack	N4699	BPZ:ASK73.1	ASK73.1
Shaft extension	N4699	BPZ:ASK74.7	ASK74.7
Weather shield for rotary actuator	N4699	BPZ:ASK75.1	ASK75.1
Weather shield for rotarytype actuator GBB/GCA/GIB...1E	N4699	BPZ:ASK75.4	ASK75.4
Rotary/linear mounting kit for frame mounting	N4699	BPZ:ASK71.2	ASK71.2
Accessory Kit, GIB/GBB/GCA		S55859-Z102	ASK71.02
Rotary/linear mounting kit with lever	N4699	BPZ:ASK71.3	ASK71.3
Mounting Bracket, GM		S55859-Z114	ASK71.03
Flexible bracket for power pack	N4699	BPZ:ASK73.2	ASK73.2
Special shaft adapter	N4699	BPZ:ASK74.1	ASK74.1
Shaft Adapter for GSD/GPC		S55859-Z120	ASK74.23

Caution!

- ASK73.1 is only valid for GCA12..1E, GCA13..1E, GCA32..1E
- ASK73.2 is only valid for GCA16..1E

Rotary air damper actuators 2 Nm, without spring return

GSD..1A

- Operate direct driven zone dampers used to control airflow in ducts specifically to address two position domestic and light commercial barrel damper applications.
- For shaft dia 8...15 mm, square 6...11 mm, min. shaft length 20 mm
- With housing made of plastic and 0.9 m connecting cable



Data sheet	N4603
Torque	2 Nm
Air damper area	0.3 m ²
Positioning time	30 s
Cable length	0.9 m
Degree of protection	IP40
Dimensions (W x H x D)	73 x 122 x 63 mm
Warranty	5 Years

Range overview GSD..1A

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Stock no.	Product no.
AC 24 DC 24...48	Open-close / three-position	2.2 VA 1.2 W	2	S55499-D227	GSD146.1A
AC 24 DC 24...48	DC 0/2...10 V	2,4 VA 1,4 W	0	S55499-D228	GSD161.1A
AC 24 DC 24...48	Open-close / three-position	2.2 VA 1.2 W	0	S55499-D281	GSD141.1A
AC 24 DC 24...48	DC 0/2...10 V	2,4 VA 1,4 W	2	S55499-D229	GSD166.1A
AC 100...240	Open-close / three-position	4,5 VA 1,8 W	0	S55499-D282	GSD341.1A
AC 100...240	Open-close / three-position	4,5 VA 1,8 W	2	S55499-D230	GSD346.1A
AC 100...240	DC 0/2...10 V	3,7 VA 1,4 W	0	S55499-D231	GSD361.1A

Damper actuators

Air damper actuators

Rotary damper actuators non-spring return

GDB..1E



Rotary air damper actuators 5 Nm, without spring return

- For shaft dia. 8..16 mm, square 6...12 mm, min. shaft length 30 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual override
- With base made of steel, plastic housing and 0.9 m connecting cable

Data sheet	A6V10636149 / A6V10881141
Torque	5 Nm
Air damper area	0.8 m ²
Positioning time	150 s
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	68 x 137 x 59.5 mm
Warranty	5 Years

Range overview GDB..1E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Stock no.	Product no.
AC 19.2...28.8	KNX TP	3.0 VA 2.5 W	0	S55499-D190	GDB111.1E/KN
AC 24	Modbus RTU	3 VA 2.5 W	0	S55499-D191	GDB111.1E/MO
AC 24 DC 24	2-position/3-position	2.5 VA 1.1 W	0	S55499-D184	GDB141.1E
AC 24 DC 24	2-position/3-position	2.5 VA 1.1 W	0	S55499-D185	GDB142.1E
AC 24 DC 24	2-position/3-position	2.5 VA 1.1 W	2	S55499-D186	GDB146.1E
AC 24 DC 24	DC 0/2...10 V	2.1 VA 1.2 W	0	S55499-D266	GDB161.1E
AC 24 DC 24	DC 0...35 V Adjustable	2.1 VA 1.2 W	0	S55499-D267	GDB163.1E
AC 24 DC 24	DC 0...35 V Adjustable	2.1 VA 1.2 W	2	S55499-D268	GDB164.1E
AC 24 DC 24	DC 0/2...10 V	3.3 VA 1.3 W	2	S55499-D269	GDB166.1E
AC 230	2-position/3-position	5 VA 1.6 W	0	S55499-D187	GDB341.1E
AC 230	2-position/3-position	5 VA 1.6 W	2	S55499-D188	GDB346.1E
AC 230	DC 0/2...10 V	2.1 VA 1.2 W	0	S55499-D189	GDB361.1E

Type GDB142.1E has a feedback potentiometer.

Type GDB161.1H has a cable length of 5m.

Basic Documentation No.: A6V10636139.

Additional variants of actuators can be configured in Product Configurator.

Accessories for rotary air damper actuators GDB..1E and GLB..1E

Product Title	Data sheet	Stock no.	Product no.
Mounting Bracket, BG		S55859-Z115	ASK71.04
Rotary/linear mounting kit	N4698	BPZ:ASK71.5	ASK71.5
Rotary/linear mounting kit with bracket	N4698	BPZ:ASK71.6	ASK71.6
Universal lever	N4697	BPZ:ASK71.9	ASK71.9
Centering insert D-profile fixed 12 mm dia. x 9 mm	N4698	BPZ:ASK78.12	ASK78.12
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3
Weather shield for rotary-/linear-type actuator GDB/GLB/GSF...E	N4698	BPZ:ASK75.5	ASK75.5
Centering insert 12.7 mm dia. (1/2")	N4698	BPZ:ASK78.5	ASK78.5

Damper actuators
Air damper actuators
Rotary damper actuators non-spring return

Accessories for rotary air damper actuators GDB..1E and GLB..1E

Product Title	Data sheet	Stock no.	Product no.
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7
Centering insert 10 mm dia.	N4698	BPZ:ASK78.9	ASK78.9
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14

Damper actuators

Air damper actuators

Rotary damper actuators non-spring return

GLB..1E



Rotary air damper actuators 10 Nm, without spring return

- For shaft dia. 8..16 mm, square 6..12 mm, min. shaft length 30 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual override
- With base made of steel, plastic housing and 0.9 m connecting cable

Data sheet	A6V10636202 / A6V10881141
Torque	10 Nm
Air damper area	1.5 m ²
Positioning time	150 s
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	68 x 137 x 59.5 mm
Warranty	5 Years

Range overview GLB..1E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Stock no.	Product no.
AC 19.2...28.8	KNX TP	3.0 VA 2.5 W	0	S55499-D198	GLB111.1E/KN
AC 24	Modbus RTU	3 VA 2.5 W	0	S55499-D199	GLB111.1E/MO
AC 24 DC 24	2-position/3-position	2 VA 1.3 W	0	S55499-D192	GLB141.1E
AC 24 DC 24	2-position/3-position	2 VA 1.3 W	0	S55499-D527	GLB141.1Y/101
AC 24 DC 24	2-position/3-position	2 VA 1.3 W	0	S55499-D193	GLB142.1E
AC 24 DC 24	2-position/3-position	2 VA 1.3 W	2	S55499-D194	GLB146.1E
AC 24 DC 24	DC 0/2...10 V	2.5 VA 1.5 W	0	S55499-D270	GLB161.1E
AC 24 DC 24	DC 0/2...10 V	2.5 VA 1.5 W	0	S55499-D587	GLB161.1H
AC 24 DC 24	DC 0...35 V Adjustable	2.5 VA 1.5 W	0	S55499-D271	GLB163.1E
AC 24 DC 24	DC 0...35 V Adjustable	2.5 VA 1.5 W	2	S55499-D272	GLB164.1E
AC 24 DC 24	DC 0/2...10 V	2.5 VA 1.5 W	2	S55499-D273	GLB166.1E
AC 230	2-position/3-position	5.8 VA 1.9 W	0	S55499-D195	GLB341.1E
AC 230	2-position/3-position	5.8 VA 1.9 W	2	S55499-D196	GLB346.1E
AC 230	DC 0/2...10 V	4 VA 1.6 W	0	S55499-D197	GLB361.1E

Type GLB142.1E has a feedback potentiometer.

Basic Documentation No.: A6V10636196.

Additional variants of actuators can be configured in Product Configurator.

Rotary air damper actuators 15 Nm, without spring return

GEB..1E

- With self-centering shaft adapter for shaft dia. 6.4...20.5 mm, square 6.4...13 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual control
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4621 / A6V101037253
Torque	15 Nm
Air damper area	3 m ²
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	81 x 192 x 63 mm
Warranty	2 Years



Range overview GEB..1E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Stock no.	Product no.
AC 24	Modbus RTU	6 VA 5.5 W	0	S55499-D298	GEB161.1E/MO

Types GEB132.1E and 332.1E have a feedback potentiometer.
Basic Documentation No.: Z4621

Rotary air damper actuators 20 Nm, without spring return

GEB..1E / GEB..9E

- With self-centering shaft adapter for shaft dia. 8...20.5 mm, square 8...14.5 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual control
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	A6V11449860
Torque	20 Nm
Air damper area	4 m ²
Angular rotation	90°
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	82 x 192 x 63 mm
Warranty	5 Years



Range overview GEB..1E / GEB..9E

Operating voltage [V]	Positioning signal [V]	Power consumption	Auxiliary switch	Cable length [m]	Stock no.	Product no.
AC/DC 24...48 24		2.3 VA 1.1 W	0		S55499-D329	GEB141.1E
AC 19.2...28.8 24		2.3 VA	0	0.9	S55499-D732	GEB141.1E/102
DC 24...48						
AC/DC 24...48 24		2.3 VA 1.1 W	0		S55499-D330	GEB142.1E
AC/DC 24...48 24		2.3 VA 1.1 W	2		S55499-D331	GEB146.1E
AC 19.2...28.8 24		2.3 VA	2	0.9	S55499-D733	GEB146.1E/102
DC 24...48						

Damper actuators

Air damper actuators

Rotary damper actuators non-spring return

Range overview GEB..1E / GEB..9E

Operating voltage [V]	Positioning signal [V]	Power consumption	Auxiliary switch	Cable length [m]	Stock no.	Product no.
AC/DC 19.2...28.8 24	DC 0/2...10	2.5 VA 1.2 W	0		S55499-D332	GEB161.1E
AC 19.2...28.8 24 DC 24...48		2.5 VA	0	0.9	S55499-D734	GEB161.1E/102
AC/DC 24...48 24	DC 0...35	2.5 VA 1.2 W	0		S55499-D333	GEB163.1E
AC/DC 24...48 24	DC 0...35	2.5 VA 1.2 W	2		S55499-D334	GEB164.1E
AC/DC 24...48 24	DC 0/2...10	2.5 VA 1.2 W	2		S55499-D335	GEB166.1E
230		4 VA 1.6 W	0		S55499-D336	GEB341.1E
230		4 VA 1.6 W	2		S55499-D337	GEB346.1E
AC 100...240	DC 0/2...10	3.4 VA 1.3 W	0		S55499-D338	GEB361.1E

Accessories for rotary air damper actuators GEB..1E

Product Title	Data sheet	Stock no.	Product no.
External auxiliary switch assembly 1 switch	N4615	BPZ:ASC77.1E	ASC77.1E
External auxiliary switch assembly 2 switches	N4615	BPZ:ASC77.2E	ASC77.2E
Rotary/linear mounting kit for duct or frame mounting	N4697	BPZ:ASK71.11	ASK71.11
Rotary/linear mounting kit with lever	N4697	BPZ:ASK71.14	ASK71.14
Universal lever	N4697	BPZ:ASK71.9	ASK71.9
Shaft extension	N4699	BPZ:ASK74.7	ASK74.7
Weather shield	N4697	BPZ:ASK75.3	ASK75.3
Rotary/linear mounting kit with lever and bracket	N4697	BPZ:ASK71.13	ASK71.13
Weather shield for rotary-/linear-type actuator GMA/GEB...E	N4697	BPZ:ASK75.6	ASK75.6

Rotary air damper actuators 25 Nm, without spring return

GBB..1E

- With self-centering shaft adapter for shaft dia. 8..25.6 mm, square 6...18 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual control
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4626
Torque	25 Nm
Air damper area	4 m ²
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	100 x 300 x 75 mm
Warranty	5 Years



Rotary actuators 25 Nm for ball valves VAF41..

Range overview GBB..1E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Stock no.	Product no.
AC 29.2...28.8 24	3-position	7 VA 7 W	0	BPZ:GBB131.1E	GBB131.1E
AC 29.2...28.8 24	3-position	7 VA 7 W	2	BPZ:GBB135.1E	GBB135.1E
AC 29.2...28.8 24	3-position	7 VA 7 W	2	BPZ:GBB136.1E	GBB136.1E
AC 29.2...28.8 24	DC 0...10 V	8 VA 8 W	0	BPZ:GBB161.1E	GBB161.1E
AC 29.2...28.8 24	DC 0...35 V Adjustable	8 VA 8 W	0	BPZ:GBB163.1E	GBB163.1E
AC 29.2...28.8 24	DC 0...35 V Adjustable	8 VA 8 W	2	BPZ:GBB164.1E	GBB164.1E
AC 29.2...28.8 24	DC 0...10 V	8 VA 8 W	2	BPZ:GBB166.1E	GBB166.1E
AC 207...253 230	3-position	5 VA 5 W	0	BPZ:GBB331.1E	GBB331.1E
AC 207...253 230	3-position	5 VA 5 W	2	BPZ:GBB335.1E	GBB335.1E
AC 207...253 230	3-position	5 VA 5 W	2	BPZ:GBB336.1E	GBB336.1E

Types GBB135.1E and GBB335.1E have a feedback potentiometer.
Basic Documentation No.: Z4626

Damper actuators

Air damper actuators

Rotary damper actuators non-spring return

GIB..1E



Rotary air damper actuators 35 Nm, without spring return

- With self-centering shaft adapter for shaft dia. 8..25.6 mm, square 6...18 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual override
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4626 / A6V101037253
Torque	35 Nm
Air damper area	6 m ²
Positioning time	150 s
Degree of protection	IP54
Dimensions (W x H x D)	100 x 300 x 75 mm
Warranty	5 Years

Rotary actuators 35 Nm for ball valves VAF41..

Range overview GIB..1E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Stock no.	Product no.
AC 29.2...28.8 24	3-position	7 VA 7 W	0	BPZ:GIB131.1E	GIB131.1E
AC 29.2...28.8 24	3-position	7 VA 7 W	2	BPZ:GIB135.1E	GIB135.1E
AC 29.2...28.8 24	3-position	7 VA 7 W	2	BPZ:GIB136.1E	GIB136.1E
AC 29.2...28.8 24	DC 0...10 V	8 VA 8 W	0	BPZ:GIB161.1E	GIB161.1E
AC 24	Modbus RTU	8 VA 8 W	0	S55499-D299	GIB161.1E/MO
AC 29.2...28.8 24	DC 0...35 V Adjustable	8 VA 8 W	0	BPZ:GIB163.1E	GIB163.1E
AC 29.2...28.8 24	DC 0...35 V Adjustable	8 VA 8 W	2	BPZ:GIB164.1E	GIB164.1E
AC 29.2...28.8 24	DC 0...10 V	8 VA 8 W	2	BPZ:GIB166.1E	GIB166.1E
AC 207...253 230	3-position	5 VA 5 W	0	BPZ:GIB331.1E	GIB331.1E
AC 207...253 230	3-position	5 VA 5 W	2	BPZ:GIB335.1E	GIB335.1E
AC 207...253 230	3-position	5 VA 5 W	2	BPZ:GIB336.1E	GIB336.1E

Types GIB135.1E and 335.1E have a feedback potentiometer.
Basic Documentation No.: Z4626

Accessories for rotary air damper actuators GBB..1E and GIB..1E

Product Title	Data sheet	Stock no.	Product no.
External auxiliary switch assembly 1 switch	N4615	BPZ:ASC77.1E	ASC77.1E
External auxiliary switch assembly 2 switches	N4615	BPZ:ASC77.2E	ASC77.2E
Rotary/linear mounting kit for duct mounting	N4699	BPZ:ASK71.1	ASK71.1
Rotary/linear mounting kit with lever and bracket	N4699	BPZ:ASK71.4	ASK71.4
Universal lever	N4697	BPZ:ASK71.9	ASK71.9
Bracket for power pack	N4699	BPZ:ASK73.1	ASK73.1
Shaft extension	N4699	BPZ:ASK74.7	ASK74.7
Weather shield for rotary actuator	N4699	BPZ:ASK75.1	ASK75.1
Weather shield for rotarytype actuator GBB/GCA/GIB...1E	N4699	BPZ:ASK75.4	ASK75.4
Rotary/linear mounting kit for frame mounting	N4699	BPZ:ASK71.2	ASK71.2

Damper actuators
Air damper actuators
Rotary damper actuators non-spring return

Accessories for rotary air damper actuators GBB..1E and GIB..1E

Product Title	Data sheet	Stock no.	Product no.
Accessory Kit, GIB/GBB/GCA		S55859-Z102	ASK71.02
Rotary/linear mounting kit with lever	N4699	BPZ:ASK71.3	ASK71.3
Mounting Bracket, GM		S55859-Z114	ASK71.03
Flexible bracket for power pack	N4699	BPZ:ASK73.2	ASK73.2
Special shaft adapter	N4699	BPZ:ASK74.1	ASK74.1
Shaft Adapter for GSD/GPC		S55859-Z120	ASK74.23

Caution!

- ASK73.1 is only valid for GIB13..1E and GIB33..1E
- ASK73.2 is only valid for GIB16..1E

Damper actuators

Air damper actuators

Rotary damper actuators non-spring return for railway application

GDA..1E/RW



Air damper actuators for railway vehicles 5 Nm, without spring return

- For shaft dia. 8...16 mm, min. shaft length 30 mm, square 6...12,8 mm, min. shaft length 20 mm
- Button for disengaging the gear train to enable manual override
- For air conditioning units and air distribution systems for railway vehicles
- Connection cables railway specific 0.9 m
- Printed circuit board, coated

Data sheet	A6V10636280 / A6V10636293
Torque	5 Nm
Air damper area	0.8 m ²
Positioning time	90 s
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	71 x 137 x 60.6 mm
Warranty	5 Years

Range overview GDA..1E/RW

Operating voltage [V]	Positioning signal	Power consumption [W]	Auxiliary switch	Stock no.	Product no.
DC 24	2-position/3-position	1	0	S55499-D212	GDA141.1E/RW
DC 24	2-position/3-position	1	0	S55499-D214	GDA142.1E/RW
DC 24	2-position/3-position	1	2	S55499-D213	GDA146.1E/RW
DC 24	DC0/2... 10 V	1	0	S55499-D215	GDA161.1E/RW

Type GDA142.1E/RW has a feedback potentiometer.

GDD..1E/RW



Air damper actuators for railway vehicles 5 Nm, without spring return

- For shaft dia. 8...16 mm, min. shaft length 30 mm, square 6...12,8 mm, min. shaft length 20 mm
- Button for disengaging the gear train to enable manual override
- For air conditioning units and air distribution systems for railway vehicles
- Connection cables railway specific 0.9 m
- Printed circuit board, coated

Data sheet	A6V10636280 / A6V10636293 / A6V10636280
Torque	5 Nm
Air damper area	0.8 m ²
Positioning time	30 s
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	71 x 137 x 60.6 mm
Warranty	5 Years

Range overview GDD..1E/RW

Operating voltage [V]	Positioning signal	Power consumption [W]	Auxiliary switch	Stock no.	Product no.
DC 24	2-position/3-position	1.5	0	S55499-D208	GDD141.1E/RW
DC 24	2-position/3-position	1.5	0	S55499-D210	GDD142.1E/RW
DC 24	2-position/3-position	1.5	2	S55499-D209	GDD146.1E/RW
DC 24	2-position/3-position	1.5	2	S55499-D274	GDD146.1G/RW
DC 24	DC0/2... 10 V	1.5	0	S55499-D211	GDD161.1E/RW

Type GDD142.1E/RW has a feedback potentiometer.

Type GDD146.1G/RW: Cable length 3m.

Rotary damper actuators non-spring return for railway application

Air damper actuators for railway vehicles 8 Nm, without spring return

GLD..1E/RW

- For shaft dia. 8...16 mm, min. shaft length 30 mm, square 6...12,8 mm, min. shaft length 20 mm
- Button for disengaging the gear train to enable manual override
- For air conditioning units and air distribution systems for railway vehicles
- Connection cables railway specific 0.9 m
- Printed circuit board, coated



Data sheet	A6V10636286 / A6V10636299
Torque	8 Nm
Air damper area	1.5 m ²
Positioning time	30 s
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	71 x 137 x 60.6 mm
Warranty	5 Years

Range overview GLD..1E/RW

Operating voltage [V]	Positioning signal	Power consumption [W]	Auxiliary switch	Stock no.	Product no.
DC 24	2-position/3-position	1.8	0	S55499-D216	GLD141.1E/RW
DC 24	DC0/2... 10 V	1.8	0	S55499-D570	GLD161.1G/RW
DC 24	2-position/3-position	1.8	0	S55499-D218	GLD142.1E/RW
DC 24	2-position/3-position	1.8	2	S55499-D217	GLD146.1E/RW
DC 24	DC0/2... 10 V	1.8	0	S55499-D219	GLD161.1E/RW

Type GLD142.1E/RW has a feedback potentiometer.

Air damper actuators for railway vehicles 10 Nm, without spring return

GLA..1E/RW

- For shaft dia. 8...16 mm, min. shaft length 30 mm, square 6...12,8 mm, min. shaft length 20 mm
- Button for disengaging the gear train to enable manual override
- For air conditioning units and air distribution systems for railway vehicles
- Connection cables railway specific 0.9 m
- Printed circuit board, coated



Data sheet	A6V10636286 / A6V10636299
Torque	10 Nm
Air damper area	1.5 m ²
Positioning time	90 s
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	71 x 137 x 60.6 mm
Warranty	5 Years

Range overview GLA..1E/RW

Operating voltage [V]	Positioning signal	Power consumption [W]	Auxiliary switch	Stock no.	Product no.
DC 24	2-position/3-position	1.3	0	S55499-D220	GLA141.1E/RW
DC 24	2-position/3-position	1.3	0	S55499-D222	GLA142.1E/RW
DC 24	2-position/3-position	1.3	2	S55499-D221	GLA146.1E/RW
DC 24	DC0/2... 10 V	1.3	0	S55499-D223	GLA161.1E/RW

Type GLA142.1E/RW has a feedback potentiometer.

Damper actuators

Air damper actuators

Fast-running damper actuators with fail safe function

GNP..1E



Rotary air damper actuators 6 Nm, with electronic fail-save function

- With self-centering shaft adapter for shaft dia. 6.4...20.5 mm, square 6.4...13 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- With housing made of die-cast aluminium and 0.9 m connecting cable

Data sheet	N4609
Torque	6 Nm
Air damper area	1 m ²
Positioning time	Opening with motor: 2 s Closing with Super Cap: 2 s
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	81 x 192 x 63 mm
Warranty	5 Years

Range overview GNP..1E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Stock no.	Product no.
AC 29.2...28.8 24 DC 24	DC 0(2)...10 V 0(4)...20 mA	20 VA 13 W	0	BPZ:GNP191.1E	GNP191.1E
AC 29.2...28.8 24 DC 24	DC 0(2)...10 V 0(4)...20 mA	20 VA 13 W	2	BPZ:GNP196.1E	GNP196.1E

Rotary air damper actuators 6 Nm, without electronic fail-save function

GAP..1E

- With self-centering shaft adapter for shaft dia. 6.4...20.5 mm, square 6.4...13 mm, min. shaft length 20 mm
- With position indication and adjustable mechanical limit stop
- Button for disengaging the gear train to enable manual control
- With housing made of die-cast aluminium and 0.9 m connecting cable



Data sheet	N4608
Torque	6 Nm
Air damper area	1 m ²
Positioning time	2 s
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	81 x 192 x 63 mm
Warranty	5 Years

Range overview GAP..1E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Stock no.	Product no.
AC 29.2...28.8 24 DC 24	DC 0(2)...10 V 0(4)...20 mA	30 VA 22 W	0	BPZ:GAP191.1E	GAP191.1E
AC 24 DC 24	DC 0/2...10 V 0/4...20 mA	30 VA 22 W	0	S55499-D710	GAP191.1E/09R
AC/DC 24	DC 0(2)...10 V 0(4)...20 mA	20 VA 13 W	0	S55499-D639	GAP191.1E/IHT
AC 24 DC 24	DC 0/2...10 V 0/4...20 mA	30 VA 22 W	2	S55499-D711	GAP196.1E/09R
AC 29.2...28.8 24 DC 24	DC 0(2)...10 V 0(4)...20 mA	30 VA 22 W	2	BPZ:GAP196.1E	GAP196.1E

Damper actuators
Air damper actuators
Linear damper actuators

GDB..2E



Linear air damper actuators 125 N, without spring return

- Button for disengaging the gear train to enable manual override
- With base made of steel, plastic housing and 0.9 m connecting cable

Data sheet	N4664
Force	125 N
Air damper area	0.8 m ²
Nominal stroke	60 mm
Positioning time	150 s
Degree of protection	IP40
Dimensions (W x H x D)	68 x 152 x 59 mm
Warranty	5 Years

Range overview GDB..2E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Stock no.	Product no.
AC 19.2...28.8 24	3-position	2 VA 1 W	0	BPZ:GDB131.2E	GDB131.2E
AC 19.2...28.8 24	DC 0...10 V	3 VA 2 W	0	BPZ:GDB161.2E	GDB161.2E
AC 19.2...28.8 24	DC 0...35 V Adjustable	3 VA 2 W	0	BPZ:GDB163.2E	GDB163.2E
AC 19.2...28.8 230	3-position	2 VA 1 W	0	BPZ:GDB331.2E	GDB331.2E
AC 19.2...28.8 230	3-position	2 VA 1 W	2	BPZ:GDB336.2E	GDB336.2E

Basic Documentation No.: Z4664.

GLB..2E



Linear air damper actuators 250 N, without spring return

- Button for disengaging the gear train to enable manual override
- With base made of steel, plastic housing and 0.9 m connecting cable

Data sheet	N4664
Force	250 N
Air damper area	1.5 m ²
Nominal stroke	60 mm
Positioning time	150 s
Degree of protection	IP40
Dimensions (W x H x D)	68 x 152 x 59 mm
Warranty	5 Years

Range overview GLB..2E

Operating voltage [V]	Positioning signal	Power consumption	Auxiliary switch	Stock no.	Product no.
AC 19.2...28.8 24	3-position	2 VA 1 W	0	BPZ:GLB131.2E	GLB131.2E
AC 19.2...28.8 24	3-position	2 VA 1 W	2	BPZ:GLB136.2E	GLB136.2E
AC 19.2...28.8 24	DC 0...10 V	3 VA 2 W	0	BPZ:GLB161.2E	GLB161.2E
AC 19.2...28.8 24	DC 0...35 V Adjustable	3 VA 2 W	0	BPZ:GLB163.2E	GLB163.2E
AC 19.2...28.8 230	3-position	2 VA 1 W	0	BPZ:GLB331.2E	GLB331.2E
AC 19.2...28.8 230	3-position	2 VA 1 W	2	BPZ:GLB336.2E	GLB336.2E

Basis Documentation No.: Z4664.

Accessories for linear air damper actuators GDB..2E and GLB..2E

Product Title	Data sheet	Stock no.	Product no.
Clamp for linkage (5...8 mm dia.)	N4698	BPZ:ASK55.2	ASK55.2
Weather shield for rotary-/linear-type actuator GDB/GLB/GSF...E	N4698	BPZ:ASK75.5	ASK75.5

Damper actuators

VAV controller

Compact room automation stations BACnet/IP DXR2.E..

DXR2.E10PL..



Compact room automation stations, BACnet/IP, 24 V

Compact room automation stations for HVAC, lighting, and shading:

- BACnet/IP communications
- KNX PL-Link bus to connect sensors, actuators, and operator units (including bus power)
- KNX S-Mode device integration
- 2-port Ethernet switch
- USB interface for Tool

Data sheet	A6V11259958
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	Max. 66 VA
Communication	BACnet/IP KNX PL-Link KNX S-Mode
Universal inputs, number	3
Triac outputs, number	4
Triac output, switching voltage	AC 24 V
Triac output, switching current	150 mA
Degree of protection	IP20
Dimensions (W x H x D)	201 x 137 x 82 mm

Range overview DXR2.E10PL..

Product Title	Stock no.	Product no.
Compact room automation station and actuator combination, BACnet/IP, 24 V, 1 DI, 2 UI, 1 AO, 4 triac, pressure sensor, 30 data points	S55376-C145	DXR2.E10PL-102B
Compact room automation station, BACnet/IP, 24 V, DIN housing, 1 DI, 2 UI, 1 AO, 4 triac, pressure sensor, 60 data points	S55376-C146	DXR2.E10PLX-102B

Accessories for DXR2.E..

Product Title	Data sheet	Stock no.	Product no.
Universal lever	N4697	BPZ:ASK71.9	ASK71.9
Centering insert D-profile fixed 12 mm dia. x 9 mm	N4698	BPZ:ASK78.12	ASK78.12
Air tube connection kit 50mm DXA.T50		S55499-D500	DXA.T50
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3
Centering insert 12.7 mm dia. (1/2")	N4698	BPZ:ASK78.5	ASK78.5
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7
Centering insert 10 mm dia.	N4698	BPZ:ASK78.9	ASK78.9
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14

Compact room automation stations BACnet/MSTP DXR2.M..

Compact room automation station, BACnet/MSTP, 24 V

DXR2.M10PL..

Compact room automation stations for HVAC, lighting, and shading:

- BACnet/MSTP communications
- KNX PL-Link bus to connect sensors, actuators, and operator units (including bus power)
- USB interface for Tool

Data sheet	A6V11259964
Operating voltage	AC 24 V
Frequency	50/60 Hz
Degree of protection	IP20
Dimensions (W x H x D)	201 x 137 x 99 mm

Compact room automation station and actuator combination, BACnet/MSTP, 24 V, 1 DI, 2 UI, 1 AO, 4 triac, pressure sensor, 30 data points

DXR2.M10PL-102B



Compact room automation stations and actuator combination for HVAC, lighting, and shading:

- BACnet/MSTP communications
- KNX PL-Link bus to connect sensors, actuators, and operator units (including bus power)
- Damper Actuator 10Nm
- USB interface for Tool
- 30 data points

Data sheet	A6V11259964
Power consumption	58 VA
Communication	BACnet/IP KNX PL-Link KNX S-Mode
Universal inputs, number	2
Digital inputs, number	1
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	1 mA
Triac outputs, number	4
Triac output, switching voltage	24 V
Triac output, switching current	0.25 A

Stock no.	Product no.
S55376-C147	DXR2.M10PL-102B

Damper actuators

VAV controller

Compact room automation stations BACnet/MSTP DXR2.M..

DXR2.M10PLX-102B



Compact room automation station, BACnet/MSTP, 24 V, DIN housing, 1 DI, 2 UI, 1 AO, 4 triac, pressure sensor, 60 data points

Compact room automation stations for HVAC, lighting, and shading:

- BACnet/MSTP communications
- KNX PL-Link bus to connect sensors, actuators, and operator units (including bus power)
- USB interface for Tool
- 60 data points

Data sheet	A6V11259964
Power consumption	58 VA
Communication	BACnet/MSTP KNX PL-Link
Universal inputs, number	2
Digital inputs, number	1
Analog outputs, number	1
Analog output, signal	DC 0...10 V
Analog output, current	1 mA
Triac outputs, number	4
Triac output, switching voltage	24 V
Triac output, switching current	0.25 A

Stock no. Product no.

S55376-C148 **DXR2.M10PLX-102B**

Accessories for DXR2.M..

Product Title	Data sheet	Stock no.	Product no.
Universal lever	N4697	BPZ:ASK71.9	ASK71.9
Centering insert D-profile fixed 12 mm dia. × 9 mm	N4698	BPZ:ASK78.12	ASK78.12
Air tube connection kit 50mm DXA.T50		S55499-D500	DXA.T50
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3
Centering insert 12.7 mm dia. (1/2")	N4698	BPZ:ASK78.5	ASK78.5
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7
Centering insert 10 mm dia.	N4698	BPZ:ASK78.9	ASK78.9
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14

Compact actuating room automation station DXR1.E09PDZ-..

DXR1.E09PDZ..



- Compact, configurable room automation station in combination with actuator for HVAC
- BACnet IP communications (BTL certified)
- 2-port Ethernet switch
- USB interface
- Operating voltage AC 24 V
- Built-in 5 Nm actuator
- Internal 0...500 Pa differential pressure sensor
- Plug-in terminal blocks

Data sheet	A6V11393931
Operating voltage	AC 24 V +/-20 %
Frequency	50 or 60 Hz
Interface	BACnet IP , USB (2.0)
Degree of protection	IP20
Dimensions (W x H x D)	143.1 x 83.6 x 137 mm
Warranty	2 Years

Range overview DXR1.E09PDZ..

Power consumption	Communication	Max. cable length [m]	Digital outputs, number	Analog outputs, number	Stock no.	Product no.
Max. 7.5 VA	BACnet IP	30	4	1	S55499-D456	DXR1.E09PDZ-112
Max. 7.5 VA	BACnet IP	30	4	1	S55499-D457	DXR1.E09PDZ-113

Compact actuating room automation station DXR1.E10PL-..

DXR1.E10PL..



- Compact, configurable room automation station in combination with actuator for HVAC
- BACnet IP communications (BTL certified)
- 2-port Ethernet switch
- USB interface
- KNX PL-Link bus to connect sensors, actuators, and operator units (including bus power)
- Operating voltage AC 24 V
- Built-in 10 Nm actuator
- Internal 0...500 Pa differential pressure sensor
- Plug-in terminal blocks

Data sheet	A6V11393933
Operating voltage	AC 24 V +/-20 %
Frequency	50 or 60 Hz
Interface	USB (2.0), PL-Link
Degree of protection	IP20
Dimensions (W x H x D)	143.1 x 83.6 x 137 mm
Warranty	2 Years

Range overview DXR1.E10PL..

Power consumption	Communication	Max. cable length [m]	Digital outputs, number	Analog outputs, number	Stock no.	Product no.
Max. 12 VA	BACnet IP	30	4	1	S55499-D458	DXR1.E10PL-112
Max. 12 VA	BACnet IP	30	4	1	S55499-D459	DXR1.E10PL-113



Damper actuators

VAV controller

Compact room automation stations BACnet/IP DXR1.E..

DXR1.E02PLZ-112



Compact, configurable room automation station and actuator combination, BACnet/IP, 24 V, pressure sensor, VAV011 (VAV012)

- Combination of compact room automation station and actuator for VAV control
- BACnet IP communications (BTL certified)
- 2-port Ethernet switch
- USB interface
- Operating voltage AC 24 V
- Built-in 10 Nm actuator
- Internal 0...500 Pa differential pressure sensor
- Plug-in terminal blocks

Data sheet	A6V11393935
Operating voltage	AC 24 V +/-20 %
Frequency	50 or 60 Hz
Power consumption	Max. 7 VA
Communication	BACnet IP
Max. cable length	30 m
Interface	Ethernet, USB (2.0)
Mounting	Directly on the damper shaft
Degree of protection	IP20
Dimensions (W x H x D)	143.1 x 83.6 x 137 mm
Warranty	2 Years

Stock no.

Product no.

S55499-D460

DXR1.E02PLZ-112

Accessories for DXR1.E..

Product Title	Data sheet	Stock no.	Product no.
Universal lever	N4697	BPZ:ASK71.9	ASK71.9
Centering insert D-profile fixed 12 mm dia. x 9 mm	N4698	BPZ:ASK78.12	ASK78.12
Air tube connection kit 50mm DXA.T50		S55499-D500	DXA.T50
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3
Centering insert 12.7 mm dia. (1/2")	N4698	BPZ:ASK78.5	ASK78.5
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7
Centering insert 10 mm dia.	N4698	BPZ:ASK78.9	ASK78.9
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14

Compact room automation stations BACnet/MSTP DXR1.M..

Compact actuating room automation station DXR1.M09PDZ-..

DXR1.M09PDZ..

- Compact, configurable room automation station in combination with actuator for HVAC
- BACnet MS/TP communications (BTL certified)
- USB interface
- Operating voltage AC 24 V
- Built-in 5 Nm actuator
- Internal 0...500 Pa differential pressure sensor
- Plug-in terminal blocks



Data sheet	A6V11393929
Operating voltage	AC 24 V +/-20 %
Frequency	50 or 60 Hz
Interface	MS/TP, USB (2.0)
Degree of protection	IP20
Dimensions (W x H x D)	143.1 x 83.6 x 137 mm
Warranty	2 Years

Range overview DXR1.M09PDZ..

Power consumption [VA]	Communication	Max. cable length [m]	Universal-inputs, number	Digital outputs, number	Analogoutput s, number	Stock no.	Product no.
Max. 5.5	BACnet MS/TP	30	2	4	1	S55499-D462	DXR1.M09PDZ-112
Max. 5.5	BACnet MS/TP	30	2	4	1	S55499-D463	DXR1.M09PDZ-113

Accessories for DXR1.M..

Product Title	Data sheet	Stock no.	Product no.
Universal lever	N4697	BPZ:ASK71.9	ASK71.9
Centering insert D-profile fixed 12 mm dia. x 9 mm	N4698	BPZ:ASK78.12	ASK78.12
Air tube connection kit 50mm DXA.T50		S55499-D500	DXA.T50
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3
Centering insert 12.7 mm dia. (½")	N4698	BPZ:ASK78.5	ASK78.5
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7
Centering insert 10 mm dia.	N4698	BPZ:ASK78.9	ASK78.9
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14

Damper actuators

VAV controller

VAV compact controllers with KNX PL-Link communication

G..B181.1E/KN



VAV compact controller KNX

- Compact controller with KNX communication for plants with variable or constant air volume flow
- Integrated, highly precise differential pressure sensor, damper actuator and digitally configurable air volume controller
- Nominal torque 5 or 10 Nm
- Air damper rotation angle mechanically adjustable between 0 and 90°
- Configurable as single device per room or for cascade control with pressure ratio 1:1, positive pressure, or negative pressure
- Prewired with a 0.9 m cable and a 0.9 m cable

Data sheet	N3547
Positioning time	150 s
Communication	KNX S-Mode KNX LTE-Mode KNX PL-Link
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	71 x 158 x 61 mm
Warranty	5 Years

Range overview G..B181.1E/KN

Torque [Nm]	Operating voltage [V]	Air damper area [m ²]	Power consumption	Stock no.	Product no.
5	AC 24	0.8	3 VA 2.5 W	S55499-D134	GDB181.1E/KN
5	AC 24	0.8	3 VA 2.5 W	S55499-D505	GDB181.1EMKN
10	AC 24	1.5	3 VA 2.5 W	S55499-D135	GLB181.1E/KN

GDB181.EMKN packaging unit 18 pieces.
Basic Documentation No.: P3547

Accessories for G..B181.1E/KN

Product Title	Data sheet	Stock no.	Product no.
Rotary/linear mounting kit	N4698	BPZ:ASK71.5	ASK71.5
Rotary/linear mounting kit with bracket	N4698	BPZ:ASK71.6	ASK71.6
Universal lever	N4697	BPZ:ASK71.9	ASK71.9
Centering insert D-profile fixed 12 mm dia. x 9 mm	N4698	BPZ:ASK78.12	ASK78.12
Handheld tool for VAV compact controllers	A6V10631836	S55499-D165	AST20
Interface Converter USB/PPS2	A6V11236956	S55499-D373	AST22
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3
Weather shield for rotary-/linear-type actuator GDB/GLB/GSF...E	N4698	BPZ:ASK75.5	ASK75.5
Centering insert 12.7 mm dia. (1/2")	N4698	BPZ:ASK78.5	ASK78.5
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7
Centering insert 10 mm dia.	N4698	BPZ:ASK78.9	ASK78.9
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14

VAV compact controllers with BACnet MS/TP communication

VAV compact controller BACnet

G..B181.1E/BA

- Networked compact controller with BACnet MS/TP (BTL-listed) communication for plants with variable or constant air volume flow
- Integrated, highly precise differential pressure sensor, damper actuator and digitally configurable air volume controller
- Nominal torque 5 or 10 Nm
- Air damper rotation angle mechanically adjustable between 0 and 90°
- Configurable as single device per room or for cascade control with pressure ratio 1:1, positive pressure, or negative pressure
- Prewired with a 0.9 m connecting cable and a 0.9 m bus cable



Data sheet	A6V10631834
Positioning time	150 s
Communication	BACnet MS/TP
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	71 x 158 x 61 mm
Warranty	5 Years

Range overview G..B181.1E/BA

Torque [Nm]	Operating voltage [V]	Air damper area [m ²]	Power consumption	Stock no.	Product no.
5	AC 24	0.8	3 VA 2.5 W	S55499-D168	GDB181.1E/BA
5	AC 24	0.8	3 VA 2.5 W	S55499-D506	GDB181.1EMBA
10	AC 24	1.5	3 VA 2.5 W	S55499-D169	GLB181.1E/BA

GDB181.EMBA packaging unit 18 pieces

Accessories for G..B181.1E/BA

Product Title	Data sheet	Stock no.	Product no.
Rotary/linear mounting kit	N4698	BPZ:ASK71.5	ASK71.5
Rotary/linear mounting kit with bracket	N4698	BPZ:ASK71.6	ASK71.6
Universal lever	N4697	BPZ:ASK71.9	ASK71.9
Centering insert D-profile fixed 12 mm dia. x 9 mm	N4698	BPZ:ASK78.12	ASK78.12
Handheld tool for VAV compact controllers	A6V10631836	S55499-D165	AST20
Interface Converter USB/PPS2	A6V11236956	S55499-D373	AST22
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3
Weather shield for rotary-/linear-type actuator GDB/GLB/GSF...E	N4698	BPZ:ASK75.5	ASK75.5
Centering insert 12.7 mm dia. (1/2")	N4698	BPZ:ASK78.5	ASK78.5
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7
Centering insert 10 mm dia.	N4698	BPZ:ASK78.9	ASK78.9
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14

Damper actuators

VAV controller

VAV compact controllers with Modbus RTU communication

G..B181.1E/MO



VAV compact controller Modbus

- Networked compact controller with Modbus RTU communication for plants with variable or constant air volume flow
- Integrated, highly precise differential pressure sensor, damper actuator and digitally configurable air volume controller
- Nominal torque 5 or 10 Nm
- Air damper rotation angle mechanically adjustable between 0 and 90°
- Configurable as single device per room or for cascade control with pressure ratio 1:1, positive pressure, or negative pressure
- Prewired with a 0.9 m connecting cable and a 0.9 m bus cable

Data sheet	A6V10631832
Positioning time	150 s
Communication	Modbus RTU
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	71 x 158 x 61 mm
Warranty	5 Years

Range overview G..B181.1E/MO

Torque [Nm]	Operating voltage [V]	Air damper area [m ²]	Power consumption	Stock no.	Product no.
5	AC 24	0.8	3 VA 2.5 W	S55499-D166	GDB181.1E/MO
10	AC 24	1.5	3 VA 2.5 W	S55499-D167	GLB181.1E/MO

Accessories for G..B181.1E/MO

Product Title	Data sheet	Stock no.	Product no.
Rotary/linear mounting kit	N4698	BPZ:ASK71.5	ASK71.5
Rotary/linear mounting kit with bracket	N4698	BPZ:ASK71.6	ASK71.6
Universal lever	N4697	BPZ:ASK71.9	ASK71.9
Centering insert D-profile fixed 12 mm dia. x 9 mm	N4698	BPZ:ASK78.12	ASK78.12
Handheld tool for VAV compact controllers	A6V10631836	S55499-D165	AST20
Interface Converter USB/PPS2	A6V11236956	S55499-D373	AST22
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3
Weather shield for rotary-/linear-type actuator GDB/GLB/GSF...E	N4698	BPZ:ASK75.5	ASK75.5
Centering insert 12.7 mm dia. (½")	N4698	BPZ:ASK78.5	ASK78.5
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7
Centering insert 10 mm dia.	N4698	BPZ:ASK78.9	ASK78.9
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14

G..B181.1E/3



VAV compact controller

- Compact controller for plants with variable or constant air volume flow
- Integrated, highly precise differential pressure sensor, damper actuator and digitally configurable air volume controller
- Nominal torque 5 or 10 Nm
- Air damper rotation angle mechanically adjustable between 0 and 90°
- Forced close-off function in DC 2...10 V operation
- Optionally configurable as VAV compact controller or as damper actuator/differential pressure sensor unit
- Prewired with a 0.9 m connecting cable

Data sheet	N3544
Positioning time	150 s
Positioning signal	DC 0...10 V DC 2...10 V 3-position
Degree of protection	IP54
Dimensions (W x H x D)	71 x 158 x 61 mm
Warranty	5 Years

Range overview G..B181.1E/3

Torque [Nm]	Operating voltage [V]	Air damper area [m ²]	Power consumption	Stock no.	Product no.
5	AC 19.2...28.8 24	0.8	3 VA 2.5 W	BPZ:GDB181.1E/3	GDB181.1E/3
10	AC 19.2...28.8 24	1.5	3 VA 2.5 W	BPZ:GLB181.1E/3	GLB181.1E/3

Basic Documentation No.: P3544.

Accessories for G..B181.1E/3

Product Title	Data sheet	Stock no.	Product no.
Rotary/linear mounting kit	N4698	BPZ:ASK71.5	ASK71.5
Rotary/linear mounting kit with bracket	N4698	BPZ:ASK71.6	ASK71.6
Universal lever	N4697	BPZ:ASK71.9	ASK71.9
Centering insert D-profile fixed 12 mm dia. x 9 mm	N4698	BPZ:ASK78.12	ASK78.12
Handheld tool for VAV compact controllers	A6V10631836	S55499-D165	AST20
Interface Converter USB/PPS2	A6V11236956	S55499-D373	AST22
Insert for small shaft dia.	N4698	BPZ:ASK78.3	ASK78.3
Weather shield for rotary-/linear-type actuator GDB/GLB/GSF...E	N4698	BPZ:ASK75.5	ASK75.5
Centering insert 12.7 mm dia. (1/2")	N4698	BPZ:ASK78.5	ASK78.5
Centering insert 8 mm square	N4698	BPZ:ASK78.6	ASK78.6
Centering insert 10 mm square	N4698	BPZ:ASK78.7	ASK78.7
Centering insert 10 mm dia.	N4698	BPZ:ASK78.9	ASK78.9
Centering insert 12 mm dia.	N4698	BPZ:ASK78.10	ASK78.10
Centering insert 8 mm square	N4698	BPZ:ASK78.14	ASK78.14

Damper actuators

VAV controller

VAV modular controllers

ASV181.1E/3



VAV modular controller

- Modular controller for plants with variable or constant air volume flow
- Integrated, highly precise differential pressure sensor and digitally configurable air volume controller
- For connection to an OpenAir™ family 3-position air damper actuator with high torque or safety functions
- Prewired with a 0.9 m cable and a 0.3 m connecting cable

Data sheet	N3545
Angular rotation	90°
Power consumption	1 VA
	0.5 W
Positioning time	150 s
Positioning signal	DC 0...10 V
	DC 2...10 V
	3-position
Degree of protection	IP54
Medium temperature	0...50 °C
Dimensions (W x H x D)	68 x 144 x 45 mm
Operating voltage	AC 24 V
Warranty	2 Years

Stock no.	Product no.
BPZ:ASV181.1E/3	ASV181.1E/3

Accessories for ASV181.1E/3

Product Title	Data sheet	Stock no.	Product no.
Handheld tool for VAV compact controllers	A6V10631836	S55499-D165	AST20
Interface Converter USB/PPS2	A6V11236956	S55499-D373	AST22

Damper actuators
Actuators for fire and smoke protection dampers
Fire damper actuators

Accessories for GND..

Product Title	Data sheet	Stock no.	Product no.
OpenAir Electronic Fusible Link.	155-746	BPZ:ASK79.165	ASK79.165
Electronic Fusible Link (EFL).		BPZ:ASK79.212	ASK79.212
OpenAir Electronic Fusible Link.	155-746	BPZ:ASK79.250	ASK79.250
OpenAir Electronic Fusible Link.	155-746	BPZ:ASK79.350	ASK79.350

Damper actuators

Actuators for fire and smoke protection dampers

Fire damper actuators

GRA..26.1E



Actuators for fire protection dampers

- Rotary type
- 2-position
- Spring return to failsafe position
- Temperature monitoring unit (for 72 °C)
- Fixed auxiliary switches for switching points 5° and 80°
- Rigid connection between actuator and damper square shafts (10x10, 12x12)
- Manual setting
- Position indicator
- Robust, lightweight all metal housing made from die-cast aluminium and 0.9 m connecting cable
- Degree of protection: Temperature monitoring unit IP54 / Actuator IP54

Data sheet	A6V10888424
Torque	4 Nm
Air damper area	0.6 m ²
Positioning time	Open with motor: 90 s Close with spring return: 15 s
Connection cable	Supply: 2 x 0.75 mm ² / auxiliary switch: 6 x 0.75 mm ²
Degree of protection	IP54
Medium temperature	≤72 °C
Dimensions (W x H x D)	81 x 178 x 63 mm
Warranty	5 Years

Range overview GRA..26.1E

Operating voltage [V]	Positioning signal	Power consumption	Cable length [m]	Shaft linkage [mm]	Stock no.	Product no.
AC 24 DC 24	2-position	5 VA 3.5 W	0.9	10 x 10	S55499-D294	GRA126.1E/10
AC 24 DC 24	2-position	5 VA 3.5 W	0.9	12 x 12	S55499-D507	GRA126.1E/12A
AC 24 DC 24	2-position	5 VA 3.5 W	0.9	12 x 12	S55499-D566	GRA126.1E/C12
AC 230	2-position	7 VA 4.5 W	0.9	10 x 10	S55499-D295	GRA326.1E/10
AC 24 DC 24	2-position	5 VA 3.5 W	0.9	12 x 12	S55499-D296	GRA126.1E/12
AC 230	2-position	7 VA 4.5 W	0.9	12 x 12	S55499-D297	GRA326.1E/12
AC 24 DC 24	2-position	5 VA 3.5 W	0.9	10 x 10	S55499-D290	GRA126.1E/T10
AC 230	2-position	7 VA 4.5 W	0.9	10 x 10	S55499-D291	GRA326.1E/T10
AC 24 DC 24	2-position	5 VA 3.5 W	0.9	12 x 12	S55499-D292	GRA126.1E/T12
AC 230	2-position	7 VA 4.5 W	0.9	12 x 12	S55499-D293	GRA326.1E/T12

The 2 final figures of the classification correspond to the square of axis in mm.
Types GRA../T10 and GRA../T12 are equipped with a temperature monitoring unit.

Accessories for GRA..26.1E

Product Title	Data sheet	Stock no.	Product no.
Duct tip for temperature monitor unit (72 °C)	N4697	BPZ:ASK79.4	ASK79.4
Duct tip for temperature monitor unit (95 °C)	N4697	BPZ:ASK79.5	ASK79.5

GNA..26.1E



Actuators for fire protection dampers

- Rotary type
- 2-position
- Spring return to failsafe position
- Temperature monitoring unit (for 72 °C)
- Fixed auxiliary switches for switching points 5° and 80°
- Rigid connection between actuator and damper square shafts (10 x 10, 12 x 12)
- Manual setting
- Position indicator
- Robust, lightweight all metal housing made from die-cast aluminium and 0.9 m connecting cable
- Degree of protection: Temperature monitoring unit IP54 / Actuator IP54

Data sheet	N4620
Torque	9 Nm
Air damper area	1 m ²
Positioning time	Open with motor: 90 s Close with spring return: 15 s
Connection cable	Supply: 2 x 0.75 mm ² / auxiliary switch: 6 x 0.75 mm ²
Degree of protection	IP54
Dimensions (W x H x D)	81 x 178 x 63 mm
Warranty	5 Years

Range overview GNA..26.1E with or without temperature monitoring unit

Operating voltage [V]	Positioning signal	Power consumption	Shaft linkage [mm]	Stock no.	Product no.
AC 24...48 24 DC 24	2-position	5 VA 3.5 W	10 x 10	BPZ:GNA126.1E/10	GNA126.1E/10
AC 195.5...264.5 230	2-position	7 VA 4.5 W	10 x 10	BPZ:GNA326.1E/10	GNA326.1E/10
AC 24...48 24 DC 24	2-position	5 VA 3.5 W	12 x 12	BPZ:GNA126.1E/12	GNA126.1E/12
AC 195.5...264.5 230	2-position	7 VA 4.5 W	12 x 12	BPZ:GNA326.1E/12	GNA326.1E/12
AC 24...48 24 DC 24	2-position	5 VA 3.5 W	10 x 10	BPZ:GNA126.1E/T10	GNA126.1E/T10
AC 195.5...264.5 230	2-position	7 VA 4.5 W	10 x 10	BPZ:GNA326.1E/T10	GNA326.1E/T10
AC 24...48 24 DC 24	2-position	7 VA 4.5 W	12 x 12	BPZ:GNA126.1E/T12	GNA126.1E/T12
AC 195.5...264.5 230	2-position	7 VA 4.5 W	12 x 12	BPZ:GNA326.1E/T12	GNA326.1E/T12

The 2 final figures of the classification correspond to the square of axis in mm.
Types GNA../T10 and GNA../T12 are equipped with a temperature monitoring unit.

Accessories for GNA..26.1E

Product Title	Data sheet	Stock no.	Product no.
Duct tip for temperature monitor unit (72 °C)	N4697	BPZ:ASK79.4	ASK79.4
Duct tip for temperature monitor unit (95 °C)	N4697	BPZ:ASK79.5	ASK79.5

Damper actuators

Actuators for fire and smoke protection dampers

Fire damper actuators

GGA..26.1E



Actuators for fire protection dampers

- Rotary type
- 2-position
- Spring return to failsafe position
- Temperature monitoring unit (for 72 °C)
- Fixed auxiliary switches for switching points 5 ° and 80 °
- Rigid connection between actuator and damper square shafts (10 x 10, 12 x 12)
- Manual setting
- Position indicator
- Robust, lightweight all metal housing made from die-cast aluminium and 0.9 m connecting cable
- Degree of protection: Temperature monitoring unit IP54 / Actuator IP54

Data sheet	N4617
Torque	18 Nm
Air damper area	2.5 m ²
Positioning time	Open with motor: 90 s Close with spring return 15 s
Connection cable	Supply: 2 x 0.75 mm ² / auxiliary switch: 6 x 0.75 mm ²
Degree of protection	IP54
Medium temperature	≤72 °C
Dimensions (W x H x D)	100 x 264 x 71 mm
Warranty	5 Years

Range overview GGA..26.1E with or without temperature monitoring unit

Operating voltage [V]	Positioning signal	Power consumption	Shaft linkage [mm]	Stock no.	Product no.
AC 24...48 24 DC 24	2-position	7 VA 5 W	10 x 10	BPZ:GGA126.1E/10	GGA126.1E/10
AC 24...48 24 DC 24	2-position	7 VA 5 W	12 x 12	BPZ:GGA126.1E/12	GGA126.1E/12
AC 195.5...264.5 230	2-position	8 VA 6 W	10 x 10	BPZ:GGA326.1E/10	GGA326.1E/10
AC 195.5...264.5 230	2-position	8 VA 6 W	12 x 12	BPZ:GGA326.1E/12	GGA326.1E/12
AC 24...48 24 DC 24	2-position	7 VA 5 W	10 x 10	BPZ:GGA126.1E/T10	GGA126.1E/T10
AC 195.5...264.5 230	2-position	8 VA 6 W	10 x 10	BPZ:GGA326.1E/T10	GGA326.1E/T10
AC 24...48 24 DC 24	2-position	7 VA 5 W	12 x 12	BPZ:GGA126.1E/T12	GGA126.1E/T12
AC 195.5...264.5 230	2-position	8 VA 6 W	12 x 12	BPZ:GGA326.1E/T12	GGA326.1E/T12

The 2 final figures of the classification correspond to the square of axis in mm.

Types GGA../T10 and GGA../T12 are equipped with a temperature monitoring unit.

Accessories for GGA..26.1E

Product Title	Data sheet	Stock no.	Product no.
Duct tip for temperature monitor unit (72 °C)	N4697	BPZ:ASK79.4	ASK79.4
Duct tip for temperature monitor unit (95 °C)	N4697	BPZ:ASK79.5	ASK79.5
Accessory Kit, GIB/GBB/GCA		S55859-Z102	ASK71.02
Mounting Bracket, GM		S55859-Z114	ASK71.03

Damper actuators
Actuators for fire and smoke protection dampers
Fire damper actuators

GRD..1U 30 lb-in, Spring Return, 2-Position, 24V, Fire-Smoke

GRD..1U

OpenAir GRD..1U direct-coupled, 30 lb-in, 2-position, spring return electronic damper actuators are UL listed for smoke control dampers or for combination fire/smoke rated dampers.

Data sheet	A6V11692965, A6V11486812
Torque	30 lb-in
Angular rotation	95°
Positioning time	Operating: 30 s runtime for 90°; Closing (power loss with spring return: 15 s max
Connection cable	19/30 strand 18 GA
Dimensions (W x H x D)	3.5 x 8.5 x 3.0 in
Material, housing	NEMA 1, plenum-rated plastic
Standard	UL60730; cUL CSA 60730; CE conformity for Residential, Commercial, and Industrial
Warranty	5 Years



Operating voltage	Power consumption	Auxiliary switch	Cable length [ft]	Stock no.	Product no.
24 VAC/DC	Running: ~14 VA/8W, Holding: ~4 VA/2 W		3	S55499-D468	GRD121.1U
24 VAC/DC	Running: ~14 VA/8W, Holding: ~4 VA/2 W	2	3	S55499-D470	GRD126.1U
120 VAC	Running: ~12 VA, Holding: ~4 VA		3	S55499-D472	GRD221.1U
120 VAC	Running: ~12 VA, Holding: ~4 VA	2	3	S55499-D474	GRD226.1U
230 VAC	Running: ~12 VA, Holding: ~4 VA		3	S55499-D476	GRD321.1U
230 VAC	Running: ~12 VA, Holding: ~4 VA	2	3	S55499-D478	GRD326.1U

Variable speed drives






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	Accessories and spare parts for G120P..	635

Variable speed drives

Overview and selection tools

Order instruction

G120P Bundle		order separately
Control Unit CU230P-2-BT incl. shield connection kit 	Power Module PM230 3 AC 380 ... 480 V 0.75 ... 75 kW (IP20) 0.75 ... 90 kW (IP55) 	Operator panel IOP-2-BT Intelligent Operator Panel or BOP-2 Basic Operator Panel or SAM Smart Access Module or Blanking cover 
Optional accessory CU230P-2 DP (PROFIBUS DP) CU230P-2 CAN (CANopen) CU230P-2 PN (PROFINET IO) Air guide sheets Door mounting kits		Spare parts Small mounting parts Fan units

Power range G120P

		Dimension / WxHxD			
		IP55		IP20	
kW	Frame size	Filter A	Filter B	Filter A	Filter B
0.75	A	154x460x249	154x460x249	73x196x223	73x202x288
1.1	A	154x460x249	154x460x249	73x196x223	73x202x288
1.5	A	154x460x249	154x460x249	73x196x223	73x202x288
2.2	A	154x460x249	154x460x249	73x196x223	73x202x288
3	A	154x460x249	154x460x249	73x196x223	73x202x288
4	B	180x540x249	180x540x249	100x292x223	100x297x308
5.5	B	180x540x249	180x540x249	100x292x223	100x297x308
7.5	B	180x540x249	180x540x249	100x292x223	100x297x308
11	C	230x620x249	230x620x249	140x355x223	140x359x318
15	C	230x620x249	230x620x249	140x355x223	140x359x318
18.5	C/D	230x620x249	320x640x329	140x355x223	140x359x318
22	D	320x640x329	320x640x329	275x512x253	375x419x253
30	D	320x640x329	320x640x329	275x512x253	375x419x253
37	E	320x751x329	320x751x329	275x635x253	385x499x253
45	E	320x751x329	320x751x329	275x635x253	385x499x253
55	F	410x915x416	410x915x416	350x934x365	500x634x365
75	F	410x915x416	410x915x416	350x934x365	500x634x365
90	F	410x915x416	410x915x416	not available	not available

IP20: The depth increases by 12 mm if BOP-2, IOP-2-BT or blanking cover is used.

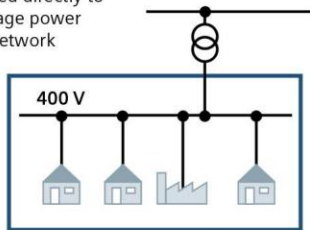
IP55: The depth increases by 7 mm if BOP-2, IOP-2-BT or blanking cover is used.

IP20: The height increases if screen plate is used:

FSA: + 80 mm; FSB: + 78 mm; FSC: + 77 mm; FSD, FSE, FSF: + 123 mm.

Filter

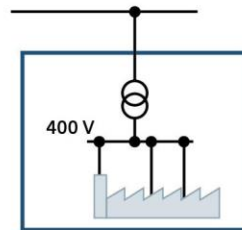
1st Enviroment
Connected directly to
low voltage power
supply network



G120P filter B
for EMV sensitive applications
filter according EN 55011 Class B / EN 61800-3 C1

G120P filter A
for standard applications
filter according EN 55011 Class A1 / EN 61800-3 C2
installation and commissioning by a professional

2nd Enviroment
Any building fed from a
dedicated transformer



Variable speed drive with filter
according EN 55011 Class A2
EN 61800-3 C3

Variable speed drive unfiltered
EN 61800-3 C4

Variable Speed Drive for pumps and fans, IP55, Filter B (C1)

G120P..5B



Variable speed drive for energy-optimized speed control of pump, compressor and fan motors in building control applications, including: Power Module PM230, Control Unit CU230P-2-BT with screening plate without panel.

The G120P Bundle does not contain an operator panel or blanking cover. To achieve the IP55 or IP54 protection rating with the IP55 devices, please order an operator panel or blanking cover separately.

Data sheet	N5111
Operating voltage	400 V
Frequency	47...63 Hz
Communication	Modbus/RTU RS485/US5 BACnet MS/TP PROFIBUS (optional) PROFINET (optional) CANopen (optional)
Product conformity	CE EAC RCM
Standard	EN 61800-3

Range overview G120P..5B

Power output [kW]	Output current [A]	Filter type	Dimensions (WxHxD) [mm]	Weight (net) [kg]	Stock no.	Product no.
0.75	2.2	B	154 x 460 x 249	5.01	6SL3200-6AM12-2BH0	G120P-0.75/35B
1.1	3.1	B	154 x 460 x 249	5.01	6SL3200-6AM13-1BH0	G120P-1.1/35B
1.5	4.1	B	154 x 460 x 249	5.01	6SL3200-6AM14-1BH0	G120P-1.5/35B
2.2	5.9	B	154 x 460 x 249	5.01	6SL3200-6AM15-8BH0	G120P-2.2/35B
3	7.7	B	154 x 460 x 249	5.01	6SL3200-6AM17-7BH0	G120P-3/35B
4	10.2	B	180 x 540 x 249	7.01	6SL3200-6AM21-0BH0	G120P-4/35B
5.5	13.2	B	180 x 540 x 249	7.01	6SL3200-6AM21-3BH0	G120P-5.5/35B
7.5	18	B	180 x 540 x 249	7.01	6SL3200-6AM21-8BH0	G120P-7.5/35B
11	26	B	230 x 620 x 249	10.21	6SL3200-6AM22-6BH0	G120P-11/35B
15	32	B	230 x 620 x 249	10.21	6SL3200-6AM23-2BH0	G120P-15/35B
18.5	38	B	320 x 640 x 329	31.71	6SL3200-6AM23-8BH0	G120P-18.5/35B
22	45	B	320 x 640 x 329	31.71	6SL3200-6AM24-5BH0	G120P-22/35B
30	60	B	320 x 640 x 329	31.71	6SL3200-6AM26-0BH0	G120P-30/35B
37	75	B	320 x 751 x 329	37.71	6SL3200-6AM27-5BH0	G120P-37/35B
45	90	B	320 x 751 x 329	37.71	6SL3200-6AM28-8BH0	G120P-45/35B
55	110	B	410 x 915 x 416	70.71	6SL3200-6AM31-1BH0	G120P-55/35B
75	145	B	410 x 915 x 416	70.71	6SL3200-6AM31-4BH0	G120P-75/35B
90	178	B	410 x 915 x 416	70.71	6SL3200-6AM31-7BH0	G120P-90/35B

IP55: The depth increases by 7mm if BOP-2, IOP-2-BT or blind cover is used.

G120P..5A



Variable Speed Drive for pumps and fans, IP55, Filter A (C2)

Variable speed drive for energy-optimized speed control of pump, compressor and fan motors in building control applications, including: Power Module PM230, Control Unit CU230P-2-BT with screening plate without panel.

The G120P Bundle does not contain an operator panel or blanking cover. To achieve the IP55 or IP54 protection rating with the IP55 devices, please order an operator panel or blanking cover separately.

Data sheet	N5111
Operating voltage	400 V
Frequency	47...63 Hz
Communication	Modbus/RTU RS485/US\$ BACnet MS/TP PROFIBUS (optional) PROFINET (optional) CANopen (optional)
Product conformity	CE RCM EAC
Standard	EN 61800-3

Range overview G120P..5A

Power output [kW]	Output current [A]	Filter type	Dimensions (WxHxD) [mm]	Weight (net) [kg]	Stock no.	Product no.
0.75	2.2	A	154 x 460 x 249	5.01	6SL3200-6AM12-2AH0	G120P-0.75/35A
1.1	3.1	A	154 x 460 x 249	5.01	6SL3200-6AM13-1AH0	G120P-1.1/35A
1.5	4.1	A	154 x 460 x 249	5.01	6SL3200-6AM14-1AH0	G120P-1.5/35A
2.2	5.9	A	154 x 460 x 249	5.01	6SL3200-6AM15-8AH0	G120P-2.2/35A
3	7.7	A	154 x 460 x 249	5.01	6SL3200-6AM17-7AH0	G120P-3/35A
4	10.2	A	180 x 540 x 249	7.01	6SL3200-6AM21-0AH0	G120P-4/35A
5.5	13.2	A	180 x 540 x 249	7.01	6SL3200-6AM21-3AH0	G120P-5.5/35A
7.5	18	A	180 x 540 x 249	7.01	6SL3200-6AM21-8AH0	G120P-7.5/35A
11	26	A	230 x 620 x 249	10.21	6SL3200-6AM22-6AH0	G120P-11/35A
15	32	A	230 x 620 x 249	10.21	6SL3200-6AM23-2AH0	G120P-15/35A
18.5	38	A	230 x 620 x 249	10.21	6SL3200-6AM23-8AH0	G120P-18.5/35A
22	45	A	320 x 640 x 329	31.71	6SL3200-6AM24-5AH0	G120P-22/35A
30	60	A	320 x 640 x 329	31.71	6SL3200-6AM26-0AH0	G120P-30/35A
37	75	A	320 x 751 x 329	37.71	6SL3200-6AM27-5AH0	G120P-37/35A
45	90	A	320 x 751 x 329	37.71	6SL3200-6AM28-8AH0	G120P-45/35A
55	110	A	410 x 915 x 416	70.71	6SL3200-6AM31-1AH0	G120P-55/35A
75	145	A	410 x 915 x 416	70.71	6SL3200-6AM31-4AH0	G120P-75/35A
90	178	A	410 x 915 x 416	70.71	6SL3200-6AM31-7AH0	G120P-90/35A

IP55: The depth increases by 7mm if BOP-2, IOP-2-BT or blind cover is used.

Variable Speed Drive for pumps and fans, IP20, Filter B (C1)

G120P..2B



Variable speed drive for energy-optimized speed control of pump, compressor and fan motors in building control applications, including: Power Module PM230, Control Unit CU230P-2-BT with screening plate without panel.

Data sheet	N5111
Operating voltage	400 V
Frequency	47...63 Hz
Communication	Modbus/RTU RS485/US\$ BACnet MS/TP PROFIBUS (optional) PROFINET (optional) CANopen (optional)
Product conformity	CE UL RCM EAC
Standard	EN 61800-3

Range overview G120P..2B

Power output [kW]	Output current [A]	Filter type	Dimensions (WxHxD) [mm]	Weight (net) [kg]	Stock no.	Product no.
0.75	2.2	B	73 x 202 x 288	4.06	6SL3200-6AE12-2BH0	G120P-0.75/32B
1.1	3.1	B	73 x 202 x 288	4.06	6SL3200-6AE13-1BH0	G120P-1.1/32B
1.5	4.1	B	73 x 202 x 288	4.06	6SL3200-6AE14-1BH0	G120P-1.5/32B
2.2	5.9	B	73 x 202 x 288	4.06	6SL3200-6AE15-8BH0	G120P-2.2/32B
3	7.7	B	73 x 202 x 288	4.06	6SL3200-6AE17-7BH0	G120P-3/32B
4	10.2	B	100 x 297 x 308	7.71	6SL3200-6AE21-0BH0	G120P-4/32B
5.5	13.2	B	100 x 297 x 308	7.71	6SL3200-6AE21-3BH0	G120P-5.5/32B
7.5	18	B	100 x 297 x 308	7.71	6SL3200-6AE21-8BH0	G120P-7.5/32B
11	26	B	140 x 359 x 318	13.11	6SL3200-6AE22-6BH0	G120P-11/32B
15	32	B	140 x 359 x 318	13.11	6SL3200-6AE23-2BH0	G120P-15/32B
18.5	38	B	140 x 359 x 318	13.11	6SL3200-6AE23-8BH0	G120P-18.5/32B
22	45	B	375 x 419 x 253	21.5	6SL3200-6AE24-5BH0	G120P-22/32B
30	60	B	375 x 419 x 253	21.5	6SL3200-6AE26-0BH0	G120P-30/32B
37	75	B	385 x 499 x 253	34.3	6SL3200-6AE27-5BH0	G120P-37/32B
45	90	B	385 x 499 x 253	34.3	6SL3200-6AE28-8BH0	G120P-45/32B
55	110	B	500 x 634 x 365	70.6	6SL3200-6AE31-1BH0	G120P-55/32B
75	145	B	500 x 634 x 365	70.6	6SL3200-6AE31-4BH0	G120P-75/32B

IP20: The depth increases by 12mm if BOP-2, IOP-2-BT or blind cover is used.

Variable speed drives

Variable Speed Drives for HVAC Applications

G120P..

G120P..2A



Variable Speed Drive for pumps and fans, IP20, Filter A (C2)

Variable speed drive for energy-optimized speed control of pump, compressor and fan motors in building control applications, including: Power Module PM230, Control Unit CU230P-2-BT with screening plate without panel.

Data sheet	N5111
Operating voltage	400 V
Frequency	47...63 Hz
Communication	Modbus/RTU RS485/US5 BACnet MS/TP PROFIBUS (optional) PROFINET (optional) CANopen (optional)
Product conformity	CE UL EAC RCM
Standard	EN 61800-3

Range overview G120P..2A

Power output [kW]	Output current [A]	Filter type	Dimensions (WxHxD) [mm]	Weight (net) [kg]	Stock no.	Product no.
0.75	2.2	A	73 x 196 x 223	2.31	6SL3200-6AE12-2AH0	G120P-0.75/32A
1.1	3.1	A	73 x 196 x 223	2.31	6SL3200-6AE13-1AH0	G120P-1.1/32A
1.5	4.1	A	73 x 196 x 223	2.31	6SL3200-6AE14-1AH0	G120P-1.5/32A
2.2	5.9	A	73 x 196 x 223	2.31	6SL3200-6AE15-8AH0	G120P-2.2/32A
3	7.7	A	73 x 196 x 223	2.31	6SL3200-6AE17-7AH0	G120P-3/32A
4	10.2	A	100 x 292 x 223	3.71	6SL3200-6AE21-0AH0	G120P-4/32A
5.5	13.2	A	100 x 292 x 223	3.71	6SL3200-6AE21-3AH0	G120P-5.5/32A
7.5	18	A	100 x 292 x 223	3.71	6SL3200-6AE21-8AH0	G120P-7.5/32A
11	26	A	140 x 355 x 223	5.81	6SL3200-6AE22-6AH0	G120P-11/32A
15	32	A	140 x 355 x 223	5.81	6SL3200-6AE23-2AH0	G120P-15/32A
18.5	38	A	140 x 355 x 223	5.81	6SL3200-6AE23-8AH0	G120P-18.5/32A
22	45	A	275 x 512 x 253	14	6SL3200-6AE24-5AH0	G120P-22/32A
30	60	A	275 x 512 x 253	14	6SL3200-6AE26-0AH0	G120P-30/32A
37	75	A	275 x 635 x 245	22	6SL3200-6AE27-5AH0	G120P-37/32A
45	90	A	275 x 635 x 253	22	6SL3200-6AE28-8AH0	G120P-45/32A
55	110	A	350 x 934 x 365	48	6SL3200-6AE31-1AH0	G120P-55/32A
75	145	A	350 x 934 x 365	48	6SL3200-6AE31-4AH0	G120P-75/32A

IP20: The depth increases by 12mm if BOP-2, IOP-2-BT or blind cover is used.

Variable speed drives
Variable Speed Drives for HVAC Applications
Accessories and spare parts for G120P..

Available operator panels for G120P..

Product Title	Data sheet	Stock no.	Product no.
G120P blanking cover, IP55		6SL3256-6BA00-0AA0	G120P-BCOVER
G120P basic operator panel BOP-2, IP55	N5116	6SL3255-6AA00-4CA0	G120P-BOP-2
G120P intelligent operator panel IOP-2-BT	N5116	6SL3255-6AA00-4JA2	G120P-IOP-2-BT
G120P-SAM Smart Access Module	N5116	6SL3255-6AA00-5AA0	G120P-SAM

Accessories and spare parts for IP55

Product Title	Data sheet	Stock no.	Product no.
G120P PM Fan IP55, external, FSA		6SL3200-0SF21-0AA1	G120P-FExtFSA-IP55
G120P PM Fan IP55, external, FSB		6SL3200-0SF22-0AA1	G120P-FExtFSB-IP55
G120P PM Fan IP55, external, FSC		6SL3200-0SF23-0AA1	G120P-FExtFSC-IP55
G120P-SAM Smart Access Module	N5116	6SL3255-6AA00-5AA0	G120P-SAM
G120P air guide sheet PM230, IP55, FSA	N5111	6SL3266-7SA00-0MA0	G120P-AIRSHEET-FSA
G120P air guide sheet PM230, IP55, FSB	N5111	6SL3266-7SB00-0MA0	G120P-AIRSHEET-FSB
G120P air guide sheet PM230, IP55, FSC	N5111	6SL3266-7SC00-0MA0	G120P-AIRSHEET-FSC
G120P PM Fan IP55, external, FSD-FSE		6SL3200-0SF24-0AA0	G120P-FExtFSD-IP55
G120P PM Fan IP55, external, FSF		6SL3200-0SF26-0AA0	G120P-FExtFSF-IP55
G120P PM Fan IP55, internal, FSA-FSC		6SL3200-0SF31-0AA0	G120P-FlntFSAC-IP55
G120P PM Fan IP55, internal, FSD-FSF		6SL3200-0SF32-0AA0	G120P-FlntFSD-IP55
Operator Panel Extension cable for G120P IP55		6SL3256-1BA00-4H80	G120P-IP55-PAN-EXT
G120P mounting parts set, PM230, IP55, FSA		6SL3200-0SK02-0AA0	G120P-MSetFSA-IP55
G120P mounting parts set, PM230, IP55, FSB		6SL3200-0SK03-0AA0	G120P-MSetFSB-IP55
G120P mounting parts set, PM230, IP55, FSC		6SL3200-0SK04-0AA0	G120P-MSetFSC-IP55
G120P mounting parts set, PM230, IP55, FSD		6SL3200-0SK05-0AA0	G120P-MSetFSD-IP55
G120P mounting parts set, PM230, IP55, FSE		6SL3200-0SK06-0AA0	G120P-MSetFSE-IP55
G120P mounting parts set, PM230, IP55, FSF		6SL3200-0SK07-0AA0	G120P-MSetFSF-IP55

Accessories and spare parts for IP20

Product Title	Data sheet	Stock no.	Product no.
G120P Door mounting kit for IOP or BOP-2		6SL3256-6AP00-0JA0	G120P-DOOR-KIT
G120P Screening-Kit, PM230 IP20 FSA		6SL3266-1EA00-0KA0	G120P-Screen-FSA
G120P Screening-Kit, PM230 IP20 FSB		6SL3266-1EB00-0KA0	G120P-Screen-FSB
G120P Screening-Kit, PM230 IP20 FSC		6SL3266-1EC00-0KA0	G120P-Screen-FSC
G120P Screening-Kit, PM230 IP20 FSD-FSE		6SL3262-1AD00-0DA0	G120P-Screen-FSDE
G120P Screening-Kit, PM230 IP20 FSF		6SL3262-1AF00-0DA0	G120P-Screen-FSF
G120P PM Fan IP20, external, FSD-FSE		6SL3200-0SF05-0AA0	G120P-FExtFSD-IP20
G120P PM Fan IP20, external, FSF		6SL3200-0SF08-0AA0	G120P-FExtFSF-IP20
G120P PM Fan IP20, external, FSA		6SL3200-0SF21-0AA0	G120P-FExtFSA-IP20
G120P PM Fan IP20, external, FSB		6SL3200-0SF22-0AA0	G120P-FExtFSB-IP20
G120P PM Fan IP20, external, FSC		6SL3200-0SF23-0AA0	G120P-FExtFSC-IP20

Accessories and spare parts for IP55 and IP20


Product Title	Data sheet	Stock no.	Product no.
G120P Control Unit, CANopen		6SL3243-0BB30-1CA3	CU230P-2 CAN
G120P Control Unit, PROFIBUS DP		6SL3243-0BB30-1PA3	CU230P-2 DP
G120P Control Unit, USS, Modbus, BACnet		S55529-E100	CU230P-2-BT
G120P PC-Inverter Connection Kit-2		6SL3255-0AA00-2CA0	G120P-PC-Kit
STARTER Commissioning Tool for Sinamics and Micromaster Drives		6SL3072-0AA00-0AG0	G120P-Starter
G120P Control Unit, PROFINET IO		6SL3243-0BB30-1FA0	CU230P-2 PN
G120P CU230P-2 Screening Kit		6SL3264-1EA00-0FA0	G120P-CUScreen

Meters



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Heat cost allocators WHE5..

		2 sensors	Communication	Summer switch off	Due date
	WHE502-D10	■	none	■ ¹⁾	31.12
	WHE542-D100S	■	AMR & walk-by	■ ¹⁾	31.12
	WHE542-D291S	■	AMR & walk-by	■ ²⁾	30.09
	WHE632-D292C	■	AMR & walk-by	■ ²⁾	30.09

¹⁾ Beginning of summer: 01.06 – End of summer: 31.08


²⁾ Beginning of summer: 01.06 – End of summer: 30.09

Mechanical impeller type hot and cold water meters

		Type of meter	Q3	Mounting length	Communication	Connection
	WFK30.D080	Cold water up to 30° C	2.5 m ³ /h	80 mm	walk-by or AMR or M-Bus ¹⁾	G 3/4"
	WFK30.D110	Cold water up to 30° C	2.5 m ³ /h	110 mm	walk-by or AMR or M-Bus ¹⁾	G 3/4"
	WFK30.E130	Cold water up to 30° C	4 m ³ /h	130 mm	walk-by or AMR or M-Bus ¹⁾	G 1"
	WFW30.D080	Hot water up to 90° C	2.5 m ³ /h	80 mm	walk-by or AMR or M-Bus ¹⁾	G 3/4"
	WFW30.D110	Hot water up to 90° C	2.5 m ³ /h	110 mm	walk-by or AMR or M-Bus ¹⁾	G 3/4"
	WFW30.E130	Hot water up to 90° C	4 m ³ /h	130 mm	walk-by or AMR or M-Bus ¹⁾	G 1"

¹⁾ With add-on module: AMR + walk-by (WFZ661), M-Bus (WFZ311)

Mechanical impeller type hot and cold water meters


		Type of meter	Q3	Mounting length	Communication	Connection
	WFK240.D080	Cold water up to 50° C	2.5 m ³ /h	80 mm	Reed contact or Namur ²⁾	G 3/4"
	WFK240.D110	Cold water up to 50° C	2.5 m ³ /h	110 mm	Reed contact or Namur ²⁾	G 3/4"
	WFK240.E130	Cold water up to 50° C	4.0 m ³ /h	130 mm	Reed contact or Namur ²⁾	G 1"
	WFW240.D080	Hot water from 30 to 90° C	2.5 m ³ /h	80 mm	Reed contact or Namur ²⁾	G 3/4"
	WFW240.D110	Hot water from 30 to 90° C	2.5 m ³ /h	110 mm	Reed contact or Namur ²⁾	G 3/4"
	WFW240.E130	Hot water from 30 to 90° C	4.0 m ³ /h	130 mm	Reed contact or Namur ²⁾	G 1"

²⁾ With impulse module: Reed contact (WFZ44), reed contact with Namur (WFZ43)

Electronic impeller type hot and cold water meters

		Type of meter	Q3	Mounting length	Communication	Connection
	WFK636.D080	Cold water meter up to 30° C	2.5 m ³ /h	80 mm	AMR + walk-by	G 3/4"
	WFK636.D110	Cold water meter up to 30° C	2.5 m ³ /h	110 mm	AMR + walk-by	G 3/4"
	WFK636.E130	Cold water meter up to 30° C	4.0 m ³ /h	130 mm	AMR + walk-by	G 1"
	WFW636.D080	Hot water meter up to 90° C	2.5 m ³ /h	80 mm	AMR + walk-by	G 3/4"
	WFW636.D110	Hot water meter up to 90° C	2.5 m ³ /h	110 mm	AMR + walk-by	G 3/4"
	WFW636.E130	Hot water meter up to 90° C	4.0 m ³ /h	130 mm	AMR + walk-by	G 1"

Impeller type meters

	Type of meter	Nominal flow rate	Communication	Power supply	Type	Connection	Mounting length	
	WFM501-E000H0	Heat	0.6 m ³ /h	walk-by or AMR or M-Bus ³⁾	Battery	Impeller meter	G 3/4"	110 mm
	WFM541-G000H0	Heat	0.6 m ³ /h	M-Bus	Battery	Impeller meter	G 3/4"	110 mm
	WFM681-G000H0	Heat	0.6 m ³ /h	AMR + walk-by	Battery	Impeller meter	G 3/4"	110 mm
	WFM502-E000H0	Heat	1.5 m ³ /h	walk-by or AMR or M-Bus ³⁾	Battery	Impeller meter	G 3/4"	110 mm
	WFM542-C000H0	Heat	1.5 m ³ /h	M-Bus	Battery	Impeller meter	G 3/4"	80 mm
	WFM542-G000H0	Heat	1.5 m ³ /h	M-Bus	Battery	Impeller meter	G 3/4"	110 mm
	WFM682-G000H0	Heat	1.5 m ³ /h	AMR + walk-by	Battery	Impeller meter	G 3/4"	110 mm
	WFM503-J000H0	Heat	2.5 m ³ /h	walk-by or AMR or M-Bus ³⁾	Battery	Impeller meter	G 1"	130 mm
	WFM543-L000H0	Heat	2.5 m ³ /h	M-Bus	Battery	Impeller meter	G 1"	130 mm
	WFM683-L000H0	Heat	2.5 m ³ /h	AMR + walk-by	Battery	Impeller meter	G 1"	130 mm

³⁾ With add-on module: AMR & walk-by (WFZ662), M-Bus (WFZ51)

Ultrasonic meters

	Type of meter	Nominal flow rate	Communication	Power supply	Type	Connection	Mounting length	
	WSM506-0E	Heat	0.6 m³/h	none	Battery ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSM506-BE	Heat	0.6 m³/h	M-Bus	Battery ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSM506-FE	Heat	0.6 m³/h	M-Bus Funk	Battery ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSM606-BE	Heat	0.6 m³/h	M-Bus	Battery ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSN506-BE	Combi	0.6 m³/h	M-Bus	Battery ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSN506-FE	Combi	0.6 m³/h	M-Bus Funk	Battery ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSN606-BE	Combi	0.6 m³/h	M-Bus	Battery ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSM515-0E	Heat	1.5 m³/h	none	Battery ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSM515-BE	Heat	1.5 m³/h	M-Bus	Battery ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSM515-FE	Heat	1.5 m³/h	M-Bus Funk	Battery ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSM615-BE	Heat	1.5 m³/h	M-Bus	Battery ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSN515-BE	Combi	1.5 m³/h	M-Bus	Battery ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSN515-FE	Combi	1.5 m³/h	M-Bus Funk	Battery ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSN615-BE	Combi	1.5 m³/h	M-Bus	Battery ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSM525-0E	Heat	2.5 m³/h	none	Battery ¹⁾	Ultrasonic meter	G 1"	130 mm
	WSM525-BE	Heat	2.5 m³/h	M-Bus	Battery ¹⁾	Ultrasonic meter	G 1"	130 mm
	WSM525-FE	Heat	2.5 m³/h	M-Bus Funk	Battery ¹⁾	Ultrasonic meter	G 1"	130 mm
	WSM625-BE	Heat	2.5 m³/h	M-Bus	Battery ¹⁾	Ultrasonic meter	G 1"	130 mm
WSN525-BE	Combi	2.5 m³/h	M-Bus	Battery ¹⁾	Ultrasonic meter	G 1"	130 mm	
WSN525-FE	Combi	2.5 m³/h	M-Bus Funk	Battery ¹⁾	Ultrasonic meter	G 1"	130 mm	
WSN625-BE	Combi	2.5 m³/h	M-Bus	Battery ¹⁾	Ultrasonic meter	G 1"	130 mm	
	WSM805-FBBAE3A	Heat	0.6 m³/h	M-Bus	M-Bus plus 1 back-up battery ²⁾	Ultrasonic meter	G 3/4"	110 mm
	WSM821-FBBAE3A	Heat	1.5 m³/h	M-Bus	M-Bus plus 1 back-up battery ²⁾	Ultrasonic meter	G 3/4"	110 mm
	WSM836-FBBAE3A	Heat	2.5 m³/h	M-Bus	M-Bus plus 1 back-up battery ²⁾	Ultrasonic meter	G 1"	130 mm
	WSM836-FHBAE3A	Heat	0.6 m³/h	M-Bus	M-Bus plus 1 back-up battery ²⁾	Ultrasonic meter	G 3/4"	110 mm
	WSM821-FHBAE3A	Heat	1.5 m³/h	M-Bus	M-Bus plus 1 back-up battery ²⁾	Ultrasonic meter	G 3/4"	110 mm
	WSM836-FHBAE3A	Heat	2.5 m³/h	M-Bus	M-Bus plus 1 back-up battery ²⁾	Ultrasonic meter	G 1"	130 mm
	WSN805-FBBBF3A	Combi	0.6 m³/h	M-Bus	M-Bus plus 2 back-up batteries ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSN821-FBBBF3A	Combi	1.5 m³/h	M-Bus	M-Bus plus 2 back-up batteries ¹⁾	Ultrasonic meter	G 3/4"	110 mm
	WSN836-FBBBF3A	Combi	2.5 m³/h	M-Bus	M-Bus plus 2 back-up batteries ¹⁾	Ultrasonic meter	G 1"	130 mm

¹⁾ Battery life: 11 years

²⁾ Battery life: 6 years

Ultrasonic meters

	Type of meter	Nominal flow rate	Communication	Power supply	Type	Connec- tion	Mounting length	
	UH50-A05-00	Heat	0.6 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 3/4"	110 mm
	UH50-C05-00	Heat	0.6 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 3/4"	110 mm
	UH50-C06-00	Combi	0.6 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 3/4"	110 mm
	UH50-A21-00	Heat	1.5 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 3/4"	110 mm
	UH50-C21-00	Heat	1.5 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 3/4"	110 mm
	UH50-C22-00	Combi	1.5 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 3/4"	110 mm
	UH50-C25-00	Combi	1.5 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 1"	190 mm
	UH50-A36-00	Heat	2.5 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 1"	130 mm
	UH50-C36-00	Heat	2.5 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 1"	130 mm
	UH50-C37-00	Combi	2.5 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 1"	130 mm
	UH50-C40-00	Combi	2.5 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 1"	190 mm
	UH50-A45-00	Heat	3.5 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 1 1/4"	260 mm
	UH50-C45-00	Combi	3.5 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 1 1/4"	260 mm
	UH50-C47-00	Combi	3.5 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 1 1/4"	260 mm
	UH50-A50-00	Heat	6.0 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 1 1/4"	260 mm
	UH50-C50-00	Combi	6.0 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 1 1/4"	260 mm
	UH50-C52-00	Combi	6.0 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	DN 25	260 mm
	UH50-C60-00	Combi	10 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	G 2"	300 mm
	UH50-A61-00	Heat	10 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	DN 40	300 mm
	UH50-C61-00	Combi	10 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	DN 40	300 mm
	UH50-A65-00	Heat	15 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	DN 50	270 mm
	UH50-C65-00	Combi	15 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	DN 50	270 mm
	UH50-A70-00	Heat	25 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	DN 65	300 mm
	UH50-C70-00	Combi	25 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	DN 65	300 mm
	UH50-A74-00	Heat	40 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	DN 80	300 mm
	UH50-C74-00	Combi	40 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	DN 80	300 mm
	UH50-A83-00	Heat	60 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	DN 100	360 mm
	UH50-C83-00	Combi	60 m ³ /h	none ³⁾	none ³⁾	Ultrasonic meter	DN 100	360 mm



³⁾ Various communication and power supply modules available

Meters

Overview and selection tools

Electronic heat cost allocators

Electronic heat cost allocators WHE50..

WHE50..



Electronic heat cost allocator

Device for heat cost allocation by acquiring the amount of heat emitted by radiators. WHE50.. heat cost allocators without communication interface must be visually read on site and the readings must be manually written down. They are especially suited for basic plants that require no complex data evaluations or no very fast readout.

- Programming is performed with the ACT50 software.
- Available as a two-sensor device or with remote sensor.

All heat cost allocators are supplied without mounting plate. The mounting plate must be ordered as a separate item.

Data sheet	A6V10786229
Voltage supply	Lithium battery
Battery life	>10 Years
Operating voltage	DC 3 V
Display	LCD
Dimensions (W x H x D)	40 x 102 x 31 mm

Range overview WHE50..

Product Title	Stock no.	Product no.
Electronic heat cost allocator with watchdog timer, Double sensor, Summer switch-off: 06/01 – 08/31, due date 12/31	S55562-F101	WHE502-D10

Meters

Electronic heat cost allocators

Electronic heat cost allocators WHE54..

WHE54..



Electronic heat cost allocators (RF)

Device for heat cost allocation by acquiring the amount of heat emitted by radiators. The heat cost allocators transmit simultaneously walk-by and AMR telegrams in S-mode (RF 868 MHz). Readout is performed via walk-by, the consumption data are collected on site using a mobile data collector. If the data shall be read out from a remote location (AMR), they are collected by a network node, stored and periodically sent to the customer via gateway.

- Programming is performed with the ACT50 software.
- Available as a two-sensor device or with remote sensor
- Communication in S-mode or C-mode

All heat cost allocators are supplied without mounting plate. The mounting plate must be ordered as a separate item.

Data sheet	A6V10786229
Voltage supply	Lithium battery
Battery life	>10 Years
Operating voltage	DC 3 V
Display	LCD
Dimensions (W x H x D)	40 x 102 x 31 mm

Range overview WHE54..

Product Title	Stock no.	Product no.
Electronic heat cost allocator with watchdog timer, Double sensor, Summer switch-off: 06/01 – 08/31, due date 12/31, meter reading by walk-by: Annually, S-mode	S55562-F127	WHE542-D100S
Electronic heat cost allocator with watchdog timer, Double sensor, Summer switch-off: 06/01 – 09/30, due date 09/30, meter reading by walk-by: Monthly, S-mode	S55562-F128	WHE542-D291S

WHE632-D292C



Electronic heat cost allocator with watchdog timer, Double sensor, Summer switch-off: 06/01 - 09/30, due date 09/30, C-mode

Device for heat cost allocation by acquiring the amount of heat emitted by radiators. The heat cost allocators transmit simultaneously walk-by and AMR telegrams in C-mode (RF 868 MHz). Readout is performed via walk-by, the consumption data are collected on site using a mobile data collector. If the data shall be read out from a remote location (AMR), they are collected by a network node, stored and periodically sent to the customer via gateway.

- Programming is performed with the ACT50 software.
- Available as a two-sensor device or with remote sensor
- Communication in C-mode

All heat cost allocators are supplied without mounting plate. The mounting plate must be ordered as a separate item.

Data sheet	A6V10786229
Voltage supply	Lithium battery
Battery life	>10 Years
Operating voltage	DC 3 V
Due Date	09.30
Display	LCD
Dimensions (W x H x D)	40 x 102 x 31 mm

Stock no.	Product no.
S55562-F129	WHE632-D292C

Electronic heat cost allocators

Accessories and mounting material for WHE5..

Parts for fixing

Product Title	Packaging unit	Stock no.	Product no.
Threaded hoop (pipe 18...30 mm)	10 pieces	JXF:FKT0014	FKT0014
Threaded hoop (pipe up to 17 mm)	10 pieces	JXF:FKT0004	FKT0004
Shank nut M3 x 3 mm	100 pieces	JXF:FNM0002	FNM0002
Shank nut M3 x 6 mm	100 pieces	JXF:FNM0003	FNM0003
Shank nut M3 x 9.5 mm	100 pieces	JXF:FNM0001	FNM0001
Clamping sleeve special radiator	10 pieces	JXF:FKM0002	FKM0002
Clamping bracket (pipes TE 36 mm)	10 pieces	JXF:FKT0015	FKT0015
Clamping bracket (pipes TE 46 mm)	10 pieces	JXF:FKT0016	FKT0016
Clamping bracket shortened	10 pieces	JXF:FKT0009	FKT0009
Clamping bracket trapezoidal 35 mm	10 pieces	JXF:FKT0018	FKT0018
Clamping bracket trapezoidal 50 mm	10 pieces	JXF:FKT0019	FKT0019
Clamping bracket trapezoidal 65 mm	10 pieces	JXF:FKT0020	FKT0020
Expanding bracket of lamella-type radiator	10 pieces	JXF:FKA0004	FKA0004
Square bolt 4.5 mm with cross pin	10 pieces	JXF:BOZ4002	BOZ4002
Square bolt 6 mm with cross pin	10 pieces	JXF:BOZ4003	BOZ4003
Square bolt 12 mm with cross pin	10 pieces	JXF:BOZ4004	BOZ4004

Parts for mounting

Product Title	Packaging unit	Stock no.	Product no.
Mounting plate (P3)	50 pieces	S55563-F115	FKA0017
Mounting plate wide	25 pieces	JXF:FKA0022	FKA0022
Prism for installation plate	1 piece	JXF:FKA0001	FKA0001
Spacer sleeve	10 pieces	JXF:FKT0010	FKT0010
Spacer	10 pieces	JXF:FKA0013	FKA0013
Threaded bushing	10 pieces	JXF:FKA0012	FKA0012
Clamping piece (threaded hoop 17 mm)	10 pieces	JXF:FKA0003	FKA0003
Clamping piece (threaded hoop 18...30 mm)	10 pieces	JXF:FKA0008	FKA0008
Installation plate for remote sensor	10 pieces	JXF:FKA0009	FKA0009
Wall bracket (P3)	10 pieces	JXF:FKK0044	FKK0044
Contact screw	10 pieces	JXF:FKA0010	FKA0010
Contact screw long	10 pieces	JXF:FKA0011	FKA0011

Standard parts

Product Title	Packaging unit	Stock no.	Product no.
Self-tapping screw B 2.9 x 13 mm	500 pieces	JXF:FNR0008	FNR0008
Screw B 3.9 x 45 mm	500 pieces	JXF:FNR0007	FNR0007
Cross-slot screw M4 x 30 mm	500 pieces	JXF:FNR0003	FNR0003
Cross-slot screw M4 x 40 mm	500 pieces	JXF:FNR0004	FNR0004
Cross-slot screw M4 x 50 mm	500 pieces	JXF:FNR0005	FNR0005
Cross-slot screw M4 x 70 mm	500 pieces	JXF:FNR0006	FNR0006
Welding stud M3 x 8 mm	1000 pieces	JXF:FKT0013	FKT0013
Welding stud M3 x 12 mm	1000 pieces	JXF:FKT0011	FKT0011
Welding stud M3 x 15 mm	1000 pieces	JXF:FKT0012	FKT0012
Hexagon nut M4	1000 pieces	JXF:FNM0004	FNM0004
Self-locking nut with serrated bearing M3	1000 pieces	JXF:FNM0005	FNM0005

Miscellaneous accessory

Product Title	Packaging unit	Stock no.	Product no.
Dowel 6 mm	100 pieces	JXF:FNU0001	FNU0001
Kit remote sensor 1.5 m	1 piece	JXF:HCAIK0100S1	HCAIK0100S1
Kit remote sensor 2.5 m	1 piece	JXF:HCAIK0100S2	HCAIK0100S2
Kit remote sensor 5 m	1 piece	JXF:HCAIK0100S5	HCAIK0100S5

Meters

Electronic heat cost allocators

Accessories and mounting material for WHE5..

Miscellaneous accessory

Product Title	Packaging unit	Stock no.	Product no.
Lead seal blue	100 pieces	JXF:FKK0041	FKK0041
Cable duct white	10 m	JXF:FOZ0001	FOZ0001
Snap-on panel	50 pieces	JXF:FKK0034	FKK0034
Installation template	1 piece	JXF:HCAIP001001	HCAIP001001
Installation aid (convector)	1 piece	JXF:FKT0017	FKT0017
ERGO universal instant glue 3g	1 piece	JXF:FSS0007	FSS0007

Programming tools and software

Product Title	Stock no.	Product no.
ACT50 – Readout and parameterization software	JXF:ACT50	ACT50
Infrared read head (with USB interface)	JXF:WFZ.IRDA-USB	WFZ.IRDA-USB
Programming adapter	JXF:HCAPH001001	HCAPH001001

Mechanical water meters

Mechanical single-jet water meters

Mechanical single-jet water meters (module compatible)

WFK30.. / WFW30..

Mechanical single-jet impeller meter for measuring the consumption of cold (WFK30..) or hot water (WFW30..). Display of cumulated consumption. Versions without remote reading output. Body made of brass, dry-runner with magnetic transmission and pivotable totalizer. All water meters WFK30.. and WFW30.. can be retrofitted with electronic communication modules for radio (WFZ661) or M-Bus (WFZ31) readout. These meters are MID conform.

- Metrological class, horizontal mounting of body = R80 (class B).
- Metrological class, vertical mounting of body = R40 (class A).
- Flow rate Q3 according 2004/22/EC MID



Mechanical water meter to acquire the water consumption in domestic water systems in residential or non-residential buildings and in water supply systems.

The meters are supplied with Installation Instructions in the following languages: English, French, German, Italian, Russian and Spanish.

Data sheet	N5326
PN class	PN 16
Pressure drop	250 mbar

Range overview WFK30.. / WFW30..

Flow rate Q3 [m ³ /h]	Mounting length [mm]	Con- nect. thread	Max. water temperature [°C]	Stock no.	Product no.
2.5	80	G ¾"	30	S55560-F100	WFK30.D080
2.5	110	G ¾"	30	S55560-F101	WFK30.D110
4	130	G 1"	30	JXF:WFK30.E130	WFK30.E130
2.5	80	G ¾"	90	S55560-F102	WFW30.D080
2.5	110	G ¾"	90	S55560-F103	WFW30.D110
4	130	G 1"	90	JXF:WFW30.E130	WFW30.E130

Meters

Mechanical water meters

Mechanical single-jet water meters

WFK40../WFW40..



Mechanical single-jet water meters

The mechanical single-jet impeller type meters are of compact design and used for measuring the consumption of cold water (WFK40..) or hot water (WFW40..). They are available as wall-mounted dry runner versions in different sizes, with a flow measuring section body made of brass. The cumulated consumption value acquired by the water meter can be read out on site. All water meters WFK40.. and WFW40.. can be retrofitted with a pulse module equipped with Reed contact (WFZ44) or Reed contact with Namur circuit (WFZ43). They conform to MID.

Metrologically, the water meters are classified as follows:

- Horizontal: R80
- Vertical: R50

They are used primarily in domestic water systems in residential or non-residential buildings and in water supply systems.

The meters are supplied with Installation Instructions in the following languages: Bulgarian, Croatian, Czech, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Lithuanian, Norwegian, Polish, Slovakian, Slovenian, Spanish, Turkish.

Data sheet	N5302
PN class	PN 16
Display	99999,999 m ³

Range overview WFK40../WFW40..

Flow rate Q ₃ [m ³ /h]	Mounting length [mm]	Con- nect. thread	Max. water temperature [°C]	Stock no.	Product no.
2.5	80	G ¾"	50	S55560-F104	WFK40.D080
2.5	110	G ¾"	50	S55560-F105	WFK40.D110
4	130	G 1"	50	S55560-F106	WFK40.E130
2.5	80	G ¾"	90	S55560-F107	WFW40.D080
2.5	110	G ¾"	90	S55560-F108	WFW40.D110
4	130	G 1"	90	S55560-F109	WFW40.E130

Mechanical water meters

Accessories for mechanical water meters

M-bus add-on module for WFx30.. water meters

WFZ31

The add-on module acquires and processes the information from the WFx30../WMx10.D water meter. It is periodically read out by an M-bus master.



Data sheet A6V10443198

Stock no.	Product no.
S55563-F136	WFZ31

Add-on radio module WFZ661 for water meters

WFZ661

Radio adapter for mechanical modularis water meters (WFx30, WMx10). Adapter acquires and processes the metering pulses of the radio-ready mechanical water meters WFx30../WMx10.. and transmits AMR and walk-by telegrams in a parallel way.



Data sheet A6V10986918

Stock no.	Product no.
S55563-F147	WFZ661

Pulse add-on module with reed contact for WFx40.. water meters

WFZ44

Data sheet N5302



Stock no.	Product no.
S55563-F134	WFZ44

Pulse add-on module with reed contact and namur circuit for WFx40.. water meters

WFZ43

Data sheet N5302



Stock no.	Product no.
S55563-F135	WFZ43

Mounting material for single-jet water meters

Product Title	Stock no.	Product no.
Adapter set from G 3/4" to 1", incl. gaskets	JXF:WZM-V110	WZM-V110
Extension set from 110 mm G 3/4" to 130 mm G 3/4", incl. gaskets	JXF:WZM-V130	WZM-V130
Extension set from 110 mm G 3/4" to 165 mm G 3/4", incl. gaskets	JXF:WZM-V165	WZM-V165
Extension set from 110 mm G 3/4" to 190 mm G 1", incl. gaskets	JXF:WZM-V190	WZM-V190
Spacer G 3/4", length 80 mm	JXF:WFZ.R80	WFZ.R80
Spacer G 3/4", length 110mm	JXF:WFZ.R110	WFZ.R110
Spacer G 1", length 130 mm	JXF:WFZ.R130	WFZ.R130

Meters

Mechanical water meters

Accessories for mechanical water meters

Mounting material for single-jet water meters

Product Title	Stock no.	Product no.
WFZ.R2 Mounting kit	S55563-F151	WFZ.R2
WFZ.R2-1 Mounting kit	S55563-F152	WFZ.R2-1
Mounting kit for washstand water meter	JXF:WFZ.W	WFZ.W
Mounting kit for tap water meter	JXF:WFZ.Z	WFZ.Z
Self-lock seal with sealing wire	JXF:WFZ.P	WFZ.P
Torque Screwdriver, Torx Plus™	JXF:FZ201-009	FZ201-009

Software and Tools

Product Title	Data sheet	Stock no.	Product no.
ACT50 – Readout and parameterization software	N2887	JXF:ACT50	ACT50
Infrared read head (with USB interface)	N2886	JXF:WFZ.IRDA-USB	WFZ.IRDA-USB
Triggering tool for radio telegrams		JXF:WFZ.PS	WFZ.PS
M-bus programming adapter (USB)		JXF:WFZ.MBM-USB	WFZ.MBM-USB

Electronic water meters

Electronic measuring capsule water meters

Accessories

Product Title	Data sheet	Stock no.	Product no.
Self-lock seal with sealing wire		JXF:WFZ.P	WFZ.P

Electronic multi-jet measuring capsule water meters

WM.636..

The electronic multi-jet measuring capsule water meters are of compact design and used for measuring the consumption of cold water (WMK636..) or hot water (WMW636..).

In most cases, the single-pipe connection piece (EAT) is already present and embedded in the masonry.

The measuring capsule is screwed on accordingly.

The cumulated consumption values determined by the meter can be read out on the meter itself or remotely via M-bus radio (AMR / walk-by).

Metrologically, the water meters are classified as follows:

- Horizontal: R80
- Vertical: R40

They are used primarily in existing domestic water systems in residential or non-residential buildings and in water supply systems.

The meters are supplied with Installation Instructions in the following languages: Bulgarian, Croatian, Czech, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Lithuanian, Norwegian, Polish, Romanian, Russian, Slovakian, Slovenian, Spanish, Turkish.

Range overview WM.636..

	Stock no.	Product no.
	JXF:WMK636.DAL00	WMK636.DAL00
	JXF:WMK636.DIS00	WMK636.DIS00
	JXF:WMK636.DTE00	WMK636.DTE00
	JXF:WMW636.DAL00	WMW636.DAL00
	JXF:WMW636.DIS00	WMW636.DIS00
	JXF:WMW636.DTE00	WMW636.DTE00

Impeller type heat/cooling energy meters

Impeller type heat/cooling energy meters WFM5.. / WFN5..

WF.5..

Electronic impeller type heat and heat / cooling energy meters



The compact, electronic and mains-independent impeller type heat and cool energy meters WF.5.. are used for the physically correct acquisition of energy consumption. They are available as wall-mounting versions in different sizes and have been developed for heat, combined heat/cooling or solar energy metering.

The devices consist of flow measuring section, 2 ready connected temperature sensors and a processor which – based on flow rate and temperature differential – calculates the energy consumption. The consumption values can be read out either on the meter itself or from a remote location. Using modules, the noncommunicating meters (WF.50..) can be upgraded for readout via AMR/walk-by (WFZ662) or M-bus (WFZ51).

In addition to modules, the meters with M-bus communication (WF.54..) are equipped with 2 pulse inputs for reading out 2 water meters (Reed contact).

The WF.5.. are used primarily in plants with central production of heat or heat and cooling energy, where the energy is supplied via zones to several individual consumers in the building.

The meters are supplied with Operating and Mounting Instructions in the following languages:

Bulgarian, Croatian, Czech, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Lithuanian, Norwegian, Polish, Slovakian, Slovenian, Spanish and Turkish

Data sheet	CE2N5323, A6V10800216
Measurement accuracy	MID class 3
Operating voltage	DC 3 V
Voltage supply	Lithium battery
Standard	DIN EN 1434
Battery life	> 10 years
PN class	PN 16
Measuring range, temperature	Heat: 15...105 °C Refrigeration range: 0.2...24 °C
Temperature response threshold	Heat: 1.0 K Cold: 0.2 K
Sensing element, temperature	Pt1000
Sensor	DS Ø5.0x45 mm
Cable length, sensor	1.5 m
Due Date	12.31
Display	kWh
Mounting location	Meter: return Sensor in the flow: directly immersed or in approved protection pockets Sensor in the return: integrated in the return, directly immersed

Range overview WF.5..

Nominal flow rate [m³/h]	Mounting length [mm]	Connect. thread	Communication	Type of Meter	Connect. thread	Stock no.	Product no.
0.6	110	G ¾"	IrDA + module	Heat	G ¾"	S55561-F177	WFM501-E000H0
0.6	110	G ¾"	IrDA, M-bus & pulse inputs	Heat	G ¾"	S55561-F239	WFM541-G000H0
0.6	110	G ¾"	IrDA, M-bus & pulse inputs	Heat Cooling	G ¾"	S55561-F243	WFN541-G000H0
1.5	110	G ¾"	IrDA + module	Heat	G ¾"	S55561-F178	WFM502-E000H0
1.5	80	G ¾"	IrDA, M-bus & pulse inputs	Heat	G ¾"	S55561-F240	WFM542-C000H0
1.5	110	G ¾"	IrDA, M-bus & pulse inputs	Heat	G ¾"	S55561-F241	WFM542-G000H0
1.5	110	G ¾"	IrDA, M-bus & pulse inputs	Heat Cooling	G ¾"	S55561-F244	WFN542-G000H0

Impeller type heat/cooling energy meters

Impeller type heat/cooling energy meters WFM5.. / WFN5..

Range overview WF.5..

Nominal flow rate [m ³ /h]	Mounting length [mm]	Connect. thread	Communication	Type of Meter	Connect. thread	Stock no.	Product no.
2.5	130	G 1 "	IrDA + module interface	Heat	G 1"	S55561-F179	WFM503-J000H0
2.5	130	G 1 "	IrDA, M-bus & pulse inputs	Heat	G 1"	S55561-F242	WFM543-L000H0
2.5	130	G 1 "	IrDA, M-bus & pulse inputs	Heat Cooling	G 1"	S55561-F245	WFN543-L000H0

Meter mounting for WFM542-C000H0: return; Sensor in the flow: directly immersed or in approved protection pockets; Sensor in the return: not integrated, directly immersed or in approved protection pockets.

Meters

Impeller type heat/cooling energy meters

Impeller type heat/cooling energy meters WFM6.. / WFN6..

WF.6..



Electronic impeller type heat and heat/cooling energy meter set with RF communication

The impeller type heat and heat/cooling energy meter set WF.6.. consists of a non-communicative meter and a preinstalled RF communication module.

The electronic, mains-independent impeller type heat and heat/cooling energy meter is of compact design and used for the physically correct acquisition of energy consumption. The meter consists of a flow measuring section, two ready connected temperature sensors and an integrated processor which – based on flow rate and temperature differential – calculates the energy consumption.

The consumption values can be read out either on the meter itself or from a remote location via AMR or walk-by.

The WF.6.. are used primarily in plants with central production of heat and heat/cooling energy, where the energy is supplied via zones to several individual consumers in the building.

Data sheet	A6V11259309
Measurement accuracy	MID class 3
Standard	DIN EN 1434
Voltage supply	Lithium battery
Operating voltage	DC 3 V
Battery life	> 10 years
PN class	PN 16
Measuring range, temperature	Heat: 15...105 °C Refrigeration range: 0.2...24 °C
Temperature response threshold	Heat: 1.0 K Cold: 0.2 K
Sensing element, temperature	Pt1000
Sensor	DS Ø5.0x45 mm
Cable length, sensor	1.5 m
Due Date	12.31
Display	kWh
Mounting location	Return

Range overview WFM6.. / WFN6..

Nominal flow rate [m ³ /h]	Mounting length [mm]	Con-nect. thread ["]	Communi-cation	Type of Meter	Con-nect. thread	Stock no.	Product no.
0.6	110	G ¾	IrDA interface	Heat	G ¾"	S55561-F260	WFM681-G000H0
0.6	110	G ¾	IrDA interface	Heat Cooling	G ¾"	S55561-F263	WFN681-G000H0
1.5	110	G ¾	IrDA interface	Heat	G ¾"	S55561-F261	WFM682-G000H0
1.5	110	G ¾	IrDA interface	Heat Cooling	G ¾"	S55561-F264	WFN682-G000H0
2.5	130	G 1	IrDA interface	Heat	G 1"	S55561-F262	WFM683-L000H0
2.5	130	G 1	IrDA interface	Heat Cooling	G 1"	S55561-F265	WFN683-L000H0

Impeller type heat/cooling energy meters

Accessories for impeller type heat meters

Screwed type meters

Product Title	Stock no.	Product no.
Installation set Rp 1/2" - ball valve Rp 1/2" with coupling nut G 3/4" and flat gaskets	JXF:HMXIK001-001	HMXIK001-001
Installation set Rp 3/4" - ball valve Rp 3/4" with coupling nut G 3/4" and flat gaskets	JXF:HMXIK001-002	HMXIK001-002
Installation set Rp 1" - ball valve Rp 1" with coupling nut G 3/4" and flat gaskets	JXF:HMXIK001-003	HMXIK001-003
Installation set Rp 1" - ball valve Rp 1" with coupling nut G 1" and flat gaskets	JXF:HMXIK001-004	HMXIK001-004
Installation set Rp 3/4" - ball valve Rp 3/4" with coupling nut G 1" and flat gaskets	JXF:HMXIK001-005	HMXIK001-005

Installation sets fittings

Product Title	Stock no.	Product no.
Installation set R 1/2" - fitting R 1/2" with coupling nut G 3/4" and flat gaskets	JXF:HMXIK002-001	HMXIK002-001
Installation set R 3/4" - fitting R 3/4" with coupling nut G 3/4" and flat gaskets	JXF:HMXIK002-002	HMXIK002-002
Installation set R 1" - fitting R 1" with coupling nut G 3/4" and flat gaskets	JXF:HMXIK002-003	HMXIK002-003
Installation set R 1" - fitting R 1" with coupling nut G 1" and flat gaskets	JXF:HMXIK002-004	HMXIK002-004
Installation set R 3/4" - fitting R 3/4" with coupling nut G 1" and flat gaskets	JXF:HMXIK002-005	HMXIK002-005

Accessories

Product Title	Stock no.	Product no.
Fitting R 1/2" x G 3/4"	JXF:FKM0018	FKM0018
Fitting R 3/4" x G 3/4"	JXF:FKM0019	FKM0019
Fitting R 1" x G 3/4"	JXF:FKM0020	FKM0020
Fitting R 3/4" x G 1"	JXF:FKM0021	FKM0021
Fitting R 1" x G 1"	JXF:FKM0022	FKM0022
Ball valve Rp 1/2" with thread	JXF:FKM0023	FKM0023
Ball valve Rp 3/4" with thread	JXF:FKM0024	FKM0024
Ball valve Rp 1" with thread	JXF:FKM0025	FKM0025
Ball valve Rp 1/2" with coupling nut and thread	JXF:FKM0026	FKM0026
Ball valve R 3/4" with coupling nut G 3/4"	JXF:FKM0028	FKM0028
Ball valve R 1" with coupling nut G 3/4"	JXF:FKM0029	FKM0029
Ball valve R 3/4" with coupling nut G 1"	JXF:FKM0030	FKM0030
Ball valve R 1" with coupling nut G 1"	JXF:FKM0031	FKM0031
T-piece R 1/2" x G 1/4"	JXF:FKM0035	FKM0035
T-piece R 3/4" x G 1/4"	JXF:FKM0036	FKM0036
T-piece R 1" x G 1/4"	JXF:FKM0037	FKM0037
Immersion sleeve G 1/4"	JXF:FKM0038	FKM0038
Immersion sleeve G 1/4"	JXF:FKM0039	FKM0039
Temperatur sensor sleeve G 1/4"	JXF:FKM0049	FKM0049
Temperatur sensor sleeve M10x1 mm	JXF:FKM0050	FKM0050
Immersion sleeve 5.0 mm, M10x1 mm	JXF:FKM0051	FKM0051
Immersion sleeve 5.2 mm, M10x1 mm	JXF:FKM0052	FKM0052
Spacer G 3/4", length 80 mm	JXF:FKM0070	FKM0070
Spacer G 3/4", length 110 mm	JXF:FKM0074	FKM0074
Spacer G 1", length 130 mm	JXF:FKM0075	FKM0075
Flat gasket 3/4"	JXF:FKS0005	FKS0005
Flat gasket 1"	JXF:FKS0006	FKS0006
Seal	JXF:FNS0001	FNS0001
Wall bracket	JXF:HMRIK001-001	HMRIK001-001
Adapter set from G 3/4" to G 1"	JXF:HMXIK003-001	HMXIK003-001
Extension set from G 3/4" to G 1"	JXF:HMXIK003-002	HMXIK003-002
Extension set from 110 mm G 3/4" to 130 mm G 3/4"	JXF:HMXIK003-003	HMXIK003-003
Extension set from 110 mm G 3/4" to 165 mm G 3/4"	JXF:HMXIK003-004	HMXIK003-004
Extension set from 110 mm G 3/4" to 190 mm G 1"	JXF:HMXIK003-005	HMXIK003-005
Temperature sensor screwed	JXF:HMXIK004-001	HMXIK004-001

Meters

Impeller type heat/cooling energy meters

Accessories for impeller type heat meters

WFZ51

M-bus add-on module for WFX5.. meters



The add-on module acquires and processes the consumption data and service information from the WFX5.. heat and heat/cooling energy meter. It is periodically read out by an M-bus master.

Data sheet

N5323

Stock no.	Product no.
S55563-F131	WFZ51

WFZ662

Radio module with integrated antenna for WFX5.. meters



The walk-by add-on module acquires and handles the consumption data and service information delivered by the WFX5.. heat and heat/cooling meters and passes it on parallelly to the walk-by and AMR system.

Data sheet

N5323

Stock no.	Product no.
S55563-F153	WFZ662

Programming tools and software for impeller type heat meters

Product Title	Stock no.	Product no.
ACT50 – Readout and parameterization software	JXF:ACT50	ACT50
Infrared read head (with USB interface)	JXF:WFZ.IRDA-USB	WFZ.IRDA-USB
Triggering tool for radio telegrams	JXF:WFZ.PS	WFZ.PS
M-bus programming adapter (USB)	JXF:WFZ.MBM-USB	WFZ.MBM-USB

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters WS.5..

Mounting sets

Product Title	Stock no.	Product no.
Mounting set 110 mm	LYU:WZT-MS110	WZT-MS110
Mounting set 130 mm	LYU:WZT-MS130	WZT-MS130

Ball valves

Product Title	Stock no.	Product no.
Ball valve R 1/2" with union nut G 3/4"	LYU:WZT-K12-34	WZT-K12-34
Ball valve R 3/4" with union nut G 3/4"	LYU:WZT-K34-34	WZT-K34-34
Ball valve R 3/4" with union nut G 1"	LYU:WZT-K34-1	WZT-K34-1
Ball valve R 1" with union nut G 1"	LYU:WZT-K1-1	WZT-K1-1
Ball valve Rp 1/2" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm	S55563-F104	WZT-K12
Ball valve Rp 3/4" for sensor DS M10x1 mm, length = 27.5 mm or Ø 5.2x45 mm	S55563-F120	WZT-K34
Ball valve Rp 1" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm	S55563-F119	WZT-K1

Adapter and accessories

Product Title	Stock no.	Product no.
Adapter G 3/8 B" with threaded hole to install sensor DS M10x1 mm, incl. gasket G 3/8"	LYU:WZT-A38	WZT-A38
Adapter M10x1 mm x G 1/2 B" for sensor DS M10x1 mm / d=5.2 x 45 mm	S55563-F116	WZT-A12
Adapter G 3/4 B" with threaded hole to install sensor DS M10x1 mm, incl. gasket G 3/4"	LYU:WZT-A34	WZT-A34
Protection pocket G 1/2 B", length 35 mm, made of brass, for temperature sensor Ø 5.2x45 mm	S55563-F103	WZT-M35
Pocket G 1/2 B", stainless steel, 5.2 x 37 mm, with seal	LYU:WZT-S43V	WZT-S43V
Adapter kit for sensor Ø 5.2x45 mm, incl. 2 O-rings	LYU:9956230	9956230
Spacer G 3/4", length 110 mm, incl. 2 flat gaskets	LYU:WZM-G110	WZM-G110
Spacer G 1", length 130 mm, incl. 2 flat gaskets	LYU:WZM-G130	WZM-G130
EPDM gaskets for mounting the flow measuring section 3/4"	LYU:T23-34EPDM10	T23-34EPDM10
EPDM gaskets for mounting the flow measuring section 1"	LYU:T23-1EPDM10	T23-1EPDM10
Wall adapter, incl. 2 screws and 2 dowels	LYU:T23-WA10	T23-WA10

Programming accessories for ultrasonic meters

Product Title	Stock no.	Product no.
Optical read head with USB interface for PC	LYU:WZR-OP-USB	WZR-OP-USB
UltraAssist standard, first licence, CD with UB-Dongle	LYU:WZX-UA-PEU	WZX-UA-PEU
UltraAssist Profi, first license, CD with USB mini-dongle	LYU:WZX-UA-PEU-MINI	WZX-UA-PEU-MINI
UltraAssist standard, second license, USB dongle	LYU:WZX-UA-PFU	WZX-UA-PFU
UltraAssist Profi, second license, USB mini-dongle	LYU:WZX-UA-PFU-MINI	WZX-UA-PFU-MINI

Meters

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters WS.5..

WS.5..



Ultrasonic heat and cooling energy meters

The WSM5.. heat meters and WSN5.. heat and cooling energy meters acquire the volume flow statically based on the ultrasonic measuring principle. They are available as wall-mounting versions in different sizes. The meters excel in great measuring accuracy, a volume measuring section made of high-tech plastic, and wear resistance.

The consumption values acquired by the meter can be read out either on the meter itself or from a remote location. The meter transmits the current consumption value, the monthly values, the set day value and error messages to the respective data collector.

The processor can be removed (cable length 1.5 m). The display informs the user about the amount of energy consumed.

The WSM5.. and WSN5.. are used in residential or commercial buildings to acquire the amount of heat or cooling energy consumed.

The meters are supplied with Operating and Mounting Instructions in the following languages: Bulgarian, Chinese, Croatian, Czech, Dutch, English, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Russian, Slovakian, Slovenian, Spanish, and Turkish

Data sheet	N5372
Measurement accuracy	MID class 2
Standard	EN 1434
Voltage supply	Lithium battery
Operating voltage	Battery operation: 3.6V
PN class	PN 16
Sensing element, temperature	Pt500
Sensor	PL Ø5.2x45 mm
Cable length, sensor	1.5 m
Due Date	01.01
Display	kWh
Temperature range electronic unit	0...180 °C
Temperature range volume measuring section	5...90 °C
Mounting location	Meter: return Sensor in the flow: selectable, directly/indirectly immersed Sensor in the return: integrated in the return, directly immersed

Range overview WS.5..

Nominal flow rate [m³/h]	Mounting length [mm]	Connect. thread	Communication	Battery life	Stock no.	Product no.
0.6	110	G ¾"		11 years	S55561-F133	WSM506-OE
0.6	110	G ¾"	M-bus	11 years	S55561-F194	WSM506-BE
0.6	110	G ¾"	M-bus RF	11 years	S55561-F246	WSM506-FE
1.5	110	G ¾"		11 years	S55561-F135	WSM515-OE
1.5	110	G ¾"	M-bus	11 years	S55561-F195	WSM515-BE
1.5	110	G ¾"	M-bus RF	11 years	S55561-F247	WSM515-FE
2.5	130	G 1"		11 years	S55561-F137	WSM525-OE
2.5	130	G 1"	M-bus	11 years	S55561-F196	WSM525-BE
2.5	130	G 1"	M-bus RF	11 years	S55561-F248	WSM525-FE
0.6	110	G ¾"	M-bus	11 years	S55561-F278	WSN506-BE
0.6	110	G ¾"	M-bus RF	11 years	S55561-F281	WSN506-FE
1.5	110	G ¾"	M-bus	11 years	S55561-F279	WSN515-BE
1.5	110	G ¾"	M-bus RF	11 years	S55561-F282	WSN515-FE
2.5	130	G 1"	M-bus	11 years	S55561-F280	WSN525-BE
2.5	130	G 1"	M-bus RF	11 years	S55561-F283	WSN525-FE

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters WS.6..

Mounting sets

Product Title	Stock no.	Product no.
Installation kit G 3/4", for threaded connection R 1/2"	S55563-F124	WZM-E34
Mounting kit G1", for threaded connection R 3/4"	S55563-F123	WZM-E1
Adapter from 110 mm G 3/4" to 130 mm G 3/4", incl. gaskets	LYU:WZM-V130	WZM-V130
Adapter from 110 mm G 3/4B" to 130 mm G 1B", incl. 4 gaskets	LYU:WZM-V130.G1	WZM-V130.G1
Adapter from 110 mm G 3/4B" to 165 mm G 3/4B", incl. 1 gasket	LYU:WZM-VE165	WZM-VE165
Adapter from 110 mm G 3/4B" to 190 mm G 1B", incl. gaskets	LYU:WZM-V190	WZM-V190
Mounting set 110 mm	LYU:WZT-MS110	WZT-MS110
Mounting set 130 mm	LYU:WZT-MS130	WZT-MS130

Ball valves

Product Title	Stock no.	Product no.
Ball valve R 1/2" with union nut G 3/4"	LYU:WZT-K12-34	WZT-K12-34
Ball valve R 3/4" with union nut G 3/4"	LYU:WZT-K34-34	WZT-K34-34
Ball valve R 3/4" with union nut G 1"	LYU:WZT-K34-1	WZT-K34-1
Ball valve R 1" with union nut G 1"	LYU:WZT-K1-1	WZT-K1-1
Ball valve Rp 1/2" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm	S55563-F104	WZT-K12
Ball valve Rp 3/4" for sensor DS M10x1 mm, length = 27.5 mm or Ø 5.2x45 mm	S55563-F120	WZT-K34
Ball valve Rp 1" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm	S55563-F119	WZT-K1

Adapter and accessories

Product Title	Stock no.	Product no.
Adapter G 3/8 B" with threaded hole to install sensor DS M10x1 mm, incl. gasket G 3/8"	LYU:WZT-A38	WZT-A38
Fitting probes 907836003/4	LYU:WZT-KA	WZT-KA
Adapter M10x1 mm x G 1/2 B" for sensor DS M10x1 mm / d=5.2 x 45 mm	S55563-F116	WZT-A12
Adapter G 3/4 B" with threaded hole to install sensor DS M10x1 mm, incl. gasket G 3/4"	LYU:WZT-A34	WZT-A34
Protection pocket G 1/2 B", length 35 mm, made of brass, for temperature sensor Ø 5.2x45 mm	S55563-F103	WZT-M35
Protection pocket G 1/2 B", brass, Ø 5.2x50 mm, for temperature sensor Ø 5.2x45 mm	LYU:WZT-M50	WZT-M50
Mounting kit for sensor Ø 5.2x45 mm	LYU:9930127002	9930127002
Adapter kit for sensor Ø 5.2x45 mm, incl. 2 O-rings	LYU:9956230	9956230
Sealing disk Ø 8.6/5.3, size 1 mm, for temperature sensor DS M10x1 mm	LYU:9060944001	9060944001
Sealing disk Ø 8.6/5.3, size 1.5 mm, for temperature sensor DS M10x1 mm made of copper	LYU:9060950	9060950
Sealing disc 1/2" made of copper	LYU:9060948	9060948
Welding sleeve with threaded hole for temperature sensor DS M10x1 mm	S55563-F121	WZT-G10
Spacer G 3/4", length 110 mm, incl. 2 flat gaskets	LYU:WZM-G110	WZM-G110
Spacer G 1", length 130 mm, incl. 2 flat gaskets	LYU:WZM-G130	WZM-G130
Sealing disk G 3/4", for threaded connection R 1/2"	LYU:9060944002	9060944002
Sealing disk G 1", for threaded connection R 3/4"	LYU:9060944003	9060944003
Wall adapter, incl. 2 screws and 2 dowels	LYU:T23-WA10	T23-WA10
Self-lock seal with sealing wire	LYU:9956186001	9956186001

Programming accessories for ultrasonic meters

Product Title	Stock no.	Product no.
Optical read head with USB interface for PC	LYU:WZR-OP-USB	WZR-OP-USB
UltraAssist standard, first licence, CD with UB-Dongle	LYU:WZX-UA-PEU	WZX-UA-PEU
UltraAssist Profi, first license, CD with USB mini-dongle	LYU:WZX-UA-PEU-MINI	WZX-UA-PEU-MINI
UltraAssist standard, second license, USB dongle	LYU:WZX-UA-PFU	WZX-UA-PFU
UltraAssist Profi, second license, USB mini-dongle	LYU:WZX-UA-PFU-MINI	WZX-UA-PFU-MINI

Meters

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters WS.6..

WS.6..



Ultrasonic heat and heat / cooling energy meters

The WSM6.. heat meters and WSN6.. heat and cooling energy meters acquire the volume flow statically based on the ultrasonic measuring principle. They are available as wall-mounting versions in different sizes. The meters excel in great measuring accuracy, a volume measuring section made of brass, and wear resistance.

The consumption values acquired by the meter can be read out either on the meter itself or from a remote location. The meter transmits the current consumption value, the monthly values, the set day value and error messages to the respective data collector.

The processor can be removed (cable length 1.5 m). The display informs the user about the amount of energy consumed.

The WSM6.. and WSB6.. are used in residential or commercial buildings to acquire the amount of heat or cooling energy consumed.

The meters are supplied with Operating and Mounting Instructions in the following languages: Bulgarian, Chinese, Croatian, Czech, Dutch, English, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Russian, Slovakian, Slovenian, Spanish, and Turkish.

Data sheet	N5372
Type of Meter	Heat Cooling
Measurement accuracy	Heat: MID class 2 Cold: EN 1434
Standard	EN 1434
Voltage supply	Lithium battery
Operating voltage	Battery operation: 3.6 V
PN class	PN 16
Sensing element, temperature	Pt500
Sensor	Type Ø 5.2 x 45 mm
Cable length, sensor	1.5 m
Due Date	01.01
Display	kWh
Mounting location	Meter: return Sensor in the flow: selectable, directly/indirectly immersed Sensor in the return: integrated in the return, directly immersed
Dimensions (W x H x D)	Electronic unit: 116 x 71 x 32 mm Flow measuring section: 110 x 43 x 64 mm (without cable) mm

Range overview WS.6..

Nominal flow rate [m³/h]	Mounting length [mm]	Connect. thread	Communication	Battery life	Stock no.	Product no.
0.6	110	G ¾"	M-bus	11 years	S55561-F249	WSM606-BE
0.6	110	G ¾"	M-bus	11 years	S55561-F266	WSN606-BE
1.5	110	G ¾"	M-bus	11 years	S55561-F250	WSM615-BE
1.5	110	G ¾"	M-bus	11 years	S55561-F267	WSN615-BE
2.5	130	G 1"	M-bus	11 years	S55561-F251	WSM625-BE
2.5	130	G 1"	M-bus	11 years	S55561-F268	WSN625-BE

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters WS.8..

WS.8..



Ultrasonic heat and heat/cooling energy meter

The WSM8.. is a measuring instrument used for the physically correct acquisition of energy consumption. The device consists of a flow measuring section made of brass, two temperature sensors, and an electronic unit which calculates the energy consumption from the flow and the temperature differential. The processor unit can be equipped with different sensors, up to four batteries and a communication module. In addition up to two impulse water meters can be readout.

The consumption values acquired by the meter can be read out either on the meter itself or from a remote location. The meter transmits the current consumption value, the monthly values, the set day value and error messages to the respective data collector. The processor can be removed (cable length 1.5 m). The display informs the user about the amount of energy consumed.

The Mounting and Operating Instructions are supplied in 18 languages: Bulgarian, Chinese, Croatian, Czech, Dutch, English, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Russian, Slovakian, Slovenian, Spanish and Turkish.

Data sheet	A6V11905989
Measurement accuracy	Class II
Standard	EN 1434
Voltage supply	Lithium battery
Operating voltage	3,6 V
PN class	PN 16
Sensing element, temperature	Pt500
Cable length, sensor	1.5 m
Due Date	01.01
Mounting location	Meter mounting: In return Sensor mounting: Return sensor, integrated in the flow measuring section
Dimensions (W x H x D)	105 x 138 x 44 mm

Range overview WS.8..

Nominal flow rate [m ³ /h]	Mounting length [mm]	Connect. thread	Communication	Battery life	Stock no.	Product no.
0.6	110	G 3/4"	M-bus	6 years	S55561-F269	WSM805-FBBAE3A
0.6	110	G 3/4"	M-bus	6 years	S55561-F272	WSM805-FHBAE3A
1.5	110	G 3/4"	M-bus	6 years	S55561-F270	WSM821-FBBAE3A
1.5	110	G 3/4"	M-bus	6 years	S55561-F273	WSM821-FHBAE3A
2.5	130	G 1"	M-bus	6 years	S55561-F271	WSM836-FBBAE3A
2.5	130	G 1"	M-bus	6 years	S55561-F274	WSM836-FHBAE3A
0.6	110	G 3/4"	M-bus	11 years	S55561-F275	WSN805-FBBBF3A
1.5	110	G 3/4"	M-bus	11 years	S55561-F276	WSN821-FBBBF3A
2.5	130	G 1"	M-bus	11 years	S55561-F277	WSN836-FBBBF3A

The meter can be supplied via M-bus. In this case the battery serves as a backup battery.

Power packs

Product Title	Stock no.	Product no.
Battery set, 1 battery	LYU:T45-BA-1	T45-BA-1
Battery set, set of 2 batteries	LYU:T45-BA-2	T45-BA-2
Battery set, set of 3 batteries	LYU:T45-BA-3	T45-BA-3
Battery set, set of 4 batteries	LYU:T45-BA-4	T45-BA-4

Communication modules

Product Title	Stock no.	Product no.
M-bus wired module	LYU:T45-MBUS	T45-MBUS
Pulse module	LYU:T45-PULSE	T45-PULSE
Radio-module, 868 MHz	LYU:T45-RADIO	T45-RADIO
Pulse input set for heat meters	LYU:T45-PULSE-IN	T45-PULSE-IN

New Product

Meters

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters WS.8..

Mounting sets

Product Title	Stock no.	Product no.
Installation kit G 3/4", for threaded connection R 1/2"	S55563-F124	WZM-E34
Mounting kit G1", for threaded connection R 3/4"	S55563-F123	WZM-E1
Adapter from 110 mm G 3/4" to 130 mm G 3/4", incl. gaskets	LYU:WZM-V130	WZM-V130
Adapter from 110 mm G 3/4B" to 130 mm G 1B", incl. 4 gaskets	LYU:WZM-V130.G1	WZM-V130.G1
Adapter from 110 mm G 3/4B" to 165 mm G 3/4B", incl. 1 gasket	LYU:WZM-VE165	WZM-VE165
Adapter from 110 mm G 3/4B" to 190 mm G 1B", incl. gaskets	LYU:WZM-V190	WZM-V190
Mounting set 110 mm	LYU:WZT-MS110	WZT-MS110
Mounting set 130 mm	LYU:WZT-MS130	WZT-MS130

Spacers and sealing disks

Product Title	Stock no.	Product no.
Spacer G 3/4", length 110 mm, incl. 2 flat gaskets	LYU:WZM-G110	WZM-G110
Spacer G 1", length 130 mm, incl. 2 flat gaskets	LYU:WZM-G130	WZM-G130
Sealing disk G 3/4", for threaded connection R 1/2"	LYU:9060944002	9060944002
Sealing disk G 1", for threaded connection R 3/4"	LYU:9060944003	9060944003

Ball valves

Product Title	Stock no.	Product no.
Ball valve R 1/2" with union nut G 3/4"	LYU:WZT-K12-34	WZT-K12-34
Ball valve R 3/4" with union nut G 3/4"	LYU:WZT-K34-34	WZT-K34-34
Ball valve R 3/4" with union nut G 1"	LYU:WZT-K34-1	WZT-K34-1
Ball valve R 1" with union nut G 1"	LYU:WZT-K1-1	WZT-K1-1
Ball valve Rp 1/2" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm	S55563-F104	WZT-K12
Ball valve Rp 3/4" for sensor DS M10x1 mm, length = 27.5 mm or Ø 5.2x45 mm	S55563-F120	WZT-K34
Ball valve Rp 1" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm	S55563-F119	WZT-K1

Accessories

Product Title	Stock no.	Product no.
Adapter G 3/8 B" with threaded hole to install sensor DS M10x1 mm, incl. gasket G 3/8"	LYU:WZT-A38	WZT-A38
Mounting set for sensor Ø 5.2x45 mm	LYU: WZT-FA	WZT-FA
Fitting probes 907836003/4	LYU:WZT-KA	WZT-KA
Mounting plate for top hat rail	LYU:WZU-MH	WZU-MH
Plate for wall mounting	LYU:WZU-WH	WZU-WH
Adapter M10x1 mm x G 1/2 B" for sensor DS M10x1 mm / d=5.2 x 45 mm	S55563-F116	WZT-A12
Adapter G 3/4 B" with threaded hole to install sensor DS M10x1 mm, incl. gasket G 3/4"	LYU:WZT-A34	WZT-A34
Protection pocket G 1/2 B", length 35 mm, made of brass, for temperature sensor Ø 5.2x45 mm	S55563-F103	WZT-M35
Protection pocket G 1/2B", brass, Ø 5.2x50 mm, for temperature sensor Ø 5.2x45 mm	LYU:WZT-M50	WZT-M50
Adapter kit for sensor Ø 5.2x45 mm, incl. 2 O-rings	LYU:9956230	9956230
Sealing disk Ø 8.6/5.3, size 1 mm, for temperature sensor DS M10x1 mm	LYU:9060944001	9060944001
Sealing disk Ø 8.6/5.3, size 1.5 mm, for temperature sensor DS M10x1 mm made of copper	LYU:9060950	9060950
Sealing disc 1/2" made of copper	LYU:9060948	9060948
Welding sleeve with threaded hole for temperature sensor DS M10x1 mm	S55563-F121	WZT-G10
Self-lock seal with sealing wire	LYU:9956186001	9956186001
Mounting plate for wall mounting	LYU:WZU-WA	WZU-WA

Temperature sensors (pairs)

Product Title	Stock no.	Product no.
Pair of temperature sensors Pt500, DS M10x1 mm, sensor length 27.5 mm, cable length 1.5 m	LYU:WZU5-2815	WZU5-2815
Pair of temperature sensors Pt500, DS M10x1 mm, sensor length 27.5 mm, cable length 2.5 m	LYU:WZU5-2825	WZU5-2825
Pair of temperature sensors Pt500, DS M10x1 mm, sensor length 38 mm, cable length 1.5 m	LYU:WZU5-3815	WZU5-3815

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters WS.8..

Temperature sensors (pairs)

Product Title	Stock no.	Product no.
Pair of temperature sensors Pt500, DS M10x1 mm, sensor length 38 mm, cable length 2.5 m	LYU:WZU5-3825	WZU5-3825
Pair of temperature sensors Pt500, PS Ø5.2x45 mm, cable length 1.5 m	LYU:WZU5-4515	WZU5-4515
Pair of temperature sensors Pt500, PS Ø 5.2x45 mm, cable length 5 m	LYU:WZU5-4550	WZU5-4550

Programming accessories for ultrasonic meters

Product Title	Stock no.	Product no.
Optical read head with USB interface for PC	LYU:WZR-OP-USB	WZR-OP-USB

Meters

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters 2WR6..

2WR6..E



Ultrasonic heat and cooling energy meters with battery

The 2WR6..E heat and cooling energy meter acquires the volume flow statically based on the ultrasonic measuring principle. It is available as a wall-mounting version in different sizes. The 2WR6..E excels in great measuring accuracy, wear resistance, and long-term stability.

The 2WR6..E transmits the current consumption value, the monthly values, the set day value, and error messages to the respective data collector. The processor unit can be removed (cable length 1 m). The temperature sensor is ready connected to the processor unit. The display informs the user about the amount of energy consumed.

The ultrasonic meters are used in residential or commercial buildings to acquire the amount of heat or cooling energy consumed.

The meters are supplied with Operating and Mounting Instructions in the following languages: Bulgarian, Chinese, Croatian, Czech, Dutch, English, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Russian, Slovakian, Slovenian, Spanish, and Turkish

Data sheet	N5378
Measurement accuracy	MID class 2
Standard	EN 1434
PN class	PN 16
Measuring range, temperature	Processor unit: 2...180 °C Flow measuring section: 5...105 °C
Temperature response threshold	0.2 K
Sensing element, temperature	Pt500
Cable length, sensor	1.5 m
Due Date	12.31
Communication	M-bus
Display	kWh
Mounting location	Meter: return Sensor in the flow: selectable, directly/indirectly immersed Sensor in the return: integrated in the return, directly immersed

Range overview ultrasonic heat meters with battery

Nominal flow rate [m³/h]	Mounting length [mm]	Connect. thread ["]	Sensor	Voltage supply	Connect. thread	Stock no.	Product no.
0.6	110	G ¾"	DS M10 x 1 mm	Lithium battery	G ¾"	S55561-F100	2WR605-MBE

Fittings

Product Title	Stock no.	Product no.
Installation kit G ¾", for threaded connection R ½"	S55563-F124	WZM-E34
Mounting kit G1", for threaded connection R ¾"	S55563-F123	WZM-E1
Adapter from 110 mm G ¾" to 130 mm G ¾", incl. gaskets	LYU:WZM-V130	WZM-V130
Adapter from 110 mm G ¾" to 130 mm G 1B", incl. 4 gaskets	LYU:WZM-V130.G1	WZM-V130.G1
Adapter from 110 mm G ¾" to 165 mm G ¾", incl. 1 gasket	LYU:WZM-VE165	WZM-VE165
Adapter from 110 mm G ¾" to 190 mm G 1B", incl. gaskets	LYU:WZM-V190	WZM-V190
Mounting set for 110 mm, 1 spacer, 2 fittings, 1 protection pocket and gaskets	LYU:99T34110	99T34110
Mounting set for 130 mm, 1 spacer, 2 fittings, 1 protection pocket and gaskets	LYU:99T01130	99T01130

Ball valves

Product Title	Stock no.	Product no.
Ball valve R ½" with union nut G ¾"	LYU:WZT-K12-34	WZT-K12-34
Ball valve R ¾" with union nut G ¾"	LYU:WZT-K34-34	WZT-K34-34
Ball valve R ¾" with union nut G 1"	LYU:WZT-K34-1	WZT-K34-1
Ball valve R 1" with union nut G 1"	LYU:WZT-K1-1	WZT-K1-1

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters 2WR6..

Ball valves

Product Title	Stock no.	Product no.
Ball valve Rp 1/2" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm	S55563-F104	WZT-K12
Ball valve Rp 3/4" for sensor DS M10x1 mm, length = 27.5 mm or Ø 5.2x45 mm	S55563-F120	WZT-K34
Ball valve Rp 1" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm	S55563-F119	WZT-K1

Accessories

Product Title	Stock no.	Product no.
Adapter M10x1 mm x G 1/2 B" for sensor DS M10x1 mm / d=5.2 x 45 mm	S55563-F116	WZT-A12
Adapter G 3/4" with threaded hole to install sensor DS M10x1 mm, incl. gasket G 3/4"	LYU:WZT-A34	WZT-A34
Protection pocket G 1/2 B", length 35 mm, made of brass, for temperature sensor Ø 5.2x45 mm	S55563-F103	WZT-M35
Protection pocket G 1/2 B", brass, Ø 5.2x50 mm, for temperature sensor Ø 5.2x45 mm	LYU:WZT-M50	WZT-M50
Pocket G 1/2 B", stainless steel, 5.2 x 37 mm, with seal	LYU:WZT-S43V	WZT-S43V
Mounting kit for sensor Ø 5.2x45 mm	LYU:9930127002	9930127002
Adapter kit for sensor Ø 5.2x45 mm, incl. 2 O-rings	LYU:9956230	9956230
Sealing disk Ø 8.6/5.3, size 1 mm, for temperature sensor DS M10x1 mm	LYU:9060944001	9060944001
Sealing disc 1/2" made of copper	LYU:9060948	9060948
Welding sleeve with threaded hole for temperature sensor DS M10x1 mm	S55563-F121	WZT-G10
Spacer G 3/4", length 110 mm, incl. 2 flat gaskets	LYU:WZM-G110	WZM-G110
Spacer G 1", length 130 mm, incl. 2 flat gaskets	LYU:WZM-G130	WZM-G130
Spacer G 1", length 190 mm, incl. 2 flat gaskets	LYU:WZM-G190	WZM-G190
Sealing disk G 3/4", for threaded connection R 1/2"	LYU:9060944002	9060944002
Sealing disk G 1", for threaded connection R 3/4"	LYU:9060944003	9060944003

Programming accessories for ultrasonic meters

Product Title	Stock no.	Product no.
Optical read head with USB interface for PC	LYU:WZR-OP-USB	WZR-OP-USB
UltraAssist standard, first licence, CD with UB-Dongle	LYU:WZX-UA-PEU	WZX-UA-PEU
UltraAssist Profi, first license, CD with USB mini-dongle	LYU:WZX-UA-PEU-MINI	WZX-UA-PEU-MINI
UltraAssist standard, second license, USB dongle	LYU:WZX-UA-PFU	WZX-UA-PFU
UltraAssist Profi, second license, USB mini-dongle	LYU:WZX-UA-PFU-MINI	WZX-UA-PFU-MINI

Meters

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters UH50..

UH50_0.6..2.5 m³/h



Ultrasonic heat and heating/cooling energy meters

The UH50-A.. heat meter and the UH50-C.. heat/combi meter acquire the volume flow statically based on the ultrasonic measuring principle. They are available as wall-mounting versions in different sizes. The meters excel in great measuring accuracy, wear resistance, and long-term stability. The UH50.. transmits the current consumption value, the monthly values, the set day value, and error messages to the respective data collector.

The processor unit can be equipped with different sensors, different power supplies, and 2 communication modules.

The display informs the user about the amount of energy consumed.

The ultrasonic meters are used in residential or commercial buildings to acquire the amount of heat or heat/cooling energy consumed.

The standard meter is supplied without power supply and without communication (see accessories).

The meters are supplied with Operating and Mounting Instructions in the following languages: Bulgarian, Chinese, Croatian, Czech, Dutch, English, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Russian, Slovakian, Slovenian, Spanish, and Turkish

Data sheet	N5324
Measurement accuracy	Heat: MID class 2 Cold: EN 1434
Standard	EN 1434
Voltage supply	Without, see accessories
Due Date	01.01
Temperature response threshold	Heat: 0.2 K Cold: 0.2 K
Measuring range, temperature	Processor unit: 0...180 °C Flow measuring section: 5...130 °C
Sensing element, temperature	Pt500
Sensor	Sensor type: DS 10x1 mm, length 27.5 mm
Communication	Without, see accessories
Mounting location	Meter: Return

Range overview UH50.. 0.6..2.5 m³/h

Nominal flow rate [m ³ /h]	Mounting length [mm]	PN class	Cable length, sensor [m]	Display	Connect. thread	Type of Meter	Stock no.	Product no.
0.6	110	PN 16		kWh	G ¾"	Heat	S55561-F112	UH50-A05-00
0.6	110	PN 16	1.5	kWh	G ¾"	Heat Cooling	S55561-F122	UH50-C05-00
0.6	110	PN 25	1.5	kWh	G ¾"	Heat Cooling	S55561-F252	UH50-C06-00
1.5	110	PN 16	1.5	kWh	G ¾"	Heat	S55561-F113	UH50-A21-00
1.5	110	PN 16	1.5	kWh	G ¾"	Heat Cooling	S55561-F123	UH50-C21-00
1.5	110	PN 25	1.5	kWh	G ¾"	Heat Cooling	S55561-F253	UH50-C22-00
1.5	190	PN 16	1.5	kWh	G 1"	Heat	S55561-F180	UH50-A23-00
1.5	190	PN 25	1.5	kWh	G 1"	Heat Cooling	S55561-F254	UH50-C25-00
2.5	130	PN 16	1.5	kWh	G 1"	Heat	S55561-F114	UH50-A36-00
2.5	130	PN 16	1.5	kWh	G 1"	Heat Cooling	S55561-F124	UH50-C36-00
2.5	130	PN 25	1.5	kWh	G 1"	Heat Cooling	S55561-F255	UH50-C37-00
2.5	190	PN 16	1.5	kWh	G 1"	Heat	S55561-F181	UH50-A38-00
2.5	190	PN 25	1.5	kWh	G 1"	Heat Cooling	S55561-F256	UH50-C40-00

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters UH50..

Accessories see datasheet: N5324

UH50-C06-00, UH50-C22-00, UH50-C25-00, UH50-C37-00, UH50-C40-00

Design of processor unit: Split unit with ready wired control line of 1.5 m.

Connection of sensor: The sensor can be replaced; return sensor installation in measuring tube optional

Sensors: DS M10x1 mm, length = 27.5 mm, cable length = 1.5 m

Display: kWh

Other types:

Design of processor unit: Split unit with ready wired control line of 1.5 m.

Connection of sensor: The sensor can be replaced; the return sensor is integrated in the volume measuring section (internally, directly immersed).

Sensors: DS M10x1 mm, length = 27.5 mm, cable length = 1.5 m

Display: kWh

Meters

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters UH50..

UH50_3.5..6 m3/h



Ultrasonic heat and heating/cooling energy meters 3.5...6 m3/h

The UH50-A.. heat meter and the UH50-C.. heat/combi meter acquire the volume flow statically based on the ultrasonic measuring principle. They are available as wall-mounting versions in different sizes. The meters excel in great measuring accuracy, wear resistance, and long-term stability. The UH50.. transmits the current consumption value, the monthly values, the set day value, and error messages to the respective data collector.

The processor unit can be equipped with different sensors, different power supplies, and 2 communication modules.

The display informs the user about the amount of energy consumed.

The ultrasonic meters are used in residential or commercial buildings to acquire the amount of heat or heat/cooling energy consumed.

The standard meter is supplied without power supply and without communication (see accessories).

The meters are supplied with Operating and Mounting Instructions in the following languages: Bulgarian, Chinese, Croatian, Czech, Dutch, English, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Russian, Slovakian, Slovenian, Spanish, and Turkish

Data sheet	N5324
Measurement accuracy	Heat: MID class 2 Cold: EN 1434
Standard	EN 1434
Voltage supply	Without, see accessories
Due Date	01.01
Measuring range, temperature	Processor unit: 0...180 °C Flow measuring section: 5...130 °C
Temperature response threshold	Heat: 0.2 K Cold: 0.2 K
Sensing element, temperature	Pt500
Sensor	Sensor type: DS 10x1 mm, length 38 mm
Communication	Without, see accessories
Mounting location	Meter: Return

Range overview UH50.. 3.5..6 m3/h

Nominal flow rate [m ³ /h]	Mounting length [mm]	PN class	Cable length, sensor [m]	Display	Connect. thread	Con-nect. thread	DN	Type of Meter	Stock no.	Product no.
3.5	260	PN 16	1.5	kWh	G 1 1/4 "	G 1 1/4 "		Heat	S55561-F115	UH50-A45-00
3.5	260	PN 16	1.5	kWh	G 1 1/4 "	G 1 1/4 "		Heat Cooling	S55561-F125	UH50-C45-00
3.5	260	PN 25	2.5	kWh	G 1 1/4 "	G 1 1/4 "		Heat Cooling	S55561-F257	UH50-C47-00
6	260	PN 16	1.5	kWh	G 1 1/4 "	G 1 1/4 "		Heat	S55561-F116	UH50-A50-00
6	260	PN 16	1.5	kWh	G 1 1/4 "	G 1 1/4 "		Heat Cooling	S55561-F126	UH50-C50-00
6	260	PN 25	1.5	kWh			25	Heat Cooling	S55561-F258	UH50-C52-00

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters UH50..

Accessories see datasheet: N5324

UH50-C47-00

Design of processor unit: Split unit with ready wired control line of 1.5 m.

Connection of sensor: The sensor can be replaced; return sensor installation in measuring tube optional

Sensors: DS M10x1 mm, length = 38 mm, cable length = 2.5 m

Display: kWh

UH50-C52-00

Design of processor unit: Split unit with ready wired control line of 1.5 m.

Connection of sensor: The sensor can be replaced; the return sensor is not integrated in the volume measuring section.

Sensors: Ø 5.2x45 mm, cable length = 1.5 m

Display: kWh

Other types:

Design of processor unit: Split unit with ready wired control line of 1.5 m.

Connection of sensor: The sensor can be replaced; the return sensor is integrated in the volume measuring section (internally, directly immersed).

Sensors: DS M10x1 mm, length = 38 mm, cable length = 1.5 m

Display: kWh

Meters

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters UH50..

UH50_10 m3/h



Ultrasonic heat and heating/cooling energy meters 10 m3/h

The UH50-A.. heat meter and the UH50-C.. heat/combi meter acquire the volume flow statically based on the ultrasonic measuring principle. They are available as wall-mounting versions in different sizes. The meters excel in great measuring accuracy, wear resistance, and long-term stability. The UH50.. transmits the current consumption value, the monthly values, the set day value, and error messages to the respective data collector.

The processor unit can be equipped with different sensors, different power supplies, and 2 communication modules.

The display informs the user about the amount of energy consumed.

The ultrasonic meters are used in residential or commercial buildings to acquire the amount of heat or heat/cooling energy consumed.

The standard meter is supplied without power supply and without communication (see accessories).

The meters are supplied with Operating and Mounting Instructions in the following languages: Bulgarian, Chinese, Croatian, Czech, Dutch, English, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Russian, Slovakian, Slovenian, Spanish, and Turkish

Data sheet	N5324
Measurement accuracy	Heat: MID class 2 Cold: EN 1434
Standard	EN 1434
Voltage supply	Without, see accessories
Due Date	01.01
Measuring range, temperature	Processor unit: 0...180 °C Flow measuring section: 5...130 °C
Temperature response threshold	Heat: 0.2 K Cold: 0.2 K
Sensing element, temperature	Pt500
Sensor	Sensor type: d = 6 mm, length 100 mm
Communication	Without, see accessories
Mounting location	Meter: Return

Range overview UH50.. 10 m3/h

Nominal flow rate [m ³ /h]	Mounting length [mm]	PN class	Cable length, sensor [m]	Display	Connect. thread ["]	Connect. thread	DN	Type of Meter	Stock no.	Product no.
10	300	PN 25	5	kWh			40	Heat	S55561-F117	UH50-A61-00
10	300	PN 25	5	kWh			40	Heat Cooling	S55561-F127	UH50-C61-00
10	300	PN 16	2	kWh	G 2	G 2"		Heat Cooling	S55561-F259	UH50-C60-00

Accessories see datasheet: N5324

UH50-C60-00

Design of processor unit: Split unit with ready wired control line of 1.5 m.

Connection of sensor: The sensor can be replaced; the return sensor is not integrated in the volume measuring section.

Sensors: Ø 6 mm, length = 100 mm, cable length = 2 m

Display: kWh

UH50-A61-00, UH50-C61-00

Design of processor unit: Split unit with ready wired control line of 1.5 m.

Connection of sensor: The sensor can be replaced; the return sensor is not integrated in the volume measuring section.

Sensors: Ø 6 mm, length = 100 mm, cable length = 5 m

Display: kWh

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters UH50..

Ultrasonic heat and heating/cooling energy meters 15...25 m³/h

UH50_15..25 m³/h

The UH50-A.. heat meter and the UH50-C.. heat/combi meter acquire the volume flow statically based on the ultrasonic measuring principle. They are available as wall-mounting versions in different sizes. The meters excel in great measuring accuracy, wear resistance, and long-term stability. The UH50.. transmits the current consumption value, the monthly values, the set day value, and error messages to the respective data collector.

The processor unit can be equipped with different sensors, different power supplies, and 2 communication modules.



The display informs the user about the amount of energy consumed.

The ultrasonic meters are used in residential or commercial buildings to acquire the amount of heat or heat/cooling energy consumed.

The standard meter is supplied without power supply and without communication (see accessories).

The meters are supplied with Operating and Mounting Instructions in the following languages: Bulgarian, Chinese, Croatian, Czech, Dutch, English, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Russian, Slovakian, Slovenian, Spanish, and Turkish

Data sheet	N5324
Measurement accuracy	Heat: MID class 2 Cold: EN 1434
Standard	EN 1434
Voltage supply	Without, see accessories
Due Date	01.01
Measuring range, temperature	Processor unit: 0...180 °C Flow measuring section: 5...130 °C
Temperature response threshold	Heat: 0.2 K Cold: 0.2 K
Sensing element, temperature	Pt500
Sensor	Sensor type: d = 6 mm, length 100 mm
Communication	Without, see accessories
Mounting location	Meter: Return

Range overview UH50.. 15..25 m³/h

Nominal flow rate [m ³ /h]	Mounting length [mm]	PN class	Cable length, sensor [m]	Display	DN	Type of Meter	Stock no.	Product no.
15	270	PN 25	5	MWh	50	Heat	S55561-F118	UH50-A65-00
15	270	PN 25	5	MWh	50	Heat Cooling	S55561-F128	UH50-C65-00
25	300	PN 25	5	MWh	65	Heat	S55561-F119	UH50-A70-00
25	300	PN 25	5	MWh	65	Heat Cooling	S55561-F129	UH50-C70-00

Accessories see datasheet: N5324

Design of processor unit: Split unit with ready wired control line of 3 m.

Connection of sensor: The sensor can be replaced; the return sensor is not integrated in the volume measuring section.

Sensors: Ø 6 mm, length = 100 mm, cable length = 5 m

Display: MWh

Meters

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters UH50..

UH50_40..60 m3/h



Ultrasonic heat and heating/cooling energy meters 40...60 m3/h

The UH50-A.. heat meter and the UH50-C.. heat/combi meter acquire the volume flow statically based on the ultrasonic measuring principle. They are available as wall-mounting versions in different sizes. The meters excel in great measuring accuracy, wear resistance, and long-term stability. The UH50.. transmits the current consumption value, the monthly values, the set day value, and error messages to the respective data collector.

The processor unit can be equipped with different sensors, different power supplies, and 2 communication modules.

The display informs the user about the amount of energy consumed.

The ultrasonic meters are used in residential or commercial buildings to acquire the amount of heat or heat/cooling energy consumed.

The standard meter is supplied without power supply and without communication (see accessories).

The meters are supplied with Operating and Mounting Instructions in the following languages: Bulgarian, Chinese, Croatian, Czech, Dutch, English, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Russian, Slovakian, Slovenian, Spanish, and Turkish

Data sheet	N5324
Measurement accuracy	Heat: MID class 2 Cold: EN 1434
Standard	EN 1434
Voltage supply	Without, see accessories
Due Date	01.01
Measuring range, temperature	Processor unit: 0...180 °C Flow measuring section: 5...130 °C
Temperature response threshold	Heat: 0.2 K Cold: 0.2 K
Sensing element, temperature	Pt500
Sensor	Sensor type: d=6 mm, length 150 mm
Communication	Without, see accessories
Mounting location	Meter: Return

Range overview UH50.. 40..60 m3/h

Nominal flow rate [m ³ /h]	Mounting length [mm]	PN class	Cable length, sensor [m]	Display	DN	Type of Meter	Stock no.	Product no.
40	300	PN 25	5	MWh	80	Heat	S55561-F120	UH50-A74-00
40	300	PN 25	5	MWh	80	Heat Cooling	S55561-F130	UH50-C74-00
60	360	PN 25	5	MWh	100	Heat	S55561-F121	UH50-A83-00
60	360	PN 25	5	MWh	100	Heat Cooling	S55561-F131	UH50-C83-00

Accessories see datasheet: N5324

Design of processor unit: Split unit with ready wired control line of 3 m.

Connection of sensor: The sensor can be replaced; the return sensor is not integrated in the volume measuring section.

Sensors: Ø 6 mm, length = 150 mm, cable length = 5 m

Display: MWh

Communication modules

Product Title	Stock no.	Product no.
Pulse module with 2 channels	S55563-F107	WZU-P2
M-bus module for heat and heat/cooling energy meters, generation 4	S55563-F110	WZU-MB-G4
M-bus module with 2 pulse inputs for heat and heat/cooling energy meters, generation 4	S55563-F108	WZU-MI
GPRS module with external antenna (magnetic attachment) and power pack 110...230 V	LYU:WZU-GPRS	WZU-GPRS
GPRS module with external antenna (for screw mounting) and power pack 110...230 V	LYU:WZU-GPRS-ANT	WZU-GPRS-ANT

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters UH50..

Communication modules

Product Title	Stock no.	Product no.
Analog module	LYU:WZU-AM	WZU-AM
Power pack for WZU-AM, WZU-485E-BAC and WZU-485E-MOD	LYU:WZU-NE24	WZU-NE24
Moduł Modbus RTU RS485	LYU:WZU-485E-MOD	WZU-485E-MOD
BACnet module RS-485 (MS/TP)	LYU:WZU-485E-BAC	WZU-485E-BAC

Power packs

Product Title	Stock no.	Product no.
Power supply AC 110/230 V for UH50..	S55563-F154	WZU-AC110/230-15
Power supply AC 110/230 V for UH50..	LYU:WZU-AC110/230-50	WZU-AC110/230-50
Power pack AC/DC 24 V	S55563-F156	WZU-ACDC24-50
Standard battery (2x AA) for 6 years, complete with fastener	S55563-F114	WZU-BA+GUM
Universal battery (D-cell), life 6 and 16 years respectively	S55563-F113	WZU-BDS

Temperature sensors (pairs)

Product Title	Stock no.	Product no.
Pair of temperature sensors Pt500, DS M10x1 mm, sensor length 27.5 mm, cable length 1.5 m	LYU:WZU5-2815	WZU5-2815
Pair of temperature sensors Pt500, DS M10x1 mm, sensor length 27.5 mm, cable length 2.5 m	LYU:WZU5-2825	WZU5-2825
Pair of temperature sensors Pt500, DS M10x1 mm, sensor length 38 mm, cable length 1.5 m	LYU:WZU5-3815	WZU5-3815
Pair of temperature sensors Pt500, DS M10x1 mm, sensor length 38 mm, cable length 2.5 m	LYU:WZU5-3825	WZU5-3825
Pair of temperature sensors Pt500, PS Ø5.2x45 mm, cable length 1.5 m	LYU:WZU5-4515	WZU5-4515
Pair of temperature sensors Pt500, PS Ø 5.2x45 mm, cable length 5 m	LYU:WZU5-4550	WZU5-4550
Pair of temperature sensors Pt500, PL Ø 6x100 mm, cable length 2 m	LYU:WZU5-1020	WZU5-1020
Pair of temperature sensors Pt500, PL Ø 6x100 mm, cable length 5 m	LYU:WZU5-1050	WZU5-1050
Pair of temperature sensors Pt500, PL Ø 6x150 mm, cable length 2 m	LYU:WZU5-1520	WZU5-1520
Pair of temperature sensors Pt500, PL Ø 6x150 mm, cable length 5 m	LYU:WZU5-1550	WZU5-1550

Fittings

Product Title	Stock no.	Product no.
Installation kit G ¾", for threaded connection R ½"	S55563-F124	WZM-E34
Mounting kit G1", for threaded connection R ¾"	S55563-F123	WZM-E1
Mounting kit G2 × R 1½"	LYU:WZM-E2.1	WZM-E2.1
Installation kit G1 1/4 × R1"	S55563-F125	WZM-E54
Adapter from 110 mm G ¾" to 130 mm G ¾", incl. gaskets	LYU:WZM-V130	WZM-V130
Adapter from 110 mm G ¾B" to 130 mm G 1B", incl. 4 gaskets	LYU:WZM-V130.G1	WZM-V130.G1
Adapter from 110 mm G ¾B" to 165 mm G ¾B", incl. 1 gasket	LYU:WZM-VE165	WZM-VE165
Adapter from 110 mm G ¾B" to 190 mm G 1B", incl. gaskets	LYU:WZM-V190	WZM-V190
Mounting set 110 mm	LYU:WZT-MS110	WZT-MS110
Mounting set 130 mm	LYU:WZT-MS130	WZT-MS130
Mounting set for 110 mm, 1 spacer, 2 fittings, 1 protection pocket and gaskets	LYU:99T34110	99T34110
Mounting set for 130 mm, 1 spacer, 2 fittings, 1 protection pocket and gaskets	LYU:99T01130	99T01130

Spacers and sealing disks

Product Title	Stock no.	Product no.
Spacer for heat meter DN20, length 190 mm, PN16, incl. 2 flat gaskets	BPZ:WZM-F190	WZM-F190
Spacer for heat meter DN25, length 260 mm, PN16, incl. 2 flat gaskets	BPZ:WZM-F260	WZM-F260
Spacer DN 50, length 270 mm, PN16, incl. 2 flat gaskets	LYU:WZM-F270	WZM-F270
Spacer DN 40, length 300 mm, PN16, incl. 2 flat gaskets	LYU:WZM-F300	WZM-F300
Spacer DN 65, length 300 mm, PN16, incl. 2 flat gaskets	LYU:WZM-F300.65	WZM-F300.65
Spacer DN 80, length 300 mm, PN16, incl. 2 flat gaskets	LYU:WZM-F300.80	WZM-F300.80
Spacer DN 100, length 360 mm, PN25, incl. 2 flat gaskets	LYU:WZM-F360.100-25	WZM-F360.100-25
Spacer G ¾", length 110 mm, incl. 2 flat gaskets	LYU:WZM-G110	WZM-G110
Spacer G 1", length 130 mm, incl. 2 flat gaskets	LYU:WZM-G130	WZM-G130

New Product

Meters

Ultrasonic heat/cooling energy meters

Ultrasonic heat/cooling energy meters UH50..

Spacers and sealing disks

Product Title	Stock no.	Product no.
Spacer G 1", length 190 mm, incl. 2 flat gaskets	LYU:WZM-G190	WZM-G190
Spacer G 1¼", length 260 mm, incl. 2 flat gaskets	LYU:WZM-G260	WZM-G260
Sealing disk G ¾", for threaded connection R ½"	LYU:9060944002	9060944002
Sealing disk G 1", for threaded connection R ¾"	LYU:9060944003	9060944003
Sealing disk G 1¼", for threaded connection R 1"	LYU:9060944004	9060944004
Sealing disk for flange DN 40	LYU:9060944024	9060944024
Sealing disk for flange DN 50	LYU:9060944025	9060944025
Sealing disk for flange DN 65	LYU:9060944026	9060944026
Sealing disk for flange DN 80	LYU:9060944027	9060944027
Sealing disk for flange DN 100	LYU:9060944028	9060944028

Ball valves

Product Title	Stock no.	Product no.
Ball valve R ½" with union nut G ¾"	LYU:WZT-K12-34	WZT-K12-34
Ball valve R ¾" with union nut G ¾"	LYU:WZT-K34-34	WZT-K34-34
Ball valve R ¾" with union nut G 1"	LYU:WZT-K34-1	WZT-K34-1
Ball valve R 1" with union nut G 1"	LYU:WZT-K1-1	WZT-K1-1
Ball valve Rp ½" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm	S55563-F104	WZT-K12
Ball valve Rp ¾" for sensor DS M10x1 mm, length = 27.5 mm or Ø 5.2x45 mm	S55563-F120	WZT-K34
Ball valve Rp 1" for sensor DS M10x1 mm, length 27.5 mm or Ø 5.2x45 mm	S55563-F119	WZT-K1

Accessories

Product Title	Stock no.	Product no.
Adapter G 3/8 B" with threaded hole to install sensor DS M10x1 mm, incl. gasket G 3/8"	LYU:WZT-A38	WZT-A38
Fitting probes 907836003/4	LYU:WZT-KA	WZT-KA
Mounting plate for top hat rail	LYU:WZU-MH	WZU-MH
Adapter M10x1 mm x G 1/2 B" for sensor DS M10x1 mm / d=5.2 x 45 mm	S55563-F116	WZT-A12
Adapter G ¾ B" with threaded hole to install sensor DS M10x1 mm, incl. gasket G ¾"	LYU:WZT-A34	WZT-A34
Protection pocket G ½ B", length 35 mm, made of brass, for temperature sensor Ø 5.2x45 mm	S55563-F103	WZT-M35
Protection pocket G ½ B", brass, Ø 5.2x50 mm, for temperature sensor Ø 5.2x45 mm	LYU:WZT-M50	WZT-M50
Protection pocket G ½ B", stainless steel, with threaded hole G ¼", L = 100 mm	S55563-F117	WZT-S100
Protection pocket G ½ B", stainless steel, with threaded hole G ¼", L = 150 mm	S55563-F118	WZT-S150
Mounting kit for sensor Ø 5.2x45 mm	LYU:9930127002	9930127002
Adapter kit for sensor Ø 5.2x45 mm, incl. 2 O-rings	LYU:9956230	9956230
Mounting set G ½ B" with threaded hole G ¼" for direct mounting of long sensors	LYU:WZT-A100	WZT-A100
Sealing disk Ø 8.6/5.3, size 1 mm, for temperature sensor DS M10x1 mm	LYU:9060944001	9060944001
Sealing disc ½" made of copper	LYU:9060948	9060948
Adapter for ball valve to install sensor DS M10x1 mm, length 38 mm	LYU:9930128002	9930128002
Welding sleeve G ½", 45° to the pipe axis, with threaded hole G ½"	S55563-F122	WZT-G12
Welding sleeve G ½", 90° to the pipe axis, with threaded hole G ½"	LYU:WZT-GLG	WZT-GLG
Welding sleeve with threaded hole for temperature sensor DS M10x1 mm	S55563-F121	WZT-G10
Self-lock seal with sealing wire	LYU:9956186001	9956186001
Mounting plate for wall mounting	LYU:WZU-WA	WZU-WA
Service-key for calibration modus	LYU:9089885	9089885

Programming accessories for ultrasonic meters

Product Title	Stock no.	Product no.
Optical read head with USB interface for PC	LYU:WZR-OP-USB	WZR-OP-USB
UltraAssist standard, first licence, CD with UB-Dongle	LYU:WZX-UA-PEU	WZX-UA-PEU
UltraAssist Profi, first license, CD with USB mini-dongle	LYU:WZX-UA-PEU-MINI	WZX-UA-PEU-MINI
UltraAssist standard, second license, USB dongle	LYU:WZX-UA-PFU	WZX-UA-PFU
UltraAssist Profi, second license, USB mini-dongle	LYU:WZX-UA-PFU-MINI	WZX-UA-PFU-MINI

Synergyr control and metering system

Mounting kit for WRV81/84 replacement

Mounting kit for WRV81/84 replacement

Using the ALG80WRI, heat meter and small valve (complete with actuator) can be installed in very confined spaces, analogous to the WRV mounting dimensions.
The ALG80WRI consists of 2 hydraulic diversion pieces with fittings, a built-in immersion sleeve and the necessary sealings.



Data sheet N2803

Stock no. Product no.

BPZ:ALG80WRI ALG80WRI

Mounting kit for WRV83 replacement

Using the ALG83WRI, a WRV83 valve can be hydraulically replaced by a heat meter without having to modify the existing piping.
The ALG83WRI consists of 2 threaded adapters (from 3/4" to 1"), an immersion sleeve and the necessary sealings.



Data sheet N2803

Stock no. Product no.

BPZ:ALG83WRI ALG83WRI

Mounting kit

Mounting kit for zone valve VVP47.10...; to be applied when replacing a valve WRV8... by an interface WRI80.



Data sheet N2803
Warranty 2 Years

Stock no. Product no.

BPZ:ALG10/20 ALG10/20

Meters

Systems for remote readout Automatic Meter Reading System

AMR



AMR wireless system

The Automatic Meter Reading system (AMR) is an innovative system for wireless remote readout of consumption data. It consists of network nodes (data collectors) which form a network within the premises to collect all consumption data transmitted by the metering devices, to store them and to make them available for further handling. The network nodes can be read either locally or by making use of Internet technologies, also from the office. The types of consumption meters included in the AMR system are heat meters, water meters and heat cost allocators. A pulse adapter is available, enabling third-party meters to be integrated into the system. The AMR system excels in versatility, ease of installation and maintenance, and offers a large number of readout choices matched to customer needs. The system components are suited for installation in small premises (e.g. 3 apartments) and in large plant comprising several buildings. Installation of the wireless network is largely automatic, including self-configuration.

Functioning principle: The system automatically configures itself during installation, forming a network. The battery-powered network nodes receive and store the consumption data from the metering devices installed within their range. In the network, the measured values received from all metering devices are constantly updated. This means that every network node holds the consumption data of the entire plant so that readout can take place at any of the nodes. For local readout, a laptop can be connected to any of the network nodes via cable, or an optional wireless module can be used. This works within the range of each network node. Depending on the local situation, it may not even be necessary to enter the house for making the readout. If AMR plant shall be read out from a remote location, one of the network nodes is to be used with a gateway. This gateway then offers a number of communication choices: Data can be transmitted directly to the billing systems via GSM network, broadband cable network or computer network. The user can choose the transmission medium he prefers.

Data sheet

N2870

Stock no.

Product no.

JXF:AMR

AMR

WTT662-BA1100



Network node

The network node WTT662.. is a component of an M-bus radio network. It receives the radio telegrams transmitted by the consumption meters and stores them locally. The WTT662.. can be read out either locally via M-bus or USB or from a remote location via gateway.

Data sheet

A6V11731517

Operating voltage

3.6 V

Voltage supply

Lithium battery

Battery life

Power supply main battery: Min. 5 years

Power supply backup battery: Min. 10 years

Communication

C-mode

S-mode

Ambient temperature, operation

-5...+55 °C

Ambient temperature, storage

-5...+45 °C

Degree of protection

IP20

Weight (net)

0.810 kg

Color

White

Dimensions (W x H x D)

200 x 200 x 57.1 mm

Stock no.

Product no.

S55563-F157

WTT662-BA1100

Add-on radio module WFZ661 for water meters

WFZ661

Radio adapter for mechanical modularis water meters (WFx30, WMx10). Adapter acquires and processes the metering pulses of the radio-ready mechanical water meters WFx30../WMx10.. and transmits AMR and walk-by-telegrams in a parallel way.



Data sheet A6V10986918

Stock no.	Product no.
S55563-F147	WFZ661

Tools for network nodes

Product Title	Stock no.	Product no.
M-bus programming adapter (USB)	JXF:WFZ.MBM-USB	WFZ.MBM-USB
USB programming adapter	JXF:RNNPH0010020	RNNPH0010020
M-bus adapter plug for WFZ.MBM-USB	JXF:RNNPH0020010	RNNPH0020010

M-bus RF gateway WTT667-0E0000

WTT667-0E0000

The M-bus RF gateway WTT667.. collects consumption data from the entire network and transmits it a maximum of 4 times a month via the portal to a defined client.

Reads a max. 2,500 meters per gateway. Meter data is securely transmitted to the portal in the GSM/UMTS band.

Data transmission via GPRS/EDGE/UMTS/HSPA (Quad-Band 900, 1,800 and 2,100 MHz) as well as connectivity through national and international roaming transmits data to the corresponding service throughout Europe at no extract charge. Battery-powered means no additional installation required (service life of 5 years) and GPRS/EDGE/UMTS/HSPA communication.



The M-bus RF gateway WTT667-0E0000 collects the consumption data of all network nodes WTT561.. up to 4 times per month and transmits them via GPRS/EDGE/ UMTS/HSPA to the portal. From there, the data are automatically transmitted to the respective clients. Hence, the device does not store any data. Each gateway is capable of reading a maximum of 2,500 meters. The transmission of meter data to the portal is based on secure data transfer in the GSM/UMTS band. Data transmission via GPRS/EDGE/UMTS/HSPA (Quad band 900, 1,800 and 2,100 MHz) plus connectivity through national and international roaming facilitate data transmission to the respective server from all European countries at no extra cost. Extra installations are not required, thanks to battery-powered operation (battery life 5 years) and communication via GPRS/EDGE/UMTS/HSPA. When purchasing the gateway, the price covers not only the product itself, but also the communication between gateway and portal (roaming costs) for a period of 5 years.

Data sheet	A6V11521727
Operating voltage	3.6 V
Voltage supply	Lithium battery
Battery life	Min. 5 years
Degree of protection	IP30
Dimensions (W x H x D)	203 x 203 x 57.5 mm

Stock no.	Product no.
S55563-F155	WTT667-0E0000

Batteries for network nodes and gateways

Product Title	Stock no.	Product no.
Battery for WTT..	JXF:WTZ.BAT	WTZ.BAT
Backup battery for WTX16..	JXF:FBCRAA/KS	FBCRAA/KS
Backup battery for WTT561..	JXF:FBR0018	FBR0018

Meters

Systems for remote readout Automatic Meter Reading System

WTX660-E05060



RF converter

The WTX660.. RF converter receives and processes data from heat cost allocators, heat and water meters within a M-bus radio system.

- Storage for up to 500 metering devices
- Repeater on the mesh system for up to 2,000 additional wireless devices
- Coverage of distances up to 500 meters outdoors and 40 meters in buildings
- Supports devices using AES128 encryption
- Mains power AC 230 V
- Optimum location function
- LED to indicate signal strength

The WTX660-E05060 can only be used in combination with the WTV676-HB6035.

Data sheet	A6V11135903
Operating voltage	AC 100...240 V
Voltage supply	Lithium battery
Frequency	50/60 Hz
Power consumption	Max. 4.5 W
Ambient temperature, operation	-20...+55 °C
Ambient temperature, storage	-25...+85 °C
Degree of protection	IP40 per EN60529
Color	White
Dimensions (W x H x D)	160 x 160 x 35 mm

Stock no.	Product no.
S55563-F149	WTX660-E05060

WFZ662



Radio module with integrated antenna for WfX5.. meters

The walk-by add-on module acquires and handles the consumption data and service information delivered by the WfX5.. heat and heat/cooling meters and passes it on parallelly to the walk-by and AMR system.

Data sheet	N5323
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Stock no.	Product no.
S55563-F153	WFZ662

AEW36.2



AMR pulse adapter

The pulse adapter is used for acquiring and storing the pulses received from consumption meters with pulse output. It is possible to acquire pulses from heat, gas and water meters.

Data sheet	N2873
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Stock no.	Product no.
S55563-F129	AEW36.2

Tools

Product Title	Stock no.	Product no.
Infrared read head (with USB interface)	JXF:WFZ.IRDA-USB	WFZ.IRDA-USB
Triggering tool for radio telegrams	JXF:WFZ.PS	WFZ.PS
PC radio module	JXF:WTZ.RM	WTZ.RM
Torque Screwdriver, Torx Plus™	JXF:FZ201-009	FZ201-009

Meters
Systems for remote readout
Automatic Meter Reading System

Software

Product Title	Stock no.	Product no.
ACT50 – Readout and parameterization software	JXF:ACT50	ACT50
ACT21 - Parameterization software	JXF:ACT21	ACT21
ACS26 – AMR remote readout software	JXF:ACS26	ACS26
ACT26 – Commissioning and service software	JXF:ACT26	ACT26

Meters

Systems for remote readout Walk-by radio system

walk-by



Walk-by radio system

Simple, fast and reliable. These three attributes are the most apt descriptions of the walk-by system. After all, it provides values for billing consumption easily, quickly and dependably. And the meter-reader does not even have to enter the tenant's flat - on the reading date, he only has to enter the commonly accessible area of the property.

For smaller properties, he can even collect data outside of the building. That not only benefits the meter-reader (who does not have to plan and mount data collectors any more), but also tenants. They no longer have to agree on a date for reading or even be there on the readout day. It couldn't be simpler. At the set reading time, the meters send current consumption data at short intervals. The meter-reader only has to enter the building or even just walk around it with his mobile meter-reading system. This consists of a mobile data collector and a laptop with application software. The data collector collects the radio telegrams and, after a plausibility check, sends them wirelessly to the laptop via the Bluetooth interface. The software on the laptop not only manages the data, it also shows the meter-reader the current progress of the process. After having received all data, the meter-reader can then leave the property. Back at his workplace, the meter-reader only has to export the data saved and read them for example into a billing program. If data is needed on a regular basis – meaning permanently mounted data collectors are to be retrofitted with an interface for remote data transmission – the measuring devices can be reprogrammed from the walk-by system to the stationary AMR system from Siemens at any time. This means that readout values can be called up on a daily basis without entering the property.

Within the walk-by system there are walk-by heat cost allocators and walk-by radio adapters available. More devices on request.

Stock no.	Product no.
JXF:walk-by	walk-by

WFZ661

Add-on radio module WFZ661 for water meters



Radio adapter for mechanical modularis water meters (WFx30, WMx10). Adapter acquires and processes the metering pulses of the radio-ready mechanical water meters WFx30./WMx10.. and transmits AMR and walk-by telegrams in a parallel way.

Data sheet [A6V10986918](#)

Stock no.	Product no.
S55563-F147	WFZ661

WFZ662

Radio module with integrated antenna for WFX5.. meters



The walk-by add-on module acquires and handles the consumption data and service information delivered by the WFX5.. heat and heat/cooling meters and passes it on parallelly to the walk-by and AMR system.

Data sheet [N5323](#)

Stock no.	Product no.
S55563-F153	WFZ662

Tools and software

Product Title	Stock no.	Product no.
ACT50 – Readout and parameterization software	JXF:ACT50	ACT50
Walk-by readout software	LYU:ACT46	ACT46
Mobile data collector	JXF:WTT665-BD5000	WTT665-BD5000
Infrared read head (with USB interface)	JXF:WFZ.IRDA-USB	WFZ.IRDA-USB
Triggering tool for radio telegrams	JXF:WFZ.PS	WFZ.PS
Torque Screwdriver, Torx Plus™	JXF:FZ201-009	FZ201-009

M-Bus metering system

M-Bus

The M-Bus Metering System is a proven system used for the remote readout of consumption data. It conforms to EN 1434/3. The system contains all components required for reading M-bus-compatible consumption meters via an easy-to-install, interference-proof 2-wire bus. The consumption meters available within the M-Bus Metering System are heat meters and water meters. A pulse adapter enables third-party meters to be integrated into the system. M-bus-compatible meters of other manufacture can also be read out after appropriate testing. The M-Bus Metering System excels in immunity, ease of installation and maintenance plus now a large number of readout choices matched to customer needs. The system components are suited for installation in small premises (e.g. 3 apartments) and in large plant comprising several buildings.

Data sheet

N5361

Stock no.

Product no.

BPZ:M-Bus

M-Bus

M-bus web server

WTV676-HB6035

The M-bus web server reads devices connected directly to the web server, devices connected to the web server via level converters as well as devices connected to the web server via RF converters.

Web server can be used:

- Alone with up to 20 directly connected, wired M-bus devices
- As master on a M-bus network with up to six parallel connected level converters per line. Per line up to 250 M-bus devices (max. 250 M-bus meters, max. 250 RVD converters) can be connected.
- As a master on an M-bus wireless network with up to 23 RF converters, each with up to 500 wireless devices

The web server can read out up to 2,500 wireless devices and up to 500 wired devices. It records the data from the connected M-bus devices, can evaluate the data, and sends email notifications on events and alarms.

A PC/Internet browser reads the data and log files either locally over Ethernet or from anywhere over the Internet. In addition, the report files can be periodically transmitted with device data to an email recipient or to an FTP server.

An email can be sent on events and alarms.

The web server can be integrated in the Synco IC-Cloud. This permits the periodic upload of invoicing and trend data as well as alarm messages to the cloud per customized settings as well as distributing the information to the corresponding customers via email.



Data sheet

A6V11157961

Operating voltage

AC/DC 24 V +/- 10 %

Frequency

50/60 Hz

Power consumption

Max. 15 VA

Ambient humidity, operation

5...95 % r. F.

Stock no.

Product no.

S55563-F150

WTV676-HB6035

Systems for remote readout
M-bus system

WTX631-GA0090



M-bus Level Converter/Repeater 250

The level converter/repeater WTX631-GA0090 is the interface between M-bus device and a read system. It consists of a level converter and the associated power supply.

- The level converter and associated power supply form a unit: No addition transformer or auxiliary power required
- Connect up to 250 M-bus devices (max. 250 simply M-bus loads)
- Can be used with the M-bus web server WTV676.., PXC devices, other M-bus read / configuration systems
- Up to 6 level converters connected in parallel on one M-bus network
- Local data reading of M-bus devices via RS-232 or RS-485 interface
- Remote reading of M-bus devices via M-bus web server WTV676.. (Cloud)

Data sheet	A6V11742346
Operating voltage	Power supply: AC 110...240 V Level converter: DC 24 V
Frequency	47...63 Hz
Power consumption	6 W + 0.07 W for each connected M-bus device
Ambient temperature, operation	-20...+55° C
Mounting	DIN rail
Degree of protection	IP20
Weight (net)	0.392 kg
Dimensions (W x H x D)	Per device: 110 x 71 x 62 mm

Stock no. Product no.

S55563-F159 **WTX631-GA0090**

WTV531-GA5060



Level converter

The level converter WTV531-GA5060 is an interface for use between M-bus meters and reading systems. The meter data can be read on site via PC software ACT531 or via internet using the optional web server. The level converter can read up to 60 M-bus devices (60 M-bus loads).

It is used:

- As a master on an M-bus network with up to 60 meters. It can read data on site from the level converter with the help of PC software ACT531
- As a slave to extend the M-bus network to up to 6 level converters (1 master and 5 slaves) with up to 60 devices each. It can read out a maximum of 360 M-bus loads and a maximum of 1,000 logical meters. Data are read locally via the master level converter
- As a slave on the optional M-bus web server to read data from remote locations

Data sheet	A6V10844290
Operating voltage	24 V AC/DC
Frequency	50/60 Hz
Power consumption	Max. 12 VA
Weight (net)	0.166 kg

Stock no. Product no.

S55563-F145 **WTV531-GA5060**

Software and Tools

Product Title	Stock no.	Product no.
ACT50 – Readout and parameterization software	JXF:ACT50	ACT50
Readout software for WTV531-GA5060 level converter	JXF:ACT531	ACT531
Infrared read head (with USB interface)	JXF:WFZ.IRDA-USB	WFZ.IRDA-USB
M-bus programming adapter (USB)	JXF:WFZ.MBM-USB	WFZ.MBM-USB
USB programming adapter	JXF:RNNPH0010020	RNNPH0010020
M-bus adapter plug for WFZ.MBM-USB	JXF:RNNPH0020010	RNNPH0020010

M-bus add-on module for WfX30.. water meters

WFZ31

The add-on module acquires and processes the information from the WfX30../WMx10.D water meter. It is periodically read out by an M-bus master.



Data sheet A6V10443198

Stock no.	Product no.
S55563-F136	WFZ31

M-bus add-on module for WfX5.. meters

WFZ51

The add-on module acquires and processes the consumption data and service information from the WfX5.. heat and heat/cooling energy meter. It is periodically read out by an M-bus master.



Data sheet N5323

Stock no.	Product no.
S55563-F131	WFZ51

M-bus pulse adapter

AEW310.2

Module for acquiring and storing the pulses received from consumption meters with pulse output. It can handle pulses from heat, gas, hot water, chilled water, electricity or hours run meters.



Data sheet N5383

Stock no.	Product no.
S55563-F130	AEW310.2

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