

Kieback&Peter

PRODUCT INFORMATION

2025/2026



Contents

Sensors..... 8
Room automation..... 28
DDC520 automation station..... 68
DDC4000 automation system..... 90
Fire protection system with safety ring bus.....145
Qanteon – The Integrated Building and Energy Management.....168
Actuators and control valves.....179

Kieback&Peter

Education and training

Kieback&Peter offers an extensive training program in the fields of digital closed-loop control and open-loop control technology as well as building management systems (BMS).

The seminars are user-oriented and are carried out in accordance with practice. They are intended for both operating personnel for system operation and technicians and engineers.
The following seminars are currently offered:

User training for system operation

- Seminar AS 40
  DDC4000 Digital DDC Control System
- Seminar AS 43
  DDC3000 Digital DDC Control System
- Seminar AS 44
  DDC3000 and BMS Building Management Systems
- Seminar AS 45
  BMS Building Management Systems
- Seminar AS 47
  DDC4000 and BMS Building Management Systems
- Seminar AS 49
  DDC4000 Operation and the Operation of the Qanteon Building Management System with Insights into Energy Management
- Seminar AS 51
  Operation of the Qanteon Building Management System with Insights into Energy Management

Training for commissioning and service technicians or system administrators

- Seminar IS 420
  Closed-Loop Control, Open-Loop Control and Monitoring of Heating, Ventilation and Air Conditioning Systems with the DDC420 Automation Station
- Seminar IS 30
  Closed-Loop Control, Open-Loop Control and Monitoring of Heating, Ventilation and Air Conditioning Systems with the DDC3000 Automation System
- Seminar IS 36
  BMS Building Management Systems (Based on DDC4000, DDC420 or BMR) Basic Training for System Administrators Including the Basics of BACnet.
  Prerequisite: Participation in seminar IS40, IS420 or IS20
- Seminar IS 37
  Qanteon Administration of the Management & Operating Equipment (MOE)
  (No Energy Management)
  Prerequisite: Participation in seminar IS40 or IS420

Training for operating personnel in maintaining their own systems

- Seminar IS 40
  Closed-Loop Control, Open-Loop Control and Monitoring of Heating, Ventilation and Air Conditioning Systems with the DDC4000 DDC Closed-Loop and Open-Loop Control System – Service Level
- Seminar IS 40 SPECIAL
  Advanced Workshop on the DDC4000 System: Using the Flexible Options of the Service and Commissioning Tool. Prerequisite: Participation in seminar IS40

Energy management system training: Installation, operation, administration

- Seminar IS 52
  Administration of the Qanteon Management and Operating Equipment (MOE) on the Basis of the DDC4000 System, DDC420 and Further Functions, Principles of BACnet and Setup of the Integrated Energy Management System.

More information

- Online at www.kieback-peter.com/en/services/training/
- Contact your nearest Kieback&Peter branch.
- Or contact the Academy in Berlin directly:
  Phone: +49 30 600 95-147
  E-mail:
  akademie@kieback-peter.de

The seminars can also be held digitally on request.





Kieback&Peter

Maintenance

The majority of the costs for a building are incurred not during construction but during operation. If you look at the entire building lifecycle, about three quarters of the total cost is spent in the operating phase. It's more than just rising energy prices and resource-intensive user behavior that drive up operating costs. General wear and tear, as well as faults and failures, can also become expensive. Poorly maintained systems also pose a greater risk of production failures or property damage and physical injuries. If you conclude a service contract with us, our technicians will take very good care of your systems.

Maintenance in accordance with industry standards

Our service contracts are based on the industry standard from the German Engineering Federation (VDMA): The services for MCR equipment and building automation systems are defined in the standard sheet VDMA 24184 Part 4. The specifications of the Machinery and Electrical Engineering Working Group for State and Local Governments (AMEV) are authoritative for public authorities, in particular the KG 480 Building Automation/MCR Systems work card.

Maintenance by qualified personnel

The service technicians at Kieback&Peter are qualified specialists who have completed vocational training in electrical or MCR engineering. They bring additional practical experience in the fields of HVAC, building services and building automation. They also undergo regular training at the Kieback&Peter Academy.

Online services

Online services such as remote diagnostics, maintenance support, online optimization, etc. are possible via our *connect* platform. Highly qualified service experts from Kieback&Peter can thus securely access your building automation.

Flexible maintenance

Together, we determine the best scope of maintenance for you. For example, you can choose between:

- Inspection or system check
- Maintenance and function monitoring contract
- Maintenance and repairs contract
- Full service contract

Complete maintenance documentation

We document every maintenance operation using special software. The documentation is available to you as a printout or in digital form. We want you to always be aware of what services Kieback&Peter has provided and when. This creates transparency for everyone involved and is the basis for a cooperation based on trust and partnership.

On-call service

The regular service contract provides customer care during normal business hours. If required, you can also agree special additional services with your local contact person, such as a 24/7 on-call service or faster response times. For example, we recommend this premium service for customers who operate critical infrastructure and need to protect themselves against the associated risks (KRITIS sector).

System check

Unlike regular maintenance, a one-off inspection of the system is carried out during the system check. This aims to determine and assess the current situation on the basis of criteria such as functional reliability, economy, availability and environmental protection.

Repair service

Even the best equipment can have a defect. For this reason, Kieback&Peter has a repair service at its Mittenwalde plant.
After the repair has been carried out, a continuous 24-hour test is carried out. An inspection is then completed as it would be for a newly manufactured device. This quality assurance process thus ensures safe operations with repaired equipment. With series devices, the repair is carried out at fixed prices depending on the age of the devices. There are no long wait times. You generally get your device back in perfect condition after one to two weeks. In addition, there is a spare parts service that allows you to place orders in the branches and technical offices. You should have your required spare parts within 24 hours.

Notes on reducing harmful waste caused by batteries

Devices that use batteries containing harmful substances are indicated by means of the following icon:



Dispose of used batteries at an approved collection point or retail store in accordance with legal regulations, or follow the applicable guidelines in your country for reducing harmful waste caused by batteries. Disposal in household waste is prohibited. You can hand in used batteries free of charge. You can also return goods to us: Please send your consignment with sufficient postage to:

Kieback&Peter GmbH & Co. KG
Dahmestraße 18-19
15749 Mittenwalde
Germany

Add-on services – sustainably lower energy consumption

We will be happy to offer you some initial advice on your legal obligations in relation to energy services legislation. We offer you support in deciding which path is the right one for your company and determine the resources you need to implement your energy audit and energy management system.

Energy audit in accordance with DIN EN 16247-1

We would be happy to carry out an energy audit with our BAFA#listed partner in accordance with DIN EN 16247#1. We will transform your seemingly tiresome auditing obligations into a savings program of permanent benefit to your company.

ISO 50001 starter set

Have you decided to introduce an energy management system but don't know what you need to do to successfully attain your certification? We assess your current situation and highlight the differences between your circumstances and the requirements of ISO 50001 in terms of documentation, energy data recording, target formulations and responsibilities.

Consulting on funding

As an innovator, we have your future requirements in mind. Higher initial investments in the life cycle of the building pay off to your advantage. For a successful ecological transition, the Federal Republic of Germany is supporting the introduction of energy management and intelligent building automation with attractive subsidies. The focus is on decarbonization and efficient operation of buildings. We would be happy to advise you about the funding options for your project and, together with our BAFA-listed partner, support you in submitting your application.

Personal load profile optimization report

The load profile shows the consumption of the purchased electrical power over time. Consumers who are already being metered (with an annual consumption of 100,000 kWh or more) can usually request this data from their supplier free of charge. You can use this data to analyze where your load peaks are, whether you have "hidden" consumers and which factors have an effect on your consumption behavior.

What analyzing your load profile lets you achieve:

- Finding starting points for low-investment efficiency measures, such as control interventions
- Optimizing system operation
- A noticeable reduction in energy consumption by switching off "hidden" consumers
- Optimizing purchasing conditions by avoiding load peaks

Our services at a glance: Report with the most important findings from your load profile data

- Consumption overview with changes in comparison with previous periods
- Differentiation between base load and operation
- Heat map for load peaks
- Hours of full utilization
- Benchmark
- Potential and forecasts

Energy data analysis system check

What does your energy data reveal?

Many factors affecting energy consumption cannot be evaluated from the utility bill – climatic effects and different system loads are not taken into account. The energy data acquisition system check prevents errors in strategic data acquisition and is the basis for an energy management system certified in accordance with DIN EN ISO 50001.

What analyzing your energy data lets you achieve

- Finding starting points for optimization measures with a valid calculation of amortization time
- Success is monitored, which creates acceptance for the measures introduced
- Fulfilling legal requirements, therefore providing long-term legal certainty
- Centrally available metering data and automated evaluations
- The utility invoice can be verified

Services at a glance

- Selection of measurement points and inspection of the metering points
- Documented inventory of existing metering equipment and suitability for data transfer
- Drafting of a metering equipment concept (ISO 50001 compliant)
- Recommendations for metering and transmission equipment with guideline prices

en:hybrid – the smart clock for hybrid systems

A pioneer for your climate goal

Kieback&Peter's CO_2 Reduction Roadmap is a comprehensive package of solutions for reducing CO_2 emissions in buildings, with en:hybrid being a vital component. As an overarching control system, the solution ensures that climate-neutral energies can be efficiently integrated into a multi-mode heating or cooling system. Thus en:hybrid makes a further essential contribution to the success of the heat transition.

en:hybrid – benefits at a glance

Climate protection:en:hybrid already fulfills the high future requirements of building automation level B in the central heating or cooling system and, thanks to the flexible integration of renewable energies, allows a decisive step to be taken towards the heat transition

Manufacturer-neutral orchestration:en:hybrid brings together all heat or cold generators to form a finely adjusted overall system.

Easy integration:en:hybrid can be set up on existing heating control systems.

Power source selection: The operator has the possibility to set the test criteria for selecting the most efficient generator according to its energy reference costs or individual CO_2 emissions.

Balanced energy balance: Through freely selectable, individual operating points of the generators, en:hybrid provides only as much energy as is required in the building.

Reliable service: Permanent support of the systems via secure remote access, remote maintenance and operational management by experienced Kieback&Peter technicians.

en:predict – predictive closed-loop control for HVAC systems

Software reduces energy consumption

Energy costs are a significant factor in reducing costs in building management, but efficiency measures are usually associated with high expense. **en:predict** is taking a new and simple path: Intelligent software is helping to permanently reduce energy consumption.

A forward-thinking learning system

Intelligent algorithms learn the complex behavior of buildings and facilities based on the building's data. They also take other relevant influential factors into consideration, such as weather forecasts, customer frequency or occupancy information. They continuously get to know the building better over time.

Automated control strategy

The specific energy requirements of whole buildings or individual climatic zones are precisely forecast. en:predict develops a tailor-made strategy for optimization and takes over the forward-looking closed-loop control of the technical systems in a completely automated manner.

Easy to retrofit

The system is based on existing building automation solutions (DDC or BMS level). It can be integrated into many buildings with ease. As the first step in doing so, a control box is connected to their building management technology via standard interfaces in order to learn about the system behavior. The second step involves the predictive closed-loop control of the systems, tailored to the building.

A summary of the benefits

- Reduction in energy consumption through forward-looking control over your heating, ventilation and air conditioning systems
- The maximum possible comfort by meeting predefined framework conditions for air quality and room temperature
- Fully automated closed-loop control
- Transparency regarding your consumption levels and savings via the dashboard
- Reduction of the CO_2 footprint
- Digital building block for ESG strategies
- Improve the certification of buildings
- Recoverability of operating costs

en:air – demand-based control for ventilation and air conditioning systems

Reduces energy costs and CO_2 emissions – boosts comfort and hygiene

Rising electricity and operating costs, ambitious climate targets, vacant buildings, public debates on compliance of air conditioning and ventilation systems with hygiene requirements: Building operators are facing significant challenges. The innovative and smart algorithm used by **en:air** makes it possible to combine all of these requirements.

Optimal ventilation management for maximum efficiency and a comfortable indoor climate

en:air is a needs-based, energy-efficient ventilation control system. The volume flow rates of the supply air and extract air are controlled separately and based on demand, depending on the CO_2 content, humidity and temperature of the room in order to maintain a balanced atmosphere.

en:air – benefits at a glance

- Reduction in energy usage by an average of 30 %
- Greater comfort thanks to a better indoor climate with no drafts
- Fulfillment of hygiene requirements through continuous CO_2 control

Our services at a glance

- Analysis of the existing ventilation and air conditioning systems and the control system
- Calculation of the individual potential savings based on available system and building data
- ROI calculation
- Definition of objectives for the indoor climate
- Technical implementation
- Installation of secure remote access via Connect
- At the customer's request, active further support after implementation through regular remote maintenance, technical operational management, etc.



Sensors

Sensors are field devices for measuring a physical value using a measurement recorder and converting it to an electrical analog or digital signal. Sensors provide the automation stations with the information required for effective open-loop and closed-loop control.

The sensors from Kieback&Peter transmit signals quickly and reliably, support on-site plant optimization and ensure safety, comfort and energy savings. The sensors for recording temperature, humidity, air flow, differential pressure and so on work with different measurement recorders. The values are measured, converted and then transmitted to building automation and control components (e.g. automation stations and automation devices) for open-loop and closed-loop control.

Temperature measurement in HVAC systems

Outside temperature sensor for reading climatic effects on HVAC systems controlled according to the outside temperature.
Immersion temperature sensors and supply temperature sensors record the measured supply temperature in closed-loop heating control systems.

TAD, TA/BW outside temperature sensors

Recording of climatic effects for outdoor heating, ventilation and air conditioning systems.

TAD measuring element:	KP10; 2.73 V at 0 °C; TC = 10 mV/K
TA/BW measuring element:	Pt1000
Measuring range:	-30..+80 °C
Connection housing:	Plastic, Cable entry M16 x 1.5
Housing:	Plastic
Degree of protection:	IP65

Accessories

Z20	Sun protection cover



TAD

TVD, TVDxx-S6 immersion temperature sensors

The TVD and TVDxx-S6 immersion temperature sensors are used for reading the measured supply temperature as a controlled variable for follow-up and fixed-value loop controllers.

The TVDxx-S6 immersion temperature sensors are used in applications where there is a risk of condensation (e.g. chilled water applications).

Measuring element:	KP10; 2.73 V at 0 °C; TC = 10 mV/K
TVD measuring range:	0..+130 °C
TVDxx-S6 measuring range:	-20..+80 °C
Thermowell:	Brass ø 7 mm; 10 bar
Connection housing:	Plastic, Cable entry M16 x 1.5
Housing:	Plastic
Degree of protection:	IP65

TVD1	Thermowell 100 mm long
TVD15	Thermowell 150 mm long
TVD2	Thermowell 200 mm long
TVD3	Thermowell 300 mm long
TVD4	Thermowell 400 mm long
TVD1-S6	for chilled water applications, thermowell 100 mm long
TVD15-S6	for chilled water applications, thermowell 150 mm long
TVD2-S6	for chilled water applications, thermowell 200 mm long
TVD3-S6	for chilled water applications, thermowell 300 mm long
TVD4-S6	for chilled water applications, thermowell 400 mm long



TVD1

TDN, TDNxx-S6 immersion temperature sensors

The TDN and TDNxx-S6 immersion temperature sensors are used for reading the measured supply temperature as a controlled variable for follow-up and fixed-value loop controllers.

The TDNxx-S6 immersion temperature sensors are used in applications where there is a risk of condensation (e.g. chilled water applications).

Measuring element:	KP10; 2.73 V at 0 °C; TC = 10 mV/K
TDN measuring range:	0..+130 °C
TDNxx-S6 measuring range:	-20..+80 °C
Thermowell:	Stainless steel ø 7 mm; 16 bar
Connection housing:	Plastic, cable entry M16 x 1.5
Degree of protection:	IP65

TDN1	Thermowell 100 mm long
TDN15	Thermowell 150 mm long
TDN2	Thermowell 200 mm long
TDN3	Thermowell 300 mm long
TDN4	Thermowell 400 mm long
TDN1-S6	for chilled water applications Thermowell 100 mm long
TDN15-S6	for chilled water applications Thermowell 150 mm long
TDN2-S6	for chilled water applications Thermowell 200 mm long
TDN3-S6	for chilled water applications Thermowell 300 mm long
TDN4-S6	for chilled water applications Thermowell 400 mm long



TDN2

TVDB, TVDBxx-S6 immersion temperature sensors

The TVDB and TVDBxx-S6 immersion temperature sensors are used for the TVDB1 reading of the measured supply temperature as a controlled variable for follow-up and fixed-value loop controllers. The TVDBxx-S6 immersion temperature sensors are used in applications in which there is a risk of condensation (in chilled water applications, for example).
TVDB and TVDBxx-S6 immersion temperature sensors have no connection threads and are intended exclusively for installation in the Z5/TD1..4 or Z6/TD1..4 thermowell.

Measuring element:	KP10; 2.73 V at 0 °C; TC = 10 mV/K
TVDB measuring range:	0..+80 °C
TVDBxx-S6 measuring range:	-20..+130 °C
Thermowell:	Brass ø 7 mm; 10 bar
Connection housing:	Plastic, Cable entry M16 x 1.5
Housing:	Plastic
Degree of protection:	IP65

TVDB1	Insertable thermowell 100 mm long
TVDB15	Insertable thermowell 150 mm long
TVDB2	Insertable thermowell 200 mm long
TVDB3	Insertable thermowell 300 mm long
TVDB4	Insertable thermowell 400 mm long
TVDB1-S6	For chilled water applications Insertable thermowell 100 mm long
TVDB15-S6	for chilled water applications Insertable thermowell 150 mm long
TVDB2-S6	for chilled water applications Insertable thermowell 200 mm long
TVDB3-S6	for chilled water applications Insertable thermowell 300 mm long
TVDB4-S6	for chilled water applications Insertable thermowell 400 mm long



TVDB1

Accessories

Brass thermowell ø 10 mm, R1/2", test pressure 16 bar

Z5/TD1	Brass thermowell for TVDB1(-S6), TVB1/BW(-S6)
Z5/TD15	Brass thermowell for TVDB15(-S6), TVB15/BW(-S6)
Z5/TD2	Brass thermowell for TVDB2(-S6), TVB2/BW(-S6)
Z5/TD3	Brass thermowell for TVDB3(-S6), TVB3/BW(-S6)
Z5/TD4	Brass thermowell for TVDB4(-S6), TVB4/BW(-S6)

Stainless steel thermowell ø 10 mm, R1/2", test pressure 25 bar

Z6/TD1	Stainless steel sensor pocket for TVDB1(-S6), TVB1/BW(-S6)
Z6/TD15	Stainless steel sensor pocket TVDB15(-S6), TVB15/BW(-S6)
Z6/TD2	Stainless steel sensor pocket for TVDB2(-S6), TVB2/BW(-S6)
Z6/TD3	Stainless steel sensor pocket for TVDB3(-S6), TVB3/BW(-S6)
Z6/TD4	Stainless steel sensor pocket for TVDB4(-S6), TVB4/BW(-S6)

TVxx/BW, TVxx/BW-S6 immersion temperature sensors

The TVxx/BW and TVxx/BW-S6 immersion temperature sensors are used for reading the measured supply temperature as a controlled variable for follow-up and fixed-value loop controllers. The TVxx/BW-S6 immersion temperature sensors are used in applications where there is a risk of condensation (e.g. chilled water applications).

Measuring element:	PT1000 in accordance with DIN EN 60751
TVxx/BW measuring range:	0..+130 °C
TVxx/BW-S6 measuring range:	-20..+80 °C
Thermowell:	Brass, PN10, Ø 7 mm, R½" threaded connection
Connection housing:	Plastic, cable entry M16 x 1.5
Housing:	Plastic
Degree of protection:	IP65

TV1/BW	Thermowell 100 mm long
TV15/BW	Thermowell 150 mm long
TV2/BW	Thermowell 200 mm long
TV3/BW	Thermowell 300 mm long
TV4/BW	Thermowell 400 mm long
TV1/BW-S6	Chilled water applications thermowell 100 mm long
TV15/BW-S6	Chilled water applications thermowell 150 mm long
TV2/BW-S6	Chilled water applications thermowell 200 mm long
TV3/BW-S6	Chilled water applications thermowell 300 mm long
TV4/BW-S6	Chilled water applications thermowell 400 mm long

TVBxx/BW, TVBxx/BW-S6 immersion temperature sensors

The TVBxx/BW and TVBxx/BW-S6 immersion temperature sensors are used for reading the measured supply temperature as a controlled variable for follow-up and fixed-value loop controllers. The TVBxx/ BW-S6 immersion temperature sensors are used in applications where there is a risk of condensation (e.g. chilled water applications). The TVBxx/BW and TVBxx/BW-S6 immersion temperature sensors have no connection threads and are intended exclusively for installation in the Z5/TD1..4 or Z6/TD1..4 thermowell.

Measuring element:	PT1000 in accordance with DIN EN 60751
TVDB measuring range:	0..+130 °C
TVDBxx-S6 measuring range:	-20..+80 °C
Thermowell:	Brass, Ø 7 mm
Connection housing:	Plastic, cable entry M16 x 1.5
Housing:	Plastic
Degree of protection:	IP65

TVB1/BW	Insertable thermowell 100 mm long
TVB15/BW	Insertable thermowell 150 mm long
TVB2/BW	Insertable thermowell 200 mm long
TVB3/BW	Insertable thermowell 300 mm long
TVB4/BW	Insertable thermowell 400 mm long
TVB1/BW-S6	Chilled water applications Insertable thermowell 100 mm long
TVB15/BW-S6	Chilled water applications Insertable thermowell 150 mm long
TVB2/BW-S6	Chilled water applications Insertable thermowell 200 mm long
TVB3/BW-S6	Chilled water applications Insertable thermowell 300 mm long
TVB4/BW-S6	Chilled water applications Insertable thermowell 400 mm long

Accessories

Brass thermowell ø 10 mm, R1/2", test pressure 16 bar

Z5/TD1	Brass thermowell for TVDB1(-S6), TVB1/BW(-S6)
Z5/TD15	Brass thermowell for TVDB15(-S6), TVB15/BW(-S6)
Z5/TD2	Brass thermowell for TVDB2(-S6), TVB2/BW(-S6)
Z5/TD3	Brass thermowell for TVDB3(-S6), TVB3/BW(-S6)
Z5/TD4	Brass thermowell for TVDB4(-S6), TVB4/BW(-S6)

Stainless steel thermowell ø 10 mm, R1/2", test pressure 25 bar

Z6/TD1	Stainless steel sensor pocket for TVDB1(-S6), TVB1/BW(-S6)
Z6/TD15	Stainless steel sensor pocket TVDB15(-S6), TVB15/BW(-S6)
Z6/TD2	Stainless steel sensor pocket for TVDB2(-S6), TVB2/BW(-S6)
Z6/TD3	Stainless steel sensor pocket for TVDB3(-S6), TVB3/BW(-S6)
Z6/TD4	Stainless steel sensor pocket for TVDB4(-S6), TVB4/BW(-S6)

TDE temperature sensors

The enclosed TDE measuring elements can be used in existing thermowells with an internal diameter of 6.5 mm and above.

Measuring element:	KP10; 2.73 V at 0 °C; TC = 10 mV/K
Connection housing:	Copper protective sleeve, not pressure-tight, with silicon connection cable

TDE	Measuring element in protective sleeve; measuring range +10..+130 °C; 1.5 m silicon connection cable; IP65 in protective sleeve area
TDE-10M	Measuring element in protective sleeve; measuring range +10..+130 °C; 10 m silicon connection cable; IP65 in the protective sleeve area
TDE-15M	Measuring element in protective sleeve; measuring range +10..+130 °C; 15 m silicon connection cable; IP65 in the protective sleeve area
TDE-S3	Measuring element in protective sleeve; measuring range -20..+130 °C; 1.5 m silicon connection cable; IP67 in the protective sleeve area; (e.g. chilled water applications)

Accessories

KTDE	Connection box with two terminals



TDE

TAVD, TAV/BW supply temperature sensors

The TAVD and TAV/BW sensors are used to record the supply temperature. The sensor housing can be rotated by 90° at the point of mounting. Simple attachment to different pipe diameters using a clamping strap.

Measuring range:	-40..+130 °C
Connection housing:	Plastic, cable entry M16 x 1.5
Degree of protection:	IP65

TAVD	Measuring element: KP10; 2.73 V at 0 °C; TC = 10 mV/K
TAV/BW	Measuring element: PT1000 in accordance with DIN EN 60751



TAVD

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Temperature measurement in ventilation systems

Duct temperature sensors for installation in ducts for ventilation and air conditioning systems.

TLD duct temperature sensors

The TLD duct temperature sensors are used as controlled variable sensors for duct installation in all outside-temperature controlled or fixed-value controlled ventilation and air conditioning systems. They can also be used for closed-loop room temperature control in industrial spaces and workshops.

Measuring element:	KP10; 2.73 V at 0 °C; TC = 10 mV/K
Measuring range:	-30..+100 °C
Thermowell:	Plastic
Connection housing:	Plastic, cable entry M16 x 1.5
Degree of protection:	IP65

TLD1	100 mm thermowell
TLD2	200 mm thermowell
TLD3	300 mm thermowell
TLD4	400 mm thermowell

Accessories

B3	Socket flange



TLD2

TLxx/BW duct temperature sensors

The TLxx/BW duct temperature sensors are used as controlled variable sensors for duct installation in all outside-temperature controlled or fixed-value controlled ventilation and air conditioning systems. They can also be used for closed-loop room temperature control in industrial spaces and workshops.

Measuring element:	Pt1000 in accordance with DIN EN 60751
Measuring range:	-30..+100 °C
Thermowell:	Plastic
Connection housing:	Plastic, cable entry M16 x 1.5
Degree of protection:	IP65

TL2/BW	200 mm thermowell
TL3/BW	300 mm thermowell

Room temperature measurement

Room temperature sensors for recording the room temperature for follow-up and fixed-value loop controllers in room temperature controllers.
For additional sensors for measuring room temperature, see the “room automation” chapter.

TD1 temperature sensors

Room temperature sensors used for reading the measured room temperature as a controlled variable for follow-up and fixed-value loop controllers in ventilation and air conditioning systems.

The TD1 is used for installation in flush-mounted boxes.



TD1

Measuring element:	KP10, 2.73 V at 0 °C, TC = 10 mV/K
Measuring range:	-30..+150 °C
Housing:	Plastic
Degree of protection:	IP10

TD, TDF room temperature sensors

Room temperature sensors used for reading the measured room temperature as a controlled variable for follow-up and fixed-value loop controllers in ventilation and air conditioning systems.

Measuring element:	KP10; 2.73 V at 0 °C; TC = 10 mV/K
Measuring range:	-20..+60 °C
Housing:	Plastic
Degree of protection:	IP30



TD11

TD11	Without setting knob; not calibrated
TD12	Without setting knob
TDF12	With setting knob (10 kΩ)
TD13	With push button and LED display, Without setting knob
TDF13	With push button and LED display, With setting knob (10 kΩ)

Accessories

BA	Ball protection cover

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TR12/BW, TRF12/BW room temperature sensors

Room temperature sensors used for reading the measured room temperature as a controlled variable for follow-up and fixed-value loop controllers in ventilation and air conditioning systems.

Measuring element:	Pt1000 in accordance with DIN EN 60751
Measuring range:	-50..+150 °C
Housing:	Plastic
Degree of protection:	IP30

TR12/BW	Without setting knob
TRF12/BW	With setting knob (10 kΩ)

Accessories

BA	Ball protection cover



TR12/BW

Kieback&Peter

Humidity/temperature measurement in ventilation systems

Combined duct humidity sensors for recording the relative humidity and temperature in an air duct.

TLH duct humidity/temperature sensors

TLH combined duct humidity and temperature sensors are used for the continuous measuring of relative humidity and temperature in an air duct. Two separate measuring systems allow constant closed-loop humidity and temperature control in ventilation and air conditioning systems. Plastic housing for duct mounting.

Measuring element:	Humidity sensor with converter; 0..10 V DC; max. 5 mA
Measuring range:	0..95 % r.h.
Measuring element:	KP10; 2.73 V at 0 °C; TC = 10 mV/K
Measuring range:	-40..+80 °C
Nominal voltage:	24 V AC; 50/60 Hz
Connection housing:	Plastic, cable entry M16 x 1.5
Degree of protection:	IP65

TLH2	Installation length 180 mm
TLH3	Installation length 280 mm
TLH4	Installation length 380 mm

Accessories

B3	Socket flange



TLH3

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Room humidity/temperature measurement

Room humidity/temperature sensor for measuring the relative humidity and temperature in a room.

HT12, HTF12 room humidity/temperature sensor

The combined humidity/temperature sensors for constant closed-loop control are used for continuous measuring of the relative humidity and temperature in a room. Combined humidity/temperature sensor with/without 10 kΩ setting knob.

Measuring element:	Humidity sensor with converter; 0..10 V DC; max. 5 mA
Measuring range:	0..100 % r.h.
Measuring element:	KP10; 2.73 V at 0 °C; TC = 10 mV/K
Measuring range:	0..+50 °C
Nominal voltage:	24 V AC; 50/60 Hz
Housing:	Plastic
Degree of protection:	IP30

HT12	Without setting knob
HTF12	With setting knob (10 kΩ)

Accessories

BA	Ball protection cover



HTF12

Kieback&Peter

L-DALI multi-sensors for presence and brightness control

The L-DALI multi-sensors are used for the purpose of movement and light intensity measurement. They are compatible with the L-DALI light controller product series and the L-ROC room automation controller with DALI interface. Presence is detected through the simultaneous use of PIR and acoustic sensors. The multi-sensor is optimized for use in standard office environments, with small movements also being detected. The communication and power supply are via the DALI bus.

- Simple integration into L-DALI light systems and L-ROC room automation controllers (with DALI interface), prioritizing light control and the reduction of energy costs.
- Brightness measurement, temperature sensor, humidity sensor
- Integrated infrared receiver for the optionally available L-RC1 IR remote control
- Multi-master-compatible, up to 16 LDALI-MSx- BT-x sensors per DALI channel (with sufficiently dimensioned bus supply)

Interfaces:	1 DALI 1 infrared receiver 3 digital inputs (floating contact, without overvoltage protection) 1 Bluetooth interface
Measuring range:	0..+50 °C
Housing:	Plastic
Degree of protection:	IP20

LDALI-MS2-BT	For installation heights of up to 12 m; lens adjustable; total diameter 104 mm; white, with an installation height of 3 m covers a detection area with a diameter of 10.8 m
LDALI-MS2-BT-B	For installation heights of up to 12 m; lens adjustable; total diameter 104 mm; black, with an installation height of 3 m covers a detection area with a diameter of 10.8 m
LDALI-MS3-BT	For installation heights of up to 12 m; lens adjustable; total diameter 68 mm; white with an installation height of 3 m covers a detection area with a diameter of 10.8 m
LDALI-MS3-BT-B	For installation heights of up to 12 m; lens adjustable; total diameter 68 mm; black, with an installation height of 3 m covers a detection area with a diameter of 10.8 m
LDALI-MS4-BT	For installation heights of up to 5 m; lens adjustable; total diameter 68 mm; white, with an installation height of 3 m covers a detection area with a diameter of 7 m



L-DALI multi-sensors

Measuring and monitoring the air flow and pressure

Sensor for recording the air currents and differential pressure in air ducts.

DU differential pressure sensors

Differential pressure sensors with 0..10 V power output for pressure or differential pressure measurements in ventilation and air conditioning systems.
The sensors convert the measured pressure/differential pressure into a proportional voltage signal between 0..10 V DC.
The voltage signal can be used directly for closed-loop control and/or display.

Measuring element:	Membrane
Measuring range:	0..2500 Pa; adjustable via DIP switch
Outputs:	DC 0..10 V
Nominal voltage:	13.5..33.0 V DC or 24 V AC ±15 %
Connection housing:	Plastic; cable entry with strain relief device PG11
Degree of protection:	IP54

DU0/5	Three adjustable pressure ranges: 0..1 mbar, 0..3 mbar or 0..5 mbar
DU0/25	Three adjustable pressure ranges: 0..10 mbar, 0..16 mbar or 0..25 mbar



DU0/25

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Monitors and Limiters

Flow monitor for air flow monitoring in ventilation and air conditioning systems. Frost protection monitor for monitoring the temperature behind air heaters in heating and air conditioning systems. Continuous frost protection with limiter contact for constant forcing the heating valve to open depending on temperature. Duct humidity monitor for monitoring and closed-loop control of the relative humidity in an air duct. Differential pressure monitor. Temperature monitor. Safety temperature monitor (STM) and safety temperature limiter (STL).

D500..593Z22 differential pressure monitors

The differential pressure monitors D500..593Z22 with contact outputs are used for air flow or filter monitoring in ventilation and air conditioning systems. The differential pressure monitors can be used for measuring differential pressure, overpressure and low pressure.
Connection accessories: PVC hose and hose nipple.

Measuring element: Membrane system with 2 separate pressure chambers
Measuring range: 20..3000 Pa
Outputs: Voltage-free changeover switch; 250 V AC; 5 (1) A
Connection housing: Plastic; cable entry with strain relief device PG11
Degree of protection: IP54

D500Z22	20..300 Pa (0.2..3 mbar)
D592Z22	100..1000 Pa (1..10 mbar)
D593Z22	250..3000 Pa (2.5..30 mbar)



D500Z22

LRF duct humidity monitors

The LRF duct humidity monitors are used for direct switching while monitoring and controlling the relative humidity in the air duct (closed-loop). With setpoint setting.

Measuring element: Hygroscopic plastic measuring tape
Measuring range: 30..100 % r. h.
Ambient temperature: 0..+60 °C
Thermowell: 200 mm
Connection housing: Plastic; cable entry PG13.5
Degree of protection: IP64

LRF105	Two-point loop controller; 30..95 % r. h.
LRF205	Three-point loop controller; 30..95 % r. h.



LRF105

Accessories

GF2	Wind protector

ATHS2 temperature monitors

The safety temperature monitors/limiters are DIN type-tested and are used for monitoring the temperature in heating and ventilation system pipelines.

The ATHS2 is equipped with a changeover contact as a switch output, switching difference approx. 5 K, interior scale.

Measuring element:	Capillary measuring system
Temperature range:	max. +80 °C on switch head
Outputs:	Voltage-free changeover switch; 230 V AC; 10 (2) A
Thermowell:	Brass thermowell ø 8 mm; 25 bar, R1/2"; 100 mm long
Connection housing:	Plastic/die-cast aluminum; cable entry M20 x 1.5
Temperature range:	0..+100 °C
Degree of protection:	IP54
Certification:	DIN EN 14597; registration number TW892



ATHS2

Accessories

Z9/10	Stainless steel thermowell for ATHS2; 40 bar

ATH20 safety temperature monitors

ATH20 safety temperature monitors are DIN type-tested and are used for establishing safety limits in heating systems.
The ATH20 is equipped with a changeover contact as a switch output, switching difference approx. 5 K, interior scale.

Measuring element:	Capillary measuring system
Temperature range:	max. +80 °C on switch head
Outputs:	Voltage-free changeover switch; 230 V AC; 10 (2) A
Thermowell:	Brass; ø 8 mm; 150 mm long; 25 bar
Connection housing:	Plastic/die-cast aluminum; cable entry M20 x 1.5
Degree of protection:	IP54
Certification:	DIN EN 14597; registration number STW(STB)894S

ATH20/90	Temperature range: +20..+90 °C
ATH20/100	Temperature range: +20..+100 °C
ATH20/110	Temperature range: +20..+110 °C
ATH20/120	Temperature range: +20..+120 °C



ATH20/110

Accessories

Z9/15	Stainless steel thermowell for ATH20; 40 bar

ATH120/150 safety temperature loop controller/monitor

The safety temperature loop controllers/monitors are DIN type-tested and are used for monitoring the temperature in heating and ventilation system pipelines.

The ATH120/150 is equipped with two separate capillary measuring systems for temperature loop controllers (TLC) and safety temperature monitors (STM), each with separately adjustable switch outputs, changeover switch and normally closed contact; switching difference approx. 5 K; switch button can be sealed.

Measuring element:	Capillary measuring system
Measuring range:	+20..+150 °C
Ambient temperature:	max. +80 °C on switch head
Outputs:	Voltage-free changeover switch for TLC; 10 (2) A; 230 V AC Voltage-free normally closed for STM; 10 (2) A; 230 V AC
Thermowell:	Brass thermowell ø 15 mm; 16 bar; R1/2", 150 mm long;
Connection housing:	Plastic/die-cast aluminum; cable entry M20 x 1.5
Degree of protection:	IP54
Certification:	DIN EN 14597; registration number TR/STW(STB)899S

Accessories

Z8/15	Stainless steel thermowell for ATH; 40 bar



ATH120/150

ATH170/150 safety temperature loop controller/limiters

The safety temperature loop controllers/limiters are DIN type-tested and are used for monitoring the temperature in heating and ventilation system pipelines.

The ATH170/150 is equipped with two separate capillary measuring systems for temperature loop controllers (TLC) and safety temperature limiters (STL), each with separately adjustable switch outputs, changeover switch and normally closed contact; switching difference approx. 5 K; switch button can be sealed.

Measuring element:	Capillary measuring system
Measuring range:	+20..+150 °C
Ambient temperature:	max. +80 °C on switch head
Outputs:	Voltage-free changeover switch for TLC; 10 (2) A; 230 V AC Voltage-free normally closed for STM; 10 (2) A; 230 V AC
Thermowell:	Brass thermowell ø 15 mm; 16 bar; R1/2", 150 mm long
Connection housing:	Plastic/die-cast aluminum; cable entry M20 x 1.5
Degree of protection:	IP54
Certification:	DIN EN 14597; registration number TR/STB900

Accessories

Z8/15	Stainless steel thermowell for ATH; 40 bar



ATH170/150

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ATH2070 safety temperature monitors/limiters

The ATH2070 is equipped with two separate capillary measuring systems for safety temperature monitors (STM) and safety temperature limiters (STL), each with separately adjustable switch outputs, changeover switch and normally closed contact.
The ATH2070 is equipped with two separate capillary measuring systems for safety temperature monitors (STM) and safety temperature limiters (STL), each with separately adjustable switch outputs, changeover switch and normally closed contact.

Measuring element:	Capillary measuring system
Ambient temperature:	max. +80 °C on switch head
Outputs:	Voltage-free changeover switch for STM; 10 (2) A; 230 V AC
	Voltage-free normally closed for STL; 10 (2) A; 230 V AC
Thermowell:	Brass thermowell ø 15 mm; 16 bar; R1/2"
Connection housing:	Plastic/die-cast aluminum; cable entry M20 x 1.5
Degree of protection:	IP54
Certification:	DIN EN 14597; registration number STW(STB)/STB906S

ATH2070	Temperature range +30..+110 °C Brass thermowell 120 mm long
ATH2070/90	Temperature range +30..+90 °C Brass thermowell 120 mm long
ATH2070/120	Temperature range +20..+120 °C Brass thermowell 120 mm long
ATH2070/2	Temperature range +30..+110 °C Brass thermowell 200 mm long

Accessories

Z8/12	Stainless steel thermowell for ATH; 40 bar; 120 mm long
Z8/20	Stainless steel thermowell for ATH; 40 bar; 200 mm long



ATH2070



Room automation

Room automation has two primary tasks: Factors such as temperature, humidity and brightness must be controlled so that the user is comfortable and a healthy environment is established. Operating costs should also be kept low – especially with regard to consumption costs for heating and electricity. There are also other requirements to keep in mind, such as operational reliability, low servicing and maintenance costs and flexibility (for instance, frequent changes of user).

The communication between equipment here makes significant savings and synergy effects possible. The intelligent cooperation between different equipment and components in a network ensures that heating, ventilation and lighting are all automatically deactivated when a room is unoccupied. When required, the blinds can also be opened simultaneously in order to warm the room using sunlight.

This significantly reduces the consumption of heating energy and electricity. Kieback&Peter has decades of experience in the field of room automation. The company has used this experience to develop room automation solutions based on standard communication protocols that provide solutions for both new build and renovation projects. The solutions range from room automation itself, to the automation level, to the management level.

Automation stations

Stand-alone automation station for closed-loop and open-loop control, optimizing and monitoring functions. 2 buses (CAN-based), configurable between switch cabinet and fieldbus. Used for connecting input modules, output modules, room controllers and room control modules to the fieldbus (63 addresses), or for connecting input modules, output modules and gateway modules to the switch cabinet bus (16 addresses). Error message memory, event log with date and time, incoming and outgoing messages are saved. Malfunction messages can be forwarded to printers, fax machines, GSM-SMS or e-mail. Backward-compatible with the Kieback&Peter DDC3000 automation system.



DDC4200E

- Communication via TCP/IP, Ethernet cable (Cat5, 10/100 Mbit)
- Integrated remote control from a web browser on any PC and mobile devices such as smartphones, tablets, etc.
- Native BACnet® in accordance with DIN EN ISO 16484-5 (BACnet® server and client functionality) facilitates communication with the BMS via Ethernet (BACnet IP) or modem.
- Up to 99 DDC4000 automation stations

DDC4200E	Automation station with operator function for 12 RLT/24 heating control systems
DDC4002E	Automation station with operator function for 4 RLT/8 heating control systems
DDC4400E	Automation station as black box for 12 RLT/24 heating control systems

Accessories for automation station

DDC4E-LON	LON adapter to RS232 interface for DDC4000E. Native LON according to ISO/IEC 14908-2 network protocol: LON-IP, LON FTT10
DDC4N-LON	LON adapter for DDC4000E for DIN rail mounting to RS232 interface DDC4040E, DDC4002E, DDC4200E, DDC4400E

Note about the DDC4000 automation stations

For more information about the automation stations and the modules that can be connected to them, see the separate “DDC4000 automation system” chapter.

Room controllers with operator function

The room controllers combine sensor technology, operating units and controllers in one device. They offer practical, powerful, simple and cost-effective solutions for intelligent room automation.

RF-T-C RC TOUCH room controller with operator function

RF-T-C BACnet room controllers (MS/TP) with an integrated temperature sensor control the room temperature using radiator, cooling ceiling and fan convector systems. Another heating circuit for a second room is also integrated (e.g. for hotel rooms with a bath).
The controllers can be used as standalone room controllers or within the BACnet bus systems (MS/TP).
The “energy ring” display makes it quick and easy to record heating requirements (red ring) or cooling requirements (blue ring). The controllers are also available with optional humidity sensors and CO2 sensors. The optional sensors allow for the display and control of the room humidity and air quality. The outputs can be configured in a variety of ways to create custom solutions. In this way, it is possible to configure heating or cooling valves with pulse width modulation, continuous control (0..10 V) or EC fans.

Display:	3.5" touchscreen, background lighting, 320 x 480 px, 255k colors
Measuring element:	Integrated temperature sensor / humidity sensor / CO2 sensor (depending on the version)
Measuring range:	0..+50 °C, ±0.5 °C / 0..100 % r. h. ±2 % r. h. (within 20..80 % r. h.) / 0..5000 ppm ±50 ppm +3 % of the measured value at 25 °C
Network protocol:	BACnet MS/TP
Interfaces:	RS485
Nominal voltage:	24 V AC/DC, -10 % / +15 %; 80 mA
Housing:	Plastic
Degree of protection:	IP20
Mounting:	on flush-mounted box, diameter >65 mm



RF-T-AH-C3/5-BT-H

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Feature		Description
Mounting location	R =	Room
Mounting type	F =	Mounting on flush-mounted box
Power supply	empty =	24 V
	H =	230 V
		-
Display element	T =	Touch display
		-
Sensors	T	Temperature
	H	Temperature, humidity
	OT	Temperature, CO_2
	AH	Temperature, humidity, CO_2
		-
Controller type	C =	HVAC controller
I/Os	X	Number of inputs
		/
	X	Number of outputs
		-
Communication protocol	B =	BACnet
	Mo =	Modbus
Interface	T =	Two-wire
		-
additional feature	I =	Different types of inputs
	O =	Different types of outputs
	H =	High current output
	S =	Weekly schedule
	C =	Additional functions (boost, light, blinds)
		-
Colors	empty =	Black RAL8022
	W =	White RAL 9010
		-
Generation		

R F H - T - XX - C X / X - X T - X X - X - X

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Item number	Nominal voltage		Inputs			Outputs			
	AC/DC 24 V	AC 230 V	BI (floating contact)	AI analog input (NTC10K3)	AI Analog input (0..10 V)	AO Analog output (0..10 V)	BO Binary output (Triac 1 A)	BO Binary output (relay 4 A)	BO Binary output (relay 7 A)
RF-T-XX-C3/3-XT-XX-X	x		1	2		3			
RF-T-XX-C3/3-XT-I-XX-X	x		1		2	3			
RF-T-XX-C2/5-XT-H-XX-X	x		1	1		2		3	
RF-T-XX-C2/5-XT-HI-XX-X	x		1		1	2		3	
RF-T-XX-C3/3-XT-O-XX-X	x		1	2		1	2		
RF-T-XX-C3/3-XT-OI-XX-X	x		1		2	1	2		
RF-T-XX-C3/5-XT-H-XX-X	x		1	2			2	3	
RF-T-XX-C3/5-XT-HI-XX-X	x		1		2		2	3	
RFH-T-XX-C3/3-XT-H-XX-X		x	1	2		1			2
RFH-T-XX-C3/3-XT-HI-XX-X		x	1		2	1			2

Selecting the options		Example
Communication protocol	**RF-T-XX-C_/_-XT-XX-X**	RF-T-T-C3/3-BT
B = BACnet Mo = Modbus		
Sensors	**RF-T-XX-C_/_-XT-XX-X**	RF-T-AH-C3/3-BT
T = temperature H = temperature + humidity AT = temperature + CO_2 AH = temperature + humidity + CO_2		
Colors	**RF-T-XX-C_/_-XT-XX-X**	RF-T-T-C3/3-BT-W
blank = Black RAL8022 W = White RAL9010		
additional feature	**RF-T-XX-C_/_-XT-XX-X**	RF-T-T-C2/5-BT-H-C RF-T-T-C3/3-BT-O-S
S = weekly schedule C = additional functions (boost, light, blind)		

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L-VIS touch panels for LonMark, BACnet and Modbus networks

L-VIS touch panels for LonMark, BACnet and Modbus networks for the visualization and operation of various applications in building automation. L-VIS touch panels visualize operational systems and function as room control devices. Dynamic, easily navigable configuration pages can be displayed on the user-defined interfaces.



Performance characteristics

- High-resolution TFT touch display with dimmable backlighting
- Integrated router between BACnet/IP, BACnet/SC and BACnet MS/TP
- Configuration via Ethernet/IP or TP/FT-10
- Supports Wifi and LTE etc.

Interfaces:	2 x Ethernet (100Base-T): OPC UA (server) and OPC XML DA (server, client), LonMark IP-852, BACnet/IP, BACnet/SC Modbus TCP (master or slave), HTTP, FTP, SSH, HTTPS, SMTP, NTP, VNC 1 x TP/FT-10 1 x RS-485 (ANSI TIA/EIA-485): BACnet MS/TP or Modbus RTU/ASCII (master or slave) 2 x digital input 2 x USB-A: (LVIS-3ME15-Gx only 1 x USB-A) WLAN (requires LWLAN-800), LTE (requires LTE-800) 1 x USB-B (PC), speaker, audio output
Ambient temperature:	+10..+40 °C
Degree of protection:	IP54/IP10

LVIS-3ME12-A1	12.1" touch display, 800 x 600, 262144 colors front frame made of anodized aluminum, silver
LVIS-3ME7-G2	7" touch display, 800 x 480, 262144 colors frameless glass front and capacitive touch, black

L-VIS touch panels für BACnet, LonMark and Modbus networks

L-VIS touch panels for LonMark, BACnet and Modbus networks are used for the visualization and operation of various applications in building automation. L-VIS touch panels visualize operational systems and function as room control devices. Dynamic, easily navigable configuration pages can be displayed on the user-defined interfaces.



Performance characteristics

- High-resolution TFT touch display with dimmable backlighting
- Integrated router between BACnet/IP, BACnet/SC and BACnet MS/TP
- Configuration via Ethernet/IP or TP/FT-10
- Supports Wifi, LTE and VPN

Display:	16.7 million colors, frameless glass front and capacitive touch
Interfaces:	2 x Ethernet (100Base-T): OPC UA (server) and OPC XML-DA (server, client), LonMark IP-852, BACnet/IP, BACnet/SC Modbus TCP (master or slave), HTTP, FTP, SSH, HTTPS, SMTP, NTP, VNC 1 x TP/FT-10 1 x RS-485 (ANSI TIA/EIA-485): BACnet MS/TP or Modbus RTU/ASCII (master or slave) 2 x digital input 2 x USB-A: WLAN (requires LWLAN-800), LTE (requires LTE-800) 2 x internal speaker 1 x audio output (3.5 stereo jack socket)
Ambient temperature:	+10..+40 °C
Degree of protection:	IP54/IP10

LVIS12-32G1	Screen diagonals: 12.1" (307 mm), silver
LVIS12-32G2	Screen diagonals: 12.1" (307 mm), black
LVIS12-32G3	Screen diagonals: 12.1" (307 mm), white
LVIS15-32G1	Screen diagonals: 15" (381 mm), silver
LVIS15-32G2	Screen diagonals: 15" (381 mm), black
LVIS15-32G3	Screen diagonals: 15" (381 mm), white
LVIS7-32G1	Screen diagonals: 7" (178 mm), silver
LVIS7-32G2	Screen diagonals: 7" (178 mm), black

L-PAD touch panel

Touch panel that can also be used as a room control device for a higher-level L-ROC controller. A programmable version is available that can function as an individual room controller for lighting, sun shading and air conditioning/ventilation control without the need for additional controller hardware. L-PAD can optionally be extended with inputs/outputs and various fieldbus interfaces with the use of sockets.



Performance characteristics

- High-resolution IPS touch display with dimmable backlighting
- Room controller for up to 2 room segments (LPAD7-31Gx and LPAD7-41Gx only)
- Supports BACnet, EnOcean, LonMark, Modbus, Bluetooth, OPC XML/DA and OPC UA
- Wide range of integrated sensors: temperature, humidity, brightness, TOF, infrared
- Modbus TCP and Modbus RTU/ASCII (master or slave)
- Integrated Wifi and Bluetooth

LPAD7-30G3	7" touch panel for room control device, white front, white housing Sensors: proximity (TOF), temperature and humidity, brightness sensor, IR receiver
LPAD7-30G4	7" touch panel for room control device, black front, black housing Sensors: proximity (TOF), temperature and humidity, brightness sensor, IR receiver
LPAD7-31G3	Programmable 7" touch panel for room control device, white Sensors: proximity (TOF), temperature and humidity, brightness sensor, IR receiver
LPAD7-31G4	Programmable 7" touch panel for room control devices, black Sensors: proximity (TOF), temperature and humidity, brightness sensor, IR receiver
LPAD7-41G4	Programmable 7" touch panel for room control device, black Sensors: proximity (TOF), temperature and humidity, brightness sensor, IR receiver, microphone

LSTAT-.. Room control devices



These room control devices are characterized by their modern and minimalist design. The temperature, humidity, condensation point, presence and CO_2 content are measured via internal sensors. They are connected directly to a controller with a Modbus interface such as L-ROC. Up to 16 L-STAT devices can be connected to one controller.

Performance characteristics

- Modbus RTU interface for integration into the higher-level control system
- Simple integration into LOYTEC controllers such as L-INX, L-ROC or L-IOB I/O controllers
- Segmented LC display
- RGB backlighting for the dynamic adjustment of the display color via the network
- Up to 8 keypads (capacitive)

Interfaces:	1 x RS-485 (ANSI TIA/EIA-485): Modbus RTU (slave) 1 x buzzer 1 x internal temperature sensor 1 x internal humidity sensor 3 x digital input for connecting standard buttons/switches 1 x universal input, configurable, either for connecting L-TEMP2 (NTC temperature sensor) or as digital input for connecting standard buttons/switches 1 x infrared receiver 1 x EnOcean wireless interface, standard ISO/IEC 14543-3-10
Ambient temperature:	0..+50 °C
Housing:	Black front, white housing
Degree of protection:	IP30

LSTAT-800-G3-L1	4 x buttons with temperature up/down, room occupancy and menu
LSTAT-800-G3-L2	6 x buttons with temperature up/down, fan up/down, room occupancy and menu
LSTAT-800-G3-L3	8 x buttons with temperature up/down, fan up/down, room occupancy and menu
LSTAT-800-G3-L4	8 x buttons with temperature up/down, sun shading up/down, light on/off, room occupancy and menu
LSTAT-800-G3-L5	8 x buttons with temperature up/down, fan up/down, sun shading up/down, room occupancy and menu
LSTAT-800-G3-L6	8 x buttons with temperature up/down, fan up/down, sun shading up/down, light and menu

Room control modules on the DDC4000 field bus

Human system interface for persons in the room for influencing the operating modes and parameters of the application and/or for displaying the functions for room automation. With room temperature sensor. Operation is simple and self-explanatory.
The respective keys are backlit. The LC display has backlighting. The fieldbus (max. 2,000 m) is used to transmit data to the automation station.

RBW42xx room control modules

Room control modules with room temperature sensor, manual temperature setpoint configuration and LED status displays for use on the DDC4000E automation system. Different variants with a graded range of functions are available. Set room temperature, manual and automatic fan control, occupancy button (present/absent).

Display:	Red LED: higher room temperature setpoint Blue LED: lower room temperature setpoint Green LEDs: Feedback for fan level, automatic fan mode, occupancy button
Controls:	Push-and-rotary knob for room temperature setpoint adjustment
Measuring element:	Integrated digital sensor
Interfaces:	CAN bus, F bus, 2000 m, 20 kBd, 4-wire connection to terminal
Nominal voltage:	12 V DC ±20 %, 0.72 W
Ambient temperature:	0..+50 °C
Housing:	Plastic housing, RAL 9010 (pure white). Other colors on request.
Degree of protection:	IP30
Mounting:	Screw mounting on standard flush-mounted box

RBW4201	Room control module for DDC4000e room temperature sensor and manual setting of the room setpoint and LED display
RBW4202	Room control module for DDC4000e Room temperature sensor and manual setting of the room setpoint, LED display with occupancy button
RBW4204	Room control module for DDC4000e Room temperature sensor and manual setting of the room setpoint, LED display and pushbuttons for fan control
RBW4205	Room control module for DDC4000e room temperature sensor and manual setting of the room setpoint and LED, occupancy button and buttons for fan control



RBW4205

RBW43xx room control modules

Room control modules with display, room temperature sensor and manual temperature setpoint configuration for use on the DDC4000E automation system. Different variants with a graded range of functions are available. Set room temperature, manual and automatic fan control, occupancy button (present/absent).

Display:	Backlit display
Controls:	Push-and-rotary knob for setpoint and timer adjustment; display of service data
Measuring element:	Integrated digital sensor
Interfaces:	CAN bus, F bus, 2000 m, 20 kBd, 4-wire connection to terminal
Nominal voltage:	12 V DC, ±10 %, 0.96 W
Ambient temperature:	0..+50 °C
Housing:	Plastic housing, RAL 9010 (pure white). Other colors on request.
Degree of protection:	IP30
Mounting:	Screw mounting on standard flush-mounted box

RBW4301	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint
RBW4302	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint and occupancy button
RBW4304	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint and buttons for fan control
RBW4305	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint, occupancy button and buttons for fan control



RBW4305

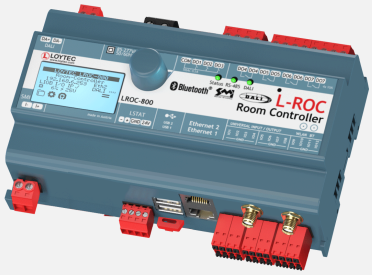
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L-ROC room controller for room segment management

Room controller for room segment management, especially for integral, axis-flexible room automation in new office buildings Lighting, sun shading and air conditioning/ventilation control are combined in one system for task-spanning functional synergies to achieve the maximum energy efficiency. Room sizes can be adjusted in just a few clicks via an intuitive visualization interface.

- Lighting control with constant light control
- Sunblind control with sun position tracking and annual shading
- Temperature control for heating, ventilation and cooling
- Presence detection
- Window monitoring via window contact

LROC-102	Up to 16 room segments possible in full version
LROC-400	Room controller for up to 8 rooms / room segments, all interfaces (complete system)
LROC-401	Room controller for up to 16 rooms / room segments, BUS only, without I/Os
LROC-402	Room controller for up to 8 rooms / room segments, without SMI, DALI, ENOCEAN, only 1 x RS485
LROC-800	Bluetooth Mesh room controller for 3 room segments
LROC-SEG8	License for L-ROC Controller extends the number of segments by 8



LROC-800

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Room controller on DDC4000 fieldbus

The FBR room controllers (fieldbus loop controllers) are components of the fieldbus system. Up to 63 FBR room controllers can be connected to a single fieldbus (DDC4002E, DDC4200E, DDC4400E). The fieldbus system allows for any combination of FBM input/output modules, FBR room controllers and room control modules. FBR room controllers are used in the area of individual room control as well as in heating and ventilation closed-loop control. The room controllers have either two-point outputs, three-point outputs or constant output signals of 0..10 V. They also offer spatially distributed intelligence thanks to stand-alone closed-loop control functions. The automation station is capable of remote access over longer distances (up to 2,000 m).

FBR3 room controller

Room controller with CAN bus controller. Stand-alone closed loop control function.
Functions can be expanded using software menus such as cascades, start-up switch, limit value monitoring and minimum room temperature monitoring.

Display:	2 LEDs for bus operation
Inputs:	3 binary inputs (BI) 1 analog input (AI); room sensor with KP10 measuring element 1 analog input (AI); remote adjuster for setpoint correction
Outputs:	1 binary output (BO); floating changeover switch 1 binary output (AO); transistor output 2 analog inputs (AI); 0..10 V DC, max. 5 mA
Interfaces:	CAN; fieldbus
Nominal voltage:	12 V DC ±20 %; 130 mA
Ambient temperature:	0..+45 °C
Housing:	Plastic
Degree of protection:	IP20
Mounting:	Wall mounting



FBR3

Kieback&Peter

FBR4 room controller

Room controller with CAN bus controller. Stand-alone closed loop control function for individual room controls, 4 triac outputs can be combined as two 2-point or two three-point control system for the sequential control of heating and cooling.

Display:	2 LEDs for bus operation
Inputs:	3 binary inputs (BI) 1 analog input (AI); room sensor with KP10 measuring element 1 analog input (AI); remote adjuster for setpoint correction
Outputs:	4 triac outputs; 24 V AC; 630 mA 1 binary output (BO); floating changeover switch 1 binary output (BO); transistor output
Interfaces:	CAN; fieldbus
Nominal voltage:	12 V DC ±20 %; 110 mA
Ambient temperature:	0..+45 °C
Housing:	Plastic
Degree of protection:	IP20
Mounting:	Wall mounting



FBR4

FBR5 room controller

Room controller with CAN bus controller. Stand-alone closed loop control function.
Functions can be expanded using software menus such as cascades, start-up switch, limit value monitoring and minimum room temperature monitoring.

Display:	2 LEDs for bus operation
Inputs:	5 analog inputs (AI) 4 binary inputs (BI)
Outputs:	4 analog outputs (AO); 0..10 V 3 binary outputs (BO); relay contact
Interfaces:	CAN; fieldbus
Nominal voltage:	12 V DC ±20 %; 1.9 W or 24 V AC/DC ±20 %; 3.2 VA
Ambient temperature:	0..+45 °C
Housing:	Plastic
Degree of protection:	IP20
Mounting:	Wall mounting



FBR5

FBR6 room controller

Room controller with CAN bus controller. Ventilation controller, stand-alone control function.
Functions can be expanded using software menus such as cascades, start-up switch, limit value monitoring and minimum room temperature monitoring.

Display:	2 LEDs for bus operation
Inputs:	5 analog inputs (AI) 4 binary inputs (BI)
Outputs:	4 triac outputs; 24 V AC, 630 mA 3 binary outputs (BO); relay outputs
Interfaces:	CAN; fieldbus
Nominal voltage:	12 V DC ±20 %; 2.8 VA or 24 V AC/DC ±20 %; 4.0 VA
Housing:	Plastic
Mounting:	Wall mounting



FBR6

Kieback&Peter

Operating and display devices

Room automation requires increasingly complex algorithms to satisfy high energy efficiency and comfort requirements in spaces. These algorithms are prepared and presented by various room control devices to give people some control over comfort and efficiency in the spaces. Kieback&Peter offers a variety of room control devices to meet customer's preferences: From operation with a simple rotary knob and keypad with an LED or LCD display to a high-quality touchscreen.

RU-TOUCH RF-T room control devices

The RF-T BACnet room control device with integrated temperature sensor allows for the intuitive configuration of the room temperature, ventilation and eco mode. The touchscreen ensures a particularly high level of user comfort. The RF-T-T-3/1-BT-S version lets you use a weekly schedule.
The visual “action circle” display alternates between the room temperature and CO2 levels. The “energy ring” display is used to show the heating requirements (red ring) or cooling requirements (blue ring).
Additional outputs can be used to output the following information through a standard signal:

- Setpoints for temperature and fan speed
- Room temperature, humidity and CO2 values

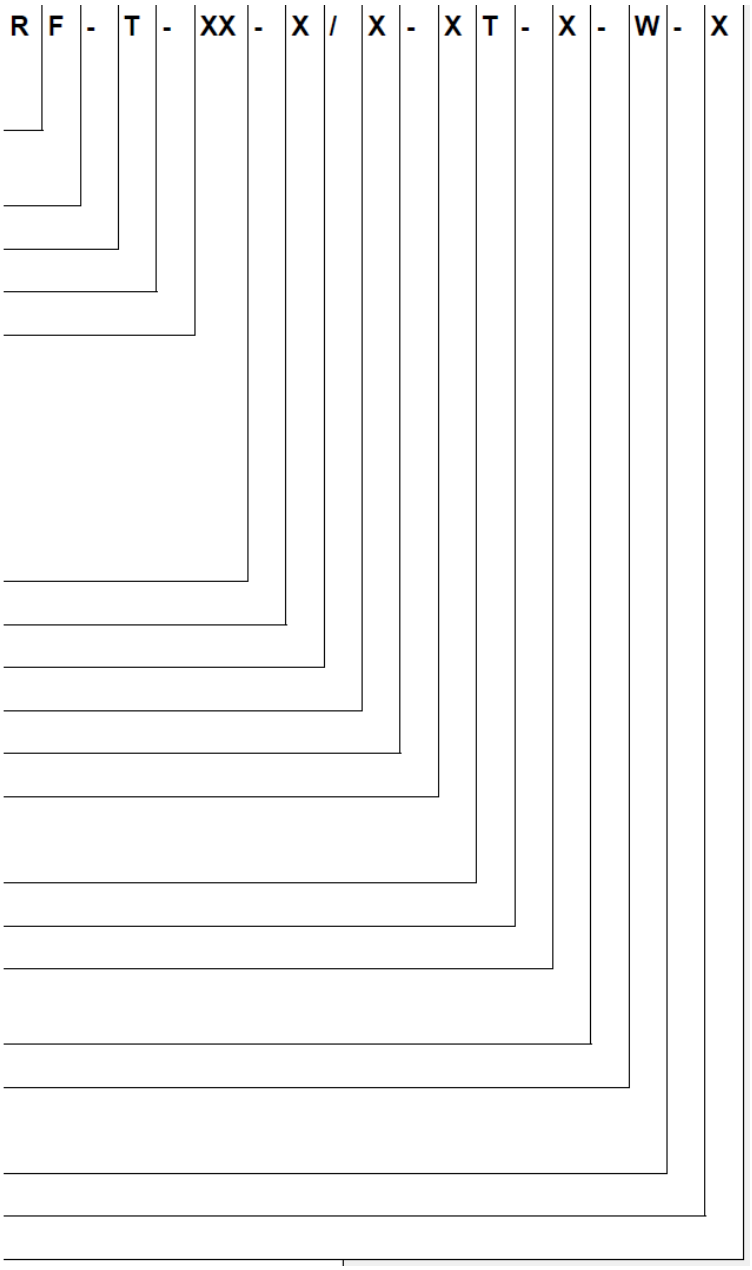
Display:	3.5" touchscreen, background lighting, 320 x 480 px, 255k colors
Measuring element:	Integrated temperature sensor / CO2 sensor (depending on the version)
Measuring range:	0..50 °C, ±0.5 °C / 0..5000 ppm ±50 ppm +3 % of the measured value at 25 °C
Network protocol:	BACnet MS/TP
Interfaces:	RS485
Nominal voltage:	24 V AC/DC, -10 % / +15 %; 80 mA
Housing:	Plastic
Degree of protection:	IP20
Mounting:	On flush-mounted box



RF-T-AT-3/1-BT

Kieback&Peter

Feature		Description
Mounting location	R =	Room
Mounting type	F =	Mounting on flush-mounted box
	-	
Display element	T =	Touch display
	-	
Sensors	T	Temperature
	H	Temperature, humidity
	OT	Temperature, CO_2
	AH	Temperature, humidity, CO_2
	-	
I/Os	X	Number of inputs
	/	
	X	Number of outputs
	-	
Communication protocol	B =	BACnet
	Mo =	Modbus
Interface	T =	Two-wire
	-	
additional feature	S =	Weekly schedule
	-	
Colors	empty =	Black RAL8022
	W =	White RAL 9010
	-	
Generation		



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Item number	Inputs		Outputs	
	BI (floating contact)	AI analog input (NTC10K3)	AO Analog output (0..10 V)	BO Binary output (relay 7 A)
RF-T-XX-3/1-XT-X-X	1	2		1
RF-T-XX-3/3-XT-X-X	1	2	3	

Selecting the options		Example
Communication protocol	**RF-T-XX-_/_-XT-X-X**	RF-T-T-3/1-BT
B = BACnet Mo = Modbus		
Sensors	**RF-T-XX-_/_-XT-X-X**	RF-T-AH-3/1-BT-S-W
T = temperature H = temperature + humidity AT = temperature + CO_2 AH = temperature + humidity + CO_2		
Colors	**RF-T-XX-_/_-XT-X-X**	RF-T-AH-3/1-BT-S-W
blank = Black RAL8022 W = White RAL9010		
additional feature	**RF-T-XX-C_/_-XT-X-X**	RF-T-AH-3/1-BT-S-W
S = weekly schedule		

RBW42xx room control modules

Room control modules with room temperature sensor, manual temperature setpoint configuration and LED status displays for use on the DDC4000E automation system. Different variants with a graded range of functions are available. Set room temperature, manual and automatic fan control, occupancy button (present/absent).

Display:	Red LED: higher room temperature setpoint Blue LED: lower room temperature setpoint Green LEDs: Feedback for fan level, automatic fan mode, occupancy button
Controls:	Push-and-rotary knob for room temperature setpoint adjustment
Measuring element:	Integrated digital sensor
Interfaces:	CAN bus, F bus, 2000 m, 20 kBd, 4-wire connection to terminal
Nominal voltage:	12 V DC ±20 %, 0.72 W
Ambient temperature:	0..+50 °C
Housing:	Plastic housing, RAL 9010 (pure white). Other colors on request.
Degree of protection:	IP30
Mounting:	Screw mounting on standard flush-mounted box

RBW4201	Room control module for DDC4000e room temperature sensor and manual setting of the room setpoint and LED display
RBW4202	Room control module for DDC4000e Room temperature sensor and manual setting of the room setpoint, LED display with occupancy button
RBW4204	Room control module for DDC4000e Room temperature sensor and manual setting of the room setpoint, LED display and pushbuttons for fan control
RBW4205	Room control module for DDC4000e room temperature sensor and manual setting of the room setpoint and LED, occupancy button and buttons for fan control



RBW4205

RBW43xx room control modules

Room control modules with display, room temperature sensor and manual temperature setpoint configuration for use on the DDC4000E automation system. Different variants with a graded range of functions are available. Set room temperature, manual and automatic fan control, occupancy button (present/absent).

Display:	Backlit display
Controls:	Push-and-rotary knob for setpoint and timer adjustment; display of service data
Measuring element:	Integrated digital sensor
Interfaces:	CAN bus, F bus, 2000 m, 20 kBd, 4-wire connection to terminal
Nominal voltage:	12 V DC, ±10 %, 0.96 W
Ambient temperature:	0..+50 °C
Housing:	Plastic housing, RAL 9010 (pure white). Other colors on request.
Degree of protection:	IP30
Mounting:	Screw mounting on standard flush-mounted box

RBW4301	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint
RBW4302	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint and occupancy button
RBW4304	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint and buttons for fan control
RBW4305	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint, occupancy button and buttons for fan control



RBW4305

Kieback&Peter

RPW4xxP-FTL room control modules

Solar-powered, self-learning room operating modules with LCD display and intelligent communication management. With integrated room temperature sensor (in the RPW414P-FTL or RPW411-FTL, plus a room humidity sensor). Independent generation of utilization time profiles, their continuous dynamic adjustment/optimization and wireless transmission of measured values. Combined with MD10P-FTL-HE and MD10P-FTL-HE-B-x valve controllers and MD15-FTL-HE, MD15-CFL-HE and MD15-LP-FTL-HE actuators, the room control modules form a functional unit for simple room temperature and humidity control.

Interfaces:	Wireless interface; bidirectional; EnOcean wireless telegram; 868.3 MHz; < 10 mW; < 1% duty cycle; 30 m range
Nominal voltage:	Dual power supply consisting of a solar cell and an internal energy storage unit with priority management
Ambient temperature:	0..+50 °C
Weight:	0,22 kg
Housing:	Plastic
Degree of protection:	IP30

RPW401P-FTL	en:key room control module with connection to an EnOcean system gateway via EEP D2-10-30 direct bidirectional wireless communication with up to 4 MD10P-FTL-HE or MD10P-FTL-HE-B-x units
RPW404P-FTL	en:key room control module with connection to an EnOcean system gateway via EEP D2-10-30 or direct bi-directional wireless communication with up to 4 MD15-FTL-HE or MD15-CFL-HE, MD15-LP-FTL-HE
RPW411P-FTL	en:key Room control module with connection to an EnOcean system gateway via EEP D2-10-30 direct bi-directional wireless communication with up to 4 MD10P-FTL-HE or MD10P-FTL-HE-B-x
RPW414P-FTL	en:key room control module with connection to an EnOcean system gateway via EEP D2-10-30 or direct bi-directional wireless communication with up to 4 MD15-FTL-HE or MD15-CFL-HE, MD15-LP-FTL-HE



RPW401P-FTL

Accessories for MD10P-FTL-HE wireless small actuators and RPW4x1P-FTL room control modules

Z192	en:key valve support

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RBW422-FTL room control module

Solar-powered room control module with LCD display and controls, with smart communication management for measuring room temperature and for wireless transmission of measured values, occupancy, setpoints and weekly schedules. For direct communication with MD15-FTL, MD15-CFL-HE and MD15-LP-FTL-HE wireless actuators. RBW422-FTL combines with the wireless actuators to form a functional unit for controlling the room temperature.

Interfaces:	Wireless interface; bidirectional; EnOcean wireless telegram; 868.3 MHz; < 10 mW; < 1% duty cycle; 30 m range
Nominal voltage:	Dual power supply consisting of a solar cell and an internal energy storage unit with priority management
Ambient temperature:	0..+50 °C
Housing:	Plastic
Degree of protection:	IP30
Mounting:	Flexible mounting using screws or adhesive



RBW422-FTL

Kieback&Peter

EnOcean wireless gateways

EnOcean wireless gateway for BACnet IP: GD-BI-E

Bidirectional gateway for sensors and actuators with EnOcean wireless technology and for controllers and control systems with a BACnet IP interface. The device has an external receiving antenna (2.5 m) and is suitable for mounting on a mounting rail.

Interfaces:	Wireless telegram: EnOcean wireless telegram, bidirectional; BACnet IP Frequency: 868.3 MHz; 30 m range
Nominal voltage:	15..24 V = (±10 %) or 24 V ~ (±10 %)



GD-BI-E

Kieback&Peter

Wireless room sensors

The room sensors communicate on a wireless basis. They obtain the energy they require from the ambient light. Cables are not required for communication or for the energy supply. The components can be installed without major effort and are easy to remove or move again.
That makes the radio room sensors the ideal solution everywhere that high flexibility is required or interference with the building structure is to be avoided.

TR20-FTL room temperature sensor

The room temperature sensor is powered by solar energy. Intelligent communication management ensures the wireless transmission of the values measured for the room temperature. Special indoor solar cells collect the power required for operation and data transfer from ambient light.

Interfaces:	Wireless interface; bidirectional; EnOcean wireless telegram; 868.3 MHz; < 10 mW; < 0.1% duty cycle; 30 m range
Nominal voltage:	Dual power supply consisting of a solar cell and an internal energy storage unit with priority management
Ambient temperature:	0..+50 °C
Housing:	Plastic
Degree of protection:	IP30
Mounting:	Flexible mounting using screws or adhesive



TR20-FTL

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HTRxx-FTL, HTRFxx-FTL room humidity/temperature sensors

The room humidity/temperature sensor with setting knob is supplied by solar energy. Intelligent communication management ensures the wireless transmission of the values measured for the room humidity, room temperature and brightness. Special indoor solar cells collect the power required for operation and data transfer from ambient light.

Interfaces:	Wireless interface; bidirectional; EnOcean wireless telegram; 868.3 MHz; < 10 mW; < 0.1% duty cycle; 30 m range
Nominal voltage:	Dual power supply consisting of a solar cell and an internal energy storage unit with priority management
Ambient temperature:	0..+50 °C
Housing:	Plastic
Degree of protection:	IP30
Mounting:	Flexible mounting using screws or adhesive

HTR20-FTL	Wireless room humidity/temperature sensor without setting knob
HTRF20-FTL	Wireless room humidity/temperature sensor with setting knob



HTRF20-FTL

Wireless actuators and actuators with integrated controller

Wireless-controlled actuators for MD15-FTL-HE, MD15-LP-FTL-HE and MD15-CFL-HE room control systems are fitted directly on conventional radiators. The actuator is controlled on a wireless basis based on the non-proprietary EnOcean wireless protocol. With the actuator MD10-FTL-HE, the desired comfort temperature is set directly on the actuator.

MD10P-FTL actuator

For directly mounting the lower sections of thermostatic valves on standard radiator valves to control the supply of heat to a radiator.
The desired comfort temperature is set on a scale of 1 to 5 using a rotary knob. The MD10P-FTL-HE then controls the room temperature according to the comfort temperature set. If the room temperature rises or falls, the heat supply to the radiator is adjusted. The valve controller is supplied with power by the integrated thermoelectric generator that uses the heating medium's thermal energy to generate electrical energy, which it feeds into an internal energy storage unit.

Actuating speed:	8 s/mm
Positioning force:	nominal 90 N
Interfaces:	Wireless interface; bidirectional; EnOcean wireless telegram; 868.3 MHz; < 10 mW; < 1% duty cycle; 30 m range
Sound power:	<30 dB(A)
Ambient temperature:	0..+50 °C
Weight:	0,39 kg
Degree of protection:	IP30



MD10P-FTL-HE

MD10P-FTL-HE	en:key valve controller with EnOcean wireless protocol Rotary know with a scale * to 5 for setting the comfort setpoint.
MD10P-FTL-HE-B-1	en:key valve controller with EnOcean radio protocol Rotary selector with factory-set min./max. limits of 2 to 4 for setting the comfort setpoint according to the scale
MD10P-FTL-HE-B-2	en:key valve controller with EnOcean radio protocol Rotary selector with factory-set min./max. limits of 2 to 5 for setting the comfort setpoint according to the scale
MD10P-FTL-HE-B-3	en:key valve controller with EnOcean radio protocol Rotary selector with factory-set min./max. limits of * to 4 for setting the comfort setpoint according to the scale
MD10P-FTL-HE-B-4	en:key valve controller with EnOcean radio protocol Rotary selector with a scale from 1 to 4 for setting the comfort setpoint

Accessories for MD10P-FTL-HE wireless small actuators and RPW4x1P-FTL room control modules

Z192	en:key valve support

MD15-FTL-HE and MD15-FTL-OV wireless actuators

Wireless-controlled, battery-powered actuator for room temperature control. Actuator for direct mounting on standard radiator valves for room-specific temperature control. The actuator is controlled on a wireless basis based on the non-proprietary EnOcean wireless protocol.

Positioning stroke:	max. 3 mm
Actuating speed:	10 s/mm
Positioning force:	nominal 100 N
Position indicator:	Stroke range scale
Interfaces:	Wireless interface; bidirectional; EnOcean wireless telegram; 868.3 MHz; < 10 mW; < 1 % duty cycle; 30 m range
Standard:	EnOcean Equipment Profile (EEP): EEP A5-20-01 (Battery Powered Actuator)
Nominal voltage:	3 alkaline AA batteries (AA, LR6 1.5 V 3400 mAh)
Sound power:	<28 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP40

MD15-FTL-HE	For valves from the R10..20 series and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc.
MD15-FTL-OV	For valves with an M30x1 connection manufactured by Oventrop (before 1998)

Accessories for battery-powered actuators

Z220	Protective battery cover only for MD15-FTL-xx small actuator



MD15-FTL-HE

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MD15-CFL-HE wireless small actuator

Wireless-controlled actuator with lifetime battery charge for room temperature control. Actuator for direct mounting on standard radiator valves for room-specific temperature control. The actuator is controlled on a wireless basis based on the non-proprietary EnOcean wireless protocol.

Positioning stroke:	max. 3 mm
Actuating speed:	10,0 s/mm
Positioning force:	nominal 100 N
Interfaces:	Wireless interface; bidirectional; EnOcean wireless telegram; 868.3 MHz; < 10 mW; < 1% duty cycle; 30 m range
Standard:	EnOcean Equipment Profile (EEP): EEP A5-20-01 (battery powered actuator)
Position indicator:	Stroke range scale
Nominal voltage:	3.6 V; Li type C
Sound power:	<28 dB(A)
Ambient temperature:	0..+50 °C
Weight:	0,201 kg
Degree of protection:	IP40

MD15-CFL-HE	Wireless small actuator for valves of series R10..20 and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc.



MD15-CFL-HE

MD15-LP-FTL-HE wireless small actuator

Wireless-controlled small actuator with lifetime battery charge for room temperature control. Actuator for direct mounting on standard radiator valves for room-specific temperature control. The actuator is controlled on a wireless basis based on the non-proprietary EnOcean wireless protocol. Integrated PI controller; HTRxx room sensor and MK10W-FTL window contact can be taught in

Positioning stroke:	max. 6 mm
Actuating speed:	10,0 s/mm
Positioning force:	nominal 100 N
Interfaces:	Wireless interface; bidirectional; EnOcean wireless telegram; 868.3 MHz; < 10 mW; < 1% duty cycle; 30 m range
Standard:	EnOcean Equipment Profile (EEP): EEP A5-20-01, A5-10-10 or D5-00-01
Position indicator:	Stroke range scale
Nominal voltage:	12..24 V AC/DC
Sound power:	<23 dB(A)
Ambient temperature:	0..+50 °C
Weight:	0,225 kg
Degree of protection:	IP54

MD15-LP-FTL-HE	For valves from the R10..20 series and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc.



MD15-LP-FTL-HE

MD15-LP-HE and MD15-LP-R-HE motor-driven actuators

MD15-LP-HE and MD15-LP-R-HE actuators for three-point, two-point or continuous control systems in zone post-treatment devices for heating, ventilation and air conditioning systems.

Nominal voltage:	12..24 V AC/DC
Positioning stroke:	max. 6 mm
Actuating speed:	10 s/mm
Positioning force:	nominal 100 N
Control:	Two-point signal (open/close), three-point signal (open/stop/close) or 0(2)..10 V DC continuous control, control invertible
Sound power:	<23 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD15-LP-HE	For valves from the R10..20 series and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc.
MD15-LP-R-HE	For valves of series R10..20 and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc. with position feedback



MD15-LP-HE

Accessories for MD15-xx-HE small actuators

Z800-HW	Adapter for Danfoss series 2 (20x1)
Z801-HW	Adapter for Danfoss series 3 - 23.5 x 1.5
Z803-HW	Adapter for Danfoss RAV
Z804-HW	Adapter for Danfoss RAV-L
Z805-HW	Adapter for Vaillant 30mm
Z806-HW	Adapter for TA M28X1.5
Z807-HW	Adapter for Herz M28X1.5
Z808-HW	Adapter for Comap M28X1.5
Z809-HW	Adapter for Oventrop M30X1
Z810-HW	Adapter for Giacomini
Z811-HW	Adapter for ISTA
Z814-HW	Adapter for Uponor (Velta) Euro distributor
Z815-HW	Adapter for Uponor (Velta) Provario
Z816-HW	Adapter for Markaryd
VS3	Anti-vandalism protection only for MD15-xx-HE small actuator

BUS actuators with integrated controller

MD15-BUS-HE
and MD15-BUS-N-HE BACnet/Modbus small actuators

Small bus-capable actuator, can be switched between Modbus RTU or BACnet MS/TP. Integrated PI controller, one universal input, one universal input and output, variable actuating speed, integrated regulation, control and limiting functions. Actuator in combination with valves from the R10..20 series and valves with M30x1.5.

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Control function:	variable via BUS
Positioning stroke:	max. 4 mm
Positioning force:	nominal 100 N
Control:	BACnet MS/TP or Modbus RTU
Sound power:	<18 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD15-BUS-HE	For valves from the R10..20 series and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc.
MD15-BUS-N-HE	For valves from the R10..20 series and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc., without inputs and outputs.



MD15-BUS-HE

MD15-BUS-Q and MD15-BUS-N-Q
BACnet/Modbus small actuators

Small bus-capable actuator, can be switched between Modbus RTU or BACnet MS/TP. Integrated PI controller, one universal input, one universal input and output, various valve characteristic curves, calculation functions such as thermal performance and volume flow, hydraulic balancing via bus, variable actuating speed. Actuator only in connection with combo valves RBQ15..32.

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Control function:	variable via BUS
Positioning stroke:	max. 9 mm
Positioning force:	nominal 150 N
Control:	BACnet MS/TP or Modbus RTU
Sound power:	<18 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD15-BUS-Q	For combo valves in the RBQ15..32 series
MD15-BUS-N-Q	for RBQ15..32 series combination valves, without inputs and outputs



MD15-BUS-Q

MD50-BUS BACnet/Modbus small actuator

Small bus-capable actuator, can be switched between Modbus RTU or BACnet MS/TP. Integrated PI controller, one universal input, one universal input and output, various valve characteristic curves, calculation functions such as thermal performance and volume flow, hydraulic balancing via bus, variable actuating speed. Actuator only in combination with valves RBQ40, RBQ50 and series RBK15..50.

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Control function:	variable via BUS
Positioning stroke:	max. 14 mm
Positioning force:	nominal 500 N
Control:	BACnet MS/TP or Modbus RTU
Sound power:	<28 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD50-BUS	For RBQ40, RBQ50 and RBK15..50 valves
MD50-BUS-N	For RBQ40, RBQ50 and RBK15..50 valves without inputs and outputs



MD50-BUS

Analog actuators

MD15-HE and MD15-R-HE motor-driven actuators

Small actuator for valves R10..20 and other valves with an M30x1.5 connection manufactured by Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop and Cazzaniga.

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Positioning stroke:	max. 3 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 100 N
Control:	Three-point signal (open/stop/close), two-point signal (open/close) or continuous control 0(2)..10 V DC
Sound power:	<18 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD15-HE	For valves from the R10..20 series and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc.
MD15-R-HE	For valves of series R10..20 and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc., but with position feedback

MD15-C motor-driven small actuator

Motor-driven small actuator for the D15xx and W15xx valves discontinued in 2003 (VST and VMT series manufactured by Controlli)

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Positioning stroke:	max. 6 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 200 N
Control:	Three-point signal (open/stop/close), two-point signal (open/close) or continuous control 0(2)..10 V DC
Sound power:	<28 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54



MD15-HE

MD15-HR and MD15/230-HR motor-driven small actuator

Motor-driven small actuator for BR216Z and BR316Z series HORA zone valves.

Positioning stroke:	max. 9 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 200 N
Control:	Three-point signal (open/stop/close) or two-point signal (open/close)
Sound power:	<23 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54
MD15-HR	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
MD15/230-HR	230 V AC ±10 %; 50/60 Hz

MD15-DA motor-driven small actuator

Motor-driven small actuator for use with Danfoss RA-N, RA-FN and RA-U zone valves.

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Positioning stroke:	max. 3 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 100 N
Control:	Three-point signal (open/stop/close), two-point signal (open/stop) or 0(2)..10 V DC continuous control
Sound power:	<18 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD15/230-DA motor-driven small actuator

Motor-driven small actuator for RA-N, RA-FN or RA-U series radiator valves manufactured by Danfoss

Nominal voltage:	230 V AC ±10 %; 50/60 Hz
Positioning stroke:	max. 3 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 100 N
Control:	Three-point signal (open/stop/close) or two-point signal (open/close)
Sound power:	<23 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

APR40405 small thermoactuator

Small thermoelectric actuator for opening and closing small valves and valves on heating circuit manifolds of surface heating and cooling systems.

Control function:	Normally closed (NC)
Positioning stroke:	4 mm
Positioning force:	nominal 100 N
Position indicator:	Indicator plunger on upper side of actuator
Nominal voltage	24 V AC; -10..+20 %; 50/60 Hz
Control:	Continuous; 0..10 V DC, Re = 100 kΩ
Ambient temperature:	0..+60 °C
Degree of protection:	IP54

APR40405/80	Adapted for: Oventrop, Heimeier, Tour&Anderson Thread: M30 x 1.5
APR40405/78	Adapted for: Danfoss RA Flange diameter: 23 mm
APR40405/50	Adapted for: MNG, Landis&Gyr, Siemens VDN215, Cazzaniga Thread: M30 x 1.5 (MNG, L&G)
APR40405/39	Adapted for: Oventrop (before 1998) Thread: M30 x 1.0



APR40405/39

AST40405 small thermoactuator

Small thermoelectric actuator for opening and closing small valves and valves on heating circuit manifolds of surface heating and cooling systems.

Control function:	Normally closed (NC)
Positioning stroke:	4 mm
Positioning force:	nominal 100 N
Position indicator:	Indicator plunger on upper side of actuator
Nominal voltage	24 V AC/DC; -10..+20 %; 50/60 Hz
Control:	Two-point (open/close)
Ambient temperature:	0..+60 °C
Degree of protection:	IP54

AST40405/80	Adapted for: Oventrop, Heimeier, Tour&Anderson Thread: M30 x 1.5
AST40405/78	Adapted for: Danfoss RA Flange diameter: 23 mm
AST40405/50	Adapted for: MNG, Landis&Gyr, Siemens VDN215, Cazzaniga Thread: M30 x 1.5 (MNG, L&G)
AST40405/39	Adapted for: Oventrop (before 1998) Thread: M30 x 1.0



AST40405

Kieback&Peter

APR42405 small thermoactuator

Small thermoelectric actuator for opening and closing small valves and valves on heating circuit manifolds of surface heating and cooling systems.

Control function:	Normally closed (NC)
Positioning stroke:	4 mm
Positioning force:	nominal 100 N
Position indicator:	Indicator plunger on upper side of actuator
Nominal voltage	24 V DC; -20..+20 %
Control:	Continuous; 0..10 V DC, Re = 100 kΩ
Ambient temperature:	0..+60 °C
Degree of protection:	IP54

APR42405/80	Adapted for: Oventrop, Heimeier, Tour&Anderson Thread: M30 x 1.5
APR42405/78	Adapted for: Danfoss RA Flange diameter: 23 mm
APR42405/50	Adapted for: MNG, Landis&Gyr, Siemens VDN215, Cazzaniga Thread: M30 x 1.5 (MNG, L&G)
APR42405/39	Adapted for: Oventrop (before 1998) Thread: M30 x 1.0



APR42405

AST20405 small thermoactuator

Small thermoelectric actuator for opening and closing small valves and valves on heating circuit manifolds of surface heating and cooling systems.

Control function:	Normally closed (NC)
Positioning stroke:	4 mm
Positioning force:	nominal 100 N
Position indicator:	Indicator plunger on upper side of actuator
Nominal voltage	230 V AC; -10..+10 %; 50/60 Hz
Control:	Two-point (open/close)
Ambient temperature:	0..+60 °C
Degree of protection:	IP54

AST20405/80	Adapted for: Oventrop, Heimeier, Tour&Anderson Thread: M30 x 1.5
AST20405/78	Adapted for: Danfoss RA Flange diameter: 23 mm
AST20405/50	Adapted for: MNG, Landis&Gyr, Siemens VDN215, Cazzaniga Thread: M30 x 1.5 (MNG, L&G)
AST20405/39	Adapted for: Oventrop (before 1998) Thread: M30 x 1.0



AST20405

CBV15 and CBV20 6-way control ball valves

Nominal pressure:	PN 16
Valve body:	dezincification-resistant Brass
Medium temperature:	0..+90 °C
Valve connection:	DN15 G3/4 AG with euro cone according to EN 16313, DN20 G1 AG with cone



CBV15..20

Article	DN	Kvs	Δp (bar)	Weight	Connection
CBV15	15	3,2	2 bar	1,34 kg	G3/4"
CBV20	20	3,2	2 bar	1,38 kg	G1"

Accessories for CBV15 and CBV20 valves

Z208	Kvs blinds, consisting of one set of blinds each for the heating and cooling medium.

DS5 rotary actuator

Rotary actuator for CBV15 and CBV20 6-way control ball valves

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Control function:	60 s for 90° rotational angle
Actuating function:	Two-point signal (open/close) or continuous control 0(2)..10 V DC
Sound power:	<26 dB(A)
Ambient temperature:	0..+55 °C
Degree of protection:	IP54



DS5

Kieback&Peter

Analog room sensors

Both room temperature sensors and room humidity/temperature sensors are used to record the room temperature and humidity for the room control systems.

TD1 temperature sensors

Room temperature sensors used for reading the measured room temperature as a controlled variable for follow-up and fixed-value loop controllers in ventilation and air conditioning systems.

The TD1 is used for installation in flush-mounted boxes.



TD1

Measuring element:	KP10, 2.73 V at 0 °C, TC = 10 mV/K
Measuring range:	-30..+150 °C
Housing:	Plastic
Degree of protection:	IP10

TD, TDF room temperature sensors

Room temperature sensors used for reading the measured room temperature as a controlled variable for follow-up and fixed-value loop controllers in ventilation and air conditioning systems.

Measuring element:	KP10; 2.73 V at 0 °C; TC = 10 mV/K
Measuring range:	-20..+60 °C
Housing:	Plastic
Degree of protection:	IP30



TD11

TD11	Without setting knob; not calibrated
TD12	Without setting knob
TDF12	With setting knob (10 kΩ)
TD13	With push button and LED display, Without setting knob
TDF13	With push button and LED display, With setting knob (10 kΩ)

Accessories

BA	Ball protection cover

TR12/BW, TRF12/BW room temperature sensors

Room temperature sensors used for reading the measured room temperature as a controlled variable for follow-up and fixed-value loop controllers in ventilation and air conditioning systems.

Measuring element:	Pt1000 in accordance with DIN EN 60751
Measuring range:	-50..+150 °C
Housing:	Plastic
Degree of protection:	IP30

TR12/BW	Without setting knob
TRF12/BW	With setting knob (10 kΩ)



TR12/BW

Accessories

BA	Ball protection cover

HT12, HTF12 room humidity/temperature sensor

The combined humidity/temperature sensors for constant closed-loop control are used for continuous measuring of the relative humidity and temperature in a room. Combined humidity/temperature sensor with/without 10 kΩ setting knob.

Measuring element:	Humidity sensor with converter; 0..10 V DC; max. 5 mA
Measuring range:	0..100 % r.h.
Measuring element:	KP10; 2.73 V at 0 °C; TC = 10 mV/K
Measuring range:	0..+50 °C
Nominal voltage:	24 V AC; 50/60 Hz
Housing:	Plastic
Degree of protection:	IP30

HT12	Without setting knob
HTF12	With setting knob (10 kΩ)



HTF12

Accessories

BA	Ball protection cover



DDC520 automation station

The DDC is an automation station designed for use in smaller plants such as in schools, kindergartens or building connection stations in offices, administrative buildings or residential buildings.

The DDC520, with its integrated 25 physical inputs and outputs, is a compact controller for top hat rail mounting. It has an integrated web server and can be operated using TPCs, smartphones, tablets or PCs.

The DDC520 has an NFC and WLAN interface instead of an integrated display. The DDC520 can also be operated easily and conveniently using a smartphone app. The smartphone app (Android and iOS) can also be used to configure the device for initial setup.

Advantages of the DDC520

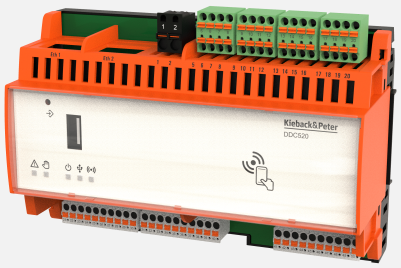
- New HMI based on HTML5
- Secure https communication during browser operation (certificates)
- Smartphone app for operation and initial configuration
- Plant images with dynamic fade-in points
- Can be expanded to up to 58 physical data points using I/O modules
- 2 switched Ethernet ports
- Data transmission speeds up to 1000 Mbps
- Up to 4 trend curves can be displayed in parallel
- DDC520 stores up to 100,000 trend values
- Full support of BACnet/SC with encryption methods to meet IT security equirements
- Support for DHCP function (static DHCP)

DDC520 automation station

The DDC520 is a compact controller for closed-loop control, open-loop control, monitoring and optimization of heating, ventilation and air conditioning systems.

Main features:

- Native BACnet® in accordance with DIN EN ISO 16484-5 (BACnet® Server, BACnet® Client), BACnet-IP and BACnet MS/TP enables communication with the BMS via Ethernet, for example.
- Different user roles for displaying and changing system values; customer-specific plain texts for every parameter
- 25 physical data points integrated
- I/O modules can increase the number of supported physical data points to a total of 58



DDC520

Technical data:

Nominal voltage:	Device power supply and CAN bus (terminals 17/18): DC 24 V ±10 % / 15 W Device and module power supply (terminals 5/6 and 7/8): DC 24 V ±10 % / 55 W Both voltages are necessary for the operation of the device!
Display:	5 status LEDs
Operation:	Recessed push-button on front to activate the wireless interface and for cold start
Inputs and outputs:	6 binary inputs, also for pulse counting up to 80 Hz Each binary input requires 5 mA at DC +12 V 8 binary inputs and outputs can be configured independently Each binary input requires 2.3 mA at DC +12 V For each binary output, DC 24 V transistor output, max. 500 mA (12 W) Total of all outputs: max. 40 W 8 universal inputs and outputs can be configured independently Analog input See technical data sheet, sensor types Analog output DC 0(2)..10 V; maximum 2.5 mA
Network protocol:	BACnet® in accordance with DIN EN ISO 16484-5

Interfaces:	2 Ethernet RJ45 (function: switch) BACnet® in accordance with DIN EN ISO 16484-5 1 CAN bus, can be switched between fieldbus and switch cabinet bus – Fieldbus: up to 2000 m; 20 kBd – Switch cabinet bus: up to 200 m; 40 kBd RS232 (for modem) RS485 (BACnet® MS/TP) – Up to 1000 m and up to 32 participants 1 USB type A WLAN 802.11b/g/n
Ambient temperature:	0..+55 °C Limit: only up to +50 °C at 1000 Mbps
Housing:	Plastic
Degree of protection:	IP20 (when installed)
Mounting:	TH 35x7.5 top hat rail in closed housing

Display and control device with touch function

Separate display and operator panels with color TFT touchscreens, for the DDC520 automation station.
Direct communication via an integrated Ethernet interface.
For front panel installation.

Display:	Backlit TFT LCD
Interfaces:	Ethernet RJ45
Nominal voltage:	24 V DC
Housing:	Plastic
Degree of protection:	IP65
Ambient temperature:	0..+50 °C
Mounting:	Front panel

TPC070	7" (1024x600)
TPC101	10.1" (1280x800)
TPC156	15.6" (1366x768)
TPC185	18.5" (1920x1080)



TPC070

LPC control modules

As a smart system solution, the new Local Priority Control (LPC) combines the market-wide unique touch user interface with maximum performance for permanently safe system operation. The innovative system solution impresses due to its self-explanatory design, particularly easy installation, comprehensive digital configurability and safe operation.

Smart and stylish like no other, these control modules were awarded the UX Design Award in 2023.

UX DESIGN AWARDS product 2023

TMC-PO touch module central

The TMC-PO is an operating unit for collective malfunction messages, collective malfunction message acknowledgement and the release of all connected TMU-PO modules. An NFC (Near Field Communication) key switch solution enables/manually locks the operation of all connected TMU-PO modules with an NFC chip.

Interfaces:	LPC bus, 200 m LPC backbone, 200 m
Nominal voltage:	12..24 V DC ±10 %; 2.0 W
Housing:	Plastic
Degree of protection:	IP54
Ambient temperature:	0..+55 °C
Mounting:	Control cabinet door installation
TMC-PO	Touch module central is an operating unit for collective malfunction messages, collective malfunction message acknowledgment and the release of all connected TMU-PO modules.



TMC-PO

TMU-PO touch module universal

The TMU-PO is a touch module for local priority control and display of the operation/malfunction messages of the units and actuators in building services.

Display:	2 x 2.4" TfT display (240 x 320 pixels)
Interfaces:	LPC bus, 200 m LPC backbone, 200 m
Nominal voltage:	12..24 V DC ±10 %; 2.0 W
Housing:	Plastic
Degree of protection:	IP54
Ambient temperature:	0..+55 °C
Mounting:	Control cabinet door installation

TMU-PO	Touch module universal for local override and indication and display of the operation/malfunction messages of the units and actuators in building services



TMU-PO

Accessories for TMC-PO and TMU-PO

TMB-PO	Dummy module cover for closing empty slots in the adaptor plate or the switch cabinet door

RBW42xx room control modules

Room control modules with room temperature sensor, manual temperature setpoint configuration and LED status displays for use on the DDC4000E automation system. Different variants with a graded range of functions are available. Set room temperature, manual and automatic fan control, occupancy button (present/absent).

Display:	Red LED: higher room temperature setpoint Blue LED: lower room temperature setpoint Green LEDs: Feedback for fan level, automatic fan mode, occupancy button
Controls:	Push-and-rotary knob for room temperature setpoint adjustment
Measuring element:	Integrated digital sensor
Interfaces:	CAN bus, F bus, 2000 m, 20 kBd, 4-wire connection to terminal
Nominal voltage:	12 V DC ±20 %, 0.72 W
Ambient temperature:	0..+50 °C
Housing:	Plastic housing, RAL 9010 (pure white). Other colors on request.
Degree of protection:	IP30
Mounting:	Screw mounting on standard flush-mounted box

RBW4201	Room control module for DDC4000e room temperature sensor and manual setting of the room setpoint and LED display
RBW4202	Room control module for DDC4000e Room temperature sensor and manual setting of the room setpoint, LED display with occupancy button
RBW4204	Room control module for DDC4000e Room temperature sensor and manual setting of the room setpoint, LED display and pushbuttons for fan control
RBW4205	Room control module for DDC4000e room temperature sensor and manual setting of the room setpoint and LED, occupancy button and buttons for fan control



RBW4205

RBW43xx room control modules

Room control modules with display, room temperature sensor and manual temperature setpoint configuration for use on the DDC4000E automation system. Different variants with a graded range of functions are available. Set room temperature, manual and automatic fan control, occupancy button (present/absent).

Display:	Backlit display
Controls:	Push-and-rotary knob for setpoint and timer adjustment; display of service data
Measuring element:	Integrated digital sensor
Interfaces:	CAN bus, F bus, 2000 m, 20 kBd, 4-wire connection to terminal
Nominal voltage:	12 V DC, ±10 %, 0.96 W
Ambient temperature:	0..+50 °C
Housing:	Plastic housing, RAL 9010 (pure white). Other colors on request.
Degree of protection:	IP30
Mounting:	Screw mounting on standard flush-mounted box

RBW4301	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint
RBW4302	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint and occupancy button
RBW4304	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint and buttons for fan control
RBW4305	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint, occupancy button and buttons for fan control



RBW4305

Kieback&Peter

BMD/BMA input/output modules

The BMD (digital bus modules) and BMA (analog bus modules) are used for the concentrated input and output of many binary and analog signals (data points).

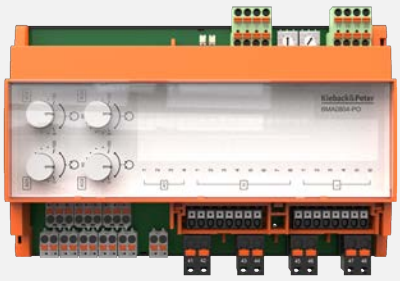
For the BMD1204 and BMA0804 modules, information is transmitted via the CAN bus. The modules automatically adapt to the CAN bus type specified by the DDC4000E automation station.
Up to 48 BMA0804 modules or up to 36 BMD1204 modules can be connected to the switch cabinet bus or fieldbus. The maximum cable length for the control cabinet bus is 200 m (transmission rate 40 kBaud) and for the fieldbus 2,000 m (transmission rate 20 kBaud).

For the BMD4032, BMD4064 and BMA4024 modules, communication with DDC4000 automation stations is performed via the control cabinet bus.
The switch cabinet bus is based on the CAN bus controller. Up to 16 bus modules can be remotely connected to the switch cabinet bus at a distance of up to 200 meters from the automation station (transmission rate 40 kBaud).

BMA0804-PO input and output module

BMA (analog bus module) with CAN bus connection.
Manual/automatic rotary switch for the automatic and manual operation of the 0..100 % analog outputs. LED display (multicolored) for the operating states of the inputs and outputs.
All terminals come as push-in spring-force plug terminals. Terminal equipment for direct connection of the sensor/actuator cable, including support terminal blocks for supplying field devices. Galvanic isolation of power supply, bus and sensor connection.

Display:	2 LEDs for displaying bus communication; 6 multi-colored, freely configurable LEDs
Inputs:	8 analog inputs; see technical data sheet, sensor types 3 inputs with 10 V DC, 70 mA auxiliary power source for connecting external setpoint transmitters
Outputs:	4 analog 0(2)..10 V DC outputs, max. 2.5 mA
Interfaces:	CAN; switch cabinet or fieldbus
Nominal voltage:	12..24 V DC +/-10 %, 2.5 W
Housing:	Plastic, 8 HP
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
BMA0804-PO	Input/output module Fieldbus or control cabinet bus, 8 analog inputs, 4 analog outputs 0(2)..10 V DC, with LPC bus interface Manual/automatic rotary switch for the automatic and manual operation of the 0..100 % analog outputs.



BMA0804-PO

Kieback&Peter

BMD0401-PO input and output module

The input/output module with 4 binary inputs and 1 binary output receives binary signals in the DDC4000 automation system and activates binary control functions. Manual/automatic rotary switch for automatic and manual operation of the auto/on/off binary output.

Display:	5 status LEDs for inputs and outputs 3 freely configurable LEDs
Inputs:	4 binary inputs, can also be used as pulse counter inputs up to 80 Hz
Outputs:	1 binary output as floating changeover contact, max. 230 V AC; 6 A (3 A)
Interfaces:	CAN; switch cabinet bus or fieldbus LPC bus, 200 m
Nominal voltage:	12..24 V DC +/-10 %, 2.2 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

BMD0401-PO	Input/output module 4 binary inputs, 1 binary output Manual/automatic rotary switch for automatic and manual operation of the auto/on/off binary output



BMD0401-PO

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BMD1204-PO iput and output module

BMD (digital bus module) with CAN bus connection. Manual/automatic rotary switches for automatic and manual operation of the auto/on/off binary outputs. LED display for the operating states of the inputs and outputs. All terminals come as push-in spring-force plug terminals. Terminal equipment for direct connection of the sensor/actuator cable, including support terminal blocks for supplying field devices. Galvanic isolation of power supply, bus and sensor connection.

Display:	2 LEDs for displaying bus communication 2 multi-colored, freely configurable LEDs
Inputs:	12 binary inputs Switch-off threshold ≤ 2.5 V DC; switch-on threshold ≥ 5.0 V DC Support for NAMUR sensors (proximity initiator)
Outputs:	4 binary outputs as floating changeover contacts, 230 V AC
Interfaces:	CAN; switch cabinet or fieldbus
Nominal voltage:	12..24 V DC +/-10 %, 3.2 W
Housing:	Plastic, 8 HP
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
BMD1204-PO	Field bus or switch cabinet bus, 12 binary inputs, 4 relay outputs, manual ON/AUTOMATIC/OFF switch with LPC bus interface for each output



BMD1204-PO

BMA0600 input module

BMA (analog bus module) with CAN bus connection. LED indicator for the operating states of the inputs. All terminals come as push-in spring-force plug terminals. Terminal equipment for direct connection of the sensor cable, including support terminal blocks for supplying field devices.

Display:	6 status LED for inputs 6 freely configurable LEDs
Inputs:	6 analog inputs separate auxiliary voltage
Interfaces:	CAN; switch cabinet or fieldbus
Nominal voltage:	12..24 V DC ±10 %; 2.5 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35x7.5 top hat rail in closed housing
BMA0600	Input module Fieldbus or switch cabinet bus, 6 analog inputs



BMA0600

BMA0004 output module

BMA (analog bus module) with CAN bus connection. Manual/automatic rotary switch for the automatic and manual operation of the 0..100 % analog outputs. LED display for the operating states of the outputs. All terminals come as push-in spring-force plug terminals. Terminal equipment for direct connection of the actuator cable, including support terminal blocks for supplying field devices.

Display:	4 status LEDs for outputs 1 LED for displaying bus communication
Outputs:	4 analog outputs, 0(2)..10 V DC; maximum 2.5 mA
Interfaces:	CAN; switch cabinet or fieldbus
Nominal voltage:	12..24 V DC ±10 %; 1.0 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35x7.5 top hat rail in closed housing
BMA0004	Fieldbus or switch cabinet bus output module, 4 analog outputs, manual ON/AUTOMATIC/OFF switch for each output



BMA0004

Kieback&Peter

BMD1200 input module

BMD (digital bus module) with CAN bus connection. LED indicator for the operating states of the inputs. All terminals come as push-in spring-force plug terminals. Terminal equipment for direct connection of the sensor cables. The module can be connected to an existing field bus or switch cabinet bus.

Display:	12 status LEDs for inputs 1 LED for displaying bus communication
Inputs:	12 binary inputs, can also be used as pulse counter inputs up to 80 Hz Switch-off threshold ≤ 2.5 V DC; switch-on threshold ≥ 5.0 V DC; 5 mA
Interfaces:	CAN; switch cabinet or fieldbus
Nominal voltage:	12..24 V DC ±10 %; 2.5 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35x7.5 top hat rail in closed housing

BMD1200	Input module Field bus or switch cabinet bus, 12 binary inputs



BMD1200

Kieback&Peter

BMD0004 output module

BMD (digital bus module) with CAN bus connection. Manual/automatic rotary switch for automatic and manual operation of the auto/on/off binary outputs. LED display for the operating states of the outputs. All terminals come as push-in spring-force plug terminals. Terminal equipment for direct connection of the actuator cable, including support terminal blocks for supplying field devices. The module can be connected to an existing field bus or switch cabinet bus.

Display:	4 status LEDs for outputs 1 LED for displaying bus communication
Outputs:	2 binary outputs as floating changeover contacts, 230 V AC 2 binary outputs as floating normally open contacts, 230 V AC
Interfaces:	CAN; switch cabinet or fieldbus
Nominal voltage:	12..24 V DC ±10 %; 1.5 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35x7.5 top hat rail in closed housing

BMD0004	Output module Fieldbus or switch cabinet bus, 4 binary outputs, manual ON/AUTOMATIC/OFF switch for each output



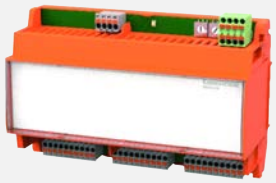
BMD0004

BMAU24 input/output module

BMAU (universal analog bus module) with CAN bus connection. Connection to all of the common temperature sensors. Communication control takes place via LED. Removable hood with electronics block for simple replacement.

Display:	2 LEDs for displaying bus communication
Inputs and outputs:	24 analog inputs and outputs AI/AO - analog inputs (AI); see technical data sheet, sensor types - analog output (AO); 0(2)..10 V DC; maximum 2.5 mA
Interfaces:	CAN bus as: Fieldbus, F-bus: 2000 m, 20 kBaud or - switch cabinet bus, SBM-bus: 200 m, 40 kBaud
Nominal voltage:	12..24 V DC ±10 %; 3.9 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

BMAU24	Input/output module The function can be individually selected as an input or output for each of the 24 connections by means of DDC configuration.



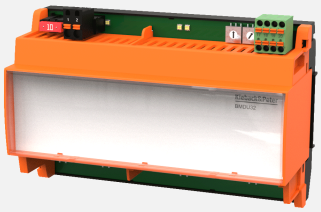
BMAU24

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BMDU32 input/output module

The input/output module with 32 binary inputs or binary outputs receives binary signals in the DDC4000 automation system and activates binary control functions.
The function can be individually selected as an input or output for each of the 32 connections by means of DDC parameterization.
The output signals can be defined in the event of an interruption in the communication between the input/output module and automation station.

Inputs and outputs:	32 BI / BO independently parameterizable as: binary input (BI) or binary output (BO)
Interfaces:	CAN bus as: Fieldbus, F-bus: 2000 m, 20 kBaud or - switch cabinet bus, SBM-bus: 200 m, 40 kBaud
Nominal voltage:	12..24 V DC ±10 %; 0.5 W (for module and CAN supply) 24 V DC ±10 %, 158 W for inputs/outputs
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing



BMDU32

Input and output modules on the fieldbus

Modules on the fieldbus FBM (fieldbus module) for collecting individual remote analog and binary signals (data points) from the automation station. The automation station is capable of remote access over longer distances (up to 2000 m).

The fieldbus system is based on the CAN bus. The FBM input/output modules are used for wall mounting and electronic distribution. The FBM input/output modules are operated using an operating level. LED display for status messages and communication monitoring. This unit dramatically reduces the need for wiring in conventional systems by bringing together scattered analog and binary signals.

FBM018 input module

Fieldbus input module with CAN bus controller. LEDs are used for communication monitoring. LED displays for the operating states of the binary inputs.

Display:	2 LEDs, bus operation
	8 LEDs operating states
Inputs:	8 contact inputs, normally closed/normally open or pulse counter up to 80 Hz
Interfaces:	CAN; fieldbus
Nominal voltage:	DC 12 V ±20 %; 90 mA; 1.08 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

FBM018	Fieldbus input module 8 binary inputs (BI)
FBM018W	Fieldbus input module 8 binary inputs (BI); wall-mounted using the included wall housing Z175



FBM018

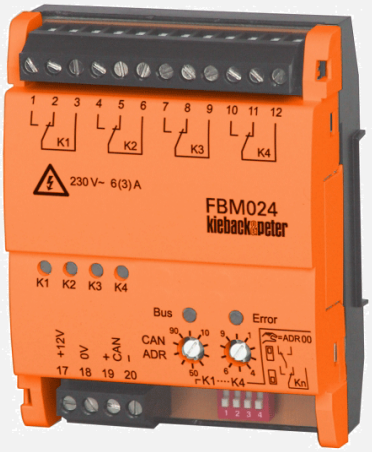
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FBM024 output module

Fieldbus output module with CAN bus controller. LEDs are used for communication monitoring. LED display of the operating states.

Display:	2 LEDs, bus operation 4 LEDs operating states
Outputs:	4 floating changeover switches, max. 230 V AC; 6 (3) A
Interfaces:	CAN; fieldbus
Nominal voltage:	DC 12 V ±20 %; 80 mA; 1.0 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

FBM024	Fieldbus output module 4 binary outputs (BO):
FBM024W	Fieldbus output module 4 binary outputs (BO); wall-mounted using the included wall housing Z175



FBM024

Kieback&Peter

FBU410 input/output module

Input/output module with CAN bus controller with 4 relay outputs and 6 universal inputs and outputs for controlling and monitoring signals from remote devices in the building services system.
The function of the 6 universal inputs/outputs can be individually configured and defined for each connection.

Display:	2 LEDs, bus operation
	4 LEDs for operating states; one LED freely configurable
Inputs and outputs:	6 universal inputs/outputs, can be configured independently
	Analog inputs (AI);
	see technical data sheet, sensor types
	Analog output (AO), 0(2)..10 V DC; maximum 2.5 mA
	Binary input (BI); floating contact; pulse counting up to 80 Hz.
	Binary output (BO); transistor outputs 24 V DC, maximum 80 mA
Outputs:	4 binary outputs (BO); floating relay contact max. 230 V AC; 5 (3) A
Interfaces:	CAN; fieldbus
Nominal voltage:	DC 12 V ±20 %; 1.8 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
FBU410	Fieldbus input/output module 4 relay outputs, manual ON/AUTOMATIC/OFF switch for each output 6 universal inputs/outputs



FBU410

Kieback&Peter

MD200BUS valve actuator fieldbus

- Maintenance-free, bus-capable valve actuator for stroke movements of 3..20 mm
- Equipped with CAN bus controller for connecting to the fieldbus of the DDC automation system
- Simple mounting using drive console
- Data collector for three additional binary inputs and two additional analog inputs
- Status data (e.g. manual intervention, valve blocking, 0..100 % setpoint, position indicator) is transferred to the automation station via the fieldbus
- Manual/automatic switch and manual adjustment
- Valve block control with remedy program
- Airtight function
- Direct control, open/close



MD200BUS

Nominal voltage:	24 V AC ±10 %; 13.0 VA
Actuator:	Step motor
Control:	CAN; fieldbus
Inputs:	3 digital inputs (DI) 2 analog inputs (AI); 0..10 V, KP10
Manual mode:	Using switch and handwheel
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

Article	Weight	Stroke	Force	Actuating speed
MD200BUS	1,46 kg	3 to 20mm	850 N	6..9.3 s/mm
MD200BUS-E	1,46 kg	3 to 20mm	850 N	6..9.3 s/mm

Accessories

Transformers

TF16	Safety isolating transformer 16 VA; 230 V AC / 24 V AC
TF25	Safety isolating transformer 25 VA; 230 V AC / 24 V AC
TF25W	Safety isolating transformer 25 VA; 230 V AC / 24 V AC
TF60	Safety transformer, 63 VA; 230 V AC / 24 V AC
TF160	Safety transformer, 160 VA; AC 230 V / AC 24 V
TF250	Safety transformer, 250 VA; 230 V AC / 24 V AC

Power supply units

Z24	Power supply unit 230 V AC / 24 V DC; 6 A
Z145	Power supply unit 230 V AC / 12 V DC; 1 A

Software

BMR-SI-TOOL	Service tool for service and commissioning

Coupling relay

Z45FK	Coupling relay with one changeover switch 24 V AC/DC ±10 %; 13 mA
Z46FK	Coupling relay with two changeover switches 24 V AC/DC ±10 %; 20 mA
Z47FK	Coupling relay with one changeover switch and a manual switch at field level 24 V AC/DC ±10 %; 13 mA
Z60FK	Coupling relay with one changeover switch and one manual switch at field level with floating feedback contact 24 V AC/DC ±10 %; 13 mA
Z45	Coupling relay with one changeover switch 24 V AC/DC ±10 %; 13 mA
Z46	Coupling relay with two changeover switches 24 V AC/DC ±10 %; 20 mA
Z47	Coupling relay with one changeover switch und a manual switch at field level 24 V AC/DC ±10 %; 13 mA
Z60	Coupling relay with one changeover switch and one manual switch at field level with floating feedback contact 24 V AC/DC ±10 %; 13 mA



Z47 and Z60

Adapter for device installation

Z63	DDC520 adapter frame, 19" module frame with cutout for DDC520, I/O modules and mounting rail
Z68	DDC520 adapter frame for installing DDC420 in the switch cabinet door
Z180	Empty housing for wall mounting
Z175	Empty housing for wall mounting (4 HP/IP65) for mounting the input and output modules



Z68

Kieback&Peter



DDC4000 automation system

The DDC4000 automation system is a control system for the measurement, closed-loop control, open-loop control, optimization and monitoring of building services. It is based on 32-bit processors and operates according to the multi-task principle. The operating system is Linux.

It consists of DDC4000 automation stations, modules on the BMA, BMD and SBM switch cabinet bus (analog bus module, digital bus module, switch cabinet bus module) and modules on the FBM fieldbus (field bus module) and operating modules FSM (front switch module), as well as a modern TMU (touch operation module) for local override and indication for the building services. The DDC4000 automation stations communicate via Ethernet (TCP/IP, BACnet®). Up to 99 DDC4000 automation stations communicate with each other in a network.

The basic functions of the DDC4000 automation system consist of basic programs in the form of closed-loop control functions for heating, ventilation and fixed-value control which include interlocks and message management with an error message memory for messages from the building services and system messages.

The software is structured in software objects and can be configured freely. The system is configured using a modern, effective object structure which reduces the amount of project planning work necessary.

Operation takes place at the automation station with touchscreen in dialog with graphic displays and plain texts. Operation of the entire DDC4000 automation system is possible from every connected DDC4000 automation station (remote control) without additional devices.
The automation station web server enables remote control via a web browser on any PC and mobile devices such as smartphones, tablets and other devices. The control modules have parameterizable switches/push-buttons and LEDs. The control modules have switches/push-buttons and an LCD

The BMS control stations can be connected directly to the DDC4000 automation station via Ethernet. The DDC4000 automation system uses native BACnet® (open standard) to communicate with the BMS control stations. For remote BMS control centers, data is transmitted via the Internet, DSL.

Automation stations

Stand-alone automation stations for closed-loop control, open-loop control, optimizing and monitoring functions. Each automation station is equipped with interfaces to CAN-based bus systems.

The automation stations have basic programs for heating, ventilation and fixed-value closed-loop controls (including interlocks). Message management with an error message memory for messages from the building services and system messages.

DDC4200E automation station

Stand-alone automation station with operator function for closed-loop control, open-loop control, optimizing and monitoring functions. High-quality backlit color display. Integrated touchscreen for intuitive, user-defined operation using system structures that can be individually created.

12 DDC control systems for heating and ventilation (can be expanded to include software objects). 2 buses (CAN-based), configurable between switch cabinet and fieldbus. Used for connecting input modules, output modules, room controllers and room control modules to the fieldbus (63 addresses), or for connecting input modules, output modules and gateway modules to the switch cabinet bus (16 addresses).

Error message memory, event log with date and time, incoming and outgoing messages are saved. Malfunction messages can be forwarded to printers, fax machines, GSM-SMS or e-mail. Backward-compatible with the Kieback&Peter DDC3000 automation system.

- Communication via TCP/IP, Ethernet cable (Cat5, 10/100 Mbit)
- Integrated remote control from a web browser on any PC and mobile devices such as smartphones, tablets, etc.
- Native BACnet® in accordance with DIN EN ISO 16484-5 (BACnet® server and client functionality) facilitates communication with the BMS via Ethernet (BACnet IP) or modem.
- Up to 99 DDC4000 automation stations
- Access to the entire DDC4000 automation system from each and every connected automation station (remote control) without the need for additional devices



DDC4200E

Kieback&Peter

Technical data:

Display:	Color TFT touchscreen
Inputs and outputs:	24 analog inputs and outputs AI/AO; can be switched individually - analog inputs (AI); see technical data sheet, sensor types - analog output (AO); 0(2)..10 V DC maximum 2.5 mA 32 binary inputs and outputs BI/BO; can be switched individually 8 of these points can be used as high rate pulse input up to 80 Hz
Network protocol:	BACnet-IP; BACnet-MS/TP
Interfaces:	Ethernet RJ45 2 x CAN; can be configured for field bus or switch cabinet bus RS232; RS485 USB 2.0; (for USB stick: update, backup, restoration)
Nominal voltage:	24 V AC/DC ±10 %; 50/60 Hz 12 V DC ±10 %
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+50 °C
Mounting:	Switchboard door or 19" rack
DDC4200E	Automation station with operator function for 12 RLT/24 heating control systems

Accessories for automation station

DDC4E-LON	LON adapter to RS232 interface for DDC4000E Native LON according to ISO/IEC 14908-2 network protocol: LON-IP, LON FTT10
DDC4N-LON	LON adapter for DDC4000E for DIN rail mounting to RS232 interface DDC4040E, DDC4002E, DDC4200E, DDC4400E

DDC4002E automation station

Stand-alone automation station with operator function for closed-loop control, open-loop control, optimizing and monitoring functions. High-quality backlit color display. Integrated touchscreen for intuitive, user-defined operation using system structures that can be individually created.

4 DDC closed-loop control systems for heating and ventilation (can be expanded to include software objects). 2 buses (CAN-based), configurable between switch cabinet and fieldbus. Used for connecting input modules, output modules, room controllers and room control modules to the fieldbus (63 addresses), or for connecting input modules, output modules and gateway modules to the switch cabinet bus (16 addresses).

Error message memory, event log with date and time, incoming and outgoing messages are saved. Malfunction messages can be forwarded to printers, fax machines, GSM-SMS or e-mail. Backward-compatible with the Kieback&Peter DDC3000 automation system.

- Communication via TCP/IP, Ethernet cable (Cat5, 10/100 Mbit)
- Integrated remote control from a web browser on any PC and mobile devices such as smartphones, tablets, etc.
- Native BACnet® in accordance with DIN EN ISO 16484-5 (BACnet® server and client functionality) facilitates communication with the BMS via Ethernet (BACnet IP) or modem.
- Up to 99 DDC4000 automation stations
- Access to the entire DDC4000 automation system from each and every connected automation station (remote control) without the need for additional devices



DDC4002E

Technical data:

Display:	Color TFT touchscreen
Inputs and outputs:	24 analog inputs and outputs AI/AO; can be switched individually - analog inputs (AI); see technical data sheet, sensor types - analog output (AO); 0(2)..10 V DC maximum 2.5 mA
	32 binary inputs or outputs BI/BO; can be switched individually
	8 of these points can be used as high rate pulse input up to 80 Hz
Network protocol:	BACnet-IP; BACnet-MS/TP
Interfaces:	Ethernet RJ45
	2 x CAN; can be configured for field bus or switch cabinet bus
	RS232; RS485
	USB 2.0; (for USB stick: update, data backup, data restoration)
Nominal voltage:	24 V AC/DC ±10 %; 50/60 Hz 12 V DC ±10 %
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+50 °C
Mounting:	Switchboard door or 19" rack
DDC4002E	Automation station with operator function for 4 RLT/8 heating control systems

Accessories for automation station

DDC4E-LON	LON adapter to RS232 interface for DDC4000E Native LON according to ISO/IEC 14908-2 network protocol: LON-IP, LON FTT10
DDC4N-LON	LON adapter for DDC4000E for DIN rail mounting to RS232 interface DDC4040E, DDC4002E, DDC4200E, DDC4400E

DDC4400E automation station

Stand-alone automation station for closed-loop and open-loop control, optimizing and monitoring functions.

12 DDC control loops for heating and ventilation, which can be expanded using software objects. 2 buses (CAN-based), configurable between switch cabinet and fieldbus. Used for connecting input modules, output modules, room controllers and room control modules to the fieldbus (63 addresses), or for connecting input modules, output modules and gateway modules to the switch cabinet bus (16 addresses).

Error message memory, event log with date and time, incoming and outgoing messages are saved. Malfunction messages can be forwarded to printers, fax machines, GSM-SMS or e-mail. Backward-compatible with the Kieback&Peter DDC3000 automation system.

- Communication via TCP/IP, Ethernet cable (Cat5, 10/100 Mbit)
- Integrated remote control from a web browser on any PC and mobile devices such as smartphones, tablets, etc.
- Native BACnet® in accordance with DIN EN ISO 16484-5 (BACnet® server and client functionality) facilitates communication with the BMS via Ethernet (BACnet IP) or modem.
- Up to 99 DDC4000 automation stations



DDC4400E

Technical data:

Inputs and outputs:	24 analog inputs and outputs AI/AO; can be switched individually - analog inputs (AI); see technical data sheet, sensor types - analog output (AO); 0(2)..10 V DC maximum 2.5 mA 32 binary inputs and outputs BI/BO; can be switched individually 8 of these points can be used as high rate pulse input up to 80 Hz
Network protocol:	BACnet-IP; BACnet-MS/TP
Interfaces:	Ethernet RJ45 2 x CAN; can be configured for field bus or switch cabinet bus RS232; RS485 USB 2.0; (for USB stick: update, backup, restoration)
Nominal voltage:	24 V AC/DC ±10 %; 50/60 Hz 12 V DC ±10 %
Housing:	19" plastic short enclosure
Degree of protection:	IP20
Ambient temperature:	0..+50 °C
Mounting:	Switchboard door or 19" rack
DDC4400E	Automation station as black box for 12 RLT/24 heating control systems

Accessories for automation station

DDC4E-LON	LON adapter to RS232 interface for DDC4000E Native LON according to ISO/IEC 14908-2 network protocol: LON-IP, LON FTT10
DDC4N-LON	LON adapter for DDC4000E for DIN rail mounting to RS232 interface DDC4040E, DDC4002E, DDC4200E, DDC4400E

DDC4040E automation station

Stand-alone automation station for closed-loop and open-loop control, optimizing and monitoring functions.

12 DDC control loops for heating and ventilation, which can be expanded using software objects. 2 buses (CAN-based), configurable between switch cabinet and fieldbus. Used for connecting input modules, output modules and room control modules to the fieldbus (63 addresses), or for connecting input modules, output modules and gateway modules to the switch cabinet bus (16 addresses).

Error message memory, event log with date and time, incoming and outgoing messages are saved. Malfunction messages can be forwarded to GSM-SMS (text message) or e-mail.

- Communication via TCP/IP, Ethernet cable (Cat5, 10/100 Mbit)
- Integrated remote control from a web browser on any PC and mobile devices such as smartphones, tablets, etc.
- Native BACnet® in accordance with DIN EN ISO 16484-5 (BACnet® server and client functionality) facilitates communication with the BMS via Ethernet (BACnet IP) or modem.
- Up to 99 DDC4000 automation stations

Network protocol:	BACnet-IP; BACnet-MS/TP
Interfaces:	2 x Ethernet RJ45
	2 x CAN; can be configured for field bus or switch cabinet bus
	2 x RS232; 2 x RS485
	USB 2.0; (for USB stick: update, data backup, data restoration)
Nominal voltage:	24 V AC/DC ±10 %; 50/60 Hz 12 V DC ±10 %
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

DDC4040E	Automation station for 12 RLT/24 heating control systems

Accessories for automation station

DDC4E-LON	LON adapter to RS232 interface for DDC4000E Native LON according to ISO/IEC 14908-2 network protocol: LON-IP, LON FTT10



DDC4040E

Kieback&Peter

DDC4020E automation station

Stand-alone automation station for closed-loop and open-loop control, optimizing and monitoring functions.

4 DDC control loops for heating and ventilation, which can be expanded using software objects. 2 buses (CAN-based), configurable between switch cabinet and fieldbus. Used for connecting input modules, output modules and room control modules to the fieldbus (63 addresses), or for connecting input modules, output modules and gateway modules to the switch cabinet bus (16 addresses).

Error message memory, event log with date and time, incoming and outgoing messages are saved. Malfunction messages can be forwarded to GSM-SMS (text message) or e-mail.

- Communication via TCP/IP, Ethernet cable (Cat5, 10/100 Mbit)
- Integrated remote control from a web browser on any PC and mobile devices such as smartphones, tablets, etc.
- Native BACnet® in accordance with DIN EN ISO 16484-5 (BACnet® server and client functionality) facilitates communication with the BMS via Ethernet (BACnet IP) or modem.
- Up to 99 DDC4000 automation stations

Network protocol:	BACnet-IP; BACnet-MS/TP
Interfaces:	2 x Ethernet RJ45
	2 x CAN; can be configured for field bus or switch cabinet bus
	2 x RS232; 2 x RS485
	USB 2.0; (for USB stick: update, data backup, data restoration)
Nominal voltage:	24 V AC/DC ±10 %; 50/60 Hz 12V DC +/-10 %; 13 W
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

DDC4020E	Automation station for 4 RLT/8 heating control systems

Accessories for automation station

DDC4E-LON	LON adapter to RS232 interface for DDC4000E Native LON according to ISO/IEC 14908-2 network protocol: LON-IP, LON FTT10



DDC4020E

Kieback&Peter

TPC070 display and operator panel

TFT touchscreen for remote operation of the DDC4000 automation system. TPC70 graphical dialogs for querying and entering: setpoints, actual values, switches and times.

Graphical queries and entering DDC closed-loop and open-loop control parameters in priority levels and with user management.

- Display of operational messages and malfunction messages
- Connection to automation stations via Ethernet and TCP/IP

Display:	Color TFT touchscreen; 7" widescreen display
Interfaces:	Ethernet RJ45
Nominal voltage:	12..24 V DC; 7 W
Housing:	Sheet steel, metal front
Degree of protection:	IP20 housing; IP65 front
Ambient temperature:	0..+55 °C
Mounting:	Switchboard door, mounting with clamps
TPC070:	Display and operator panel for operating the DDC4000e automation stations TFT touchscreen with a screen diagonal of 7" = 17.8 cm



TPC070

DDC420 automation station

The DDC420 is a compact automation station for closed-loop and open-loop control, monitoring and optimizing heating, ventilation and air conditioning systems. The automation station can be individually configured, making it flexible and usable anywhere. Using additional software objects, the automation station can be adjusted to suit the individual requirements of particular systems and installation locations. Mounted onto mounting rails in switch cabinets. Plug-in terminals reduce the need for cabling and wiring. The inputs and outputs can be extended using input and output modules on the fieldbus (CAN-based) or gateway modules, for example.

The automation station web server enables remote control via a web browser on any PC and mobile devices such as smartphones, tablets and other devices. This allows you to visualize information from the building services. The automation station is operated using the simple tried and tested Kieback&Peter concept with a push and rotary knob and a backlit graphical display. This intuitive operating concept guides the user through the operating menu. All functions are self-explanatory.

DDC420 automation station

The DDC420 is an automation station for closed-loop control, open-loop control, monitoring and optimizing heating, ventilation and air conditioning systems.

A CAN-based fieldbus allows for flexible enhancement with input and output modules and room control modules.

With an integrated Ethernet interface, a built-in web server facilitates display, remote control and data backup over a web browser without the need for any additional software.

Additional main features:

- Native BACnet® in accordance with DIN EN ISO 16484-5 (BACnet® server and client functionality); BACnet IP and BACnet MS/TP; facilitates communication with the BMS via Ethernet, BACnet IP or modem.
- Illuminated graphic display
- Control panel with push and rotary knob and function keys
- Weekly schedule and annual schedule
- Trend data can be saved and displayed
- Different password-protected operating levels for displaying and changing system values; customer-specific plain texts for every parameter
- User interface available in 12 languages (Czech, German, English, Spanish, French, Hungarian, Italian, Latvian, Dutch, Polish, Russian and Swedish)
- Three control loops for heating or two control loops for ventilation, which can be extended by hardware and software objects
- Malfunction message logging with time and date



DDC420

Technical data:

Display:	Backlit graphical display
Operation:	Single-button operation, rotary push-button
Inputs and outputs:	8 universal inputs/outputs; can be configured independently
	Analog inputs (AI); see technical data sheet, sensor types
	Analog output (AO), 0(2)..10 V DC; maximum 2.5 mA
	Binary input (BI), floating contact
	Binary output (BO); transistor outputs 24 V DC, maximum 40 mA
	2 binary inputs (BI) (also as pulse inputs (80 Hz))
	5 binary outputs (BO); (relay contact)
Network protocol:	BACnet® in accordance with DIN EN ISO 16484-5
Interfaces:	RS485 (BACnet MS/TP)
	RS232 serial
	CAN; fieldbus
	Ethernet RJ45
Nominal voltage:	110..230 V AC ±10 %; 50/60 Hz; 21 VA
Housing:	Plastic
Degree of protection:	IP20 (when installed)
Ambient temperature:	0..+50° C
Mounting:	TH 35-7.5 mounting rail in closed housing
DDC420	Automation station with operator function

Information on the DDC420 automation station

More information on the automation station and the modules that can be connected to it can be found in the separate “DDC420 automation station” section.

BMD/BMA input/output modules

The BMD (digital bus modules) and BMA (analog bus modules) are used for the concentrated input and output of many binary and analog signals (data points).

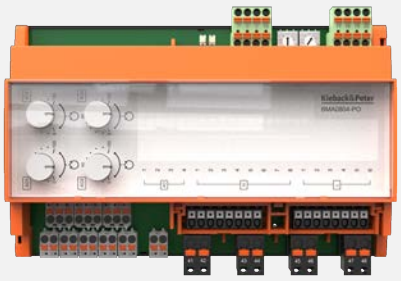
For the BMD1204 and BMA0804 modules, information is transmitted via the CAN bus. The modules automatically adapt to the CAN bus type specified by the DDC4000E automation station.
Up to 48 BMA0804 modules or up to 36 BMD1204 modules can be connected to the switch cabinet bus or fieldbus. The maximum cable length for the control cabinet bus is 200 m (transmission rate 40 kBaud) and for the fieldbus 2,000 m (transmission rate 20 kBaud).

For the BMD4032, BMD4064 and BMA4024 modules, communication with DDC4000 automation stations is performed via the control cabinet bus.
The switch cabinet bus is based on the CAN bus controller. Up to 16 bus modules can be remotely connected to the switch cabinet bus at a distance of up to 200 meters from the automation station (transmission rate 40 kBaud).

BMA0804-PO input and output module

BMA (analog bus module) with CAN bus connection.
Manual/automatic rotary switch for the automatic and manual operation of the 0..100 % analog outputs. LED display (multicolored) for the operating states of the inputs and outputs.
All terminals come as push-in spring-force plug terminals. Terminal equipment for direct connection of the sensor/actuator cable, including support terminal blocks for supplying field devices. Galvanic isolation of power supply, bus and sensor connection.

Display:	2 LEDs for displaying bus communication; 6 multi-colored, freely configurable LEDs
Inputs:	8 analog inputs; see technical data sheet, sensor types 3 inputs with 10 V DC, 70 mA auxiliary power source for connecting external setpoint transmitters
Outputs:	4 analog 0(2)..10 V DC outputs, max. 2.5 mA
Interfaces:	CAN; switch cabinet or fieldbus
Nominal voltage:	12..24 V DC +/-10 %, 2.5 W
Housing:	Plastic, 8 HP
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
BMA0804-PO	Input/output module Fieldbus or control cabinet bus, 8 analog inputs, 4 analog outputs 0(2)..10 V DC, with LPC bus interface Manual/automatic rotary switch for the automatic and manual operation of the 0..100 % analog outputs.



BMA0804-PO

Kieback&Peter

BMD1204-PO iput and output module

BMD (digital bus module) with CAN bus connection. Manual/automatic rotary switches for automatic and manual operation of the auto/on/off binary outputs. LED display for the operating states of the inputs and outputs. All terminals come as push-in spring-force plug terminals. Terminal equipment for direct connection of the sensor/actuator cable, including support terminal blocks for supplying field devices. Galvanic isolation of power supply, bus and sensor connection.

Display:	2 LEDs for displaying bus communication 2 multi-colored, freely configurable LEDs
Inputs:	12 binary inputs Switch-off threshold ≤ 2.5 V DC; switch-on threshold ≥ 5.0 V DC Support for NAMUR sensors (proximity initiator)
Outputs:	4 binary outputs as floating changeover contacts, 230 V AC
Interfaces:	CAN; switch cabinet or fieldbus
Nominal voltage:	12..24 V DC +/-10 %, 3.2 W
Housing:	Plastic, 8 HP
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
BMD1204-PO	Field bus or switch cabinet bus, 12 binary inputs, 4 relay outputs, manual ON/AUTOMATIC/OFF switch with LPC bus interface for each output



BMD1204-PO

BMA0600 input module

BMA (analog bus module) with CAN bus connection. LED indicator for the operating states of the inputs. All terminals come as push-in spring-force plug terminals. Terminal equipment for direct connection of the sensor cable, including support terminal blocks for supplying field devices.

Display:	6 status LED for inputs 6 freely configurable LEDs
Inputs:	6 analog inputs separate auxiliary voltage
Interfaces:	CAN; switch cabinet or fieldbus
Nominal voltage:	12..24 V DC ±10 %; 2.5 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35x7.5 top hat rail in closed housing
BMA0600	Input module Fieldbus or switch cabinet bus, 6 analog inputs



BMA0600

BMA0004 output module

BMA (analog bus module) with CAN bus connection. Manual/automatic rotary switch for the automatic and manual operation of the 0..100 % analog outputs. LED display for the operating states of the outputs. All terminals come as push-in spring-force plug terminals. Terminal equipment for direct connection of the actuator cable, including support terminal blocks for supplying field devices.

Display:	4 status LEDs for outputs 1 LED for displaying bus communication
Outputs:	4 analog outputs, 0(2)..10 V DC; maximum 2.5 mA
Interfaces:	CAN; switch cabinet or fieldbus
Nominal voltage:	12..24 V DC ±10 %; 1.0 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35x7.5 top hat rail in closed housing
BMA0004	Fieldbus or switch cabinet bus output module, 4 analog outputs, manual ON/AUTOMATIC/OFF switch for each output



BMA0004

Kieback&Peter

BMD1200 input module

BMD (digital bus module) with CAN bus connection. LED indicator for the operating states of the inputs. All terminals come as push-in spring-force plug terminals. Terminal equipment for direct connection of the sensor cables. The module can be connected to an existing field bus or switch cabinet bus.

Display:	12 status LEDs for inputs 1 LED for displaying bus communication
Inputs:	12 binary inputs, can also be used as pulse counter inputs up to 80 Hz Switch-off threshold ≤ 2.5 V DC; switch-on threshold ≥ 5.0 V DC; 5 mA
Interfaces:	CAN; switch cabinet or fieldbus
Nominal voltage:	12..24 V DC ±10 %; 2.5 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35x7.5 top hat rail in closed housing

BMD1200	Input module Field bus or switch cabinet bus, 12 binary inputs



BMD1200

Kieback&Peter

BMD0004 output module

BMD (digital bus module) with CAN bus connection. Manual/automatic rotary switch for automatic and manual operation of the auto/on/off binary outputs. LED display for the operating states of the outputs. All terminals come as push-in spring-force plug terminals. Terminal equipment for direct connection of the actuator cable, including support terminal blocks for supplying field devices. The module can be connected to an existing field bus or switch cabinet bus.

Display:	4 status LEDs for outputs 1 LED for displaying bus communication
Outputs:	2 binary outputs as floating changeover contacts, 230 V AC 2 binary outputs as floating normally open contacts, 230 V AC
Interfaces:	CAN; switch cabinet or fieldbus
Nominal voltage:	12..24 V DC ±10 %; 1.5 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35x7.5 top hat rail in closed housing

BMD0004	Output module Fieldbus or switch cabinet bus, 4 binary outputs, manual ON/AUTOMATIC/OFF switch for each output



BMD0004

BMD4032 input/output module

BMD (digital bus module) with CAN bus connection. With cascade plug for simple wiring with other modules on the switch cabinet bus. Removable hood with electronics block for simple replacement.

Display:	2 LEDs for displaying bus communication
Inputs and outputs:	32 binary inputs or outputs (BI/BO); can be switched individually
Interfaces:	CAN; switch cabinet bus
Nominal voltage:	24 V AC 10 %; 50/60 Hz
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

BMD4032	Input/output module The function can be individually selected as an input or output for each of the 32 connections by means of DDC configuration



BMD4032

Kieback&Peter

BMD4064 input/output module

BMD (digital bus module) with CAN bus connection. With cascade plug for simple wiring with other modules on the switch cabinet bus. Removable hood with electronics block for simple replacement.

Display:	2 LEDs for displaying bus communication
Inputs and outputs:	64 binary inputs or outputs (BI/BO); can be switched individually
Interfaces:	CAN; switch cabinet bus
Nominal voltage:	24 V AC 10 %; 50/60 Hz
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
BMD4064	Input/output module The function can be individually selected as an input or output for each of the 64 connections by means of DDC configuration

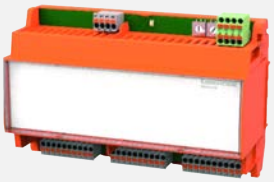


BMD4064

BMAU24 input/output module

BMAU (universal analog bus module) with CAN bus connection. Connection to all of the common temperature sensors. Communication control takes place via LED. Removable hood with electronics block for simple replacement.

Display:	2 LEDs for displaying bus communication
Inputs and outputs:	24 analog inputs and outputs AI/AO - analog inputs (AI); see technical data sheet, sensor types - analog output (AO); 0(2)..10 V DC; maximum 2.5 mA
Interfaces:	CAN bus as: Fieldbus, F-bus: 2000 m, 20 kBaud or - switch cabinet bus, SBM-bus: 200 m, 40 kBaud
Nominal voltage:	12..24 V DC ±10 %; 3.9 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
BMAU24	Input/output module The function can be individually selected as an input or output for each of the 24 connections by means of DDC configuration.



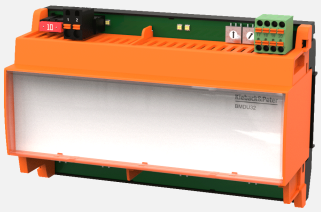
BMAU24

Kieback&Peter

BMDU32 input/output module

The input/output module with 32 binary inputs or binary outputs receives binary signals in the DDC4000 automation system and activates binary control functions.
The function can be individually selected as an input or output for each of the 32 connections by means of DDC parameterization.
The output signals can be defined in the event of an interruption in the communication between the input/output module and automation station.

Inputs and outputs:	32 BI / BO independently parameterizable as: binary input (BI) or binary output (BO)
Interfaces:	CAN bus as: Fieldbus, F-bus: 2000 m, 20 kBaud or - switch cabinet bus, SBM-bus: 200 m, 40 kBaud
Nominal voltage:	12..24 V DC ±10 %; 0.5 W (for module and CAN supply) 24 V DC ±10 %, 158 W for inputs/outputs
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

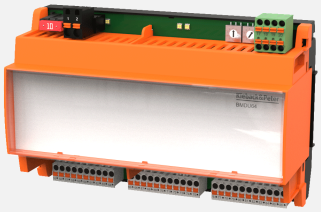


BMDU32

BMDU64 input and output module

The input/output module with 64 binary inputs or binary outputs receives binary signals in the DDC4000 automation system and activates binary control functions.
The function can be individually selected as an input or output for each of the 64 connections by means of DDC parameterization.
Communication control takes place via LED.

Inputs and outputs:	64 BI / BO independently parameterizable as: binary input (BI) or binary output (BO)
Interfaces:	CAN bus as: fieldbus, F-bus: 2000 m, 20 kBaud or switch cabinet bus, SBM bus: 200 m, 40 kBaud
Nominal voltage:	12..24 V DC ±10 %; 0.6 W for module and CAN supply 24 V DC ±10 %, 160 W for inputs/outputs
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing



BMDU64

Input and output modules on the fieldbus

Modules on the fieldbus FBM (fieldbus module) for collecting individual remote analog and binary signals (data points) from the automation station. The automation station is capable of remote access over longer distances (up to 2,000 m).

The fieldbus system is based on the CAN bus. The FBM input/output modules are used for wall mounting and electronic distribution. The FBM input/output modules have an operating level. LED display for status messages and communication monitoring. This unit dramatically reduces the need for wiring in conventional systems by bringing together scattered analog and binary signals.

Overview

Display:	LED for bus operation and operating state
Interfaces:	CAN; fieldbus
Nominal voltage:	12 V DC
Ambient temperature:	0..+45 °C
Housing:	Plastic
Degree of protection:	IP20

	Inputs	Outputs
FBM018	8 contact inputs, normally closed/normally open or pulse counter up to 80 Hz	
FBM018W	8 contact inputs, normally closed/normally open or pulse counter up to 80 Hz	
FBM024		4 floating changeover switches, max. 230 V AC; 6 (3) A
FBM024W		4 floating changeover switches, max. 230 V AC; 6 (3) A
FBM38	10 binary inputs (BI)	4 floating changeover switches, max. 230 V AC; 6 (3) A
FBM044		4 analog outputs (AO); 0..10 V DC; 5 mA
FBM044W		4 analog outputs (AO); 0..10 V DC; 5 mA
FBM45	4 analog inputs (AI); 0..10 V DC; approx. 0.5 mA, for position feedback only	4 analog outputs (AO); 0..10 V DC; 4 mA
FBK36	4 analog inputs (AI); input signal 0..10 V; 0..20 mA or 4..20 mA	
FBU410	6 universal inputs/outputs, can be configured independently	4 binary outputs (BO); floating relay contact max. 230 V AC; 5 (3) A

FBM018 input module

Fieldbus input module with CAN bus controller. LEDs are used for communication monitoring. LED displays for the operating states of the binary inputs.

Display:	2 LEDs, bus operation 8 LEDs operating states
Inputs:	8 contact inputs, normally closed/normally open or pulse counter up to 80 Hz
Interfaces:	CAN; fieldbus
Nominal voltage:	DC 12 V ±20 %; 90 mA; 1.08 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

FBM018	Fieldbus input module 8 binary inputs (BI)
FBM018W	Fieldbus input module 8 binary inputs (BI); wall-mounted using the included wall housing Z175



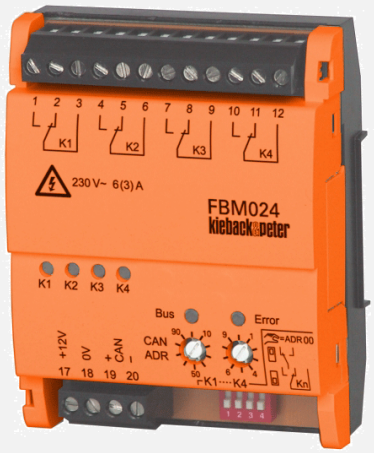
FBM018

FBM024 output module

Fieldbus output module with CAN bus controller. LEDs are used for communication monitoring. LED display of the operating states.

Display:	2 LEDs, bus operation 4 LEDs operating states
Outputs:	4 floating changeover switches, max. 230 V AC; 6 (3) A
Interfaces:	CAN; fieldbus
Nominal voltage:	DC 12 V ±20 %; 80 mA; 1.0 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

FBM024	Fieldbus output module 4 binary outputs (BO):
FBM024W	Fieldbus output module 4 binary outputs (BO); wall-mounted using the included wall housing Z175



FBM024

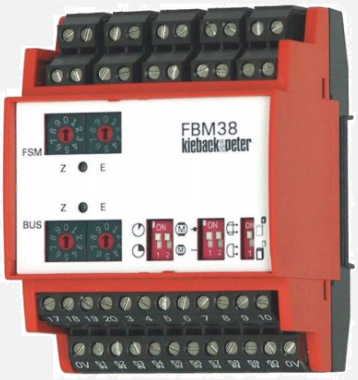
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FBM38 input/output module

Input/output module with CAN bus controller for connecting to an FSM local priority control. Separate LEDs for communication monitoring. 5 DIP switches for setting the operating mode, additional functions and for inverting the malfunction message inputs. Up to 20 software macros that can be set individually. Independent message management via backbone (can be expanded to include SBM21, SBM41 and FBM45).

Display:	2 LEDs, bus operation
Inputs:	10 binary inputs (BI)
Outputs:	4 floating changeover switches, max. 230 V AC; 6 (3) A
Interfaces:	CAN; fieldbus; QBS
Nominal voltage:	DC 12 V +20 %..-10 %; 1,2 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

FBM38	Basic binary module for local override and indication (LO and ID) 10 binary inputs (BI); 4 binary outputs (BO) (relay)



FBM38

Kieback&Peter

FBM45 input/output module

Input/output module with CAN bus controller with 4 analog outputs for FBM45 control of remote building services devices. 4 analog inputs for recording position feedback (0..10 V DC). For stand-alone manual operation, the input/output module uses a QB interface to connect to a local priority control (FSM42 or FSM44).

Display:	2 LEDs, bus operation
Inputs:	4 analog inputs (AI); 0..10 V DC; approx. 0.5 mA, for position feedback only
Outputs:	4 analog outputs (AO); 0..10 V DC; 4 mA
Interfaces:	CAN; fieldbus; QBS
Nominal voltage:	12 V DC +20 %..-5 %; 2,4 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
FBM45	Basic analog module for local override and indication (LO and ID) 4 analog inputs (AI) for recording position feedback, 0..10 V DC; 4 analog outputs (AO), 0..10 V DC



FBM45

FBK36 input module

FBK fieldbus input module with CAN bus controller.
LEDs are used for communication monitoring.

Inputs:	4 analog inputs (AI); input signal 0..10 V; 0..20 mA or 4..20 mA
Interfaces:	CAN; fieldbus
Nominal voltage:	12 V DC ±20 %; 37 mA; 0,44 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+50 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
FBK36	Input module fieldbus 4 analog inputs (AI); input signal 0..10 V; 0..20 mA or 4..20 mA



FBK36

Kieback&Peter

FBU410 input/output module

Input/output module with CAN bus controller with 4 relay outputs and 6 universal inputs and outputs for controlling and monitoring signals from remote devices in the building services system.
The function of the 6 universal inputs/outputs can be individually configured and defined for each connection.

Display:	2 LEDs, bus operation
	4 LEDs for operating states; one LED freely configurable
Inputs and outputs:	6 universal inputs/outputs, can be configured independently
	Analog inputs (AI);
	see technical data sheet, sensor types
	Analog output (AO), 0(2)..10 V DC; maximum 2.5 mA
	Binary input (BI); floating contact; pulse counting up to 80 Hz.
	Binary output (BO); transistor outputs 24 V DC, maximum 80 mA
Outputs:	4 binary outputs (BO); floating relay contact max. 230 V AC; 5 (3) A
Interfaces:	CAN; fieldbus
Nominal voltage:	DC 12 V ±20 %; 1.8 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
FBU410	Fieldbus input/output module 4 relay outputs, manual ON/AUTOMATIC/OFF switch for each output 6 universal inputs/outputs



FBU410

Kieback&Peter

MD200BUS valve actuator fieldbus

- Maintenance-free, bus-capable valve actuator for stroke movements of 3..20 mm
- Equipped with CAN bus controller for connecting to the fieldbus of the DDC automation system
- Simple mounting using drive console
- Data collector for three additional binary inputs and two additional analog inputs
- Status data (e.g. manual intervention, valve blocking, 0..100 % setpoint, position indicator) is transferred to the automation station via the fieldbus
- Manual/automatic switch and manual adjustment
- Valve block control with remedy program
- Airtight function
- Direct control, open/close



MD200BUS

Nominal voltage:	24 V AC ±10 %; 13.0 VA
Actuator:	Step motor
Control:	CAN; fieldbus
Inputs:	3 digital inputs (DI) 2 analog inputs (AI); 0..10 V, KP10
Manual mode:	Using switch and handwheel
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

Article	Weight	Stroke	Force	Actuating speed
MD200BUS	1,46 kg	3 to 20mm	850 N	6..9.3 s/mm
MD200BUS-E	1,46 kg	3 to 20mm	850 N	6..9.3 s/mm

Input and output modules on the fieldbus

Modules on SBM (switch cabinet bus modules) switch cabinet bus are used for concentrated input and output of many analog and binary signals (data points). Control modules SBM have configurable operator functions which consist of switches/push-buttons and LEDs.

The inputs and outputs are transferred to the automation station using the modules on the switch cabinet bus. The switch cabinet bus is based on the CAN bus. The switch cabinet bus connects 16 modules to the automation station at a distance of up to 200 meters.

Overview

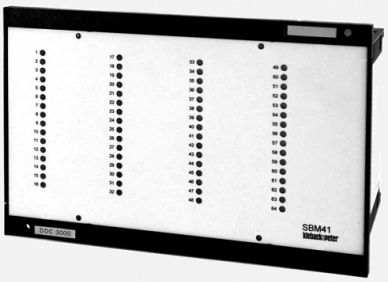
Display:	LED for bus operation and operating state
Interfaces:	CAN; switch cabinet bus
Nominal voltage:	24 V AC ±10 %; 50/60 Hz
Ambient temperature:	0..+45 °C
Degree of protection:	IP20
Mounting:	Switchboard door or 19" rack

	Inputs and outputs	Displays
SBM41	24 binary inputs or outputs (BI/BO); can be switched individually	2 LEDs for bus operation 64 LEDs (multicolored), operating states
SBM42	24 binary inputs or outputs (BI/BO); can be switched individually	LED for bus operation and operating state
SBM44		2 LEDs for bus operation 64 LEDs (multicolored), operating states
SBM45		2 LEDs for bus operation 48 LEDs (multicolored), operating states (16 of which are in the form of buttons)

SBM41 input/output module

Input/output module with CAN bus controller.
Display of status messages with off/constant light/flashing light.
With address setting > up to 16 can be used as message module for operating and error messages.

Display:	2 LEDs, bus operation 64 LEDs, multi-colored, operating states
Inputs and outputs:	24 binary inputs or outputs (BI/BO); can be switched individually
Inputs:	40 binary inputs (BI)
Interfaces:	CAN; switch cabinet bus
Nominal voltage:	24 V AC ±10 %; 50/60 Hz
Housing:	19" plastic short enclosure
Degree of protection:	IP40
Ambient temperature:	0..+45 °C
Mounting:	Switchboard door or 19" rack
SBM41	Input/output module 40 binary inputs (BI); 24 binary inputs or outputs (BI/BO); 64 LEDs

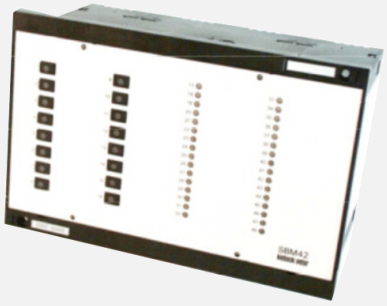


SBM41

SBM42 input/output module with operator function

Input/output module with CAN bus controller and operator function.
Display of status messages with off/constant light/flashing light.

Display:	LED for bus operation and operating state
Inputs and outputs:	24 binary inputs or outputs (BI/BO); can be switched individually
Inputs:	40 binary inputs (BI)
Interfaces:	CAN; switch cabinet bus
Nominal voltage:	24 V AC ±10 %; 50/60 Hz; 3 VA
Housing:	19" plastic short enclosure
Degree of protection:	IP40
Ambient temperature:	0..+45 °C
Mounting:	Switchboard door or 19" rack
SBM42	2 LEDs, bus operation 48 multicolored LEDs, operating states (16 of which are in the form of buttons)

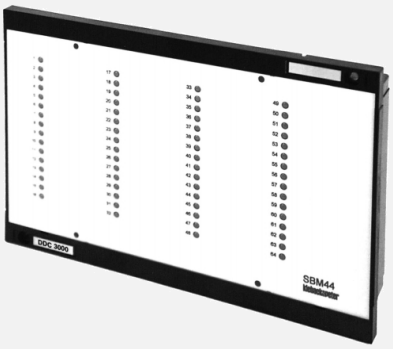


SBM42

SBM44 control module

Control module with CAN bus controller.
Display of status messages with off/constant light/flashing light.

Display:	2 LEDs for bus operation 64 LEDs (multicolored), operating states
Interfaces:	CAN; switch cabinet bus
Nominal voltage:	24 V AC ±10 %; 50/60 Hz; 1.5 VA
Housing:	19" plastic short enclosure
Degree of protection:	IP40
Ambient temperature:	0..+45 °C
Mounting:	Switchboard door or 19" rack
SBM44	Control module 64 LEDs

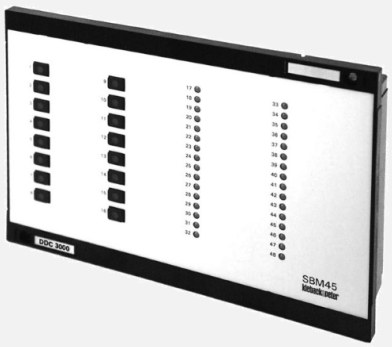


SBM44

SBM45 control module

Control module with CAN bus controller.
Display of status messages with off/constant light/flashing light.

Display:	2 LEDs, bus operation 48 multicolored LEDs, operating states (16 of which are in the form of buttons)
Controls:	16 push-buttons/switches; can be parameterized in push-button/switch groups
Interfaces:	CAN; switch cabinet bus
Nominal voltage:	24 V AC ±10 %; 50/60 Hz; 1.5 VA
Housing:	19" plastic short enclosure
Degree of protection:	IP40
Ambient temperature:	0..+45 °C
Mounting:	Switchboard door or 19" rack
SBM45	Control module 32 LEDs; 16 buttons/switches



SBM45

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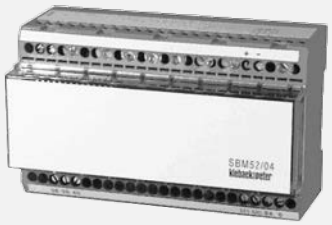
Gateway modules

Gateway modules for integrating devices and device systems of other manufactures at field level. The data points of these manufacturers are converted to the parameters of the automation station and are available for use within the automation system and together with the building management equipment.

SBM51/SBM52 gateway modules

Integration of devices and device systems of other manufacturers at field level. Pumps, counters, boilers, frequency inverters, etc., are integrated via the open communication interface.

Display:	2 LEDs for bus operation
Interfaces:	CAN; switch cabinet bus
Nominal voltage:	24 V AC ±10 %; 50/60 Hz
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing



SBM52/04

SBM51/01	Grundfos pump gateway module Connection of up to 8 Grundfos pumps via Genibus
SBM51/02	WILO/KSB pump gateway module Connect up to 4 single or twin pumps with PLR interface
SBM51/04	32 counters gateway module with m-bus in accordance with DIN EN 1434-3; up to 32 counters can be connected using the m-bus
SBM52/04	99 counters gateway module with M-Bus in accordance with DIN EN 1434-3; up to 99 counters can be connected using the M-Bus
SBM51/05	Berg network monitoring gateway module Connection of Berg energy monitoring modules UBN204, UBN303, UBN304, UBN305, UBN2010, UBN30, UBN310, UBN315, UBN3060
SBM51/06	Danfoss gateway module Connection of 8 Danfoss variable frequency drives VLT 6000/5000/2800, FC 102, FC 202, FC 301, FC 302 and FC 51
SBM51/08	HRP, LRP gateway module Connection of an HRP-LRP bus system
SBM51/10	Pneumatex gateway module Connection of up to 4 expansion and pressure maintenance systems (Compresso controllers)
SBM51/11	Gateway module for A210/A220 and A230/A230s energy monitoring devices with EMMOD 201 communication module from Camille Bauer
SBM51/13	Gossen Metrawatt gateway module Connection of 8 Gossen Metrawatt A2000 energy monitoring modules

Room controller on DDC4000 fieldbus

The FBR room controllers (fieldbus loop controllers) are components of the fieldbus system. Up to 63 FBR room controllers can be connected to a single fieldbus (DDC4002E, DDC4200E, DDC4400E). The fieldbus system allows for any combination of FBM input/output modules, FBR room controllers and room control modules. FBR room controllers are used in the area of individual room control as well as in heating and ventilation closed-loop control. The room controllers have either two-point outputs, three-point outputs or constant output signals of 0..10 V. They also offer spatially distributed intelligence thanks to stand-alone closed-loop control functions. The automation station is capable of remote access over longer distances (up to 2,000 m).

FBR3 room controller

Room controller with CAN bus controller. Stand-alone closed loop control function.
Functions can be expanded using software menus such as cascades, start-up switch, limit value monitoring and minimum room temperature monitoring.

Display:	2 LEDs for bus operation
Inputs:	3 binary inputs (BI) 1 analog input (AI); room sensor with KP10 measuring element 1 analog input (AI); remote adjuster for setpoint correction
Outputs:	1 binary output (BO); floating changeover switch 1 binary output (AO); transistor output 2 analog inputs (AI); 0..10 V DC, max. 5 mA
Interfaces:	CAN; fieldbus
Nominal voltage:	12 V DC ±20 %; 130 mA
Ambient temperature:	0..+45 °C
Housing:	Plastic
Degree of protection:	IP20
Mounting:	Wall mounting



FBR3

FBR4 room controller

Room controller with CAN bus controller. Stand-alone closed loop control function for individual room controls, 4 triac outputs can be combined as two 2-point or two three-point control system for the sequential control of heating and cooling.

Display:	2 LEDs for bus operation
Inputs:	3 binary inputs (BI) 1 analog input (AI); room sensor with KP10 measuring element 1 analog input (AI); remote adjuster for setpoint correction
Outputs:	4 triac outputs; 24 V AC; 630 mA 1 binary output (BO); floating changeover switch 1 binary output (BO); transistor output
Interfaces:	CAN; fieldbus
Nominal voltage:	12 V DC ±20 %; 110 mA
Ambient temperature:	0..+45 °C
Housing:	Plastic
Degree of protection:	IP20
Mounting:	Wall mounting



FBR4

FBR5 room controller

Room controller with CAN bus controller. Stand-alone closed loop control function.
Functions can be expanded using software menus such as cascades, start-up switch, limit value monitoring and minimum room temperature monitoring.

Display:	2 LEDs for bus operation
Inputs:	5 analog inputs (AI) 4 binary inputs (BI)
Outputs:	4 analog outputs (AO); 0..10 V 3 binary outputs (BO); relay contact
Interfaces:	CAN; fieldbus
Nominal voltage:	12 V DC ±20 %; 1.9 W or 24 V AC/DC ±20 %; 3.2 VA
Ambient temperature:	0..+45 °C
Housing:	Plastic
Degree of protection:	IP20
Mounting:	Wall mounting



FBR5

FBR6 room controller

Room controller with CAN bus controller. Ventilation controller, stand-alone control function.
Functions can be expanded using software menus such as cascades, start-up switch, limit value monitoring and minimum room temperature monitoring.

Display:	2 LEDs for bus operation
Inputs:	5 analog inputs (AI) 4 binary inputs (BI)
Outputs:	4 triac outputs; 24 V AC, 630 mA 3 binary outputs (BO); relay outputs
Interfaces:	CAN; fieldbus
Nominal voltage:	12 V DC ±20 %; 2.8 VA or 24 V AC/DC ±20 %; 4.0 VA
Housing:	Plastic
Mounting:	Wall mounting



FBR6

Room control modules on the DDC4000 field bus

Human system interface for persons in the room for influencing the operating modes and parameters of the application and/or for displaying the functions for room automation. With room temperature sensor. Operation is simple and self-explanatory.
The respective keys are backlit. The LC display has backlighting. The fieldbus (max. 2,000 m) is used to transmit data to the automation station.

RBW42xx room control modules

Room control modules with room temperature sensor, manual temperature setpoint configuration and LED status displays for use on the DDC4000E automation system. Different variants with a graded range of functions are available. Set room temperature, manual and automatic fan control, occupancy button (present/absent).

Display:	Red LED: higher room temperature setpoint Blue LED: lower room temperature setpoint Green LEDs: Feedback for fan level, automatic fan mode, occupancy button
Controls:	Push-and-rotary knob for room temperature setpoint adjustment
Measuring element:	Integrated digital sensor
Interfaces:	CAN bus, F bus, 2000 m, 20 kBd, 4-wire connection to terminal
Nominal voltage:	12 V DC ±20 %, 0.72 W
Ambient temperature:	0..+50 °C
Housing:	Plastic housing, RAL 9010 (pure white). Other colors on request.
Degree of protection:	IP30
Mounting:	Screw mounting on standard flush-mounted box

RBW4201	Room control module for DDC4000e room temperature sensor and manual setting of the room setpoint and LED display
RBW4202	Room control module for DDC4000e Room temperature sensor and manual setting of the room setpoint, LED display with occupancy button
RBW4204	Room control module for DDC4000e Room temperature sensor and manual setting of the room setpoint, LED display and pushbuttons for fan control
RBW4205	Room control module for DDC4000e room temperature sensor and manual setting of the room setpoint and LED, occupancy button and buttons for fan control



RBW4205

RBW43xx room control modules

Room control modules with display, room temperature sensor and manual temperature setpoint configuration for use on the DDC4000E automation system. Different variants with a graded range of functions are available. Set room temperature, manual and automatic fan control, occupancy button (present/absent).

Display:	Backlit display
Controls:	Push-and-rotary knob for setpoint and timer adjustment; display of service data
Measuring element:	Integrated digital sensor
Interfaces:	CAN bus, F bus, 2000 m, 20 kBd, 4-wire connection to terminal
Nominal voltage:	12 V DC, ±10 %, 0.96 W
Ambient temperature:	0..+50 °C
Housing:	Plastic housing, RAL 9010 (pure white). Other colors on request.
Degree of protection:	IP30
Mounting:	Screw mounting on standard flush-mounted box

RBW4301	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint
RBW4302	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint and occupancy button
RBW4304	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint and buttons for fan control
RBW4305	Room control module for DDC4000e with display, room temperature sensor and manual setting of the room setpoint, occupancy button and buttons for fan control



RBW4305

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Local priority control

FSMs (front switching modules) are local priority operating units that allow for limited operation of field devices in building systems independently of the automation system. In conjunction with specially developed input/output modules for the fieldbus (FBM), these make up the functional units of the local priority control in accordance with the regulations of EN 16484 Part 2.

Communication between the two modules takes place via a stand-alone 4-wire connection (QB interface) on a separate, independent level. Local priority control with FSM and FBM functions independently of the system and is specially adjusted for the fieldbus system. The integrated additional functions for operating different field devices can also be controlled via manual intervention. Because they can be used universally in nearly all of the areas of TBE and system construction, different FSMs are available for local priority control; these are organized according to function and control channel.

Overview

Interfaces:	QBS
Nominal voltage:	12 V DC
Ambient temperature:	0..+45 °C
Housing:	1/4 19" plastic short enclosure
Degree of protection:	IP20
Mounting:	Wall mounting (WAS accessories), switchboard door or 19" rack

	Inputs	Outputs
FSM01	as universal multiple switch, 1 switch channel, local operation	1 position switch with 2 switch levels and attachable mechanical switch stop to limit the switching position
FSM02	as universal multiple switch, 2 switch channels, local functional unit	2 position switches with 1 switch level each and attachable mechanical switch stop to limit the switching position
FSM04	as universal multiple switch, 4 switch channels, local functional unit	4 position switches with one switch level each
FSM08	with 8 message displays and integrated switch power supply unit, local functional unit	
FSM12	2 analog inputs (AI); 2 analog outputs (AO); 2 binary feedback contacts Local operation in connection with FBM018	2 “Automatic/Manual” switches 2 continuous knobs 0..100 % (= 0..10 V)
FSM14	4 analog inputs (AI); 4 analog outputs (AO); 4 binary feedback contacts Local operation and/or in connection with FBM018	4 “Automatic/Manual” switches 4 continuous knobs 0..100 % (= 0..10 V)
FSM21	2 x 2-level or 1-level Local operation and/or in connection with FBM38	2 “Automatic/Manual” switches with manual control of level 1 and level 2 and attachable mechanical switch stop
FSM22	2 x three-point local operation and/or in connection with FBM38	2 “Automatic/Manual” switches with manual “Open/Stop/Closed” control

	Inputs	Outputs
FSM24	2 x On/Off Local operation and/ or in connection with FBM38	2 “Automatic/Manual” switches with manual On/Off control
FSM25	4 x On/Off Local operation and/ or in connection with FBM38	4 “Automatic/Manual” switches with manual On/Off control
FSM27	1 x 1- to 4-level Local operation and/or in connection with FBM38	1 “Automatic/Manual” switch with manual control of levels 1/2/3/4 and attachable mechanical switch stop
FSM28	1 x 2-level, 2 x On/Off Local operation and/or in connection with FBM38	1 “Automatic/Manual” switch with manual control of levels 1/2; 2 x “Automatic/Manual” switch with manually controlled On/Off
FSM29	1 x 3-position 2 x On/Off Local operation and/or in connection with FBM38	1 “Automatic/Manual” switch with manual Open/Stop/Closed control of levels; 2 x “Automatic/Manual” switch with manually controlled On/Off
FSM3M	8 message lines, 8 patented operating and display elements, 5 different function macros for message management Local operation in connection with FBM38	8 configurable LED indicators/key indicators
FSM42	2 x 0..10 V operation in connection with FBM45	2 “Automatic/Manual” switches with manual control from 0..100 %
FSM44	4 x 0..10 V operation in connection with FBM45	4 “Automatic/Manual” switches with manual control from 0..100 %

FSM01 control module

Position switch with mechanical limit of the switching positions.

Controls:	1 position switch with 2 switch levels and attachable mechanical switch stop to limit the switching position
Inputs and outputs:	Up to 12 (2 parallel switch levels)
Function:	Local operation
Housing:	1/4 19" plastic short enclosure
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM01	Control module as universal multiple switch, 1 switch channel, up to 12 switch inputs or outputs separated into 2 parallel switch levels



FSM01

FSM02 control module

Both position switches with mechanical limit of the switching positions.

Controls:	2 position switches with 1 switch level each and attachable mechanical switch stop to limit the switching position
Inputs and outputs:	Up to 12 (2 x 6)
Function:	Local function unit
Housing:	1/4 19" plastic short enclosure
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM02	Control module as universal multiple switch, 2 switch channels, up to 12 switch inputs or outputs



FSM02

FSM04 control module

Universal multiple switch, switch channels with 3 switch settings each on separate switch levels.

Controls:	4 position switches with one switch level each
Inputs and outputs:	Up to 12 (4 x 3)
Function:	Local function unit
Housing:	1/4 19" plastic short enclosure
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM04	Control module as universal multiple switch, 4 switch channels, up to 12 switch inputs or outputs



FSM04

FSM08 message module

Module with collected error message output and input for central lamp test. In addition to performing display and message functions, the FSM08 can also be used as a power supply unit for supplying 12 V DC.

Display:	2 LEDs for bus operation 8 message LEDs (multicolored) (operating and malfunction messages)
Inputs:	9 binary inputs (BI)
Outputs:	1 binary output (BO)
Function:	Local function unit
Nominal voltage:	24 V AC ±10 %; 12 V DC ±10 %
Housing:	1/4 19" plastic short enclosure
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM08	Universal message module with 8 message displays and integrated switch power supply unit



FSM08

FSM12 local priority control

Local priority control device in accordance with VDI 3814 for controlling technical devices using an analog 0..10 V signal.

Display:	2 LEDs for analog output signals
Controls:	2 “Automatic/Manual” switches 2 continuous knobs, 0..100% (= 0..10 V)
Inputs:	2 analog inputs (AI)
Outputs:	2 analog outputs (AO) 2 binary outputs (BO); feedback contacts
Interfaces:	QBS
Function:	Local operation and/or in connection with FBM018
Nominal voltage:	12 V DC +20 % to -10 %
Housing:	1/4 19" plastic short enclosure
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM12	Local override and indication 2 analog inputs; 2 analog outputs; 2 binary feedback contacts



FSM12

FSM14 local priority control

Local priority control device in accordance with VDI 3814 for controlling technical devices using an analog 0..10 V signal.

Display:	4 LEDs for analog output signals
Controls:	4 “Automatic/Manual” switches 4 continuous knobs, 0..100% (= 0..10 V)
Inputs:	4 analog inputs (AI)
Outputs:	4 analog outputs (AO) 4 binary outputs (BO); feedback contacts
Interfaces:	QBS
Function:	Local operation and/or in connection with FBM018
Nominal voltage:	12 V DC +20 % to -10 %
Housing:	1/4 19" plastic short enclosure
Degree of protection:	IP20
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM14	Local override and indication 4 analog inputs; 4 analog outputs; 4 binary feedback contacts



FSM14

FSM21 local priority control

Together with the FBM38 input/output module, FSM21 constitutes a local override and indication device in accordance with VDI 3814 for controlling 1-level or 2-level technical devices/units using switching contacts.

Display:	4 green LEDs (operational feedback signal), can be switched off 4 red LEDs (malfunction message)
Controls:	2 “Automatic/Manual” switches with manual control of level 1 and level 2 and attachable mechanical switch stop
Interfaces:	QBS
Function:	Local operation and/or in connection with FBM38
Nominal voltage:	12 V DC +20 % to -10 %
Housing:	1/4 19" plastic short enclosure
Degree of protection:	IP20
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM21	Local priority control 2 x 2-level or 1-level



FSM21

FSM22 local priority control

Together with the FBM38 input/output module, FSM22 constitutes a local priority control device in accordance with VDI 3814 for the three-point control of technical devices/units using switching contacts.

Display:	4 green LEDs (FBM38 relay outputs) 4 multicolored LEDs (operating and malfunction messages), can be switched off
Controls:	2 “Automatic/Manual” switches with manual “Open/Stop/Closed” control
Interfaces:	QBS
Function:	Local operation and/or in connection with FBM38
Nominal voltage:	12 V DC +20 % to -10 %
Housing:	1/4 19" plastic short enclosure
Degree of protection:	IP20
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM22	Local priority control 2 x 3-point



FSM22

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FSM24 local priority control

Together with the FBM38 input/output module, FSM24 constitutes a local priority control device in accordance with VDI 3814 for controlling 1-level technical devices/units using switching contacts.

Display:	2 green LEDs (FBM38 relay outputs) 2 multicolored LEDs (operating and malfunction messages), can be switched off
Controls:	2 “Automatic/Manual” switches with manual on/off control
Interfaces:	QBS
Function:	Local operation and/or in connection with FBM38
Nominal voltage:	12 V DC +20 % to -10 %
Housing:	1/4 19" plastic short enclosure
Degree of protection:	IP20
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM24	Local priority control 2 x On/Off



FSM24

FSM25 local priority control

Together with the FBM38 input/output module, FSM25 constitutes a local priority control device in accordance with VDI 3814 for controlling 1-level technical devices/units using switching contacts.

Display:	4 green LEDs (FBM38 relay outputs) 4 multicolored LEDs (operating and malfunction messages), can be switched off
Controls:	4 “Automatic/Manual” switches with manual on/off control
Interfaces:	QBS
Function:	Local operation and/or in connection with FBM38
Nominal voltage:	12 V DC +20 % to -10 %
Housing:	1/4 19" plastic short enclosure
Degree of protection:	IP20
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM25	Local priority control 4 x On/Off



FSM25

FSM27 local priority control

Together with the FBM38 input/output module, FSM27 constitutes a local override and indication device in accordance with VDI 3814 for controlling 1 to 4-level technical devices/units using switching contacts.

Display:	4 green LEDs (operational feedback signal), can be switched off 4 red LEDs (malfunction message)
Controls:	1 “Automatic/Manual” switch with manual control of level 1/2/3/4 and attachable mechanical switch stop
Interfaces:	QBS
Function:	Local operation and/or in connection with FBM38
Nominal voltage:	12 V DC +20 % to -10 %
Housing:	1/4 19" plastic short enclosure
Degree of protection:	IP20
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM27	Local priority control 1 x 1- to 4-level



FSM27

FSM28 local priority control

Together with the FBM38 input/output module, FSM28 constitutes a local priority control device in accordance with VDI 3814 for controlling one 2-level technical device/unit and two 1-level technical devices/units using switching contacts.

Display:	4 green LEDs (FBM38 relay outputs) 4 multicolored LEDs (operating and malfunction messages), can be switched off
Controls:	1 “Automatic/Manual” switch with manual control of level 1/2 2 “Automatic/Manual” switches with manual on/off control
Interfaces:	QBS
Function:	Local operation and/or in connection with FBM38
Nominal voltage:	12 V DC +20 % to -10 %
Housing:	1/4 19" plastic short enclosure
Degree of protection:	IP20
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM28	Local priority control 1 x 2-level, 2 x On/Off



FSM28

FSM29 local priority control

Together with the FBM38 input/output module, FSM29 constitutes a local FSM29 priority control device in accordance with VDI 3814 for controlling one technical device/unit with two 1-level technical devices/units using switching contacts.

Display:	4 green LEDs (FBM38 relay outputs) 4 multicolored LEDs (operating and malfunction messages), can be switched off
Controls:	1 “Automatic/Manual” switch with manual open/stop/closed control 2 “Automatic/Manual” switches with manual on/off control
Interfaces:	QBS
Function:	Local operation and/or in connection with FBM38
Nominal voltage:	12 V DC +20 % to -10 %
Housing:	1/4 19" plastic short enclosure
Degree of protection:	IP20
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM29	Local override and indication, 1 x 3-point, 2 x on/off



FSM29

FSM3M local priority control

Together with the FBM38 input/output module in the local priority operating level, FSM3M constitutes a universally applicable, multi-functional message module in accordance with VDI 3814. Flexible application thanks to activation of function macros. Patented multicolored operating and display elements, can be configured individually as LED indicators or key indicators. It is possible to select the LED/key functions (= individual confirmation) on location at any time.

Display:	8 multicolored LEDs (red/green/yellow) for plant messages
Controls:	8 configurable LED indicators/key indicators
Interfaces:	QBS
Function:	Local operation and/or in connection with FBM38
Nominal voltage:	12 V DC +20 % to -10 %
Housing:	1/4 19" plastic short enclosure
Degree of protection:	IP20
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM3M	Local override and indication, 8 message lines, 8 patented operating and display elements, 5 different function macros for notification management



FSM3M

FSM42 local priority control

Together with the FBM45 input/output module, FSM42 constitutes a local priority control device in accordance with VDI 3814 for controlling technical devices/units using an analog 0..10 V signal.

Display:	2 LED bar indicators, green (either FBM45 input or output signals) 2 LEDs, error/manual, red
Controls:	2 “Automatic/Manual” switches with manual 0..100% control
Interfaces:	QBS
Function:	Operation in conjunction with FBM45
Nominal voltage:	12 V DC +20 % to -10 %
Housing:	1/4 19" plastic short enclosure
Degree of protection:	IP20
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM42	Local priority control 2 x 0..10 V

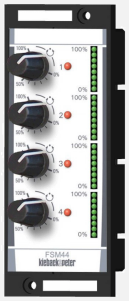


FSM42

FSM44 local priority control

Together with the FBM45 input/output module, FSM44 constitutes a local priority control device in accordance with VDI 3814 for controlling technical devices/units using an analog 0..10 V signal.

Display:	2 LED bar indicators, green (either FBM45 input or output signals) 2 LEDs, error/manual, red
Controls:	4 “Automatic/Manual” switches with manual 0..100% control
Interfaces:	QBS
Function:	Operation in conjunction with FBM45
Nominal voltage:	12 V DC +20 % to -10 %
Housing:	1/4 19" plastic short enclosure
Degree of protection:	IP20
Mounting:	Wall mounting (WAS accessories); switchboard door or 19" rack
FSM44	Local priority control 4 x 0..10 V

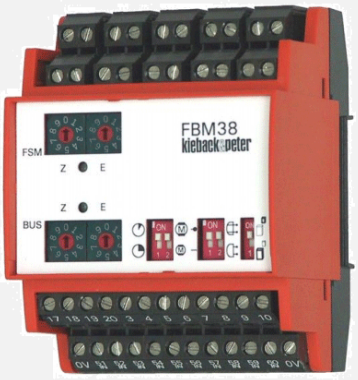


FSM44

FBM38 input/output module

Input/output module with CAN bus controller for connecting to an FSM local priority control. Separate LEDs for communication monitoring. 5 DIP switches for setting the operating mode, additional functions and for inverting the malfunction message inputs. Up to 20 software macros that can be set individually. Independent message management via backbone (can be expanded to include SBM21, SBM41 and FBM45).

Display:	2 LEDs, bus operation
Inputs:	10 binary inputs (BI)
Outputs:	4 floating changeover switches, max. 230 V AC; 6 (3) A
Interfaces:	CAN; fieldbus; QBS
Nominal voltage:	DC 12 V +20 %..-10 %; 1,2 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
FBM38	Basic binary module for local override and indication (LO and ID) 10 binary inputs (BI); 4 binary outputs (BO) (relay)



FBM38

FBM45 input/output module

Input/output module with CAN bus controller with 4 analog outputs for FBM45 control of remote building services devices. 4 analog inputs for recording position feedback (0..10 V DC). For stand-alone manual operation, the input/output module uses a QB interface to connect to a local priority control (FSM42 or FSM44).

Display:	2 LEDs, bus operation
Inputs:	4 analog inputs (AI); 0..10 V DC; approx. 0.5 mA, for position feedback only
Outputs:	4 analog outputs (AO); 0..10 V DC; 4 mA
Interfaces:	CAN; fieldbus; QBS
Nominal voltage:	12 V DC +20 %..-5 %; 2,4 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
FBM45	Basic analog module for local override and indication (LO and ID) 4 analog inputs (AI) for recording position feedback, 0..10 V DC; 4 analog outputs (AO), 0..10 V DC



FBM45

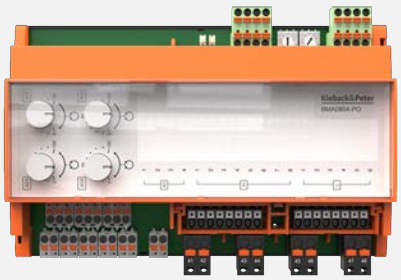
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BMA0804-PO input and output module

BMA (analog bus module) with CAN bus connection.
Manual/automatic rotary switch for the automatic and manual operation of the 0..100 % analog outputs. LED display (multicolored) for the operating states of the inputs and outputs.
All terminals come as push-in spring-force plug terminals. Terminal equipment for direct connection of the sensor/actuator cable, including support terminal blocks for supplying field devices. Galvanic isolation of power supply, bus and sensor connection.

Display:	2 LEDs for displaying bus communication; 6 multi-colored, freely configurable LEDs
Inputs:	8 analog inputs; see technical data sheet, sensor types 3 inputs with 10 V DC, 70 mA auxiliary power source for connecting external setpoint transmitters
Outputs:	4 analog 0(2)..10 V DC outputs, max. 2.5 mA
Interfaces:	CAN; switch cabinet or fieldbus
Nominal voltage:	12..24 V DC +/-10 %, 2.5 W
Housing:	Plastic, 8 HP
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

BMA0804-PO	Input/output module Fieldbus or control cabinet bus, 8 analog inputs, 4 analog outputs 0(2)..10 V DC, with LPC bus interface Manual/automatic rotary switch for the automatic and manual operation of the 0..100 % analog outputs.



BMA0804-PO

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BMD0401-PO input and output module

The input/output module with 4 binary inputs and 1 binary output receives binary signals in the DDC4000 automation system and activates binary control functions. Manual/automatic rotary switch for automatic and manual operation of the auto/on/off binary output.

Display:	5 status LEDs for inputs and outputs 3 freely configurable LEDs
Inputs:	4 binary inputs, can also be used as pulse counter inputs up to 80 Hz
Outputs:	1 binary output as floating changeover contact, max. 230 V AC; 6 A (3 A)
Interfaces:	CAN; switch cabinet bus or fieldbus LPC bus, 200 m
Nominal voltage:	12..24 V DC +/-10 %, 2.2 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

BMD0401-PO	Input/output module 4 binary inputs, 1 binary output Manual/automatic rotary switch for automatic and manual operation of the auto/on/off binary output



BMD0401-PO

Kieback&Peter

BMD1204-PO iput and output module

BMD (digital bus module) with CAN bus connection. Manual/automatic rotary switches for automatic and manual operation of the auto/on/off binary outputs. LED display for the operating states of the inputs and outputs. All terminals come as push-in spring-force plug terminals. Terminal equipment for direct connection of the sensor/actuator cable, including support terminal blocks for supplying field devices. Galvanic isolation of power supply, bus and sensor connection.

Display:	2 LEDs for displaying bus communication 2 multi-colored, freely configurable LEDs
Inputs:	12 binary inputs Switch-off threshold ≤ 2.5 V DC; switch-on threshold ≥ 5.0 V DC Support for NAMUR sensors (proximity initiator)
Outputs:	4 binary outputs as floating changeover contacts, 230 V AC
Interfaces:	CAN; switch cabinet or fieldbus
Nominal voltage:	12..24 V DC +/-10 %, 3.2 W
Housing:	Plastic, 8 HP
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
BMD1204-PO	Field bus or switch cabinet bus, 12 binary inputs, 4 relay outputs, manual ON/AUTOMATIC/OFF switch with LPC bus interface for each output



BMD1204-PO

LPC control modules

As a smart system solution, the new Local Priority Control (LPC) combines the market-wide unique touch user interface with maximum performance for permanently safe system operation. The innovative system solution impresses due to its self-explanatory design, particularly easy installation, comprehensive digital configurability and safe operation.

Smart and stylish like no other, these control modules were awarded the UX Design Award in 2023.

UX DESIGN AWARDS product 2023

TMC-PO touch module central

The TMC-PO is an operating unit for collective malfunction messages, collective malfunction message acknowledgement and the release of all connected TMU-PO modules. An NFC (Near Field Communication) key switch solution enables/manually locks the operation of all connected TMU-PO modules with an NFC chip.

Interfaces:	LPC bus, 200 m LPC backbone, 200 m
Nominal voltage:	12..24 V DC ±10 %; 2.0 W
Housing:	Plastic
Degree of protection:	IP54
Ambient temperature:	0..+55 °C
Mounting:	Control cabinet door installation
TMC-PO	Touch module central is an operating unit for collective malfunction messages, collective malfunction message acknowledgment and the release of all connected TMU-PO modules.



TMC-PO

TMU-PO touch module universal

The TMU-PO is a touch module for local priority control and display of the operation/malfunction messages of the units and actuators in building services.

Display:	2 x 2.4" TfT display (240 x 320 pixels)
Interfaces:	LPC bus, 200 m LPC backbone, 200 m
Nominal voltage:	12..24 V DC ±10 %; 2.0 W
Housing:	Plastic
Degree of protection:	IP54
Ambient temperature:	0..+55 °C
Mounting:	Control cabinet door installation

TMU-PO	Touch module universal for local override and indication and display of the operation/malfunction messages of the units and actuators in building services



TMU-PO

DDC4000 Accessories

DDC4xxBW overvoltage protection

DDC464BW	Overvoltage protection with function monitoring (type 3 as per EN 61643-11/Class III as per IEC 61643-1) 230 V AC for power connection lines for power transformers of the DDC system, lightning protection zone: LPZ 2/3 transition
DDC465BW	Overvoltage protection with function monitoring (type 3 as per EN 61643-11/Class III as per IEC 61643-1) up to 24 V AC for power connection lines to the DDC system, lightning protection zone: LPZ 2/3 transition
DDC466BW	Overvoltage protection for bus lines in DDC3000, DDC4000 and HRP/LRP systems, lightning protection zone: LPZ 0A–2/3 transition (per DIN EN 61643-21)
DDC467BW	Overvoltage protection for 24 V DC power supply, lightning protection zone: LPZ 0A–2/3 transition (per DIN EN 61643-21)
DDC467/2BW	Overvoltage protection for 24 V DC power supply for 2 double wires, lightning protection zone: LPZ 0A–2/3 transition (per DIN EN 61643-21)
DDC468BW	Overvoltage protection for bus lines and sensors in DDC3000, DDC4000 and HRP/LRP systems. Lightning protection zone: LPZ 0A–1 transition (inter-building lines) (per DIN EN 61643-21)
DDC473BW	Overvoltage protection for fieldbus lines and 12 V DC voltage supply for fieldbus, lightning protection zone: LPZ 0A–2/3 transition (per DIN EN 61643-21)



DDC464BW

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Transformers

TF16	Safety isolating transformer 16 VA; 230 V AC / 24 V AC
TF25	Safety isolating transformer 25 VA; 230 V AC / 24 V AC
TF25W	Safety isolating transformer 25 VA; 230 V AC / 24 V AC
TF60	Safety transformer, 63 VA; 230 V AC / 24 V AC
TF160	Safety transformer, 160 VA; AC 230 V / AC 24 V
TF250	Safety transformer, 250 VA; 230 V AC / 24 V AC

Power supply units

Z24	Power supply unit 230 V AC / 24 V DC; 6 A
Z145	Power supply unit 230 V AC / 12 V DC; 1 A

Coupling relay

Z45FK	Coupling relay with one changeover switch 24 V AC/DC ±10 %; 13 mA
Z46FK	Coupling relay with two changeover switches 24 V AC/DC ±10 %; 20 mA
Z47FK	Coupling relay with one changeover switch and a manual switch at field level 24 V AC/DC ±10 %; 13 mA
Z60FK	Coupling relay with one changeover switch and one manual switch at field level with floating feedback contact 24 V AC/DC ±10 %; 13 mA
Z45	Coupling relay with one changeover switch 24 V AC/DC ±10 %; 13 mA
Z46	Coupling relay with two changeover switches 24 V AC/DC ±10 %; 20 mA
Z47	Coupling relay with one changeover switch und a manual switch at field level 24 V AC/DC ±10 %; 13 mA
Z60	Coupling relay with one changeover switch and one manual switch at field level with floating feedback contact 24 V AC/DC ±10 %; 13 mA



Z47 and Z60

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Analog encoder

Z61	Analog encoder for continuous signal 0..10 V DC with manual function at the field level and floating feedback contact
Z61/BW	Analog encoder with potential isolation and manual emergency operating level for 0..10 V DC or 0..20 mA DC
Z61FK	Analog encoder for continuous signal 0..10 V DC with manual function at the field level and floating feedback contact for the ON/OFF/AUTO switch positions

Other

Z175	Empty housing for wall mounting (4 HP/IP65) for mounting the input and output modules
KB1	19" blank front panel for single cassette
KB2	19" blank front panel for double cassette
KA	19" rack
KA4	11" rack



Fire protection system with safety ring bus

The fire protection system is a system for controlling and monitoring fire dampers, fire smoke control dampers, fire door actuators, shutter actuators and actuators for components that form fire compartments for preventive fire protection.

The system consists of fire service display panels, controllers, communication interfaces and input and output modules. The components are networked in a safety ring bus to ensure maximum fail-safety and maintain function in the event of a fire. The control units can have a redundant design.

The system operates based on a fire control matrix. The system complies with the standards EN 1366-2 and EN 15650. This ensures that the fire protection system is ideally prepared for inspection by an expert recognized by the building authorities. Approval by the TÜV is also available. Country-specific building regulations must be observed.

The control units communicate with each other via the IP network.
With one master control unit and 15 slave control units,
126 fire dampers and input/output modules can be managed per controller.
256 ventilation systems (and therefore up to 4032 fire dampers in total) can be controlled.

The controllers communicate with the input and output modules via Ethernet or safety ring bus. The building management system can be connected to the controller directly via Ethernet. The controllers have native BACnet/IP® or BACnet/SC® for communication with the building management system.

Fire protection controllers

Fire protection controllers are used to control and monitor the fire dampers.

The controllers have interfaces for secure bidirectional communication in the safety ring bus at field level.
At the automation level, the control units communicate via Modbus TCP or BACnet/IP or BACnet SC. The control units are certified in accordance with protocol rev 1.22 BTL. The control logic allows for automatic or manual fire damper tests. The fire dampers are controlled in accordance with the fire control matrix. Communication with all the communication partners is monitored. Any events that are relevant to operation are recorded in logs. The controller monitors cable breaks and short circuits in the fire damper safety ring bus.

BKC-35-M-light, BKC-35-M-00, BKC-35-M-01, BKC-35-M-02, BKC-35-M-03, BKC-35-M-04 fire protection controllers

The fire protection controllers are designed as masters and are used to control and monitor fire dampers in the safety ring bus. The controllers have a high-quality shielded housing for mounting on mounting rails. Depending on the version, between 5 and 126 fire damper modules for different ring bus sizes can be connected for 252 fire damper actuators in the safety ring bus. In addition, between 5 and 47 input and output modules and 15 fire protection controllers can be connected via Ethernet in the slave version. The controllers have system and communication software for the fire control center. They operate according to predefined fire protection-related priorities.

The following functions can be implemented:

- Monitoring of communication with all the communication partners
- Logging of reporting statistics that are relevant to operations
- Monitoring for cable breakage and short circuits on the safety ring bus
- Automatic or manual fire damper tests; test reports are generated for each system group or floor
- Reactivation delay for ventilation units
  Partitioning of the ventilation system
- Consideration of extended fire damper errors
  in revision mode
- Shutdown of ventilation units in the event of faults on secondary dampers
- Fire damper tests without shutting down the ventilation system

The connection to the building management system unit is made via BACnet/IP or BACnet/SC.

- Communication via TCP/IP takes place through the Ethernet cable
- Communication in the safety ring bus
- System certification by state certified expert possible
- Native BACnet® in accordance with DIN EN ISO 16484-5 BACnet® server
- Up to 15 slave controllers per 1 master controller
  for up to 4032 fire damper actuators
- Automatic revision mode with logging available



BKC-35-M-00

Technical data:

Network protocol:	Modbus TCP, BACnet/IP
Interfaces:	1 safety ring bus 2 RS232/485 3 Ethernet 2 USB
Nominal voltage:	24 V DC; 19.2 W
Housing:	Steel
Degree of protection:	IP20
Ambient temperature:	-10..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

BKC-35-M-LIGHT	Fire protection controllers (master) Safety ring bus, 5 input and output modules and 5 fire damper modules
BKC-35-M-00	Fire protection controllers (master) Safety ring bus, 21 input and output modules and 21 fire damper modules
BKC-35-M-01	Fire protection controllers (master) Safety ring bus, 47 input and output modules, 63 fire damper modules
BKC-35-M-02	Fire protection controllers (master) Safety ring bus, 47 input and output modules, 84 fire damper modules
BKC-35-M-03	Fire protection controllers (master) Safety ring bus, 47 input and output modules, 105 fire damper modules
BKC-35-M-04	Fire protection controllers (master) Safety ring bus, 47 input and output modules, 126 fire damper modules

BKC-35-SL-light, BKC-35-SL-00, BKC-35-SL-01, BKC-35-SL-02, BKC-35-SL-03 and BKC-35-SL-04 fire protection controllers

The fire protection controllers are designed as slaves and are used to control and monitor fire dampers in the safety ring bus. The controllers have a high-quality shielded housing for mounting on mounting rails. Depending on the version, between 5 and 126 fire damper modules for different ring bus sizes can be connected for 252 fire damper actuators in the safety ring bus. In addition, between 5 and 47 input and output modules can be connected via Ethernet. The controllers have system and communication software. If communication with the master fails, the slave devices ensure that the fire dampers are in a safe position.

The following functions can be implemented:

- Monitoring of communication with all the communication partners
- Logging of reporting statistics that are relevant to operations
- Monitoring for cable breakage and short circuits on the safety ring bus

The connection to the building management system unit is made via BACnet/IP or BACnet/SC.

- Communication via TCP/IP takes place through the Ethernet cable
- Communication in the safety ring bus
- System certification by state certified expert possible
- Native BACnet® in accordance with DIN EN ISO 16484-5 BACnet® server
- Up to 252 fire damper actuators

Technical data:

Network protocol:	Modbus TCP, BACnet/IP
Interfaces:	1 safety ring bus 2 RS232/485 3 Ethernet 2 USB
Nominal voltage:	24 V DC; 19.2 W
Housing:	Steel
Degree of protection:	IP20
Ambient temperature:	-10..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing



BKC-35-SL-00

BKC-35-SL-LIGHT	Fire protection controllers (slave) Safety ring bus, 5 input and output modules and 5 fire damper modules
BKC-35-SL-00	Fire protection controllers (slave) Safety ring bus, 21 input and output modules and 21 fire damper modules
BKC-35-SL-01	Fire protection controllers (slave) Safety ring bus, 47 input and output modules, 63 fire damper modules
BKC-35-SL-02	Fire protection controllers (slave) Safety ring bus, 47 input and output modules, 84 fire damper modules
BKC-35-SL-03	Fire protection controllers (slave) Safety ring bus, 47 input and output modules, 105 fire damper modules
BKC-35-SL-04	Fire protection controllers (slave) Safety ring bus, 47 input and output modules, 126 fire damper modules

Fire protection communication interface

The communication interface is used for galvanic isolation between the safety ring bus and the fire protection controller on the master and slave. The device is used to analyze and deactivate the safety ring bus (during startup, for example).

BKT-35-S fire protection communication interface

The BKT-35-S is used for the concentrated input and output of a large number of binary signals (data points). It has 13 binary outputs. 1 output is floating. The device has 17 binary inputs. 14 binary inputs are monitored for cable breakage. It is used for the galvanic isolation of the safety ring bus and for analysis and is connected to the fire protection master and slave controller.

Inputs:	17 binary inputs
Outputs:	13 binary outputs 1 binary output, floating
Interfaces:	RS232/485, safety ring bus
Nominal voltage:	24 V DC, 0,24 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	-10..+65 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

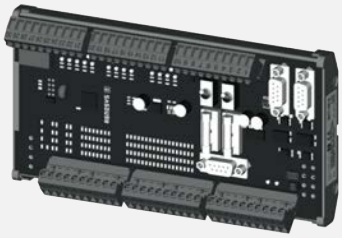
BKT-35-S	Fire protection communication interface 17 binary inputs, 13 binary outputs

BKT-35-S-LIGHT fire protection communication interface

Communication interface in the safety ring bus for connecting to one fire protection master controller and one fire protection slave controller. It is used for the galvanic isolation of the safety ring bus and for analysis.
The device has a metal housing for mounting on a mounting rail.

Interfaces:	2 RS232/485 interfaces 1 safety ring bus
Nominal voltage:	24 V DC, 1,2 W
Housing:	metal
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

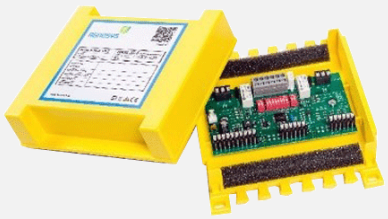
BKT-35-S-LIGHT	Fire protection communication interface



BKT-35-S

BKM-35-xx fire protection damper modules

The fire damper modules from the BKM-35-xx series are used for the BKM-35-xx concentrated input and output of binary signals (data points) for controlling the fire damper actuators and for end position feedback.
The modules are used for monitoring, control and runtime testing of the fire dampers. The information from the BKM-35-xx modules is transmitted via the safety ring bus. Up to 126 modules for 252 fire damper actuators can be networked in one safety ring bus.
The modules in the safety ring bus are tested for 10,200 complete switching cycles. Communication with the fire protection control device takes place via the communication interface.



BKM-35-xx

BKM-35-F-ST input and output module

Fire damper module with safety ring bus connection. 4 DIP switches are used in manual mode on site to control two fire dampers through the Open/ Close binary outputs. The LED indicators signal the operating states of the inputs and outputs. For quick mounting, the actuator connections are equipped with plug connectors. The module is designed for space-saving wall mounting.

Display:	1 LED for control of each fire damper 2 LEDs for displaying the checkback signal for each fire damper 1 LED for displaying the module status
Inputs:	4 binary inputs
Outputs:	2 binary outputs as floating changeover contacts 230 V AC
Interfaces:	Safety ring bus
Nominal voltage:	18..32 V DC, 0,624 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	Wall mounting

BKM-35-F-ST	Fire damper module, safety ring bus plug-in version, 4 binary inputs, 2 relay outputs, DIP switch for each output

BKM-35-F-IP66 input and output module

Fire damper module with safety ring bus connection.
4 DIP switches are used in manual mode on site to control two fire dampers through the open/close binary outputs. The LED indicators signal the operating states of the inputs and outputs. The module with IP66 housing is designed for space-saving wall mounting in the harsh environmental conditions.

Display:	1 LED for control of each fire damper 2 LEDs for displaying the checkback signal for each fire damper 1 LED for displaying the module status
Inputs:	4 binary inputs
Outputs:	2 binary outputs as floating changeover contacts 230 V AC
Interfaces:	Safety ring bus
Nominal voltage:	18..32 V DC, 0,624 W
Housing:	Plastic
Degree of protection:	IP66
Ambient temperature:	0..+45 °C
Mounting:	Wall mounting

BKM-35-F-IP66	Fire damper module, safety ring bus, 4 binary inputs, 2 relay outputs, DIP switch for each output

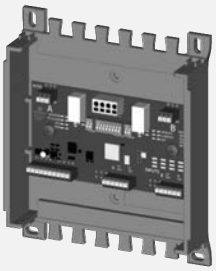
Kieback&Peter

BKM-35-F input and output module

Fire damper module with safety ring bus connection. 4 DIP switches are used in manual mode on site to control two fire dampers through the Open/ Close binary outputs. The LED indicators signal the operating states of the inputs and outputs. All terminals are designed as push-in spring-force plug terminals. Module for direct field wiring, one terminal for each wire. The module is intended for field supply. The module is designed for space-saving wall mounting.

Display:	1 LED for control of each fire damper 2 LEDs for displaying the checkback signal for each fire damper 1 LED for displaying the module status
Inputs:	4 binary inputs
Outputs:	2 binary outputs as floating changeover contacts 230 V AC
Interfaces:	Safety ring bus
Nominal voltage:	18..32 V DC, 0,624 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	Wall mounting

BKM-35-F	Fire damper module, safety ring bus, 4 binary inputs, 2 relay outputs, DIP switch for each output

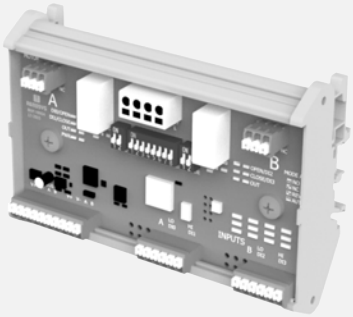


BKM-35-F

BKM-35-S input and output module

Fire damper module with safety ring bus connection. 4 DIP switches are used in manual mode on site to control two fire dampers through the open/close binary outputs. The LED indicators signal the operating states of the inputs and outputs. All terminals are designed as push-in spring-force plug terminals. Module for direct field wiring, one terminal for each wire.
The module is intended for field supply. Mounted onto mounting rails in switch cabinets.

Display:	1 LED for control of each fire damper 2 LEDs for displaying the checkback signal for each fire damper 1 LED for displaying the module status
Inputs:	4 binary inputs
Outputs:	2 binary outputs as floating changeover contacts 230 V AC
Interfaces:	Safety ring bus
Nominal voltage:	18..32 V DC, 0,624 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
BKM-35-S	Fire damper module, safety ring bus, 4 binary inputs, 2 relay outputs, DIP switch for each output, mounting rail



BKM-35-S

BKM4-35-F input module

Fire damper module with safety ring bus connection. 4 binary inputs are used to monitor 4 thermal fire dampers. The LED indicators signal the operating states of the inputs. All terminals are designed as push-in spring-force plug terminals. Module for direct field wiring, one terminal for each wire.
The module is intended for field supply. The module is designed for space-saving wall mounting.

Display:	2 LEDs for displaying the checkback signal for each fire damper 1 LED for displaying the module status
Inputs:	4 binary inputs
Interfaces:	Safety ring bus
Nominal voltage:	DC 18..32 V, 0.24 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	Wall mounting

BKM1-35-F input and output module

Fire damper module with safety ring bus connection. 2 DIP switches are used in manual mode on site to control on fire damper through the open/ close binary outputs. The LED indicators signal the operating states of the inputs and outputs. All terminals are designed as push-in spring-force plug terminals. Module for direct field wiring, one terminal for each wire.
The module is intended for field supply. The module is designed for space-saving, efficient wall mounting.

Display:	1 LED for control of each fire damper 2 LEDs for displaying the checkback signal for each fire damper 1 LED for displaying the module status
Inputs:	2 binary inputs
Outputs:	1 binary output as floating changeover contact 230 V AC
Interfaces:	Safety ring bus
Nominal voltage:	18..32 V DC, 0,624 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	Wall mounting

BKM1-35-F	Fire damper module, safety ring bus, 2 binary inputs, 1 relay output, DIP switch for the output

IOM-xx fire damper modules

The fire damper modules from the IOM-xx series are used for the concentrated input and output of binary signals (data points) for controlling ventilation systems and transmitting their status.
The information from the IOM-35-F and IOM-35-S modules is transmitted via the safety ring bus. Up to 47 modules can be connected in one safety ring bus. The modules in the safety ring bus are tested for 10,200 complete switching cycles. The communication with the fire protection control device takes place via the communication interface. The information from the modules in the IOM-xx-LAN series is transmitted via Ethernet. Up to 16 modules can be managed by one master controller. The input and output modules are used to save large amounts of space for electrical distributions. The need for wiring is reduced dramatically in comparison to conventional systems by bringing together widely scattered binary signals.



IOM-35-xx

IOM-35-F input and output module

Fire damper modules with safety ring bus connection.
4 binary inputs are used for monitoring. The LED indicators signal the operating states of the inputs. 2 DIP switches are used for control via the on/off binary outputs. All terminals are designed as push-in spring-force plug terminals. Module for direct field wiring, one terminal for each wire.
The module is intended for field supply. The module is designed for space-saving wall mounting.



IOM-35-F

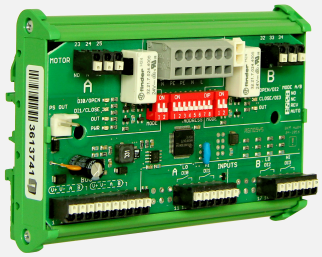
Display:	6 LEDs operating states
	1 LED for displaying the module status
Inputs:	4 binary inputs
Outputs:	2 binary outputs
Interfaces:	Safety ring bus
Nominal voltage:	18..32 V DC, 0,24 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	Wall mounting

IOM-35-F	Fire damper module, safety ring bus, 4 binary inputs and 2 binary outputs with status display

IOM-35-S input and output module

Fire damper modules with safety ring bus connection. 4 binary inputs are used for monitoring The LED indicators signal the operating states of the inputs. 2 DIP switches are used for control via the on/off binary outputs. All terminals are designed as push-in spring-force plug terminals. Module for direct field wiring, one terminal for each wire. The module is intended for field supply. Mounted onto mounting rails in switch cabinets.

Display:	6 LEDs operating states 1 LED for displaying the module status
Inputs:	4 binary inputs
Outputs:	2 binary outputs
Interfaces:	Safety ring bus
Nominal voltage:	18..32 V DC, 0,24 W
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
IOM-35-S	Fire damper module, safety ring bus, 4 binary inputs and 2 binary outputs with status indicator, mounting rail



IOM-35-S

IOM-35-LAN-16-8-S input and output module

Fire damper module with Ethernet connection. 16 binary inputs are used for monitoring 8 binary outputs for switching on/off. The LED indicators signal the operating states of the inputs and outputs. All terminals are designed as push-in spring-force plug terminals. Module for direct field wiring, one terminal for each wire. The module is intended for field supply. It is mounted onto mounting rails in switch cabinets to save space.

Display:	24 LEDs operating states
Inputs:	16 binary inputs
Outputs:	8 binary outputs
Interfaces:	Ethernet
Nominal voltage:	21..28 V DC, 7.68 W load-dependent
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing
IOM-35-LAN-16-8-S	Smoke extraction and fire damper module, Ethernet, 16 binary inputs and 8 binary outputs with status display, mounting rail

IOM-10-LAN-32O-S output module

Fire damper module with Ethernet connection. 64 binary outputs for switching on/off. The LED indicators signal the operating states of the outputs. All terminals are designed as push-in spring-force plug terminals. Module for direct field wiring, one terminal for each wire. The module is intended for field supply.
It is mounted onto mounting rails in switch cabinets to save space.

Display:	32 LEDs operating states
Outputs:	32 binary outputs
Interfaces:	Ethernet
Nominal voltage:	21..28 V DC, 7.68 W load-dependent
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

IOM-10-LAN-32O-S	Smoke extraction and fire damper module, Ethernet, 32 binary outputs with status display, mounting rail

IOM-10-LAN-64O-S output module

Fire damper module with Ethernet connection. 32 binary outputs for switching on/off. The LED indicators signal the operating states of the outputs. All terminals are designed as push-in spring-force plug terminals. Module for direct field wiring, one terminal for each wire. The module is intended for field supply.
It is mounted onto mounting rails in switch cabinets to save space.

Display:	64 LEDs operating states
Outputs:	64 binary outputs
Interfaces:	Ethernet
Nominal voltage:	21..28 V DC, 7.68 W load-dependent
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

IOM-10-LAN-64O-S	Smoke extraction and fire damper module, Ethernet, 64 binary outputs with status display, mounting rail

IOM-10-LAN-32I-S input module

Fire damper module with Ethernet connection. 32 binary inputs are used for monitoring The LED indicators signal the operating states of the inputs. All terminals are designed as push-in spring-force plug terminals. Module for direct field wiring, one terminal for each wire. The module is intended for field supply. It is mounted onto mounting rails in switch cabinets to save space.

Display:	32 LEDs operating states
Inputs:	32 binary inputs
Interfaces:	Ethernet
Nominal voltage:	21..28 V DC; 7,68 W, load-dependent
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

IOM-10-LAN-32I-S	Smoke extraction and fire damper module, Ethernet, 32 binary inputs with status display, mounting rail

IOM-10-LAN-64I-S input module

Fire damper module with Ethernet connection. 64 binary inputs are used for monitoring The LED indicators signal the operating states of the inputs. All terminals are designed as push-in spring-force plug terminals. Module for direct field wiring, one terminal for each wire. The module is intended for field supply. It is mounted onto mounting rails in switch cabinets to save space.

Display:	64 LEDs operating states
Inputs:	64 binary inputs
Interfaces:	Ethernet
Nominal voltage:	21..28 V DC; 7,68 W, load-dependent
Housing:	Plastic
Degree of protection:	IP20
Ambient temperature:	0..+55 °C
Mounting:	TH 35-7.5 mounting rail in closed housing

IOM-10-LAN-64I-S	Smoke extraction and fire damper module, Ethernet, 64 binary inputs with status display, mounting rail

Fire service display panel

The fire service uses the fire service display panel to display information and perform operations on site. In the event of fire, the panels are used for the prioritized overriding of fire dampers at the fire service's point of attack. The information from the display panels is transmitted via any of the input and output modules or communication interfaces of the safety ring bus. The display panels are designed for remote installation in the fire control panel or fire alarm panel in the distributor.

BKF-35-FW-S fire service display panel

The BKF-35-FW-S fire service display panel is the external override option for the fire damper system with safety ring bus.
The LED indicators signal the operating states.
The override is performed using a safety key switch.

- LED indicator: override status – fire dampers open
- LED indicator: override status – fire dampers closed
- Fireman's switch with the AUTOMATIC position
- Fireman's switch with the override position – fire dampers open
- Fireman's switch with the override position – fire dampers closed

Nominal voltage:	24 V DC; 0,48 W
Housing:	Steel sheet/metal front
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	Switchboard door

BKF-35-FW-S	Fire service display panel for externally overriding fire dampers with status indicator

BKF-35-A-S fire service display panel

The BKF-35-A-S fire service display panel transmits the status indicator for the fire damper system with safety ring bus to the fire service.
The LED indicators signal the operating states.

- LED indicator: normal operation or emergency power supply (UPS) status
- LED indicator: collective malfunction message
- LED indicator: system error message
- LED indicator: error communicating with the fire control panel

Nominal voltage:	24 V DC; 1,92 W
Housing:	Steel sheet/metal front
Degree of protection:	IP20
Ambient temperature:	0..+45 °C
Mounting:	Switchboard door

BKF-35-A-S	Fire service display panel for externally displaying the status of the fire damper system

Smoke extraction system with safety ring bus

The smoke extraction system is a system for controlling and monitoring smoke extraction dampers and actuators for components that form fire compartments or dissipate smoke for smoke extraction with maintenance of function. It is predominantly used for smoke pressurization systems, mechanical smoke extraction systems and natural smoke extraction systems for which safety up to SIL2 is required. The system can be controlled for 30 minutes and the components remain in the last position after 60 minutes.

The system consists of fire service display panels, controllers, communication interfaces and input and output modules. The components are networked in a safety ring bus to ensure maximum fail-safety and maintain function in the event of a fire. The control units can have a redundant design. The system operates based on a fire control matrix. The system complies with the standards EN 1366-2 and EN 15650. This ensures that the fire protection system is ideally prepared for inspection by an expert recognized by the building authorities. Approval by the TÜV is also available. Country-specific building regulations must be observed. The control units communicate with each other via Ethernet. With one master control unit and 15 slave control units, 126 fire dampers and input/output modules can be managed per controller. 126 ventilation systems (and therefore up to 2016 fire dampers in total) can be controlled.

The controllers communicate with the input and output modules via Ethernet or safety ring bus. Galvanic isolation between the field and automation levels is done via the communication interface. At the automation level, the control units communicate via Modbus TCP or BACnet/IP or BACnet SC. The control units are certified in accordance with protocol rev 1.22 BTL. The building management system and the smoke extraction damper control system communicate via the BACnet® protocol in accordance with the international standard DIN EN ISO 16484.

BRT-10-S-LIGHT	Smoke extraction communication interface
BRT-10-S	Smoke extraction communication interface 17 binary inputs, 13 binary outputs
BRM-10-S	Smoke extraction damper module, input and output module, safety ring bus, mounting rail
BRM-10-F-WS	Smoke extraction damper module, input and output module, safety ring bus, reversing circuit
BRM-10-F-ST	Smoke extraction damper module, input and output module, safety ring bus, plug-in version
BRM-10-F	Smoke extraction damper module
IOM-10-S	Smoke extraction damper module, input and output module, mounting rail, safety ring bus, 4 binary inputs and 2 binary outputs with status display
IOM-10-LAN-64O-S	Smoke extraction and fire damper module, Ethernet, 64 binary outputs with status display, mounting rail
IOM-10-LAN-64I-S	Smoke extraction and fire damper module, Ethernet, 64 binary inputs with status display, mounting rail
IOM-10-LAN-32O-S	Smoke extraction and fire damper module, Ethernet, 32 binary outputs with status display, mounting rail

IOM-10-LAN-32I-S	Smoke extraction and fire damper module, Ethernet, 32 binary inputs with status display, mounting rail
BRF-10-FW-S-22	Fire service panel housing 4-way LAN
BRF-10-FW-S-11	Fire service panel housing, single
BRF-10-FW-S-08	Cover, fire service panel
BRF-10-FW-S-06	Fire service panel housing 12-way LAN
BRF-10-FW-S-05	Fire service panel housing 9-way LAN
BRC-10-SL-LIGHT	Smoke extraction controller (slave) 5 input and output modules and 5 fire damper modules
BRC-10-SL-04	Smoke extraction controller (slave) 47 input and output modules, 126 fire damper modules
BRC-10-SL-03	Smoke extraction controller (slave) 47 input and output modules, 105 fire damper modules
BRC-10-SL-02	Smoke extraction controller (slave) 47 input and output modules, 84 fire damper modules
BRC-10-SL-01	Smoke extraction controller (slave) 47 input and output modules, 63 fire damper modules
BRC-10-SL-00	Smoke extraction controller (slave) 21 input and output modules and 21 fire damper modules
BRC-10-M-LIGHT	Smoke extraction controller (master) 5 input and output modules and 5 fire damper modules
BRC-10-M-04	Smoke extraction controller (master) 47 input and output modules, 126 fire damper modules
BRC-10-M-03	Smoke extraction controller (master) 47 input and output modules, 105 fire damper modules
BRC-10-M-02	Smoke extraction controller (master) 47 input and output modules, 84 fire damper modules
BRC-10-M-01	Smoke extraction controller (master) 47 input and output modules, 63 fire damper modules
BRC-10-M-00	Smoke extraction controller (master) 21 input and output modules and 21 fire damper modules
BRC-10-BACKUP	Smoke extraction redundancy device

Fire protection and smoke extraction software

Fire damper viewer for fire damper control system

The fire damper viewer is used to display and operate the fire protection system. It provides visualization of all system statuses with an overview of the most important states for all parameters.

The fire damper viewer includes the following functions:

- Listing the current alarms for all systems and components
- Alarm logging
- Triggering of the automatic fire damper revision and creation of reports in PDF format
- Activation of the operating mode or inspection mode
- Inspection mode for each section, floor or system
- Functional fire damper tests with runtime monitoring
- Deactivation of the system
- Reading the log file for the controllers
- Displaying plant images with floor plans (optional BS-V-XXXX license required)
- Visualization of actuators (fire dampers, smoke extraction dampers, etc.), modules, fans, binary setpoint and actual values (optional BS-V-XXXX license required)
- Displaying all the data points in a list
- Custom user management

The fire damper view is offered as a Windows application or a web server for operation via web browser. The BS-V-XXXX license enhances the fire damper viewer by displaying the fire or smoke extraction dampers in the floor plans.

BK-VIEW	Fire damper viewer for fire damper control system

Fire damper viewer app for fire damper control system

The fire damper viewer app is used to display and operate the fire damper control system. The app depicts all the system statuses with an overview of the most important states for the parameterized systems.

The fire damper viewer app includes the following functions:

- Listing the current alarms for all systems and components
- Alarm logging
- Triggering of the automatic fire damper revision and creation of reports in PDF format
- Activation of the operating mode or inspection mode
- Inspection mode for each section, floor or system
- Functional fire damper tests with runtime monitoring
- Deactivation of the system
- Reading the log file for the controllers
- Displaying plant images with floor plans (optional BS-V-XXXX license required)
- Visualization of actuators (fire dampers, smoke extraction dampers, etc.), modules, fans, binary setpoint and actual values
- Displaying all the data points in a list
- Scope of delivery includes 1 user license for Android devices

The BS-V-XXXX license enhances the fire damper viewer app by displaying the fire or smoke extraction dampers in the system images with the floor plans.

BK-VIEW-APP	Fire protection flap viewer app for fire protection flap control system for Android and iOS

Volume license for displaying fire or smoke extraction dampers in the system images with the floor plans

Volume licenses are available to expand the BK-VIEW and BK-VIEW app software products to add the display of fire dampers or smoke extraction dampers in the building floor plans This allows you to display the exact positions of the devices in the building or on the floor. At least XX data points for the fire or smoke extraction dampers (open/closed/in motion and malfunction) are visualized.

BS-V-10	10 fire or smoke extraction dampers in the floor plan views
BS-V-20	20 fire or smoke extraction dampers in the floor plan views
BS-V-50	50 fire or smoke extraction dampers in the floor plan views
BS-V-100	100 fire or smoke extraction dampers in the floor plan views
BS-V-200	200 fire or smoke extraction dampers in the floor plan views
BS-V-300	300 fire or smoke extraction dampers in the floor plan views
BS-V-400	400 fire or smoke extraction dampers in the floor plan views
BS-V-1000	1000 fire or smoke extraction dampers in the floor plan views
BS-V-2000	2000 fire or smoke extraction dampers in the floor plan views
BS-V-4000	4000 fire or smoke extraction dampers in the floor plan views

Annual software upgrades for controllers

The upgrade preserves the support option for the controllers. The systems can be expanded without restriction. Conformity with the latest standards and software maintenance are ensured. Servicing, modification and system operation can be performed according to the latest standards of technology.

BS-M-LIGHT	Softwareupgrade p. a. M LIGHT
BS-M-00	Softwareupgrade p. a. M00
BS-M-01	Softwareupgrade p. a. M01
BS-M-02	Softwareupgrade p. a. M02
BS-M-03	Softwareupgrade p. a. M03
BS-M-04	Softwareupgrade p. a. M04
BS-SL-LIGHT	Softwareupgrade p. a. SL LIGHT
BS-SL-00	Softwareupgrade p. a. SL00
BS-SL-01	Softwareupgrade p. a. SL01
BS-SL-02	Softwareupgrade p. a. SL02
BS-SL-03	Softwareupgrade p. a. SL03
BS-SL-04	Softwareupgrade p. a. SL04

Accessories for fire protection and smoke extraction systems

Fire protection and smoke extraction accessories

HW-204020	Cable for safety ring bus. Designed as an environmentally-friendly, copper-saving, halogen-free bus cable, 100 m
HW-205525	Cable for safety ring bus. Designed as an environmentally-friendly, copper-saving, halogen-free bus cable, 500m
AGF-IBN-10-KIT	Commissioning adapter for fire protection and smoke extraction
SWITCH-5PORT-RAIL-02	Ethernet switch, 5 ports
SWITCH-8PORT-RAIL-02	Ethernet switch, 8 ports
PANELPC-15-L-03	Operator station for BK-View, PHWIN, PHWEB and Qanteon with 15.6" capacitive multi-touch monitor and FHD for installation in the switch cabinet door
PANELPC-22-L-02	Operator station for BK-View, PHWIN, PHWEB and Qanteon with 21.5" capacitive multi-touch monitor and FHD for installation in the switch cabinet door



Qanteon – The Integrated Building and Energy Management

Qanteon combines the functions of a powerful building management system, a BACnet Advanced Operator Workstation with BTL certification in accordance with BACnet® DIN EN ISO 16484-5 and an energy management system with ISO 50001 certification in one solution.

Qanteon helps you to discover and utilize potential savings and monitor their success. For communication, Qanteon uses secure protocols such as BACnet/SC or HTTPS.
The system has a consistent and comprehensive user-oriented operating philosophy. Qanteon is powerful and easy to operate,
but also has the flexibility to adapt to the widest variety of user requirements.

Various installation environments are supported for Qanteon. Qanteon can be run on PC hardware or in an existing IT environment using PROCMOC VE or Microsoft Hype-V. It is also possible to rent the software as QanteonCS (Cloud Solution) in the Kieback&Peter cloud.

Qanteon

Buildings are among the greatest consumers of energy. Anyone who wants to do something for climate protection and avoid cost increases due to rising energy prices needs to improve the energy efficiency of buildings.
Legal regulations also have the objective of reducing the energy consumption of buildings. They include the Energy Performance of Buildings Directive (EPBD) and national regulations based on it, such as the German Federal Energy Saving Ordinance (EnEV) or, from 2019, the German Federal Building Energy Act (GEG).The software is certified and thus aids the implementation of ISO 50001 as an energy data management system.

To successfully conserve energy, knowing how much energy a building or property consumes is not sufficient. You also need to know when it is being consumed, how much is being consumed and who exactly is doing the consuming. This is precisely the knowledge provided by energy management software. Energy management software collects and archives consumption data as measured and counter values. It uses this information to provide evaluations and reports based on a variety of criteria and for a variety of purposes. Energy management provides current and detailed insight into the level, type, location and time of the consumption, at any time. On the basis of this information, the user can create analyses, develop and set energy conservation objectives and implement appropriate energy conservation measures. In turn, energy management tracks how and where the measures are effective and whether the objectives were reached.

Consistent system navigation is at the heart of the operating concept. In Qanteon, you can navigate through your property structure, which maps all of the customer-specific systems for which project planning has been performed in a hierarchical form. After you select an element from the property structure, you can then access all of its assigned data, including system images, trend curves, messages, statistics, energy consumption data and consumption analyses.

Four display types for visualizing the system images are provided: DIN, Standard, Relief and 3D. Qanteon lets you display all of your data points, schedules and switching and control functions in accordance with the building automation and control function list (VDI 3814/DIN EN ISO 16484).



Qanteon

Functions

The system includes comprehensive notification management. To analyze weak points in buildings monitored with the building and energy management system, the system provides statistics about the frequency, overall duration and minimum and maximum duration of malfunctions that occur. They can be displayed in graphs or tables.

Trend curves are recorded on the basis of events. A trend curve analysis module lets you display any number of trend curves at the same time. You can also compare them with a previous period. Multifaceted diagram options allow the user to customize the graphical display.

Graphical event statistics let you analyze the system availability quickly. All the measured values and counter values (limit value violations) that belong to a system are provided automatically for statistical recording. The selection can be flexibly configured to meet individual needs using filters. A wide range of message groupings can also be selected. The time period for recording the statistics can be freely selected. Messages can be sent by e-mail, SMS or SNMP to different recipient groups based the system state. In terms of energy analysis, the system provides users with an evaluation and analysis module containing a wide range of options for analyzing data stock. You can create individual benchmark dashboards and consumption, cost and emission evaluations. All of the evaluations can determine differences in comparison to other periods. They are displayed in charts and tables. Analyses can be saved as user-specific templates for quick access when they are needed again.

Benchmark functions for efficiently analyzing extensive property portfolios are also provided. In Qanteon, you can define corresponding criteria such as costs, consumption, emissions, etc. Benchmarks based on this criteria can be created with a high level of flexibility. Qanteon provides four-quadrant diagrams displaying absolute consumption values and specific consumption key figures for any number of different property parts.

Basic license

QANTEON-B-BASE	Basic Qanteon license Contains all the operator functions, analysis options and evaluations that are necessary for efficient building operation.

User licenses

QANTEON-V-USER1	Device client license for Qanteon Permits the full use of the Qanteon software for one operator based on the concurrent user license model. The maximum number of users that can access the Qanteon at the same time is increased.
QANTEON-V-USER5	5 device client licenses for Qanteon Permits the full use of the Qanteon software for one operator based on the concurrent user license model. The maximum number of users that can access the Qanteon at the same time is increased.
QANTEON-V-USER10	10 device client licenses for Qanteon Permits the full use of the Qanteon software for one operator based on the concurrent user license model. The maximum number of users that can access the Qanteon at the same time is increased.
QANTEON-V-USER50	50 device client licenses for Qanteon Permits the full use of the Qanteon software for one operator based on the concurrent user license model. The maximum number of users that can access the Qanteon at the same time is increased.

Functional expansions

QANTEON-F-GRAPHICS	Editor for creating and editing plant images
QANTEON-F-LINKS	Logical and mathematical data point linking for higher-level control strategies
QANTEON-F-OPTIMIZE	Load optimization for electrical consumers. Load optimization prevents load peaks and thus saves on power supply costs while also balancing grid load. The optimization function can monitor 10 consumer pools concurrently with 100 consumers each.

Energy management system (EMS)

Expansion of the usable database of the Qanteon software with additional data points.

QANTEON-V-EMS10	Volume license for 10 EMS data points
QANTEON-V-EMS20	Volume license for 20 EMS data points
QANTEON-V-EMS50	Volume license for 50 EMS data points
QANTEON-V-EMS100	Volume license for 100 EMS data points
QANTEON-V-EMS200	Volume license for 200 EMS data points
QANTEON-V-EMS500	Volume license for 500 EMS data points
QANTEON-V-EMS1000	Volume license for 1000 EMS data points
QANTEON-V-EMS2000	Volume license for 2000 EMS data points
QANTEON-V-EMS5000	Volume license for 5000 EMS data points
QANTEON-V-EMS10000	Volume license for 10000 EMS data points
QANTEON-V-EMS20000	Volume license for 20000 EMS data points

Qanteon ReadMe app

The ReadMe app records meter readings on the go and synchronizes them with Qanteon. A ReadMe Client license is required to connect a smartphone to Qanteon.

QANTEON-V-README1	1 ReadMe client license for Qanteon
QANTEON-V-README5	5 ReadMe client licenses for Qanteon
QANTEON-V-README10	10 ReadMe client licenses for Qanteon
QANTEON-V-README50	50 ReadMe client licenses for Qanteon

Building management system

Expansion of the usable database of the Qanteon software with additional data points.

QANTEON-V-BMS100	Volume license for 100 BMS data points
QANTEON-V-BMS200	Volume license for 200 BMS data points
QANTEON-V-BMS500	Volume license for 500 BMS data points
QANTEON-V-BMS1000	Volume license for 1000 BMS data points
QANTEON-V-BMS2000	Volume license for 2000 BMS data points
QANTEON-V-BMS5000	Volume license for 5000 BMS data points
QANTEON-V-BMS10000	Volume license for 10000 BMS data points
QANTEON-V-BMS20000	Volume license for 20000 BMS data points
QANTEON-V-BMS50000	Volume license for 50000 BMS data points

Trend curves

Expansion of the BMS data points with a historization in the database. The data is recorded based on events. Trend logs for the automation stations can be retrieved based on events or cycles.
The properties of the supported BACnet objects can also be recorded.

QANTEON-V-TREND10	Volume license for 10 trend recordings
QANTEON-V-TREND20	Volume license for 20 trend recordings
QANTEON-V-TREND50	Volume license for 50 trend recordings
QANTEON-V-TREND100	Volume license for 100 trend recordings
QANTEON-V-TREND200	Volume license for 200 trend recordings
QANTEON-V-TREND500	Volume license for 500 trend recordings
QANTEON-V-TREND1000	Volume license for 1000 trend recordings
QANTEON-V-TREND2000	Volume license for 2000 trend recordings
QANTEON-V-TREND5000	Volume license for 5000 trend recordings
QANTEON-V-TREND10000	Volume license for 10000 trend recordings
QANTEON-V-TREND20000	Volume license for 20000 trend recordings

LON

QANTEON-V-LONID	Connection of a LON domain to Qanteon Up to 20 LON domains can be used with Qanteon.

Hardware for Qanteon

Hardware specially designed for the Qanteon software for higher-level building and energy management functions.

SERVER-TOWER-S-04	Server for smaller plants, tower housing
SERVER-TOWER-L-04	High-performance server for large plants, tower housing
SERVER-RACK-XL-04	High performance server for plants with the maximum configuration, with a redundant power supply unit, for installation in a 19" server cabinet
SERVER-RACK-L-04	High-performance server for large plants, with a redundant power supply unit, for installation in a 19" server cabinet
SERVER-RAIL-S-03	Server hardware for DIN rail mounting in server cabinet

Hardware for remote control

Hardware specially designed for remotely controlling the Neutrino BMS via PHWIN and for the Qanteon building and energy management system.

NOTEBOOK-WIN-L-03	Mobile operator station for remote operation, 17.3 inch
NOTEBOOK-WIN-XL-05	Mobile operator station for remote operation, 15.6 inch
PANELPC-15-L-03	Operator station for BK-View, PHWIN, PHWEB and Qanteon with 15.6" capacitive multi-touch monitor and FHD for installation in the switch cabinet door
PANELPC-22-L-02	Operator station for BK-View, PHWIN, PHWEB and Qanteon with 21.5" capacitive multi-touch monitor and FHD for installation in the switch cabinet door

Accessories for Qanteon hardware

SERVER-HDD600	600 GB Dell HDD with frame, SAS, 12 Gbit/s, 10 K, for R730 server
SERVER-HDD-UPGRA1200	Dell HDD 1x upgrade to 1200 GB with frame, SAS
SERVER-HDD1200	1200 GB Dell HDD with frame, SAS, 12 Gbit/s, 10 K, for R730 server
SERVER-RAM-01	8 GB SERVER RAIL S
SERVER-RAM-02	8 GB SERVER TOWER S-001/01_2
SERVER-RAILSSD1TB	SSD for SERVER-RAIL-S with Qanteon advance installation
ROUTER-SMS-RAIL-03	SMS gateway for top hat rail mounting

Qanteon CS

The Qanteon Cloud Solution (Qanteon CS) includes the functions of Qanteon and its Online Service. The general terms and conditions for the provision and use of online services of Kieback&Peter GmbH & Co. KG apply to the use of the Qanteon CS online service. Qanteon and all project-specific data are located in the European Union.

The following services are included in the Qanteon CS subscription:

- Server availability of at least 99.5 %
- Storage of historical data for up to 4 years
- Software updates for new software releases
- Daily backups of the last 30 days for high data security

Qanteon CS basic license

QANTEONCS-B-BASE	Basic Qanteon CS license Contains all the operator functions, analysis options and evaluations that are necessary for efficient building operation.

Qanteon CS operator licenses

QANTEONCS-V-USER1	Device client license for Qanteon CS Permits the full use of the Qanteon software for one operator based on the concurrent user license model. The maximum number of users that can access the Qanteon at the same time is increased.
QANTEONCS-V-USER5	5 device client licenses for Qanteon CS Permits the full use of the Qanteon software for one operator based on the concurrent user license model. The maximum number of users that can access the Qanteon at the same time is increased.
QANTEONCS-V-USER10	10 device client licenses for Qanteon CS Permits the full use of the Qanteon software for one operator based on the concurrent user license model. The maximum number of users that can access the Qanteon at the same time is increased.
QANTEONCS-V-USER50	50 device client licenses for Qanteon CS Permits the full use of the Qanteon software for one operator based on the concurrent user license model. The maximum number of users that can access the Qanteon at the same time is increased.

Qanteon CS functional extensions

QANTEONCS-F-GRAPHICS	Monthly fee for the plant image editor
QANTEONCS-F-LINKS	Monthly fee for linking BMS data points across automation stations.
QANTEONCS-F-OPTIMIZE	Monthly fee for load peak optimization. Load optimization can optimize load peaks in 10 energy meters concurrently.

Qanteon CS energy management system (EMS)

Expansion of the usable database of the Qanteon CS software with additional data points.

QANTEONCS-V-EMS10	Volume license for 10 EMS data points
QANTEONCS-V-EMS20	Volume license for 20 EMS data points
QANTEONCS-V-EMS50	Volume license for 50 EMS data points
QANTEONCS-V-EMS100	Volume license for 100 EMS data points
QANTEONCS-V-EMS200	Volume license for 200 EMS data points
QANTEONCS-V-EMS500	Volume license for 500 EMS data points
QANTEONCS-V-EMS1000	Volume license for 1000 EMS data points
QANTEONCS-V-EMS2000	Volume license for 2000 EMS data points
QANTEONCS-V-EMS5000	Volume license for 5000 EMS data points
QANTEONCS-V-EMS10000	Volume license for 10000 EMS data points
QANTEONCS-V-EMS20000	Volume license for 20000 EMS data points

Qanteon CS ReadMe app

The ReadMe app records meter readings on the go and synchronizes them with Qanteon CS. A ReadMe Client license is required to connect a smartphone to Qanteon CS.

QANTEONCS-V-README	1 ReadMe client license for Qanteon CS
QANTEONCS-V-README5	5 ReadMe client licenses for Qanteon CS
QANTEONCS-V-README10	10 ReadMe client licenses for Qanteon CS
QANTEONCS-V-README50	50 ReadMe client licenses for Qanteon CS

Qanteon CS building management system

Expansion of the usable database of the Qanteon CS software with additional data points.

QANTEONCS-V-BMS100	Volume license for 100 BMS data points
QANTEONCS-V-BMS200	Volume license for 200 BMS data points
QANTEONCS-V-BMS500	Volume license for 500 BMS data points
QANTEONCS-V-BMS1000	Volume license for 1000 BMS data points
QANTEONCS-V-BMS2000	Volume license for 2000 BMS data points
QANTEONCS-V-BMS5000	Volume license for 5000 BMS data points
QANTEONCS-V-BMS10000	Volume license for 10000 BMS data points
QANTEONCS-V-BMS20000	Volume license for 20000 BMS data points
QANTEONCS-V-BMS50000	Volume license for 50000 BMS data points

Qanteon CS trend curves

Expansion of the BMS data points with a historization in the database. The data is recorded based on events. Trend logs for the automation stations can be retrieved based on events or cycles.
The properties of the supported BACnet objects can also be recorded.

QANTEONCS-V-TREND10	Volume license for 10 trend recordings
QANTEONCS-V-TREND20	Volume license for 20 trend recordings
QANTEONCS-V-TREND50	Volume license for 50 trend recordings
QANTEONCS-V-TREND100	Volume license for 100 trend recordings
QANTEONCS-V-TREND200	Volume license for 200 trend recordings
QANTEONCS-V-TREND500	Volume license for 500 trend recordings
QANTEONCS-V-TRD1000	Volume license for 1000 trend recordings
QANTEONCS-V-TRD2000	Volume license for 2000 trend recordings
QANTEONCS-V-TRD5000	Volume license for 5000 trend recordings
QANTEONCS-V-TRD10000	Volume license for 10000 trend recordings
QANTEONCS-V-TRD20000	Volume license for 20000 trend recordings

VPN connections

To connect an automation network to QanteonCS, one of the connection licenses is required.

QANTEONCS-V-IPSECVPN	Monthly service rate for providing an ICPSEC VPN connection. Up to 10 local automation networks are connected to Qanteon CS.
QANTEONCS-V-VPN1	Monthly service rate for providing an OpenVPN connection. This connects a local automation network to Qanteon CS.

Hardware for VPN connections

ROUTER-LAN-RAIL-03	LAN router with 4 ports for DIN rail mounting. Router for connecting a building automation network to the Kieback&Peter service platform and Qanteon CS.
ROUTER-LTE-RAIL-03	LTE and LAN 4-port router for DIN rail mounting. Router for connecting a building automation network to the Kieback&Peter service platform and Qanteon CS.



Actuators and control valves

Innovative drive technology solutions are necessary in all areas where high levels of accuracy, reliability and flexibility are required. This includes all applications in the building automation and control branch, plus industrial systems or regular use in heating, ventilation and air conditioning systems.

Kieback&Peter actuators can be used for the precise control and mixing of both liquid media (e.g. water, glycol and drinking water) and gaseous media.

Kieback&Peter actuators are based on established actuator functions from various series, which have proved their quality and reliability in practice on hundreds of thousands of occasions.
The actuators can be seamlessly integrated into the Kieback&Peter product range of digital measurement, open-loop control and closed-loop control solutions in the building automation and control field.

Existing systems can also be easily upgraded and expanded with Kieback&Peter valve actuators.

MD15-BUS-HE
and MD15-BUS-N-HE BACnet/Modbus small actuators

Small bus-capable actuator, can be switched between Modbus RTU or BACnet MS/TP. Integrated PI controller, one universal input, one universal input and output, variable actuating speed, integrated regulation, control and limiting functions. Actuator in combination with valves from the R10..20 series and valves with M30x1.5.

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Control function:	variable via BUS
Positioning stroke:	max. 4 mm
Positioning force:	nominal 100 N
Control:	BACnet MS/TP or Modbus RTU
Sound power:	<18 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD15-BUS-HE	For valves from the R10..20 series and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc.
MD15-BUS-N-HE	For valves from the R10..20 series and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc., without inputs and outputs.



MD15-BUS-HE

MD15-BUS-Q and MD15-BUS-N-Q
BACnet/Modbus small actuators

Small bus-capable actuator, can be switched between Modbus RTU or BACnet MS/TP. Integrated PI controller, one universal input, one universal input and output, various valve characteristic curves, calculation functions such as thermal performance and volume flow, hydraulic balancing via bus, variable actuating speed. Actuator only in connection with combo valves RBQ15..32.

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Control function:	variable via BUS
Positioning stroke:	max. 9 mm
Positioning force:	nominal 150 N
Control:	BACnet MS/TP or Modbus RTU
Sound power:	<18 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD15-BUS-Q	For combo valves in the RBQ15..32 series
MD15-BUS-N-Q	for RBQ15..32 series combination valves, without inputs and outputs



MD15-BUS-Q

MD50-BUS BACnet/Modbus small actuator

Small bus-capable actuator, can be switched between Modbus RTU or BACnet MS/TP. Integrated PI controller, one universal input, one universal input and output, various valve characteristic curves, calculation functions such as thermal performance and volume flow, hydraulic balancing via bus, variable actuating speed. Actuator only in combination with valves RBQ40, RBQ50 and series RBK15..50.

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Control function:	variable via BUS
Positioning stroke:	max. 14 mm
Positioning force:	nominal 500 N
Control:	BACnet MS/TP or Modbus RTU
Sound power:	<28 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD50-BUS	For RBQ40, RBQ50 and RBK15..50 valves
MD50-BUS-N	For RBQ40, RBQ50 and RBK15..50 valves without inputs and outputs



MD50-BUS

Rxx valves for thermoactuators and small actuators

Nickel-plated gunmetal two-way and three-way valves for water, suitable for thermoactuators and motor-driven small actuators.

Two-way valves with straight throughput

Two-way valves for water, suitable for thermoactuators and small motor-driven actuators.

Nominal pressure: PN 10
Positioning stroke: 2 mm
Medium temperature: Water up to +120 °C
Valve body: Gunmetal; nickel-plated
Valve connection: Pipe screw connection in accordance with DIN EN 2115



R15DQ

Article	DN	Kvs	Δp (bar)	Weight	Connection
R10D	10	1,25	1.0 bar	0,23 kg	G3/8"
R15D	15	1,35	1.0 bar	0,28 kg	G1/2"
R20D	20	2,5	0.7 bar	0,38 kg	G3/4"

Two-way valve with right-angled throughput

Two-way valves for water, suitable for thermoactuators and small motor-driven actuators.

Nominal pressure: PN 10
Positioning stroke: 2 mm
Medium temperature: Water up to +120 °C
Valve body: Gunmetal; nickel-plated
Valve connection: Pipe screw connection in accordance with DIN EN 2115

Article	DN	Kvs	Δp (bar)	Weight	Connection
R15E	15	1,35	1,0 bar	0,26 kg	G1/2"

Two-way valves - straight throughput with presetting

Two-way valves for water, suitable for thermoactuators and small motor-driven actuators. To adjust to the heat requirement, the valves have 8 flow settings for limiting the radiator mass flow rate.

Nominal pressure:	PN 10
Positioning stroke:	2 mm
Valve body:	Gunmetal, Nickel-plated
Medium temperature:	Water up to +120 °C
Valve connection:	Pipe screw connection in accordance with DIN EN 2115

Article	DN	Kvs	Δp (bar)	Weight	Connection
R10DV	10	0,049..0,86	1.0 bar	0,23 kg	G3/8"
R15DV	15	0,054..0,73	1.0 bar	0,27 kg	G1/2"
R20DV	20	0,054..0,73	0.7 bar	0,38 kg	G3/4"

Two-way valves - right-angled throughput with presetting

Two-way valves for water, suitable for thermoactuators and small motor-driven actuators. To adjust to the heat requirement, the valves have 8 flow settings for limiting the radiator mass flow rate.

Nominal pressure:	PN 10
Positioning stroke:	2 mm
Valve body:	Gunmetal, Nickel-plated
Medium temperature:	Water up to +120 °C
Valve connection:	Pipe screw connection in accordance with DIN EN 2115

Article	DN	Kvs	Δp (bar)	Weight	Connection
R15EV	15	0,049..0,86	1.0 bar	0,24 kg	G1/2"

Two-way valve in straight throughput with automatic hydraulic balancing

It can be used for applications in heating and cooling plants with a medium temperature of -10 °C to +100 °C (water or max. 50 % glycol-water mixtures). The requisite flow rate is set directly on the valve and is regulated automatically to the desired value.

- Automatic hydraulic balancing
- Flow rate set directly on the valve
- Flow rate independent of the differential pressure

Article	DN	Volume flow rate	Pressure difference	Weight	Connection
R10DQ	10	10..150 l/h	max. 60 kPA	0,29 kg	Rp3/8"
R15DQ	15	10..150 l/h	max. 60 kPA	0,34 kg	Rp1/2"
R20DQ	20	10..150 l/h	max. 60 kPA	0,41 kg	Rp3/4"

Two-way valve, right-angled throughput with automatic hydraulic balancing

It can be used for applications in heating and cooling systems with a medium temperature of -10 °C to +100 °C. The requisite flow rate is set directly on the valve and is regulated automatically to the desired value.

- Automatic hydraulic balancing
- Flow rate set directly on the valve
- Flow rate independent of the differential pressure

Article	DN	Volume flow rate	Pressure difference	Weight	Connection
R10EQ	10	10..150 l/h	max. 60 kPA	0,27 kg	Rp3/8"
R15EQ	15	10..150 l/h	max. 60 kPA	0,32 kg	Rp1/2"
R20EQ	20	10..150 l/h	max. 60 kPA	0,40 kg	Rp3/4"

MD15-HE and MD15-R-HE motor-driven actuators

Small actuator for valves R10..20 and other valves with an M30x1.5 connection manufactured by Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop and Cazzaniga.

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Positioning stroke:	max. 3 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 100 N
Control:	Three-point signal (open/stop/close), two-point signal (open/close) or continuous control 0(2)..10 V DC
Sound power:	<18 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD15-HE	For valves from the R10..20 series and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc.
MD15-R-HE	For valves of series R10..20 and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc., but with position feedback



MD15-HE

MD15-LP-HE and MD15-LP-R-HE motor-driven actuators

MD15-LP-HE and MD15-LP-R-HE actuators for three-point, two-point or continuous control systems in zone post-treatment devices for heating, ventilation and air conditioning systems.

Nominal voltage:	12..24 V AC/DC
Positioning stroke:	max. 6 mm
Actuating speed:	10 s/mm
Positioning force:	nominal 100 N
Control:	Two-point signal (open/close), three-point signal (open/stop/close) or 0(2)..10 V DC continuous control, control invertible
Sound power:	<23 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD15-LP-HE	For valves from the R10..20 series and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc.
MD15-LP-R-HE	For valves of series R10..20 and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc. with position feedback



MD15-LP-HE

Accessories for MD15-xx-HE small actuators

Z800-HW	Adapter for Danfoss series 2 (20x1)
Z801-HW	Adapter for Danfoss series 3 - 23.5 x 1.5
Z803-HW	Adapter for Danfoss RAV
Z804-HW	Adapter for Danfoss RAV-L
Z805-HW	Adapter for Vaillant 30mm
Z806-HW	Adapter for TA M28X1.5
Z807-HW	Adapter for Herz M28X1.5
Z808-HW	Adapter for Comap M28X1.5
Z809-HW	Adapter for Oventrop M30X1
Z810-HW	Adapter for Giacomini
Z811-HW	Adapter for ISTA
Z814-HW	Adapter for Uponor (Velta) Euro distributor
Z815-HW	Adapter for Uponor (Velta) Provario
Z816-HW	Adapter for Markaryd
VS3	Anti-vandalism protection only for MD15-xx-HE small actuator

MD15-FTL-HE and MD15-FTL-OV wireless actuators

Wireless-controlled, battery-powered actuator for room temperature control. Actuator for direct mounting on standard radiator valves for room-specific temperature control. The actuator is controlled on a wireless basis based on the non-proprietary EnOcean wireless protocol.

Positioning stroke:	max. 3 mm
Actuating speed:	10 s/mm
Positioning force:	nominal 100 N
Position indicator:	Stroke range scale
Interfaces:	Wireless interface; bidirectional; EnOcean wireless telegram; 868.3 MHz; < 10 mW; < 1 % duty cycle; 30 m range
Standard:	EnOcean Equipment Profile (EEP): EEP A5-20-01 (Battery Powered Actuator)
Nominal voltage:	3 alkaline AA batteries (AA, LR6 1.5 V 3400 mAh)
Sound power:	<28 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP40

MD15-FTL-HE	For valves from the R10..20 series and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc.
MD15-FTL-OV	For valves with an M30x1 connection manufactured by Oventrop (before 1998)

Accessories for battery-powered actuators

Z220	Protective battery cover only for MD15-FTL-xx small actuator



MD15-FTL-HE

MD15-CFL-HE wireless small actuator

Wireless-controlled actuator with lifetime battery charge for room temperature control. Actuator for direct mounting on standard radiator valves for room-specific temperature control. The actuator is controlled on a wireless basis based on the non-proprietary EnOcean wireless protocol.

Positioning stroke:	max. 3 mm
Actuating speed:	10,0 s/mm
Positioning force:	nominal 100 N
Interfaces:	Wireless interface; bidirectional; EnOcean wireless telegram; 868.3 MHz; < 10 mW; < 1% duty cycle; 30 m range
Standard:	EnOcean Equipment Profile (EEP): EEP A5-20-01 (battery powered actuator)
Position indicator:	Stroke range scale
Nominal voltage:	3.6 V; Li type C
Sound power:	<28 dB(A)
Ambient temperature:	0..+50 °C
Weight:	0,201 kg
Degree of protection:	IP40

MD15-CFL-HE	Wireless small actuator for valves of series R10..20 and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc.



MD15-CFL-HE

MD15-LP-FTL-HE wireless small actuator

Wireless-controlled small actuator with lifetime battery charge for room temperature control. Actuator for direct mounting on standard radiator valves for room-specific temperature control. The actuator is controlled on a wireless basis based on the non-proprietary EnOcean wireless protocol. Integrated PI controller; HTRxx room sensor and MK10W-FTL window contact can be taught in

Positioning stroke:	max. 6 mm
Actuating speed:	10,0 s/mm
Positioning force:	nominal 100 N
Interfaces:	Wireless interface; bidirectional; EnOcean wireless telegram; 868.3 MHz; < 10 mW; < 1% duty cycle; 30 m range
Standard:	EnOcean Equipment Profile (EEP): EEP A5-20-01, A5-10-10 or D5-00-01
Position indicator:	Stroke range scale
Nominal voltage:	12..24 V AC/DC
Sound power:	<23 dB(A)
Ambient temperature:	0..+50 °C
Weight:	0,225 kg
Degree of protection:	IP54

MD15-LP-FTL-HE	For valves from the R10..20 series and valves with M30x1.5 connections such as Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (from 1998 onwards), Cazzaniga, etc.



MD15-LP-FTL-HE

MD15-C motor-driven small actuator

Motor-driven small actuator for the D15xx and W15xx valves discontinued in 2003 (VST and VMT series manufactured by Controlli)

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Positioning stroke:	max. 6 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 200 N
Control:	Three-point signal (open/stop/close), two-point signal (open/close) or continuous control 0(2)..10 V DC
Sound power:	<28 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD15-HR and MD15/230-HR motor-driven small actuator

Motor-driven small actuator for BR216Z and BR316Z series HORA zone valves.

Positioning stroke:	max. 9 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 200 N
Control:	Three-point signal (open/stop/close) or two-point signal (open/close)
Sound power:	<23 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54
MD15-HR	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
MD15/230-HR	230 V AC ±10 %; 50/60 Hz

MD15-DA motor-driven small actuator

Motor-driven small actuator for use with Danfoss RA-N, RA-FN and RA-U zone valves.

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Positioning stroke:	max. 3 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 100 N
Control:	Three-point signal (open/stop/close), two-point signal (open/stop) or 0(2)..10 V DC continuous control
Sound power:	<18 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD15/230-HE motor-driven small actuator

Small actuator for R10..20 series valves and other valves with an M30x1.5 connection manufactured by Heimeier, Honeywell-MNG, Junkers, Honeywell-Baukmann, Oventrop (1998 and later) or Cazzaniga.

Nominal voltage:	230 V AC ±10 %; 50/60 Hz
Positioning stroke:	max. 3 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 100 N
Control:	Three-point signal (Open/Stop/Close) or two-point signal (Open/Close)
Sound power:	<23 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD15/230-DA motor-driven small actuator

Motor-driven small actuator for RA-N, RA-FN or RA-U series radiator valves manufactured by Danfoss

Nominal voltage:	230 V AC ±10 %; 50/60 Hz
Positioning stroke:	max. 3 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 100 N
Control:	Three-point signal (open/stop/close) or two-point signal (open/close)
Sound power:	<23 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD15/230-HR motor-driven small actuator

Motor-driven small actuator for BR216Z and BR316Z series HORA zone valves.

Nominal voltage:	230 V AC ±10 %; 50/60 Hz
Positioning stroke:	Max. 9 mm
Actuating speed:	22,0 s/mm
Positioning force:	nominal 200 N
Control:	Three-point signal (open/stop/close) or two-point signal (open/close)
Sound power:	<23 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

Accessories for MD15-xx-HE small actuators

Z800-HW	Adapter for Danfoss series 2 (20x1)
Z801-HW	Adapter for Danfoss series 3 - 23.5 x 1.5
Z803-HW	Adapter for Danfoss RAV
Z804-HW	Adapter for Danfoss RAV-L
Z805-HW	Adapter for Vaillant 30mm
Z806-HW	Adapter for TA M28X1.5
Z807-HW	Adapter for Herz M28X1.5
Z808-HW	Adapter for Comap M28X1.5
Z809-HW	Adapter for Oventrop M30X1
Z810-HW	Adapter for Giacomini
Z811-HW	Adapter for ISTA
Z814-HW	Adapter for Uponor (Velta) Euro distributor
Z815-HW	Adapter for Uponor (Velta) Provario
Z816-HW	Adapter for Markaryd
VS3	Anti-vandalism protection only for MD15-xx-HE small actuator

APR40405 small thermoactuator

Small thermoelectric actuator for opening and closing small valves and valves on heating circuit manifolds of surface heating and cooling systems.

Control function:	Normally closed (NC)
Positioning stroke:	4 mm
Positioning force:	nominal 100 N
Position indicator:	Indicator plunger on upper side of actuator
Nominal voltage	24 V AC; -10..+20 %; 50/60 Hz
Control:	Continuous; 0..10 V DC, Re = 100 kΩ
Ambient temperature:	0..+60 °C
Degree of protection:	IP54

APR40405/80	Adapted for: Oventrop, Heimeier, Tour&Anderson Thread: M30 x 1.5
APR40405/78	Adapted for: Danfoss RA Flange diameter: 23 mm
APR40405/50	Adapted for: MNG, Landis&Gyr, Siemens VDN215, Cazzaniga Thread: M30 x 1.5 (MNG, L&G)
APR40405/39	Adapted for: Oventrop (before 1998) Thread: M30 x 1.0



APR40405/39

AST40405 small thermoactuator

Small thermoelectric actuator for opening and closing small valves and valves on heating circuit manifolds of surface heating and cooling systems.

Control function:	Normally closed (NC)
Positioning stroke:	4 mm
Positioning force:	nominal 100 N
Position indicator:	Indicator plunger on upper side of actuator
Nominal voltage	24 V AC/DC; -10..+20 %; 50/60 Hz
Control:	Two-point (open/close)
Ambient temperature:	0..+60 °C
Degree of protection:	IP54

AST40405/80	Adapted for: Oventrop, Heimeier, Tour&Anderson Thread: M30 x 1.5
AST40405/78	Adapted for: Danfoss RA Flange diameter: 23 mm
AST40405/50	Adapted for: MNG, Landis&Gyr, Siemens VDN215, Cazzaniga Thread: M30 x 1.5 (MNG, L&G)
AST40405/39	Adapted for: Oventrop (before 1998) Thread: M30 x 1.0



AST40405

Kieback&Peter

APR42405 small thermoactuator

Small thermoelectric actuator for opening and closing small valves and valves on heating circuit manifolds of surface heating and cooling systems.

Control function:	Normally closed (NC)
Positioning stroke:	4 mm
Positioning force:	nominal 100 N
Position indicator:	Indicator plunger on upper side of actuator
Nominal voltage	24 V DC; -20..+20 %
Control:	Continuous; 0..10 V DC, Re = 100 kΩ
Ambient temperature:	0..+60 °C
Degree of protection:	IP54

APR42405/80	Adapted for: Oventrop, Heimeier, Tour&Anderson Thread: M30 x 1.5
APR42405/78	Adapted for: Danfoss RA Flange diameter: 23 mm
APR42405/50	Adapted for: MNG, Landis&Gyr, Siemens VDN215, Cazzaniga Thread: M30 x 1.5 (MNG, L&G)
APR42405/39	Adapted for: Oventrop (before 1998) Thread: M30 x 1.0



APR42405

AST20405 small thermoactuator

Small thermoelectric actuator for opening and closing small valves and valves on heating circuit manifolds of surface heating and cooling systems.

Control function:	Normally closed (NC)
Positioning stroke:	4 mm
Positioning force:	nominal 100 N
Position indicator:	Indicator plunger on upper side of actuator
Nominal voltage	230 V AC; -10..+10 %; 50/60 Hz
Control:	Two-point (open/close)
Ambient temperature:	0..+60 °C
Degree of protection:	IP54

AST20405/80	Adapted for: Oventrop, Heimeier, Tour&Anderson Thread: M30 x 1.5
AST20405/78	Adapted for: Danfoss RA Flange diameter: 23 mm
AST20405/50	Adapted for: MNG, Landis&Gyr, Siemens VDN215, Cazzaniga Thread: M30 x 1.5 (MNG, L&G)
AST20405/39	Adapted for: Oventrop (before 1998) Thread: M30 x 1.0



AST20405

Kieback&Peter

CBV15 and CBV20 valves with DS5 rotary actuator

6-way control ball valves with DS5 rotary actuator for use in heated and cooled ceilings or fan coil units. The ball valve is operated with a rotating shaft and a rotation angle of up to 90°. The flow rate is controlled by the rotary movement of the ball valve. To limit the flow for hydraulic balancing in heating and cooling mode, Kvs orifices are installed in the flow lines.
The Kvs orifices enable flow rate limitation and a linear opening characteristic of the ball valve. The actuator has two operating modes: “manual” and “automatic”. The actuator can be operated with “continuous control” or “two-point control”. The control type is automatically detected.

CBV15 and CBV20 6-way control ball valves

Nominal pressure:	PN 16
Valve body:	dezincification-resistant Brass
Medium temperature:	0..+90 °C
Valve connection:	DN15 G3/4 AG with euro cone according to EN 16313, DN20 G1 AG with cone



CBV15..20

Article	DN	Kvs	Δp (bar)	Weight	Connection
CBV15	15	3,2	2 bar	1,34 kg	G3/4"
CBV20	20	3,2	2 bar	1,38 kg	G1"

Accessories for CBV15 and CBV20 valves

Z208	Kvs blinds, consisting of one set of blinds each for the heating and cooling medium.

DS5 rotary actuator

Rotary actuator for CBV15 and CBV20 6-way control ball valves

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Control function:	60 s for 90° rotational angle
Actuating function:	Two-point signal (open/close) or continuous control 0(2)..10 V DC
Sound power:	<26 dB(A)
Ambient temperature:	0..+55 °C
Degree of protection:	IP54



DS5

RBQxx combo valves with hydraulic balancing

Hydraulic balancing of the power supply lines is necessary for optimal, energy-efficient operation of the heating and cooling systems. Combo valves are suitable for this.
Combo valves combine several functions. They can be used as automatic flow controllers or – when combined with an actuator – as valves for controlling recirculated hydraulic balancing of fan coils, cooling ceilings and recirculation air units, for example.
The differential pressure is kept constant by the membrane unit integrated in the RBQ combo valve as well as by the actuator-controlled regulating unit and the setpoint unit that can be set to a maximum flow value rate.
The combo valve keeps the differential pressure at a constant level even in the event of intense pressure fluctuations in the system.

RBQ15..150 combo valves

Two-way combo valves are valve combinations with automatic differential pressure-dependent flow rate control (hydraulic balancing).
The combo valve is used for precise volume flow control in air conditioning, cooling and heating systems, e.g. central heating systems, floor heating systems, fan coil systems, cooling ceilings and fan convectors.

Nominal pressure:	PN 16
Medium:	Water or water-propylene glycol mixtures and water-ethylene glycol mixtures (max. 50 %, pH value 6.5..10)

Article	DN	Volume flow rate	Pressure difference	Weight	Connection
RBQ15/0,5	15	30..210 l/h	20 to 400kPa	0,45 kg	G3/4"
RBQ15/1,1	15	90..450 l/h	20 to 400kPa	0,45 kg	G3/4"
RBQ15/1,8	15	150..1050 l/h	20 to 400kPa	0,45 kg	G3/4"
RBQ20/1,8	20	150..1050 l/h	20 to 400kPa	0,52 kg	G1"
RBQ20/2,5	20	180..1300 l/h	15 to 400kPa	0,73 kg	G3/4"
RBQ25/4,0	25	300..2000 l/h	15 to 400kPa	1,8 kg	G1 1/4"
RBQ32/6,0	32	600..3600 l/h	15 to 400kPa	1,9 kg	G1 3/4"
RBQ40	40	1500..7500 l/h	20 to 400kPa	5,7 kg	G 1 3/4"
RBQ50	50	2500..10000 l/h	20 to 400kPa	6,4 kg	G 2 3/8"
RBQ65	65	5000..20000 l/h	20 to 400kPa	27,0 kg	DN65 flange
RBQ80	80	7500..30000 l/h	20 to 400kPa	32,0 kg	DN80 flange
RBQ100	100	12500..50000 l/h	20 to 400kPa	45,0 kg	DN100 flange
RBQ125	125	27000..108000 l/h	20 to 400kPa	69,0 kg	DN125 flange
RBQ150	150	36000..150000 l/h	20 to 400kPa	84,0 kg	DN150 flange

Accessories

Z221	Measuring valves for RBQ40..100 combo valves
Z223	Adapter for RBQ40, RBQ50 combo valves for MD50-xx
Z224-2	Adapter for RBQ65..100 combo valves for MD100-xx

MD15-Q motor-driven small actuator

Small actuator for continuous control in zone post-treatment devices for heating, ventilation and air conditioning systems.

Positioning stroke:	max. 4 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 150 N
Control:	Two-point signal (Open/Close) or continuous control 0(2)..10 V DC
Position indicator:	Stroke range scale
Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Sound power:	<23 dB(A)
Ambient temperature:	0..+50 °C
Weight:	0,25 kg
Degree of protection:	IP54

MD15-Q	for RBQ15..32 combo valves



MD15-Q

MF15-R-Q valve actuator with electrical emergency control function

- Maintenance-free valve actuator for stroke movements up to 4 mm
- Self-adapting length of stroke
- Emergency control function in the event of a power failure: Adjustable emergency control end position
- Position feedback
- Optionally adjustable valve block protection feature
- Optionally adjustable characteristic curve compensation

  Actuator only in connection with combo valves RBQ15..32.

Positioning stroke:	max. 4 mm
Actuating speed:	22,0 s/mm
Positioning force:	nominal 150 N
Control:	Two-point signal (Open/Close), continuous control 0(2)..10 V DC; < 0.5 mA, invertible
Position indicator:	Stroke range scale
Nominal voltage:	24 V AC ±10 %; 50/60 Hz and 24 V DC ±10 %
Sound power:	<23 dB(A)
Ambient temperature:	0..+50 °C
Weight:	0,25 kg
Degree of protection:	IP54

MF15-R-Q	Small actuator with electrical emergency control function for RBQ15..32 combo valves



MF15-R-Q

MD50 intelligent valve actuator

- Maintenance-free compact actuator for stroke movements up to 10 mm
- Self-adapting length of stroke
- Very simple installation due to automatic coupling with positive connection
- Manual adjustment when disconnected from the power supply
- Electronic limit stop depending on force
- Optionally adjustable valve block protection feature
- Optionally adjustable characteristic curve compensation
- Actuator only in combination with RBQ40 and RBQ50 valves and the RBK series.

Positioning stroke:	max. 10 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 500 N
Control:	Three-point (Open/Stop/Close), two-point (Open/Close) or continuous 0(2)..10 V DC; < 0.5 mA; invertible
Sound power:	<30 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD50	For RBQ40 and RBQ50 valves as well as the RBK series 24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
MD50-E	with position feedback and limit switch for RBQ40 and RBQ50 valves from the RBK series 24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
MD50-R	with position feedback and limit switch for RBQ40 and RBQ50 valves from the RBK series 24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
MD50/230	For RBQ40 and RBQ50 valves as well as the RBK series 230 V AC ±10 %; 50/60 Hz; 3.5 VA



MD50

MF50-R valve actuator
with electrical emergency control function

- Maintenance-free valve actuator for stroke movements up to 10 mm
- Self-adapting length of stroke
- Very simple installation due to automatic coupling with positive connection
- Emergency control function in the event of a power failure: Adjustable emergency control end position
- Control signal invertible
- Optionally adjustable valve block protection feature
- Optionally adjustable characteristic curve compensation

Actuator only in combination with RBK15..50, RBQ40 and RBQ50 valves.

Positioning stroke:	max. 10 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 500 N
Position indicator:	Stroke range scale
Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Sound power:	<30 dB(A)
Ambient temperature:	0..+50 °C
Weight:	0,325 kg
Degree of protection:	IP54



MF50-R

RBKxx and RBKxx-BK valves with actuators

RBK three-way valve, PN 1

Gunmetal three-way valve with male threads and screw fitting connections in accordance with DIN, airtight.

Valve characteristic curve:	A—AB same percentage up to DN32; linear with DN40 and up
	B—AB linear
Nominal pressure:	PN 16
Medium:	Water
Medium temperature:	up to 120 °C
Valve body:	Gunmetal, CC491K
Valve connection:	Male thread ISO 228/1



RBK15/1,0

Article	DN	Kvs	Weight	Connection	Stroke
RBK15/0,63	15	0,63	1,06 kg	G1 1/8"	10 mm
RBK15/1,0	15	1,0	1,06 kg	G1 1/8"	10 mm
RBK15/1,6	15	1,6	1,06 kg	G1 1/8"	10 mm
RBK15/2,5	15	2,5	1,06 kg	G1 1/8"	10 mm
RBK20/4,0	20	4,0	1,16 kg	G1 1/4"	10 mm
RBK20/6,3	20	6,3	1,16 kg	G1 1/4"	10 mm
RBK25/6,3	25	6,3	1,38 kg	G1 1/2"	10 mm
RBK25/8,0	25	8,0	1,38 kg	G1 1/2"	10 mm
RBK25/10,0	25	10,0	1,38 kg	G1 1/2"	10 mm
RBK32/10,0	32	10,0	1,92 kg	G2"	10 mm
RBK32/16,0	32	16,0	1,92 kg	G2"	10 mm
RBK40	40	25,0	2,34 kg	G2 1/4"	10 mm
RBK50	50	35,0	3,50 kg	G2 3/4"	10 mm

RBKxx-BK two-way valves (PN 16)

Gunmetal three-way valve with blank cover. Male threads and screw fitting connections in accordance with DIN, airtight.

Valve characteristic curve:	Same percentage up to DN32; linear with DN40 and up
Nominal pressure:	PN 16
Medium:	Water
Medium temperature:	Up to 120 °C
Valve body:	Gunmetal, CC491K
Valve connection:	Male thread ISO 228/1



RBK15/1,0-BK

Article	DN	Kvs	Weight	Connection	Stroke
RBK15/0,63-BK	15	0,63	1,17 kg	G1 1/8"	10 mm
RBK15/1,0-BK	15	1,0	1,17 kg	G1 1/8"	10 mm
RBK15/1,6-BK	15	1,6	1,17 kg	G1 1/8"	10 mm
RBK15/2,5-BK	15	2,5	1,17 kg	G1 1/8"	10 mm
RBK20/4,0-BK	20	4,0	1,29 kg	G1 1/4"	10 mm
RBK20/6,3-BK	20	6,3	1,29 kg	G1 1/4"	10 mm
RBK25/6,3-BK	25	6,3	1,54 kg	G1 1/2"	10 mm
RBK25/8,0-BK	25	8,0	1,54 kg	G1 1/2"	10 mm
RBK25/10,0-BK	25	10,0	1,54 kg	G1 1/2"	10 mm
RBK32/10,0-BK	32	10,0	2,20 kg	G2"	10 mm
RBK32/16,0-BK	32	16,0	2,20 kg	G2"	10 mm
RBK40-BK	40	25,0	2,69 kg	G2 1/4"	10 mm
RBK50-BK	50	35,0	4,00 kg	G2 3/4"	10 mm

Accessories for RBKxx, RBKxx-BK valves

Z210	DN15 female thread fitting
Z211	DN20 female thread fitting
Z212	DN25 female thread fitting
Z213	DN32 female thread fitting
Z214	DN40 female thread fitting
Z215	DN50 female thread fitting

MD50 intelligent valve actuator

- Maintenance-free compact actuator for stroke movements up to 10 mm
- Self-adapting length of stroke
- Very simple installation due to automatic coupling with positive connection
- Manual adjustment when disconnected from the power supply
- Electronic limit stop depending on force
- Optionally adjustable valve block protection feature
- Optionally adjustable characteristic curve compensation
- Actuator only in combination with RBQ40 and RBQ50 valves and the RBK series.

Positioning stroke:	max. 10 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 500 N
Control:	Three-point (Open/Stop/Close), two-point (Open/Close) or continuous 0(2)..10 V DC; < 0.5 mA; invertible
Sound power:	<30 dB(A)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

MD50	For RBQ40 and RBQ50 valves as well as the RBK series 24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
MD50-E	with position feedback and limit switch for RBQ40 and RBQ50 valves from the RBK series 24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
MD50-R	with position feedback and limit switch for RBQ40 and RBQ50 valves from the RBK series 24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
MD50/230	For RBQ40 and RBQ50 valves as well as the RBK series 230 V AC ±10 %; 50/60 Hz; 3.5 VA



MD50

MF50-R valve actuator
with electrical emergency control function

- Maintenance-free valve actuator for stroke movements up to 10 mm
- Self-adapting length of stroke
- Very simple installation due to automatic coupling with positive connection
- Emergency control function in the event of a power failure: Adjustable emergency control end position
- Control signal invertible
- Optionally adjustable valve block protection feature
- Optionally adjustable characteristic curve compensation

Actuator only in combination with RBK15..50, RBQ40 and RBQ50 valves.

Positioning stroke:	max. 10 mm
Actuating speed:	22 s/mm
Positioning force:	nominal 500 N
Position indicator:	Stroke range scale
Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Sound power:	<30 dB(A)
Ambient temperature:	0..+50 °C
Weight:	0,325 kg
Degree of protection:	IP54



MF50-R

Control valves

Control valves are mechanical devices that work on auxiliary power and are used to change the volume flow of a liquid in a closed pipeline.

RK three-way valve, PN 6

Compact three-way valve, airtight, flange in accordance with DIN.

Valve characteristic curve:	A—AB same percentage B—AB linear
Nominal pressure:	PN 6
Medium:	Water up to +120 °C; 6 bar
Medium temperature:	0..+130 °C (max. 120 °C at 6 bar)
Valve body:	Gray iron; GG25/ EN-JL104
Valve connection:	Flanges acc. to EN 1092-2 type 21



RK40

Article	DN	Kvs	Weight	Connection	Stroke
RK15/0,63	15	0,63	2,8 kg	Flange	14 mm
RK15/1,0	15	1,0	2,8 kg	Flange	14 mm
RK15/1,25	15	1,25	2,8 kg	Flange	14 mm
RK15/1,6	15	1,6	2,8 kg	Flange	14 mm
RK15/2,5	15	2,5	2,8 kg	Flange	14 mm
RK15	15	4,0	2,8 kg	Flange	14 mm
RK20/5,0	20	5,0	3,0 kg	Flange	14 mm
RK20	20	6,3	3,0 kg	Flange	14 mm
RK25/8,0	25	8,0	3,7 kg	Flange	14 mm
RK25	25	10,0	3,7 kg	Flange	14 mm
RK32/12,5	32	12,5	5,6 kg	Flange	14 mm
RK32	32	16,0	5,6 kg	Flange	14 mm
RK40/20	40	20,0	7,0 kg	Flange	14 mm
RK40	40	25,0	7,0 kg	Flange	14 mm
RK50/31,5	50	31,5	8,4 kg	Flange	14 mm
RK50	50	40,0	8,4 kg	Flange	14 mm
RK65/50K	65	50,0	14,7 kg	Flange	20 mm
RK65K	65	63,0	14,7 kg	Flange	20 mm
RK65/50	65	50,0	14,7 kg	Flange	30 mm
RK65	65	63,0	14,7 kg	Flange	30 mm
RK80/80	80	80,0	22,0 kg	Flange	30 mm
RK80	80	100,0	22,0 kg	Flange	30 mm
RK100/125	100	125,0	31,0 kg	Flange	30 mm
RK100	100	160,0	31,0 kg	Flange	30 mm

RKxx-BF two-way valves (PN 6)

Compact three-way valve with blank flange as two-way valve, airtight, flange in accordance with DIN

Valve characteristic curve:	equal percentage
Nominal pressure:	PN 6
Medium:	Water up to +120 °C; 6 bar
Medium temperature:	0..+130 °C (max. 120 °C at 6 bar)
Valve body:	Gray iron; GG25/ EN-JL104
Valve connection:	Flange in accordance with DIN EN 1092-2



RK20-BF

Article	DN	Kvs	Weight	Connection	Stroke
RK15/0,63-BF	15	0,63	2,8 kg	Flange	14 mm
RK15/1,0-BF	15	1,0	2,8 kg	Flange	14 mm
RK15/1,25-BF	15	1,25	2,8 kg	Flange	14 mm
RK15/1,6-BF	15	1,6	2,8 kg	Flange	14 mm
RK15/2,5-BF	15	2,5	2,8 kg	Flange	14 mm
RK15-BF	15	4,0	2,8 kg	Flange	14 mm
RK20/5,0-BF	20	5,0	3,0 kg	Flange	14 mm
RK20-BF	20	6,3	3,0 kg	Flange	14 mm
RK25/8,0-BF	25	8,0	3,7 kg	Flange	14 mm
RK25-BF	25	10,0	3,7 kg	Flange	14 mm
RK32/12,5-BF	32	12,5	5,8 kg	Flange	14 mm
RK32-BF	32	16,0	5,8 kg	Flange	14 mm
RK40/20-BF	40	20,0	8,8 kg	Flange	14 mm
RK40-BF	40	25,0	8,8 kg	Flange	14 mm
RK50/31,5-BF	50	31,5	10,5 kg	Flange	14 mm
RK50-BF	50	40,0	10,5 kg	Flange	14 mm
RK65/50K-BF	65	50,0	17,9 kg	Flange	20 mm
RK65K-BF	65	63,0	17,9 kg	Flange	20 mm
RK65/50-BF	65	50,0	17,9 kg	Flange	30 mm
RK65-BF	65	63,0	17,9 kg	Flange	30 mm
RK80/80-BF	80	80,0	26,3 kg	Flange	30 mm
RK80-BF	80	100	26,3 kg	Flange	30 mm
RK100/125-BF	100	125	37,1 kg	Flange	30 mm
RK100-BF	100	160	37,1 kg	Flange	30 mm

RB three-way valve, PN 16

Gunmetal three-way valve with male threads and screw fitting connections in accordance with DIN, airtight.

Valve characteristic curve:	A—AB same percentage B—AB linear
Nominal pressure:	PN 16
Medium:	Water up to +120 °C; 16 bar
Medium temperature:	0..150 °C (max. 120 °C at 16 bar)
Valve body:	Gunmetal R-5; CC491K
Valve connection:	Male thread in accordance with DIN ISO 228/1, with female thread fittings in accordance with DIN ISO 7/1



RB32

Article	DN	Kvs	Weight	Connection	Stroke
RB15/0,63	15	0,63	0,9 kg	G1/2"	12 mm
RB15/1,0	15	1,0	0,9 kg	G1/2"	12 mm
RB15/1,25	15	1,25	0,9 kg	G1/2"	12 mm
RB15/1,6	15	1,6	0,9 kg	G1/2"	12 mm
RB15/2,5	15	2,5	0,9 kg	G1/2"	12 mm
RB15	15	4,0	0,9 kg	G1/2"	12 mm
RB20/5,0	20	5,0	1,4 kg	G3/4"	12 mm
RB20	20	6,3	1,4 kg	G3/4"	12 mm
RB25/8,0	25	8,0	1,7 kg	G1"	14 mm
RB25	25	10,0	1,7 kg	G1"	14 mm
RB32/12,5	32	12,5	3,4 kg	G1 1/4"	14 mm
RB32	32	16,0	3,4 kg	G1 1/4"	14 mm
RB40/20	40	20,0	4,0 kg	G1 1/2"	14 mm
RB40	40	25,0	4,0 kg	G1 1/2"	14 mm
RB50/31,5	50	31,5	5,6 kg	G2"	14 mm
RB50	50	40,0	5,6 kg	G2"	14 mm

RBxx-BK two-way valves (PN 16)

Gunmetal three-way valve with blank cover. Male threads and screw fitting connections in accordance with DIN, airtight.

Valve characteristic curve:	Equal percentage
Nominal pressure:	PN 16
Medium:	Water up to +120 °C; 16 bar
Medium temperature:	0..150 °C (max. 120 °C at 16 bar)
Valve body:	Gunmetal R-5; CC491K
Valve connection:	Male thread in accordance with DIN ISO 228/1, with female thread fittings in accordance with DIN ISO 7/1



RB20-BK

Article	DN	Kvs	Weight	Connection	Stroke
RB15/0,63-BK	15	0,63	0,9 kg	G1/2"	12 mm
RB15/1,0-BK	15	1,0	0,9 kg	G1/2"	12 mm
RB15/1,25-BK	15	1,25	0,9 kg	G1/2"	12 mm
RB15/1,6-BK	15	1,6	0,9 kg	G1/2"	12 mm
RB15/2,5-BK	15	2,5	0,9 kg	G1/2"	12 mm
RB15-BK	15	4,0	0,9 kg	G1/2"	12 mm
RB20-BK	20	6,3	1,4 kg	G3/4"	12 mm
RB25/8,0-BK	25	8,0	1,7 kg	G1"	14 mm
RB25-BK	25	10,0	1,7 kg	G1"	14 mm
RB32/12,5-BK	32	12,5	3,4 kg	G1 1/4"	14 mm
RB32-BK	32	16,0	3,4 kg	G1 1/4"	14 mm
RB40/20-BK	40	20,0	4,0 kg	G1 1/2"	14 mm
RB40-BK	40	25,0	4,0 kg	G1 1/2"	14 mm
RB50/31,5-BK	50	31,5	5,6 kg	G2"	14 mm
RB50-BK	50	40,0	5,6 kg	G2"	14 mm

RBK three-way valve, PN 1

Gunmetal three-way valve with male threads and screw fitting connections in accordance with DIN, airtight.

Valve characteristic curve:	A—AB same percentage up to DN32; linear with DN40 and up
	B—AB linear
Nominal pressure:	PN 16
Medium:	Water
Medium temperature:	up to 120 °C
Valve body:	Gunmetal, CC491K
Valve connection:	Male thread ISO 228/1



RBK15/1,0

Article	DN	Kvs	Weight	Connection	Stroke
RBK15/0,63	15	0,63	1,06 kg	G1 1/8"	10 mm
RBK15/1,0	15	1,0	1,06 kg	G1 1/8"	10 mm
RBK15/1,6	15	1,6	1,06 kg	G1 1/8"	10 mm
RBK15/2,5	15	2,5	1,06 kg	G1 1/8"	10 mm
RBK20/4,0	20	4,0	1,16 kg	G1 1/4"	10 mm
RBK20/6,3	20	6,3	1,16 kg	G1 1/4"	10 mm
RBK25/6,3	25	6,3	1,38 kg	G1 1/2"	10 mm
RBK25/8,0	25	8,0	1,38 kg	G1 1/2"	10 mm
RBK25/10,0	25	10,0	1,38 kg	G1 1/2"	10 mm
RBK32/10,0	32	10,0	1,92 kg	G2"	10 mm
RBK32/16,0	32	16,0	1,92 kg	G2"	10 mm
RBK40	40	25,0	2,34 kg	G2 1/4"	10 mm
RBK50	50	35,0	3,50 kg	G2 3/4"	10 mm

RBKxx-BK two-way valves (PN 16)

Gunmetal three-way valve with blank cover. Male threads and screw fitting connections in accordance with DIN, airtight.

Valve characteristic curve:	Same percentage up to DN32; linear with DN40 and up
Nominal pressure:	PN 16
Medium:	Water
Medium temperature:	Up to 120 °C
Valve body:	Gunmetal, CC491K
Valve connection:	Male thread ISO 228/1



RBK15/1,0-BK

Article	DN	Kvs	Weight	Connection	Stroke
RBK15/0,63-BK	15	0,63	1,17 kg	G1 1/8"	10 mm
RBK15/1,0-BK	15	1,0	1,17 kg	G1 1/8"	10 mm
RBK15/1,6-BK	15	1,6	1,17 kg	G1 1/8"	10 mm
RBK15/2,5-BK	15	2,5	1,17 kg	G1 1/8"	10 mm
RBK20/4,0-BK	20	4,0	1,29 kg	G1 1/4"	10 mm
RBK20/6,3-BK	20	6,3	1,29 kg	G1 1/4"	10 mm
RBK25/6,3-BK	25	6,3	1,54 kg	G1 1/2"	10 mm
RBK25/8,0-BK	25	8,0	1,54 kg	G1 1/2"	10 mm
RBK25/10,0-BK	25	10,0	1,54 kg	G1 1/2"	10 mm
RBK32/10,0-BK	32	10,0	2,20 kg	G2"	10 mm
RBK32/16,0-BK	32	16,0	2,20 kg	G2"	10 mm
RBK40-BK	40	25,0	2,69 kg	G2 1/4"	10 mm
RBK50-BK	50	35,0	4,00 kg	G2 3/4"	10 mm

Accessories for RBKxx, RBKxx-BK valves

Z210	DN15 female thread fitting
Z211	DN20 female thread fitting
Z212	DN25 female thread fitting
Z213	DN32 female thread fitting
Z214	DN40 female thread fitting
Z215	DN50 female thread fitting

RF three-way valve, PN 16

Compact three-way valve, airtight, flange in accordance with DIN.

Valve characteristic curve:	A—AB same percentage B—AB linear
Nominal pressure:	PN 16
Medium temperature:	0..130 °C (max. 120 °C at 16 bar)
Valve body:	Gray iron; GG25/ EN-JL1040
Valve connection:	Flanges acc. to DIN EN 1092-2 type 21



RF40

Article	DN	Kvs	Weight	Connection	Stroke
RF15/0,63	15	0,63	3,1 kg	Flange	14 mm
RF15/1,0	15	1,0	3,1 kg	Flange	14 mm
RF15/1,25	15	1,25	3,1 kg	Flange	14 mm
RF15/1,6	15	1,6	3,1 kg	Flange	14 mm
RF15/2,5	15	2,5	3,1 kg	Flange	14 mm
RF15	15	4,0	3,1 kg	Flange	14 mm
RF20/5,0	20	5,0	4,0 kg	Flange	14 mm
RF20	20	6,3	4,0 kg	Flange	14 mm
RF25/8,0	25	8,0	5,0 kg	Flange	14 mm
RF25	25	10,0	5,0 kg	Flange	14 mm
RF32/12,5	32	12,5	7,6 kg	Flange	14 mm
RF32	32	16,0	7,6 kg	Flange	14 mm
RF40/20	40	20,0	9,1 kg	Flange	14 mm
RF40	40	25,0	9,1 kg	Flange	14 mm
RF50/31,5	50	31,5	11,6 kg	Flange	14 mm
RF50	50	40,0	11,6 kg	Flange	14 mm
RF65/50K	65	50,0	19,1 kg	Flange	20 mm
RF65K	65	63,0	19,1 kg	Flange	20 mm
RF65/50	65	50,0	19,8 kg	Flange	30 mm
RF65	65	63,0	19,8 kg	Flange	30 mm
RF80/80	80	80	24,0 kg	Flange	30 mm
RF80	80	100	24,0 kg	Flange	30 mm
RF100/125	100	125,0	36,0 kg	Flange	30 mm
RF100	100	160,0	36,0 kg	Flange	30 mm
RF125	125	250,0	50,0 kg	Flange	50 mm
RF150/315	150	315,0	76,0 kg	Flange	50 mm

RFxx-BF two-way valves (PN 16)

Compact three-way valve with blank flange as two-way valve, airtight, flange in accordance with DIN

Valve characteristic curve:	equal percentage
Nominal pressure:	PN 16
Medium:	Water up to +120 °C; 6 bar
Medium temperature:	0..+130 °C (max. +120 °C at 16 bar)
Valve body:	Gray iron; GG25/ EN-JL1040
Valve connection:	Flanges acc. to DIN EN 1092-2 type 2



RF20-BF

Article	DN	Kvs	Weight	Connection	Stroke
RF15/0,63-BF	15	0,63	4,1 kg	Flange	14 mm
RF15/1,0-BF	15	1,0	4,1 kg	Flange	14 mm
RF15/1,25-BF	15	1,25	4,1 kg	Flange	14 mm
RF15/1,6-BF	15	1,6	4,1 kg	Flange	14 mm
RF15/2,5-BF	15	2,5	4,1 kg	Flange	14 mm
RF15-BF	15	4,0	4,1 kg	Flange	14 mm
RF20/5,0-BF	20	5,0	5,3 kg	Flange	14 mm
RF20-BF	20	6,3	5,3 kg	Flange	14 mm
RF25/8,0-BF	25	8,0	6,6 kg	Flange	14 mm
RF25-BF	25	10,0	6,6 kg	Flange	14 mm
RF32/12,5-BF	32	12,5	10,0 kg	Flange	14 mm
RF32-BF	32	16,0	10,0 kg	Flange	14 mm
RF40/20-BF	40	20,0	11,8 kg	Flange	14 mm
RF40-BF	40	25,0	11,8 kg	Flange	14 mm
RF50/31,5-BF	50	31,5	13,3 kg	Flange	14 mm
RF50-BF	50	40,0	13,3 kg	Flange	14 mm
RF65/50K-BF	65	50,0	24,8 kg	Flange	20 mm
RF65K-BF	65	63,0	24,8 kg	Flange	20 mm
RF65/50-BF	65	50,0	24,8 kg	Flange	30 mm
RF65-BF	65	63,0	24,8 kg	Flange	20 mm
RF80/80-BF	80	80	29,8 kg	Flange	30 mm
RF80-BF	80	100	29,8 kg	Flange	30 mm
RF100/125-BF	100	125,0	42,9 kg	Flange	30 mm
RF100-BF	100	160,0	42,9 kg	Flange	30 mm
RF125-BF	125	250,0	60,0 kg	Flange	50 mm
RF150/315-BF	150	315,0	88,8 kg	Flange	50 mm

RGD two-way valves (PN 25)

Two-way valve for precise control of liquid, gas and vapor. Spheroidal graphite iron housing (GGG 40.3), flange in accordance with DIN, maintenance-free spindle seal with PTFE.

Valve characteristic curve:	Equal percentage
Nominal pressure:	PN 25
Medium:	Water up to +120 °C; Hot water and steam up to +200 °C; 20 bar
Medium temperature:	0..+200 °C
Valve body:	Ductile iron
Valve connection:	Flange in accordance with DIN EN 1092-2



RGD32

Article	DN	Kvs	Weight (kg)	Stroke (mm)
RGD15/0,4	15	0,4	3,2 kg	15 mm
RGD15/0,63	15	0,63	3,2 kg	15 mm
RGD15/1,0	15	1,0	3,2 kg	15 mm
RGD15/1,6	15	1,6	3,2 kg	15 mm
RGD15/2,5	15	2,5	3,2 kg	15 mm
RGD15	15	4,0	3,2 kg	15 mm
RGD25/6,3	25	6,3	4,8 kg	15 mm
RGD25	25	10,0	4,8 kg	15 mm
RGD32	32	16,0	6,3 kg	15 mm
RGD40	40	25,0	8,7 kg	15 mm
RGD50	50	40,0	11,2 kg	30 mm
RGD65	65	63,0	15,5 kg	30 mm
RGD80	80	100,0	21,3 kg	30 mm
RGD100	100	160,0	32,6 kg	30 mm

RWG three-way valve, PN 25

Three-way valve for fine mixing of liquids, gases and vapors. Spheroidal graphite iron housing (GGG 40.3), flange in accordance with DIN, maintenance-free spindle seal with PTFE.

Valve characteristic curve A—AB:	Equal percentage
Valve characteristic curve B—AB:	linear
Nominal pressure:	PN 25
Medium:	Water up to +120 °C; 25 bar Hot water up to +200 °C; 20 bar
Medium temperature:	0..+200 °C
Valve body:	Ductile iron
Valve connection:	Flange in accordance with DIN EN 1092-2



RWG25

Article	DN	Kvs	Weight (kg)	Stroke (mm)
RWG15/1,0	15	1	5,1 kg	15 mm
RWG15/1,6	15	1,6	5,1 kg	15 mm
RWG15/2,5	15	2,5	5,1 kg	15 mm
RWG15	15	4	5,1 kg	15 mm
RWG25/6,3	25	6,3	7,1 kg	15 mm
RWG25	25	10	7,1 kg	15 mm
RWG32	32	16	9,7 kg	15 mm
RWG40	40	25	13 kg	15 mm
RWG50	50	40	16,8 kg	30 mm
RWG65	65	63	23,5 kg	30 mm
RWG80	80	100	30 kg	30 mm
RWG100	100	160	46,5 kg	30 mm

RGDE two-way valves, PN25

The spheroidal graphite iron two-way valves RGDE25..100 with pressure-relief cone are used for precisely regulating liquid and vapor flow rates.

Valve characteristic curve A—AB:	Equal percentage
Nominal pressure:	PN 25
	Water up to +120 °C; 25 bar
Medium:	Hot water and steam up to +200 °C; 20 bar
Valve body:	Ductile iron
Valve connection:	Flanges in accordance with DIN



RGDE25

Article	DN	Kvs	Weight (kg)	Stroke (mm)
RGDE25	25	10,0	7,0 kg	20 mm
RGDE32	32	16,0	9,0 kg	20 mm
RGDE40	40	25,0	12,0 kg	20 mm
RGDE50	50	40,0	15,0 kg	20 mm
RGDE65	65	63,0	25,0 kg	30 mm
RGDE80	80	100,0	34,5 kg	30 mm
RGDE100	100	160	48,0 kg	30 mm

Two-way valves RD, PN 16

Nodular iron two-way valves RD65..100 are used for precisely regulating liquid and vapor flow rates.

Valve characteristic curve A—AB:	Equal percentage
Nominal pressure:	PN 16
	Water up to +120 °C; 16 bar
Medium:	Hot water and steam up to +200 °C; 13 bar
Valve body:	Ductile iron
Valve connection:	Flanges in accordance with DIN



RD65

Article	DN	Kvs	Weight (kg)	Stroke (mm)
RD65	65	63	16,5 kg	30 mm
RD100	100	100	32,6 kg	30 mm

Actuators

Actuators are electrical motors for operating valves.
Innovative drive technology solutions are necessary in all areas where high levels of accuracy, reliability and flexibility are required. This includes all applications in the building automation and control branch, plus industrial systems or regular use in heating, ventilation and air conditioning systems. Kieback&Peter actuators can be used for the precise control and mixing of both liquid media (e.g. water, glycol and drinking water) and gaseous media. Kieback&Peter actuators are based on established actuator functions from past series, which have proved their quality and reliability in practice on hundreds of thousands of occasions. The actuators can be seamlessly integrated into the Kieback&Peter product range of digital measurement, open-loop control and closed-loop control solutions in the building automation and control field.

MD100 valve actuator

- Maintenance-free compact valve actuator for stroke movements up to 20 mm
- 50/65K (-BF), RB15..50 (-BK), RF15..50/65K (-BF), RGD15..40, RWG15..40
- Self-adjusting position marks on the actuator
- Simple mounting using drive console
- Adjustable actuating speed
- Automatic valve blocking control with rectification program
- Direct control, open/close
- Variant (-E) with additional auxiliary switch with two galvanically separated changers
- Auxiliary switch function adjustable: optional message of valve positions open, closed, two valve positions (adjustable) or malfunction message



MD100

Nominal voltage:	24 V AC/DC ±10 %; 50/60 Hz
Control:	Two-point signal (Open/Close), three-point signal (Open/Stop/Close) or 0(2)..10 V DC continuous control; 0(4)..20 mA; invertible
Reply:	0(2)..10 V DC; 5 mA; 0(4)..20 mA; Ri = 0.5 kΩ; invertible
Manual mode:	activatable by dip switches, adjustment with hand wheel
Ambient temperature:	0..+55 °C
Degree of protection:	IP54 (upper semi-sphere), IP40 (lower semi-sphere)

Article	Stroke	Force	Actuating speed
MD100	0 to 20 mm	1000 N	1,9..9 s/mm
MD100-E	0 to 20 mm	1000 N	1,9..9 s/mm
MF100	0 to 20 mm	1000 N	1,9..9 s/mm

MD100-RE/MD100-RE-E valve actuators

- Maintenance-free compact valve actuator for stroke movements up to 20 mm
- combinable with valve series RK15..50/65K (-BF), RB15..50 (-BK), RF15..50/65K (-BF), RGD15..40, RWG15..40
- Self-adjusting position marks on the actuator
- Simple mounting using drive console
- Manual automatic switch in the hood
- Automatic valve blocking control with rectification program
- Direct control, open/close
- Variant (-E) with additional auxiliary switch with two galvanically separated changers
- Auxiliary switch function adjustable: optional message of valve positions open, closed, two valve positions (adjustable) or malfunction message



MD100-RE

Nominal voltage:	24 V AC/DC ±10 %; 50/60 Hz
Control:	0(2)..10 V DC; Re=100 kΩ; invertible, or 0(4)..20 mA; invertible
Reply:	0(2)..10 V DC; 5 mA; 0(4)..20 mA; Ri = 0.5 kΩ; invertible
Manual mode:	through magnet switch and handwheel
Ambient temperature:	0..+55 °C
Degree of protection:	IP54 (upper semi-sphere), IP40 (lower semi-sphere)

Article	Stroke	Force	Actuating speed
MD100-RE	0 to 20 mm	1000 N	1,9..9 s/mm
MD100-RE-E	0 to 20 mm	1000 N	1,9..9 s/mm

MD100/230 valve actuator

- Maintenance-free compact valve actuator for stroke movements up to 20 mm
- combinable with valve series RK15..50/65K (-BF), RB15..50 (-BK), RF15..50/65K (-BF), RGD15..40, RWG15..40, RBQ65..100
- Simple mounting using drive console
- Simple electrical plug connection
- Adjustable actuating speed
- Marking of end positions using position marks
- Variant (-E) with additional auxiliary switch with two galvanically separated changers
- Auxiliary switch function adjustable: optional message of valve positions open, closed, two valve positions (adjustable) or malfunction message



MD100/230

Nominal voltage:	110..230 V ±10 %, 50/60 Hz
Control:	Two-point signal (Open/Close), three-point signal (Open/Stop/Close)
Manual mode:	activatable by dip switches, adjustment with hand wheel
Ambient temperature:	0..+55 °C
Degree of protection:	IP54

Article	Stroke	Force	Actuating speed
MD100/230	0 to 20 mm	1000 N	1..9 s/mm
MD100/230-E	0 to 20 mm	1000 N	1..9 s/mm

MD100-BUS valve actuator

- Maintenance-free bus-capable valve actuator for stroke movements up to 20 mm
- combinable with valve series RK15..50/65K (-BF), RB15..50 (-BK), RF15..50/65K (-BF), RGD15..40, RWG15..40
- Simple mounting using drive console
- Manual/automatic switch and manual adjustment
- Valve block control with remedy program
- Airtight function
- Direct control, open/close

Nominal voltage:	24 V AC ±10 %; 50/60 Hz or 24 V DC ±10 %
Control:	Directly via BACnet MS/TP or Modbus through automation station or gateway
Manual mode:	activatable by dip switches, adjustment with hand wheel
Ambient temperature:	0..+55 °C
Degree of protection:	IP54



MD100-BUS-6/4

Article	Stroke	Force	Actuating speed
MD100-BUS-4/1	0 to 20mm	1000 N	1..9 s/mm
MD100-BUS-4/1-E	0 to 20mm	1000 N	1..9 s/mm
MD100-BUS-6/4	0 to 20mm	1000 N	1..9 s/mm
MD100-BUS-6/4-E	0 to 20mm	1000 N	1..9 s/mm

MF100-SR valve actuator with emergency control function

- Self-adapting length of stroke
- Emergency control function in the event of a power failure: Valve spindle extending
- DIN test and monitoring markings
- Type test according to DIN EN 14597 for delivery in unit with valves RGD, RWG and RGDE
- Can be combined with valve series RB15..50 (-BK), RF15..50/65K (-BF), RK15..50/65K (-BF), RGD15..40, RWG15..40 and the pressure-relief valves RGDE25..50
- Simple mounting using drive console
- Independent control valve adaptation due to automatic coupling
- Manual emergency function check
- Control signal invertible
- Electronic limit stop depending on force
- Valve exercise
- Direct control, open/close
- Integrated heating module for ambient temperatures < 5 °C
- Variant (-E) with two galvanically separated changers
- Auxiliary switch function: Position message in the upper or lower end position, invertible by DIP switch



MF100-SR

Nominal voltage:	24 V; 50 Hz ±15 %
Control:	Two-point signal (Open/Close), three-point signal (Open/Stop/Close) or 0(2)..10 V DC continuous control; 0(4)..20 mA; invertible
Reply:	0..10 V DC; max. 5 mA; 0(4)..20 mA
Manual mode:	Hexagon socket (under the actuator cover)
Ambient temperature:	0..+55 °C
Degree of protection:	IP54

Article	Stroke	Force	Actuating speed
MF100-SR	0 to 20 mm	1000 N	1..9 s/mm
MF100-SR-E	0 to 20 mm	1000 N	1..9 s/mm

MF100-SR-Z valve actuator with emergency control function

- Emergency control function in the event of a power failure: Drive spindle retracting without current
- combinable with valve series RK15..50/65K(-BF), RB15..50(-BK), RF15..50/65K(-BF), RWG15..40 and RGD15..40
- Simple mounting using drive console
- Electronic limit stop depending on force
- Direct control, open/close
- Integrated heating module for ambient temperatures < 5 °C
- Variant (-E) with two galvanically separated changers



MF100-SR-Z

Nominal voltage:	24 V AC ±15 %; 50/60 Hz; 24 V DC ±15 %
Control:	Two-point signal (Open/Close), three-point signal (Open/Stop/Close) or 0(2)..10 V DC continuous control; 0(4)..20 mA; invertible
Reply:	0(2)..10 V DC; 5 mA; 0(4)..20 mA; Ri = 0.5 kΩ; invertible
Manual mode:	Hexagon socket (under the actuator cover)
Ambient temperature:	0..+55 °C
Degree of protection:	IP54

Article	Stroke	Force	Actuating speed
MF100-SR-Z	0 to 20 mm	1000 N	1..9 s/mm
MF100-SR-Z-E	0 to 20 mm	1000 N	1..9 s/mm

MF100-SR-L valve actuator with emergency control function

- Self-adapting length of stroke
- Emergency control function in the event of a power failure: Valve spindle extending
- DIN test and monitoring markings
- Type test according to DIN EN 14597 for delivery in unit with valves RGD, RWG and RGDE
- combinable with valve series RD65, RGD50..80, RWG50..80, RGDE65..80
- Simple mounting using drive console
- Independent control valve adaptation due to automatic coupling
- Manual emergency function check
- Control signal invertible
- Electronic limit stop depending on force
- Valve exercise
- Direct control, open/close
- Integrated heating module for ambient temperatures < 5 °C
- Variant (-E) with two galvanically separated changers



MF100-SR-L

Nominal voltage:	24 V; 50 Hz ±15 %
Control:	Two-point signal (Open/Close), three-point signal (Open/Stop/Close) or 0(2)..10 V DC continuous control; 0(4)..20 mA; invertible
Reply:	0..10 V DC; max. 5 mA; 0(4)..20 mA
Manual mode:	Hexagon socket (under the actuator cover)
Ambient temperature:	0..+55 °C
Degree of protection:	IP54

Article	Stroke	Force	Actuating speed
MF100-SR-L	0 to 30 mm	1000 N	1..9 s/mm
MF100-SR-L-E	0 to 30 mm	1000 N	1..9 s/mm

MF100/230-SR valve actuator with emergency function

- Self-adapting length of stroke
- Emergency control function in the event of a power failure: Valve spindle extending
- DIN test and monitoring markings
- Type test according to DIN EN 14597 for delivery in unit with valves RGD, RWG and RGDE
- Can be combined with valve series RB15..50 (-BK), RF15..50/65K (-BF), RK15..50/65K (-BF), RGD15..40, RWG15..40 and the pressure-relief valves RGDE25..50
- Simple mounting using drive console
- Independent control valve adaptation due to automatic coupling
- Manual emergency function check
- Manual adjustment
- Electronic limit stop depending on force
- Direct control, open/close
- Integrated heating module for ambient temperatures < 5 °C
- Variant (-E) with two galvanically separated changers



MF100/230-SR

Actuator:	Brushless DC motor
Nominal voltage:	110..230 V ±10 %, 50/60 Hz
Control:	Three-point; energized 230 V or floating
Reply:	0(2)..10 V DC; 5 mA; 0(4)..20 mA; Ri = 0.5 kΩ; invertible
Manual mode:	Hexagon socket (under the actuator cover)
Ambient temperature:	0..+55 °C
Degree of protection:	IP54

Article	Stroke	Force	Actuating speed
MF100/230-SR	0 to 20 mm	1000 N	1..9 s/mm
MF100/230-SR-E	0 to 20 mm	1000 N	1..9 s/mm

MF100/230-SR-Z valve actuator with emergency function

- Self-adapting length of stroke MF100/230-SR-Z
- Emergency control function in the event of a power failure: Valve spindle retracting
- combinable with valve series RB15..50 (-BK), RF15..50/65K (-BF), RK15..50/65K (-BF)
- Simple mounting using drive console
- Independent control valve adaptation due to automatic coupling
- Manual emergency function check
- Electronic limit stop depending on force
- Direct control, open/close
- Integrated heating module for ambient temperatures < 5 °C
- Variant (-E) with two galvanically separated changers



MF100/230-SR-Z

Nominal voltage:	110..230 V ±10 %, 50/60 Hz
Control:	Three-point; energized 230 V or floating
Reply:	0(2)..10 V DC; 5 mA; 0(4)..20 mA; Ri = 0.5 kΩ; invertible
Manual mode:	Hexagon socket (under the actuator cover)
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

Article	Stroke	Force	Actuating speed
MF100/230-SR-Z	0 to 20 mm	1000 N	1..9 s/mm
MF100/230-SR-Z-E	0 to 20 mm	1000 N	1..9 s/mm

MF100/230-SR-L valve actuator with emergency function

- Self-adapting length of stroke
- Emergency control function in the event of a power failure: Valve spindle extending
- DIN test and monitoring markings
- Type test according to DIN EN 14597 for delivery in unit with valves RGD, RWG and RGDE
- combinable with valve series RD65, RGD50..80, RWG50..80, RGDE65..80
- Simple mounting using drive console
- Independent control valve adaptation due to automatic coupling
- Manual emergency function check
- Electronic limit stop depending on force
- Direct control, open/close
- Integrated heating module for ambient temperatures < 5 °C
- Variant (-E) with two galvanically separated changers



MF100/230-SR-L

Nominal voltage:	110..230 V ±10 %, 50/60 Hz
Control:	Three-point; energized 230 V or floating
Reply:	0(2)..10 V DC; 5 mA; 0(4)..20 mA; Ri = 0.5 kΩ; invertible
Manual mode:	Hexagon socket (under the actuator cover)
Ambient temperature:	0..+55 °C
Degree of protection:	IP54

Article	Stroke	Force	Actuating speed
MF100/230-SR-L	0 to 30 mm	1000 N	1..9 s/mm
MF100/230-SR-L-E	0 to 30 mm	1000 N	1..9 s/mm

MD200BUS valve actuator fieldbus

- Maintenance-free, bus-capable valve actuator for stroke movements of 3..20 mm
- Equipped with CAN bus controller for connecting to the fieldbus of the DDC automation system
- Simple mounting using drive console
- Data collector for three additional binary inputs and two additional analog inputs
- Status data (e.g. manual intervention, valve blocking, 0..100 % setpoint, position indicator) is transferred to the automation station via the fieldbus
- Manual/automatic switch and manual adjustment
- Valve block control with remedy program
- Airtight function
- Direct control, open/close



MD200BUS

Nominal voltage:	24 V AC ±10 %; 13.0 VA
Actuator:	Step motor
Control:	CAN; fieldbus
Inputs:	3 digital inputs (DI) 2 analog inputs (AI); 0..10 V, KP10
Manual mode:	Using switch and handwheel
Ambient temperature:	0..+50 °C
Degree of protection:	IP54

Article	Weight	Stroke	Force	Actuating speed
MD200BUS	1,46 kg	3 to 20mm	850 N	6..9.3 s/mm
MD200BUS-E	1,46 kg	3 to 20mm	850 N	6..9.3 s/mm

MD250 valve actuator

- Maintenance-free compact valve actuator for stroke movements up to 50 mm
- combinable with valve series RK65..100 (-BF) , RF65..100 (-BF) , RD65..100 , RGD50..100 , RWG50..100 , RGDE25..100
- Self-adjusting position marks on the actuator
- Simple mounting using drive console
- Adjustable actuating speed
- Automatic valve blocking control with rectification program
- Direct control, open/close
- Variant (-E) with additional auxiliary switch with two galvanically separated changers
- Auxiliary switch function adjustable: optional message of valve positions open, closed, two valve positions (adjustable) or malfunction message

Nominal voltage:	24 V AC ±10 %, 50/60 Hz; 24 V DC ±10 %
Control:	Two-point signal (Open/Close), three-point signal (Open/Stop/Close) or 0(2)..10 V DC continuous control; 0(4)..20 mA; invertible
Reply:	0(2)..10 V DC; 5 mA; 0(4)..20 mA; Ri = 0.5 kΩ; invertible
Manual mode:	activatable by DIP switches
Ambient temperature:	0..+55 °C
Degree of protection:	IP54

Article	Stroke	Force	Actuating speed
MD250	0 to 50 mm	2500 N	3,8..11 s/mm
MD250-E	0 to 50 mm	2500 N	3,8..11 s/mm

MF250 valve actuator with emergency control function

- Emergency control function in the event of a power failure: selectable position of the valve spindle or in upper end position or lower end position
- Maintenance-free compact valve actuator for stroke movements up to 50 mm
- combinable with valve series RK65..100 (-BF) , RF65..100 (-BF) , RD65..100 , RGD50..100 , RWG50..100 , RGDE25..100
- Self-adjusting position marks on the actuator
- Simple mounting using drive console
- Adjustable actuating speed
- Automatic valve blocking control with rectification program
- Direct control, open/close
- Auxiliary switch function adjustable: optional message of valve positions open, closed, two valve positions (adjustable) or malfunction message

Nominal voltage:	24 V AC ±10 %, 50/60 Hz; 24 V DC ±10 %
Control:	Two-point signal (Open/Close), three-point signal (Open/Stop/Close) or 0(2)..10 V DC continuous control; 0(4)..20 mA; invertible
Reply:	0(2)..10 V DC; 5 mA; 0(4)..20 mA; Ri = 0.5 kΩ; invertible
Manual mode:	activatable by DIP switches, adjustment with hand wheel
Ambient temperature:	0..+55 °C
Degree of protection:	IP54

Article	Stroke	Force	Actuating speed
MF250	0 to 50 mm	2500 N	3,8..11 s/mm

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MD250/230, MD250/230-E valve actuators

- Maintenance-free compact valve actuator for stroke movements up to 50 mm
- combinable with valve series RK65..100 (-BF) , RF65..100 (-BF) , RD65..100 , RGD50..100 , RWG50..100 , RGDE25..100
- Self-adjusting position marks on the actuator
- Simple mounting using drive console
- Adjustable actuating speed
- Automatic valve blocking control with rectification program
- Direct control, open/close
- Variant (-E) with additional auxiliary switch with two galvanically separated changers
- Auxiliary switch function adjustable: optional message of valve positions open, closed, two valve positions (adjustable) or malfunction message

Nominal voltage:	110..230 V AC ±10 %; 50/60 Hz
Control:	Three-point signal (Open/Stop/Close); minimum switch-on time 0.6 s and minimum switch-off time 2 s two-point signal (Open/Close)
Manual mode:	activatable by DIP switches
Ambient temperature:	0..+55 °C
Degree of protection:	IP54

Article	Stroke	Force	Actuating speed
MD250/230	0 to 50 mm	2500 N	3,8..11 s/mm
MD250/230-E	0 to 50 mm	2500 N	3,8..11 s/mm

MD300/MD300-E valve actuators

- Maintenance-free compact valve actuator for stroke movements up to 50 mm
- combinable with valve series RF125..150
- Self-adjusting position marks on the actuator
- Simple mounting using drive console
- Adjustable actuating speed
- Automatic valve blocking control with rectification program
- Direct control, open/close
- Variant (-E) with additional auxiliary switch with two galvanically separated changers
- Auxiliary switch function adjustable: optional message of valve positions open, closed, two valve positions (adjustable) or malfunction message

Nominal voltage:	24 V AC ±10 %, 50/60 Hz; 24 V DC ±10 %
Control:	Two-point signal (Open/Close), three-point signal (Open/Stop/Close) or 0(2)..10 V DC continuous control; 0(4)..20 mA; invertible
Reply:	0(2)..10 V DC; 5 mA; 0(4)..20 mA; Ri = 0.5 kΩ; invertible
Manual mode:	activatable by DIP switches
Ambient temperature:	0..+55 °C
Degree of protection:	IP54

Article	Stroke	Force	Actuating speed
MD300	0 to 50 mm	3000 N	3,8..11 s/mm
MD300-E	0 to 50 mm	3000 N	3,8..11 s/mm

MD300/230 valve actuator

- Maintenance-free compact valve actuator for stroke movements up to 50 mm
- combinable with valve series RF125..150
- Self-adjusting position marks on the actuator
- Simple mounting using drive console
- Adjustable actuating speed
- Automatic valve blocking control with rectification program
- Direct control, open/close
- Variant (-E) with additional auxiliary switch with two galvanically separated changers
- Auxiliary switch function adjustable: optional message of valve positions open, closed, two valve positions (adjustable) or malfunction message

Nominal voltage:	110..230 V AC ±10 %; 50/60 Hz
Control:	Three-point signal (Open/Stop/Close) or two-point signal (Open/Close)
Reply:	0(2)..10 V DC; 5 mA; 0(4)..20 mA; Ri = 0.5 kΩ; invertible
Manual mode:	activatable by DIP switches
Ambient temperature:	0..+55 °C
Degree of protection:	IP54

Article	Stroke	Force	Actuating speed
MD300/230	0 to 30 mm	3000 N	3,8..11 s/mm
MD300/230-E	0 to 30 mm	3000 N	3,8..11 s/mm

RK three-way valve with PN 6 actuator

Compact three-way valve, airtight, flange in accordance with DIN.
With motor-driven actuator.



RK32MD100

RK three-way valve with MD100, PN 6 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK15/0,63MD100	15	0,63	6,0 bar	3,7 kg	configurable
RK15/1,0MD100	15	1,0	6,0 bar	3,7 kg	configurable
RK15/1,25MD100	15	1,25	6,0 bar	3,7 kg	configurable
RK15/1,6MD100	15	1,6	6,0 bar	3,7 kg	configurable
RK15/2,5MD100	15	2,5	6,0 bar	3,7 kg	configurable
RK15MD100	15	4,0	6,0 bar	3,7 kg	configurable
RK20/5,0MD100	20	5,0	6,0 bar	4,4 kg	configurable
RK20MD100	20	6,3	6,0 bar	4,4 kg	configurable
RK25/8,0MD100	25	8,0	6,0 bar	5,1 kg	configurable
RK25MD100	25	10	6,0 bar	5,1 kg	configurable
RK32/12,5MD100	32	12,5	6,0 bar	6,9 kg	configurable
RK32MD100	32	16	6,0 bar	6,9 kg	configurable
RK40/20MD100	40	20	5,5 bar	8,2 kg	configurable
RK40MD100	40	25	5,5 bar	8,2 kg	configurable
RK50/31,5MD100	50	31,5	3,5 bar	9,3 kg	configurable
RK50MD100	50	40	3,5 bar	9,3 kg	configurable
RK65/50KMD100	65	50	1,5 bar	15,6 kg	configurable
RK65KMD100	65	63	1,5 bar	15,6 kg	configurable

RK three-way valve with MD100-RE, PN 6 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK15/0,63MD100-RE	15	0,63	6,0 bar	3,7 kg	configurable
RK15/1,0MD100-RE	15	1,0	6,0 bar	3,7 kg	configurable
RK15/1,25MD100-RE	15	1,25	6,0 bar	3,7 kg	configurable
RK15/1,6MD100-RE	15	1,6	6,0 bar	3,7 kg	configurable
RK15/2,5MD100-RE	15	2,5	6,0 bar	3,7 kg	configurable
RK15MD100-RE	15	4,0	6,0 bar	3,7 kg	configurable
RK20/5,0MD100-RE	20	5,0	6,0 bar	4,4 kg	configurable
RK20MD100-RE	20	6,3	6,0 bar	4,4 kg	configurable
RK25/8,0MD100-RE	25	8,0	6,0 bar	5,1 kg	configurable
RK25MD100-RE	25	10	6,0 bar	5,1 kg	configurable
RK32/12,5MD100-RE	32	12,5	6,0 bar	6,9 kg	configurable
RK32MD100-RE	32	16	6,0 bar	6,9 kg	configurable
RK40/20MD100-RE	40	20	5,5 bar	8,2 kg	configurable
RK40MD100-RE	40	25	5,5 bar	8,2 kg	configurable
RK50/31,5MD100-RE	50	31,5	3,5 bar	9,3 kg	configurable
RK50MD100-RE	50	40	3,5 bar	9,3 kg	configurable
RK65/50KMD100-RE	65	50	1,5 bar	15,6 kg	configurable
RK65KMD100-RE	65	63	1,5 bar	15,6 kg	configurable

RK three-way valve with MD100/230, PN 6 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK15/0,63MD100/230	15	0,63	6,0 bar	3,7 kg	configurable
RK15/1,0MD100/230	15	1,0	6,0 bar	3,7 kg	configurable
RK15/1,25MD100/230	15	1,25	6,0 bar	3,7 kg	configurable
RK15/1,6MD100/230	15	1,6	6,0 bar	3,7 kg	configurable
RK15/2,5MD100/230	15	2,5	6,0 bar	3,7 kg	configurable
RK15MD100/230	15	4,0	6,0 bar	3,7 kg	configurable
RK20/5,0MD100/230	20	5,0	6,0 bar	4,4 kg	configurable
RK20MD100/230	20	6,3	6,0 bar	4,4 kg	configurable
RK25/8,0MD100/230	25	8,0	6,0 bar	5,1 kg	configurable
RK25MD100/230	25	10	6,0 bar	5,1 kg	configurable
RK32/12,5MD100/230	32	12,5	6,0 bar	6,9 kg	configurable
RK32MD100/230	32	16	6,0 bar	6,9 kg	configurable
RK40/20MD100/230	40	20	5,5 bar	8,2 kg	configurable
RK40MD100/230	40	25	5,5 bar	8,2 kg	configurable
RK50/31,5MD100/230	50	31,5	3,5 bar	9,3 kg	configurable
RK50MD100/230	50	40	3,5 bar	9,3 kg	configurable
RK65/50KMD100/230	65	50	1,5 bar	15,6 kg	configurable
RK65KMD100/230	65	63	1,5 bar	15,6 kg	configurable

RK three-way valve with MF100-SR, PN 6 actuator

Emergency control function: Valve: Closed

Valve characteristic curve: A—AB = same percentage
B—AB = linear

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK15/0,63MF100-SR	15	0,63	6,0 bar	3,7 kg	configurable
RK15/1,0MF100-SR	15	1,0	6,0 bar	3,7 kg	configurable
RK15/1,6MF100-SR	15	1,6	6,0 bar	3,7 kg	configurable
RK15/2,5MF100-SR	15	2,5	6,0 bar	3,7 kg	configurable
RK15MF100-SR	15	4,0	6,0 bar	3,7 kg	configurable
RK20MF100-SR	20	6,3	6,0 bar	4,4 kg	configurable
RK25MF100-SR	25	10	6,0 bar	5,1 kg	configurable
RK32MF100-SR	32	16	6,0 bar	6,9 kg	configurable
RK40MF100-SR	40	25	5,5 bar	8,2 kg	configurable
RK50MF100-SR	50	40	3,5 bar	9,3 kg	configurable
RK65KMF100-SR	65	63	1,5 bar	15,6 kg	configurable

RK three-way valve with MF100-SR-Z, PN 6 actuator

Emergency control function: Valve: Closed

Valve characteristic curve: A—AB = same percentage
B—AB = linear

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK15/0,63MF100-SR-Z	15	0,63	6,0 bar	3,7 kg	configurable
RK15/1,0MF100-SR-Z	15	1,0	6,0 bar	3,7 kg	configurable
RK15/1,6MF100-SR-Z	15	1,6	6,0 bar	3,7 kg	configurable
RK15/2,5MF100-SR-Z	15	2,5	6,0 bar	3,7 kg	configurable
RK15MF100-SR-Z	15	4,0	6,0 bar	3,7 kg	configurable
RK20MF100-SR-Z	20	6,3	6,0 bar	4,4 kg	configurable
RK25MF100-SR-Z	25	10	6,0 bar	5,1 kg	configurable
RK32MF100-SR-Z	32	16	6,0 bar	6,9 kg	configurable
RK40MF100-SR-Z	40	25	5,5 bar	8,2 kg	configurable
RK50MF100-SR-Z	50	40	3,5 bar	9,3 kg	configurable
RK65KMF100-SR-Z	65	63	1,5 bar	15,6 kg	configurable

RK three-way valve with MF100/230-SR actuator, PN 6

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK15BMF100/230-SR	15	0,63	6,0 bar	3,7 kg	configurable
RK15/1,0MF100/230-SR	15	1,0	6,0 bar	3,7 kg	configurable
RK15/1,6MF100/230-SR	15	1,6	6,0 bar	3,7 kg	configurable
RK15/2,5MF100/230-SR	15	2,5	6,0 bar	3,7 kg	configurable
RK15MF100/230-SR	15	4,0	6,0 bar	3,7 kg	configurable
RK20MF100/230-SR	20	6,3	6,0 bar	4,4 kg	configurable
RK25MF100/230-SR	25	10	6,0 bar	5,1 kg	configurable
RK32MF100/230-SR	32	16	6,0 bar	6,9 kg	configurable
RK40MF100/230-SR	40	25	5,5 bar	8,2 kg	configurable
RK50MF100/230-SR	50	40	3,5 bar	9,3 kg	configurable
RK65KMF100/230-SR	65	63	1,5 bar	15,6 kg	configurable

RK three-way valve with MD200BUS, PN 6 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK15/1,0MD200BUS	15	1,0	6,0 bar	3,8 kg	130
RK15/1,6MD200BUS	15	1,6	6,0 bar	3,8 kg	130
RK15/2,5MD200BUS	15	2,5	6,0 bar	3,8 kg	130
RK15MD200BUS	15	4,0	6,0 bar	3,8 kg	130
RK20MD200BUS	20	6,3	6,0 bar	4,3 kg	130
RK25MD200BUS	25	10	6,0 bar	5,3 kg	130
RK32MD200BUS	32	16	6,0 bar	6,8 kg	130
RK40MD200BUS	40	25	4,9 bar	8,3 kg	130
RK50MD200BUS	50	40	3,0 bar	9,8 kg	130
RK65KMD200BUS	65	63	1,7 bar	15,9 kg	186

RK three-way valve with MD250, PN 6 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK65/50MD250	65	50	6,0 bar	16,9 kg	configurable
RK65MD250	65	63	6,0 bar	16,9 kg	configurable
RK80/80MD250	80	80	4,0 bar	24,2 kg	configurable
RK80MD250	80	100	4,0 bar	24,2 kg	configurable
RK100/125MD250	100	125	2,4 bar	33,2 kg	configurable
RK100MD250	100	160	2,4 bar	33,2 kg	configurable

RK three-way valve with MD250/230, PN 6 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK65/50MD250/230	65	50	6,0 bar	17,0 kg	configurable
RK65MD250/230	65	63	6,0 bar	17,0 kg	configurable
RK80/80MD250/230	80	80	4,0 bar	24,3 kg	configurable
RK80MD250/230	80	100	4,0 bar	24,3 kg	configurable
RK100/125MD250/230	100	125	2,4 bar	33,3 kg	configurable
RK100MD250/230	100	160	2,4 bar	33,3 kg	configurable

RKxx-BF two-way valves with actuator (PN 6)

Compact three-way valve with blank flange as two-way valve, airtight, flange in accordance with DIN.
With motor-driven actuator.

RKxx-BF two-way valves with MD100, PN 6 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK15/0,63-BFMD100	15	0,63	6,0 bar	4,3 kg	configurable
RK15/1,0-BFMD100	15	1,0	6,0 bar	4,3 kg	configurable
RK15/1,25-BFMD100	15	1,25	6,0 bar	4,3 kg	configurable
RK15/1,6-BFMD100	15	1,6	6,0 bar	3,7 kg	configurable
RK15/2,5-BFMD100	15	2,5	6,0 bar	3,8 kg	configurable
RK15-BFMD100	15	4,0	6,0 bar	4,3 kg	configurable
RK20/5,0-BFMD100	20	5,0	6,0 bar	5,2 kg	configurable
RK20-BFMD100	20	6,3	6,0 bar	5,2 kg	configurable
RK25/8,0-BFMD100	25	8,0	6,0 bar	6,0 kg	configurable
RK25-BFMD100	25	10	6,0 bar	5,1 kg	configurable
RK32/12,5-BFMD100	32	16	6,0 bar	8,2 kg	configurable
RK32-BFMD100	32	16	6,0 bar	8,2 kg	configurable
RK40/20-BFMD100	40	20	5,5 bar	9,9 kg	configurable
RK40-BFMD100	40	25	5,5 bar	9,9 kg	configurable
RK50/31,5-BFMD100	50	31,5	3,5 bar	11,4 kg	configurable
RK50-BFMD100	50	40	3,5 bar	11,4 kg	configurable
RK65/50K-BFMD100	65	50	1,5 bar	18,0 kg	configurable
RK65K-BFMD100	65	63	1,5 bar	18,0 kg	configurable

RKxx-BF two-way valves with MD100-RE, PN 6 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK15/0,63-BFMD100-RE	15	0,63	6,0 bar	4,3 kg	configurable
RK15/1,0-BFMD100-RE	15	1,0	6,0 bar	4,3 kg	configurable
RK15/1,25-BFMD100-RE	15	1,25	6,0 bar	4,3 kg	configurable
RK15/1,6-BFMD100-RE	15	1,6	6,0 bar	4,3 kg	configurable
RK15/2,5-BFMD100-RE	15	2,5	6,0 bar	4,3 kg	configurable
RK15-BFMD100-RE	15	4,0	6,0 bar	4,3 kg	configurable
RK20/5,0-BFMD100-RE	20	5,0	6,0 bar	5,2 kg	configurable
RK20-BFMD100-RE	20	6,3	6,0 bar	5,2 kg	configurable
RK25/8,0-BFMD100-RE	25	8,0	6,0 bar	6,0 kg	configurable
RK25-BFMD100-RE	25	10	6,0 bar	6,0 kg	configurable
RK32/12,5-BFMD100-RE	32	16	6,0 bar	8,2 kg	configurable
RK32-BFMD100-RE	32	16	6,0 bar	8,2 kg	configurable
RK40/20-BFMD100-RE	40	20	5,5 bar	9,9 kg	configurable
RK40-BFMD100-RE	40	40	5,5 bar	9,9 kg	configurable
RK50/31,5-BFMD100-RE	50	31,5	3,5 bar	11,4 kg	configurable
RK50-BFMD100-RE	50	40	3,5 bar	11,4 kg	configurable
RK65/50K-BFMD100-RE	65	50	1,5 bar	18,0 kg	configurable
RK65K-BFMD100-RE	65	63	1,5 bar	18,0 kg	configurable

RKxx-BF two-way valves with MD100/230, PN 6 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK15B-BFMD100/230	15	0,63	6,0 bar	4,3 kg	configurable
RK15/1,0-BFMD100/230	15	1,0	6,0 bar	4,3 kg	configurable
RK15H-BFMD100/230	15	1,25	6,0 bar	4,3 kg	configurable
RK15/1,6-BFMD100/230	15	1,6	6,0 bar	3,7 kg	configurable
RK15/2,5-BFMD100/230	15	2,5	6,0 bar	3,8 kg	configurable
RK15-BFMD100/230	15	4,0	6,0 bar	4,3 kg	configurable
RK20/5,0-BFMD100/230	20	5,0	6,0 bar	5,2 kg	configurable
RK20-BFMD100/230	20	6,3	6,0 bar	5,2 kg	configurable
RK25/8,0-BFMD100/230	25	8,0	6,0 bar	6,0 kg	configurable
RK25-BFMD100/230	25	10	6,0 bar	5,1 kg	configurable
RK32I-BFMD100/230	32	16	6,0 bar	8,2 kg	configurable
RK32-BFMD100/230	32	16	6,0 bar	8,2 kg	configurable
RK40/20-BFMD100/230	40	20	5,5 bar	9,9 kg	configurable
RK40-BFMD100/230	40	25	5,5 bar	9,9 kg	configurable
RK50J-BFMD100/230	50	31,5	3,5 bar	11,4 kg	configurable
RK50-BFMD100/230	50	40	3,5 bar	11,4 kg	configurable
RK65/50K-BFMD100/230	65	50	1,5 bar	18,0 kg	configurable
RK65K-BFMD100/230	65	63	1,5 bar	18,0 kg	configurable

RKxx-BF two-way valves with MF100-SR, PN 6 actuator

Emergency control function: Valve: Closed

Valve characteristic curve: A—AB = same percentage
B—AB = linear

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK15/0,63-BFMF100-SR	15	0,63	6.0 bar	4,3 kg	configurable
RK15/1,0-BFMF100-SR	15	1,0	6.0 bar	4,3 kg	configurable
RK15/1,6-BFMF100-SR	15	1,6	6.0 bar	4,3 kg	configurable
RK15/2,5-BFMF100-SR	15	2,5	6.0 bar	4,3 kg	configurable
RK15-BFMF100-SR	15	4,0	6.0 bar	4,3 kg	configurable
RK20-BFMF100-SR	20	6,3	6.0 bar	5,2 kg	configurable
RK25-BFMF100-SR	25	10	6.0 bar	6,0 kg	configurable
RK32-BFMF100-SR	32	16	6.0 bar	8,2 kg	configurable
RK40-BFMF100-SR	40	25	5.5 bar	9,9 kg	configurable
RK50-BFMF100-SR	65	40	3.5 bar	11,4 kg	configurable
RK65K-BFMF100-SR	65	63	1.5 bar	18,0 kg	configurable

RKxx-BF two-way valves with MF100-SR-Z, PN 6 actuator

Emergency control function: Valve: Closed

Valve characteristic curve: A—AB = same percentage
B—AB = linear

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK15B-BFMF100-SR-Z	15	0,63	6,0 bar	4,3 kg	configurable
RK15C-BFMF100-SR-Z	15	1,0	6,0 bar	4,3 kg	configurable
RK15D-BFMF100-SR-Z	15	1,6	6,0 bar	4,3 kg	configurable
RK15E-BFMF100-SR-Z	15	2,5	6,0 bar	4,3 kg	configurable
RK15-BFMF100-SR-Z	15	4,0	6,0 bar	4,3 kg	configurable
RK20-BFMF100-SR-Z	20	6,3	6,0 bar	5,2 kg	configurable
RK25-BFMF100-SR-Z	25	10	6,0 bar	6,0 kg	configurable
RK32-BFMF100-SR-Z	32	16	6,0 bar	8,2 kg	configurable
RK40-BFMF100-SR-Z	40	25	5,5 bar	9,9 kg	configurable
RK50-BFMF100-SR-Z	50	40	3,5 bar	11,4 kg	configurable
RK65K-BFMF100-SR-Z	65	63	1,5 bar	18,0 kg	configurable

RKxx-BF two-way valves with MF100/230-SR, PN 6

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK15B-BFMF100/230-SR	15	0,63	6,0 bar	4,3 kg	configurable
RK15C-BFMF100/230-SR	15	1,0	6,0 bar	4,3 kg	configurable
RK15D-BFMF100/230-SR	15	1,6	6,0 bar	4,3 kg	configurable
RK15E-BFMF100/230-SR	15	2,5	6,0 bar	4,3 kg	configurable
RK15-BFMF100/230-SR	15	4,0	6,0 bar	4,3 kg	configurable
RK20-BFMF100/230-SR	20	6,3	6,0 bar	5,2 kg	configurable
RK25-BFMF100/230-SR	25	10	6,0 bar	6,0 kg	configurable
RK32-BFMF100/230-SR	32	16	6,0 bar	8,2 kg	configurable
RK40-BFMF100/230-SR	40	25	5,5 bar	9,9 kg	configurable
RK50-BFMF100/230-SR	50	40	3,5 bar	11,4 kg	configurable
RK65K-BFMF100/230-SR	65	63	1,5 bar	18,0 kg	configurable

RKxx-BF two-way valves with MD200BUS, PN 6 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK32-BFMD200BUS	32	16	6,0 bar	6,8 kg	130
RK40-BFMD200BUS	40	25	4,9 bar	8,3 kg	130
RK50-BFMD200BUS	50	40	3,0 bar	9,8 kg	130
RK65K-BFMD200BUS	65	63	1,7 bar	15,6 kg	186

RKxx-BF two-way valves with MD250, PN 6 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK65/50-BFMD250	65	50	6,0 bar	20,1 kg	configurable
RK65-BFMD250	65	63	6,0 bar	20,1 kg	configurable
RK80/80-BFMD250	80	80	4,0 bar	28,5 kg	configurable
RK80-BFMD250	80	100	4,0 bar	28,5 kg	configurable
RK100/125-BFMD250	100	125	2,4 bar	39,3 kg	configurable
RK100-BFMD250	100	160	2,4 bar	39,3 kg	configurable

RKxx-BF two-way valves with MD250/230, PN 6 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RK65/50-BFMD250/230	65	50	6,0 bar	20,2 kg	configurable
RK65-BFMD250/230	65	63	6,0 bar	20,2 kg	configurable
RK80/80-BFMD250/230	80	80	4,0 bar	28,6 kg	configurable
RK80-BFMD250/230	80	100	4,0 bar	28,6 kg	configurable
RK100G-BFMD250/230	100	125	2,4 bar	39,4 kg	configurable
RK100-BFMD250/230	100	160	2,4 bar	39,4 kg	configurable

RB three-way valve with PN 16 actuator

Gunmetal three-way valve with male threads and screw fitting connections in accordance with DIN, airtight.
With motor-driven actuator.



RB32MD100

RB three-way valve with MD100, PN 16 actuator

Article	DN	Kvs	Δp (bar)	Weight	Connec-tion	Travel time (s)
RB15/0,63MD100	15	0,63	16 bar	2,2 kg	G1/2"	configurable
RB15/1,0MD100	15	1,0	16 bar	2,9 kg	G1/2"	configurable
RB15/1,25MD100	15	1,25	16 bar	2,9 kg	G1/2"	configurable
RB15/1,6MD100	15	1,6	16 bar	2,2 kg	G1/2"	configurable
RB15/2,5MD100	15	2,5	16 bar	2,2 kg	G1/2"	configurable
RB15MD100	15	4,0	16 bar	2,2 kg	G1/2"	configurable
RB20/5,0MD100	20	5,0	16 bar	2,7 kg	G3/4"	configurable
RB20MD100	20	6,3	16 bar	2,7 kg	G3/4"	configurable
RB25/8,0MD100	25	8,0	15 bar	2,9 kg	G1"	configurable
RB25MD100	25	10	15 bar	2,9 kg	G1"	configurable
RB32/12,5MD100	32	12,5	9 bar	4,6 kg	G1 1/4"	configurable
RB32MD100	32	16	9 bar	4,6 kg	G1 1/4"	configurable
RB40/20MD100	40	20	5,5 bar	5,3 kg	G1 1/2"	configurable
RB40MD100	40	25	5,5 bar	5,3 kg	G1 1/2"	configurable
RB50/31,5MD100	50	31,5	3,5 bar	6,7 kg	G2"	configurable
RB50MD100	50	40	3,5 bar	6,7 kg	G2"	configurable

RB three-way valve with MD100-RE, PN 16 actuator

Article	DN	Kvs	Δp (bar)	Weight	Connec-tion	Travel time (s)
RB15/0,63MD100-RE	15	0,63	16 bar	2,2 kg	G1/2"	configurable
RB15/1,0MD100-RE	15	1,0	16 bar	2,2 kg	G1/2"	configurable
RB15/1,25MD100-RE	15	1,25	16 bar	2,2 kg	G1/2"	configurable
RB15/1,6MD100-RE	15	1,6	16 bar	2,2 kg	G1/2"	configurable
RB15/2,5MD100-RE	15	2,5	16 bar	2,2 kg	G1/2"	configurable
RB15MD100-RE	15	4,0	16 bar	2,2 kg	G1/2"	configurable
RB20/5,0MD100-RE	20	5,0	16 bar	2,7 kg	G3/4"	configurable
RB20MD100-RE	20	6,3	16 bar	2,7 kg	G3/4"	configurable
RB25/8,0MD100-RE	25	8,0	15 bar	2,9 kg	G1"	configurable
RB25MD100-RE	25	10,0	15 bar	2,9 kg	G1"	configurable
RB32/12,5MD100-RE	32	12,5	9 bar	4,6 kg	G1 1/4"	configurable
RB32MD100-RE	32	16,0	9 bar	4,6 kg	G1 1/4"	configurable
RB40/20MD100-RE	40	20,0	5,5 bar	5,3 kg	G1 1/2"	configurable
RB40MD100-RE	40	25,0	5,5 bar	5,3 kg	G1 1/2"	configurable
RB50/31,5MD100-RE	50	31,5	3,5 bar	6,7 kg	G2"	configurable
RB50MD100-RE	50	40,0	3,5 bar	6,7 kg	G2"	configurable

RB three-way valve with MD100/230, PN 16 actuator

Article	DN	Kvs	Δp (bar)	Weight	Connec-tion	Travel time (s)
RB15/0,63MD100/230	15	0,63	16 bar	2,2 kg	G1/2"	configurable
RB15/1,0MD100/230	15	1,0	16 bar	2,9 kg	G1/2"	configurable
RB15/1,25MD100/230	15	1,25	16 bar	2,9 kg	G1/2"	configurable
RB15/1,6MD100/230	15	1,6	16 bar	2,2 kg	G1/2"	configurable
RB15/2,5MD100/230	15	2,5	16 bar	2,2 kg	G1/2"	configurable
RB15MD100/230	15	4,0	16 bar	2,2 kg	G1/2"	configurable
RB20/5,0MD100/230	20	5,0	16 bar	2,7 kg	G3/4"	configurable
RB20MD100/230	20	6,3	16 bar	2,7 kg	G3/4"	configurable
RB25/8,0MD100/230	25	8,0	15 bar	2,9 kg	G1"	configurable
RB25MD100/230	25	10	15 bar	2,9 kg	G1"	configurable
RB32/12,5MD100/230	32	12,5	9 bar	4,6 kg	G1 1/4"	configurable
RB32MD100/230	32	16	9 bar	4,6 kg	G1 1/4"	configurable
RB40/20MD100/230	40	20	5,5 bar	5,3 kg	G1 1/2"	configurable
RB40MD100/230	40	25	5,5 bar	5,3 kg	G1 1/2"	configurable
RB50/31,5MD100/230	50	31,5	3,5 bar	6,7 kg	G2"	configurable
RB50MD100/230	50	40	3,5 bar	6,7 kg	G2"	configurable

RB three-way valve with MF100-SR, PN 16 actuator

Emergency control function: Valve: Closed

Article	DN	Kvs	Δp (bar)	Weight	Connec-tion	Travel time (s)
RB15/0,63MF100-SR	15	0,63	16 bar	2,2 kg	G1/2"	configurable
RB15/1,0MF100-SR	15	1,0	16 bar	2,2 kg	G1/2"	configurable
RB15/1,6MF100-SR	15	1,6	16 bar	2,2 kg	G1/2"	configurable
RB15/2,5MF100-SR	15	2,5	16 bar	2,2 kg	G1/2"	configurable
RB15MF100-SR	15	4,0	16 bar	2,2 kg	G1/2"	configurable
RB20MF100-SR	20	6,3	16 bar	2,7 kg	G3/4"	configurable
RB25MF100-SR	25	10,0	15 bar	2,9 kg	G1"	configurable
RB32MF100-SR	32	16,0	9 bar	4,6 kg	G1 1/4"	configurable
RB40MF100-SR	40	25,0	5,5 bar	5,3 kg	G1 1/2"	configurable
RB50MF100-SR	50	40,0	3,5 bar	6,7 kg	G2"	configurable

RB three-way valve with MF100-SR-Z, PN 16 actuator

Emergency control function: Valve: Closed

Article	DN	Kvs	Δp (bar)	Weight	Connec-tion	Travel time (s)
RB15/0,63MF100-SR-Z	15	0,63	16 bar	2,2 kg	G1/2"	configurable
RB15/1,0MF100-SR-Z	15	1,0	16 bar	2,2 kg	G1/2"	configurable
RB15/1,6MF100-SR-Z	15	1,6	16 bar	2,2 kg	G1/2"	configurable
RB15/2,5MF100-SR-Z	15	2,5	16 bar	2,2 kg	G1/2"	configurable
RB15MF100-SR-Z	15	4,0	16 bar	2,2 kg	G1/2"	configurable
RB20MF100-SR-Z	20	6,3	16 bar	2,7 kg	G3/4"	configurable
RB25MF100-SR-Z	25	10,0	15 bar	2,9 kg	G1"	configurable
RB32MF100-SR-Z	32	16,0	9 bar	4,6 kg	G1 1/4"	configurable
RB40MF100-SR-Z	40	25,0	5,5 bar	5,3 kg	G1 1/2"	configurable
RB50MF100-SR-Z	50	40,0	3,5 bar	6,7 kg	G2"	configurable

RB three-way valve with MF100/230-SR actuator, PN 16

Article	DN	Kvs	Δp (bar)	Weight	Connec-tion	Travel time (s)
RB15BMF100/230-SR	15	0,63	16 bar	2,2 kg	G1/2"	configurable
RB15/1,0MF100/230-SR	15	1,0	16 bar	2,2 kg	G1/2"	configurable
RB15/1,6MF100/230-SR	15	1,6	16 bar	2,2 kg	G1/2"	configurable
RB15/2,5MF100/230-SR	15	2,5	16 bar	2,2 kg	G1/2"	configurable
RB15MF100/230-SR	15	4,0	16 bar	2,2 kg	G1/2"	configurable
RB20MF100/230-SR	20	6,3	16 bar	2,7 kg	G3/4"	configurable
RB25MF100/230-SR	25	10,0	15 bar	2,9 kg	G1"	configurable
RB32MF100/230-SR	32	16,0	9 bar	4,6 kg	G1 1/4"	configurable
RB40MF100/230-SR	40	25,0	5,5 bar	5,3 kg	G1 1/2"	configurable
RB50MF100/230-SR	50	40,0	3,5 bar	6,7 kg	G2"	configurable

RB three-way valve with MD200BUS, PN 16 actuator

Article	DN	Kvs	Δp (bar)	Weight	Connec-tion	Travel time (s)
RB15/0,63MD200BUS	15	0,63	16 bar	2,2 kg	G1/2"	111
RB15/1,0MD200BUS	111	1,0	16 bar	2,2 kg	G1/2"	111
RB15/1,6MD200BUS	15	1,6	16 bar	2,2 kg	G1/2"	111
RB15/2,5MD200BUS	111	2,5	16 bar	2,2 kg	G1/2"	
RB15MD200BUS	15	4,0	16 bar	2,2 kg	G1/2"	111
RB20MD200BUS	20	6,3	16 bar	2,7 kg	G3/4"	111
RB25MD200BUS	25	10	12,7 bar	2,9 kg	G1"	130
RB32MD200BUS	32	16	7,8 bar	4,5 kg	G1 1/4"	130
RB40MD200BUS	40	25	4,9 bar	5,0 kg	G1 1/2"	130
RB50MD200BUS	50	40	3,0 bar	6,5 kg	G2"	130

RBxx- BK two-way valves with actuator, PN 16

Gunmetal three-way valve with blank cover. Male threads and screw fitting connections in accordance with DIN, airtight.
With motor-driven actuator.

RBxx-BK two-way valves with MD100 actuator, PN 16

Article	DN	Kvs	Δp (bar)	Weight	Connec-tion	Travel time (s)
RB15/0,63-BKMD100	15	0,63	16 bar	2,2 kg	G1/2"	configurable
RB15/1,0-BKMD100	15	1,0	16 bar	2,2 kg	G1/2"	configurable
RB15/1,25-BKMD100	15	1,25	16 bar	2,2 kg	G1/2"	configurable
RB15/1,6-BKMD100	15	1,6	16 bar	2,2 kg	G1/2"	configurable
RB15/2,5-BKMD100	15	2,5	16 bar	2,2 kg	G1/2"	configurable
RB15-BKMD100	15	4,0	16 bar	2,2 kg	G1/2"	configurable
RB20/5,0-BKMD100	20	5,0	16 bar	2,7 kg	G3/4"	configurable
RB20-BKMD100	20	6,3	16 bar	2,7 kg	G3/4"	configurable
RB25/8,0-BKMD100	25	8,0	15 bar	2,9 kg	G1"	configurable
RB25-BKMD100	25	10	15 bar	2,9 kg	G1"	configurable
RB32/12,5-BKMD100	32	12,5	9 bar	4,5 kg	G1 1/4"	configurable
RB32-BKMD100	32	16	9,0 bar	4,6 kg	G1 1/4"	configurable
RB40/20-BKMD100	40	20,0	5,5 bar	5,2 kg	G1 1/2"	configurable
RB40-BKMD100	40	25	5,5 bar	5,2 kg	G1 1/2"	configurable
RB50/31,5-BKMD100	50	31,5	3,5 bar	6,5 kg	G2"	configurable
RB50-BKMD100	50	40	3,5 bar	6,5 kg	G2"	configurable

RBxx-BK two-way valves with MD100-RE actuator, PN 16

Article	DN	Kvs	Δp (bar)	Weight	Connec-tion	Travel time (s)
RB15/0,63-BKMD100-RE	15	0,63	16 bar	2,2 kg	G1/2"	configurable
RB15/1,0-BKMD100-RE	15	1,0	16 bar	2,2 kg	G1/2"	configurable
RB15/1,25-BKMD100-RE	15	1,25	16 bar	2,2 kg	G1/2"	configurable
RB15/1,6-BKMD100-RE	15	1,6	16 bar	2,2 kg	G1/2"	configurable
RB15/2,5-BKMD100-RE	15	2,5	16 bar	2,2 kg	G1/2"	configurable
RB15-BKMD100-RE	15	4,0	16 bar	2,2 kg	G1/2"	configurable
RB20/5,0-BKMD100-RE	20	5,0	16 bar	2,7 kg	G3/4"	configurable
RB20-BKMD100-RE	20	6,3	16 bar	2,7 kg	G3/4"	configurable
RB25/8,0-BKMD100-RE	25	8,0	15 bar	2,9 kg	G1"	configurable
RB25-BKMD100-RE	25	10,0	15 bar	2,9 kg	G1"	configurable
RB32/12,5-BKMD100-RE	32	12,5	9 bar	4,5 kg	G1 1/4"	configurable
RB32-BKMD100-RE	32	16,0	9 bar	4,5 kg	G1 1/4"	configurable
RB40/20-BKMD100-RE	40	20,0	5,5 bar	5,2 kg	G1 1/2"	configurable
RB40-BKMD100-RE	40	25,0	5,5 bar	5,2 kg	G1 1/2"	configurable
RB50/31,5-BKMD100-RE	50	31,5	3,5 bar	6,5 kg	G2"	configurable
RB50-BKMD100-RE	50	40,0	3,5 bar	6,5 kg	G2"	configurable

RBxx-BK two-way valves with MD100/230 actuator, PN 16

Article	DN	Kvs	Δp (bar)	Weight	Connec-tion	Travel time (s)
RB15B-BKMD100/230	15	0,63	16 bar	2,2 kg	G1/2"	configurable
RB15/1,0-BKMD100/230	15	1,0	16 bar	2,2 kg	G1/2"	configurable
RB15H-BKMD100/230	15	1,25	16 bar	2,2 kg	G1/2"	configurable
RB15/1,6-BKMD100/230	15	1,6	16 bar	2,2 kg	G1/2"	configurable
RB15/2,5-BKMD100/230	15	2,5	16 bar	2,2 kg	G1/2"	configurable
RB15-BKMD100/230	15	4,0	16 bar	2,2 kg	G1/2"	configurable
RB20/5,0-BKMD100/230	20	5,0	16 bar	2,7 kg	G3/4"	configurable
RB20-BKMD100/230	20	6,3	16 bar	2,7 kg	G3/4"	configurable
RB25/8,0-BKMD100/230	25	8,0	15 bar	2,9 kg	G1"	configurable
RB25-BKMD100/230	25	10	15 bar	2,9 kg	G1"	configurable
RB32I-BKMD100/230	32	12,5	9 bar	4,5 kg	G1 1/4"	configurable
RB32-BKMD100/230	32	16	9,0 bar	4,6 kg	G1 1/4"	configurable
RB40/20-BKMD100/230	40	20,0	5,5 bar	5,2 kg	G1 1/2"	configurable
RB40-BKMD100/230	40	25	5,5 bar	5,2 kg	G1 1/2"	configurable
RB50J-BKMD100/230	50	31,5	3,5 bar	6,5 kg	G2"	configurable
RB50-BKMD100/230	50	40	3,5 bar	6,5 kg	G2"	configurable

RBxx-BK two-way valves with MF100-SR actuator, PN 16

Emergency control function: Valve: Closed

Article	DN	Kvs	Δp (bar)	Weight	Connec-tion	Travel time (s)
RB15/0,63-BKMF100-SR	15	0,63	16 bar	2,2 kg	G1/2"	configurable
RB15/1,0-BKMF100-SR	15	1,0	16 bar	2,2 kg	G1/2"	configurable
RB15/1,6-BKMF100-SR	15	1,6	16 bar	2,2 kg	G1/2"	configurable
RB15/2,5-BKMF100-SR	15	2,5	16 bar	2,2 kg	G1/2"	configurable
RB15-BKMF100-SR	15	4,0	16 bar	2,2 kg	G1/2"	configurable
RB20-BKMF100-SR	20	5,0	16 bar	2,7 kg	G3/4"	configurable
RB25-BKMF100-SR	25	10,0	15 bar	2,9 kg	G1"	configurable
RB32-BKMF100-SR	32	16,0	9 bar	4,5 kg	G1 1/4"	configurable
RB40-BKMF100-SR	40	25,0	5,2 bar	5,2 kg	G1 1/2"	configurable
RB50-BKMF100-SR	50	40,0	3,5 bar	6,5 kg	G2"	configurable

RBxx-BK two-way valves with MF100-SR-Z actuator, PN 16

Emergency control function: Valve: Closed

Article	DN	Kvs	Δp (bar)	Weight	Connec-tion	Travel time (s)
RB15B-BKMF100-SR-Z	15	0,63	16 bar	2,2 kg	G1/2"	configurable
RB15C-BKMF100-SR-Z	15	1,0	16 bar	2,2 kg	G1/2"	configurable
RB15D-BKMF100-SR-Z	15	1,6	16 bar	2,2 kg	G1/2"	configurable
RB15E-BKMF100-SR-Z	15	2,5	16 bar	2,2 kg	G1/2"	configurable
RB15-BKMF100-SR-Z	15	4,0	16 bar	2,2 kg	G1/2"	configurable
RB20-BKMF100-SR-Z	20	6,3	16 bar	2,7 kg	G3/4"	configurable
RB25-BKMF100-SR-Z	25	10,0	15 bar	2,9 kg	G1"	configurable
RB32-BKMF100-SR-Z	32	16,0	9 bar	4,5 kg	G1 1/4"	configurable
RB40-BKMF100-SR-Z	40	25,0	5,5 bar	5,2 kg	G1 1/2"	configurable
RB50-BKMF100-SR-Z	50	40,0	3,5 bar	6,5 kg	G2"	configurable

RBxx-BK two-way valve with MF100/230-SR, PN 16

Article	DN	Kvs	Δp (bar)	Weight	Connec-tion	Travel time (s)
RB15B-BKMF100/230-SR	15	0,63	16 bar	2,2 kg	G1/2"	configurable
RB15C-BKMF100/230-SR	15	1,0	16 bar	2,2 kg	G1/2"	configurable
RB15D-BKMF100/230-SR	15	1,6	16 bar	2,2 kg	G1/2"	configurable
RB15E-BKMF100/230-SR	15	2,5	16 bar	2,2 kg	G1/2"	configurable
RB15-BKMF100/230-SR	15	4,0	16 bar	2,2 kg	G1/2"	configurable
RB20-BKMF100/230-SR	20	6,3	16 bar	2,7 kg	G3/4"	configurable
RB25-BKMF100/230-SR	25	10,0	15 bar	2,9 kg	G1"	configurable
RB32-BKMF100/230-SR	32	16,0	9 bar	4,5 kg	G1 1/4"	configurable
RB40-BKMF100/230-SR	40	25,0	5,5 bar	5,2 kg	G1 1/2"	configurable
RB50-BKMF100/230-SR	50	40,0	3,5 bar	6,5 kg	G2"	configurable

RBxx-BK two-way valves with MD200BUS actuator, PN 16

Article	DN	Kvs	Δp (bar)	Weight	Connec-tion	Travel time (s)
RB15/0,63-BKMD200BUS	15	0,63	16 bar	2,2 kg	G1/2"	111
RB15/1,0-BKMD200BUS	15	1,0	16 bar	2,2 kg	G1/2"	111
RB15/2,5-BKMD200BUS	15	2,5	16 bar	2,2 kg	G1/2"	111
RB15-BKMD200BUS	15	4,0	16 bar	2,2 kg	G1/2"	111
RB20-BKMD200BUS	20	6,3	16 bar	2,7 kg	G3/4"	111
RB25-BKMD200BUS	25	10	127 bar	2,9 kg	G1"	130
RB32-BKMD200BUS	32	16	7,8 bar	4,5 kg	G1 1/4"	130

RF three-way valve with PN 16 actuator

Compact three-way valve, airtight, flange in accordance with DIN.
With motor-driven actuator.



RF32MD100

RF three-way valve with MD100 actuator, PN 16

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF15/0,63MD100	15	0,63	16 bar	4,5 kg	configurable
RF15/1,0MD100	15	1,0	16 bar	4,5 kg	configurable
RF15/1,25MD100	15	1,25	16 bar	4,5 kg	configurable
RF15/1,6MD100	15	1,6	16 bar	4,1 kg	configurable
RF15/2,5MD100	15	2,5	16 bar	4,5 kg	configurable
RF15MD100	15	4,0	16 bar	4,5 kg	configurable
RF20/5,0MD100	20	5,0	16 bar	5,5 kg	configurable
RF20MD100	20	6,3	16 bar	5,2 kg	configurable
RF25/8,0MD100	25	8,0	15 bar	6,4 kg	configurable
RF25MD100	25	10	15 bar	6,4 kg	configurable
RF32/12,5MD100	32	12,5	9 bar	9,1 kg	configurable
RF32MD100	32	16	9 bar	9,1 kg	configurable
RF40/20MD100	40	20	5,5 bar	10,5 kg	configurable
RF40MD100	40	25	5,5 bar	10,1 kg	configurable
RF50/31,5MD100	50	31,5	3,5 bar	13,4 kg	configurable
RF50MD100	50	40	3,5 bar	13,4 kg	configurable
RF65/50KMD100	65	50	1,5 bar	20,6 kg	configurable
RF65KMD100	65	63	1,5 bar	20,6 kg	configurable

RF three-way valve with MD100-RE, PN 16 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF15/0,63MD100-RE	15	0,63	16 bar	4,5 kg	configurable
RF15/1,0MD100-RE	15	1,0	16 bar	4,5 kg	configurable
RF15/1,25MD100-RE	15	1,25	16 bar	4,5 kg	configurable
RF15/1,6MD100-RE	15	1,6	16 bar	4,5 kg	configurable
RF15/2,5MD100-RE	15	2,5	16 bar	4,5 kg	configurable
RF15MD100-RE	15	4,0	16 bar	4,5 kg	configurable
RF20/5,0MD100-RE	20	5,0	16 bar	5,5 kg	configurable
RF20MD100-RE	20	6,3	16 bar	5,5 kg	configurable
RF25/8,0MD100-RE	25	8,0	15 bar	6,4 kg	configurable
RF25MD100-RE	25	10	15 bar	6,4 kg	configurable
RF32/12,5MD100-RE	32	12,5	9 bar	9,1 kg	configurable
RF32MD100-RE	32	16	9 bar	9,1 kg	configurable
RF40/20MD100-RE	40	20	5,5 bar	10,5 kg	configurable
RF40MD100-RE	40	25	5,5 bar	10,5 kg	configurable
RF50/31,5MD100-RE	50	31,5	3,5 bar	13,4 kg	configurable
RF50MD100-RE	50	40	3,5 bar	13,4 kg	configurable
RF65/50KMD100-RE	65	50	1,5 bar	20,6 kg	configurable
RF65KMD100-RE	65	63	1,5 bar	20,6 kg	configurable

RF three-way valve with MD100/230, PN 16 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF15/0,63MD100/230	15	0,63	16 bar	4,5 kg	configurable
RF15/1,0MD100/230	15	1,0	16 bar	4,5 kg	configurable
RF15/1,25MD100/230	15	1,25	16 bar	4,5 kg	configurable
RF15/1,6MD100/230	15	1,6	16 bar	4,1 kg	configurable
RF15/2,5MD100/230	15	2,5	16 bar	4,5 kg	configurable
RF15MD100/230	15	4,0	16 bar	4,5 kg	configurable
RF20/5,0MD100/230	20	5,0	16 bar	5,5 kg	configurable
RF20MD100/230	20	6,3	16 bar	5,2 kg	configurable
RF25/8,0MD100/230	25	8,0	15 bar	6,4 kg	configurable
RF25MD100/230	25	10	15 bar	6,4 kg	configurable
RF32/12,5MD100/230	32	12,5	9 bar	9,1 kg	configurable
RF32MD100/230	32	16	9,0 bar	9,1 kg	configurable
RF40/20MD100/230	40	20	5,5 bar	10,5 kg	configurable
RF40MD100/230	40	25	5,5 bar	10,1 kg	configurable
RF50/31,5MD100/230	50	31,5	3,5 bar	13,4 kg	configurable
RF50MD100/230	50	40	3,5 bar	13,4 kg	configurable
RF65/50KMD100/230	65	50	1,5 bar	20,6 kg	configurable
RF65KMD100/230	65	63	1,5 bar	20,6 kg	configurable

RF three-way valve with MF100-SR, PN 16 actuator

Emergency control function: Valve: Closed

Valve characteristic curve:
A—AB = same percentage
B—AB = linear

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF15/0,63MF100-SR	15	0,63	16 bar	4,5 kg	configurable
RF15/1,0MF100-SR	15	1,0	16 bar	4,5 kg	configurable
RF15/1,6MF100-SR	15	1,6	16 bar	4,5 kg	configurable
RF15/2,5MF100-SR	15	2,5	16 bar	4,5 kg	configurable
RF15MF100-SR	15	4,0	16 bar	4,5 kg	configurable
RF20MF100-SR	20	6,3	16 bar	5,5 kg	configurable
RF25MF100-SR	25	10	15 bar	6,4 kg	configurable
RF32MF100-SR	32	16	9 bar	9,1 kg	configurable
RF40MF100-SR	40	25	5.5 bar	10,5 kg	configurable
RF50MF100-SR	50	40	3.5 bar	13,4 kg	configurable
RF65KMF100-SR	65	63	1.5 bar	20,6 kg	configurable

RF three-way valve with MF100-SR-Z, PN 16 actuator

Emergency control function: Valve: Closed

Valve characteristic curve: A—AB = same percentage
B—AB = linear

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF15/0,63MF100-SR-Z	15	0,63	16 bar	4,5 kg	configurable
RF15/1,0MF100-SR-Z	15	1,0	16 bar	4,5 kg	configurable
RF15/1,6MF100-SR-Z	15	1,6	16 bar	4,5 kg	configurable
RF15/2,5MF100-SR-Z	15	2,5	16 bar	4,5 kg	configurable
RF15MF100-SR-Z	15	4,0	16 bar	4,5 kg	configurable
RF20MF100-SR-Z	20	6,3	16 bar	5,5 kg	configurable
RF25MF100-SR-Z	25	10	15 bar	6,4 kg	configurable
RF32MF100-SR-Z	32	16	9 bar	9,1 kg	configurable
RF40MF100-SR-Z	40	25	5.5 bar	10,5 kg	configurable
RF50MF100-SR-Z	50	40	3.5 bar	13,4 kg	configurable
RF65KMF100-SR-Z	65	63	1.5 bar	20,6 kg	configurable

RF three-way valve with MF100/230-SR actuator, PN 16

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF15BMF100/230-SR	15	0,63	16 bar	4,5 kg	configurable
RF15/1,0MF100/230-SR	15	1,0	16 bar	4,5 kg	configurable
RF15/1,6MF100/230-SR	15	1,6	16 bar	4,5 kg	configurable
RF15/2,5MF100/230-SR	15	2,5	16 bar	4,5 kg	configurable
RF15MF100/230-SR	15	4,0	16 bar	4,5 kg	configurable
RF20MF100/230-SR	20	6,3	16 bar	5,5 kg	configurable
RF25MF100/230-SR	25	10	15 bar	6,4 kg	configurable
RF32MF100/230-SR	32	16	9 bar	9,1 kg	configurable
RF40MF100/230-SR	40	25	5,5 bar	10,5 kg	configurable
RF50MF100/230-SR	50	40	3,5 bar	13,4 kg	configurable
RF65KMF100/230-SR	65	63	1,5 bar	20,6 kg	configurable

RF three-way valve with MD200BUS, PN 16 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF15/1,0MD200BUS	15	1,0	16 bar	4,3 kg	130
RF15/1,6MD200BUS	15	1,6	16 bar	4,3 kg	130
RF15/2,5MD200BUS	15	2,5	16 bar	4,3 kg	130
RF15MD200BUS	15	4,0	16 bar	4,3 kg	130
RF20MD200BUS	20	6,3	16 bar	5,3 kg	130
RF25MD200BUS	25	10	12,7 bar	6,3 kg	130
RF32MD200BUS	32	16	7,8 bar	8,8 kg	130
RF40MD200BUS	40	25	4,9 bar	10,3 kg	130
RF50MD200BUS	50	40	3,0 bar	13,3 kg	130

RF three-way valve with MD250, PN 16 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF65/50MD250	65	50	6.2 bar	21 kg	configurable
RF65MD250	65	63	6.2 bar	21 kg	configurable
RF80/80MD250	80	80	4.0 bar	26,2 kg	configurable
RF80MD250	80	100	4.0 bar	26,2 kg	configurable
RF100/125MD250	100	125	2.4 bar	38,2 kg	configurable
RF100MD250	100	160	2.4 bar	38,2 kg	configurable

RF three-way valve with MD250/230, PN 16 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF65/50MD250/230	65	50	6.2 bar	21,1 kg	configurable
RF65MD250/230	65	63	6.2 bar	21,1 kg	configurable
RF80/80MD250/230	80	80	4.0 bar	26,3 kg	configurable
RF80MD250/230	80	100	4.0 bar	26,3 kg	configurable
RF100/125MD250/230	100	125	2.4 bar	38,3 kg	configurable
RF100MD250/230	100	160	2.4 bar	38,3 kg	configurable

RFxx-BF two-way valves with actuator, PN 16

Compact three-way valve with blank flange as two-way valve, airtight, flange in accordance with DIN.
With motor-driven actuator.

RFxx-BF two-way valves with MD100, PN 16 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF15/0,63-BFMD100	15	0,63	16 bar	5,5 kg	configurable
RF15/1,0-BFMD100	15	1,0	16 bar	4,5 kg	configurable
RF15/1,25-BFMD100	15	1,25	16 bar	4,5 kg	configurable
RF15/1,6-BFMD100	15	1,6	16 bar	5,5 kg	configurable
RF15/2,5-BFMD100	15	2,5	16 bar	5,5 kg	configurable
RF15-BFMD100	15	4,0	16 bar	5,5 kg	configurable
RF20/5,0-BFMD100	20	5,0	16 bar	5,5 kg	configurable
RF20-BFMD100	20	6,3	16 bar	5,2 kg	configurable
RF25/8,0-BFMD100	25	8,0	15 bar	6,4 kg	configurable
RF25-BFMD100	25	10	15 bar	7,9 kg	configurable
RF32/12,5-BFMD100	32	12,5	9 bar	9,1 kg	configurable
RF32-BFMD100	32	16	9,0 bar	11,6 kg	configurable
RF40/20-BFMD100	40	20	5,5 bar	10,5 kg	configurable
RF40-BFMD100	40	25	5,5 bar	10,5 kg	configurable
RF50/31,5-BFMD100	50	31,5	3,5 bar	13,4 kg	configurable
RF50-BFMD100	50	40	3,5 bar	16,7 kg	configurable
RF65/50K-BFMD100	65	50	1,5 bar	20,6 kg	configurable
RF65K-BFMD100	65	63	1,5 bar	24,9 kg	configurable

RFxx-BF two-way valves with MD100-RE, PN 16 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF15/0,63-BFMD100-RE	15	0,63	16 bar	5,5 kg	configurable
RF15/1,0-BFMD100-RE	15	1,0	16 bar	4,5 kg	configurable
RF15/1,25-BFMD100-RE	15	1,25	16 bar	4,5 kg	configurable
RF15/1,6-BFMD100-RE	15	1,6	16 bar	5,5 kg	configurable
RF15/2,5-BFMD100-RE	15	2,5	16 bar	5,5 kg	configurable
RF15-BFMD100-RE	15	4,0	16 bar	5,5 kg	configurable
RF20/5,0-BFMD100-RE	20	5,0	16 bar	5,5 kg	configurable
RF20-BFMD100-RE	20	6,3	16 bar	5,5 kg	configurable
RF25/8,0-BFMD100-RE	25	8,0	15 bar	6,4 kg	configurable
RF25-BFMD100-RE	25	10	15 bar	6,4 kg	configurable
RF32/12,5-BFMD100-RE	32	12,5	9 bar	9,1 kg	configurable
RF32-BFMD100-RE	32	16	9 bar	9,1 kg	configurable
RF40/20-BFMD100-RE	40	20	5,5 bar	10,5 kg	configurable
RF40-BFMD100-RE	40	25	5,5 bar	10,5 kg	configurable
RF50/31,5-BFMD100-RE	50	31,5	3,5 bar	13,4 kg	configurable
RF50-BFMD100-RE	50	40	3,5 bar	13,4 kg	configurable
RF65/50K-BFMD100-RE	65	50	1,5 bar	20,6 kg	configurable
RF65K-BFMD100-RE	65	63	1,5 bar	20,6 kg	configurable

RFxx-BF two-way valves with MD100/230 actuator, PN 16

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF15B-BFMD100/230	15	0,63	16 bar	5,5 kg	configurable
RF15/1,0-BFMD100/230	15	1,0	16 bar	4,5 kg	configurable
RF15H-BFMD100/230	15	1,25	16 bar	4,5 kg	configurable
RF15/1,6-BFMD100/230	15	1,6	16 bar	5,5 kg	configurable
RF15/2,5-BFMD100/230	15	2,5	16 bar	5,5 kg	configurable
RF15-BFMD100/230	15	4,0	16 bar	5,5 kg	configurable
RF20/5,0-BFMD100/230	20	5,0	16 bar	5,5 kg	configurable
RF20-BFMD100/230	20	6,3	16 bar	5,2 kg	configurable
RF25/8,0-BFMD100/230	25	8,0	15 bar	6,4 kg	configurable
RF25-BFMD100/230	25	10	15 bar	7,9 kg	configurable
RF32I-BFMD100/230	32	12,5	9 bar	9,1 kg	configurable
RF32-BFMD100/230	32	16	9,0 bar	11,6 kg	configurable
RF40/20-BFMD100/230	40	20	5,5 bar	10,5 kg	configurable
RF40-BFMD100/230	40	25	5,5 bar	10,5 kg	configurable
RF50J-BFMD100/230	50	31,5	3,5 bar	13,4 kg	configurable
RF50-BFMD100/230	50	40	3,5 bar	16,7 kg	configurable
RF65/50K-BFMD100/230	65	50	1,5 bar	20,6 kg	configurable
RF65K-BFMD100/230	65	63	1,5 bar	24,9 kg	configurable

RFxx-BF two-way valves with MF100-SR, PN 16 actuator

Emergency control function: Valve: Closed
Valve characteristic curve: A—AB = same percentage
B—AB = linear

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF15/0,63-BFMF100-SR	15	0,63	16 bar	4,5 kg	configurable
RF15/1,0-BFMF100-SR	15	1,0	16 bar	4,5 kg	configurable
RF15/1,6-BFMF100-SR	15	1,6	16 bar	4,5 kg	configurable
RF15/2,5-BFMF100-SR	15	2,5	16 bar	4,5 kg	configurable
RF15-BFMF100-SR	15	4,0	16 bar	4,5 kg	configurable
RF20-BFMF100-SR	20	6,3	16 bar	5,5 kg	configurable
RF25-BFMF100-SR	25	10	15 bar	6,4 kg	configurable
RF32-BFMF100-SR	32	16	9 bar	9,1 kg	configurable
RF40-BFMF100-SR	40	25	5.5 bar	10,5 kg	configurable
RF50-BFMF100-SR	50	40	3.5 bar	13,4 kg	configurable
RF65K-BFMF100-SR	65	63	1.5 bar	20,6 kg	configurable

RFxx-BF two-way valves with MF100-SR-Z, PN 16 actuator

Emergency control function: Valve: Closed
Valve characteristic curve: A—AB = same percentage
B—AB = linear

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF15B-BFMF100-SR-Z	15	0,63	16 bar	4,5 kg	configurable
RF15C-BFMF100-SR-Z	15	1,0	16 bar	4,5 kg	configurable
RF15D-BFMF100-SR-Z	15	1,6	16 bar	4,5 kg	configurable
RF15E-BFMF100-SR-Z	15	2,5	16 bar	4,5 kg	configurable
RF15-BFMF100-SR-Z	15	4,0	16 bar	4,5 kg	configurable
RF20-BFMF100-SR-Z	20	6,3	16 bar	5,5 kg	configurable
RF25-BFMF100-SR-Z	25	10	15 bar	6,4 kg	configurable
RF32-BFMF100-SR-Z	32	16	9 bar	9,1 kg	configurable
RF40-BFMF100-SR-Z	40	25	5.5 bar	10,5 kg	configurable
RF50-BFMF100-SR-Z	50	40	3.5 bar	13,4 kg	configurable
RF65K-BFMF100-SR-Z	65	63	1.5 bar	1,5 kg	configurable

RFxx-BF two-way valves with MF100/230-SR, PN 16

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF15B-BFMF100/230-SR	15	0,63	16 bar	4,5 kg	configurable
RF15C-BFMF100/230-SR	15	1,0	16 bar	4,5 kg	configurable
RF15D-BFMF100/230-SR	15	1,6	16 bar	4,5 kg	configurable
RF15E-BFMF100/230-SR	15	2,5	16 bar	4,5 kg	configurable
RF15-BFMF100/230-SR	4,5	4,0	16 bar	4,5 kg	configurable
RF20-BFMF100/230-SR	20	6,3	16 bar	5,5 kg	configurable
RF25-BFMF100/230-SR	25	10	15 bar	6,4 kg	configurable
RF32-BFMF100/230-SR	32	16	9 bar	9,1 kg	configurable
RF40-BFMF100/230-SR	40	25	5,5 bar	10,5 kg	configurable
RF50-BFMF100/230-SR	50	40	1,5 bar	13,4 kg	configurable
RF50-BFMF100/230-SR	50	40	1,5 bar	13,4 kg	configurable

RFxx-BF two-way valves with MD200BUS, PN 16 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF15/0,63-BFMD200BUS	15	0,63	16 bar	4,3 kg	130
RF15/1,0-BFMD200BUS	15	1,0	16 bar	4,3 kg	130
RF15/1,25-BFMD200BUS	15	1,25	16 bar	4,3 kg	130
RF15/1,6-BFMD200BUS	15	1,6	16 bar	4,3 kg	130
RF15/2,5-BFMD200BUS	15	2,5	16 bar	4,3 kg	130
RF15-BFMD200BUS	15	4,0	16 bar	4,3 kg	130
RF20-BFMD200BUS	20	6,3	16 bar	5,3 kg	130
RF25-BFMD200BUS	25	10	12,7 bar	6,3 kg	130
RF40-BFMD200BUS	40	25	4,9 bar	10,3 kg	130
RF50-BFMD200BUS	50	40	3,0 bar	13,3 kg	130

RFxx-BF two-way valves with MD250, PN 16 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF65/50-BFMD250	65	50	6,2 bar	27 kg	configurable
RF65-BFMD250	65	6,2	6,2 bar	27 kg	configurable
RF80/80-BFMD250	80	80	4,0 bar	27 kg	configurable
RF80-BFMD250	80	100	4,0 bar	32 kg	configurable
RF100/125-BFMD250	100	125	2,4 bar	45,1 kg	configurable
RF100-BFMD250	100	160	2,4 bar	45,1 kg	configurable

RFxx-BF two-way valves with MD250/230 actuator, PN 16

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RF65/50-BFMD250/230	65	50	6,2 bar	27,1 kg	configurable
RF65-BFMD250/230	65	63	6,2 bar	27,1 kg	configurable
RF80/80-BFMD250/230	80	80	4,0 bar	32,1 kg	configurable
RF80-BFMD250/230	80	100	4,0 bar	32,1 kg	configurable
RF100G-BFMD250/230	100	160	2,4 bar	45,2 kg	configurable
RF100-BFMD250/230	100	125	2,4 bar	45,2 kg	configurable

RGD two-way valve with actuator, PN 25

Two-way valve for precise control of liquid, gas and vapor. Spheroidal graphite iron housing (GGG 40.3), flange in accordance with DIN, maintenance-free spindle seal with PTFE.
With motor-driven actuator.



RGD32MD100

RGD two-way valve with MD100, PN 25 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RGD15/0,4MD100	15	0,4	25 bar	4,7 kg	configurable
RGD15/0,63MD100	15	0,63	25 bar	4,7 kg	configurable
RGD15/1,0MD100	15	1,0	20,5 bar	4,7 kg	configurable
RGD15/1,6MD100	15	1,6	20,5 bar	4,7 kg	configurable
RGD15/2,5MD100	15	2,5	20,5 bar	4,7 kg	configurable
RGD15MD100	15	4,0	20,5 bar	4,7 kg	configurable
RGD25/6,3MD100	25	6,3	11,8 bar	6,5 kg	configurable
RGD25MD100	25	10,0	11,8 bar	6,5 kg	configurable
RGD32MD100	32	16	8,6 bar	7,8 kg	configurable
RGD40MD100	40	25	4,4 bar	9,7 kg	configurable

RGD two-way valve with MD100-RE, PN 25 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RGD15/0,4MD100-RE	15	0,4	25 bar	4,7 kg	configurable
RGD15/0,63MD100-RE	15	0,63	25 bar	4,7 kg	configurable
RGD15/1,0MD100-RE	15	1,0	20,5 bar	4,7 kg	configurable
RGD15/1,6MD100-RE	15	1,6	20,5 bar	4,7 kg	configurable
RGD15/2,5MD100-RE	15	2,5	20,5 bar	4,7 kg	configurable
RGD15MD100-RE	15	4,0	15 bar	4,7 kg	configurable
RGD25/6,3MD100-RE	25	6,3	11,8 bar	6,5 kg	configurable
RGD25MD100-RE	25	10,0	11,8 bar	6,5 kg	configurable
RGD32MD100-RE	32	16	8,6 bar	7,8 kg	configurable
RGD40MD100-RE	40	25	4,4 bar	9,7 kg	configurable

RGD two-way valve with MD100/230, PN 25 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RGD15/0,4MD100/230	15	0,4	25 bar	4,7 kg	configurable
RGD15/0,63MD100/230	15	0,63	25 bar	4,7 kg	configurable
RGD15/1,0MD100/230	15	1,0	20,5 bar	4,7 kg	configurable
RGD15/1,6MD100/230	15	1,6	20,5 bar	4,7 kg	configurable
RGD15/2,5MD100/230	15	2,5	20,5 bar	4,7 kg	configurable
RGD15MD100/230	15	4,0	20,5 bar	4,7 kg	configurable
RGD25/6,3MD100/230	25	6,3	11,8 bar	6,5 kg	configurable
RGD25MD100/230	25	10	11,8 bar	6,5 kg	configurable
RGD32MD100/230	32	16	8,6 bar	7,8 kg	configurable
RGD40MD100/230	40	25	4,4 bar	9,7 kg	configurable

RGD two-way valve with MF100-SR, PN 25 emergency actuator

Emergency control function: Valve: Closed

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RGD15/0,4MF100-SR	15	0,4	18 bar	6,0 kg	30
RGD15/0,63MF100-SR	15	0,63	18 bar	6,0 kg	30
RGD15/1,0MF100-SR	15	1,0	18 bar	6,0 kg	30
RGD15/1,6MF100-SR	15	1,6	18 bar	6,0 kg	30
RGD15/2,5MF100-SR	15	2,5	18 bar	6,0 kg	30
RGD15MF100-SR	15	4,0	18 bar	6,0 kg	30
RGD25/6,3MF100-SR	25	6,3	11 bar	7,6 kg	30
RGD25MF100-SR	25	10	11 bar	7,6 kg	30
RGD32MF100-SR	32	16	7,0 bar	9,1 kg	30
RGD40MF100-SR	40	25	4,5 bar	11,5 kg	30

RGD two-way valve with MF100-SR-L, PN 25 emergency actuator

Emergency control function: Valve: Closed

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RGD50MF100-SR-L	50	40	2,5 bar	18,2 kg	configurable
RGD65MF100-SR-L	65	63	1,7 bar	22,5 kg	configurable
RGD80MF100-SR-L	80	100	1,1 bar	27,3 kg	configurable

RGD two-way valve with MF100/230-SR, PN 25 emergency actuator

Emergency control function: Valve: Closed

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RGD15AMF100/230-SR	15	0,4	18 bar	6,0 kg	configurable
RGD15BMF100/230-SR	15	0,63	18 bar	6,0 kg	configurable
RGD15CMF100/230-SR	15	1,0	18 bar	6,0 kg	configurable
RGD15DMF100/230-SR	15	1,6	18 bar	6,0 kg	configurable
RGD15EMF100/230-SR	15	2,5	18 bar	6,0 kg	configurable
RGD15MF100/230-SR	15	4,0	18 bar	6,0 kg	configurable
RGD25FMF100/230-SR	25	10	11 bar	7,6 kg	configurable
RGD25MF100/230-SR	25	10	11 bar	7,6 kg	configurable
RGD32MF100/230-SR	32	16	7,0 bar	9,1 kg	configurable
RGD40MF100/230-SR	40	25	4,5 bar	11,5 kg	configurable

RGD two-way valve with MF100/230-SR-L, PN 25 emergency actuator

Emergency control function: Valve: Closed

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RGD50MF100/230-SR-L	50	40	2,5 bar	18,2 kg	configurable
RGD65MF100/230-SR-L	65	63	1,7 bar	22,5 kg	configurable
RGD80MF100/230-SR-L	80	100	1,1 bar	27,3 kg	configurable

RGD two-way valve with MD200BUS, PN 25 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RGD40MD200BUS	40	25	3,6 bar	10 kg	140

RGD two-way valve with MD250, PN 25 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RGD50MD250	50	40	11,7 bar	13,4 kg	configurable
RGD65MD250	65	63	6,9 bar	17,7 kg	configurable
RGD80MD250	80	100	4,5 bar	23,7 kg	configurable
RGD100MD250	100	160	2,9 bar	37,2 kg	configurable

RGD two-way valve with MD250/230, PN 25 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RGD50MD250/230	50	40	11,7 bar	13,5 kg	configurable
RGD65MD250/230	65	63	6,9 bar	17,8 kg	configurable
RGD80MD250/230	80	100	4,5 bar	23,8 kg	configurable
RGD100MD250/230	100	160	2,9 bar	37,3 kg	configurable

RWG three-way valve with PN 25 actuator

Three-way valve for fine mixing of liquids, gases and vapors. Spheroidal graphite iron housing (GGG 40.3), flange in accordance with DIN, maintenance-free spindle seal with PTFE.
With motor-driven actuator.



RWG32MF100-SR

RWG three-way valve with MD100, PN 25 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RWG15/1,0MD100	15	1,0	20,5 bar	6,1 kg	configurable
RWG15/1,6MD100	15	1,6	20,5 bar	6,1 kg	configurable
RWG15/2,5MD100	15	2,5	20,5 bar	6,1 kg	configurable
RWG15MD100	15	4,0	20,5 bar	6,1 kg	configurable
RWG25/6,3MD100	25	6,3	11,8 bar	8,1 kg	configurable
RWG25MD100	25	10	11,8 bar	8,2 kg	configurable
RWG32MD100	32	16	8,6 bar	10,7 kg	configurable
RWG40MD100	40	25	4,4 bar	14,0 kg	configurable

RWG three-way valve with MD100-RE, PN 25 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RWG15/1,0MD100-RE	15	1,0	20,5 bar	6,1 kg	configurable
RWG15/1,6MD100-RE	15	1,6	20,5 bar	6,1 kg	configurable
RWG15/2,5MD100-RE	15	2,5	20,5 bar	6,1 kg	configurable
RWG15MD100-RE	15	4,0	20,5 bar	6,1 kg	configurable
RWG25/6,3MD100-RE	25	6,3	11,8 bar	8,1 kg	configurable
RWG25MD100-RE	25	10,0	11,8 bar	8,2 kg	configurable
RWG32MD100-RE	32	16,0	8,6 bar	10,7 kg	configurable
RWG40MD100-RE	40	25,0	4,4 bar	14,0 kg	configurable

RWG three-way valve with MD100/230, PN 25 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RWG15/1,0MD100/230	15	1,0	20,5 bar	6,1 kg	configurable
RWG15/1,6MD100/230	15	1,6	20,5 bar	6,1 kg	configurable
RWG15/2,5MD100/230	15	2,5	20,5 bar	6,1 kg	configurable
RWG15MD100/230	15	4,0	20,5 bar	6,1 kg	configurable
RWG25/6,3MD100/230	25	6,3	11,8 bar	8,1 kg	configurable
RWG25MD100/230	25	10	11,8 bar	8,2 kg	configurable
RWG32MD100/230	32	16	8,6 bar	10,7 kg	configurable
RWG40MD100/230	40	25	4,4 bar	14,0 kg	configurable

RWG three-way valve with MF100-SR emergency actuator, PN 25

Emergency control function: Valve gate A: Open

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RWG15/1,0MF100-SR	15	1,0	20 bar	7,5 kg	30
RWG15/1,6MF100-SR	15	1,6	20 bar	7,5 kg	30
RWG15/2,5MF100-SR	15	2,5	20 bar	7,5 kg	30
RWG15MF100-SR	15	4,0	20 bar	7,5 kg	30
RWG25/6,3MF100-SR	25	6,3	11 bar	9,4 kg	30
RWG25MF100-SR	25	10	11 bar	9,4 kg	30
RWG32MF100-SR	32	16	11 bar	12,0 kg	30

RWG three-way valve with MF100-SR-L emergency actuator, PN 25

Emergency control function: Valve gate A: Open

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RWG50MF100-SR-L	50	40	2,5 bar	16,8 kg	configurable
RWG65MF100-SR-L	65	63	1,7 bar	23,5 kg	configurable
RWG80MF100-SR-L	80	100	1,1 bar	30,5 kg	configurable

RWG three-way valve with MF100-SR-Z emergency actuator, PN 25

Emergency control function: Valve gate A: Closed

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RWG15/1,0MF100-SR-Z	15	1,0	20,5 bar	6,1 kg	configurable
RWG15/1,6MF100-SR-Z	15	1,6	20,5 bar	6,1 kg	configurable
RWG15/2,5MF100-SR-Z	15	2,5	20,5 bar	6,1 kg	configurable
RWG15MF100-SR-Z	15	4,0	20,5 bar	6,1 kg	configurable
RWG25/6,3MF100-SR-Z	25	6,3	11,8 bar	8,1 kg	configurable
RWG25MF100-SR-Z	25	10,0	11,8 bar	8,2 kg	configurable
RWG32MF100-SR-Z	32	16,0	8,6 bar	10,7 kg	configurable
RWG40MF100-SR-Z	40	25,0	4,4 bar	14,0 kg	configurable

RWG three-way valve with MF100/230-SR, PN 25 emergency actuator

Emergency control function: Valve gate A: Open

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RWG15CMF100/230-SR	15	1,0	20 bar	7,5 kg	configurable
RWG15DMF100/230-SR	15	1,6	20 bar	7,5 kg	configurable
RWG15EMF100/230-SR	15	2,5	20 bar	7,5 kg	configurable
RWG15MF100/230-SR	15	4,0	20 bar	7,5 kg	configurable
RWG25FMF100/230-SR	25	6,3	11 bar	9,4 kg	configurable
RWG32MF100/230-SR	32	16	7,0 bar	12,0 kg	configurable

RWG three-way valve with MF100/230-SR-L, PN 25 emergency actuator

Emergency control function: Valve gate A: Open

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RWG50MF100/230-SR-L	50	40	2,5 bar	18,2 kg	configurable
RWG65MF100/230-SR-L	65	63	1,7 bar	22,5 kg	configurable
RWG80MF100/230-SR-L	80	100	1,1 bar	27,3 kg	configurable

RWG three-way valve with MD250, PN 25 actuator

Article	DN	Kvs	Δp(bar)	Weight	Travel time (s)
RWG50MD250	50	40	11,7 bar	19,1 kg	configurable
RWG65MD250	65	63	6,9 bar	25,8 kg	configurable
RWG80MD250	80	100	4,5 bar	32,9 kg	configurable
RWG100MD250	100	160	2,9 bar	49,3 kg	configurable

Damper actuator

Damper actuators are used in ventilation systems in order to control ventilation dampers. They are controlled electronically using DDC controls of the automation stations or loop controllers.

SMxxA damper actuator

Compact damper actuators with direct operation for controlling air dampers.

Torque:	20 Nm (for damper areas up to 4 m²)
Rotational angle:	max. 95°, can be limited in both directions using adjustable mechanical stops
Air damper valve:	10..20 mm
Ambient temperature:	-30..+50 °C
Degree of protection:	IP54



SM24A

Article	Nominal voltage	Control	Weight	Run time
SM230A	230 V AC; 50/60 Hz	Two-point or three-point	1,00 kg	150
SM24A	24 V AC; 50/60 Hz	Two-point or three-point	1,00 kg	150
SM24A-S	24 V AC; 50/60 Hz	Two-point or three-point	1,10 kg	150
SM24A-SR	24 V AC; 50/60 Hz	0..10 V	1,05 kg	150

Accessories

AV8/25	Axle extension
S2A	Auxiliary switch, floating

SF damper actuator

Damper actuators with spring return for controlling air dampers in VAC systems with emergency function. When the power supply is interrupted, the spring energy moves the air damper back into the emergency position. xx-S2 damper actuators also have two auxiliary switches.

Torque:	20 Nm (for damper areas up to 4 m²)
Rotational angle:	Max. 95°, can be limited in both directions using adjustable mechanical stops
Air damper valve:	10..20.4 mm
Ambient temperature:	-30..+50 °C
Degree of protection:	IP54



SF24A-SR

Article	Nominal voltage	Control	Weight	Run time
SF24A	24 V AC/DC; 50/60 Hz	Two-point	2,1 kg	≤75
SF24A-S2	24 V AC/DC; 50/60 Hz	Two-point	2,3 kg	≤75
SF24A-SR	24 V AC/DC; 50/60 Hz	0..10 V	2,1 kg	≤150

Accessories

AV8/25	Axle extension

NF24A-S2 damper actuator

Damper actuators with spring return for controlling air dampers in VAC systems with emergency function. When the power supply is interrupted, the spring energy moves the air damper back into the emergency position. xx-S2 damper actuators also have two auxiliary switches.

Nominal voltage:	24 V AC/DC; 50/60 Hz
Control:	Two-point
Torque:	10 Nm
Rotational angle:	max. 95°, can be limited in both directions using adjustable mechanical stops; can be limited in both directions using adjustable mechanical stops
Run time:	≤75 s
Air damper valve:	10..20.4 mm
Weight:	2,0 kg
Ambient temperature:	-30..+50 °C
Degree of protection:	IP54

Accessories

AV8/25	Axle extension

DS actuators

The actuators are used for adjustment of air flaps in ventilation and air conditioning systems. The drives are equipped with a universal adapter and are mounted directly on the air damper axle.

Torque: 4..32 Nm

Rotational angle: 0..90° working range, direction of rotation can be inverted

Ambient temperature: -20..+50 °C

Degree of protection: DSxx/4: IP42;DSxx/8..32: IP54 (cable at the bottom)



DS24/4

Article	Nominal voltage	Control	Weight	Run time
DS24/4	24 V AC; 50/60 Hz	Two-point or three-point	0,9 kg	35
DS24/4/E	24 V AC; 50/60 Hz	Two-point or three-point	0,9 kg	35
DS24/8	24 V AC; 50/60 Hz	Two-point or three-point	1,1 kg	30
DS24/8/E	24 V AC; 50/60 Hz	Two-point or three-point	1,1 kg	30
DS24/16	24 V AC; 50/60 Hz	Two-point or three-point	1,1 kg	80
DS24/16/E	24 V AC; 50/60 Hz	Two-point or three-point	1,1 kg	80
DS24/24	24 V AC; 50/60 Hz	Two-point or three-point	1,1 kg	125
DS24/24/E	24 V AC; 50/60 Hz	Two-point or three-point	1,1 kg	125
DS24/32	24 V AC; 50/60 Hz	Two-point or three-point	1,1 kg	140
DS230/4	230 V AC; 50/60 Hz	Two-point or three-point	0,9 kg	35
DS230/4/E	230 V AC; 50/60 Hz	Two-point or three-point	0,9 kg	35
DS230/8	230 V AC; 50/60 Hz	Two-point or three-point	1,2 kg	30
DS230/8/E	230 V AC; 50/60 Hz	Two-point or three-point	1,2 kg	30
DS230/16	230 V AC; 50/60 Hz	Two-point or three-point	1,2 kg	80
DS230/16/E	230 V AC; 50/60 Hz	Two-point or three-point	1,2 kg	80
DS230/24	230 V AC; 50/60 Hz	Two-point or three-point	1,2 kg	125
DS230/24/E	230 V AC; 50/60 Hz	Two-point or three-point	1,2 kg	125
DSY/8	24 V AC; 50/60 Hz	0..10 V DC	1,1 kg	30
DSY/8/E	24 V AC; 50/60 Hz	0..10 V DC	1,1 kg	30
DSY/16	24 V AC; 50/60 Hz	0..10 V DC	1,1 kg	80
DSY/16/E	24 V AC; 50/60 Hz	0..10 V DC	1,1 kg	80
DSY/24	24 V AC; 50/60 Hz	0..10 V DC	1,1 kg	125
DSY/24/E	24 V AC; 50/60 Hz	0..10 V DC	1,1 kg	125
DSF24/16	24 V AC; 50/60 Hz	Two-point or three-point	2,7 kg	90..120
DSF24/16/E	24 V AC; 50/60 Hz	Two-point or three-point	2,7 kg	90..120
DSF230/16	230 V AC; 50/60 Hz	Two-point or three-point	2,9 kg	90..120
DSF230/16/E	230 V AC; 50/60 Hz	Two-point or three-point	2,9 kg	90..120
DSFY/16	24 V AC; 50/60 Hz	0..10 V DC	2,9 kg	90
DSFY/16/E	24 V AC; 50/60 Hz	0..10 V DC	2,9 kg	90

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