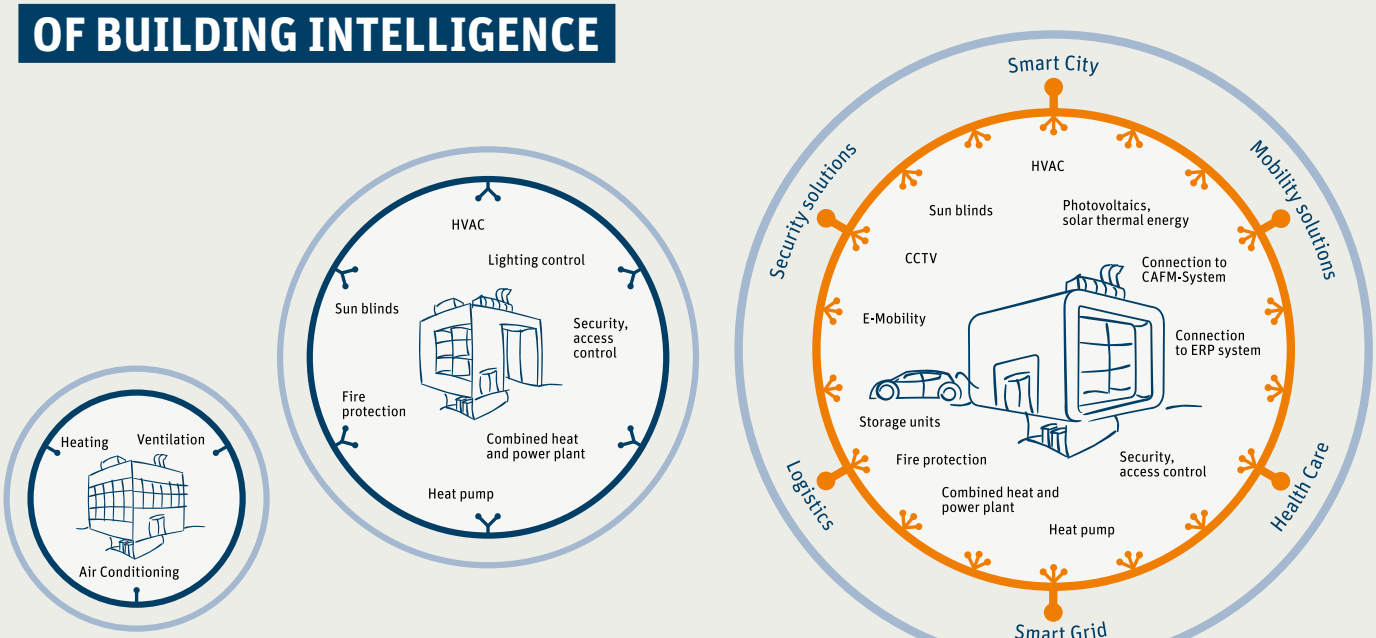
Kieback&Peter

SIMPLY. SMART BUILDINGS.
CREATED WITH HEART.

THE EVOLUTION OF BUILDING INTELLIGENCE



Digitalization of existing systems

Digital services

connect
Remote access, cloud solutions

MPC 2.0
Predictive control

Today, Kieback&Peter is already working on digitization, networked platforms, the Internet of Things (IoT) and Cloud computing. The research and development center is developing solutions which will create a long-term economic benefit.

Migration and system integration

The rising demand for communication between devices and computer systems calls for increasing IP-based solutions. Totally new conditions are being created for BA systems. The staff at Kieback&Peter are experts in replacing existing communication structures, and virtualizing software in a professional IT environment.

Connect: Secured and flexible access

The ability to access systems from anywhere at any time, saves operators time and money. Secured platforms for remote access are essential here. For this, Kieback&Peter has developed Connect, an extendable system for widely varying Cloud solutions.

Internet of Things

Solutions for integration into existing IT infrastructures, trade union networking, or a constantly growing number of networked devices inside and outside buildings, the Internet of Things (IoT) is the basis for innovative automation solutions. In the future, components such as sensors and actuators will be used to expand functionality, detect status and trigger actions.

“As a Service” solutions

Cloud platforms relocate many activities to the outside. As a result, “As a Service” solutions are possible. They can be accessed over the internet and place the spotlight on the service character of system solutions. The entire building is regarded as a “Service” – for example as a local energy storage unit that is helpful to balance the power grid when needed.

Data analytics and MPC 2.0

Data analytics will become a special discipline in the future, to acquire beneficial knowledge from Big Data and allow sustained operational optimization. Today, the Model Predictive Control 2.0 (MPC) module delivers constantly optimized control for HVAC systems on the basis of measurement data and prognosis models. Thereby substantial savings can be achieved.

Building Information modeling

The nature of collaboration in planning, construction and operation is also changing. With Building Information Modeling, a new standard for collaboration is being established worldwide, saving costs and time. Here too, the scene is already set for an optimal building life cycle.

QANTEON
THE INTEGRATED BUILDING AND ENERGY MANAGEMENT SYSTEM

With Qanteon, Kieback&Peter has developed a **solution for efficiently interlinking building management systems with energy data management,** offering **savings potential.** Qanteon is the foundation for an economically successful building operation.

Qanteon is based on HTML5 and is therefore independent of any operating system or hardware platform. Communication between the Qanteon server and the client is sent via HTTPS so that your data always has optimum protection. Qanteon is the first building management system that has been **certified to B-AWS** and meets the requirements of ISO 50001. It also complies with the provisions of the Energy Efficiency Directive, EED.

Qanteon displays situational information on a simple, intuitive and easy working user interface. The user finds even the most diverse data in a clearly arranged overview. Qanteon won for its design the UX Design Award in 2016 and the German Design Award in 2018.

Technical data	
HTML5	▪ Can be operated using any modern browser
VM Ware vSphere	▪ Optimized for use in data centers

Qanteon

- Award winning operating concept
- Plant centric operating philosophy
- The foundation for an economically successful building management system

DDC4020e AND DDC4040e
AUTOMATION STATIONS FOR HIGHLY INTERCONNECTED SYSTEMS

The automation stations DDC4020e and DDC4040e come with a **new, intuitive operating concept.** With their **Qanteon look and feel,** the user interfaces offer optimum operating convenience and high operational reliability. The devices control 3 or 12 DDC control systems and are extendable via software objects.The controllers are equipped with trend value memory for up to 100,000 trend points, as well as error message memories, event logging and the ability to forward data to GSM-SMS as well as e-mail. Customer-specific plain text may be entered for all parameters.

Both the DDC4020e and DDC4040e come inherently with BACnet® according to DIN EN ISO 16484-5, **BACnet-IP and BACnet MS/TP** and are **BTL certified**. Due to their flexibility and excellent scalability, they perfectly fit HVAC systems of all sizes as well as industry-related sectors. LON® solutions are also available. Ethernet interfaces for data transfer with the internet protocol TC/IP enable plug & play solutions to be used in new and existing networks. The system is **mounted on DIN rails**, enabling direct installation in the control cabinet. BACnet MS/TP field devices can be connected without the need for additional components. Bi-directional communication is possible with up to 99 DDC4000 devices and is constantly monitored. Everything is adapted to reliable Kieback&Peter systems. Remote operation is possible via touch panel PC TPC70 or TPC140, a PC with a web browser or mobile devices.

DDC4020e, DDC4040e

- For DIN rail installation
- BACnet®, BTL certified
- Excellent scalability

OEM

Technical data	
Nominal voltage	▪ AC 24 V ±10 %; 50..60 Hz; 20 VA; 0.83 A or ▪ DC 24 V ±10 %; 13 W; 0.54 A or ▪ DC 12 V ±10 %; 13 W; 1.08 A
Fuses	▪ Time-delay power fuse T 0.63 A
Bus connection/ interfaces	▪ 2 x Ethernet RJ45: 99 manageable DDC4000 automation stations that can be networked globally via active network components, BMS and BACnet® client connection, 10/100 Mbits/s, TCP/IP ▪ USB socket for USB memory stick only: update, backup/restoration ▪ 2 x RS485 ▪ 1 x for BACnet MS/TP (terminals “32”, “33”, “34”): 32 devices, 1000 m, up to 115 kBd, routing in accordance with BACnet/IP
DDC4020e	
Bus connection/ interfaces	▪ 2 x CAN bus, switchable as field or switch cabinet bus ▪ Fieldbus, F-bus: up to 8 fieldbus modules FBM, 2000 m, 20 kBd, CAN ▪ Switch cabinet bus, SBM-bus: up to 4 switch cabinet bus modules SBM or BMA/BMD, 200 m, 40 kBd, CAN ▪ 2 x serial RS232 ▪ 1 x for modem (terminals “21”, “22”, “23”)
DDC4040e	
Bus connection/ interfaces	▪ 2 x CAN bus, switchable as field or switch cabinet bus ▪ Field bus, F-bus: up to 63 fieldbus modules FBM/FBU or RBW4xxx, 2000 m, 20 kBd, CAN ▪ Switch cabinet bus, SBM-bus: up to 16 switch cabinet bus modules SBM or BMA/BMD, 200 m, 40 kBd, CAN ▪ 2 x serial RS232 ▪ 1 x for LON® (terminals “11”, “12”, “13”) ▪ 1 x for modem (terminals “21”, “22”, “23”)

DDC4000e
THE HIGHLY VERSATILE AUTOMATION SYSTEM

Technical data		DDC4002e DDC4200e DDC4400e	DDC420
Nominal voltage	▪ AC/DC 24 V ±10 %	▪	
	▪ AC 110..230 V ±10 %		▪
Inputs/outputs	▪ 32 binary (switchable input/output)	▪	
	▪ 24 analog (switchable input/output)	▪	
	▪ 2 binary		▪
	▪ 8 universal (switchable)		▪
	▪ 5 relay outputs max. 5(3) A; AC 250 V		▪
Bus connection/ interfaces	▪ Ethernet RJ45: 99 DDC4000 automation stations that can be globally networked via active network components, BMS and BACnet® client connection, 10/100 Mbits/s, TCP/IP	▪	▪
	▪ RS232 interface (modem)	▪	▪
	▪ RS232 interface (LON dongle FTT10)	▪	
	▪ RS485 interface: BACnet MS/TP for up to 7 communication partners, 1000 m, up to 115 kBd, routing in accordance with BACnet/IP		▪
	▪ RS485 interface: BACnet MS/TP for up to 31 communication partners, 1000 m, up to 115 kBd, routing in accordance with BACnet/IP	▪	
	▪ 2 x CAN bus, switchable as field or switch cabinet bus ▪ Fieldbus, F-bus: up to 63 fieldbus modules, 2000 m, 20 kBd ▪ Switch cabinet bus, SBM-bus: up to 16 cabinet bus modules, 200 m, 40 kBd	▪	
	▪ 1 x CAN bus ▪ Fieldbus, F-bus: up to 3 fieldbus modules plus up to 3 room control modules, 2000 m, 20 kBd		▪
	▪ USB socket for USB memory stick only: update, backup/restoration	▪	

DDC4000e

The automation stations with **BACnet® communication** serve as autonomous stations for open-loop control, optimization, closed-loop control and monitoring functions. They enable customer-specific plain text to be input for all parameters. The DDC4000e family is **backward-compatible with** the Kieback&Peter **DDC3000** automation system and offers **constant system monitoring across the bus communication** and all connected **DDC components.** Remote operation is possible via touch panel PC TPC140, a PC with web browser or mobile devices.

DDC4000e

- Intuitive, customizable user interface
- BACnet®, BTL certified
- LON® optional

Compact automation station DDC420

The DDC420 automation station is optimized for **BACnet®** according to DIN EN ISO 16484-5 and has an integrated web server. The system is **operated and visualized via a web browser, separate touch displays** and mobile devices. Every automation station has an Ethernet connection.

DDC420

- BACnet® controller for HVAC-systems
- Flexible with Multi-IO and relay
- BACnet MS/TP on board

TPC
DISPLAY AND OPERATOR PANEL

The TPCs (touch panel PCs) are separate display and operating devices for the automation stations. They have a backlight, color TFT touch screen and are suitable for installation in the front panel. An integrated Ethernet interface enables direct communication with one or more automation station.

TPC56

- Intuitive, colorful user interface
- Customizable operation of DDC420
- Operation of up to 99 automation stations

Technical data TPC56	
Control	▪ For DDC420
Display	▪ 5.6" resistive touch
Resolution	▪ QVGA 320 x 240 pixels
Format	▪ 4:3
Interface	▪ RJ45 Ethernet connection
Operation	▪ Fan-less
Housing	▪ For front panel installation with assembly kit
Degree of protection	▪ Front face IP65, housing IP20
Power supply	▪ DC 24 V
Ambient temperature	▪ 0..50 °C

TPC70

- For DDC4020e and DDC4040e
- Plant images in full screen format
- 7" widescreen, touch display

Technical data TPC70	
Control	▪ For DDC4020e and DDC4040e
Display	▪ 7" resistive touch
Resolution	▪ WVGA 800 x 480 pixels, widescreen
Interface	▪ RJ45 Ethernet connection
Operation	▪ Fan-less
Housing	▪ For front panel installation with assembly kit
Degree of protection	▪ Front face IP65, housing IP20
Power supply	▪ DC 24 V
Ambient temperature	▪ 0..50 °C

ROOM AUTOMATION
SIMPLY AND PERFECTLY REGULATED

Kieback&Peter is constantly expanding its product range to enable it to offer coordinated system solutions for room automation. New product developments include:

Change over ball valve CBV15..20

The change over ball valve CBV15..20 replaces up to four conventional valves in 4-pipe systems and its compact design makes it perfect for use in combined heating/cooling ceilings as well as fan coil devices.

Technical data	
Operating temperature	▪ -10..120 °C
Max. operating pressure	▪ 16 bar
Max. differential pressure	▪ 2 bar
Positioning angle	▪ 90°
Housing	▪ Dezincification resistant brass
Center distance	▪ 50 mm
Connection	▪ DN15 G3/4 AG with Euroconus according to EN16313 ▪ DN20 G1 AG with conus
Kvs values	▪ 0.25/0.4/0.63/1.6/2.5 – adjustable with aperture plates

CBV15..20

- For cooled and heated ceilings
- Compact design
- Low pressure drop, high flow rates

Rotary actuator DS5

The DS5 rotary actuator was developed for use with the change over ball valve CBV15..20 in order to provide precise volume flow control. With a protection rating of IP54, it can be used even in demanding environments.

Technical data	
Nominal voltage	▪ AC 24 V ±10 %; 50/60 Hz; 6 VA; DC 24 V ±10 %; 2.6 W
Control	▪ Continuous control: DC 0..10 V; <0.5 mA
Connection	▪ Pre-installed cable: 1.5 m; 5 x 0.25 mm²
Positioning angle	▪ 90°
Torque	▪ 5 Nm
Position indication	▪ Mechanical position indicator
Position feedback	▪ DC 0..10 V; 5 mA for 0..100 % positioning angle
Ambient temperature	▪ 0..55 °C
Degree of protection	▪ IP54

DS5

- For change over ball valve CBV
- Precise flow control
- IP54 for demanding environmental conditions

ROOM AUTOMATION
SIMPLY AND PERFECTLY REGULATED

RCN15x-L, RCC156-L

- Complete controller range with up to 6 inputs and 11 outputs
- eu.bac certified controller

LON® individual room controller RCx15x-L

With new additions to the RCx15x-L series, Kieback&Peter is updating its range of individual room controllers. These devices now have **six configurable inputs** along with significantly expanded functions. This controller is suitable for room control with up to two sequences each for heating and cooling. The devices can be used for radiators, surface heating as well as cooling systems, fan coil units and VAV systems. An **air quality and humidity control system** may also be integrated.

Technical data		RCN150-L	RCN151-L	RCN152-L	RCN155-L	RCC156-L
Nominal voltage	▪ AC 110..230 V (internal consumption <1 W)	▪		▪		▪
Inputs	▪ 2 x KP10 or binary	▪	▪	▪	▪	▪
	▪ 2 x NTC10K or binary	▪	▪	▪	▪	▪
	▪ 2 x 0..10 V or binary	▪	▪	▪	▪	▪
Outputs	▪ PWM output DC 24 V or 0..10 V	2		4		
	▪ PWM output AC 24/230 V (∑ 400 mA)		2		2	
	▪ Relay contact AC 230 V 10 A; Inrush 80 A K10	1		1		
	▪ Relay contact AC 230 V 3 A			5		
LON® network	▪ Plug-in screw terminal	1	1	1	1	2
Control module	▪ RJ9 or screw terminal	▪	▪	▪	▪	▪
	▪ RBW20x-C, RBW30x-C	▪	▪	▪	▪	▪

BCU040-L

- Flush mounting in the wall
- 4 binary inputs, 4 outputs
- Switch and push button functions

LON® push button interface BCU040-L

Install into the deep flush-mounted box with any standard switch frame. The apparatus can accommodate four button elements as well as four LEDs for feedback. Light and sun shading and blind functions can also be activated via the configuration. A convenient LNS3 plug-in is used for configuration.

Technical data	
Network protocol	▪ LonTalk®
Interfaces	▪ LON FTT10; 78 kBit/s; terminals
Nominal voltage	▪ AC/DC 24 V
Inputs	▪ 4 binary inputs for BI potential-free contacts
Outputs	▪ 4 binary outputs DC 24 V, 20 mA
Installation	▪ Deep flush-mounted box

BACnet® room controller RCN420-B

The new freely-programmable RCN420-B room controller completes Kieback&Peter's range of individual room controllers, **now with BACnet®**. The 8 universal inputs on these devices have extensive functions. This controller is suitable for **room control with up to 2 sequences each for heating and cooling.** The devices can be used for radiators, surface heating and cooling systems, fan coil units as well as VAV systems. An air quality and humidity control system can also be added.

Technical data	
Nominal voltage	▪ AC 110..230 V ±10 %; 50/60 Hz; A 21 V
Inputs/outputs	▪ 8 universal inputs and outputs, parameterizable as:
	▪ Binary output: Transistor output DC 24 V 40 mA
	▪ Binary input for potential-free contact
	▪ Analog output DC 0..10 V; max. 2.5 mA
	▪ Analog input
	▪ 2 binary inputs for potential-free contact
Outputs	▪ 5 x relay contact AC 230 V 3 A
BACnet® network	▪ BACnet IP Ethernet RJ45
Control module	▪ RJ9 or screw terminal
	▪ RBW20x-C, RBW30x-C

OEM

RCN420-B

- 8 universal inputs and 5 binary outputs
- Free programmable for up to 4 room control circuits

High-end sun blind solutions

The modular high-end sun blind solutions from Kieback&Peter include
- Shading correction
- Slat tracking
- Automatic thermal control

So you can easily achieve efficiency class A (to DIN EN 15232).

Kieback&Peter offers solutions for wall and ceiling mounting as well as installation of manifolds (on standard rails), which are quickly parameterizable and even freely programmable. SMI and DALI technologies are also supported.

High-end sun blind solutions

- Effortless to efficiency class A
- Shading correction, slat tracking and automatic thermal control
- Programmable software and parameterizable

ROOM AUTOMATION
SIMPLY AND PERFECTLY REGULATED

RBW322-FTL

- Weekly schedule
- Integrated humidity sensor (optional)
- Control → MD15-FTL

Solar-powered room control module RBW322-FTL

The solar-powered room control module is convincing due to its smart communication management for measuring room temperature and for wireless transmission of measured values, occupancy, setpoint and weekly schedules. The RBW322-FTL supports the EnOcean® wireless standard ISO/IEC 14543-3-10 for direct communication with the wireless small actuator MD15-FTL.

RBW20x-C, RWB30x-C

- Integrated room temperature sensor
- Manual setting of the room temperature set point
- Presence button and fan control
- Adjustable weekly program (RBW30x-C)

Room control module RBW20x-C

The room control module features buttons and a rotary knob. LEDs of different colors communicate the module's status to the operator. The unit has a sensor for measuring room temperature. The module can be used in conjunction with the RCx15x-L, RCx200-L and RCN420-B room controllers.

Room control module with LCD display RBW30x-C

The room control module features buttons and a rotary knob. An LCD display facilitates communication with the operator. The unit has a sensor for measuring room temperature. The module can be used in conjunction with the RCx15x-L, RCx200-L and RCN420-B room controllers.

Technical data		RBW201-C	RBW202-C	RBW204-C	RBW205-C	RBW301-C	RBW302-C	RBW304-C	RBW305-C
Nominal voltage	▪ DC 12 V, 0.6 W	▪	▪	▪	▪				
Sensor	▪ Temperature	▪	▪	▪	▪	▪	▪	▪	▪
Control	▪ Rotary knob for adjusting the setpoint value	▪	▪	▪	▪	▪	▪	▪	▪
	▪ Fan level buttons			▪	▪			▪	▪
	▪ Automatic button			▪	▪			▪	▪
	▪ Occupancy button		▪		▪		▪		▪
	▪ Indicator LEDs	▪	▪	▪	▪				
	▪ Backlight LCD display					▪	▪	▪	▪
CAN bus	▪ RJ9 or screw terminal	▪	▪	▪	▪	▪	▪	▪	▪

LON® room control module RBW30x-L

The room control module features control buttons and a rotary knob. An LCD display facilitates communication with the operator. The unit has a sensor for measuring room temperature. The module is used in LON-networks together with other LonWorks® devices.

RBW30x-L

- Integrated room temperature sensor
- Manual setting for the room temperature set point
- Presence button and fan control

LON® room control module RBW31x-x-L

The room control module features control buttons and a rotary knob. There are up to 8 buttons for light and sun protection applications. Up to 8 light circuits can be dimmed. Dimming is made easy using the rotary knob. An LCD display facilitates communication with the operator. The unit has a sensor for measuring the room temperature. The module is used in LON-networks together with other LonWorks® devices.

RBW31x-x-L

- Integrated room temperature sensor
- Manual setting for the room temperature set point or brightness
- Fan, light and blind control
- Adjustable weekly program

Technical data		RBW301-L	RBW302-L	RBW304-L	RBW305-L	RBW31x-2-L	RBW31x-4-L	RBW31x-8-L
Nominal voltage	▪ AC/DC 24 V	▪	▪	▪	▪			
Sensor	▪ Temperature	▪	▪	▪	▪	▪	▪	▪
Control	▪ Rotary knob for adjusting the set point value	▪	▪	▪	▪	▪	▪	▪
	▪ Fan level buttons			▪	▪	▪	▪	▪
	▪ Automatic button for fans			▪	▪	▪	▪	▪
	▪ Presence button		▪		▪	▪	▪	▪
	▪ Indicator LEDs	▪	▪	▪	▪	▪	▪	▪
	▪ Backlight LCD display	▪	▪	▪	▪	▪	▪	▪
	▪ Light/sun protection/scene buttons					2	4	8
LON® network	▪ 4 pin screw terminal	▪	▪	▪	▪	▪	▪	▪
	▪ LON FTT10, 78 Kbit	▪	▪	▪	▪	▪	▪	▪

Sensors TAD, TLH, TDE

The new sensors guarantee precise temperature and humidity detection, and high accuracy over the entire measurement range and life cycle. The high quality housing design meets German quality standards.

Variants		
Housing sensor	Outside temperature sensor	▪ TAD
Rod/integral sensor	Duct temperature sensor	▪ TLD1.. TLD4
	Duct temperature and humidity sensor	▪ TLH2..TLH4
	Immersion sensor ▪ Brass	▪ TVD1..TVD4
	▪ Stainless steel	▪ TDN1..TDN4
Contact sensor		▪ TAVD
Cable sensor		▪ TDE
Terminal housing		▪ KTDE

Technical data	
Accuracy	▪ ±0.2 K over the entire measurement range
Usage	▪ Long-term suitability for -50..150 °C
Measurement values	▪ Temperature (active or passive measuring elements) and relative humidity
Degree of protection	▪ IP65
Input	▪ AC 24 V ±10 %; 0.5 VA (TLH only)
Output	▪ Humidity DC 0..10 V; max. 5 mA for 0 %..100 % r.h.
	▪ Temperature 2.731 V at 0 °C; TK 10 mV/K

TAD, TLH, TDE

- High accuracy over the entire measured range and life cycle
- Recording of temperature and humidity

ELECTRIC FAIL-SAFE ACTUATOR

Electric fail-safe actuators MF15 and MF50

The MF15 and MF50 small actuators feature an electric fail-safe function, meaning that the range of small actuators available can now offer a solution for every function. When compared to similar mechanical fail-safe actuators, the MF15 and MF50 come out on top with their compact design and optimized energy efficiency. With freely selectable fail-safe actuator positions, the MF15 and MF50 offer more than just one function in the event of a critical safety situation.

OEM

OEM

MF15

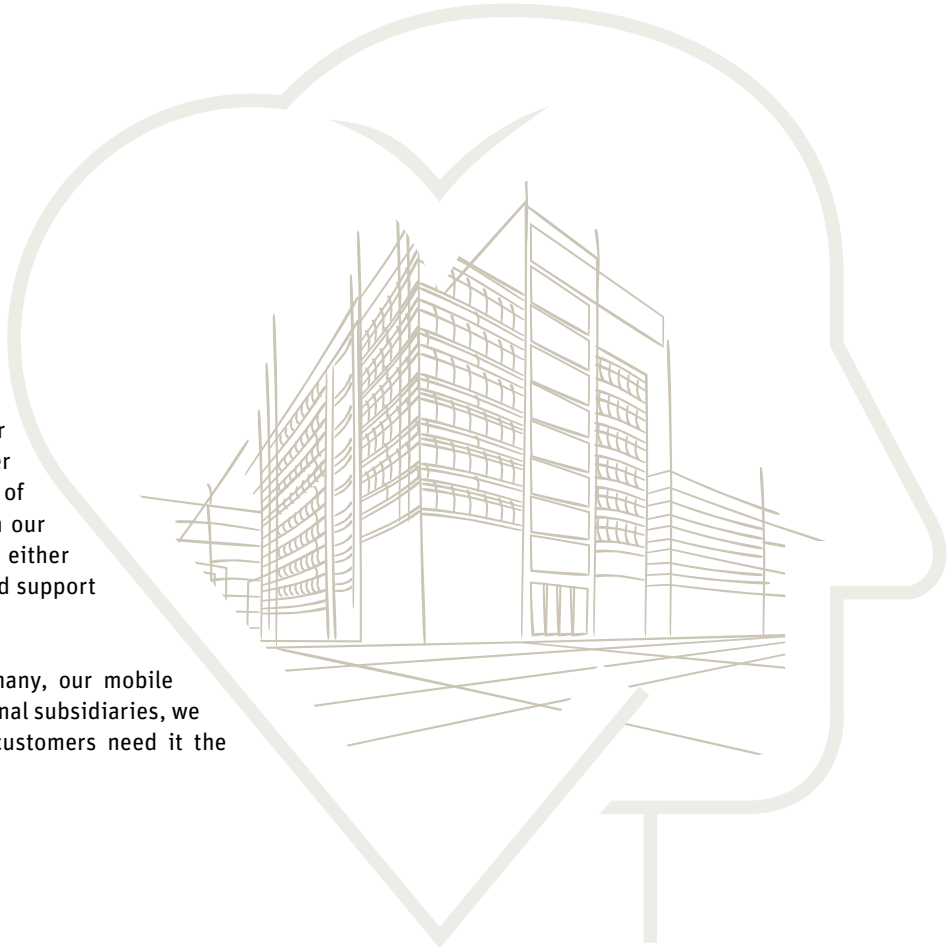
- Adjustable fail-safe position
- Compact design
- Highest level of energy efficiency

MF50

- Minimal space required
- Fail-safe position freely selectable
- Highest level of energy efficiency

		MF15	MF50
Technical data			
Nominal voltage	▪ AC 24 V ±10 %; 50..60 Hz; 6 VA; DC 24 V ±10 %; 2.6 W		▪
	▪ AC 24 V ±10 %; 50..60 Hz; 2.5 VA; DC 24 V ±10 %; 0.8 W	▪	
Control	▪ Continuous control: DC 0(2)..10 V; <0.5 mA, invertible	▪	▪
Connection	▪ Pre-installed cable: 1.5 m; 5 x 0.25 mm²	▪	▪
Nominal stroke	▪ 10 mm		▪
	▪ 4 mm	▪	
Travel time	▪ 22 s/mm	▪	▪
Positioning force	▪ 500 N nominal		▪
	▪ 150 N nominal	▪	
Position indicator	▪ Travel indicator scale	▪	▪
Position feedback	▪ DC 0..10 V, 5 mA for 0..100 % nominal stroke; invertible	▪	▪
Ambient temperature	▪ 0..50 °C	▪	▪
Degree of protection	▪ IP40	▪	
	▪ IP52		▪
Installation position	▪ Vertical to horizontal position	▪	▪

SERVICES WITH HEART AND MIND
ACROSS ALL PHASES OF THE BUILDING LIFE CYCLE



Be it planning, construction or building management, Kieback&Peter offers support across all phases of the building life cycle. Benefit from our comprehensive range of services, either directly on-site or via our centralized support and training facilities.

With 31 branches throughout Germany, our mobile teams of experts and nine international subsidiaries, we provide services right where our customers need it the most.

Design | Project planning

- **Assistance in planning HVAC/BA**
- **IT consulting:** System integration, cloud computing, Internet of Things
- **Efficiency-coaching:** Compliance with standards and regulations in the fields of efficiency, safety and comfort

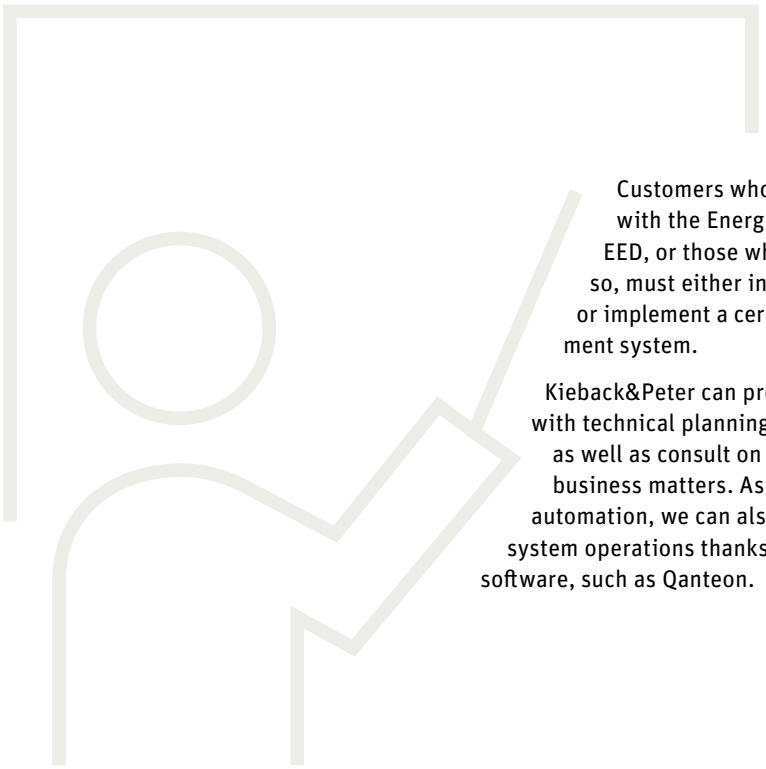
Construction | Installation | Commissioning

- **Project management HVAC/BA**
- **Technical service:** Installation, commissioning and project planning for software and hardware
- **On-site training:** Software and hardware

Operation | Maintenance | Optimization

- **Technical services:** Maintenance, repair, support
- **Digital services:** Remote monitoring and control, data analysis and optimization, online support
- **IT consulting:** Migration, system integration, cloud computing, Internet of Things
- **Efficiency-coaching:** Optimizing efficiency, safety and comfort, compliance with legal regulations and subsidies‘ consultancy
- **Training-center Berlin**

EFFICIENCY-COACHING
ENERGY EFFICIENCY AND MANAGEMENT



Customers who wish to comply with the Energy Efficiency Directive, EED, or those who are obligated to do so, must either initiate an energy audit or implement a certified energy management system.

Kieback&Peter can provide assistance with technical planning and implementation, as well as consult on laws, norms and other business matters. As an expert in building automation, we can also significantly simplify system operations thanks to our proprietary software, such as Qanteon.

Consulting on laws and norms

- **Energy Performance of Buildings Directive**
- **Energy Efficiency Directive, EED**
- **Energy Audit DIN EN 16247-1**
- **ISO 50001 Energy management**

Business consulting

- **Baseline study**
- **ROI-calculation**
- **Subsidies‘ consultancy**

Technical implementation

- **Consumption metering concept**
- **Integration into building automation planning**
- **Performance measurement**
- **Data analysis, reporting, optimization and Model Predictive Control 2.0**

IT CONSULTING
MIGRATION AND SYSTEM INTEGRATION

Digitization is more than just a buzzword. It's at the forefront of everyone's mind because it represents a real challenge that so many now are facing. This is also true of building automation. When it comes to digitizing existing buildings, as extensive as they are, all providers of suitable solutions are confronted with the task of integrating the IT systems for building automation into a regular IT infrastructure. In other words, they have to bring a 20-year-old serial infrastructure up to speed for cloud computing.

This was also a challenge that Kieback&Peter faced in late 2015, when the Building Department at the State Capital of Wiesbaden awarded them a contract to install a cloud-server-based building control system in the data center at their ITC service provider, WiTCOM (Wiesbadener Information- und Telekommunikations GmbH). This involved connecting all building and property automation stations to this system. The primary objective of city authorities was that this networking project enables a centralized access and thus lays the foundation for energy cost reduction. However, it was also necessary to transfer the serial (P90) controller connections from a modem to an IP-based solution, simply because analogue/ISDN-based connections are becoming obsolete. Older automation stations not compatible with the network are to be replaced with DDC4000 technology from Kieback&Peter.

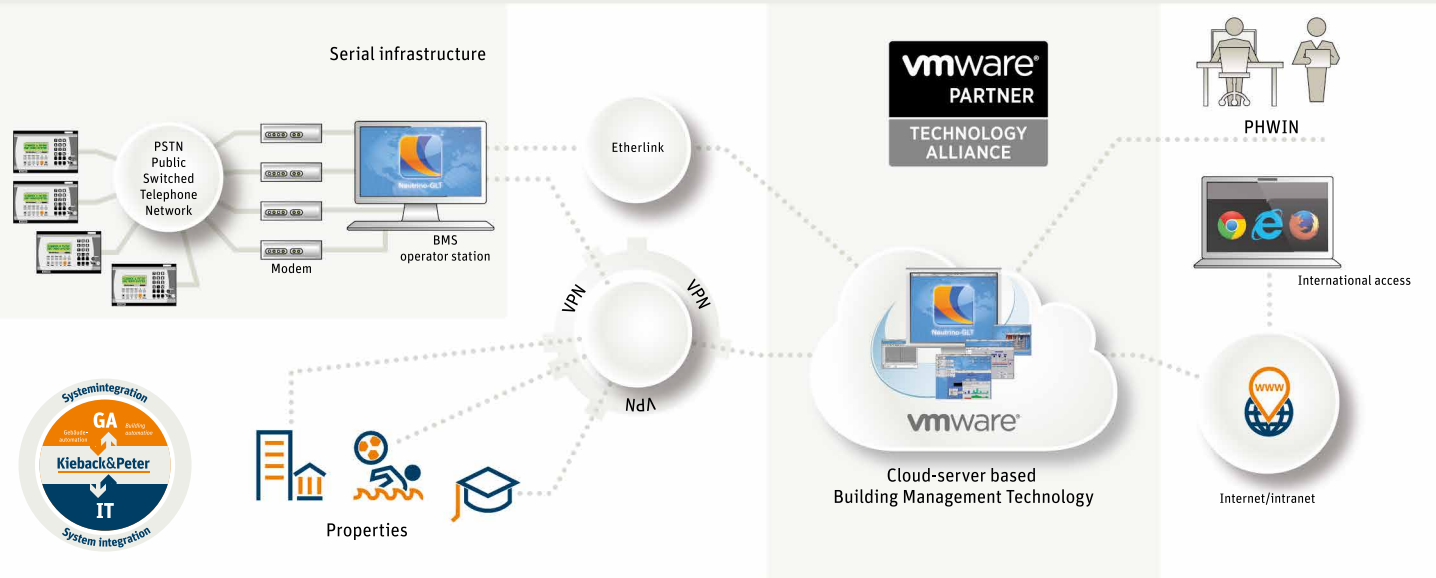
The Building Department of the State Capital of Wiesbaden operates a large number of properties, including schools, nurseries and office buildings. The technical infrastructure had been built over a long period of time and therefore consisted of a wide range of different devices and technologies. Migration also required time: transferring the current systems in Wiesbaden to a VPN infrastructure will take several years and is still not complete.

For instance, some 80 buildings are set to be integrated in 2017 alone. Until modernization is complete, the existing serial systems must still be able to be used. To make this possible, the serial modem connections were converted to an Ethernet-IP at a Kieback&Peter building control operating station and forwarded to the WitCOM data center via Etherlink.

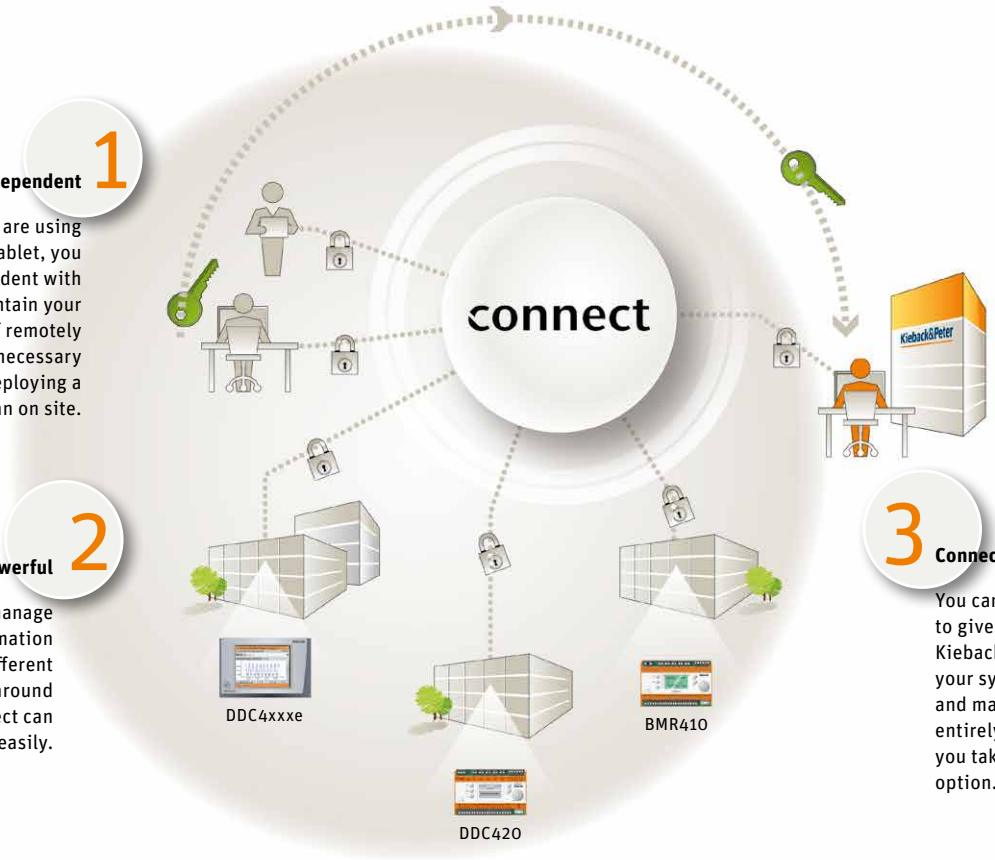
The building control system is then virtualized. Due to this system, the Building Department of the State Capital of Wiesbaden now has a secure, virtualized building control system that is freely scalable and operates in high-availability mode (HA), and already includes the serial infrastructure.

Additionally, now Kieback&Peter has even more experience creating and implementing suitable migration concepts.

- **Harmonizing office IT, production and building automation networks**
- **Securing company-wide access to equipment and building automation systems (BAS)**
- **Streamlining service and maintenance processes**
- **Ensuring IT-based availability of building automation systems (BAS)**



CONNECT
SECURED WEB-BASED REMOTE CONTROL



1 Connect is independent

Whether you are using a PC, laptop or tablet, you can stay independent with Connect. Maintain your plants yourself remotely and save the unnecessary costs of deploying a technician on site.

2 Connect is powerful

Do you need to manage several automation stations in different locations around the clock? Connect can handle this easily.

3 Connect is flexible

You can also use Connect to give experts from Kieback&Peter access to your systems for diagnostic and maintenance work. It's entirely up to you whether you take advantage of this option.

With Connect, you can control your automation systems via the internet at any time, from anywhere in the world. You can access Connect by logging in to the Kieback&Peter website. The user interface for your site automation station is integrated into the Connect interface. Now you can carry on working as normal even when you're not on-site. As a leading provider of tailored system solutions, Kieback&Peter has developed Connect to offer you a product that provides optimum protection against unauthorized access to your system.

Safe and flexible

Your automation station is connected directly to Connect via a router, which is then configured quickly and easily using auto-configure. The connection to Connect can be established via a range of media, such as a mobile network, DSL or existing private network infrastructures. The automation stations DDC4000e, DDC420 and BMR410 can be easily integrated into the Connect infrastructure.

Cost savings

Connect doesn't just help you work more efficiently, it also offers a considerable tax advantage as its cost can be offset as a business expense. Connect runs on an infrastructure hosted by Kieback&Peter. This means that you can access your building automation system at any time via your browser. You can also give experts from Kieback&Peter individual, limited-time access to your system as required, eliminating the need for on-site intervention.

Benefits at a glance

- **Powerful and scalable**
  Regardless of whether you are responsible for just one plant or several properties, Connect ensures that you can access your building automation at any time and manage it from a central access point, wherever it is located.

- **Flexible and familiar**
  Connect is based on HTML5 and is therefore independent of any operating system or hardware platform. The modern and intuitive user interface provides an overview of your system in just a few clicks. You can control your automation station from your own familiar interface.

- **Safe and simple**
  The safety of your plant is our top priority. A router that has been preconfigured by Kieback&Peter establishes a secure connection to Connect. This protects your plant against unauthorized internet access. No IT specialist is needed to set up the system.

- **Control access**
  Should you require support at any time, such as help with maintenance work, you can allow experts from Kieback&Peter to access your system. When needed, you can grant this access flexibly, individually and on a limited-time basis, meaning that you always have control and can call the shots yourself.

- **Save time and money**
  Connect enables you to work more efficiently and reduce additional deployment costs. You can react to problems more quickly, no matter where you are or when they happen. As the costs can be offset as a business expense, Connect provides you with a considerable tax benefit.

EXPANDED WIRELESS PORTFOLIO

For especially user-friendly and efficient solutions in the field of individual room controllers, Kieback&Peter has expanded its wireless portfolio.

The great advantage of room control modules such as RPW404-FTL and RPW414-FTL: They communicate wirelessly with small actuator MD15-FTL.

This allows the technology to be installed and maintained in residential and public buildings at minimal cost.

The wireless room control modules are optimized for controlling small actuators for room temperature control. They have a self-learning room sensor which automatically generates a user profile.

The RPW414-FTL is also equipped with a humidity sensor. Further sensors can be connected via gateway based on EnOcean®. Four buttons are fitted to the room control modules for easy adjustment of the set point values. The temperature and time, as well as the current operating mode, can be read in various selectable displays. The wireless small actuators have an integrated controller.

Small wireless actuator MD15-FTL

The battery-powered MD15-FTL small actuator combines three functions in one device: actuator, room temperature controller and temperature sensor. It is controlled wirelessly on the basis of the manufacturer-neutral EnOcean® wireless protocol. The MD15-FTL is suitable for direct mounting on standard radiator valves for room-specific temperature control in heating systems.

OEM

enocean

MD15-FTL

- Easy to install
- Battery life time up to 3 years
- Integrated temperature controller

Technical data	
Nominal voltage	▪ 3 alkaline Mignon batteries (Type AA, LR6AD Panasonic Powerline 1.5 V)
Battery life	▪ Up to 3 years
Measuring system	▪ Integrated digital temperature sensor: 0..40 °C; ±0.5 °C at 25 °C
Interfaces	▪ EnOcean® wireless interface
	▪ EnOcean® wireless telegram, bi-directional
	▪ EEP A5-20-01 (Battery Powered Actuator)
	▪ Frequency 868.3 MHz and 902 MHz
Indicator	▪ Multi-color status LED
Operation noise	▪ <28 dB (A)
Nominal stroke	▪ Up to 3 mm
Travel time	▪ 10 s/mm
Positioning force	▪ 100 N nominal
Position indicator	▪ Travel indicator scale

Room sensor RPW4x4-FTL

The innovative, stand-alone temperature sensor (as well as for the RPW414-FTL, humidity sensor) with solar powered technology, integrated bi-directional EnOcean® wireless interface, and an algorithm for self-learning of utilization time profile/ heating profiles in rooms.

OEM

RPW404-FTL

- Self-learning sensor
- Control → MD15-FTL
- Generation of utilization time profile

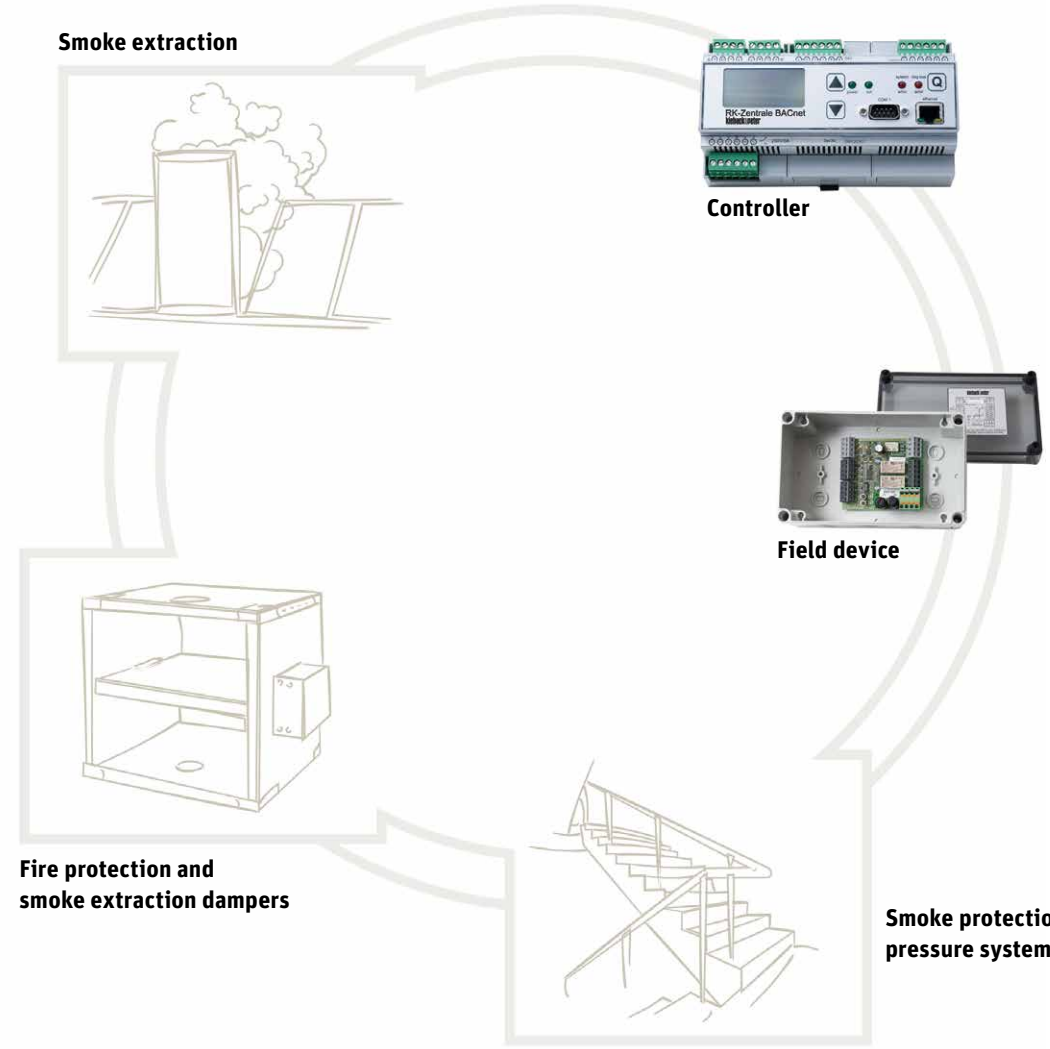
OEM

RPW414-FTL

- Self-learning sensor
- Integrated humidity sensor
- Control → MD15-FTL

Technical data	
Nominal voltage	▪ Dual energy supply with solar cell and internal energy accumulator with priority management, internal energy storage unit 2 x 3.6 V, AA lithium batteries
Measurement values in domestic and commercial premises	▪ Room temperature ▪ Relative humidity
Measuring system	▪ Temperature sensor: Integrated digital sensor ▪ Occupation sensor: Integrated PIR (Passive Infrared) sensor ▪ Humidity sensor: Integrated digital sensor
Relative measurement accuracy	▪ Temperature 0.1 K
Interfaces	▪ EnOcean® wireless interface ▪ Frequency 868.3 MHz ▪ Duty Cycle <1 % ▪ Cyclic transmit/receive intervals communication cycle 10 min, transmit power <10 mW

HIGHLY RELIABLE AND FLEXIBLE
FIRE PROTECTION AND SMOKE EXTRACTION IN ONE UNIT



Controller

- Optimum safety due to ringbus and redundant controller
- Easy customization
- Cost-effective

Field device

- Short-circuit proof
- Approx. 1000 modules on a 2500 m bus ring
- Easy replacement

Fire protection and smoke extraction dampers

- Limit switch monitoring
- Highly secured control
- Damper test with run-time monitoring

Smoke extraction

- Maximum safety
- Components for smoke control panels
- Multiple scenario control

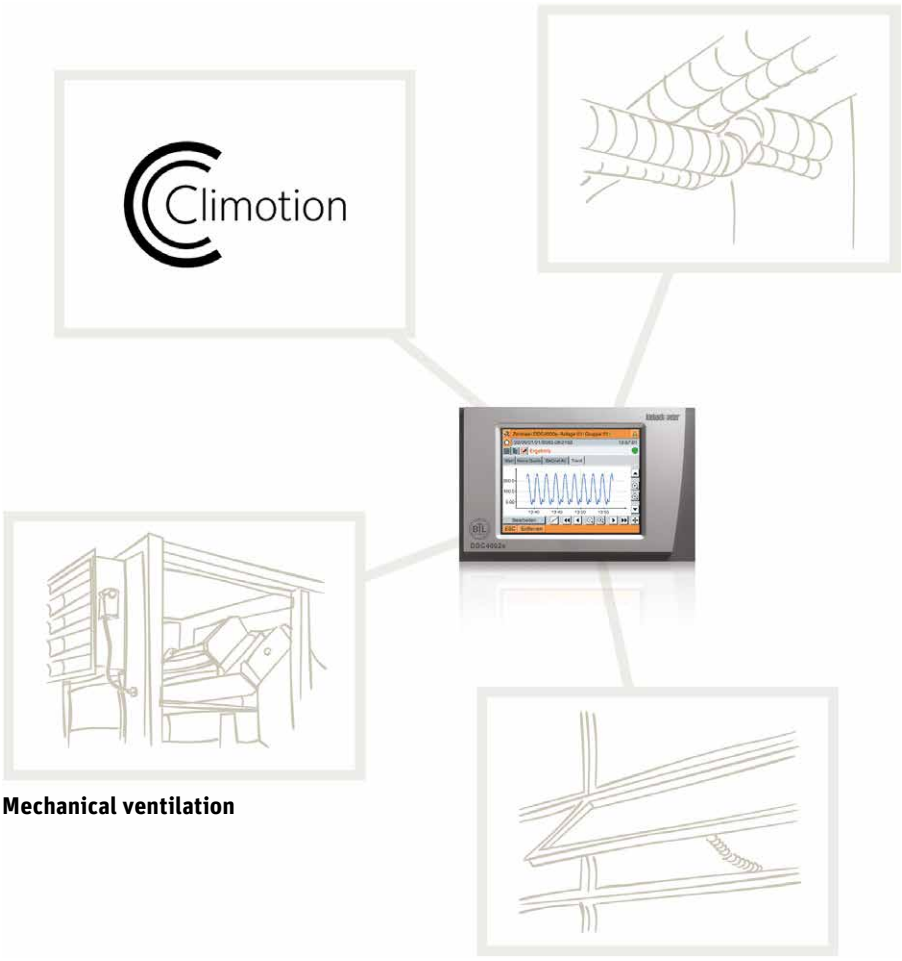
Kieback&Peter has added further solutions to its existing fire protection portfolio. For the first time, the company is offering integrated automation solutions to structural fire protection for fire protection dampers, smoke extraction dampers and smoke and heat extraction systems. All functions are combined in a user-friendly and reliable fashion, with complete integration in the building management system.

Simple solutions for fire protection damper automation can be achieved using DDC controllers. Complex solutions, or those with special safety requirements, are configured as independent high-security networks and connected to the DDC or BMS via a BACnet® central device.

As the general contractor, we also handle project management and commissioning. Kieback&Peter also offers fire protection automation service and maintenance.

- Integrated, combined solutions
- Cost-efficient solutions
- Maximum safety

SMART HVAC CONTROLLING OPTIMIZED WITH CLIMOTION



Improved efficiency, greater convenience and simple integration: these are the benefits of the smart ventilation closed loop control from Kieback&Peter – optimized with Climotion.

Extremely high energy consumption and an unpleasant room climate can result from ventilation systems with poor or even no control, as can be found in many commercial and public buildings.

With the DDC4000 automation system, Kieback&Peter offers an efficient demand-based closed-loop ventilation control system. This smart ventilation solution can be installed in new and existing buildings with minimal effort. It can also be equipped with the patented "Climotion" algorithm upon request, which optimizes comfort and efficiency by supplying air in all directions more slowly.

- 30 % less energy costs on average
- Healthy room climate
- Optimum mixture of ambient air supply

Natural ventilation can also be implemented easily with the DDC4000 technology.

FIND THE RIGHT SOLUTION FOR YOUR PROJECT

We are working intensively on our new website. In the future, we want you to find the information you're looking for immediately. Our new online presence should be helpful and above all, save you time searching for content. We are featuring content that is truly relevant and that which is presented simply and clearly. Let's begin with the Solution Finder.

If you're planning a new project with building automation, now you can find relevant information on how Kieback&Peter has solved similar challenges. Filter our references for example by sector, systems or by products. Is your focus on efficiency, ease of use or safety? Find projects in which we've already successfully achieved such targets. Enjoy yourself!

www.kieback-peter.com/references

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BUILDING LIFE CYCLE


Design | Project planning


Construction | Installation | Commissioning


Operation | Maintenance | Optimization

FOCUS

Efficiency


Security


Comfort


Integration | Networking

SYSTEMS


Heating


Ventilation


Air Conditioning


Lighting


Sun blind


Fire protection

PRODUCTS


Software


Controller


Sensors


Actuators

OPERATION SITE


Workstation


Room | Zone


Switch cabinet | Technique

NETWORKING


Cable

Wireless

IP