USER MANUAL

BUILDING CONTROL SYSTEM

Wildeboer-Net compact controller **KS2**

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WILDEBOER

Contents

1 Product overview

The KS2 compact controller is used - as a component of the overall Wildeboer-Net system - to control and monitor fire protection and ventilation components in buildings. The required modules can be selected and combined in accordance with the building and control requirements, set up as a modular and flexible system for mounting on a DIN top hat rail. Fire protection and ventilation components are connected in a star-shaped configuration. Commissioning and operation of the components can be performed using the KS2-CPU-01 main control unit. Further parametrisation is performed using the Wildeboer-Net WiNet-SW-02 software.

- For controlling fire protection and ventilation components:
  - Fire dampers with motor-driven actuators or thermal-mechanical release equipment (TMA), fire protection valves, smoke protection dampers, smoke detectors, multileaf dampers with spring return actuators, fans, further sensors and actuators.
- Automatic detection and commissioning of connected modules
- Operator-friendly software pre-installed on the WiNet-ZB-03 or for installation on the operating company's PC
- Straightforward integration of media, such as building plans, photos or comments for description of connected components inside a building
- Straightforward parametrisation of the system, no programming required
- Modular and flexible setup
- Comprehensive range of functions:
- Automatic commissioning, automatic functional test, release group control, sequence control, calendar control, data recording, analysis and optimisation, storage of building plans and photos, master data management, system operation, module configuration and parametrisation, comment function, fan control, documentation

1.1 Communication system Wildeboer-Net

Wildeboer-Net is a communication system which comprises multiple higher-level components of WiNet. These components are used for configuration of the system, and enable communication with external systems. The system is divided up flexibly and can be used for various applications. It is split into two main controllers: the BS2 bus controller and the KS2 compact controller.

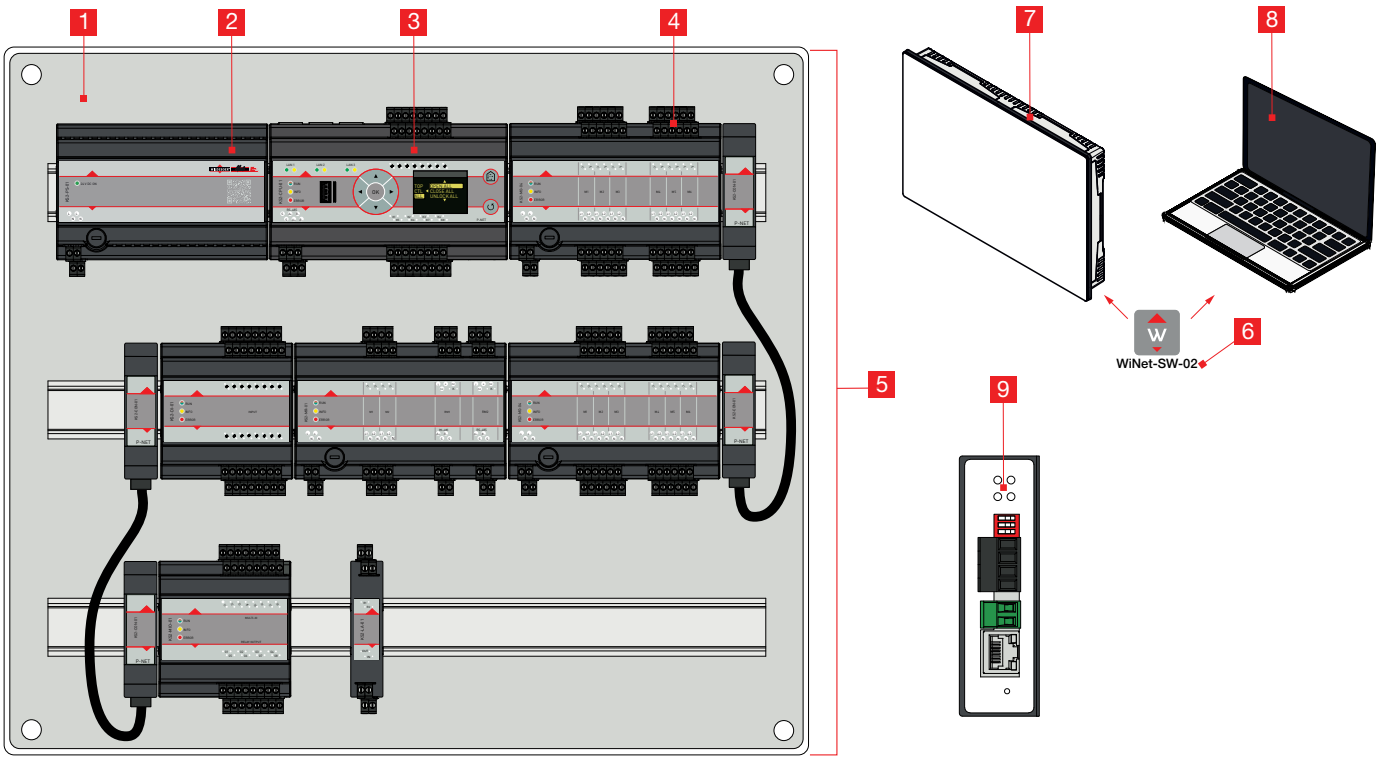
The **BS2 bus controller** is designed for decentralised installation of components. It is for applications for which long line lengths are required. The components are connected in series.

The **KS2 compact controller** is designed for centralised installation, for example, in a control cabinet. The components of this controller are connected in a star-shaped configuration.

Both controllers, the BS2 and the KS2, can be operated individually or in combination within the communication system. All functions are available throughout the entire system.

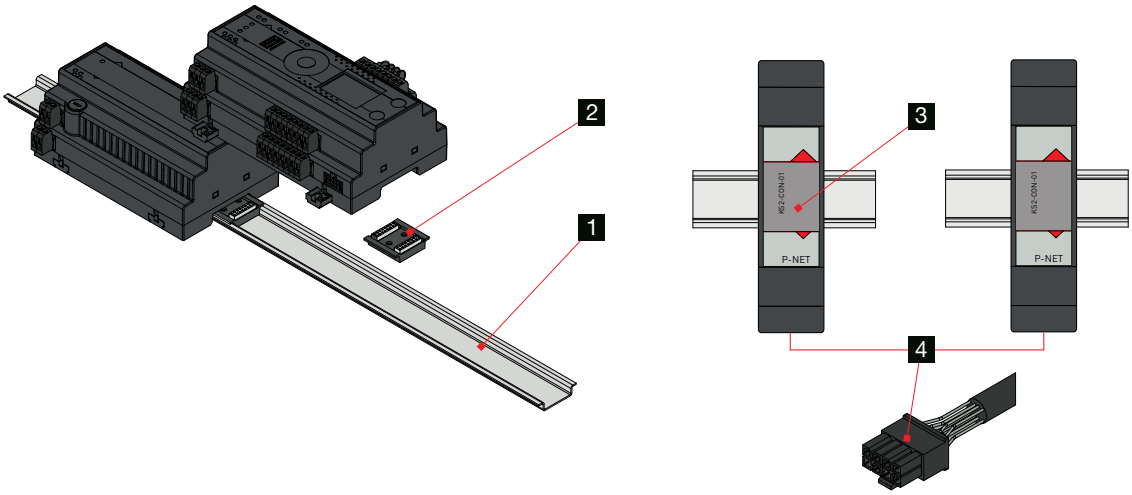
For further information on the BS2 bus controller, see ▸ BS2 user manual

2 Product features



1 Installation

The modules of the KS2 compact controller can be mounted on a DIN top hat rail 1 without tools. The modules are connected to each other at the rear using module connectors 2 (KS2-CON-02) and are connected to the next top hat rail using top hat rail connectors 3 (KS2-CON-01) which are connected to each other with a P-Net cable 4.



2 Voltage supply

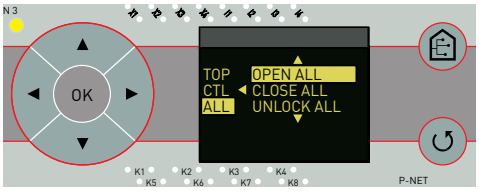
The KS2-PS-01 module 2 provides the internal system voltage for all modules of the compact controller, and supplies the KS2-CPU-01 main control unit 3 with up to 8 connected periphery modules. The voltage supply is connected using the rear plug-in KS2-CON-02 module connector 2. The voltage supply for connected motors is provided by the operating company.

For further information, see ▸ Page 7.

3 Implemented functions/operation

The CPU module 3 is the main control unit of the compact controller, and allows for local operation:

- Commissioning
- Functional test
- Fault diagnostics
- Status displays



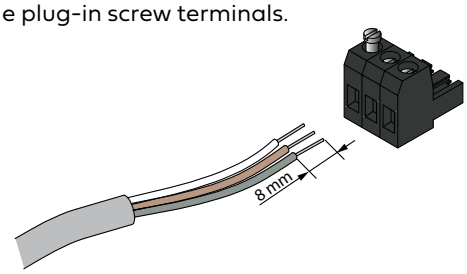
For further information, see ▸ Page 7.

4 Connection

The components are connected to the modules of the KS2 via the plug-in screw terminals.

They are designed for the following cables:

- Line cross section: 0.08 - 2.5 mm²
- Tightening torque: 0.5 Nm
- Stripping length: min. 8 mm
- Screwdriver: 3 mm blade width (-)



5 Modules

The KS2 compact controller is made up of various modules which are selected to suit the fire protection and ventilation components which are to be controlled.

For an overview and further information on the modules, see ▸ Page 7.

6 Software and operation

WiNet-SW-02 6 is pre-installed on the WiNet-ZB-03 7 or can be installed on a PC 8 provided by the operating company. It has an intuitive operating interface which is used for parametrisation, configuration and access to the functions of the compact controller. The user account control can be used to set up the appropriate accesses.

For further information on the functions, see ▸ Page 15.

7 Touch screen

The WiNet-ZB-03 7 is equipped with the Wildeboer-Net WiNet-SW-02 6 software in the factory, and is used for operation and control of the KS2 compact controller and the BS2 bus controller. Thanks to the touch screen, no further peripheral devices, such as a mouse or keyboard, are required.

For further information, see ▸ Page 12.

8 Operating company's PC

WiNet-SW-02 6 can also be installed on a PC 8 provided by the operating company, which is connected to the KS2-CPU-01 main control unit 3 via Ethernet.

Requirements for operating company's PC:

- 4 GB random access memory
- 500 MB free hard drive storage
- Ethernet interface (100 Mbit/s)
- Screen resolution at least 1920 x 1080 px
- Supported operating systems: Windows 7, Windows 8, Windows 10, Windows 11 (32 Bit or 64 Bit)
- Microsoft DotNet Framework 8 Hosting Bundle
- Supported (current) web browsers: Google Chrome, Microsoft Edge

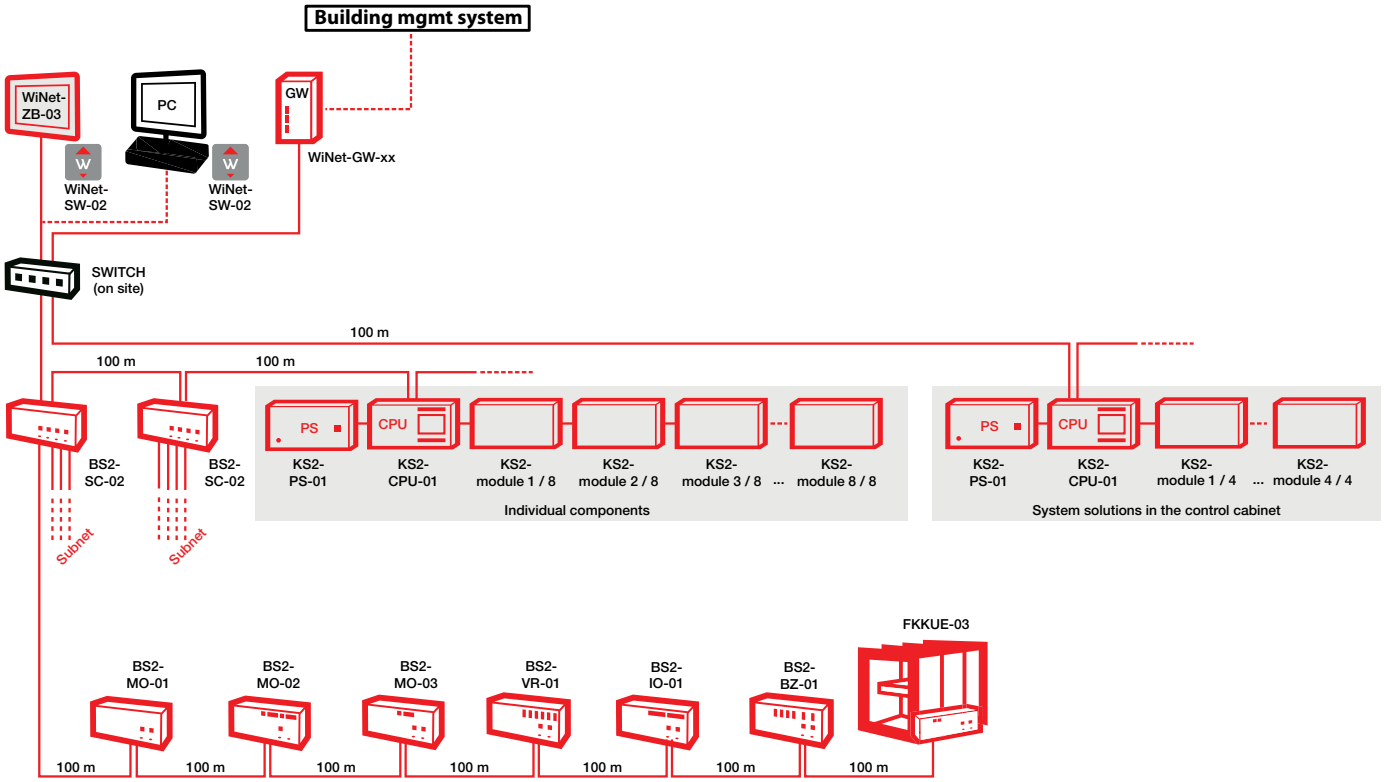
9 WiNet-GW-xx gateways

Gateways 9 are used for communication between devices with different communication protocols. A WiNet-GW gateway allows you to connect Wildeboer-Net to open communication profiles. In the process, one gateway can be used to operate different protocols simultaneously.

For further information on WiNet-GW-xx gateways, see ▸ Page 11.

3 System setup and topology

A KS2 compact controller (shown with a grey background) is made up of the KS2-PS-01 power unit, the KS2-CPU-01 main control unit and up to 8 further periphery modules. In the process, the periphery modules are selected to suit the fire protection and ventilation components. The following image shows the interaction of the KS2 compact controller with the BS2 bus controller. Both control systems can be used as standalone systems or as an integrated system in Wildeboer-Net.



3.1 Module overview

The following overview shows the options for connecting the fire protection and ventilation components to the KS2 modules.

Description	KS2-CPU-01	KS2-MO-04	KS2-MR-01	KS2-MIO-01	KS2-DI-01	WiNet-GW-xx
Fire dampers with spring return actuators and integrated limit switches		■	■			
Fire dampers with thermal-mechanical release mechanism (TMA)	■			■	■	
Multileaf dampers with spring return actuators and integrated limit switches		■	■			
Smoke protection dampers with spring return actuators and integrated limit switches		■	■			
Fire protection valves	■			■	■	
Smoke detectors			■			
Sensors/actuators	■ / ■			■ / ■	■ / -	
Building management system						■
Line monitoring for connected floating relay contacts	■			■		

4 System components

4.1 KS2-PS-01 power unit

The KS2-PS-01 power unit supplies the CPU module and up to 8 further modules of the KS2 with system voltage. The power is supplied via the KS2-CON-02 module connector at the rear of the modules. The actuators connected to the modules are supplied with voltage provided by the operating company.

Technical features:

- 1 x L (phase)
- 1 x N (neutral conductor)
- 2 x PE (protective earth conductor)

Connection overview

- Voltage supply, CPU module and up to 8 modules
- Internal fuse, 2.5 A slow-blow
- 1 x LED operating display: 24 V DC ON
- 2 x plug-in screw terminal, 2-pole

4.2 KS2-CPU-01 main control unit

The CPU module is the main control unit of the compact controller and allows operation to be performed locally using the membrane keypad and the OLED display screen. The connection to the Wildeboer-Net software WiNet-SW-02 is established using the LAN interface and the associated WiNet ZB-03 or a PC provided by the operating company.

Technical features:

- 4 x plug-in screw terminal, 8-pole
- 2 x plug-in screw terminal, 3-pole
- 3 x LED operating display: RUN, INFO, ERROR
- 6 x LED connection display: 3-port switch
- Membrane keypad for operation
- High-contrast OLED display screen 35 x 25 mm
- 1 x integrated 3-port switch

Connection overview

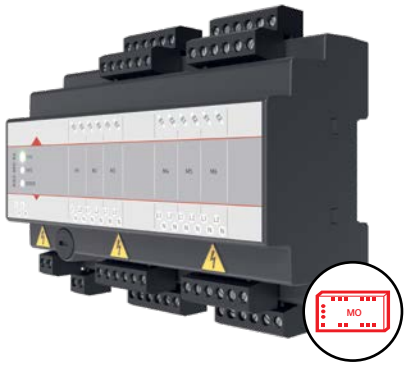
- 4 x galvanically isolated digital inputs
- 4 x galvanically isolated multifunctional inputs, configuration types, parametrisable using the Wildeboer-Net WiNet-SW-02 software:
  - Line monitoring for connected floating relay contacts (e.g. fire detection panel)
  - Digital input
- 8 x signal relay outputs

Implemented functions:

- All inputs and outputs can be used in calendar controls and release groups

4.3 KS2-MO-04 motor module

The motor module is used to connect fire dampers, multileaf dampers and smoke protection dampers with spring return actuators and integrated limit switches.



Connection overview

- up to 6 x fire dampers, multileaf dampers or smoke protection dampers with spring return actuators and integrated limit switches

Technical features:

- 8 x plug-in screw terminal, 6-pole
- 2 x plug-in screw terminal, 2-pole
- 3 x LED operating display: RUN, INFO, ERROR

Implemented functions:

- All inputs and outputs can be used in calendar controls and release groups
- Limit switch monitoring, galvanically isolated

4.4 KS2-MR-01 motor and smoke detector module

The motor and smoke detector module is used to connect fire dampers, multileaf dampers and smoke protection dampers with spring return actuators and integrated limit switches and OR4 smoke detectors and RL4 smoke detectors for ventilation ducts.

Connection overview

- up to 2 x RL4/OR4 smoke detectors
- up to 2 x fire dampers, multileaf dampers or smoke protection dampers with spring return actuators and integrated limit switches

Technical features:

- 4 x plug-in screw terminal, 4-pole
- 4 x plug-in screw terminal, 3-pole
- 6 x plug-in screw terminal, 2-pole
- 3 x LED operating display: RUN, INFO, ERROR

Implemented functions:

- All inputs and outputs can be used in calendar controls and release groups
- Limit switch monitoring, galvanically isolated

4.5 KS2-MIO-01 multi IO module

The multi IO module, with its multifunctional inputs and outputs and signal relay outputs, is used to connect further sensors and actuators provided by the operating company.

Connection overview

- 8 x galvanically isolated multifunctional inputs, configuration types, parametrisable using the Wildeboer-Net WiNet-SW-02 software:
  - Line monitoring for connected floating relay contacts (e.g. fire detection panel)
  - Digital input
- 8 x signal relay outputs

Technical features:

- 4 x plug-in screw terminal, 8-pole
- 3 x LED operating display: RUN, INFO, ERROR

Implemented functions:

- All inputs and outputs can be used in calendar controls and release groups

4.6 KS2-DI-01 digital input module

The digital input module, with its floating contacts, is used to connect fire dampers or valves with thermal-mechanical release equipment (TMA), and to connect further sensors provided by the operating company.

Connection overview

- up to 16 x limit switches for fire dampers or valves with thermal-mechanical release equipment (TMA)
- or up to 16 x other floating contacts

Technical features:

- 4 x plug-in screw terminal, 8-pole
- 3 x LED operating display: RUN, INFO, ERROR

Implemented functions:

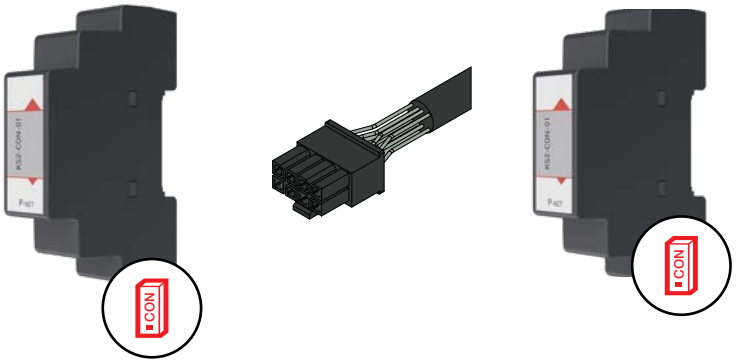
- All inputs can be used in calendar controls and release groups
- Input monitoring, galvanically isolated

4.7 KS2-LA-01 line terminator

The line termination is used for convenient connection of the resistor combinations for line monitoring. The monitoring of lines is performed by KS2 modules with multifunctional inputs and outputs or signalling devices provided by the operating company.

4.8 KS2-CON-01 top hat rail connector

Two top hat rail connectors connect the periphery buses of the modules with each other if they are installed on different DIN top hat rails. The connection of the two top hat rail connectors is made using a pre-fabricated P-NET cable.



4.9 KS2-CON-02 module connector

The module connector is situated at the rear of the modules and connects them to each other. It provides the connection of the periphery bus and the voltage supply of the modules to each other. The module connectors are included in the scope of supply of the modules connected to the KS2-PS-01.

4.10 AB-xx connection box

The connection box allows you to connect 24 V **(AB-01)** or 230 V **(AB-02)** spring return actuators with AMP plug connectors. The line connection is made by the operating company using plug-in screw terminals.

Connection overview

- 2 x AMP plug connection for fire damper
- 2 x plug-in screw terminal for operating company's line connection

4.11 WiNet-GW-xx gateways

Gateways are used for communication between devices with different communication protocols. A WiNet-GW gateway allows you to connect Wildeboer-Net to open communication profiles. In the process, one gateway can be used to operate different protocols simultaneously.

WiNet-GW-01 gateway
WiNet-GW-02 gateway
for BACnet, Modbus and OPC Server DA 2.0

WiNet-GW-03 gateway
WiNet-GW-04 gateway
for BACnet, Modbus, OPC Server DA 2.0 and LON

WiNet-GW-05 gateway
WiNet-GW-06 gateway
for BACnet, Modbus, OPC Server DA 2.0 and KNX

Supported communication protocols

	Gateway					
Protocol	**WiNet-GW-01**	**WiNet-GW-02**	**WiNet-GW-03**	**WiNet-GW-04**	**WiNet-GW-05**	**WiNet-GW-06**
BACnet MS/TP[1)]	■	■	■	■	■	■
BACnet IP	■	■	■	■	■	■
Modbus/serial (ASCII & RTU)[1)]	■	■	■	■	■	■
Modbus/IP	■	■	■	■	■	■
OPC Server DA 2.0	■	■	■	■	■	■
LON			■	■		
KNX/TP					■	■
Data points	**200**	**1100**	**200**	**1100**	**200**	**1100**
An update to 2500 data points is possible.						

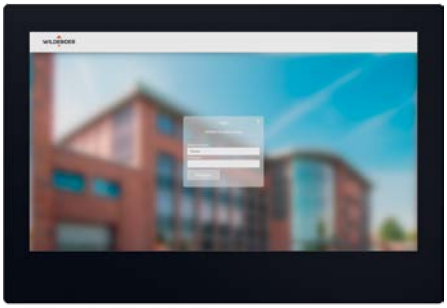
1) not possible simultaneously

Data points

The exchange via the communication protocols is performed using data points. In the process, a data point comprises an address and additional metadata which is sent into a communication protocol.

4.12 WiNet-ZB-03 central operating unit

The central operating unit is an industrial PC with multi-touch glass display screen for installation in an IP65 control cabinet front. Microsoft Windows 10 IoT and the Wildeboer-Net WiNet-SW-02 software are pre-installed.



Technical features:

- Shock- and vibration-resistant display screen, thermally stable, LED background lighting, display format 16:9
- Wildeboer-Net WiNet-SW-02 software for parametrisation and operation
- Voltage supply 230 V AC with 24 V DC power unit
- Dimensions (b x h x t): 392 x 266 x 77 mm

4.13 WiNet-AP-01 support during commissioning and system parametrisation

Our Customer Service department can provide supporting instructions for operation of the software and the system for commissioning. This includes, for example, instructions on generating texts, functional tests, calendar controls and release groups.

Contact us for further details.

5 System solutions in the control cabinet

The individual components of the KS2 are also available for different requirements as pre-fabricated and fully functional wired control cabinet solutions which allow for operation by laypersons.

System solutions for operation and parametrisation and for control and monitoring of 6 x, 12 x, 18 x or 24 x fire protection, multileaf dampers and smoke protection dampers with 24 V DC/230 V AC spring return actuators and two integrated limit switches (OPEN/CLOSED) are available.

5.1 WiNet control cabinet ZB-03

The central operating unit is an industrial PC with multi-touch glass display screen and is installed in an IP65 control cabinet front. Microsoft Windows 10 IoT and the Wildeboer-Net WiNet-SW-02 software are pre-installed.

Technical features:

- Control cabinet with WiNet-ZB-03 central operating unit
- Wildeboer-Net WiNet-SW-02 software for parametrisation and operation
- Mains voltage 230 V AC
- Dimensions (b x h x t): 600 x 400 x 200 mm
- Protection rating IP65

5.2 KS2 control cabinet 06/230

Technical features:

- For connection of up to 6 x fire dampers, multileaf dampers or smoke protection dampers with 230 V AC spring return actuators and integrated limit switches
- Wildeboer-Net WiNet-SW-02 software for parametrisation and operation
- Comprising the KS2 modules:
  - KS2-PS-01
  - KS2-CPU-01
  - KS2-MO-04
- Mains voltage 230 V AC
- Dimensions (b x h x t): 600 x 400 x 200 mm
- Protection rating IP66

5.3 KS2 control cabinet 06/24

Technical features:

- For connection of up to 6 x fire dampers, multileaf dampers or smoke protection dampers with 24 V DC spring return actuators and integrated limit switches
- Wildeboer-Net WiNet-SW-02 software for parametrisation and operation
- Comprising the KS2 modules:
  - KS2-PS-01
  - KS2-CPU-01
  - KS2-MO-04
- Mains voltage 230 V AC
- Dimensions (b x h x t): 600 x 400 x 200 mm
- Protection rating IP66

5.4 KS2 control cabinet 12/230

Technical features:

- For connection of up to 12 x fire dampers, multileaf dampers or smoke protection dampers with 230 V AC spring return actuators and integrated limit switches
- Wildeboer-Net WiNet-SW-02 software for parametrisation and operation
- Comprising the KS2 modules:
  - KS2-PS-01
  - KS2-CPU-01
  - KS2-MO-04 (2x)
- Mains voltage 230 V AC
- Dimensions (b x h x t): 600 x 800 x 200 mm
- Protection rating IP66

5.5 KS2 control cabinet 12/24

Technical features:

- For connection of up to 12 x fire dampers, multileaf dampers or smoke protection dampers with 24 V DC spring return actuators and integrated limit switches
- Wildeboer-Net WiNet-SW-02 software for parametrisation and operation
- Comprising the KS2 modules:
  - KS2-PS-01
  - KS2-CPU-01
  - KS2-MO-04 (2x)
- Mains voltage 230 V AC
- Dimensions (b x h x t): 600 x 800 x 200 mm
- Protection rating IP66

5.6 KS2 control cabinet 18/230

Technical features:

- For connection of up to 18 x fire dampers, multileaf dampers or smoke protection dampers with 230 V AC spring return actuators and integrated limit switches
- Wildeboer-Net WiNet-SW-02 software for parametrisation and operation
- Comprising the KS2 modules:
  - KS2-PS-01,
  - KS2-CPU-01
  - KS2-MO-04 (3x)
- Mains voltage 230 V AC
- Dimensions (b x h x t): 600 x 800 x 200 mm
- Protection rating IP66

5.7 KS2 control cabinet 18/24

Technical features:

- For connection of up to 18 x fire dampers, multileaf dampers or smoke protection dampers with 24 V DC spring return actuators and integrated limit switches
- Wildeboer-Net WiNet-SW-02 software for parametrisation and operation
- Comprising the KS2 modules:
  - KS2-PS-01
  - KS2-CPU-01
  - KS2-MO-04 (3x)
- Mains voltage 230 V AC
- Dimensions (b x h x t): 600 x 800 x 200 mm
- Protection rating IP66

5.8 KS2 control cabinet 24/230

Technical features:

- For connection of up to 24 x fire dampers, multileaf dampers or smoke protection dampers with 230 V AC spring return actuators and integrated limit switches
- Wildeboer-Net WiNet-SW-02 software for parametrisation and operation
- Comprising the KS2 modules:
  - KS2-PS-01
  - KS2-CPU-01
  - KS2-MO-04 (4x)
- Mains voltage 230 V AC
- Dimensions (b x h x t): 600 x 800 x 200 mm
- Protection rating IP66

5.9 KS2 control cabinet 24/24

Technical features:

- For connection of up to 24 x fire dampers, multileaf dampers or smoke protection dampers with 24 V DC spring return actuators and integrated limit switches
- Wildeboer-Net WiNet-SW-02 software for parametrisation and operation
- Comprising the KS2 modules:
  - KS2-PS-01
  - KS2-CPU-01
  - KS2-MO-04 (4x)
- Mains voltage 230 V AC
- Dimensions (b x h x t): 600 x 800 x 200 mm
- Protection rating IP66

6 Scope of functions

6.1 Release group control

In order to guarantee the internal sealing of a building in the event of a fire, further fire dampers often have to close when a fire damper or a smoke detector is released. For this purpose, release groups are defined with which complex control scenarios can be represented with little effort. Release groups are parametrised and transferred to the modules using the Wildeboer-Net software in the form of a release group matrix. In the process, it is possible to differentiate between alarm issuers and alarm receivers. Release groups can be formed to be universal for all modules within the Wildeboer-Net system. In the process, all inputs and outputs of the modules can be used.

6.2 Functional tests

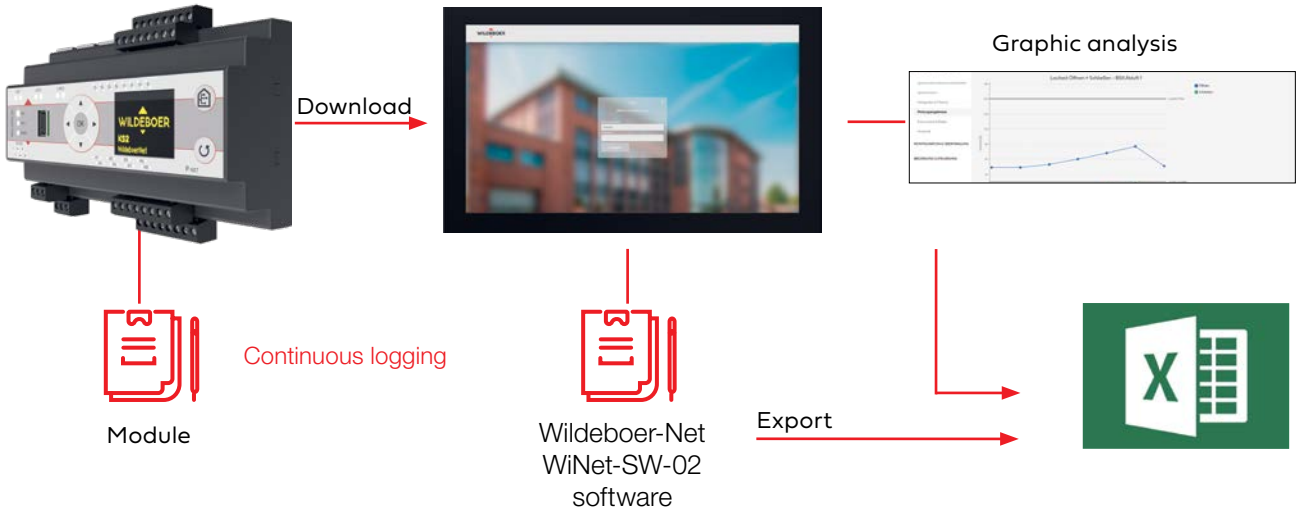
A remote-controlled functional test is a reliable manner of testing and recording whether the CLOSED and OPEN positions of a motor-operated fire damper are reached. The results of the functional test are saved reliably and permanently on the modules and, after download, in the Wildeboer-Net software.

The functional test can be performed for all fire dampers simultaneously, but also in groups and individually. Regardless of the number of dampers, this is completed within a few minutes.

Functional tests can be scheduled in a straightforward manner using a timetable calendar. They are started automatically at the defined scheduled time. In the process, the fan activation (see ▸ Page 16) can be used to shut off the fan.

Furthermore, functional tests can be started manually at any time. This way, you can check both that the fire damper is connected properly to the motor module and that the fire damper is fully functional directly after installation on site.

The runtimes of the connected fire dampers, multileaf dampers or smoke protection dampers are recorded. For evaluation, a table view which includes all dampers, and a graphic analysis for individual dampers are available. Required repair measures can thus be detected and arranged in good time. For documentation purposes, you have the option of exporting the data to Excel.



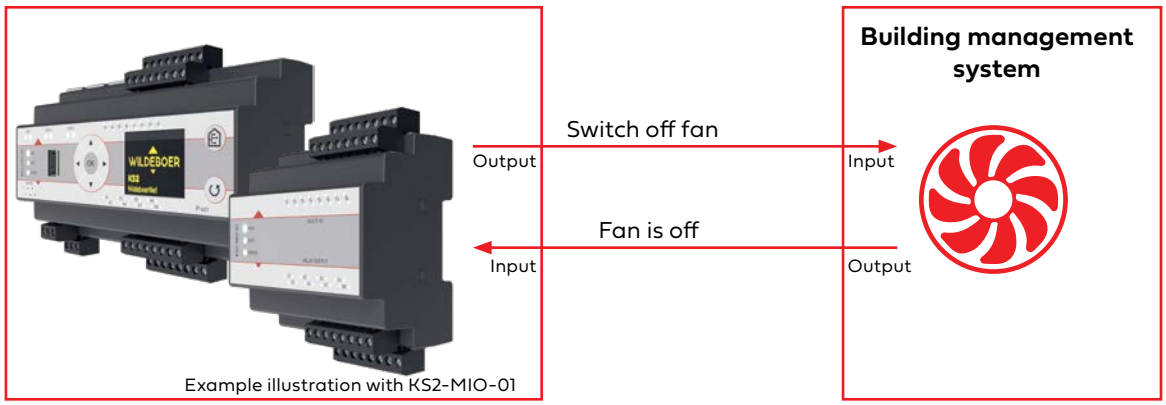
6.3 Calendar control

The calendar control enables the automatic execution of product-specific actions at defined points in time or at fixed intervals.

For example, fire dampers/smoke protection dampers can be closed at the end of operation and opened at the beginning of operation, and ventilation fans can be switched on or off. That way, the individual components in the building can be adapted to the times of operation and use in a straightforward manner.

6.4 Fan activation

A parametrisable fan shut-off for functional tests is integrated into Wildeboer-Net. It is used when, for system reasons, it is necessary to shut off the fan before and during the implementation of a functional test. An output of the system is used to shut off the fan as soon as a functional test is to be performed for one or more of the fire dampers assigned to the fan. A functional test is not started until feedback is received via an input of the system indicating that the fan has been shut off.



7 Technical data

Technical data	Parameter
Min. ... max. temperature range	0 ... 60 °C
Relative humidity	95 %, non-condensing
Protection rating	IP20: Individual components IP65: KS2 control cabinet ZB-03 IP66: KS2 control cabinet xx/xxx
Protection class	**Class III** KS2-CON-01, KS2-CON-02, KS2-CPU-01, KS2-DI-01, KS2-MIO-01, KS2-LA-01 **Class II** KS2-MO-04, KS2-MR-01 (with SELV also Class III possible) **Class I** KS2-PS-01
Screw terminals	Plug-in Permitted conductor cross-section 0.08 ... 2.5 mm² SEV tightening torque: 0.5 Nm Stripping length: min. 8 mm Screwdriver: 3 mm blade width
Materials	**Parameter**
Casing	Plastic V0 according to UL94

For further information and technical data, see the installation and operating instructions of the modules or the control cabinet

8 Specification text

The KS2 compact controller is used - as a component of the Wildeboer-Net communication system - to control fire protection and ventilation components in buildings.

Operation, visualisation and parametrisation of all functions is performed from a central point using ready-for-operation software. The software is pre-installed on the central operating unit. Alternatively, it can also be installed on a PC provided by the operating company. The components can also be commissioned and operated using the KS2-CPU-01 main control unit. Continuous logging of operating data in the software and on the modules even in the event of a power failure. Connection to building management system using gateways for BACnet, Modbus, LON, KNX or OPC. Software, gateways and modules communicate with each other via an integrated periphery bus (P-Net). Line lengths between CPU modules and from periphery modules to fire protection and ventilation components of up to 100 m. Faults are diagnosed automatically, narrowed down to the partial segment or module, and displayed.

24 V DC mains voltage of the modules as integrated KS2-PS-01 power unit.

Fast commissioning with automatic addressing of modules, partial commissioning during the construction phases can also be implemented. Simple upgrade of the system without programming. Automatic restoration after module replacement.

Comment function for description and identification of connected modules and devices, and integration of building plans for orientation in the building. In addition, existing identification codes in accordance with the system identification code (SID) system can be applied. The saved comments or the identification codes can optionally be applied in the EDE files generated automatically for the gateways.

Controller for implementation of requirements for cold smoke safety and of the stipulated functional tests for fire dampers and smoke protection dampers:

Sequence controls for generating control links for fire dampers and smoke protection dampers to sensors and actuators. That way, for example, fan activations can be implemented using modules. Straightforward parametrisation of the fan activation using a matrix. Release group controls for increasing cold smoke safety and fire protection by integrating fire dampers and smoke protection dampers into release groups and sensors and actuators using MIO and DI modules. Subscribers of a release group can be all connected inputs and outputs of a module. The modules within the release group monitor each other mutually using a heart beat signal. Straightforward parametrisation of the release group using a matrix.

Calendar controls for scheduled opening and closing of motor-driven fire dampers and smoke protection dampers adapted to the operating times of the building and for implementation of regular functional tests of the motor-driven fire dampers. Straightforward generation of calendar entries using a timetable calendar assistant.

Functional tests for motor-driven fire dampers within a few minutes for all dampers simultaneously, in groups or individually. The test begins automatically as scheduled, manually as scheduled or simply manually. Continuous logging of the results of the functional tests and the scheduled manual tests which are not performed. An export function is available for the results. The fire dampers can also be operated using the modules without prior commissioning of the overall system, including carrying out functional tests with logging of the results. Graphic trend analysis for identifying changes when carrying out functional tests on the fire dampers. As "1-to-1 test" of the scheduled connection of the fire dampers, a ping function can be carried out by a single person.

Accordingly comprising:

Wildeboer-Net software for installation on a PC provided by the operating company as operating interface for visualisation of the operating and diagnostics data collected in the field. For parametrisation and control of connected modules.

..... pcs. WiNet-SW-02 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Central operating unit with multi-touch glass display screen for front installation in control cabinets with IP65 front. Mains connection via power adapter to 230 V AC. Fully pre-installed with the operating system and with the Wildeboer-Net WiNet-SW-02 software for data communication with modules via Ethernet. For visualisation of the operating and diagnostics data saved on the modules and control and parametrisation of the modules.

..... pcs. WiNet-ZB-03 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Gateway for implementation of Wildeboer-Net on BACnet/IP, Modbus/series, Modbus/TCP or OPC Server DA 2.0. The project planning of the up to 200 data points and the generation of an EDE file is performed using the Wildeboer-Net software.

..... pcs. WiNet-GW-01 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Gateway for implementation of Wildeboer-Net on BACnet/IP, Modbus/series, Modbus/TCP or OPC Server DA 2.0. The project planning of the up to 1100 data points and the generation of an EDE file is performed using the Wildeboer-Net software.

..... pcs. WiNet-GW-02 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Gateway for implementation of Wildeboer-Net on BACnet/IP, Modbus/series, Modbus/TCP, OPC Server DA 2.0 or LON. The project planning of the up to 200 data points and the generation of an EDE file is performed using the Wildeboer-Net software.

..... pcs. WiNet-GW-03 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Gateway for implementation of Wildeboer-Net on BACnet/IP, Modbus/ series, Modbus/TCP, OPC Server DA 2.0 or LON. The project planning of the up to 1100 data points and the generation of an EDE file is performed using the Wildeboer-Net software.

..... pcs. WiNet-GW-04 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Gateway for implementation of Wildeboer-Net on BACnet/IP, Modbus/ series, Modbus/TCP, OPC Server DA 2.0 or KNX/TP. The project planning of the up to 200 data points and the generation of an EDE file is performed using the Wildeboer-Net software.

..... pcs. WiNet-GW-05 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Gateway for implementation of Wildeboer-Net on BACnet/IP, Modbus/ series, Modbus/TCP, OPC Server DA 2.0 or KNX/TP. The project planning of the up to 1100 data points and the generation of an EDE file is performed using the Wildeboer-Net software.

..... pcs. WiNet-GW-06 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Main control unit for mounting on a top hat rail with option of local operation using membrane keypad and OLED display screen. 4 galvanically isolated digital inputs and 4 galvanically isolated multifunctional inputs for connection of fire protection and ventilation components, configuration types parametrisable using WiNet-SW-02. 8 signal relay outputs and line monitoring for connected floating relay contacts.

..... pcs. KS2-CPU-01 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Power unit for mounting on a top hat rail with LED operating display and internal fuse for voltage supply of the KS2-CPU-01 main control unit and 8 further modules. Voltage supply and data communication via rear periphery bus.

..... pcs. KS2-PS-01 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Motor module for mounting on a top hat rail and for connection of up to 6 fire dampers, multileaf dampers and smoke protection dampers with spring return actuators and two integrated limit switches (OPEN/CLOSED). With LED operation display: RUN, INFO, ERROR.

..... pcs. KS2-MO-04 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Motor and smoke detector module for mounting on top hat rail. For connection of up to 2 fire dampers, multileaf dampers and smoke protection dampers with spring return actuators and integrated limit switches and up to 2 RL4/OR4 smoke detection and release devices. With LED operation display: RUN, INFO, ERROR.

..... pcs. KS2-MR-01 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Digital input module for mounting on top hat rail with floating contacts for connection of up to 16 limit switches for fire dampers or valves with thermal-mechanical release mechanism (TMA) or up to 16 other floating contacts. With LED operation display: RUN, INFO, ERROR.

..... pcs. KS2-DI-01 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Multi IO module for mounting on top hat rail with 8 galvanically isolated multifunctional inputs and connection of fire protection and ventilation components, configuration types parametrisable using WiNet-SW-02. 8 signal relay outputs and line monitoring for connected floating relay contacts. With LED operation display: RUN, INFO, ERROR.

..... pcs. KS2-MIO-01 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Top hat rail connector for connection of the periphery buses of the modules to each other when installing on different top hat rails. Connection of the top hat rail connectors using pre-fabricated periphery bus cable.

..... pcs. KS2-CON-01 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Line terminator for connection of resistor combinations for line monitoring. Monitoring of lines by KS2 modules with multifunctional inputs and outputs or signalling devices provided by the operating company.

..... pcs. KS2-LA-01 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Support for commissioning and system parametrisation of WildeboerNet.

..... pcs. WiNet-AP-01 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Connection box for 24 V/230 V spring return actuator with AMP plug connector on the connecting ducts for forwarding via plug-in screw terminals to an operating company's line. Plastic casing IP40.

..... pcs. AB-01 for 24 V AC **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

..... pcs. AB-02 for 230 V AC **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Control cabinet with fully functional, wired ZB-03 central operating unit with multi-touch glass display screen. Fully pre-installed with the operating system and with the Wildeboer-Net WiNet-SW-02 software for data communication with the main control unit of the BS2 bus controller or KS2 compact controller via Ethernet. For visualisation of the operating and diagnostics data saved on the modules and control and parametrisation of the modules. Mains voltage 230 V AC. Protection rating IP65.

..... pcs. WiNet ZB-03 control cabinet **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Control cabinet for control and monitoring of up to 6 x fire dampers, multileaf dampers or smoke protection dampers with 230 V AC spring return actuators and two integrated limit switches. Suitable for operation by laypersons thanks to integrated safety devices. Comprising fully functional wired modules KS2-PS-01, KS2-CPU-01 and KS2-MO-04 in control cabinet housing made of sheet steel, powder coated in shade RAL 7035 with glazed door. Suitable for wall mounting. Mains voltage 230 V AC/DC, dimensions (b x h x t): 600 x 400 x 200 mm. Protection rating IP66.

..... pcs. KS2 control cabinet 06/230 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Control cabinet for control and monitoring of up to 6 x fire dampers, multileaf dampers or smoke protection dampers with 24 V DC spring return actuators and two integrated limit switches. Suitable for operation by laypersons thanks to integrated safety devices. Comprising the modules KS2-PS-01, KS2-CPU-01 and KS2-MO-04. Mains voltage 230 V AC/DC, dimensions (b x h x t): 600 x 400 x 200 mm. Protection rating IP66.

..... pcs. KS2 control cabinet 06/24 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Control cabinet for control and monitoring of up to 12 x fire dampers, multileaf dampers or smoke protection dampers with 230 V AC spring return actuators and two integrated limit switches. Suitable for operation by laypersons thanks to integrated safety devices. Comprising the modules KS2-PS-01, KS2-CPU-01 and 2 x KS2-MO-04. Mains voltage 230 V AC/DC, dimensions (b x h x t): 600 x 800 x 200 mm. Protection rating IP66.

..... pcs. KS2 control cabinet 12/230 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Control cabinet for control and monitoring of up to 12 x fire dampers, multileaf dampers or smoke protection dampers with 24 V DC spring return actuators and two integrated limit switches. Suitable for operation by laypersons thanks to integrated safety devices. Comprising the modules KS2-PS-01, KS2-CPU-01 and 2 x KS2-MO-04. Mains voltage 230 V AC/DC, dimensions (b x h x t): 600 x 800 x 200 mm. Protection rating IP66.

..... pcs. KS2 control cabinet 12/24 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

Control cabinet for control and monitoring of up to 18 x fire dampers, multileaf dampers or smoke protection dampers with 230 V AC spring return actuators and two integrated limit switches. Suitable for operation by laypersons thanks to integrated safety devices. Comprising the modules KS2-PS-01, KS2-CPU-01 and 3 x KS2-MO-04. Mains voltage 230 V AC/DC, dimensions (b x h x t): 600 x 800 x 200 mm. Protection rating IP66.

..... pcs. KS2 control cabinet 18/230 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

IP66 control cabinet for control and monitoring of up to 18 x fire dampers, multileaf dampers or smoke protection dampers with 24 V DC spring return actuators and two integrated limit switches. Suitable for operation by laypersons thanks to integrated safety devices. Comprising the modules KS2-PS-01, KS2-CPU-01 and 3 x KS2-MO-04. Mains voltage 230 V AC/DC, dimensions (b x h x t): 600 x 800 x 200 mm. Protection rating IP66.

..... pcs. KS2 control cabinet 18/24 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

IP66 control cabinet for control and monitoring of up to 24 x fire dampers, multileaf dampers or smoke protection dampers with 230 V AC spring return actuators and two integrated limit switches. Suitable for operation by laypersons thanks to integrated safety devices. Comprising the modules KS2-PS-01, KS2-CPU-01 and 4 x KS2-MO-04. Mains voltage 230 V AC/DC, dimensions (b x h x t): 600 x 800 x 200 mm. Protection rating IP66.

..... pcs. KS2 control cabinet 24/230 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

IP66 control cabinet for control and monitoring of up to 24 x fire dampers, multileaf dampers or smoke protection dampers with 24 V DC spring return actuators and two integrated limit switches. Suitable for operation by laypersons thanks to integrated safety devices. Comprising the modules KS2-PS-01, KS2-CPU-01 and 4 x KS2-MO-04. Mains voltage 230 V AC/DC, dimensions (b x h x t): 600 x 800 x 200 mm. Protection rating IP66.

..... pcs. KS2 control cabinet 24/24 **deliver: .....**
Manufacturer: WILDEBOER **install: ....**

9 Wildeboer makes it easy

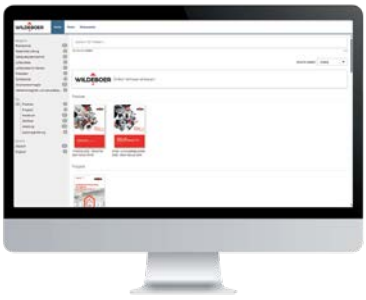
9.1 Wildeboer Connect

- High-performance configurator with customer-specific net prices
  - Quick, intuitive product configuration of Wildeboer products
  - Access to prices and unique version keys for ordering products
  - Easy calculation of operating point data for configured products
  - Interface to Autodesk Revit and AutoCAD for transferring CAD geometries
  - Download of CAD data, data sheets, specification texts and further product documents in common data formats
- Transparent real-time order tracking
  - Detailed order information
  - Access to order documents
  - Access to shipment tracking

9.2 WiDim dimensioning software

- Functional, modern and intuitive dimensioning of Wildeboer products
- Conveniently collect operating point data, 3D product views, suitable accessories and current revision documents in a single project
- Project can be output in various formats
- A GAEB interface and an interface based on VDI 3805 facilitate a continuous planning process

9.3 Documents online



- Paperless and environmentally friendly online access to Wildeboer documents
- All documents in one central location and always up to date
- Supporting interactive formats and content

9.4 Wildeboer-Net assistant

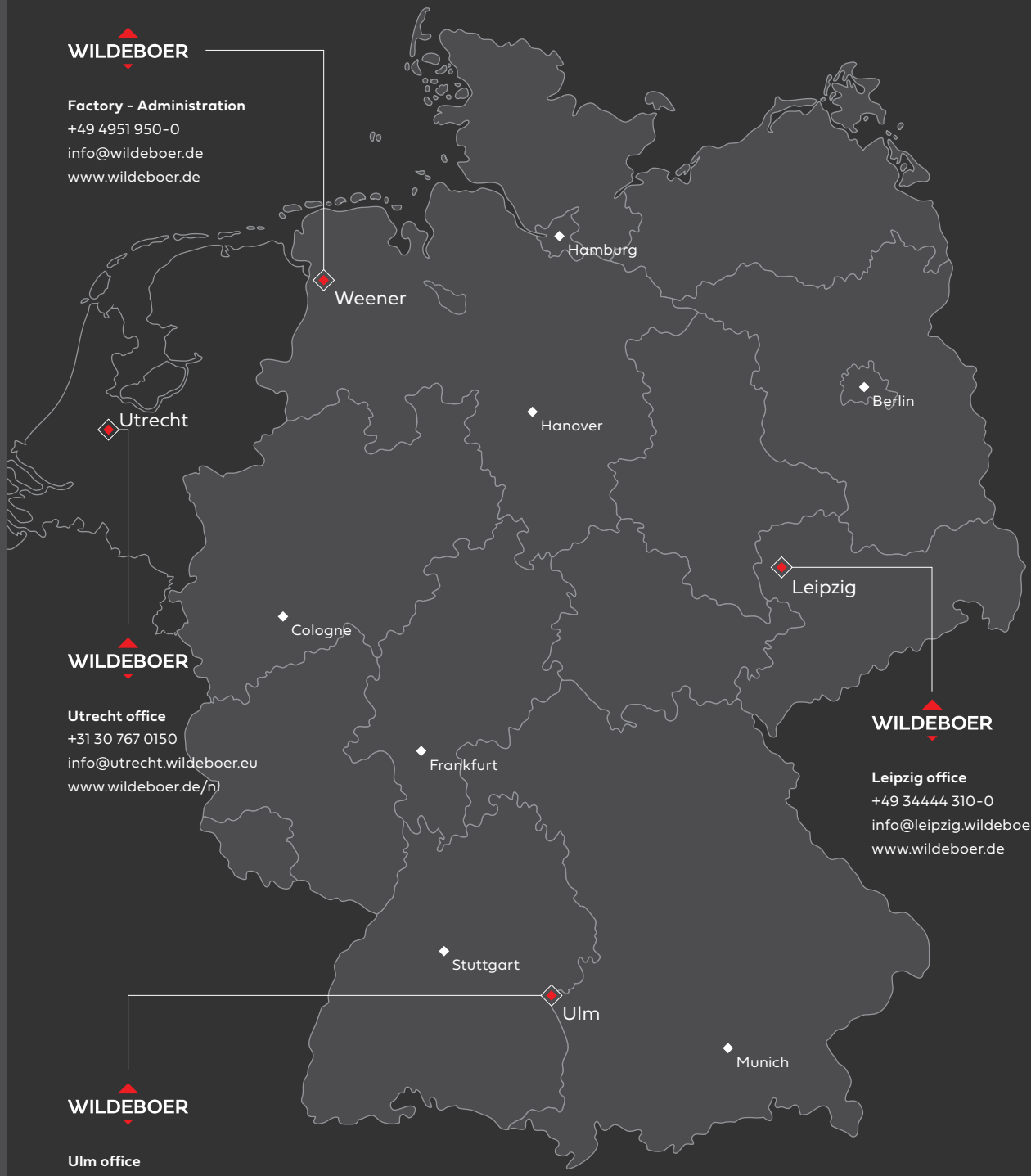
- Issuing of SID codes, brief comments and further information for connected field devices.
- Storing of images of installation scenarios and scanning and saving the option barcodes.
- Import of recorded data to the Wildeboer-Net WiNet-SW-02 software and synchronisation with the integrated ping list.

IOS

Android

Always there for you

Locations & contact



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