

# Product catalogue

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2026 | 2027





# Table of contents

|          |                                                 |            |
|----------|-------------------------------------------------|------------|
| <b>1</b> | <b>General</b>                                  | <b>5</b>   |
| 1.2      | General safety notes                            | 8          |
| <b>2</b> | <b>System overview</b>                          | <b>10</b>  |
| 2.1      | System family                                   | 10         |
| 2.2      | Integral EvoxX control units                    | 13         |
| 2.3      | Operating panel                                 | 14         |
| <b>3</b> | <b>Integral EvoxX M modular control panel</b>   | <b>16</b>  |
| 3.1      | Features                                        | 17         |
| 3.2      | Options                                         | 18         |
| 3.3      | Approvals                                       | 19         |
| 3.4      | Integral EvoxX M cabinet variants               | 19         |
| 3.5      | Components in 19-inch version                   | 24         |
| 3.6      | Integral EvoxX M modules                        | 27         |
| 3.7      | Modernisation modules                           | 40         |
| 3.8      | Accessories and spare parts                     | 44         |
| <b>4</b> | <b>Integral EvoxX C compact control panel</b>   | <b>49</b>  |
| 4.1      | Features                                        | 50         |
| 4.2      | Options                                         | 51         |
| 4.3      | Approvals                                       | 52         |
| 4.4      | Integral EvoxX C cabinet variants               | 52         |
| 4.5      | Integral EvoxX C modules                        | 58         |
| 4.6      | Accessories and spare parts                     | 63         |
| <b>5</b> | <b>Integral EvoxX B basic control panel</b>     | <b>68</b>  |
| 5.1      | Features                                        | 69         |
| 5.2      | Approvals                                       | 70         |
| <b>6</b> | <b>External operating and indicator devices</b> | <b>73</b>  |
| 6.1      | MMI-bus devices                                 | 73         |
| 6.2      | EPI-bus devices                                 | 90         |
| <b>7</b> | <b>Software and digital applications</b>        | <b>98</b>  |
| 7.1      | Software for fire alarm control panels          | 98         |
| 7.2      | Integral Remote                                 | 99         |
| 7.3      | SPECTRUS fire alarm operation control system    | 107        |
| 7.4      | Interfaces and protocols                        | 113        |
| 7.5      | Service Platform                                | 117        |
| <b>8</b> | <b>Peripheral</b>                               | <b>124</b> |
| 8.1      | Point detectors and detector base               | 124        |
| 8.2      | Manual call points                              | 149        |

|           |                                                                 |            |
|-----------|-----------------------------------------------------------------|------------|
| 8.3       | Input and output modules . . . . .                              | 166        |
| 8.4       | Signal devices . . . . .                                        | 180        |
| 8.5       | Holding magnets and anchoring plates. . . . .                   | 204        |
| 8.6       | Testing devices . . . . .                                       | 213        |
| <b>9</b>  | <b>Special fire alarm systems. . . . .</b>                      | <b>218</b> |
| 9.1       | Aspirating smoke detectors . . . . .                            | 218        |
| 9.2       | Line-type smoke detectors . . . . .                             | 261        |
| 9.3       | Line-type heat detectors. . . . .                               | 270        |
| 9.4       | Flame detectors . . . . .                                       | 296        |
| 9.5       | Radio fire detectors . . . . .                                  | 305        |
| 9.6       | Fire detection units . . . . .                                  | 313        |
| 9.7       | Thermal imaging-based fire detection . . . . .                  | 316        |
| <b>10</b> | <b>Accessories . . . . .</b>                                    | <b>322</b> |
| 10.1      | Fire brigade peripherals . . . . .                              | 322        |
| 10.2      | External power supply units. . . . .                            | 327        |
| 10.3      | Rechargeable batteries for power supply unit cabinets . . . . . | 339        |
| 10.4      | Overvoltage protection . . . . .                                | 340        |
| 10.5      | Ex-barriers . . . . .                                           | 345        |
| 10.6      | Hold-open systems . . . . .                                     | 348        |
| 10.7      | Cables . . . . .                                                | 355        |
| 10.8      | Inscription label and stickers . . . . .                        | 356        |



# 1 General



Schrack Seconet security systems are developed in Austria, produced in Germany and incorporate both state-of-the-art technology and the latest scientific developments, while meeting all the latest applicable standards (European standards, requirements of European testing and certification bodies etc.). Schrack Seconet frequently cooperates with technical universities and international companies, as well as with testing and certification bodies, fire prevention bodies and fire brigade associations, so that products can be constantly optimized and adapted to meet new demands.



The high quality of our products is ensured by a quality assurance system in accordance with ISO 9001 for all areas of the company (from development to production, sales and installation to customer service).

Considerable attention is paid in the development of products towards the separation of materials used, reusability, disposal and recycling to ensure that materials were processed in an as environmentally sound way as possible.

## 1.1 About this document

These descriptions and technical specifications correspond to the status as of the date of publication. Schrack Seconet reserves the right to make modifications, in particularly where they are justified as a result of technological progress. In the course of continual development, the products delivered may differ optically from shown products. Information which is not contained in this document can be requested at any time from one of our offices.

The original of this document was written in German. Foreign-language documents are released and modified with the German version. In the case of deviations in the foreign-language document, the German version of this document is the approved reference document.

The design of this document is subject to copyright law. The printing and the copying of contents (e.g. texts, images, photos) including extracts in any type of media (such as print, CD-ROM, internet) is only permitted with Schrack Seconet explicit written consent. For printing errors and obvious errors no liability is accepted. For enquiries and orders, please indicate article numbers.

### 1.1.1 Explanation of symbols

Important notes in this document are identified by the following symbols. Failure to observe these notes may result in malfunction of the security systems or in property or personal injury.



#### **NOTE**

Contains notes to help you use the product or system more effectively and easily. Usage is optional.



#### **ENVIRONMENTAL NOTICE**

##### **Electrical/electronic devices and batteries/rechargeable batteries**

Electrical and electronic devices as well as batteries or rechargeable batteries may not be disposed of in household rubbish. As the end user, you are legally obliged to return them. Used electrical and electronic devices as well as batteries or rechargeable batteries should be returned free of charge after use to the vendor or to the designated places for returning them (e.g. communal collection points or in shops). Proper disposal of the devices will relieve the burden on the environment. For more detailed information please contact your waste disposal center.

## 1.1.2 Information about the structure of the catalogue

### Product groups

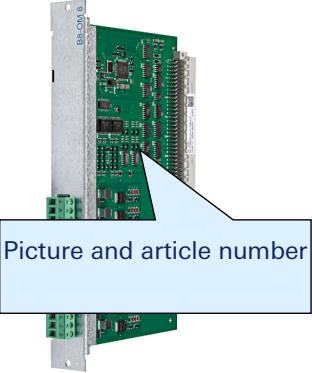
The product groups are divided into chapters. Each chapter begins with a description of the product group and the possible structure of products. The connection options for the system connection are shown in a diagram.

### Product overview

The product overview is an overview of the available functions for each product. For each available function it is shown in which product this function is available.

### Article description

The articles are described with the information shown:



**No.: 21-1031502-01**

**Label and product type**

**B8-OM5 module for monitored outputs**

**General short description and installation information**

For activation and monitoring of eight primary lines (flashlight, sirens etc.) to EN 54-13, each with a maximum current of 1.5 A.

The three load ranges are set as appropriate in the software dependent on the purpose of use.

|                        |                                |
|------------------------|--------------------------------|
| Power supply:          | internally via the system bus  |
| Current consumption:   | 28 mA typ.                     |
| Connection:            | 8 monitored outputs            |
| Output voltage:        | 22 – 28 V                      |
| Output current:        | max. 1.5 A                     |
| Short circuit current: | 1.75 A typ.                    |
| Connection plug:       | 16 pin screw-type terminal     |
| Interface:             | system bus                     |
| Ambient temperature:   | –5 °C – +50 °C                 |
| Relative air humidity: | 5 to 95 % without condensation |
| Dimensions:            | 215 × 27 × 116 mm (H×W×D)      |
| Weight:                | 224 g                          |

**Picture and article number**

**Technical data**

### Product list and accessories

At the end of a chapter all products and variants as well as the respective accessories and spare parts are listed. The overview table contains descriptions, the product types and the article numbers for ordering products.

## 1.2 General safety notes

The planning of security systems as well as the installation, commissioning and maintenance of products and the systems which they form required specialist expert knowledge, and therefore may only be undertaken by specially trained experts according to the manufacturer's specifications. The product-specific training of specialist personnel must be carried out by the manufacturer or by specialist personnel expressly authorised by the manufacturer.

The manufacturer explicitly state, that security systems must be periodically maintained by certified and qualified staff in accordance with the relevant standards (such as ÖNORM F 3070, DIN 14675, EN 16763), in order to maintain the functional and protective scope in the long term. For servicing and maintenance work on safety-related systems, the currently valid regulations of the country in which the system is being operated shall apply.

In addition, the respective country-specific regulations and guidelines for the planning, installation, service and maintenance must be adhered to and complied with. Damage and consequential damage caused by interventions or changes to products and their improper handling are excluded from liability. The same is also true for inappropriate storage of items and other detrimental external factors.



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## 2 System overview



### **Preventive fire protection is no coincidence**

An early and reliable fire detection system enables targeted alerts and life-saving fire protection measures that are carried out effectively and automatically.

## 2.1 System family

The Integral EvoxX system family consists of a range of different control panels, equipment, case types and components, which can be perfectly combined and coordinated for every expansion stage and system size.

All devices are compatible with each other and work with the same software and commissioning tools.

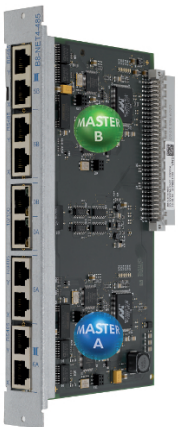
### IP technology as a standard

All Integral EvoxX control panels support the Internet protocol. With software applications, the control panels can also be networked independently of their location and accessed using remote access via PC, smart phone or tablet.

### Simple and intuitive operation

The operating panel is the same for all Integral EvoxX control panels and Integral EvoxX applications: logical processes and a clear layout of buttons provide the necessary overview in stressful situations. The button labels and display text are available in more than 20 languages.

### Full redundancy



An essential part of the Integral EvoxX system is complete, intelligent redundancy. This means that a second, identical system is constantly working in hot stand-by operation, parallel to the operating system.

Not only is the microprocessor structure duplicated, but all system structures, components and electronic components in the control panel are also duplicated. A fault in the active system causes an automatic, uninterrupted switchover to the second, parallel-running system and the indication of a system fault.

All functions, such as detectors, alarms, plain text indication and activation of the fire incident control systems etc., are retained without restriction.

The data lines to the external operating panels and the connections between the control panels are also laid out multiple times to ensure that the system remains fully functional in the event of line interruptions or faults.

### Flexible interfaces

Integral EvoxX control panels contain a wide range of different interfaces and standardised protocols. This ensures that they are compatible with other devices, such as building management systems.

### Investment security

It is particularly important to Schrack Seconet that our products maintain the highest possible degree of forward and backward compatibility. We ensure that a gradual modernisation of older fire alarm systems can be performed easily and flexibly - so that Schrack Seconet products are always a sound investment for the future.

### Easy programming and planning

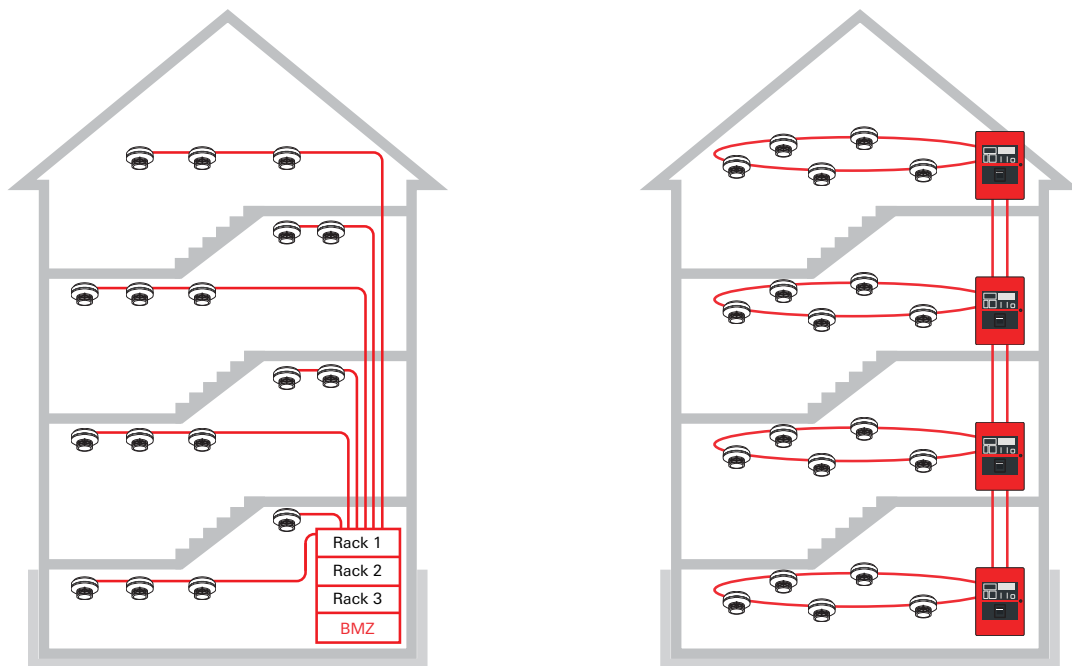
All Integral EvoxX control panels can be easily and clearly programmed and planned using a single software tool. Logical combinations of inputs and outputs systems can be easily and flexibly configured – even across different loops and multiple control panels.

## Modular, decentralised structure

The Integral EvoxX system is a modular, decentralised system, which consists of individual components that can be planned and programmed according to individual installation requirements.

This completely modular system design enables use in almost any application, from very small systems to large-area networked systems, with the ability to be easily and quickly extended and adapted – even retro-spectively. Detectors that are already installed and listed in the system approval can also be easily integrated into a Integral EvoxX system.

## Integral LAN and Integral WAN network



Unlike previous designs, the control panel is no longer a single device to which all lines must be routed. Up to 16 sub-control units can be connected as desired in a stub, loop or mesh topology, the so called Integral LAN to form a logical control panel, and can be distributed throughout the building as required. Larger buildings and complexes such as hotels, office buildings, industrial plants etc. are efficiently fitted with this. The connection between the individual sub-control units is achieved using the latest IP technology. According to regulations, an integration of in-house LAN infrastructure into Integral LAN is not standard-compliant.

In the case of very extensive company premises with campus structures such as hospitals or universities, but also in the case of locally distant locations such as supermarket chains or companies with several branches, the so-called Integral WAN is implemented as a superordinate fire alarm network, also across locations. The aim of Integral WAN is to use existing networks (Intranet/Internet) for communication between the control panels as an addition to the standard-compliant construction of exclusive networks.

## Wiring length

The distance between any two control panels can be up to 1200 metres. Neither repeaters nor other additional devices are required; the only critical factors are the cable type and ambient conditions. In special cases – if the distance needs to exceed 1200 metres – other communication media such as optical fibres (with a maximum wiring length of 30 km) can be used.

## Secure data transmission

Due to an increase in environmental and electromagnetic factors that can affect the control panels, detectors, peripheral devices and even transmission systems, a new digital data protocol with fault detection and redundant coding was specifically designed for the control panels.

This enables permanent, intelligent communication between peripheral elements and subsystems with the highest level of data security (Hamming code distance 4). This ensures that deceptive alarms caused by electromagnetic interference (radio wave radiation, overvoltage, glitches etc.) are filtered out.

## Log printer

The serial log printer can be integrated into various Integral EvoxX cabinet variants using a suitable front panel; it is also available in an external case for connection directly next to an external operating panel. In any case, the Integral EvoxX log printer is supplied with emergency power for at least 72 hours in accordance with the requirements of EN 54-4.

All state changes of the fire alarm system (e.g. alarms, faults, disablements, activations, actuations, operating processes, alarm delays, service hints) are stored in the event log memory of the master control unit as plain text with date, time and additional information. The printer has access to this event log memory and can print out its contents in any repetition. All information is presented in unambiguous clear text on both the display and the log printer itself.

The transmission of the printer lists (both internal and external) is encrypted by default.

## Overvoltage protection, earthing concept

The Integral EvoxX is equipped with a comprehensive, integrated overvoltage protection concept that protects all peripheral inputs as well as the mains power supply in accordance with EN 50130-4 (EMC) and EN 61000-6-2 (interference in industrial use). The EMC protection concept is achieved via measures such as a zoning concept, transzorb diodes, filters and broadband decoupling of the power supply to protect the electronics. For operation inside buildings with installed high voltage protection (lightning protection, mains-side overvoltage arrester), no further measures (e.g. separate overvoltage arresters) are necessary.

## Power supply connection and emergency power supply

The power supply connection must comply with the respective country's applicable regulations (e.g. DIN, ÖNORM, VDE). The emergency power supply batteries ensure proper functioning of the fire alarm system for a defined time period in the event of a power failure. Because the rechargeable batteries must remain fully charged throughout their life, their charging and discharging characteristics are subject to specific requirements, conditions and testing. Furthermore, the charging curve of the power supply unit is precisely adapted to the rechargeable batteries used.

If rechargeable batteries with other charging characteristics are used, proper functioning of the emergency power supply cannot be guaranteed. Furthermore, it is possible that the entire system may be damaged as a result. For these reasons, only rechargeable battery types that are approved by Schrack Seconet and VdS may be used.

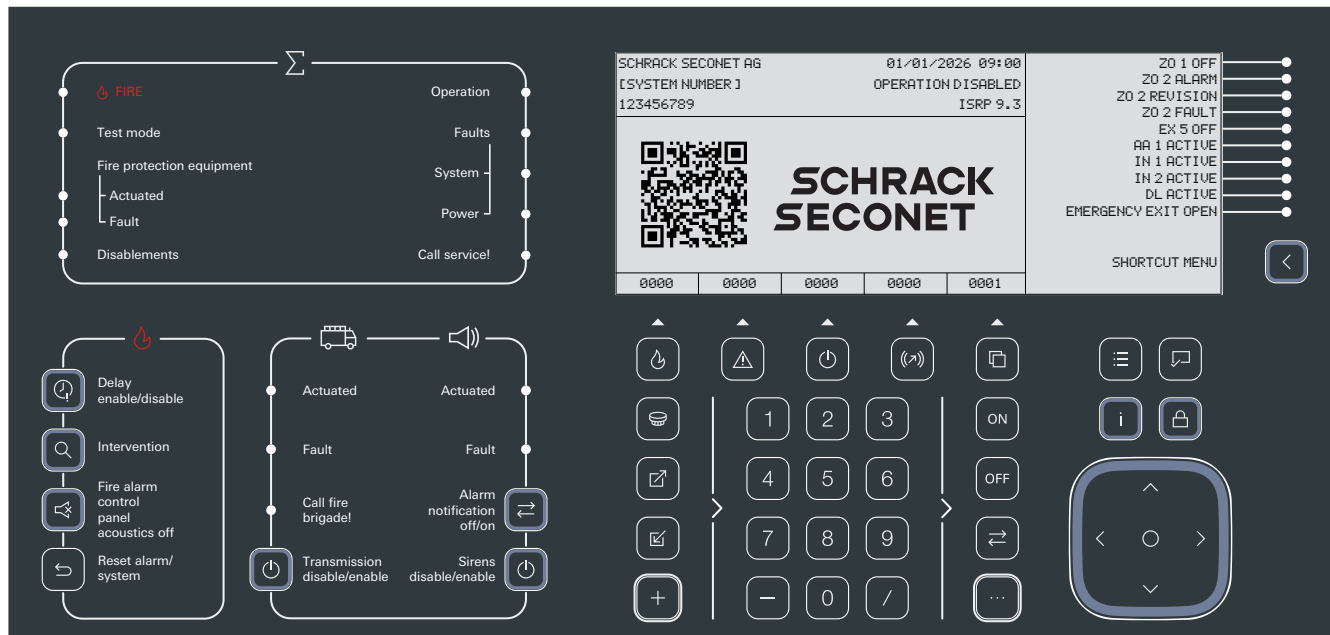
## 2.2 Integral EvoxX control units

|                                                               | Integral EvoxX M | Integral EvoxX C                      | Integral EvoxX B |
|---------------------------------------------------------------|------------------|---------------------------------------|------------------|
| Modular structure                                             | •                | 1 connection slot for optional module | —                |
| Hardware redundancy                                           | •                | —                                     | —                |
| Software redundancy                                           | •                | •                                     | •                |
| Degree of protection                                          | IP30, IP54       | IP30                                  | IP30             |
| Number of X-LINE loops                                        | max. 16          | max. 4                                | max. 1           |
| Devices per control panel                                     | max. 4000        | max. 1000                             | max. 250         |
| Control panel networking                                      |                  |                                       |                  |
| via LAN                                                       | •                | •                                     | •                |
| via optical fibre                                             | •                | •                                     | —                |
| via RS-485                                                    | •                | •                                     | —                |
| Wiring length between two control panels                      |                  |                                       |                  |
| LAN:                                                          | max. 100 m       | max. 100 m                            | max. 100 m       |
| Optical fibre:                                                | max. 30 000 m    | max. 30 000 m                         | —                |
| RS-485:                                                       | max. 1200 m      | max. 1200 m                           | —                |
| Modernisation of existing systems                             | •                | —                                     | —                |
| Floor-standing cabinet variant                                | •                | —                                     | —                |
| Activation of single-zone extinguishing systems               | •                | •                                     | •                |
| Activation of multi-zone extinguishing systems                | •                | —                                     | —                |
| Number of extinguishing zones                                 | 32               | 1                                     | 1                |
| Default interface extinguishing                               | •                | •                                     | •                |
| Additional LED parallel indication panels                     | •                | •                                     | •                |
| Optionally as combined fire alarm/extinguishing control panel | •                | •                                     | •                |

## 2.3 Operating panel

The Integral IMAP operating panel is used for indication and operation of Integral EvoxX control panels. From this panel, it is possible to send any command to the system, as well as to indicate the system states of all devices. The operating panel can be installed directly into the case of the control panel or is available as an external version – installed separately from the control panel – in its own case.

Due to the clarity of the indication and operation, the Integral IMAP is also used as the initial information point (main access for the fire brigade) in addition to the fire brigade operating panel required by the standard.



- The LC display is divided into the following operating areas:
  - Info area 3 lines, 40 characters
  - Operational area 9 lines (8 dynamic lines), 40 characters
  - State list counter and list selection buttons, 1 row
  - Programmable LED labelling 10 lines, 20 characters
  - Programmable button labelling (shortcut menu) 1 line, 20 characters
- Can be deployed as a main operating panel in an Integral WAN
- Available in numerous language versions (both with operating panel and menu navigation on the display)
- Up to four languages can be toggled between in normal operating mode
- Pushbuttons with illuminated ring – action feedback and menu guidance
- A freely programmable button that can be labelled using software
- 10 freely programmable multi-colour LEDs that can be labelled using software
- Indication of QR codes on the operating panel for quick access to individually stored information
- Five status lists (alarms, faults, shutdowns etc.)
- New list scrolling
- Range operation (e.g. disable range 1 to 10)
- Six programmable pieces of information in the info area of the indication
- Simplified operation of function types
- Group operation (e.g. simultaneously disable all detector zones)



- Individual user management with password and user level
- Every change of user is logged in the event log memory
- Connection for external EPI-Bus devices (display or control units)
- Connection for internal/external log printer

The external serial log printer can also be connected to the external version of the operating panel. The printer is mounted directly next to the operating panel.

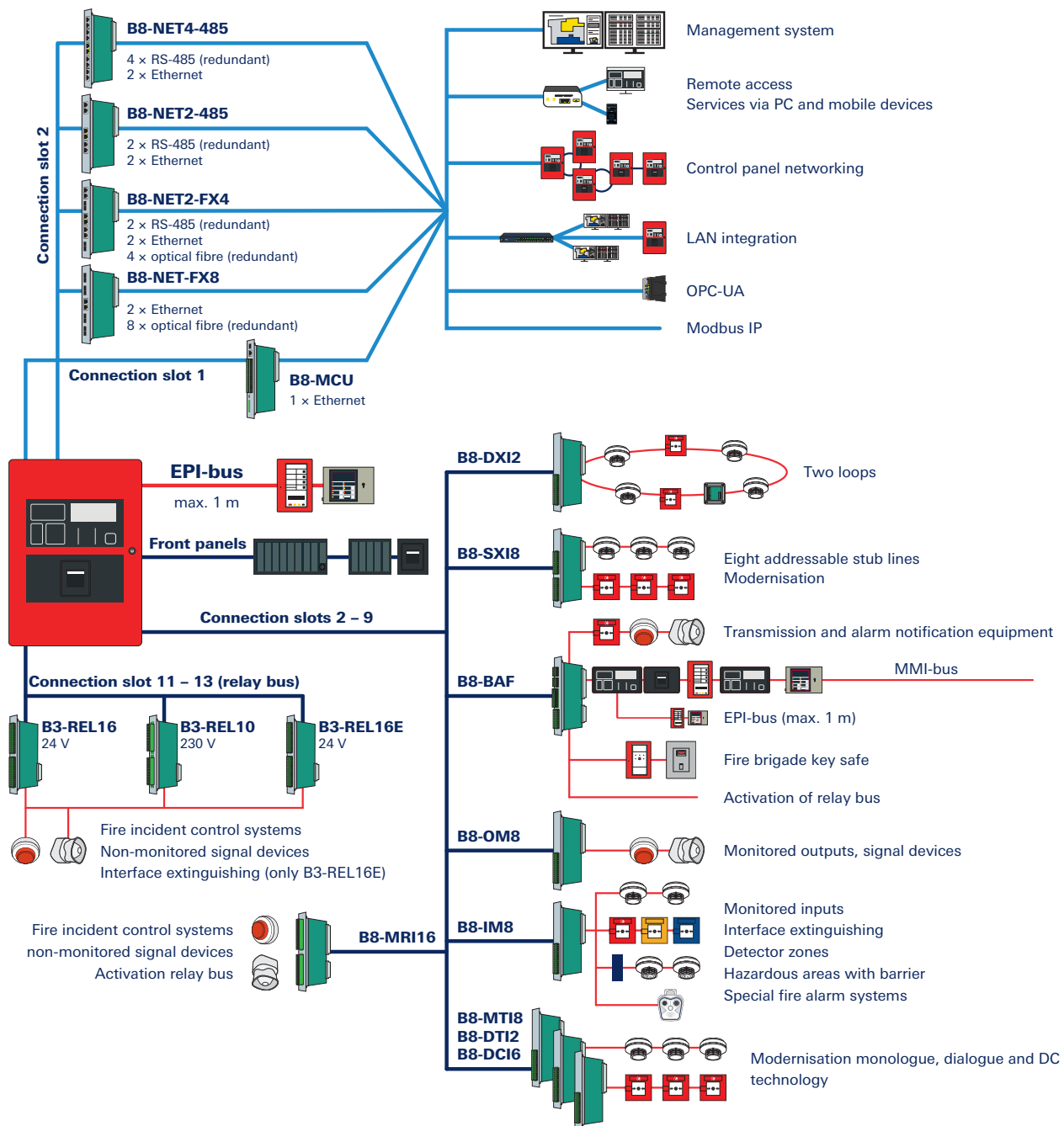


The Integral IMAP operating panel is labelled using an adhesive labelling plate, which is available in more than 30 languages:

|           |                  |           |
|-----------|------------------|-----------|
| German    | Dutch            | Swedish   |
| English   | Italian          | Serbian   |
| Arabic    | Kazakh           | Slovakian |
| Bosnian   | Croatian         | Slovenian |
| Bulgarian | Latvian          | Spanish   |
| Danish    | North Macedonian | Czech     |
| Estonian  | Norwegian        | Turkish   |
| Finnish   | Polish           | Ukrainian |
| French    | Portuguese       | Hungarian |
| Greek     | Romanian         | Uzbek     |
| Hebrew    | Russian          |           |

### 3 Integral EvoxX M modular control panel

Due to its special redundancy concept and the high level of security it provides for a wide range of applications, the Integral EvoxX M control panel can be used as a fire alarm control panel for large installations, as a multi-zone extinguishing control panel (electrical control and delay unit), or as a combined fire alarm and extinguishing control panel.



The Integral EvoxX M is a modular, fully redundant system consisting of individual components for large installations (up to 16 loops with up to 4000 devices).

The basic configuration of the Integral EvoxX M control panel includes a module rack with master control unit and power supply. The required customer-specific modules are inserted into the slots in the module rack. Each control panel is planned and programmed according to the area of application and associated requirements.

With the LED indication inserts for 4 or 8 extinguishing zones, Integral EvoxX M is both suitable and standard-compliant for activation of more than one extinguishing zone and for monitoring the following fire extinguishing systems in accordance with the requirements of EN 12094-1 as well as VdS 2496:

- CO<sub>2</sub> high pressure and low pressure extinguishing systems with and without a danger to the safety of people
- Inert gas and argon extinguishing systems with and without a danger to the safety of people
- Water spray and water fog extinguishing system
- Sprinkler systems and pre-action sprinkler systems
- Chemical extinguishing systems

## 3.1 Features

- Fully redundant hardware configuration to ensure full functionality, even in the event of a fault or a failure of the active half of the system
- Eleven free connection slots for modules (detector zones, inputs/outputs, relays etc.)
- Software redundancy according to TRVB S 123
- Continuous automatic test routines for all system components and software
- 13-line plain text indication of the current system state (alarm, fault etc.)
- 10 freely programmable multicolour LEDs
- LED indication panel for one extinguishing zone directly on the operating panel
- Acoustic and visual alarm device for alarms and faults
- Intermediate alarm storage
- Manual testing of control panel functions
- Plain text indication of individual detectors or indication areas
- Operating panel language (labelling and display indication) can be selected, up to 4 languages are switchable on the fly
- Suitable for connection to the fire brigade's public alarm notification system
- Connection for fire brigade operating panel in accordance with DIN 14661
- System configuration can be saved using flexible flash memory technology
- Emergency power supply for a power bridging time of up to 72 hours

- Meets or exceeds the following relevant standards and guidelines: EN 54, DIN, ÖNORM, ÖVE, VDE and many more
- External device bus for up to 15 indication and operating devices, max. distance 1200 m
- Data serial, emergency powered log printer with access to event log memory and message filter
- Encrypted transmission of the lists to be output to the log printer
- Control panel networking via local mesh network:
  - Up to 16 control panels can be networked to one logical unit without a superordinate operation control system
  - Local mesh network with up to four connections per sub-control unit: in the event of a device or connection fault, it is possible to maintain communication via redirection (routing) of data
  - Flexible topology: Stub connection to loop is possible
  - Ethernet protocol: Use of customers' IT infrastructure
  - Access to the control panel via intranet and internet
  - Use of standardised IT components
  - Data transmission via TCP/IP (Ethernet 10/100Base-TX) at max. 100 Mbit/s
- Up to 20 000 events can be stored in the event log memory; this capacity can be increased via the additional use of an SD memory card to up to 65 000

## 3.2 Options

- Expandable via modules for up to 16 loops with a maximum of 4000 devices
- Control panel networking via local mesh network:
  - Data transmission via TCP/IP (Ethernet 10/100Base-TX) at max. 100 Mbit/s
  - Data transmission via RS-485 (copper) at 625 to 2500 kBit/s
- Possibility to activate different IP protocols enables the wiring of:
  - Operation control systems in accordance with ÖNORM (Austrian standard) F 3003
  - Alarm management systems
  - Other building management systems
- Connection for fire brigade operating panels in accordance with ÖNORM F 3031, DIN 14661, SN 054002 and DIN 14662
- Day/night mode, individually programmable for each detector zone and day of the week
- Intervention mode
- Software-controlled free assignment and connection of detectors to the activation criteria
- Software-controlled two-zone dependency or two-detector dependency for alarm notification and output
- Recognition and evaluation of the detector state (contamination)
- Individual detector disablement
- Can be connected to all of the manufacturer's control panels

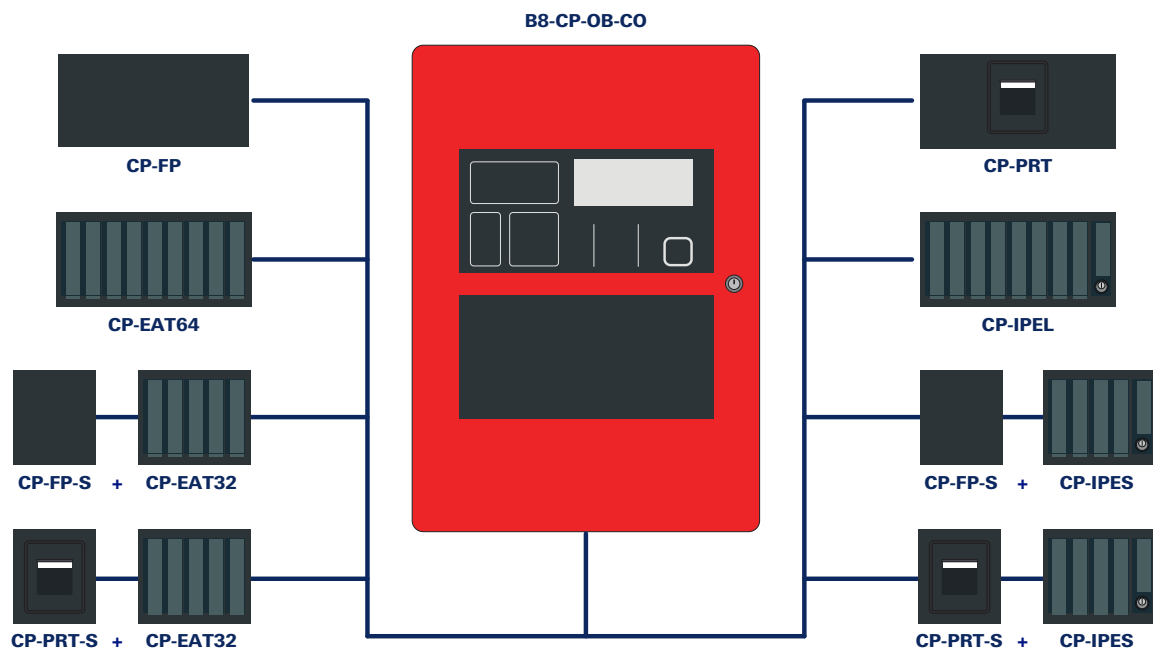
### 3.3 Approvals

- VdS device and system approval: G298029, S298029, G204087
- Declaration of Performance (DoP): CPR-20-25-001
- Austrian Testing Centre for Fire Prevention Technology: Nr. FT 14/159/06, FT 14/622/06, FT 14/623/06, FT 14/625/06
- VB-Cert Austria: No. 002/BM-PSys/014
- Country-specific approvals in Austria, Germany, Denmark, Italy, Netherlands, Poland, Romania, Russia, Sweden, Switzerland, Slovak Republic, Czech Republic, Turkey, Ukraine, Hungary, and many more.

### 3.4 Integral EvoxX M cabinet variants

The modular system allows the Integral EvoxX M in the B8-CP-OB-CO version to be flexibly adapted for a wide variety of applications. The designated cut-out must always be fully covered; an empty cut-out is not permitted. This can be done either by using one large front panel that covers the entire width of the cut-out, or by using a combination of one small and one medium front panel.

The B8-CP-OB-CO design is supplied with the Integral IMAP B8-OB built-in operating panel by default. A label in the local language must be ordered. In addition, you must order one of the following front panels in order to cover the lower cut-out as well.



## B8-CP-OB-CO Integral EvoxX M control panel with operating panel and cut-out



**No.: 20-1010302-01**

The Integral EvoxX M control panel consists of:

- Cabinet made of sheet steel
- B8-OB built-in operating panel
- Module rack for installing eight freely selectable line or input/output modules as well as three connection slots for relay modules
- B8-MCU master control unit
- B8-PSU power supply unit
- Mounting space for rechargeable batteries (max. size 2 × 12 V/45 Ah)
- Mains terminals and rechargeable battery cable

Must be ordered separately:

- Labelling plate in the local language
- Front panel or front panels for the lower cut-out

|                                                    |                                                                                                                             |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Mains voltage                                      | 110 V AC –15 % to 230 V AC +10 %                                                                                            |
| Mains frequency                                    | 47 to 63 Hz                                                                                                                 |
| Input power                                        | max. 280 W                                                                                                                  |
| Output power                                       | max. 200 W                                                                                                                  |
| Output voltage (PELV compliant)                    | 21.0 to 27.9 V DC                                                                                                           |
| Usable rechargeable batteries                      | 2 × 12 V/38 to 45 Ah in series<br>Total capacity: max. 88 Ah (2 identical strings with 2 × 12 V/38 to 44 Ah each in series) |
| Emergency power supply with rechargeable batteries | 72 h normal operation additionally<br>0.5 h alarm                                                                           |
| Degree of protection                               | IP30                                                                                                                        |
| Ambient temperature                                |                                                                                                                             |
| Manufacturer specification                         | –5 °C to +50 °C                                                                                                             |
| Approved by VdS                                    | –5 °C to +40 °C                                                                                                             |
| Relative humidity                                  | 5 to 95 % non-condensing                                                                                                    |
| Air pressure up to 2000 m above sea level          | ≥ 80 kPa                                                                                                                    |
| Case material                                      | sheet steel                                                                                                                 |
| Case colour                                        | red RAL 3000, anthracite grey RAL 7016                                                                                      |
| Dimensions                                         | 625 × 446 × 230 mm (H × W × D)                                                                                              |
| Weight                                             |                                                                                                                             |
| Basic configuration                                | 15 kg                                                                                                                       |
| Per rechargeable battery                           | approx. 15 kg                                                                                                               |
| VdS approval                                       | G298029                                                                                                                     |
| Declaration of Performance (DoP)                   | CPR-20-25-001                                                                                                               |

## B8-CP Integral EvoxX M control panel without operating panel



**No.: 20-1010300-01**

The Integral EvoxX M control panel consists of:

- Cabinet made of sheet steel
- Module rack for installing eight freely selectable line or input/output modules as well as three connection slots for relay modules
- B8-MCU master control unit
- B8-PSU power supply unit
- Mounting space for rechargeable batteries (max. size 2 × 12 V/45 Ah)
- Mains terminals and rechargeable battery cable

|                                                    |                                                                                                                             |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Mains voltage                                      | 110 V AC –15 % to 230 V AC +10 %                                                                                            |
| Mains frequency                                    | 47 to 63 Hz                                                                                                                 |
| Input power                                        | max. 280 W                                                                                                                  |
| Output power                                       | max. 200 W                                                                                                                  |
| Output voltage (PELV compliant)                    | 21.0 to 27.9 V DC                                                                                                           |
| Usable rechargeable batteries                      | 2 × 12 V/38 to 45 Ah in series<br>Total capacity: max. 88 Ah (2 identical strings with 2 × 12 V/38 to 44 Ah each in series) |
| Emergency power supply with rechargeable batteries | 72 h normal operation additionally<br>0.5 h alarm                                                                           |
| Degree of protection                               | IP30                                                                                                                        |
| Ambient temperature                                |                                                                                                                             |
| Manufacturer specification                         | –5 °C to +50 °C                                                                                                             |
| Approved by VdS                                    | –5 °C to +40 °C                                                                                                             |
| Relative humidity                                  | 5 to 95 % non-condensing                                                                                                    |
| Air pressure up to 2000 m above sea level          | ≥ 80 kPa                                                                                                                    |
| Case material                                      | sheet steel                                                                                                                 |
| Case colour                                        | red RAL 3000, anthracite grey RAL 7016                                                                                      |
| Dimensions                                         | 625 × 446 × 230 mm (H × W × D)                                                                                              |
| Weight                                             |                                                                                                                             |
| Basic configuration                                | 15 kg                                                                                                                       |
| Per rechargeable battery                           | approx. 15 kg                                                                                                               |
| VdS approval                                       | G298029                                                                                                                     |
| Declaration of Performance (DoP)                   | CPR-20-25-001                                                                                                               |



## Integral EvoX M and accessories

|                                                                                     | Designation                                                                                 | Type            | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------|---------------|
|    | <b>Integral EvoX M</b><br>Control panel without operating panel                             | B8-CP           | 20-1010300-01 |
|    | <b>Integral EvoX M</b><br>Control panel with B8-OB operating panel and cut-out              | B8-CP-OB-CO     | 20-1010302-01 |
|    | <b>SD card 2 GB for B8-MCU/B9-BCU</b><br>for extending the event log memory                 | SD-CARD-2GB IND | 20-1400216-01 |
|    | <b>Integral IMAP built-in operating panel</b><br>without lettering plate (replacement part) | B8-OB           | 20-1031001-01 |
|    | <b>Lettering plate for Integral IMAP</b><br>German                                          | OB-TXT DE01     | 20-1041001-01 |
|    | <b>Lettering plate for Integral IMAP</b><br>English                                         | OB-TXT EN01     | 20-1041002-01 |
|    | <b>Lettering plate for Integral IMAP</b><br>other languages                                 | OB-TXT          | auf Anfrage   |
|   | <b>Integral EvoX M/C front panel</b><br>without cut-out                                     | CP-FP           | 20-1400260-01 |
|  | <b>Integral EvoX M/C front panel</b><br>with printer                                        | CP-PRT          | 20-1400261-01 |
|  | <b>Integral EvoX M/C front panel</b><br>without cut-out, small                              | CP-FP-S         | 20-1400262-01 |
|  | <b>Integral EvoX M/C front panel</b><br>with log printer, small                             | CP-PRT-S        | 20-1400263-01 |
|  | <b>Integral EvoX M/C front panel</b><br>with EAT64                                          | CP-EAT64        | 20-1400264-01 |
|  | <b>Integral EvoX M/C front panel</b><br>with EAT32, medium                                  | CP-EAT32        | 20-1400265-01 |
|  | <b>Integral EvoX M front panel</b><br>with IPEL                                             | CP-IPEL         | 20-1400266-01 |
|  | <b>Integral EvoX M/C front panel</b><br>with IPES, medium                                   | CP-IPES         | 20-1400267-01 |
|  | <b>Integral EvoX M/C front panel</b><br>without cut-out, medium                             | CP-FP-M         | 20-1400269-01 |
|  | <b>Integral EvoX M replacement case</b><br>without cut-out                                  | H-CP-M          | 20-1400130-01 |
|  | <b>Integral EvoX M replacement case</b><br>2 cut-outs                                       | H-CP-M-2CO      | 20-1400132-01 |
|                                                                                     | <b>B8/B9-CP lock for cabinets</b>                                                           | CP-LOCK         | 20-1400213-01 |
|  | <b>B8/B9-CP key for cabinets</b>                                                            | CP-KEY          | 20-1400214-01 |

|                                                                                   | Designation                                                  | Type       | Article no.   |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------|------------|---------------|
|  | <b>Lock for keyswitch (replacement)</b><br>incl. 2 pcs. keys | SCU LOCK-2 | 20-1400200-01 |
|  | <b>Key for keyswitch (replacement)</b>                       | SCU KEY-2  | 20-1400201-01 |

## 3.5 Components in 19-inch version

For compact accommodation of several Integral EvoxX control panels in one case, separate control panel components are available which can be installed in any 19-inch floor-standing cabinets provided the following requirements are met:



- Degree of protection IP55
- overvoltage protection type 1 (formerly electrical protection class B)
- relative air humidity 5 % – 95 %
- control panels and printers must be installed in 19-inch frames
- central earthing point
- access level 1: all mandatory displays must be visible in access level 1 without prior manual intervention (e.g. opening the door). Operating elements in access level 1 must be accessible without restriction.

This variant offers many advantages for various applications, such as the modernisation of old systems, extinguishing controls with several indication panels or if the local conditions do not allow otherwise.

## B8-CP-WCAB control panel in wall-mounted cabinet with glass door



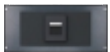
**No.: 20-1010306-01**

Integral EvoxX M in three-part wall-mounted cabinet with increased degree of protection, consisting of:

- Cabinet made of sheet steel
- Module rack for installing eight freely selectable line or input/output modules as well as three connection slots for relay modules
- B8-MCU master control unit
- B8-PSU power supply unit
- Mounting space for rechargeable batteries (max. size 2 × 12 V/45 Ah)
- Maximum 15 height units for up to 3 floor-standing cabinet front panels

|                                           |                                                                                                                             |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Mains voltage                             | 110 V AC –15 % to 230 V AC +10 %                                                                                            |
| Mains frequency                           | 47 to 63 Hz                                                                                                                 |
| Input power                               | max. 280 W                                                                                                                  |
| Output power                              | max. 200 W                                                                                                                  |
| Output voltage (PELV compliant)           | 21.0 to 27.9 V DC                                                                                                           |
| Usable rechargeable batteries             | 2 × 12 V/38 to 45 Ah in series<br>Total capacity: max. 88 Ah (2 identical strings with 2 × 12 V/38 to 44 Ah each in series) |
| Maximum configuration                     | 3 front panels (5 HU each)                                                                                                  |
| Front door                                | Single-pane safety glass 3 mm, 3524 E closure, hinged left                                                                  |
| Load capacity swivel part                 | 75 kg                                                                                                                       |
| Degree of protection                      | IP54                                                                                                                        |
| Ambient temperature                       |                                                                                                                             |
| Manufacturer specification                | –5 °C to +50 °C                                                                                                             |
| Approved by VdS                           | –5 °C to +40 °C                                                                                                             |
| Relative humidity                         | 5 to 95 % non-condensing                                                                                                    |
| Air pressure up to 2000 m above sea level | ≥ 80 kPa                                                                                                                    |
| Case material                             | sheet steel, 1.5 mm, powder coated                                                                                          |
| Case colour                               | light grey, RAL 7035                                                                                                        |
| Dimensions                                | 746 × 600 × 473 mm (H × W × D)                                                                                              |
| Depth swivel part                         | 316 mm                                                                                                                      |
| Depth wall section                        | 135 mm                                                                                                                      |
| Weight                                    |                                                                                                                             |
| Basic configuration                       | approx. 55 kg                                                                                                               |
| Per rechargeable battery                  | approx. 15 kg                                                                                                               |
| VdS approval                              | G298029, G204087                                                                                                            |

## Integral EvoxX M components, 19-inch version

|                                                                                     | Designation                                                                                                       | Type           | Article no.   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------|---------------|
|    | <b>Integral EvoxX M</b><br>Control panel in wall-mounted cabinet with glass door                                  | B8-CP-WCAB     | 20-1010306-01 |
|    | <b>Integral IMAP STS</b><br>Operating panel without labelling, 5 HU support plate                                 | B8-ST5-OB      | 20-1060017-01 |
|    | <b>Integral IMAP STS DE</b><br>Operating panel German, 5 HU support plate                                         | B8-ST5-OB-DE-2 | 20-1060018-01 |
|    | <b>Lettering plate for Integral IMAP</b><br>German                                                                | OB-TXT DE01    | 20-1041001-01 |
|    | <b>Lettering plate for Integral IMAP</b><br>English                                                               | OB-TXT EN01    | 20-1041002-01 |
|    | <b>Lettering plate for Integral IMAP</b><br>other languages                                                       | OB-TXT         | auf Anfrage   |
|    | <b>STS log printer</b><br>for Integral IMAP, 5 HU support plate                                                   | B8-ST5-OB-PRT  | 20-1060019-01 |
|    | <b>19" front panel with EAT64 LED indication panel</b><br>for 64 detector zones                                   | B5-ST5-EAT64-2 | 20-1060011-01 |
|  | <b>19" front panel with IPEL LED indication panel</b><br>for eight extinguishing zones                            | B5-ST5-IPEL-2  | 20-1060012-01 |
|  | <b>19" blanking plate (5 height units)</b>                                                                        | B5-ST5-BFP-2   | 20-1060003-01 |
|  | <b>19" blanking plate (1 height unit)</b>                                                                         | B5-ST5-BFP2-2  | 20-1060008-01 |
|  | <b>Module rack Integral EvoxX M</b><br>incl. B8-PSU, B8-BUS, B8-MCU, B3-BSR5 and rechargeable battery compartment | B8-ST5-BGT     | 20-1060016-01 |
|  | <b>Battery holder for additional battery expansion</b>                                                            | B5-ST5-AF      | 20-1060007-01 |
|  | <b>Cat 5 cable 3 m with connector</b><br>for B8-NETx for connecting sub-control units in a floor-standing cabinet | B5-ST5-CAT5    | 20-1060043-01 |
|  | <b>Terminal block for supply voltage</b>                                                                          | B5-ST5-KL      | 20-1060045-01 |

## 3.6 Integral EvoxX M modules

All the modules and components of the Integral EvoxX M system are constructed with complete redundancy for reasons of system availability, thereby ensuring seamless information indication, signal processing and control of all connected fire incident control systems even in the event of a fault.

The module rack is mounted on the back plate of each Integral EvoxX M basic unit and comes with the B8-MCU master control unit and B8-PSU power supply unit by default. 11 more connection slots can be equipped with other flat modules as required. Due to this modular design, different line technologies (loop and stub lines) can be simultaneously connected to one control panel.

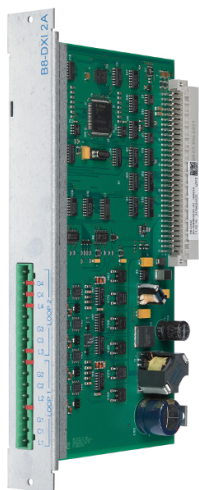


### 3.6.1 Important notes for equipping the module rack

The power supply and data communication between the modules takes place via the bus circuit board on the rear of the module rack via plug and socket connections.

|                           |                                                                                                                                                                                                |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connection slot 1         | exclusively for master control module B8-MCU                                                                                                                                                   |
| Connection slot 2         | if a network module is used, it must be installed in connection slot 2, otherwise the connection slot is freely available (except for B3-RELx modules)                                         |
| Connection slots 3 to 8   | freely available for all modules described below (except for B3-RELx)                                                                                                                          |
| Connection slot 9         | must be equipped with one of the B8-BAF or B8-MRI16 modules if relay modules are to be installed in connection slots 11 to 13, as only these modules are suitable for activating the relay bus |
| Connection slot 10        | exclusively for the B8-PSU power supply unit                                                                                                                                                   |
| Connection slots 11 to 13 | exclusively for B3-RELx relay modules                                                                                                                                                          |

## B8-DXI2A module for X-LINE

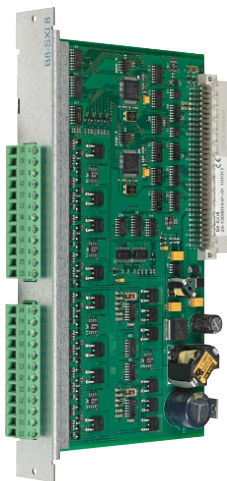


**No.: 20-1000018-01**

To connect two loops with associated detectors and modules of the Integral X-LINE. Alternatively, one loop and 2 stub lines, or maximum 4 stub lines can be connected.

|                                    |                                                                        |
|------------------------------------|------------------------------------------------------------------------|
| Power supply                       | internally via the system bus, with extended redundancy                |
| Connection                         | 2 loops (each max. 250 devices) or 4 stub lines (each max. 64 devices) |
| Battery voltage VL                 | 22 to 30 V                                                             |
| Loop voltage VCC                   | 30 V $\pm$ 3 %                                                         |
| Connector plug                     | 16-pin screw-type terminal                                             |
| Interface                          | system bus                                                             |
| Connection slot on the module rack | 2 to 9                                                                 |
| Ambient temperature                |                                                                        |
| Manufacturer specification         | -5 °C to +50 °C                                                        |
| Approved by VdS                    | -5 °C to +40 °C                                                        |
| Relative humidity                  | 5 to 95 % non-condensing                                               |
| Dimensions                         | 215 x 27 x 116 mm (H x W x D)                                          |
| Weight                             | 235 g                                                                  |

## B8-SXI8 stub line module for X-LINE



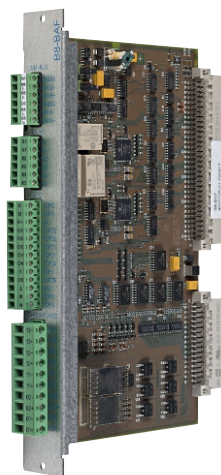
**No.: 20-1000010-01**

For connecting up to eight stub lines with corresponding detectors and modules of the Integral X-LINE. Up to 32 automatic fire detectors, ten manual call points or ten BX modules can be connected to each of the eight stub lines. The B8-SXI8 is particularly suitable for modernising existing stub lines from older control panel models (CBMZ, Maxima).

|                                    |                                                         |
|------------------------------------|---------------------------------------------------------|
| Power supply                       | internally via the system bus, with extended redundancy |
| Connection                         | 8 stub lines (each maximum 32 devices)                  |
| Connector plug                     | 2 x 12-pin screw terminal                               |
| Interface                          | system bus                                              |
| Connection slot on the module rack | 2 to 9                                                  |
| Ambient temperature                |                                                         |
| Manufacturer specification         | -5 °C to +50 °C                                         |
| Approved by VdS                    | -5 °C to +40 °C                                         |
| Relative humidity                  | 5 to 95 % non-condensing                                |
| Dimensions                         | 215 x 27 x 116 mm (H x W x D)                           |
| Weight                             | 235 g                                                   |



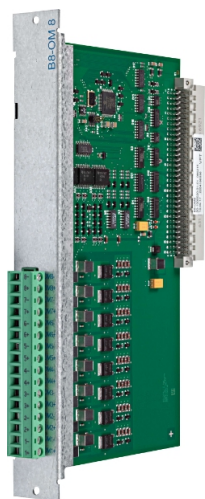
## B8-BAF output module



**No.: 20-1000011-01**

For connecting alarm notification and transmission equipment, monitored inputs for querying galvanically isolated contacts, key safes and release mechanisms and for controlling the relay bus. For the transmission of alarms relays can be controlled. The module also includes an interface to the MMI-bus (external device bus) to which external operating panels, amongst other things, can be connected.

|                                         |                                                                                  |
|-----------------------------------------|----------------------------------------------------------------------------------|
| Power supply                            | internally via the system bus, with extended redundancy                          |
| Fire brigade panel interface (DIN14661) | 13-pin screw-type terminal                                                       |
| Transmission type                       | parallel, bidirectional                                                          |
| Range                                   | max. 3 m                                                                         |
| Monitored output OM1/2                  | 3 load ranges, alarm notification and transmission equipment or monitored output |
| Monitored input IM1/2/3                 | galvanically isolated contacts, key safe, release mechanisms                     |
| MMI-bus                                 | for low and high speed MMI-bus devices, galvanically isolated RS-485             |
| Relay outputs                           |                                                                                  |
| Quantity                                | 3                                                                                |
| Switching voltage                       | max. 30 V AC/30 V DC                                                             |
| Switching/continuous current            | max. 3 A                                                                         |
| Switching capacity                      | 90 VA/90 W                                                                       |
| Interface                               | system bus                                                                       |
| Connection slot on the module rack      | 2 to 9                                                                           |
| Ambient temperature                     |                                                                                  |
| Manufacturer specification              | –5 °C to +50 °C                                                                  |
| Approved by VdS                         | –5 °C to +40 °C                                                                  |
| Relative humidity                       | 5 to 95 % non-condensing                                                         |
| Dimensions                              | 215 × 27 × 116 mm (H × W × D)                                                    |
| Weight                                  | 235 g                                                                            |

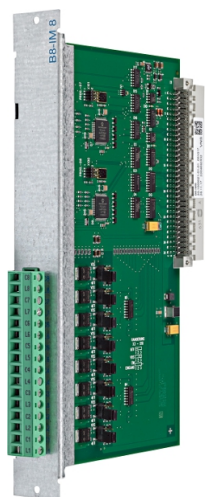
**No.: 20-1000020-01**

## B8-OM8 module for monitored outputs

For activation and monitoring eight primary lines (flashlights, sirens etc.) in accordance with EN 54-13, each with a maximum current of 1.5 A. However, the total current across all outputs must not exceed 4 A.

The 3 load ranges are set as appropriate in the software depending on the purpose of use.

|                                    |                                                         |
|------------------------------------|---------------------------------------------------------|
| Power supply                       | internally via the system bus, with extended redundancy |
| Connection                         | 8 monitored outputs                                     |
| Output voltage                     | 22 to 28 V                                              |
| Output current                     | max. 1.5 A                                              |
| Short circuit current              | 1.75 A typ.                                             |
| Connector plug                     | 16-pin screw-type terminal                              |
| Interface                          | system bus                                              |
| Connection slot on the module rack | 2 to 9                                                  |
| Ambient temperature                |                                                         |
| Manufacturer specification         | –5 °C to +50 °C                                         |
| Approved by VdS                    | –5 °C to +40 °C                                         |
| Relative humidity                  | 5 to 95 % non-condensing                                |
| Dimensions                         | 215 × 27 × 116 mm (H × W × D)                           |
| Weight                             | 224 g                                                   |

**No.: 20-1000021-01**

## B8-IM8 module for monitored inputs

For connection of up to eight stub lines, which can be configured as as monitored inputs (e.g. VdS extinguishing interface, primary inputs, valve monitoring) or as detector zones.

The operating mode of the individual stub lines can be independently selected: Via programming and jumpers on the module.

|                                    |                                                         |
|------------------------------------|---------------------------------------------------------|
| Power supply                       | internally via the system bus, with extended redundancy |
| Connection                         | 8 stub lines for monitored inputs or detector zones     |
| Connector plug                     | 16-pin screw-type terminal                              |
| Interface                          | system bus                                              |
| Connection slot on the module rack | 2 to 9                                                  |
| Ambient temperature                |                                                         |
| Manufacturer specification         | –5 °C to +50 °C                                         |
| Approved by VdS                    | –5 °C to +40 °C                                         |
| Relative humidity                  | 5 to 95 % non-condensing                                |
| Dimensions                         | 215 × 27 × 116 mm (H × W × D)                           |
| Weight                             | 221 g                                                   |

## B8-NET2-485 network module



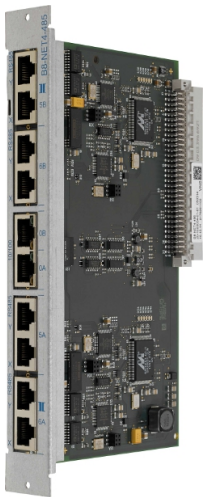
**No.: 20-1000033-01**

For redundant networking of Integral EvoxX M control panels or for connection of Integral EvoxX applications. The module has two network connections (based on RS-485) and two Ethernet 10/100Base-TX interfaces.

There are six RJ-45 sockets on the front for sub-control unit networks and Ethernet connections.

The module can only be installed in connection slot 2 in the module rack.

|                                    |                                                            |
|------------------------------------|------------------------------------------------------------|
| Power supply                       | internally via the system bus, with extended redundancy    |
| Current consumption                | 120 mA                                                     |
| LAN interface                      | 2 × Ethernet 10/100Base-TX (port-redundancy)               |
| Mechanical                         | RJ-45 socket, eight pin                                    |
| Speed                              | max. 100 Mbit/s                                            |
| Range                              | max. 100 m                                                 |
| RS-485 interface                   | 2 × RS-485 with line redundancy, one galvanically isolated |
| Mechanical                         | RJ-45 socket, eight pin                                    |
| Speed                              | max. 1.25 Mbit/s                                           |
| Range                              | max. 1200 m                                                |
| Interface                          | system bus                                                 |
| Connection slot on the module rack | 2                                                          |
| Ambient temperature                |                                                            |
| Manufacturer specification         | –5 °C to +50 °C                                            |
| Approved by VdS                    | –5 °C to +40 °C                                            |
| Relative humidity                  | 5 to 95 % non-condensing                                   |
| Dimensions                         | 215 × 27 × 116 mm (H × W × D)                              |
| Weight                             | 208 g                                                      |



No.: 20-1000034-01

**B8-NET4-485 network module**

For redundant networking of Integral EvoxX M control panels or for connection of Integral EvoxX applications. The module has four network connections (based on RS-485) and two Ethernet 10/100Base-TX interfaces.

There are ten RJ-45 sockets on the front for the sub-control unit networks and Ethernet connections.

The module can only be installed in connection slot 2 in the module rack.

|                                    |                                                          |
|------------------------------------|----------------------------------------------------------|
| Power supply                       | internally via the system bus, with extended redundancy  |
| Current consumption                | 127 mA                                                   |
| LAN interface                      | 2 × Ethernet 10/100Base-TX (port-redundancy)             |
| Mechanical                         | RJ-45 socket, eight pin                                  |
| Speed                              | max. 100 Mbit/s                                          |
| Range                              | max. 100 m                                               |
| RS-485 interface                   | 4 × RS-485 with line redundancy, 2 galvanically isolated |
| Mechanical                         | RJ-45 socket, eight pin                                  |
| Speed                              | max. 1.25 Mbit/s                                         |
| Range                              | max. 1200 m                                              |
| Interface                          | system bus                                               |
| Connection slot on the module rack | 2                                                        |
| Ambient temperature                |                                                          |
| Manufacturer specification         | –5 °C to +50 °C                                          |
| Approved by VdS                    | –5 °C to +40 °C                                          |
| Relative humidity                  | 5 to 95 % non-condensing                                 |
| Dimensions                         | 215 × 27 × 116 mm (H × W × D)                            |
| Weight                             | 208 g                                                    |

## B8-NET2-FX4 network module

For networking of Integral EvoxX M control panels via redundant optical fibre cables and for connection of Integral EvoxX applications.

The module has two RS-485 interfaces with line redundancy, four optical fibre ports for use with pluggable SFP optical modules (multi mode version with 2000 m range or single mode version with up to 10 000 m or 30 000 m range) and two 10/100Base-TX interfaces with port redundancy.

The module can only be installed in connection slot 2 in the module rack.



**No.: 20-1000030-01**



**No.: 20-1400005-01**



**No.: 20-1400006-01**



**No.: 20-1400007-01**



**No.: 20-1400040-01**

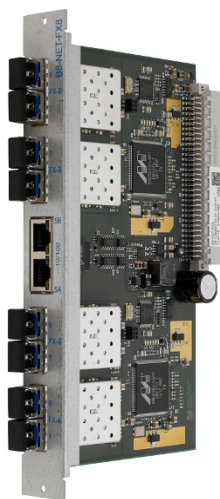
|                                    |                                                            |
|------------------------------------|------------------------------------------------------------|
| Power supply                       | internally via the system bus, with extended redundancy    |
| LAN interface                      | 2 × Ethernet 10/100Base-TX (port-redundancy)               |
| Mechanical                         | RJ-45 socket, eight pin                                    |
| Speed                              | max. 100 Mbit/s                                            |
| Range                              | max. 100 m                                                 |
| RS-485 interface                   | 2 × RS-485 with line redundancy, one galvanically isolated |
| Mechanical                         | RJ-45 socket, eight pin                                    |
| Direction                          | bidirectional, half-duplex                                 |
| Speed                              | max. 1.25 Mbit/s                                           |
| Range                              | max. 1200 m                                                |
| FX interface                       | 4 × SFP module slots, multi mode and/or single mode        |
| Speed                              | max. 100 Mbit/s                                            |
| Range                              |                                                            |
| SFP module multi mode              | max. 2000 m                                                |
| SFP module single mode             | max. 10 000 m or 30 000 m                                  |
| Optical fibre                      |                                                            |
| SFP module multi mode              | 62,5/125 µm or 50/125 µm                                   |
| SFP module single mode             | 9/125 µm                                                   |
| Connector type                     | LC 2 × 5                                                   |
| Interface                          | system bus                                                 |
| Connection slot on the module rack | 2                                                          |
| Ambient temperature                |                                                            |
| Manufacturer specification         | –5 °C to +50 °C                                            |
| Approved by VdS                    | –5 °C to +40 °C                                            |
| Relative humidity                  | 5 to 95 % non-condensing                                   |
| Dimensions                         | 215 × 27 × 116 mm (H × W × D)                              |
| Weight                             | 208 g                                                      |

## B8-NET-FX8 network module

For networking of Integral EvoX M control panels via redundant optical fibre cables and for connection of Integral EvoX applications.

The module has eight optical fibre ports for use with pluggable SFP optical modules (multi mode version with 2000 m range or single mode version with up to 10 000 m or 30 000 m range) and two 10/100Base-TX interfaces with port redundancy.

The module can only be installed in connection slot 2 in the module rack.



**No.: 20-1000031-01**



**No.: 20-1400005-01**



**No.: 20-1400006-01**



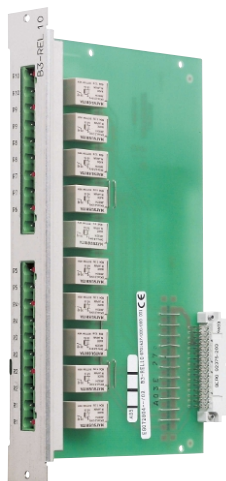
**No.: 20-1400007-01**



**No.: 20-1400040-01**

|                                    |                                                         |
|------------------------------------|---------------------------------------------------------|
| Power supply                       | internally via the system bus, with extended redundancy |
| LAN interface                      | 2 × Ethernet 10/100Base-TX (port-redundancy)            |
| Mechanical                         | RJ-45 socket, eight pin                                 |
| Speed                              | max. 100 Mbit/s                                         |
| Range                              | max. 100 m                                              |
| FX interface                       | 8 × SFP module slots, multi mode and/or single mode     |
| Speed                              | max. 100 Mbit/s                                         |
| Range                              |                                                         |
| SFP module multi mode              | max. 2000 m                                             |
| SFP module single mode             | max. 10 000 m or 30 000 m                               |
| Optical fibre                      |                                                         |
| SFP module multi mode              | 62,5/125 µm or 50/125 µm                                |
| SFP module single mode             | 9/125 µm                                                |
| Connector type                     | LC 2 × 5                                                |
| Interface                          | system bus                                              |
| Connection slot on the module rack | 2                                                       |
| Ambient temperature                |                                                         |
| Manufacturer specification         | –5 °C to +50 °C                                         |
| Approved by VdS                    | –5 °C to +40 °C                                         |
| Relative humidity                  | 5 to 95 % non-condensing                                |
| Dimensions                         | 215 × 27 × 116 mm (H × W × D)                           |
| Weight                             | 208 g                                                   |

## B3-REL10 relay module



**No.: 20-1000003-01**

Relay module for modular installation in the control panel for wiring loads via ten bistable, freely programmable relay contacts for 250 V AC voltage.

The determination of whether the contact is normally open contact or normally closed contact is made during planning via software. A programmed fail-safe position can define the status of each individual relay in the event of a supply voltage failure or switch-off of the control panel.

To activate the relays, connection slot 9 in the module rack must contain either a B8-BAF, B8-MRI16 or B3-LPI module. The relay module can only be installed in connection slots 11 to 13 in the module rack.

|                                    |                                                               |
|------------------------------------|---------------------------------------------------------------|
| Power supply                       | internally via the system/relay bus, with extended redundancy |
| Relay type                         | bi-stable                                                     |
| Contact resistance                 | max. 30 mΩ                                                    |
| Relay outputs                      |                                                               |
| Quantity                           | 2 × 5                                                         |
| Switching voltage                  | max. 250 V AC/30 V DC                                         |
| Switching/continuous current       | max. 3 A                                                      |
| Switching capacity                 | 750 VA/90 W                                                   |
| Interface                          | System bus and relay bus                                      |
| Connection slot on the module rack | 11 to 13                                                      |
| Ambient temperature                |                                                               |
| Manufacturer specification         | –5 °C to +50 °C                                               |
| Approved by VdS                    | –5 °C to +40 °C                                               |
| Relative humidity                  | 5 to 95 % non-condensing                                      |
| Dimensions                         | 215 × 27 × 116 mm (H × W × D)                                 |
| Weight                             | 280 g                                                         |



## B3-REL16 relay module



No.: 20-1000004-01

Relay module for modular installation into the control panel for activating sirens, holding magnets, relays etc. via 16 bi-stable freely programmable contacts for 30 V.

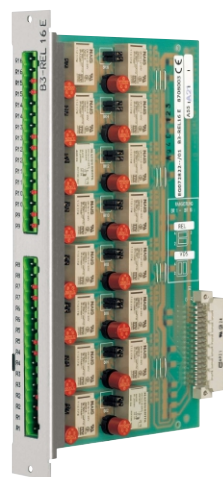
The determination of whether the contact is normally open contact or normally closed contact is made during planning via software. A programmed fail-safe position can define the status of each individual relay in the event of a supply voltage failure or switch-off of the control panel.

A relay contact can also be used as a standardised extinguishing interface or fault interface to VdS specifications.

To activate the relays, connection slot 9 in the module rack must contain either a B8-BAF, B8-MRI16 or B3-LPI module. The relay module can only be installed in connection slots 11 to 13 in the module rack.

|                                    |                                                               |
|------------------------------------|---------------------------------------------------------------|
| Power supply                       | internally via the system/relay bus, with extended redundancy |
| Relay type                         | bi-stable                                                     |
| Contact resistance                 | max. 30 mΩ                                                    |
| Relay outputs                      |                                                               |
| Quantity                           | 2 × 8                                                         |
| Switching voltage                  | max. 30 V AC/30 V DC                                          |
| Switching/continuous current       | max. 3 A                                                      |
| Switching capacity                 | 90 VA/90 W                                                    |
| Interface                          | System bus and relay bus                                      |
| Connection slot on the module rack | 11 to 13                                                      |
| Ambient temperature                |                                                               |
| Manufacturer specification         | –5 °C to +50 °C                                               |
| Approved by VdS                    | –5 °C to +40 °C                                               |
| Relative humidity                  | 5 to 95 % non-condensing                                      |
| Dimensions                         | 215 × 27 × 116 mm (H × W × D)                                 |
| Weight                             | 280 g                                                         |

## B3-REL16E relay module



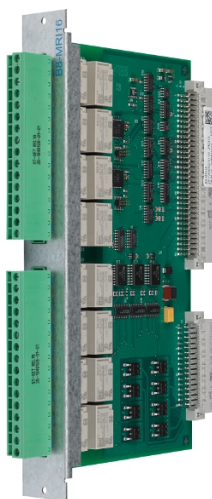
No.: 20-1000005-01

Equivalent in function and technical data to the B3-REL16E module, however all relay contacts can additionally be used as a standardised sprinkler or fault interface in accordance with VdS. The configuration is performed using jumper caps, the relay contacts are fused (the fuses themselves are not monitored).

To activate the relays, connection slot 9 in the module rack must contain either a B8-BAF, B8-MRI16 or B3-LPI module. The relay module can only be installed in connection slots 11 to 13 in the module rack.

|                    |                                                           |
|--------------------|-----------------------------------------------------------|
| Contact protection | miniature fuse 3.15 A with slow triggering characteristic |
|--------------------|-----------------------------------------------------------|

## B8-MRI16 relay module



**No.: 20-1000022-01**

Used for activation of sirens, holding magnet, relays etc. via 16 bi-stable freely programmable 24 V/3 A relay contacts.

B8-MRI16 contains an interface for activation of the internal relay bus. This allows it to be additionally equipped with other relay modules (B3-REL10, B3-REL16, B3-REL16E).

In order to use this function, the module must be installed in connection slot 9.

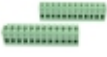
The determination of whether the contact is normally open contact or normally closed contact is made during planning via software. A programmed fail-safe position can define the status of each individual relay in the event of a supply voltage failure or switch-off of the control panel.

The module can be fitted in the connection slots 2 to 9.

In connection slot 9, B8-MRI16 also controls the relay modules B3-REL10, B3-REL16 as well as B3-REL16E.

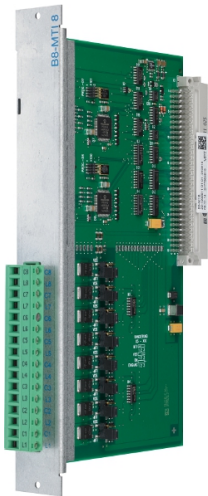
|                                    |                                                               |
|------------------------------------|---------------------------------------------------------------|
| Power supply                       | internally via the system/relay bus, with extended redundancy |
| Connection                         | 16 unmonitored outputs                                        |
| Connector plug                     | 2 × 16-pin screw-type terminal                                |
| Relay type                         | bi-stable                                                     |
| Contact resistance                 | 30 mΩ                                                         |
| Relay outputs                      |                                                               |
| Quantity                           | 2 × 8                                                         |
| Switching voltage                  | max. 30 V AC/30 V DC                                          |
| Switching/continuous current       | max. 3 A                                                      |
| Switching capacity                 | 90 VA/90 W                                                    |
| Interface                          | system bus                                                    |
| Connection slot on the module rack | 2 to 9                                                        |
| Ambient temperature                |                                                               |
| Manufacturer specification         | –5 °C to +50 °C                                               |
| Approved by VdS                    | –5 °C to +40 °C                                               |
| Relative humidity                  | 5 to 95 % non-condensing                                      |
| Dimensions                         | 215 × 27 × 116 mm (H × W × D)                                 |
| Weight                             | 306 g                                                         |

## Integral EvoxX M modules and accessories

|                                                                                     | Designation                                                 | Type          | Article no.   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------|---------------|---------------|
|    | <b>X-LINE B8-DXI2A modules</b>                              | B8-DXI2A      | 20-1000018-01 |
|    | <b>B5/B8-DXI2/B8-DXI2A replacement connector</b>            | ST-DXI2       | 20-1040105-01 |
|    | <b>B8-SXI8 stub line module for X-LINE</b>                  | B8-SXI8       | 20-1000010-01 |
|    | <b>B8-SXI8 replacement connector</b>                        | ST-SET SXI8   | 20-1040102-01 |
|    | <b>B8-BAF control module</b>                                | B8-BAF        | 20-1000011-01 |
|    | <b>B8-BAF replacement connector</b>                         | ST-SET BAF    | 20-1040103-01 |
|   | <b>B8-OM8 module for monitored outputs</b>                  | B8-OM8        | 20-1000020-01 |
|  | <b>B3/B5/B8-OM8 replacement connector</b>                   | ST-OM8        | FG74095       |
|  | <b>B8-IM8 module for monitored inputs</b>                   | B8-IM8        | 20-1000021-01 |
|  | <b>B3/B8-MTI8/B3/B8-IM8 connector</b>                       | ST-MTI8       | FG74087       |
|  | <b>953R jumper for B3/B8-IM8</b><br>Packaging unit 8 pieces | JUMP-IM8-953R | FG74113       |
|  | <b>110R jumper for B3/B8-IM8</b><br>Packaging unit 8 pieces | JUMP-IM8-110R | FG74114       |
|  | <b>B8-NET2-485 network module</b>                           | B8-NET2-485   | 20-1000033-01 |
|  | <b>B8-NET4-485 network module</b>                           | B8-NET4-485   | 20-1000034-01 |
|  | <b>RJ-45 connector Cat 5e</b>                               | RJ45-IP       | MM010008      |
|  | <b>Crimping pliers for RJ-45</b>                            | CRIMP-IP      | MM010001      |
|  | <b>9Sub-D RJ45 coupling</b><br>With Sub-D blank plug        | KUP 9RJ45     | 20-1400000-01 |

|                                                                                     | Designation                                                                | Type            | Article no.   |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------|---------------|
|    | <b>15Sub-D RJ45 coupling</b><br>With Sub-D blank plug                      | KUP 15RJ45      | 20-1400001-01 |
|    | <b>B8-NET2-FX4 network module</b>                                          | B8-NET2-FX4     | 20-1000030-01 |
|    | <b>B8-NET-FX8 network module</b>                                           | B8-NET-FX8      | 20-1000031-01 |
|    | <b>B3-REL10 relay module</b>                                               | B3-REL10        | 20-1000003-01 |
|    | <b>B3-REL10 replacement connector</b>                                      | ST-SET REL10    | 20-1040101-01 |
|    | <b>B3-REL16 relay module</b>                                               | B3-REL16        | 20-1000004-01 |
|    | <b>B3-REL16E relay module</b>                                              | B3-REL16E       | 20-1000005-01 |
|  | <b>B8-MRI16 relay module</b>                                               | B8-MRI16        | 20-1000022-01 |
|  | <b>B3-REL16/E replacement connector sets</b><br>for B3-REL16/E and B8-MIT8 | ST-SET REL16    | 20-1040100-01 |
|  | <b>Plug-in module for FX modules single mode</b><br>up to 10 km            | SFP-MODUL SM    | 20-1400005-01 |
|  | <b>Plug-in module for FX modules multi mode</b><br>up to 2 km              | SFP-MODUL MM    | 20-1400006-01 |
|  | <b>Plug-in module for FX modules single mode</b><br>up to 30 km            | SFP-MODUL SM 30 | 20-1400007-01 |
|  | <b>Cable bend protection 90 degree bend</b>                                | KBKN-90GR-AD10  | 20-1400040-01 |

### 3.7 Modernisation modules



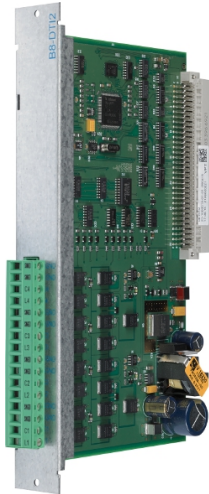
No.: 20-1000014-01

#### B8-MTI8 module for monologue technology

For connection of up to eight stub lines, which can be configured either as detector zones in monologue technology or as monitored inputs (e.g. VdS extinguishing inputs, primary inputs, valve monitoring etc.).

The operating mode of the individual stub lines can be independently selected via programming and jumpers on the module.

|                                    |                                                                    |
|------------------------------------|--------------------------------------------------------------------|
| Power supply                       | internally via the system bus, with extended redundancy            |
| Connection                         | 8 detector zones (up to 62 detectors per zone) or monitored inputs |
| Connector plug                     | 16-pin screw-type terminal                                         |
| Interface                          | system bus                                                         |
| Connection slot on the module rack | 2 to 9                                                             |
| Ambient temperature                |                                                                    |
| Manufacturer specification         | –5 °C to +50 °C                                                    |
| Approved by VdS                    | –5 °C to +40 °C                                                    |
| Relative humidity                  | 5 to 95 % non-condensing                                           |
| Dimensions                         | 215 × 27 × 116 mm (H × W × D)                                      |
| Weight                             | 210 g                                                              |

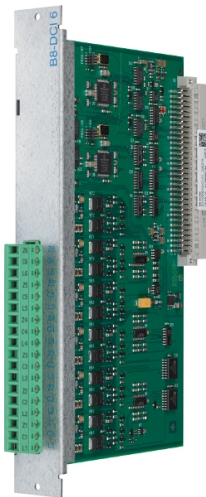
**No.: 20-1000015-01**

## B8-DTI2 module for dialogue technology

For connection of up to two loops or four stub lines using dialogue technology with the corresponding detectors and modules of the fire alarm control panel Maxima.

For reasons of standardisation, the module may be used exclusively for re-furbishments.

|                                    |                                                                        |
|------------------------------------|------------------------------------------------------------------------|
| Power supply                       | internally via the system bus, with extended redundancy                |
| Connection                         | 2 loops (each max. 128 devices) or 4 stub lines (each max. 64 devices) |
| Connector plug                     | 16-pin screw-type terminal                                             |
| Interface                          | system bus                                                             |
| Connection slot on the module rack | 2 to 9                                                                 |
| Ambient temperature                |                                                                        |
| Manufacturer specification         | –5 °C to +50 °C                                                        |
| Approved by VdS                    | –5 °C to +40 °C                                                        |
| Relative humidity                  | 5 to 95 % non-condensing                                               |
| Dimensions                         | 215 x 27 x 116 mm (H x W x D)                                          |
| Weight                             | 251 g                                                                  |



No.: 20-1000013-01

**B8-DCI6 module for DC technology**

For connection of up to six inputs, which can be configured either as detector zones in DC technology or as monitored inputs (e.g. VdS extinguishing inputs, primary inputs, valve monitoring etc.).

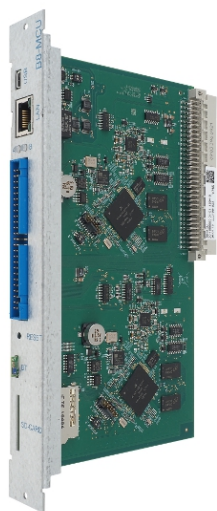
|                                    |                                                                   |
|------------------------------------|-------------------------------------------------------------------|
| Power supply                       | internally via the system bus, with extended redundancy           |
| Connection                         | 6 detector zones (max. 30 detectors per zone) or monitored inputs |
| Connector plug                     | 18-pin screw-type terminal                                        |
| Interface                          | system bus                                                        |
| Connection slot on the module rack | 2 to 9                                                            |
| Ambient temperature                |                                                                   |
| Manufacturer specification         | –5 °C to +50 °C                                                   |
| Approved by VdS                    | –5 °C to +40 °C                                                   |
| Relative humidity                  | 5 to 95 % non-condensing                                          |
| Dimensions                         | 215 × 27 × 116 mm (H × W × D)                                     |
| Weight                             | 219 g                                                             |



## Modernisation modules and accessories

|                                                                                   | Designation                                    | Type     | Article no.   |
|-----------------------------------------------------------------------------------|------------------------------------------------|----------|---------------|
|  | <b>B8-MTI8 module for monologue technology</b> | B8-MTI8  | 20-1000014-01 |
|  | <b>B3/B8-MTI8/B3/B8-IM8 connector</b>          | ST-MTI8  | FG74087       |
|  | <b>B8-DTI2 module for dialogue technology</b>  | B8-DTI2  | 20-1000015-01 |
|                                                                                   | <b>Connection plug for modules</b>             | ST-B3 16 | YY970138      |
|  | <b>B8-DCI6 module for DC technology</b>        | B8-DCI6  | 20-1000013-01 |
|  | <b>B3/B8-DCI6 connection plug</b>              | ST-DCI6  | FG74099       |

## 3.8 Accessories and spare parts



**No.: 20-1000060-01**

### B8-MCU master control unit

The B8-MCU communicates with all other modules and the operating panel, manages planning data and system time and manages all processes that are necessary for the logical behaviour of the system.

The module includes a USB 2.0 Mini-B interface to load software and planning data, and an Ethernet 10/100Base-TX interface. Up to 20 000 events can be stored in the internal event log memory; this capacity can be increased via the additional use of an SD memory card.

|                            |                                                         |
|----------------------------|---------------------------------------------------------|
| Power supply               | internally via the system bus, with extended redundancy |
| Operating panel connection | 50-pin flat ribbon cable connector                      |
| Transmission speed         | 700 kbit/s                                              |
| Service interface wired    |                                                         |
| Range                      | max. 3 m                                                |
| Technology                 | USB 2.0, connector mini                                 |
| Service interface wireless |                                                         |
| Range                      | max. 1 m                                                |
| Technology                 | Bluetooth Low Energy                                    |
| LAN interface              | Ethernet 10/100Base-TX                                  |
| Transmission type          | TCP/IP                                                  |
| Mechanical                 | RJ-45 socket, eight pin                                 |
| Direction                  | bidirectional, full-duplex                              |
| Speed                      | max. 100 Mbit/s                                         |
| Range                      | max. 100 m                                              |
| SD connection slot         | SD 3.0 (SDHC, SDXC) memory card                         |
| Ambient temperature        |                                                         |
| Manufacturer specification | –5 °C to +50 °C                                         |
| Approved by VdS            | –5 °C to +40 °C                                         |

## B8-PSU power supply unit



**No.: 20-1000008-01**

The B8-PSU power supply unit has a rated output current of 7 A and is included with every Integral EvoxX M control panel. It delivers the required output voltage and has a terminal to connect five separately electrically fused outputs for external consumers. Up to four rechargeable batteries can be connected to the emergency power supply.

|                                 |                                             |
|---------------------------------|---------------------------------------------|
| Mains voltage                   | 110 V AC –15 % to 230 V AC +10 %            |
| Mains frequency                 | 47 to 63 Hz                                 |
| Input power                     | max. 280 W                                  |
| Output power                    | max. 200 W                                  |
| Output voltage (PELV compliant) | 26,3 V DC (+50 °C) to 28,3 V DC (0 °C)      |
| Output current                  | max. 7.1 A                                  |
| Outputs for internal consumers  | 3.3 V/5 V/27 V*                             |
| Outputs for external consumers  | 5 × 27 V* fused with resettable fuses       |
| Battery connection              | for 12 V/38 to 44 Ah rechargeable batteries |
| Usable rechargeable batteries   | 2 × 12 V/38 to 45 Ah in series              |
| Ambient temperature             |                                             |
| Manufacturer specification      | –5 °C to +50 °C                             |
| Approved by VdS                 | –5 °C to +40 °C                             |

\* depending on temperature

## B8-UGK upgrade kit



For upgrading existing Integral (B5 platform) control panels to Integral EvoxX M control panels (B8 platform).

Consists of a module rack with built-in B8-MCU master control unit, B8-PSU power supply unit, bus circuit board and relay circuit board.

No.: 20-1000102-01

## H-CP-M-CBE Integral EvoxX M battery cabinet



Cabinet in the Integral EvoxX M design with full door, built-in rechargeable battery cup and cable set for rechargeable battery expansion.

|               |                                        |
|---------------|----------------------------------------|
| Case material | sheet steel                            |
| Case colour   | red RAL 3000, anthracite grey RAL 7016 |
| Dimensions    | 625 × 446 × 230 mm (H × W × D)         |

No.: 20-1400133-01

## H-CP-M-CTR Integral EvoxX M top-hat rail cabinet



Cabinet in the Integral EvoxX M design with full door, built-in DIN top-hat rail and cable ducts for use as a distribution cabinet, for installing modules etc.

|               |                                        |
|---------------|----------------------------------------|
| Case material | sheet steel                            |
| Case colour   | red RAL 3000, anthracite grey RAL 7016 |
| Dimensions    | 625 × 446 × 230 mm (H × W × D)         |

No.: 20-1400134-01

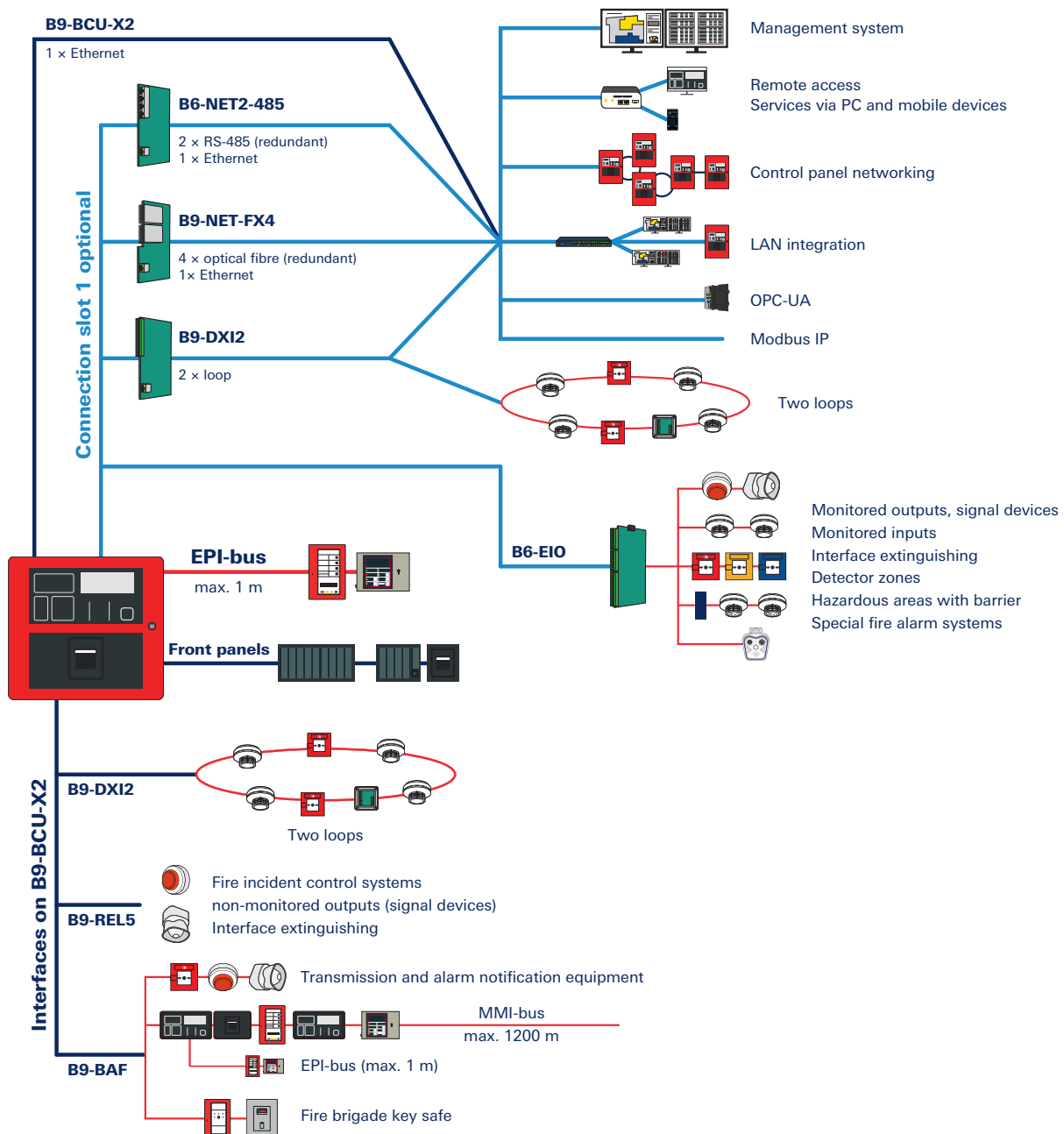
## Accessories and replacement parts for Integral EvoxX M control panels

|                                                                                     | Designation                                                                                 | Type            | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------|---------------|
|    | <b>B8-MCU master control unit</b>                                                           | B8-MCU          | 20-1000060-01 |
|    | <b>B8-PSU power supply unit</b>                                                             | B8-PSU          | 20-1000008-01 |
|    | <b>B8-PSU replacement connection plug</b><br>for external consumers                         | ST-PSU-FS       | 20-1040104-01 |
|    | <b>SD card 2 GB for B8-MCU/B9-BCU</b><br>for extending the event log memory                 | SD-CARD-2GB IND | 20-1400216-01 |
|    | <b>B8-UGK upgrade kit</b>                                                                   | B8-UGK          | 20-1000102-01 |
|    | <b>Integral IMAP built-in operating panel</b><br>without lettering plate (replacement part) | B8-OB           | 20-1031001-01 |
|   | <b>Rechargeable battery 12 V/24 Ah</b>                                                      | AKKU 24         | HG691023      |
|  | <b>Rechargeable battery 12 V/44 Ah</b>                                                      | AKKU 44         | HG691017      |
|  | <b>Integral EvoxX M battery cabinet</b>                                                     | H-CP-M-CBE      | 20-1400133-01 |
|  | <b>Integral EvoxX M top-hat rail cabinet</b>                                                | H-CP-M-CTR      | 20-1400134-01 |
|  | <b>Integral EvoxX M replacement case</b><br>without cut-out                                 | H-CP-M          | 20-1400130-01 |
|  | <b>Integral EvoxX M replacement case</b><br>2 cut-outs                                      | H-CP-M-2CO      | 20-1400132-01 |
|  | <b>B5 replacement door</b><br>with 2 cut-outs                                               | B5-DOOR-2CO     | 20-1400160-01 |
|  | <b>Log printer cover (replacement)</b>                                                      | B8-OB-PRT-CVR   | 20-1400230-01 |
|  | <b>Paper roll for log printer (replacement)</b>                                             | PD PPR          | PPF-519057    |
|  | <b>Ribbon cartridge for log printer (replacement)</b>                                       | PD FRB          | HG694076      |

|                                                                                     | Designation                                                                          | Type           | Article no.   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------|---------------|
|    | <b>Log printer interface (electronics)</b>                                           | B8-PPI         | 20-1400211-01 |
|    | <b>Log printer interface external (electronics)</b><br>for external operating panels | B8-PPIE        | 20-1400212-01 |
|    | <b>B5 Log printer printer unit</b>                                                   | B5-PDR-DW      | FG030550      |
|    | <b>MMI connection cable for B8-BAF (replacement)</b>                                 | KAB MMI B8-BAF | 20-1400020-01 |
|    | <b>USB-Kabel, Mini</b><br>3 m length                                                 | KAB USB 3 MINI | 20-1400205-01 |
|                                                                                     | <b>B8/B9-CP lock for cabinets</b>                                                    | CP-LOCK        | 20-1400213-01 |
|    | <b>B8/B9-CP key for cabinets</b>                                                     | CP-KEY         | 20-1400214-01 |
|    | <b>B5 battery holder set</b>                                                         | B5-BATH-SET    | FG74108       |
|    | <b>B5 spacers set</b>                                                                | B5-DISTH-SET   | FG74110       |
|   | <b>B5 blanking plate Integral</b>                                                    | B5 BFP         | FG06240       |
|  | <b>B5 battery cable set</b><br>Length approx. 50 cm                                  | B5 BATKAB1     | FG29910       |
|  | <b>B5 battery cable set (long)</b><br>Length approx. 150 cm                          | B5 BATKAB2     | FG29911       |
|  | <b>SI 8A thermal fuse</b><br>for all Integral battery cable                          | ZUB SICH8      | IS625040      |
|  | <b>Top-hat rail 35 mm wide</b><br>for installation in Integral EvoX M cabinets       | B5-RAIL 35     | 20-1400003-01 |
|  | <b>Connection unit Cat 7/RJ45</b><br>for network modules                             | B5-CAT7-RJ45   | 20-1400004-01 |
|  | <b>Coupling RJ45/RJ45</b>                                                            | KUP RJ45       | 20-1400002-01 |
|  | <b>B8-BUS System bus circuit board</b>                                               | B8-BUS         | 20-1000009-01 |
|  | <b>B8-BSR 5-bus for relay modules</b>                                                | B8-BSR5        | 20-1010320-01 |
|  | <b>Lock for keyswitch (replacement)</b><br>incl. 2 pcs. keys                         | SCU LOCK-2     | 20-1400200-01 |
|  | <b>Key for keyswitch (replacement)</b>                                               | SCU KEY-2      | 20-1400201-01 |

## 4 Integral EvoxX C compact control panel

The Integral EvoxX C control panel can be used as a fire alarm control panel, as a single-zone extinguishing control panel (electronic control and delay device) or as a combined fire alarm/extinguishing control panel.



The Integral EvoxX C is a compact control panel to which two loops can be connected with a maximum of 500 elements in the basic configuration. In addition, it has an expansion connection slot, which can optionally hold a network module, a module for two more loops, a universal interface module or an input/output module.



The Integral EvoxX C is suitable and approved with an internal or external Integral IMAP operating panel with freely programmable LEDs as an extinguishing zone indicator in accordance with the requirements of the standards and guidelines EN 12094-1 and VdS 2496 for activation and monitoring of a maximum of one extinguishing zone for the following fire extinguishing systems:

- CO<sub>2</sub> high pressure and low pressure extinguishing systems with and without a danger to the safety of people
- Inert gas and argon extinguishing systems with and without a danger to the safety of people
- Water spray and water fog extinguishing system
- Sprinkler systems and pre-action sprinkler systems
- Chemical extinguishing systems

## 4.1 Features

- Two loops with max. 500 devices
- Software redundancy according to TRVB S 123
- Continuous automatic test routines for all system components and software
- 13-line plain text indication of the current system state (alarm, fault etc.)
- 10 freely programmable multicolour LEDs
- LED indication panel for one extinguishing zone directly on the operating panel
- Acoustic and visual alarm device for alarms and faults
- Intermediate alarm storage
- Manual testing of control panel functions
- Plain text indication of individual detectors or indication areas
- Operating panel language (labelling and display indication) can be selected, up to 4 languages are switchable on the fly
- Suitable for connection to the fire brigade's public alarm notification system
- Connection for fire brigade operating panel in accordance with DIN 14661
- System configuration can be saved using flexible flash memory technology
- Emergency power supply for a power bridging time of up to 72 hours

- Meets or exceeds the following relevant standards and guidelines: EN 54, DIN, ÖNORM, ÖVE, VDE and many more
- External device bus for up to 15 indication and operating devices, max. distance 1200 m
- Data serial, emergency powered log printer with access to event log memory and message filter
- Encrypted transmission of the lists to be output to the log printer
- Control panel networking via local mesh network:
  - Up to 16 control panels can be networked to one logical unit without a superordinate operation control system
  - Local mesh network with up to four connections per sub-control unit: in the event of a device or connection fault, it is possible to maintain communication via redirection (routing) of data
  - Flexible topology: Stub connection to loop is possible
  - Ethernet protocol: Use of customers' IT infrastructure
  - Access to the control panel via intranet and internet
  - Use of standardised IT components
  - Data transmission via TCP/IP (Ethernet 10/100Base-TX) at max. 100 Mbit/s
- Up to 20 000 events can be stored in the event log memory; this capacity can be increased via the additional use of an SD memory card to up to 65 000

## 4.2 Options

- Expandable to four loops with a maximum of 1000 devices (only Integral EvoxX CF)
- Control panel networking via local mesh network:
  - Data transmission via TCP/IP (Ethernet 10/100Base-TX) at max. 100 Mbit/s
  - Data transmission via RS-485 (copper) at 625 to 2500 kBit/s
- Possibility to activate different IP protocols enables the wiring of:
  - Operation control systems in accordance with ÖNORM (Austrian standard) F 3003
  - Alarm management systems
  - Other building management systems
- Connection for fire brigade operating panels in accordance with ÖNORM F 3031, DIN 14661, SN 054002 and DIN 14662
- Day/night mode, individually programmable for each detector zone and day of the week
- Intervention mode
- Software-controlled free assignment and connection of detectors to the activation criteria
- Software-controlled two-zone dependency or two-detector dependency for alarm notification and output
- Recognition and evaluation of the detector state (contamination)
- Individual detector disablement
- Can be connected to all of the manufacturer's control panels

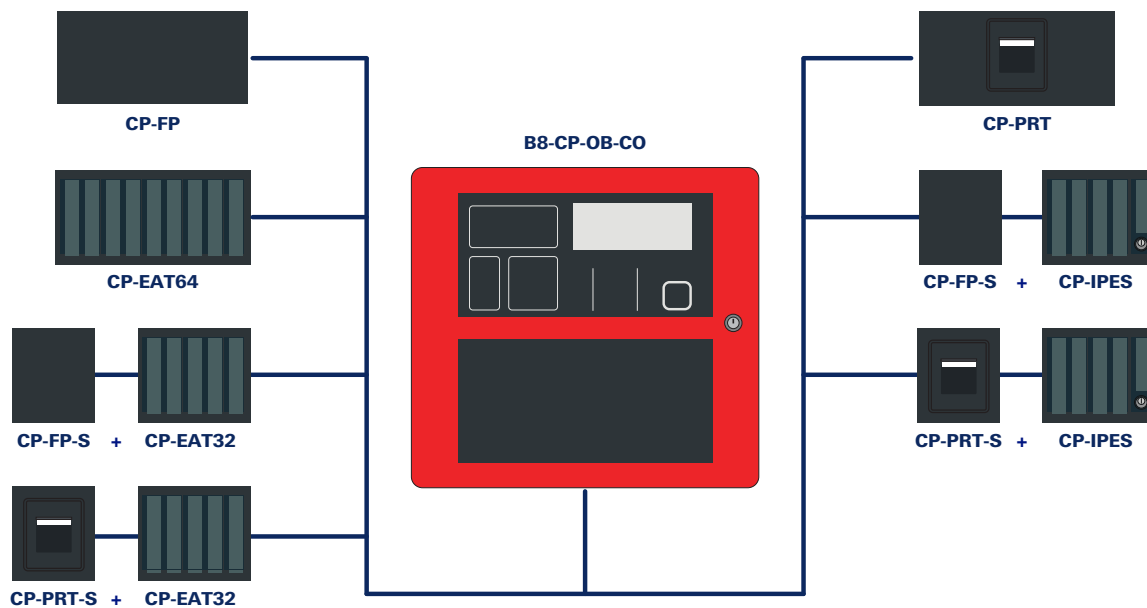
## 4.3 Approvals

- VdS device and system approval: G200081, S200081, G206045
- Declaration of Performance (DoP): CPR-20-25-002
- Austrian Testing Centre for Fire Prevention Technology: Nr. FT 14/159/06, FT 14/622/06, FT 14/623/06, FT 14/625/06
- VB-Cert Austria: No. 002/BM-PSys/014
- Country-specific approvals in Austria, Germany, Denmark, Italy, Netherlands, Poland, Romania, Russia, Sweden, Switzerland, Slovak Republic, Czech Republic, Turkey, Ukraine, Hungary, and many more.

## 4.4 Integral EvoxX C cabinet variants

The modular system allows the Integral EvoxX C in the B9-CP-X2-OB-CO version to be flexibly adapted for a wide variety of applications. The designated cut-out must always be fully covered; an empty cut-out is not permitted. This can be done either by using one large front panel that covers the entire width of the cut-out, or by using a combination of one small and one medium front panel.

The B9-CP-X2-OB-CO variant is supplied with the Integral IMAP B9-OB built-in operating panel by default. A label in the local language must be ordered. In addition, you must order one of the following front panels in order to cover the lower cut-out as well.





**No.: 20-1110302-01**

## **B9-CP-X2-OB-CO Integral EvoxX C control panel with operating panel and cut-out**

The Integral EvoxX C control panel consists of:

- Cabinet made of sheet steel
- B9-OB built-in operating panel
- B9-BCU-X2 master control unit
- B9-PSU power supply unit
- Connection for 2 loops (max. 500 elements)
- 2 monitored outputs for transmission and alarm notification equipment
- Connection for 2 monitored inputs
- 5 relay outputs (230 V/3 A)
- Connection for fire brigade operating panel in accordance with DIN 14661
- Connection for external operating and indication panels
- Interface for network or extension modules
- Mounting space for rechargeable batteries (max. size 2 × 12 V/18 Ah)
- Mains terminals and rechargeable battery cable

Must be ordered separately:

- Labelling plate in the local language
- Front panel or front panels for the lower cut-out

|                                                    |                                                                                                                             |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Mains voltage                                      | 110 V AC –15 % to 230 V AC +15 %                                                                                            |
| Mains frequency                                    | 47 to 63 Hz                                                                                                                 |
| Input power                                        | max. 160 W                                                                                                                  |
| Output power                                       | max. 115 W                                                                                                                  |
| Output voltage (PELV compliant)                    | 21.0 to 27.9 V DC                                                                                                           |
| Usable rechargeable batteries                      | 2 × 12 V/15 to 18 Ah in series<br>Total capacity: max. 34 Ah (2 identical strings with 2 × 12 V/15 to 17 Ah each in series) |
| Emergency power supply with rechargeable batteries | 72 h normal operation additionally<br>0.5 h alarm                                                                           |
| Degree of protection                               | IP30                                                                                                                        |
| Ambient temperature                                |                                                                                                                             |
| Manufacturer specification                         | –5 °C to +50 °C                                                                                                             |
| Approved by VdS                                    | –5 °C to +40 °C                                                                                                             |
| Relative humidity                                  | 5 to 95 % non-condensing                                                                                                    |
| Air pressure up to 2000 m above sea level          | ≥ 80 kPa                                                                                                                    |
| Case material                                      | sheet steel                                                                                                                 |
| Case colour                                        | red RAL 3000, anthracite grey RAL 7016                                                                                      |
| Dimensions                                         | 424 × 446 × 146 mm (H × W × D)                                                                                              |
| Weight                                             |                                                                                                                             |
| Basic configuration                                | 8 kg                                                                                                                        |
| Per rechargeable battery                           | approx. 5.5 kg                                                                                                              |
| VdS approval                                       | G200081                                                                                                                     |
| Declaration of Performance (DoP)                   | CPR-20-25-002                                                                                                               |

## B9-CP-X2 Integral EvoxX C control panel without operating panel



No.: 20-1110300-01

The Integral EvoxX C control panel consists of:

- Cabinet made of sheet steel
- B9-BCU-X2 master control unit
- B9-PSU power supply unit
- Connection for 2 loops (max. 500 elements)
- 2 monitored outputs for transmission and alarm notification equipment
- Connection for 2 monitored inputs
- 5 relay outputs (230 V/3 A)
- Connection for fire brigade operating panel in accordance with DIN 14661
- Connection for external operating and indication panels
- Interface for network or extension modules
- Mounting space for rechargeable batteries (max. size 2 × 12 V/18 Ah)
- Mains terminals and rechargeable battery cable

|                                                    |                                                                                                                             |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Mains voltage                                      | 110 V AC –15 % to 230 V AC +15 %                                                                                            |
| Mains frequency                                    | 47 to 63 Hz                                                                                                                 |
| Input power                                        | max. 160 W                                                                                                                  |
| Output power                                       | max. 115 W                                                                                                                  |
| Output voltage (PELV compliant)                    | 21.0 to 27.9 V DC                                                                                                           |
| Usable rechargeable batteries                      | 2 × 12 V/15 to 18 Ah in series<br>Total capacity: max. 34 Ah (2 identical strings with 2 × 12 V/15 to 17 Ah each in series) |
| Emergency power supply with rechargeable batteries | 72 h normal operation additionally 0.5 h alarm                                                                              |
| Degree of protection                               | IP30                                                                                                                        |
| Ambient temperature                                |                                                                                                                             |
| Manufacturer specification                         | –5 °C to +50 °C                                                                                                             |
| Approved by VdS                                    | –5 °C to +40 °C                                                                                                             |
| Relative humidity                                  | 5 to 95 % non-condensing                                                                                                    |
| Air pressure up to 2000 m above sea level          | ≥ 80 kPa                                                                                                                    |
| Case material                                      | sheet steel                                                                                                                 |
| Case colour                                        | red RAL 3000, anthracite grey RAL 7016                                                                                      |
| Dimensions                                         | 424 × 446 × 146 mm (H × W × D)                                                                                              |
| Weight                                             |                                                                                                                             |
| Basic configuration                                | 8 kg                                                                                                                        |
| Per rechargeable battery                           | approx. 5.5 kg                                                                                                              |
| VdS approval                                       | G200081                                                                                                                     |
| Declaration of Performance (DoP)                   | CPR-20-25-002                                                                                                               |

## B9-CP-X1-OB-CO Integral EvoxX C control panel with operating panel and cut-out, 1-Loop



**No.: 20-1110311-01**

The Integral EvoxX C 1-Loop control unit consists of:

- Cabinet made of sheet steel
- B9-OB built-in operating panel
- B9-BCU-X1F master control unit
- B9-PSU power supply unit
- Connection for one loop (max. 250 elements)
- 2 monitored outputs for transmission and alarm notification equipment
- Connection for 2 monitored inputs
- 5 relay outputs (230 V/3 A)
- Connection for fire brigade operating panel in accordance with DIN 14661
- Connection for external operating and indication panels
- Mounting space for rechargeable batteries (max. size 2 × 12 V/18 Ah)
- Mains terminals and rechargeable battery cable

Must be ordered separately:

- Labelling plate in the local language
- Front panel or front panels for the lower cut-out

|                                                    |                                                                                                                             |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Mains voltage                                      | 110 V AC –15 % to 230 V AC +15 %                                                                                            |
| Mains frequency                                    | 47 to 63 Hz                                                                                                                 |
| Input power                                        | max. 160 W                                                                                                                  |
| Output power                                       | max. 115 W                                                                                                                  |
| Output voltage (PELV compliant)                    | 21.0 to 27.9 V DC                                                                                                           |
| Usable rechargeable batteries                      | 2 × 12 V/15 to 18 Ah in series<br>Total capacity: max. 34 Ah (2 identical strings with 2 × 12 V/15 to 17 Ah each in series) |
| Emergency power supply with rechargeable batteries | 72 h normal operation additionally<br>0.5 h alarm                                                                           |
| Degree of protection                               | IP30                                                                                                                        |
| Ambient temperature                                |                                                                                                                             |
| Manufacturer specification                         | –5 °C to +50 °C                                                                                                             |
| Approved by VdS                                    | –5 °C to +40 °C                                                                                                             |
| Relative humidity                                  | 5 to 95 % non-condensing                                                                                                    |
| Air pressure up to 2000 m above sea level          | ≥ 80 kPa                                                                                                                    |
| Case material                                      | sheet steel                                                                                                                 |
| Case colour                                        | red RAL 3000, anthracite grey RAL 7016                                                                                      |
| Dimensions                                         | 424 × 446 × 146 mm (H × W × D)                                                                                              |
| Weight                                             |                                                                                                                             |
| Basic configuration                                | 8 kg                                                                                                                        |
| Per rechargeable battery                           | approx. 5.5 kg                                                                                                              |
| VdS approval                                       | G200081                                                                                                                     |
| Declaration of Performance (DoP)                   | CPR-20-25-002                                                                                                               |

## Integral EvoxX C and accessories

|                                                                                     | Designation                                                                                           | Type            | Article no.   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-----------------|---------------|
|    | <b>Integral EvoxX C</b><br>Control panel with B9-OB operating panel and cut-out, 2-loop X-LINE        | B9-CP-X2-OB-CO  | 20-1110302-01 |
|    | <b>Integral EvoxX C</b><br>Control panel without operating panel, 2-loop X-LINE                       | B9-CP-X2        | 20-1110300-01 |
|    | <b>Integral EvoxX C</b><br>Control panel with B9-OB operating panel and cut-out, 1-loop X-LINE        | B9-CP-X1-OB-CO  | 20-1110311-01 |
|    | <b>SD card 2 GB for B8-MCU/B9-BCU</b><br>for extending the event log memory                           | SD-CARD-2GB IND | 20-1400216-01 |
|    | <b>Integral IMAP built-in operating panel</b><br>without lettering plate (replacement part)           | B9-OB           | 20-1131002-01 |
|    | <b>Lettering plate for Integral IMAP</b><br>German                                                    | OB-TXT DE01     | 20-1041001-01 |
|   | <b>Lettering plate for Integral IMAP</b><br>English                                                   | OB-TXT EN01     | 20-1041002-01 |
|  | <b>Lettering plate for Integral IMAP</b><br>other languages                                           | OB-TXT          | auf Anfrage   |
|  | <b>Integral EvoxX M/C front panel</b><br>without cut-out                                              | CP-FP           | 20-1400260-01 |
|  | <b>Integral EvoxX M/C front panel</b><br>with printer                                                 | CP-PRT          | 20-1400261-01 |
|  | <b>Integral EvoxX M/C front panel</b><br>without cut-out, small                                       | CP-FP-S         | 20-1400262-01 |
|  | <b>Integral EvoxX M/C front panel</b><br>with log printer, small                                      | CP-PRT-S        | 20-1400263-01 |
|  | <b>Integral EvoxX M/C front panel</b><br>with EAT64                                                   | CP-EAT64        | 20-1400264-01 |
|  | <b>Integral EvoxX M/C front panel</b><br>with EAT32, medium                                           | CP-EAT32        | 20-1400265-01 |
|  | <b>Integral EvoxX M/C front panel</b><br>with IPES, medium                                            | CP-IPES         | 20-1400267-01 |
|  | <b>Integral EvoxX M/C front panel</b><br>without cut-out, medium                                      | CP-FP-M         | 20-1400269-01 |
|  | <b>Resistors for single-zone extinguishing control panel</b><br>8 × R3k, 2 × R1k, 2 × R220, 10 × R680 | EIO-EXT-RES     | 20-1140001-01 |
|  | <b>Integral EvoxX C replacement case</b><br>without cut-out                                           | H-CP-C          | 20-1400140-01 |
|  | <b>Integral EvoxX C replacement case</b><br>2 cut-outs                                                | H-CP-C-2CO      | 20-1400142-01 |

|                                                                                   | Designation                                                  | Type       | Article no.   |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------|------------|---------------|
|                                                                                   | <b>B8/B9-CP lock for cabinets</b>                            | CP-LOCK    | 20-1400213-01 |
|  | <b>B8/B9-CP key for cabinets</b>                             | CP-KEY     | 20-1400214-01 |
|  | <b>Lock for keyswitch (replacement)</b><br>incl. 2 pcs. keys | SCU LOCK-2 | 20-1400200-01 |
|  | <b>Key for keyswitch (replacement)</b>                       | SCU KEY-2  | 20-1400201-01 |



## 4.5 Integral EvoxX C modules

The following modules are compatible exclusively with Integral EvoxX C 2-loop control units. Use with the Integral EvoxX C 1-Loop control units is not supported.



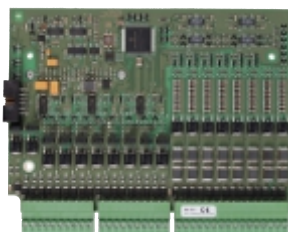
**No.: 20-1100010-01**

### B9-DXI2 extension module

For extending Integral EvoxX C control panels with two additional Integral X-LINE loops. Alternatively, a loop and two stub lines, or maximum four stub lines can be connected.

The module is plugged into the B9-BCU-X2 master control unit.

|                            |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| Power supply               | internally via master control unit                                     |
| Connection                 | 2 loops (each max. 250 devices) or 4 stub lines (each max. 64 devices) |
| Loop length                | max. 3500 m                                                            |
| Connector plug             | 16-pin screw-type terminal                                             |
| Ambient temperature        |                                                                        |
| Manufacturer specification | –5 °C to +50 °C                                                        |
| Approved by VdS            | –5 °C to +40 °C                                                        |
| Relative humidity          | 5 to 95 % non-condensing                                               |



**No.: 20-1100003-01**

### B6-EIO input/output module

For connecting up to ten stub lines, each with a maximum of 30 detectors from the 130 A detector series, primary inputs or VdS extinguisher interfaces, and eight monitored outputs, each with a maximum output current of 1.3 A. Additionally suitable for connecting intrinsically safe Ex-i detectors of the MMD 130 Ex-i and WCP 1A detector series via a safety barrier.

The module is plugged into the B9-BCU-X2 master control unit. Connection plugs are included.

|                            |                                    |
|----------------------------|------------------------------------|
| Power supply               | internally via master control unit |
| Number of inputs           | max. 10                            |
| Number of outputs          | max. 8                             |
| Loop length                | max. 1000 m                        |
| Ambient temperature        |                                    |
| Manufacturer specification | –5 °C to +50 °C                    |
| Approved by VdS            | –5 °C to +40 °C                    |
| Relative humidity          | 5 to 95 % non-condensing           |

**No.: EG072934**

## B6-NET2-485 network module

For redundant networking of Integral EvoxX C control panels or for connection of PC applications. The module has two network connections (RS-485) and one Ethernet 10/100Base-TX interface. The module is plugged into the B9-BCU-X2 master control unit.

|                            |                                                            |
|----------------------------|------------------------------------------------------------|
| Power supply               | internally via master control unit                         |
| LAN interface              | Ethernet 10/100Base-TX                                     |
| Transmission type          | TCP/IP                                                     |
| Mechanical                 | RJ-45 socket, eight pin                                    |
| Direction                  | bidirectional, full-duplex                                 |
| Speed                      | max. 100 Mbit/s                                            |
| Range                      | max. 100 m                                                 |
| RS-485 interface           | 2 × RS-485 with line redundancy, one galvanically isolated |
| Mechanical                 | RJ-45 socket, eight pin                                    |
| Direction                  | bidirectional, half-duplex                                 |
| Speed                      | max. 1.25 Mbit/s                                           |
| Range                      | max. 1200 m                                                |
| Ambient temperature        |                                                            |
| Manufacturer specification | –5 °C to +50 °C                                            |
| Approved by VdS            | –5 °C to +40 °C                                            |
| Relative humidity          | 5 to 95 % non-condensing                                   |

## B9-NET-FX4 network module



**No.: 20-1100030-01**



**No.: 20-1400005-01**



**No.: 20-1400006-01**



**No.: 20-1400007-01**



**No.: 20-1400040-01**

For networking of Integral EvoX C control panels or for connection of PC applications. The module has four optical fibre ports for use with pluggable SFP optical modules (multi mode version with 2000 m range or single mode version with up to 10 000 m or 30 000 m range) and one 10/100Base-TX interface.

The module is plugged onto the master control unit B9-BCU-X2, and is supplied with a connection plug. The single mode/multi mode SFP modules and an optional cable bend protection must be ordered separately.

|                            |                                                     |
|----------------------------|-----------------------------------------------------|
| Power supply               | internally via master module                        |
| LAN interface              | Ethernet 10/100Base-TX                              |
| Transmission type          | TCP/IP                                              |
| Mechanical                 | RJ-45 socket, eight pin                             |
| Direction                  | bidirectional, full-duplex                          |
| Speed                      | max. 100 Mbit/s                                     |
| Range                      | max. 100 m                                          |
| FX interface               | 4 × SFP module slots, multi mode and/or single mode |
| Speed                      | max. 100 Mbit/s                                     |
| Range                      |                                                     |
| SFP module multi mode      | max. 2000 m                                         |
| SFP module single mode     | max. 10 000 m or 30 000 m                           |
| Optical fibre              |                                                     |
| SFP module multi mode      | 62,5/125 µm or 50/125 µm                            |
| SFP module single mode     | 9/125 µm                                            |
| Connector type             | LC 2 × 5                                            |
| Ambient temperature        |                                                     |
| Manufacturer specification | –5 °C to +50 °C                                     |
| Approved by VdS            | –5 °C to +40 °C                                     |
| Relative humidity          | 5 to 95 % non-condensing                            |

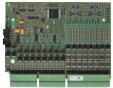
**No.: 20-1100000-01****No.: 20-1100001-01****No.: 20-1400040-01**

## B6-NET2-FXM/FXS network module

For redundant networking of Integral EvoxX C control panels or for connection of PC applications. The modules contain a RS-485 network connection, two optical network connections (multimode version FXM with a range of 2000 m or singlemode FXS with a range of up to 10 000 m) and a 10/100Base-TX interface. The module is plugged into the B9-BCU-X2 master control unit.

|                            |                                                    |
|----------------------------|----------------------------------------------------|
| Power supply               | internally via master control unit                 |
| LAN interface              | Ethernet 10/100Base-TX                             |
| Transmission type          | TCP/IP                                             |
| Mechanical                 | RJ-45 socket, eight pin                            |
| Direction                  | bidirectional, full-duplex                         |
| Speed                      | max. 100 Mbit/s                                    |
| Range                      | max. 100 m                                         |
| RS-485 interface           | RS-485 with line redundancy, galvanically isolated |
| Mechanical                 | RJ-45 socket, eight pin                            |
| Direction                  | bidirectional, half-duplex                         |
| Speed                      | max. 1.25 Mbit/s                                   |
| Range                      | max. 1200 m                                        |
| FX interface               | 2 × multi mode or single mode                      |
| Range                      | max. 100 m                                         |
| Range                      |                                                    |
| B6-NET2-FXM                | max. 2000 m                                        |
| B6-NET2-FXS                | up to 10 000 m                                     |
| Optical fibre              |                                                    |
| B6-NET2-FXM                | 62,5/125 µm or 50/125 µm                           |
| B6-NET2-FXS                | 9/125 µm                                           |
| Connector type             |                                                    |
| B6-NET2-FXM                | MTRJ                                               |
| B6-NET2-FXS                | LC 2 × 5                                           |
| Ambient temperature        |                                                    |
| Manufacturer specification | –5 °C to +50 °C                                    |
| Approved by VdS            | –5 °C to +40 °C                                    |
| Relative humidity          | 5 to 95 % non-condensing                           |

## Integral EvoX C modules and accessories

|                                                                                     | Designation                                                      | Type            | Article no.   |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------|-----------------|---------------|
|    | <b>B9-DXI2 extension module</b>                                  | B9-DXI2         | 20-1100010-01 |
|    | <b>16-pin replacement plug</b><br>for B9-BCU, B6-LXI2 and B6-EIO | ST-LOOP/DAI     | YK130295      |
|    | <b>B6-EIO input/output module</b>                                | B6-EIO          | 20-1100003-01 |
|    | <b>B6-EIO replacement connection plug</b>                        | ST-SET-EIO      | FG74109       |
|    | <b>B6-NET2-485 network module</b>                                | B6-NET2-485     | EG072934      |
|    | <b>B9-NET-FX4 network module</b>                                 | B9-NET-FX4      | 20-1100030-01 |
|    | <b>B6-NET2-FXS network module</b>                                | B6-NET2-FXS     | 20-1100000-01 |
|    | <b>B6-NET2-FXM network module</b>                                | B6-NET2-FXM     | 20-1100001-01 |
|   | <b>RJ-45 connector Cat 5e</b>                                    | RJ45-IP         | MM010008      |
|  | <b>Crimping pliers for RJ-45</b>                                 | CRIMP-IP        | MM010001      |
|  | <b>9Sub-D RJ45 coupling</b><br>With Sub-D blank plug             | KUP 9RJ45       | 20-1400000-01 |
|  | <b>15Sub-D RJ45 coupling</b><br>With Sub-D blank plug            | KUP 15RJ45      | 20-1400001-01 |
|  | <b>Plug-in module for FX modules single mode</b><br>up to 10 km  | SFP-MODUL SM    | 20-1400005-01 |
|  | <b>Plug-in module for FX modules multi mode</b><br>up to 2 km    | SFP-MODUL MM    | 20-1400006-01 |
|  | <b>Plug-in module for FX modules single mode</b><br>up to 30 km  | SFP-MODUL SM 30 | 20-1400007-01 |
|  | <b>Cable bend protection 90 degree bend</b>                      | KBKN-90GR-AD10  | 20-1400040-01 |

## 4.6 Accessories and spare parts



**No.: 20-1100007-01**

### B9-BCU-X2 master control unit

The B9-BCU-X2 is part of every Integral EvoX C control panel and includes all interfaces for connecting operating panel, peripherals, relay contacts, MMI-bus, monitored outputs and the service PC, as well as a connection slot for an additional module.

Furthermore, the module includes a USB 2.0 Mini-B interface to load software and planning data and a 10/100Base-TX interface. Up to 20 000 events can be stored in the internal event log memory; this capacity can be increased via the additional use of an SD memory card.

All required connectors are included, the SD memory card must be ordered separately.

|                            |                                    |
|----------------------------|------------------------------------|
| Power supply               | via power supply unit B9-PSU       |
| Operating panel connection | 34-pin flat ribbon cable connector |
| Transmission speed         | 700 kbit/s                         |
| Service interface wired    |                                    |
| Range                      | max. 3 m                           |
| Technology                 | USB 2.0, connector mini            |
| Service interface wireless |                                    |
| Range                      | max. 1 m                           |
| Technology                 | Bluetooth Low Energy               |
| LAN interface              | Ethernet 10/100Base-TX             |
| Transmission type          | TCP/IP                             |
| Mechanical                 | RJ-45 socket, eight pin            |
| Direction                  | bidirectional, full-duplex         |
| Speed                      | max. 100 Mbit/s                    |
| Range                      | max. 100 m                         |
| SD connection slot         | SD 3.0 (SDHC, SDXC) memory card    |
| Ambient temperature        |                                    |
| Manufacturer specification | –5 °C to +50 °C                    |
| Approved by VdS            | –5 °C to +40 °C                    |

B9-PSU power supply unit



No.: 20-1100006-01

The 4 A power supply unit provides the 3.3 V, 5 V and 27 V output voltages required by every Integral EvoX C control panel and is always installed to the right of the master control unit. On the underside is a terminal for connecting the rechargeable batteries and five separately fused outputs for connecting external consumers. The B9-PSU power supply unit has a rechargeable battery monitoring, which is controlled and evaluated by the control panel's master control unit. The connector for the power supply connection and external consumers are included.

|                                                     |                                        |
|-----------------------------------------------------|----------------------------------------|
| Mains voltage                                       | 110 V AC –15 % to 230 V AC +10 %       |
| Mains frequency                                     | 47 to 63 Hz                            |
| Input power                                         | max. 160 W                             |
| Output power                                        | max. 115 W                             |
| Output voltage (PELV compliant)                     | 26,3 V DC (+50 °C) to 28,3 V DC (0 °C) |
| Output current                                      | max. 4 A                               |
| Outputs for internal consumers                      | 3.3 V/3 A, 5 V/1 A, 27 V/4 A           |
| Outputs for external consumers                      | 5 × 27 V/2.5 A FF                      |
| Charging output for rechargeable battery connection | 27 V/3.2 A                             |
| Mains fuse                                          | with 10 A surge energy capacity        |
| Mains fuse in power supply unit                     | 4.0 A T                                |
| Usable rechargeable batteries                       | 2 × 12 V/15 to 18 Ah in series         |
| Ambient temperature                                 |                                        |
| Manufacturer specification                          | –5 °C to +50 °C                        |
| Approved by VdS                                     | –5 °C to +40 °C                        |

**No.: 20-1100102-01**

## B9-UGK-X2 upgrade kit

The country-specific regulations for the planning and installation of automatic fire alarm systems apply for planning the system.

**No.: 20-1400143-01**

## H-CP-C-CBE Integral EvoxX C battery cabinet

Cabinet in the Integral EvoxX C design with full door, built-in rechargeable battery cup and cable set for rechargeable battery expansion.

|               |                                        |
|---------------|----------------------------------------|
| Case material | sheet steel                            |
| Case colour   | red RAL 3000, anthracite grey RAL 7016 |
| Dimensions    | 424 × 446 × 146 mm (H × W × D)         |

**No.: 20-1400144-01**

## H-CP-C-CTR Integral EvoxX C top-hat rail cabinet

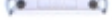
Cabinet in the Integral EvoxX C design with full door, built-in DIN top-hat rail and cable ducts for use as a distribution cabinet, for installing modules etc.

|               |                                        |
|---------------|----------------------------------------|
| Case material | sheet steel                            |
| Case colour   | red RAL 3000, anthracite grey RAL 7016 |
| Dimensions    | 424 × 446 × 146 mm (H × W × D)         |



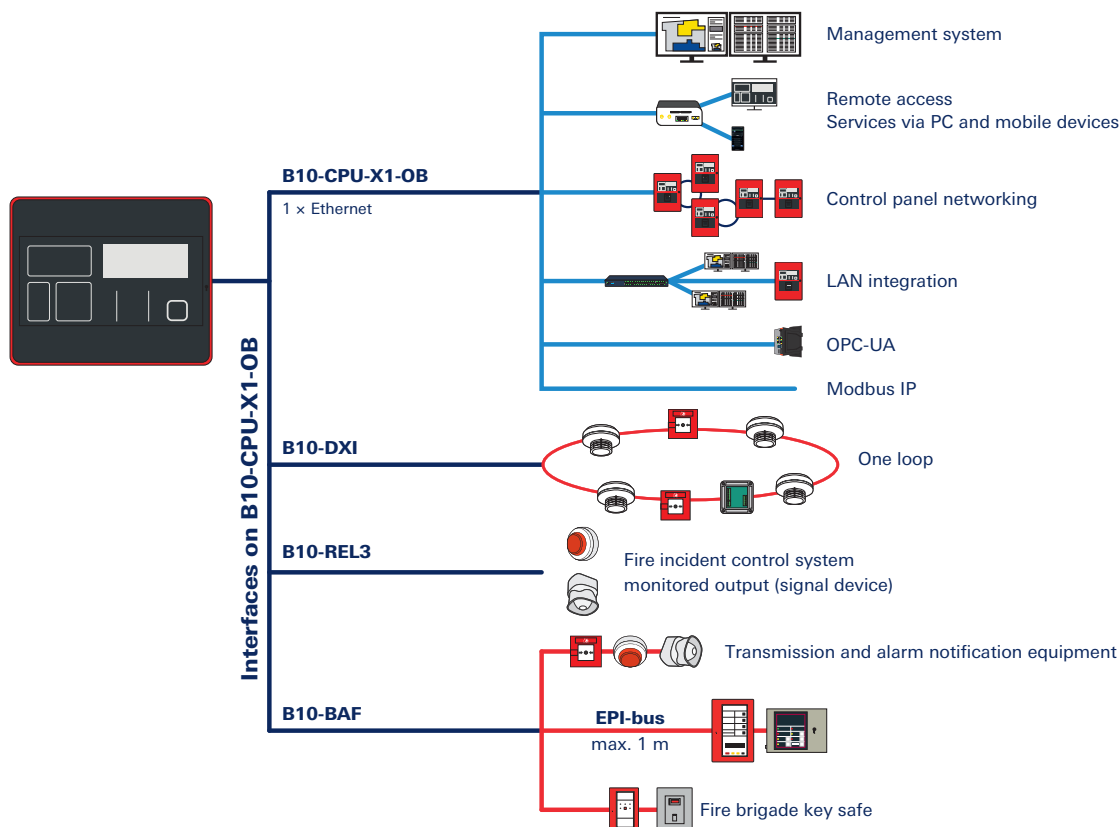
## Accessories and replacement parts for Integral EvoxX C control panels

|                                                                                     | Designation                                                                                      | Type            | Article no.   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------|---------------|
|    | <b>B9-BCU-X2 master control unit</b>                                                             | B9-BCU-X2       | 20-1100007-01 |
|    | <b>B9-BCU-X1F master control unit</b><br>1-Loop and fire brigade interface, 1 x<br>10/100Base-TX | B9-BCU-X1F      | 20-1100008-01 |
|    | <b>B9 Cover master control unit</b><br>needed when changing from B6 to B9 BCU                    | B9-BC-CVR       | 20-1140100-01 |
|    | <b>B9-PSU power supply unit</b>                                                                  | B9-PSU          | 20-1100006-01 |
|    | <b>Upgrade kit B9-UGK-X2</b><br>for upgrading to Integral EvoxX C                                | B9-UGK-X2       | 20-1100102-01 |
|    | <b>SD card 2 GB for B8-MCU/B9-BCU</b><br>for extending the event log memory                      | SD-CARD-2GB IND | 20-1400216-01 |
|    | <b>16-pin replacement plug</b><br>for B9-BCU, B6-LXI2 and B6-EIO                                 | ST-LOOP/DAI     | YK130295      |
|   | <b>B6-OM connector</b>                                                                           | ST-B6-OM        | FG74116       |
|  | <b>Connection plug for fire brigade operating panel</b>                                          | ST-FBD          | YK130459      |
|  | <b>B6-REL connector</b>                                                                          | ST-B6-REL       | FG74115       |
|  | <b>Integral IMAP built-in operating panel</b><br>without lettering plate (replacement part)      | B9-OB           | 20-1131002-01 |
|  | <b>Connector for external consumers</b><br>10-pin replacement plug                               | ST-PSU EV       | FG74090       |
|  | <b>Power plug for B4/B6</b><br>3-pin replacement plug                                            | ST-PSU NS       | YK130302      |
|  | <b>Rechargeable battery 12 V/17 Ah</b>                                                           | AKKU 17         | HG691013      |
|  | <b>B6 replacement door</b><br>with 2 cut-outs                                                    | B6-DOOR-2CO     | 20-1400162-01 |
|  | <b>Integral EvoxX C battery cabinet</b>                                                          | H-CP-C-CBE      | 20-1400143-01 |
|  | <b>Integral EvoxX C top-hat rail cabinet</b>                                                     | H-CP-C-CTR      | 20-1400144-01 |

|                                                                                     | Designation                                                                          | Type           | Article no.   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------|---------------|
|    | <b>Integral EvoX C replacement case</b><br>without cut-out                           | H-CP-C         | 20-1400140-01 |
|    | <b>Integral EvoX C replacement case</b><br>2 cut-outs                                | H-CP-C-2CO     | 20-1400142-01 |
|    | <b>Log printer cover (replacement)</b>                                               | B8-OB-PRT-CVR  | 20-1400230-01 |
|    | <b>Paper roll for log printer (replacement)</b>                                      | PD PPR         | PPF-519057    |
|    | <b>Ribbon cartridge for log printer (replacement)</b>                                | PD FRB         | HG694076      |
|    | <b>Log printer interface (electronics)</b>                                           | B8-PPI         | 20-1400211-01 |
|    | <b>Log printer interface external (electronics)</b><br>for external operating panels | B8-PPIE        | 20-1400212-01 |
|  | <b>B5 Log printer printer unit</b>                                                   | B5-PDR-DW      | FG030550      |
|  | <b>USB-Kabel, Mini</b><br>3 m length                                                 | KAB USB 3 MINI | 20-1400205-01 |
|                                                                                     | <b>B8/B9-CP lock for cabinets</b>                                                    | CP-LOCK        | 20-1400213-01 |
|  | <b>B8/B9-CP key for cabinets</b>                                                     | CP-KEY         | 20-1400214-01 |
|  | <b>B6 battery cable set</b><br>Length approx. 35 cm                                  | B6 BATKAB      | EI29940       |
|  | <b>B6 battery holder set</b>                                                         | B6-BATH-SET    | FG74112       |
|  | <b>B6 spacer set</b>                                                                 | B6-DISTH-SET   | FG74111       |
|  | <b>SI 8A thermal fuse</b><br>for all Integral battery cable                          | ZUB SICH8      | IS625040      |
|  | <b>Lock for keyswitch (replacement)</b><br>incl. 2 pcs. keys                         | SCU LOCK-2     | 20-1400200-01 |
|  | <b>Key for keyswitch (replacement)</b>                                               | SCU KEY-2      | 20-1400201-01 |

## 5 Integral EvoxX B basic control panel

The Integral EvoxX B control panel can be used as a fire alarm control panel, as a single-zone extinguishing control panel (electronic control and delay device) or as a combined fire alarm/extinguishing control panel.



### NOTE

The B10-CP-X1-OB control panel is approved as follows:

- \* Integral EvoxX BF fire alarm control panel or Integral EvoxX BF/BE combined fire alarm/extinguishing control panel (G212110)
- \* Integral EvoxX BE single-zone extinguishing control panel due to the ten freely programmable multi-colour LEDs on the Integral IMAP operating panel (G225031)

The Integral EvoxX B control panel consists of a plastic case with a Integral IMAP operating panel and is suitable for connecting a loop. The labelling of the control panel (language) is achieved with a stick-on plate. The master control unit with integrated power supply unit includes all interfaces for connecting peripherals. The lower area of the case can accommodate the installation of two 7.2 Ah rechargeable batteries, one 100 Mbit-TX LAN interface can be used for remote access to the control panel.

When used with an internal or external Integral IMAP operating panel, the Integral EvoxX B – thanks to its freely programmable LEDs for indicating the extinguishing zone – is suitable and approved for the operation and monitoring of a maximum of one extinguishing zone in accordance with the requirements of the standards and guidelines EN 12094-1 and VdS 2496 for the following fire-extinguishing systems:

- CO<sub>2</sub> high pressure and low pressure extinguishing systems with and without a danger to the safety of people
- Inert gas and argon extinguishing systems with and without a danger to the safety of people
- Water spray and water fog extinguishing system
- Sprinkler systems and pre-action sprinkler systems
- Chemical extinguishing systems

## 5.1 Features

- One loop with up to max. 250 devices
- Microprocessor-controlled and monitored system topology
- Software redundancy according to TRVB S 123
- Continuous automatic test routines for all system components and software
- 13-line plain text indication of the current system state (alarm, fault etc.)
- 10 freely programmable multicolour LEDs
- LED indication panel for one extinguishing zone directly on the operating panel
- Acoustic and visual alarm device for alarms and faults
- Intermediate alarm storage
- Manual testing of control panel functions
- Plain text indication of individual detectors or indication areas
- Operating panel language (labelling and display indication) can be selected, up to 4 languages are switchable on the fly
- Suitable for connection to the fire brigade's public alarm notification system
- Connection for fire brigade operating panel in accordance with DIN 14661
- System configuration can be saved using flexible flash memory technology
- Emergency power supply for a power bridging time of up to 72 hours
- Meets or exceeds the following relevant standards and guidelines: EN 54, DIN, ÖNORM, ÖVE, VDE and many more
- External device bus (EPI-bus) for up to 3 indication and operating devices, max. distance 1 m
- Up to 16 control panels can be networked to one logical unit without a superordinate operation control system
- Access to the control panel via intranet and internet
- Event log memory with capacity for up to 20 000 events

## 5.2 Approvals

- VdS device and system approval: G212110, S212004, G225031
- Declaration of Performance (DoP): CPR-20-25-004
- Austrian Testing Centre for Fire Prevention Technology: Nr. FT 14/159/06, FT 14/622/06, FT 14/623/06, FT 14/625/06
- VB-Cert Austria: No. 002/BM-PSys/014
- Country-specific approvals in Austria, Germany, Denmark, Italy, Netherlands, Poland, Romania, Russia, Sweden, Switzerland, Slovak Republic, Czech Republic, Turkey, Ukraine, Hungary, and many more.

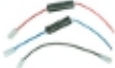
**No.: 20-1110340-01**

The Integral EvoxX B control panel includes:

- B10-CPU-X1-OB master control unit including interfaces:
  - Connection for one Integral X-LINE (max. 250 elements, max. 3500 m)
  - 2 monitored primary outputs for transmission and alarm notification equipment (main alarm output, main siren) as well as other outputs
  - 2 monitored primary inputs
  - 3 relay outputs
  - 10 freely programmable multicolour LEDs
  - Connection for an external consumer, e.g. for connecting a fire brigade key safe
  - EPI-bus (wiring fire brigade operating panels)
  - Mini USB 2.0 device service interface
  - Ethernet LAN 10/100Base-TX TCP/IP
- Power supply unit, integrated into the master control unit (max. 2.4 A rated output current)
- Mounting space for rechargeable batteries (max. rechargeable battery size 2 × 12 V/7.2 Ah) for emergency power supply
- Built-in operating panel Integral IMAP B10-OB (language neutral), can be labelled via stick-on labels
- Mains terminal and battery cable
- Plastic cabinet

|                                                    |                                                   |
|----------------------------------------------------|---------------------------------------------------|
| Mains voltage                                      | 110 V AC –15 % to 230 V AC +15 %                  |
| Mains frequency                                    | 47 to 63 Hz                                       |
| Input power                                        | max. 90 W                                         |
| Output power                                       | max. 63 W                                         |
| Output voltage (PELV compliant)                    | 21.0 to 27.9 V DC                                 |
| Usable rechargeable batteries                      | 2 × 12 V/7.2 Ah in series                         |
| Emergency power supply with rechargeable batteries | 72 h normal operation additionally<br>0.5 h alarm |
| Degree of protection                               | IP30                                              |
| Ambient temperature                                |                                                   |
| Manufacturer specification                         | –5 °C to +50 °C                                   |
| Approved by VdS                                    | –5 °C to +40 °C                                   |
| Relative humidity                                  | 5 to 95 % non-condensing                          |
| Air pressure up to 2000 m above sea level          | ≥ 80 kPa                                          |
| Case material                                      | ABS plastic                                       |
| Case colour                                        | red RAL 3000, anthracite grey<br>RAL 7016         |
| Dimensions                                         | 300 × 360 × 88 mm (H × W × D)                     |
| Weight                                             |                                                   |
| with rechargeable batteries                        | 7.5 kg                                            |
| Without rechargeable batteries                     | 2.2 kg                                            |
| VdS approval                                       | G225031, G212110                                  |
| Declaration of Performance (DoP)                   | CPR-20-25-004                                     |

## Integral EvoxX B and accessories

|                                                                                    | Designation                                                                                            | Type          | Article no.   |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------|---------------|
|   | <b>Integral EvoxX B</b><br>Control panel with operating panel, 1-loop X-LINE                           | B10-CP-X1-OB  | 20-1110340-01 |
|   | <b>B10-CPU-X1-OB master control unit (replacement)</b><br>incl. power supply, for IMAP operating panel | B10-CPU-X1-OB | 20-1101002-01 |
|   | <b>Lettering plate for Integral IMAP</b><br>German                                                     | OB-TXT DE01   | 20-1041001-01 |
|   | <b>Lettering plate for Integral IMAP</b><br>English                                                    | OB-TXT EN01   | 20-1041002-01 |
|   | <b>Lettering plate for Integral IMAP</b><br>other languages                                            | OB-TXT        | auf Anfrage   |
|   | <b>Rechargeable battery 12 V/7 Ah</b>                                                                  | AKKU 7        | HG691021      |
|   | <b>B7 battery cable set</b>                                                                            | B7 BATKAB     | 20-1140000-01 |
|  | <b>Metal key (replacement)</b><br>for Integral EvoxX B, fire brigade operating panel, MCP 535X         | DKM SCHL      | FG020015      |

## 6 External operating and indicator devices

External operating panels and devices are connected via the Integral MMI and the EPI system bus to the Integral control panel family.

### 6.1 MMI-bus devices

The MMI-bus is a serial data bus for connecting external operating panels and devices whose type designation has the suffix MMI. In the Integral EvoxX M control panels, the interface for connecting the MMI-bus is located on the B8-BAF module; in the Integral EvoxX C control panels, it can be found on the B9-BCU-X2 master control unit.



#### NOTE

A maximum of 15 devices can be connected to one MMI-Bus and can be located up to 1200 meters away from a control panel.



## B8-MMI-OB Integral IMAP external operating panel



**No.: 20-1210103-01**

Integral IMAP external operating panel in language-neutral version for remote operation of Integral EvoxX M and Integral EvoxX C control panels. The lettering plate is affixed in the desired language, further indication and operating devices as well as a log printer can be connected via integrated interfaces.

- The LC display is divided into the following operating areas:
  - Info area 3 lines, 40 characters
  - Operational area 9 lines (8 dynamic lines), 40 characters
  - State list counter and list selection buttons, 1 row
  - Programmable LED labelling 10 lines, 20 characters
  - Programmable button labelling (shortcut menu) 1 line, 20 characters
- Can be deployed as a main operating panel in an Integral WAN
- Pushbuttons with illuminated ring – action feedback and menu guidance
- A freely programmable button that can be labelled using software
- 10 freely programmable multi-colour LEDs that can be labelled using software
- Five status lists (alarms, faults, shutdowns etc.)
- New list scrolling
- Range operation (e.g. disable range 1 to 10)
- Six programmable pieces of information in the info area of the indication
- Simplified operation of function types
- Group operation (e.g. simultaneously disable all detector zones)

|                              |                                        |
|------------------------------|----------------------------------------|
| Operating voltage range      | 10 to 30 V DC                          |
| Current consumption          | 49 mA typ., max. 55 mA with 24 V DC    |
| Data transmission            | MMI-bus                                |
| Electrical                   | RS-485, galvanically isolated          |
| Protocol                     | serial, DIN 19244-3                    |
| Distance to sub-control unit | max. 1200 m                            |
| Degree of protection         | IP30                                   |
| Ambient temperature          |                                        |
| Manufacturer specification   | –5 °C to +50 °C                        |
| Approved by VdS              | –5 °C to +40 °C                        |
| Case material                | ABS plastic                            |
| Case colour                  | red RAL 3000, anthracite grey RAL 7016 |
| Dimensions                   | 192 × 361 × 49 mm (H × W × D)          |
| Weight                       | approx. 880 g                          |
| VdS approval                 | G225020                                |



**No.: 20-1400250-01**

## B8-OB-PRT log printer

The B8-OB-PRT external, data-serial log printer is used for logging all externally important data and events concerning the system, such as alarms, faults, disablements, actuations, activations, operating procedures, alarm delays, service instructions, etc.

|                            |                                                                |
|----------------------------|----------------------------------------------------------------|
| Power supply               | internally over the B8-MMI-OB                                  |
| Quiescent current          | approx. 2 mA                                                   |
| Active current:            | 35 mA (average value during a printing process)                |
| Current peaks              | 1.3 A motor start-up<br>0.5 A per active printer needle (stop) |
| Printing speed             | 2.7 lines per second                                           |
| Character size             | 2.6 × 1.7 mm (H × W)                                           |
| Paper roll                 | 57.5 × 50 mm (W × D)                                           |
| Range                      | max. 1 m                                                       |
| Degree of protection       | IP30                                                           |
| Ambient temperature        |                                                                |
| Manufacturer specification | –5 °C to +50 °C                                                |
| Approved by VdS            | –5 °C to +40 °C                                                |
| Case material              | ABS plastic                                                    |
| Case colour                | red RAL 3000, anthracite grey<br>RAL 7016                      |
| Dimensions                 | 192 × 260 × 49 mm (H × W × D)                                  |
| Weight                     | approx. 830 g                                                  |

**No.: 20-1210000-01**

## B5-MMI-PIP external indicator panel

For parallel indication of the fire alarm control panel's operating states. The device can be programmed so that it only displays information that is relevant to the surrounding area, for example for use as a floor repeater terminal. The labelling of the keys and the information on the display are available in more than 20 languages.

- Connection for external EPI-Bus devices (display or control units)
- Display with six lines, 40 characters per line
- Two freely programmable and inscribable keys
- Two freely programmable and inscribable three-colour LED
- Three status lists (alarms, faults, shutdowns etc.)
- Acoustic alarm and fault signals
- Acoustic signals for pressing a button

|                              |                                                   |
|------------------------------|---------------------------------------------------|
| Operating voltage range      | 10 to 30 V DC                                     |
| Current consumption          | 49 mA typ., max. 55 mA with 24 V DC               |
| Data transmission            | MMI-bus                                           |
| Electrical Protocol          | RS-485, galvanically isolated serial, DIN 19244-3 |
| Distance to sub-control unit | max. 1200 m                                       |
| Degree of protection         | IP42                                              |
| Ambient temperature          |                                                   |
| Manufacturer specification   | –5 °C to +50 °C                                   |
| Approved by VdS              | –5 °C to +40 °C                                   |
| Case material                | ABS plastic                                       |
| Case colour                  | red, RAL 3000                                     |
| Dimensions                   | 170 × 227 × 40 mm (H × W × D)                     |
| Weight                       | approx. 500 g                                     |
| VdS approval                 | G222036                                           |

**No.: 20-1210121-01**

### B3-MMI-IPEL external LED indicator panel

External LED indication panel for eight extinguishing zones (twelve LEDs per extinguishing zone and group display with nine LEDs), incl. operating system case, keyswitch, key and output module.

The labelling is achieved with push-in strips (not included). The device is also available without a case for installation in control cabinets.

|                              |                               |
|------------------------------|-------------------------------|
| Operating voltage range      | 10 to 30 V DC                 |
| Quiescent current            | 2 mA per lit LED              |
| Data transmission            | MMI-bus                       |
| Electrical                   | RS-485, galvanically isolated |
| Protocol                     | serial, DIN 19244-3           |
| Distance to sub-control unit | max. 1200 m                   |
| Degree of protection         | IP30                          |
| Ambient temperature          |                               |
| Manufacturer specification   | –5 °C to +50 °C               |
| Approved by VdS              | –5 °C to +40 °C               |
| Case material                | sheet steel                   |
| Case colour                  | red, RAL 3000                 |
| Dimensions                   | 226 × 443 × 48 mm (H × W × D) |
| Weight                       | 3.5 kg                        |

**No.: 20-1210120-01**

### B3-MMI-EAT64 external LED indication panel

External LED indication panel for indicating up to 64 detector zones with one red and one yellow LED each for indicating the alarm, fault and disablement state per detector zone, in a sturdy sheet steel housing.

The labelling is achieved with push-in strips (not included). The device is also available without a case for installation in control cabinets.

|                              |                               |
|------------------------------|-------------------------------|
| Operating voltage range      | 10 to 30 V DC                 |
| Quiescent current            | 2 mA per lit LED              |
| Data transmission            | MMI-bus                       |
| Electrical                   | RS-485, galvanically isolated |
| Protocol                     | serial, DIN 19244-3           |
| Distance to sub-control unit | max. 1200 m                   |
| Degree of protection         | IP30                          |
| Ambient temperature          |                               |
| Manufacturer specification   | –5 °C to +50 °C               |
| Approved by VdS              | –5 °C to +40 °C               |
| Case material                | sheet steel                   |
| Case colour                  | red, RAL 3000                 |
| Dimensions                   | 226 × 443 × 48 mm (H × W × D) |
| Weight                       | 3.5 kg                        |

**No.: 20-1210020-01**

## B8-MMI-FPA fire brigade operating panel, Austria

Fire brigade operating panel with LC-display in accordance with ÖNORM F 3031 variant C for indication of the most important operating states and simple and uniform operation of the fire alarm system by the fire brigade.

It has an extremely robust metal case with an IP30 degree of protection. Operation and indication are via buttons, LED and an LC display.

The lock in the door can be opened with a fire brigade key.

|                              |                               |
|------------------------------|-------------------------------|
| Operating voltage range      | 10 to 30 V DC                 |
| Quiescent current            | 14 mA typ.                    |
| Data transmission            | MMI-bus                       |
| Electrical                   | RS-485, galvanically isolated |
| Protocol                     | serial, DIN 19244-3           |
| Distance to sub-control unit | max. 1200 m                   |
| Degree of protection         | IP30                          |
| Ambient temperature          |                               |
| Manufacturer specification   | –5 °C to +50 °C               |
| Approved by VdS              | –5 °C to +40 °C               |
| Case material                | sheet steel                   |
| Case colour                  | red, RAL 3000                 |
| Dimensions                   | 300 × 200 × 55 mm (H × W × D) |
| Weight                       | 1.9 kg                        |
| Test number                  | FT 14/447/24 (ÖNORM F 3031)   |

## B3-MMI-FAT fire brigade indicator tableau



**No.: 20-1240202-01**

Fire brigade indicator tableau with LC-display to DIN 14662 for display of the most important operating conditions and simple and uniform operation of the fire alarm system by the fire brigade.

A fire brigade operating panel in accordance with DIN 14661 can be connected to the B3-MMI-FAT.

|                              |                               |
|------------------------------|-------------------------------|
| Operating voltage range      | 10 to 30 V DC                 |
| Quiescent current            | 14 mA typ.                    |
| Data transmission            | MMI-bus                       |
| Electrical                   | RS-485, galvanically isolated |
| Protocol                     | serial, DIN 19244-3           |
| Distance to sub-control unit | max. 1200 m                   |
| Degree of protection         | IP30                          |
| Ambient temperature          |                               |
| Manufacturer specification   | –5 °C to +50 °C               |
| Approved by VdS              | –5 °C to +40 °C               |
| Case material                | sheet steel                   |
| Case colour                  | grey, RAL 7032                |
| Dimensions                   | 185 × 255 × 65 mm (H × W × D) |
| Weight                       | 1.85 kg                       |
| VdS approval                 | G206116                       |

**No.: 20-1240200-01**

## B5-MMI-FPD fire brigade operating panel, Germany

Fire brigade operating panel in accordance with DIN 14661 for indication of the most important operating states as well as simple and uniform operation of the fire alarm system by the fire brigade. It has an extremely robust metal case with an IP30 degree of protection. Operation and indication via buttons and LED.

|                              |                               |
|------------------------------|-------------------------------|
| Operating voltage range      | 10 to 30 V DC                 |
| Quiescent current            | 30 mA typ.                    |
| Data transmission            | MMI-bus                       |
| Electrical                   | RS-485, galvanically isolated |
| Protocol                     | serial, DIN 19244-3           |
| Distance to sub-control unit | max. 1200 m                   |
| Degree of protection         | IP30                          |
| Ambient temperature          |                               |
| Manufacturer specification   | –5 °C to +50 °C               |
| Approved by VdS              | –5 °C to +40 °C               |
| Case material                | sheet steel                   |
| Case colour                  | grey, RAL 7032                |
| Dimensions                   | 185 × 255 × 65 mm (H × W × D) |
| Weight                       | 2 kg                          |
| VdS approval                 | G213076                       |

**No.: 20-1210010-01**

## B5-MMI-FPS fire brigade operating panel, Sweden

Fire brigade operating panel with LC display in accordance with SS 3654, with four-line indication, six LEDs for state indication, three function keys, one of which has two associated LEDs, a Piezo sound generator for acoustic signalling, as well as a keyswitch.

Operation is possible with a fire brigade key after activation. The operating panel has a robust ABS plastic case with degree of protection IP42.

|                              |                               |
|------------------------------|-------------------------------|
| Operating voltage range      | 10 to 30 V DC                 |
| Quiescent current            | 47 mA typ.                    |
| Data transmission            | MMI-bus                       |
| Electrical                   | RS-485, galvanically isolated |
| Protocol                     | serial, DIN 19244-3           |
| Distance to sub-control unit | max. 1200 m                   |
| Degree of protection         | IP42                          |
| Ambient temperature          |                               |
| Manufacturer specification   | –5 °C to +50 °C               |
| Approved by VdS              | –5 °C to +40 °C               |
| Case material                | ABS plastic                   |
| Case colour                  | red, RAL 3000                 |
| Dimensions                   | 170 × 227 × 40 mm (H × W × D) |
| Weight                       | approx. 500 g                 |
| SBSC-Approval                | 13-360                        |



**No.: 20-1210011-01**

## B5-MMI-IPS intervention panel Sweden

Sub-panel in a plastic case with Swedish labelling for actuation of a (programmed) intervention mode and display of the most important operating states of the fire alarm control panel. It can be programmed in such a way, that only the information that is relevant for the surrounding area is displayed on it, e.g. for use as a floor repeater terminal.

|                              |                               |
|------------------------------|-------------------------------|
| Operating voltage range      | 10 to 30 V DC                 |
| Quiescent current            | 47 mA typ.                    |
| Data transmission            | MMI-bus                       |
| Electrical                   | RS-485, galvanically isolated |
| Protocol                     | serial, DIN 19244-3           |
| Distance to sub-control unit | max. 1200 m                   |
| Degree of protection         | IP42                          |
| Ambient temperature          |                               |
| Manufacturer specification   | –5 °C to +50 °C               |
| Approved by VdS              | –5 °C to +40 °C               |
| Case material                | ABS plastic                   |
| Case colour                  | red, RAL 3000                 |
| Dimensions                   | 170 × 227 × 40 mm (H × W × D) |
| Weight                       | approx. 500 g                 |

**No.: 20-1210012-01**

## B5-MMI-FPF fire brigade operating panel, Finland

Fire brigade operating panel with LC display in accordance with SS 3654, with four-line indication, six LEDs for state indication, three function keys, one of which has two associated LEDs, a Piezo sound generator for acoustic signalling, as well as a keyswitch.

Operation is possible with a fire brigade key after activation. The operating panel has a robust ABS plastic case with degree of protection IP42.

|                              |                               |
|------------------------------|-------------------------------|
| Operating voltage range      | 10 to 30 V DC                 |
| Quiescent current            | 47 mA typ.                    |
| Data transmission            | MMI-bus                       |
| Electrical                   | RS-485, galvanically isolated |
| Protocol                     | serial, DIN 19244-3           |
| Distance to sub-control unit | max. 1200 m                   |
| Degree of protection         | IP42                          |
| Ambient temperature          |                               |
| Manufacturer specification   | –5 °C to +50 °C               |
| Approved by VdS              | –5 °C to +40 °C               |
| Case material                | ABS plastic                   |
| Case colour                  | red, RAL 3000                 |
| Dimensions                   | 170 × 227 × 40 mm (H × W × D) |
| Weight                       | approx. 500 g                 |
| SBSC-Approval                | 13-360                        |

**No.: 20-1210013-01**

## B5-MMI-FPN fire brigade operating panel, Norway

Fire brigade operating panel with LC display in accordance with SS 3654, with four-line indication, six LEDs for state indication, three function keys, one of which has two associated LEDs, a Piezo sound generator for acoustic signalling, as well as a keyswitch.

Operation is possible with a fire brigade key after activation. The operating panel has a robust ABS plastic case with degree of protection IP42.

|                              |                               |
|------------------------------|-------------------------------|
| Operating voltage range      | 10 to 30 V DC                 |
| Quiescent current            | 47 mA typ.                    |
| Data transmission            | MMI-bus                       |
| Electrical                   | RS-485, galvanically isolated |
| Protocol                     | serial, DIN 19244-3           |
| Distance to sub-control unit | max. 1200 m                   |
| Degree of protection         | IP42                          |
| Ambient temperature          |                               |
| Manufacturer specification   | –5 °C to +50 °C               |
| Approved by VdS              | –5 °C to +40 °C               |
| Case material                | ABS plastic                   |
| Case colour                  | red, RAL 3000                 |
| Dimensions                   | 170 × 227 × 40 mm (H × W × D) |
| Weight                       | approx. 500 g                 |
| SBSC-Approval                | 13-360                        |

**No.: 20-1211001-01**

## B3-MMI-UIO universal input/output module

For control of floor plan and parallel indication panels or as a remote input/output module for querying potential-free contacts (sprinkler systems), and also for the control of non-monitored horns, lamps, relays etc. The module can be incorporated either directly into the corresponding tableaus or in junction boxes.

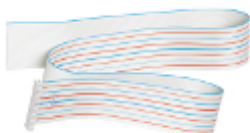
|                                  |                                                                                                                                                                                                                                                      |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating voltage range          | 10 to 30 V DC                                                                                                                                                                                                                                        |
| Quiescent current                | 14 mA typ.                                                                                                                                                                                                                                           |
| Data transmission                | MMI-bus                                                                                                                                                                                                                                              |
| Electrical                       | RS-485, galvanically isolated                                                                                                                                                                                                                        |
| Protocol                         | serial, DIN 19244-3                                                                                                                                                                                                                                  |
| Distance to sub-control unit     | max. 1200 m                                                                                                                                                                                                                                          |
| Connection                       | Floor plan panels, parallel panels, flashlights, sirens, horns, sprinkler systems etc.                                                                                                                                                               |
| Connection data                  | 64 LED outputs 2 mA<br>max. 256 LED outputs/control panel<br>8 open collector outputs up to max. 100 mA<br>Output voltage max. +30 V<br>8 can be interconnected with 8 outputs as an 8 × 8 matrix<br>input voltage +5 V<br>input current max. 3.3 mA |
| Ambient temperature              |                                                                                                                                                                                                                                                      |
| Manufacturer specification       | –5 °C to +50 °C                                                                                                                                                                                                                                      |
| Approved by VdS                  | –5 °C to +40 °C                                                                                                                                                                                                                                      |
| Dimensions                       | 160 × 105 × 20 mm (H × W × D)                                                                                                                                                                                                                        |
| VdS approval                     | G200116                                                                                                                                                                                                                                              |
| Declaration of Performance (DoP) | CPR-20-13-016                                                                                                                                                                                                                                        |

**No.: FG69041**

## Plastic case and steel mounting board for B3-MMI-UIO

For installation of the B3-MMI-UIO module. The UIO STP steel mounting board consists of galvanized sheet steel with five insertion pins and is used to mount the B3-MMI-UIO module inside the plastic case.

|                      |                            |
|----------------------|----------------------------|
| Degree of protection | IP66 (flame retardant)     |
| Ambient temperature  | up to +70 °C               |
| Case material        | Plastic/polystyrene        |
| Dimensions           |                            |
| Case                 | 182 × 180 × 90 mm (H×W×D)  |
| Steel mounting board | 150 × 173 × 1.5 mm (H×W×D) |

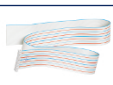
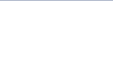
**No.: FG81725**

## Flat ribbon cable 34-pin for B3-MMI-UIO

One-metre ribbon cable (34- or 40-pin) with a connection plug and an open end for connection to the B3-MMI-UIO module. The cables must be adjusted in length in conjunction with the respective suitable second connection plug (must be ordered separately).

## MMI-Bus devices and accessories

|                                                                                     | Designation                                                                                     | Type          | Article no.   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------|---------------|
|    | <b>Integral IMAP external</b><br>without labelling plate                                        | B8-MMI-OB     | 20-1210103-01 |
|    | <b>Lettering plate for Integral IMAP</b><br>German                                              | OB-TXT DE01   | 20-1041001-01 |
|    | <b>Lettering plate for Integral IMAP</b><br>English                                             | OB-TXT EN01   | 20-1041002-01 |
|    | <b>Lettering plate for Integral IMAP</b><br>other languages                                     | OB-TXT        | auf Anfrage   |
|    | <b>log printer</b><br>for IMAP operating panel                                                  | B8-OB-PRT     | 20-1400250-01 |
|    | <b>Indicator panel PIP</b><br>German                                                            | B5-MMI-PIP-DE | 20-1210000-01 |
|    | <b>Indicator panel PIP</b><br>English                                                           | B5-MMI-PIP-EN | 20-1210000-02 |
|   | <b>Indicator panel PIP</b><br>other languages                                                   | B5-MMI-PIP-xx | Upon request  |
|  | <b>External LED indication panel for eight extinguishing zones</b>                              | B3-MMI-IPEL   | 20-1210121-01 |
|  | <b>Integral EvoxX M front panel</b><br>with IPEL                                                | CP-IPEL       | 20-1400266-01 |
|  | <b>Log printer cover (replacement)</b>                                                          | B8-OB-PRT-CVR | 20-1400230-01 |
|  | <b>Paper roll for log printer (replacement)</b>                                                 | PD PPR        | PPF-519057    |
|  | <b>Ribbon cartridge for log printer (replacement)</b>                                           | PD FRB        | HG694076      |
|  | <b>External LED indicator panel for 64 detector zones</b>                                       | B3-MMI-EAT64  | 20-1210120-01 |
|  | <b>Integral EvoxX M/C front panel</b><br>with EAT64                                             | CP-EAT64      | 20-1400264-01 |
|  | <b>Metal key (replacement)</b><br>for Integral EvoxX B, fire brigade operating panel, MCP 535X  | DKM SCHL      | FG020015      |
|  | <b>B8 Fire brigade operating panel A</b><br>in accordance with ÖNORM F 3031, variant C, MMI-bus | B8-MMI-FPA    | 20-1210020-01 |
|  | <b>Fire brigade indicator tableau</b>                                                           | B3-MMI-FAT    | 20-1240202-01 |

|                                                                                     | Designation                                                                     | Type           | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|----------------|---------------|
|    | <b>Fire brigade indicator tableau without case</b>                              | B3-MMI-FAT-E   | 20-1240203-01 |
|    | <b>Fire brigade operating panel</b><br>Germany                                  | B5-MMI-FPD     | 20-1240200-01 |
|    | <b>Fire brigade operating panel</b><br>Sweden                                   | B5-MMI-FPS     | 20-1210010-01 |
|    | <b>Intervention panel</b><br>Sweden                                             | B5-MMI-IPS     | 20-1210011-01 |
|    | <b>Fire brigade operating panel</b><br>Finland                                  | B5-MMI-FPF     | 20-1210012-01 |
|    | <b>Fire brigade operating panel</b><br>Norway                                   | B5-MMI-FPN     | 20-1210013-01 |
|    | <b>MMI-Bus cable 3.4 m</b><br>B8-BAF MMI-Bus cable connection with first device | B8-ST5-MMI-BAF | 20-1060046-01 |
|   | <b>MMI-bus-cable 1.6 m</b><br>Connection between devices                        | B5-ST5-MMI     | 20-1060041-01 |
|  | <b>Universal input/output module</b>                                            | B3-MMI-UIO     | 20-1211001-01 |
|  | <b>Plastic case for B3-MMI-UIO</b>                                              | UIO GEH        | FG69041       |
|  | <b>Steel mounting board for B3-MMI-UIO</b>                                      | UIO STP        | FG05203       |
|  | <b>34-pin flat ribbon cable 1 m</b><br>for B3-MMI-UIO                           | UIO KAB 34     | FG81725       |
|  | <b>40-pin flat ribbon cable 1 m</b><br>for B3-MMI-UIO                           | UIO KAB 40     | FG81726       |
|  | <b>40-pin connector plug</b><br>for B3-MMI-UIO                                  | UIO KAB 40 ST  | HG566170      |
|  | <b>Diode terminal block for DIN rail</b><br>for B3-MMI-UIO                      | DK 20          | FG020980      |
|  | <b>Connection module</b><br>34-pin for X4 connector                             | UM 45-FLK 34   | FG020981      |
|  | <b>Connection module</b><br>40-pin for X3 connector                             | UM 45-FLK 40   | FG020982      |
|  | <b>LC-Display CSM 6789</b><br>incl. connection cable (spare part)               | CSM 6789       | 20-1400210-01 |
|  | <b>Earthing Set</b><br>for external operating panels                            | EARTH-SET      | 20-1400030-01 |

|                                                                                   | Designation                                                  | Type       | Article no.   |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------|------------|---------------|
|  | <b>Lock for keyswitch (replacement)</b><br>incl. 2 pcs. keys | SCU LOCK-2 | 20-1400200-01 |
|  | <b>Key for keyswitch (replacement)</b>                       | SCU KEY-2  | 20-1400201-01 |



## 6.2 EPI-bus devices

The EPI-bus is a serial data bus for devices whose type designation has the suffix EPI. The external operating panels and devices must either be connected to MMI-bus devices with an additional EPI-bus master interface or directly to an Integral EvoxX control panel.



### NOTE

A maximum of three devices can be connected to one MMI-Bus and can be located up to 1 meters away from a control panel or an MMI-Bus device.



No.: 20-1210021-01

### B8-EPI-FPA fire brigade operating panel, Austria

Fire brigade operating panel with LC-display in accordance with ÖNORM F 3031 variant C for indication of the most important operating states and simple and uniform operation of the fire alarm system by the fire brigade.

It has an extremely robust metal case with an IP30 degree of protection. Operation and indication are via buttons, LED and an LC display.

The lock in the door can be opened with a fire brigade key.

Includes 1-metre Cat 5e patch cable.

|                              |                                   |
|------------------------------|-----------------------------------|
| Operating voltage            | 3.3 V DC $\pm 5\%$                |
| Quiescent current            | 5 mA typ.                         |
| Data transmission            | EPI-bus                           |
| Electrical                   | RS-485                            |
| Protocol                     | asynchronous serial               |
| Distance to sub-control unit | max. 1 m                          |
| Degree of protection         | IP30                              |
| Ambient temperature          |                                   |
| Manufacturer specification   | $-5\text{ °C}$ to $+50\text{ °C}$ |
| Approved by VdS              | $-5\text{ °C}$ to $+40\text{ °C}$ |
| Case material                | sheet steel                       |
| Case colour                  | red, RAL 3000                     |
| Dimensions                   | 300 × 200 × 55 mm (H × W × D)     |
| Weight                       | 1.9 kg                            |
| Test number                  | FT 14/447/24 (ÖNORM F 3031)       |

**No.: 20-1210050-01**

## B5-EPI-PIC parallel LED and keypad

For extended indication and operation of Integral EvoxX fire alarm control panels with 32 programmable LEDs (colour red/yellow, output behaviour static/flashing), one permanently assigned operation LED (colour green), 16 programmable buttons, internal acoustics and a connection option for an external keyswitch. Labelling of the LEDs and buttons is done with push-in strips.

Includes 1-metre Cat 5e patch cable.

|                              |                                                               |
|------------------------------|---------------------------------------------------------------|
| Operating voltage            | 3.3 V DC $\pm 5\%$                                            |
| Quiescent current            | 6 mA typ.                                                     |
| Data transmission            | EPI-bus                                                       |
| Electrical                   | RS-485                                                        |
| Protocol                     | asynchronous serial                                           |
| Distance to sub-control unit | max. 1 m                                                      |
| Degree of protection         | IP42                                                          |
| Ambient temperature          |                                                               |
| Manufacturer specification   | $-5\text{ }^{\circ}\text{C}$ to $+50\text{ }^{\circ}\text{C}$ |
| Approved by VdS              | $-5\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$ |
| Case material                | ABS plastic                                                   |
| Case colour                  | red, RAL 3000                                                 |
| Dimensions                   | 170 x 227 x 40 mm (H x W x D)                                 |
| Weight                       | approx. 500 g                                                 |

**No.: 20-1240118-01**

## B5-EPI-FPS fire brigade operating panel, Sweden

Fire brigade operating panel with LC display in accordance with SS 3654, with four-line indication, six LEDs for state indication, three function keys, one of which has two associated LEDs, a Piezo sound generator for acoustic signalling, as well as a keyswitch.

Operation is possible with a fire brigade key after activation. The operating panel has a robust ABS plastic case with degree of protection IP42.

Includes 1-metre Cat 5e patch cable.

|                              |                                                               |
|------------------------------|---------------------------------------------------------------|
| Operating voltage            | 3.3 V DC $\pm 5\%$                                            |
| Quiescent current            | 11 mA typ.                                                    |
| Data transmission            | EPI-bus                                                       |
| Electrical                   | RS-485                                                        |
| Protocol                     | asynchronous serial                                           |
| Distance to sub-control unit | max. 1 m                                                      |
| Degree of protection         | IP42                                                          |
| Ambient temperature          |                                                               |
| Manufacturer specification   | $-5\text{ }^{\circ}\text{C}$ to $+50\text{ }^{\circ}\text{C}$ |
| Approved by VdS              | $-5\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$ |
| Case material                | ABS plastic                                                   |
| Case colour                  | red, RAL 3000                                                 |
| Dimensions                   | 170 × 227 × 40 mm (H × W × D)                                 |
| Weight                       | approx. 500 g                                                 |
| SBSC-Approval                | 13-360                                                        |

**No.: 20-1240122-01**

## B5-EPI-FPN fire brigade operating panel, Norway

Fire brigade operating panel with LC display in accordance with SS 3654, with four-line indication, six LEDs for state indication, three function keys, one of which has two associated LEDs, a Piezo sound generator for acoustic signalling, as well as a keyswitch.

Operation is possible with a fire brigade key after activation. The operating panel has a robust ABS plastic case with degree of protection IP42.

Includes 1-metre Cat 5e patch cable.

|                              |                                                               |
|------------------------------|---------------------------------------------------------------|
| Operating voltage            | 3.3 V DC $\pm 5\%$                                            |
| Quiescent current            | 11 mA typ.                                                    |
| Data transmission            | EPI-bus                                                       |
| Electrical                   | RS-485                                                        |
| Protocol                     | asynchronous serial                                           |
| Distance to sub-control unit | max. 1 m                                                      |
| Degree of protection         | IP42                                                          |
| Ambient temperature          |                                                               |
| Manufacturer specification   | $-5\text{ }^{\circ}\text{C}$ to $+50\text{ }^{\circ}\text{C}$ |
| Approved by VdS              | $-5\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$ |
| Case material                | ABS plastic                                                   |
| Case colour                  | red, RAL 3000                                                 |
| Dimensions                   | 170 x 227 x 40 mm (H x W x D)                                 |
| Weight                       | approx. 500 g                                                 |
| SBSC-Approval                | 13-360                                                        |

**No.: 20-1240123-01**

## B5-EPI-FAT fire brigade indicator tableau

Fire brigade indicator tableau with LC-display to DIN 14662 for display of the most important operating conditions and simple and uniform operation of the fire alarm system by the fire brigade.

Includes 1-metre Cat 5e patch cable.

|                              |                                                               |
|------------------------------|---------------------------------------------------------------|
| Operating voltage            | 3.3 V DC $\pm 5\%$                                            |
| Quiescent current            | 12 mA typ.                                                    |
| Data transmission            | EPI-bus                                                       |
| Electrical                   | RS-485                                                        |
| Protocol                     | asynchronous serial                                           |
| Distance to sub-control unit | max. 1 m                                                      |
| Degree of protection         | IP30                                                          |
| Ambient temperature          |                                                               |
| Manufacturer specification   | $-5\text{ }^{\circ}\text{C}$ to $+50\text{ }^{\circ}\text{C}$ |
| Approved by VdS              | $-5\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$ |
| Case material                | sheet steel                                                   |
| Case colour                  | grey, RAL 7032                                                |
| Dimensions                   | 185 x 255 x 65 mm (H x W x D)                                 |
| Weight                       | 1.85 kg                                                       |
| VdS approval                 | G211102                                                       |

## B5-EPI-FPD fire brigade operating panel, Germany



**No.: 20-1240116-01**

Fire brigade operating panel in accordance with DIN 14661 for indication of the most important operating states as well as simple and uniform operation of the fire alarm system by the fire brigade. It has an extremely robust metal case with an IP30 degree of protection. Operation and indication via buttons and LED.

Includes 1-metre Cat 5e patch cable.

|                              |                                                               |
|------------------------------|---------------------------------------------------------------|
| Operating voltage            | 3.3 V DC $\pm 5\%$                                            |
| Quiescent current            | 6 mA typ.                                                     |
| Data transmission            | EPI-bus                                                       |
| Electrical                   | RS-485                                                        |
| Protocol                     | asynchronous serial                                           |
| Distance to sub-control unit | max. 1 m                                                      |
| Degree of protection         | IP30                                                          |
| Ambient temperature          |                                                               |
| Manufacturer specification   | $-5\text{ }^{\circ}\text{C}$ to $+50\text{ }^{\circ}\text{C}$ |
| Approved by VdS              | $-5\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$ |
| Case material                | sheet steel                                                   |
| Case colour                  | grey, RAL 7032                                                |
| Dimensions                   | 185 x 255 x 65 mm (H x W x D)                                 |
| Weight                       | 2 kg                                                          |
| VdS approval                 | G211101                                                       |

## B5-EPI-FPCZ fire brigade operating panel, Czech Republic



**No.: 20-1240121-01**

Fire brigade operating panel with Czech labelling to DIN 14661 for display of the most important operating conditions and simple and uniform operation of the fire alarm system by the fire brigade.

The control panel has seven LEDs to indicate the system status and five buttons for operation.

Includes 1-metre Cat 5e patch cable.

|                              |                                                               |
|------------------------------|---------------------------------------------------------------|
| Operating voltage            | 3.3 V DC $\pm 5\%$                                            |
| Quiescent current            | 6 mA typ.                                                     |
| Data transmission            | EPI-bus                                                       |
| Electrical                   | RS-485                                                        |
| Protocol                     | asynchronous serial                                           |
| Distance to sub-control unit | max. 1 m                                                      |
| Degree of protection         | IP30                                                          |
| Ambient temperature          |                                                               |
| Manufacturer specification   | $-5\text{ }^{\circ}\text{C}$ to $+50\text{ }^{\circ}\text{C}$ |
| Approved by VdS              | $-5\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$ |
| Case material                | sheet steel                                                   |
| Case colour                  | grey, RAL 7032                                                |
| Dimensions                   | 185 × 255 × 65 mm (H × W × D)                                 |
| Weight                       | 2 kg                                                          |

## EPI-Bus devices and accessories

|                                                                                     | Designation                                                                                        | Type         | Article no.   |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------|---------------|
|    | <b>B8 Fire brigade operating panel A</b><br>in accordance with ÖNORM F 3031, variant C,<br>EPI-bus | B8-EPI-FPA   | 20-1210021-01 |
|    | <b>Parallel LED and keypad</b>                                                                     | B5-EPI-PIC   | 20-1210050-01 |
|    | <b>Fire brigade operating panel</b><br>Sweden                                                      | B5-EPI-FPS   | 20-1240118-01 |
|    | <b>Fire brigade operating panel</b><br>Norway                                                      | B5-EPI-FPN   | 20-1240122-01 |
|    | <b>Fire brigade indicator tableau</b>                                                              | B5-EPI-FAT   | 20-1240123-01 |
|    | <b>Fire brigade indicator tableau</b><br>without case                                              | B5-EPI-FAT-E | 20-1240124-01 |
|   | <b>Fire brigade operating panel</b><br>Germany                                                     | B5-EPI-FPD   | 20-1240116-01 |
|  | <b>Fire brigade operating panel</b><br>Czech Republic                                              | B5-EPI-FPCZ  | 20-1240121-01 |
|  | <b>Metal key (replacement)</b><br>for Integral EvoxX B, fire brigade operating<br>panel, MCP 535X  | DKM SCHL     | FG020015      |
|  | <b>LC-Display CSM 6789</b><br>incl. connection cable (spare part)                                  | CSM 6789     | 20-1400210-01 |



# 7 Software and digital applications

## 7.1 Software for fire alarm control panels

### Integral Application Center IAC



No.: 20-1300113-01

Integral Software for programming the entire Integral EvoxX system family and for providing service tools on a PC or laptop. The software works exclusively using a dongle and can be downloaded from our website.

System prerequisites:

Hardware:

- 4 GB RAM
- Intel processor min. 2 GHz
- 2 USB ports
- 1 network interface RJ-45
- 1 serial interface RS-232 (only for configuration of SecoNET)
- 1.5 GB free hard disk space
- Activated ULM dongle
- Windows 11

Software:

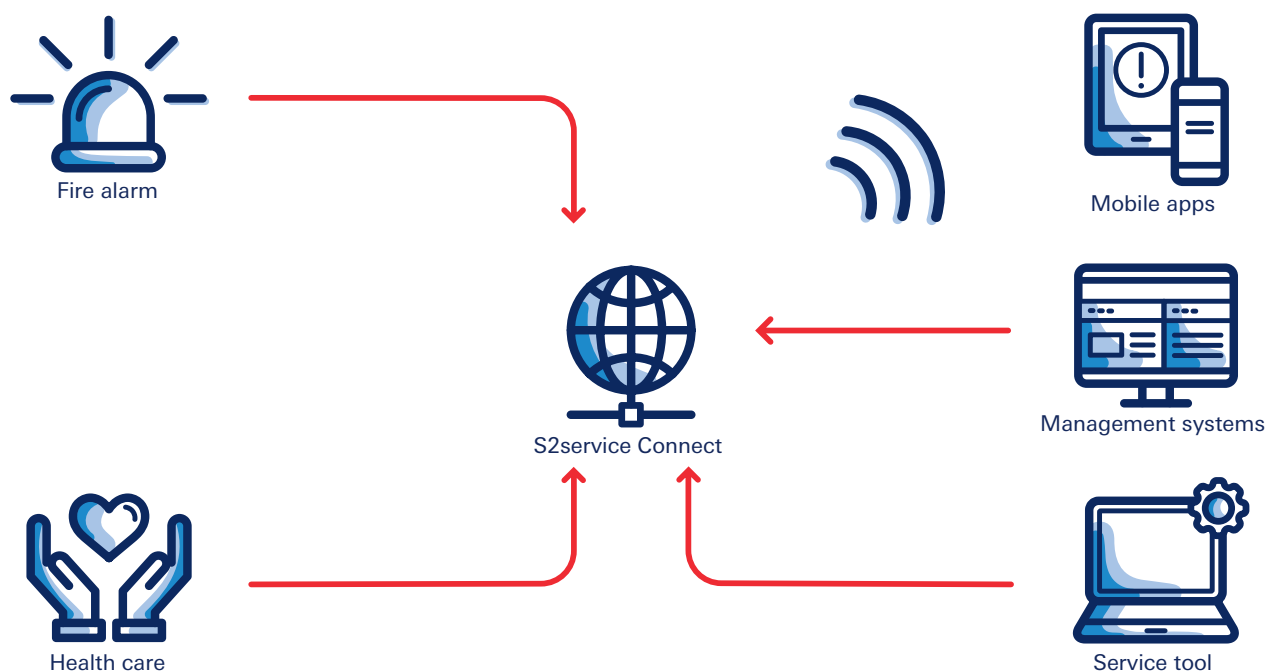
| Designation                                                                         |                              | Type       | Article no.   |
|-------------------------------------------------------------------------------------|------------------------------|------------|---------------|
|  | Dongle for Integral software | DONGLE USB | 20-1300113-01 |

## 7.2 Integral Remote

The remote access solutions provided by Schrack Seconet enable users to retrieve information or operate safety systems via PC or mobile devices.

These applications are exclusively provided for services that are not intended for alarm notification purposes. Due to power failures (e.g. telecommunications networks, power networks or the internet), a lack of network availability (e.g. failure of a transmission device) or failures/faults in the mobile device, timely operation of the control panel cannot always be guaranteed.

The web-based service S2service Connect offers all the necessary components so that a connection to a security system (e.g. fire alarm system) can be established worldwide via PC or mobile devices. This allows various applications to exchange data with a security system. The connection to the VPN network of S2service Connect is established using routers. PCs are connected to S2service Connect via software (e.g. Open VPN) and a valid VPN certificate. Mobile devices establish a connection via access data (user name, password) via an encrypted connection.



## 7.2.1 Features

- Provision of secure VPN connections
- Providing apps for mobile access to various trades (e.g. Integral EvoxX)
- E-mail service (e.g. to send e-mails from an fire alarm control panel)
- Providing a configuration interface for managing VPN connections and users
- Indication of scheduled maintenance on the web-based maintenance platform
- Central event list (event log memory of a fire alarm system) and reports



### NOTE

When using remote access solutions, the standards and guidelines (e.g. TRVB) that apply to the respective system must be observed.

Remote access is only possible via secure data connections (e.g. VPN tunnel) and only in encrypted form. The IT systems must be protected by security programs (e.g. firewalls) in such a way that minimises damage (e.g. by viruses) as far as possible.

For all transmission types, the quality of the bandwidth is crucial for the smooth functioning of the applications.

Information retrieval and operation must only be carried out by qualified staff (e.g. fire protection officers).

The operation and configuration of the control panel via remote access may only be carried out with explicit permission/clearance from the operator.



**No.: 23-2010902-01**

## Integral Mobile

Integral Mobile enables location-independent, secure access to the Schrack Seconet fire alarm system in real-time via mobile devices (app) for indication and operation in the approved geodata area.

More detailed information on alarms and other events is transmitted in real-time via push notification or call, enabling a quick response and targeted handling of events. This shortens distances and saves important time in the event of a fire. The use of Integral Mobile minimises the number of fire brigade call-outs triggered by false alarms.

Another advantage is that it ensures normal operations, for example by reducing downtime. In addition, centralised, cross-location property management is guaranteed, enabling comprehensive and efficient management of different locations.

- Push, e-mail and VoIP notifications with all desired detailed information (alarm, fault, contamination, etc.)
- Geodata check for optional restriction of operation to the plant location
- Clear indication of the system's event log memory
- System list for clear visualisation of all connected systems
- Multi-level security concept for authorised staff
- Up to eight users per sub-control unit simultaneously



### NOTE

The prerequisite for communication via the Internet is a connection between the fire alarm control panel and S2service Connect via S2service-VPN router.





**No.: 20-1300200-01**

## Integral Desktop

Enables indication and operation of a Integral EvoxX fire alarm control panel from a Windows PC.

Calling up information on the current status of the system and having all necessary alarm and status messages sent automatically is just as possible as switching detector zones on and off or starting the intervention period. It is ensured that no unauthorized access to the fire alarm system can occur. The communication between the software and the fire alarm system is encrypted.

All incoming messages are delivered with e-mail. Advantage: It is possible to react at a point in time when a danger has already arisen but no damage has been done. This offers a decisive information advantage, especially when technical facilities are unmanned, in garages or warehouses. The reaction time of fire protection officers is reduced considerably.

To access Desktop with a Windows PC, the application must be installed and a valid dongle must be available.

There are two options for using Desktop: The PC application must be connected to S2service Connect via VPN or it is operated in the customer network.

- Indication and operation of Integral EvoxX fire alarm control panels
- E-mail for notification of an event (e.g. fault) in combination with an Integral Remote Notification service (Integral Message or Integral Mail)
- Supports many language variants
- Up to eight users per sub-control unit simultaneously
- Choice between the Integral IMAP and Integral MAP operating panel



### NOTE

The prerequisite for communication via the Internet is a connection between the fire alarm control panel and S2service Connect via S2service-VPN router.



**No.: Upon request**

## Integral Mail

Automatic e-mail delivery from one or more fire alarm control panels when an event occurs (e.g. alarms, faults) to one or more recipients on PC, laptop, or mobile devices. Events and receivers can be planned in order to provide information in a targeted manner.

Any e-mail server that meets the requirements can be used. If no mail server is available, this function can also be realised via web service platform.

When used locally, Integral Mail can be connected to an e-mail server via the internal network. Alternatively, Integral Mail can also be operated via a direct connection of the fire alarm control panel with a DSL modem, if the function is desired without additional remote access.

- Sending e-mails from the Integral EvoxX fire alarm control panel per event
- Different events are sent specific various receivers
- Transmission of all available information such as standardised and customer text
- E-mail server or free mail service with unencrypted transmission or mail server provided with the web service platform (S2service router with certificate required)
- Programming of the Integral EvoxX fire alarm control panel (server data and E-mail addresses)



### NOTE

The prerequisite for communication via the Internet is a connection between the fire alarm control panel and S2service Connect via S2service-VPN router.

VPN router LAN



No.: 23-2010500-01

The VPN router LAN is used for the simple connection of security systems (e.g. fire alarm control panel) to the SecureOnlinePlatform (SOP) via an existing Internet connection.

The router has two Ethernet interfaces and is therefore able to ensure a secure and simple connection of LAN networks via OpenVPN tunnel. In addition to the integrated firewall, the encrypted data transmission is also one of the most important security features. Integrated services such as network address translation (NAT) offer a high degree of flexibility.

The router is shipped fully pre-configured for using remote access over the SOP. The integrated web interface can be used to alter settings on site in accordance with customer-preferences. The configuration and updating of the firmware can be carried out using LAN or an auto update function.

Thanks to its compact footprint and the possibility to fit it on a on a top-hat rail in various ways.

Power can be supplied using the supplied power supply unit or using the power supply unit of the security system. Only the interfaces and indicators are described overleaf, which are required for operation in combination with the SOP.

|                         |                                                    |
|-------------------------|----------------------------------------------------|
| Operating voltage range | 9 to 48 V DC                                       |
| Nominal power uptake    | 5.3 W                                              |
| Connection              | plug-in power supply unit 230 V AC/<br>12 V DC     |
| Interfaces              | 2 × Ethernet (10/100 Mbit/s)                       |
| Mounting                | DIN top-hat rail, 35 mm                            |
| Degree of protection    | IP30                                               |
| Ambient temperature     | –40 °C to +75 °C                                   |
| Case material           | Plastic                                            |
| Case colour             | graphite black RAL 9011, platinum<br>grey RAL 7036 |
| Dimensions              | 52 × 117 × 93 mm (H × W × D)                       |
| Weight                  | approx. 170 g                                      |

**No.: 23-2010700-01**

## VPN router LTE/LAN

The VPN router LTE/LAN is used for the redundant connection of security systems (e.g. fire alarm control panel) to the SecureOnlinePlatform (SOP) via LTE and LAN.

The router has two Ethernet interfaces and is therefore able to ensure a secure and simple connection of LAN networks via OpenVPN tunnel. In addition to the integrated firewall, the encrypted data transmission is also one of the most important security features. Integrated services such as network address translation (NAT) offer a high degree of flexibility.

The router is shipped fully pre-configured for using remote access over the SOP. The integrated web interface can be used to alter settings on site in accordance with customer-preferences. The configuration and updating of the firmware can be carried out using LAN or an auto update function.

Thanks to its compact footprint and the possibility to fit it on a top-hat rail in various ways.

Power can be supplied using the supplied power supply unit or using the power supply unit of the security system. Only the interfaces and indicators are described overleaf, which are required for operation in combination with the SOP.

|                                |                                                    |
|--------------------------------|----------------------------------------------------|
| Operating voltage range        | 9 to 48 V DC                                       |
| Nominal power uptake           | 6.2 W                                              |
| Connection                     | plug-in power supply unit 230 V AC/<br>12 V DC     |
| Interfaces                     | 2 × Ethernet (10/100 Mbit/s)<br>2 × SIM card slots |
| Mobile communication standards | GPRS/EDGE, UMTS, LTE                               |
| Accessories                    | external LTE aerial                                |
| Ambient temperature            | –40 °C to +75 °C                                   |
| Mounting                       | DIN top-hat rail, 35 mm                            |
| Case material                  | Plastic                                            |
| Case colour                    | graphite black RAL 9011, platinum<br>grey RAL 7036 |
| Dimensions                     | 52 × 116 × 99 mm (H × W × D)                       |
| Weight                         | approx. 200 g                                      |



## Integral Remote licences, accessories and fitting materials

|                                                                                     | Designation                                                                                                                                                        | Type              | Article no.   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------|
|    | <b>Integral Mobile Basic 1</b><br>For 1 connection                                                                                                                 | IMOB BASIC 1      | 23-2010902-01 |
|    | <b>Integral Mobile Basic 2</b><br>for 2 concurrent connections                                                                                                     | IMOB BASIC 2      | 23-2010903-01 |
|    | <b>Integral Mobile extension</b><br>for 2 additional connections                                                                                                   | IMOB EXT 2        | 23-2010904-01 |
|    | <b>Integral Desktop – ULM dongle</b><br>Software via Schrack Seconet Update                                                                                        | DONGLE IDT        | 20-1300200-01 |
|    | <b>VPN router LAN-FAS</b><br>VPN connection to the fire alarm control panel                                                                                        | VPN LAN FAS       | 23-2010500-01 |
|    | <b>VPN router LTE/LAN-FAS</b><br>VPN connection to the fire alarm control panel                                                                                    | VPN LTE-LAN FAS   | 23-2010700-01 |
|   | <b>VPN certificate PC</b><br>for Windows PC                                                                                                                        | VPN-Z-PC          | 23-2010800-01 |
|  | <b>IP65 router case</b><br>with top-hat rail, wiring, terminals                                                                                                    | BMZ IP-BOX        | 23-2010010-01 |
|  | <b>5-port network switch</b><br>is required if a service interface (e.g. access for a technician's PC) is to be provided in parallel with an S2Service router.     | EIBA5-100T/R      | 23-2010300-01 |
|  | <b>Integral CX top-hat rail cabinet</b><br>Cabinet made of sheet steel (red RAL 3000) with built-in top-hat rail and ducts, dimensions: 400 × 445 × 140 mm (H×W×D) | B6-CTR            | 20-1400115-01 |
|  | <b>USB cable</b><br>3 m length                                                                                                                                     | KAB USB 3         | 23-1020021-01 |
|  | <b>USB cable</b><br>4.5 m length                                                                                                                                   | KAB USB 45        | 23-1020022-01 |
|  | <b>Panel omnidirect LTE antenna</b>                                                                                                                                | A-XPOL-0001-V3-21 | 23-2010008-01 |

## 7.3 SPECTRUS fire alarm operation control system



Multi-user graphical operation control system in accordance with ÖNORM F 3003 for simple, uncluttered and plan-based indication and operation of fire alarm systems.

SPECTRUS collects messages and states from the connected fire alarm control panels and indicated them centrally on one or more PC workstations. The modern user interface, featuring light and dark modes, high-performance graphics and a flexible system architecture, facilitates the rapid localisation of events and ensures efficient handling.

### 7.3.1 Features

- Simple, standardised operation in alarm and command mode, e.g. for controlling fire alarm systems
- A clear, plan-based user interface for quick localisation of events
- A modern user interface with light and dark modes for a comfortable working experience
- Suitable for multiple users and modular expansion
- Powerful application graphics with dynamic zoom function
- Individual design of the user interface for each user and workstation
- Event indication and operation either via symbol or text field indication in the building graphics
- Targeted switching of elements directly via the plan
- Automatic reactivation of elements that have been temporarily switched off after a defined period of time
- Configurable work flows and switching operations can be automatically or manually triggered
- Monitoring of all connected subsystems and connections
- Comprehensive logging of all events, links and system activities
- Configurable customer-specific reports and evaluations
- Alarm printout, application and action texts individually configurable
- Convenient full-text search
- Individual authorisation and password assignment with role and group function
- Optional email notifications via an additional licence
- Import of application graphics from all common graphics and CAD systems
- Wiring via TCP/IP and serial interfaces is possible
- Changeable user interface language
- Tested and certified in accordance with ÖNORM F 3003 for Austrian standard, fire alarm operation control systems

## 7.3.2 Software license packages

### 7.3.2.1 Basic licences

|                                                                                    | Designation                                                                              | Type            | Article no.   |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------|---------------|
|   | <b>SPECTRUS Basis 1,000 DP</b><br>Basic licence: 1,000 DP, including 1 client and driver | SPECTRUS 1000 B | 23-1100001-01 |
|   | <b>SPECTRUS Basis 2,500 DP</b><br>Basic licence: 2,500 DP, including 1 client and driver | SPECTRUS 2500 B | 23-1100002-01 |
|   | <b>SPECTRUS Basis 4,500 DP</b><br>Basic licence: 4,500 DP, including 1 client and driver | SPECTRUS 4500 B | 23-1100003-01 |
|   | <b>SPECTRUS Basis 7,500 DP</b><br>Basic licence: 7,500 DP, including 1 client and driver | SPECTRUS 7500 B | 23-1100004-01 |
|  | <b>SPECTRUS Basis 20K DP</b><br>Basic licence: 20,000 DP, including 1 client and driver  | SPECTRUS 20K B  | 23-1100005-01 |
|                                                                                    | <b>SPECTRUS dongle</b><br>USB dongle for licence activation                              | SPECTRUS DONGLE | 23-1110001-01 |

### 7.3.2.2 Additional licence

|                                                                                     | Designation                                                                                                   | Type            | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------|---------------|
|  | <b>SPECTRUS mail add-on</b><br>Additional licence for email notifications                                     | SPECTRUS MAIL   | 23-1100101-01 |
|  | <b>SPECTRUS client add-on</b><br>Additional licence for an extra client                                       | SPECTRUS CLIENT | 23-1100102-01 |
|  | <b>SPECTRUS ISP-IP add-on</b><br>Additional licence for ISP-IP driver for additional fire alarm control panel | SPECTRUS ISP-IP | 23-1100103-01 |

### 7.3.2.3 Extension licences

|                                                                                   | Designation                                                        | Type              | Article no.   |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------|---------------|
|  | <b>SPECTRUS Extension 2500 DP</b><br>Extension licence to 2500 DP  | SPECTRUS 2500 EXT | 23-1100011-01 |
|  | <b>SPECTRUS Extension 4500 DP</b><br>Extension licence to 4500 DP  | SPECTRUS 4500 EXT | 23-1100012-01 |
|  | <b>SPECTRUS Extension 7500 DP</b><br>Extension licence to 7500 DP  | SPECTRUS 7500 EXT | 23-1100013-01 |
|  | <b>SPECTRUS Extension 20K DP</b><br>Extension licence to 20,000 DP | SPECTRUS 20K EXT  | 23-1100014-01 |

### 7.3.3 Software licence packages for platform changes

|                                                                                     | Designation                                                                             | Type                | Article no.   |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------|---------------|
|    | <b>SecoLog to SPECTRUS 1,000</b><br>Platform change from SecoLog to SPECTRUS 1K         | SL-SPECT 1000 UPG   | 23-1100309-01 |
|    | <b>SecoLog to SPECTRUS 2,500</b><br>Platform change from SecoLog to SPECTRUS 2.5K       | SL-SPECT 2500 UPG   | 23-1100310-01 |
|    | <b>SecoLog to SPECTRUS 4,500</b><br>Platform change from SecoLog to SPECTRUS 4.5K       | SL-SPECT 4500 UPG   | 23-1100311-01 |
|    | <b>SecoLog to SPECTRUS 7,500</b><br>Platform change from SecoLog to SPECTRUS 7.5K       | SL-SPECT 7500 UPG   | 23-1100312-01 |
|    | <b>SecoLog to SPECTRUS 20K</b><br>Platform change from SecoLog to SPECTRUS 20K          | SL-SPECT 20K UPG    | 23-1100313-01 |
|   | <b>SecoLog to SPECTRUS Client</b><br>Switching from SecoLog to SPECTRUS Client          | SL-SPECT CLIENT UPG | 23-1100314-01 |
|  | <b>SecoLog to SPECTRUS Mail</b><br>Switching from SecoLog to SPECTRUS Mail              | SL-SPECT MAIL UPG   | 23-1100315-01 |
|  | <b>Secolog to SPECTRUS ISP-IP</b><br>Platform change from Secolog IP to SPECTRUS ISP-IP | SL-SPECT ISP-IP UPG | 23-1100318-01 |

## 7.3.4 SPECTRUS software maintenance contract

Software maintenance contract for SPECTRUS to ensure the continued operational readiness and long-term up-to-date status of the software solution in use.

The maintenance contract covers the provision of software updates to ensure technical functionality, to rectify software errors and to adapt the software to current technological requirements. These include, in particular, security updates, bug fixes, updates, upgrades and functional enhancements within the scope of the supported software versions.

### 7.3.4.1 Features

- Security updates to address potential vulnerabilities
- Bug fixes to rectify software errors and ensure stable system operation
- Functional updates to improve ease of use, system efficiency and functionality
- Technological enhancements within the scope of the supported software versions
- Provision of the latest software versions to maintain technical compatibility
- Support for the long-term operational readiness of the SPECTRUS software solution in use
- Scheduled software maintenance through recurring maintenance services
- Contributing to long-term system availability and operational reliability
- Suitable for SPECTRUS in accordance with the agreed feature list
- Installation, commissioning, training and the installation of software updates are not included, unless otherwise agreed

### 7.3.4.2 Software maintenance contract

|                                                                                     | Designation                                                                    | Type             | Article no.   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------|---------------|
|  | <b>SPECTRUS Maintenance 1000 DP</b><br>Software maintenance contract 1000 DP   | SPECTRUS 1000 SW | 23-1120001-01 |
|  | <b>SPECTRUS Maintenance 2500 DP</b><br>Software maintenance contract 2500 DP   | SPECTRUS 2500 SW | 23-1120002-01 |
|  | <b>SPECTRUS Maintenance 4500 DP</b><br>Software maintenance contract 4500 DP   | SPECTRUS 4500 SW | 23-1120003-01 |
|  | <b>SPECTRUS Maintenance 7500 DP</b><br>Software maintenance contract 7500 DP   | SPECTRUS 7500 SW | 23-1120004-01 |
|  | <b>SPECTRUS Maintenance 20K DP</b><br>Software maintenance contract 20,000 DP  | SPECTRUS 20K SW  | 23-1120005-01 |
|  | <b>SPECTRUS Maintenance Email</b><br>Mail add-on software maintenance contract | SPECTRUS MAIL SW | 23-1120101-01 |

|                                                                                   | Designation                                                                       | Type                  | Article no.   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------|---------------|
|  | <b>SPECTRUS Maintenance Client</b><br>Client add-on software maintenance contract | SPECTRUS CLIENT<br>SW | 23-1120102-01 |
|  | <b>SPECTRUS Maintenance ISP-IP</b><br>ISP-IP add-on software maintenance contract | SPECTRUS ISP-IP SW    | 23-1120103-01 |

## 7.4 Interfaces and protocols

With the increase in electronic security systems, the demand for their networking is growing. The universal interfaces of the Integral EvoxX fire alarm control panel ensure that the systems speak the same language, thus enabling economical building automation to be implemented.

- Maximizing economy, flexibility, transparency and energy efficiency in building automation
- The Integral EvoxX fire alarm control panel becomes a universal security control panel
- Modular and flexible: The connection to various subsystems is possible
- Synergy effects through networking with security systems

The Integral EvoxX fire alarm control panel supports the interfaces OPC UA, ISP-IP, ESPA 4.4.4 and Modbus-TCP. The subsystems can be connected and networked with each other.

### FAS converter basic



No.: 20-1301000-01

Interface converter for connecting an Integral EvoxX fire alarm control panel to a superordinate management system e.g. building technology via LAN. The converter has two LAN interfaces via which the fire alarm control panel is connected and a protocol can be output.

All licences required to provide the default interface OPC UA with more than 10 000 data points or BACnet up to a maximum of 5400 elements are included.

The fanless FAS converter has status LEDs to indicate the operating states and can be easily installed in control cabinets with the mounting plate attached to the rear wall.

|                         |                                                                                     |
|-------------------------|-------------------------------------------------------------------------------------|
| Operating voltage range | 22 to 30 V DC (24 V DC power supply unit)                                           |
| Current consumption     | max. 14 W with basic equipment                                                      |
| Interfaces              | 2 × RJ-45 Ethernet 100/1000BASE-T<br>1 × display port<br>1 × USB 2.0<br>1 × USB 3.0 |
| Data points             | max. 10000                                                                          |
| Degree of protection    | IP20                                                                                |
| Ambient temperature     | 0 °C to +55 °C                                                                      |
| Relative humidity       | 95 % non-condensing                                                                 |
| Case material           | Aluminium-zinc die-casting                                                          |
| Dimensions              |                                                                                     |
| with mounting plate     | 82 × 82 × 40.6 mm (H×W×D)                                                           |
| without mounting plate  | 96 × 91 × 40.6 mm (H×W×D)                                                           |
| Weight                  |                                                                                     |
| with mounting plate     | 450 g                                                                               |
| without mounting plate  | 400 g                                                                               |



FAS converter OPC UA unlimited



No.: 20-1301002-01

Interface converter for connecting an Integral EvoxX fire alarm control panel to a superordinate management system e.g. building technology via LAN. The converter has four LAN interfaces via which the fire alarm control panel is connected and up to three different protocols can be output simultaneously.

All licences required to provide the default interface OPC UA with more than 10 000 data points are included.

The FAS converter is equipped with a controllable, double ball-bearing fan, which is replaceable. It also has status LEDs on the front to indicate the operating states and can be easily installed in control cabinets with the mounting plate attached to the rear wall.

The country-specific regulations for the planning and installation of automatic fire alarm systems apply for planning the system.

|                         |                                                                      |
|-------------------------|----------------------------------------------------------------------|
| Operating voltage range | 22 to 30 V DC (24 V DC power supply unit)                            |
| Current consumption     | max. 60 W with basic equipment                                       |
| Interfaces              | 4 × RJ-45 Ethernet 100/1000BASE-T<br>2 × display port<br>4 × USB 3.0 |
| Data points             | more than 10 000                                                     |
| Degree of protection    | IP20                                                                 |
| Ambient temperature     | 0 °C to +55 °C                                                       |
| Relative humidity       | 95 % non-condensing                                                  |
| Case material           | Aluminium-zinc die-casting                                           |
| Dimensions              |                                                                      |
| with mounting plate     | 150 × 145 × 78.6 mm (H×W×D)                                          |
| without mounting plate  | 133 × 129 × 78.6 mm (H×W×D)                                          |
| Weight                  |                                                                      |
| with mounting plate     | 1700 g                                                               |
| without mounting plate  | 1460 g                                                               |



**No.: Upon request**

## **Dongle for implementing a protocol**

When ordering the dongle, the requested protocols must be mentioned. For each protocol a protocol description, a test tool and a tool description are provided.



**No.: Upon request**

## **ISP-IP interface**

Protocol for connecting Integral EvoxX control panels to a superordinate management system. Further details, hardware and software requirements upon request.



**No.: Upon request**

## **ESPA 4.4.4 interface**

Protocol for connecting Integral EvoxX control panels to a superordinate management system. Further details, hardware and software requirements upon request.



**No.: Upon request**

## **Modbus-TCP interface**

Protocol for connecting Integral EvoxX control panels to a superordinate management system. Further details, hardware and software requirements upon request.



**No.: 20-1301004-01**

## **ISP-IP licence for FAS converter**

Licence for connecting Integral EvoxX control panels to a superordinate management system.

Only in connection with a hardware PC from Beckhoff.

## Interfaces and protocols

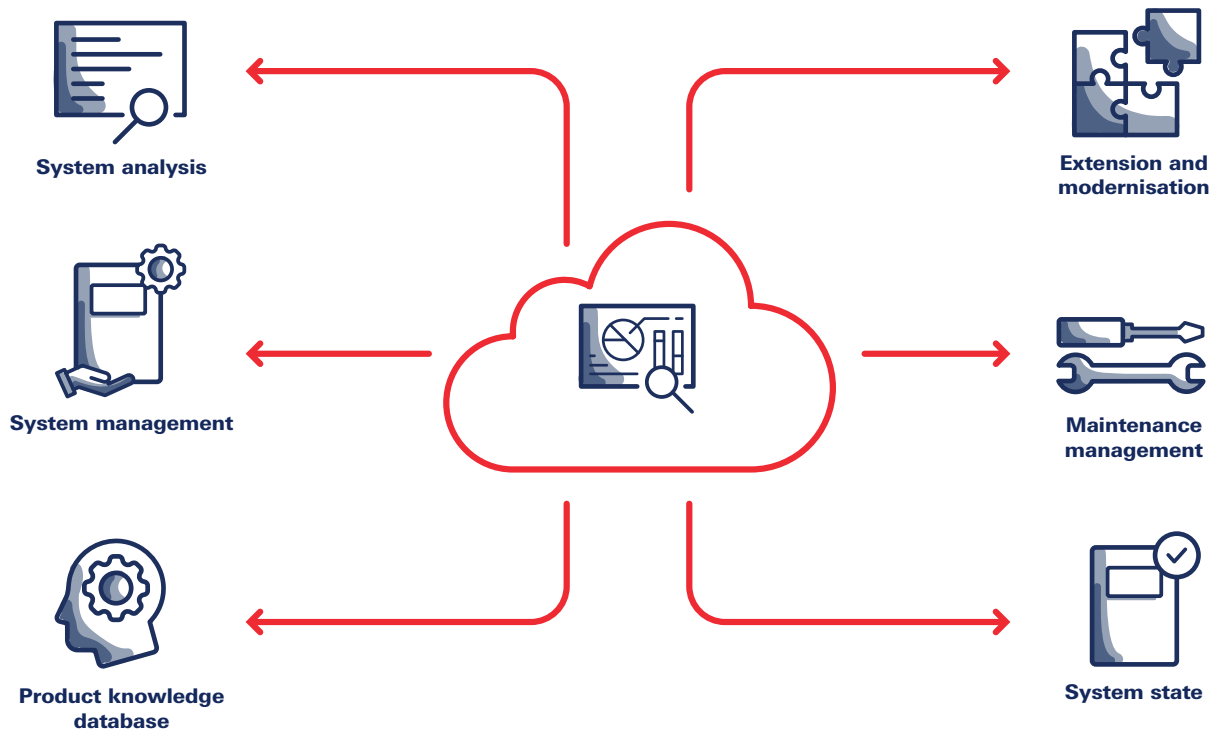
|                                                                                   | Designation                                                                      | Type             | Article no.   |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------------|---------------|
|  | <b>FAS converter OPC UA basic</b><br>PC incl. operating SW and licenses          | FAS OPC UA BASIC | 20-1301000-01 |
|  | <b>FAS converter OPC UA unlimited</b><br>PC incl. operating SW and licenses      | FAS OPC UA UNLTD | 20-1301002-01 |
|  | <b>Support tools for protocols</b><br>ULM dongle                                 | DONGLE USB PROT  | 20-1300202-01 |
|  | <b>ISP-IP interface</b>                                                          | ISP-IP           | Upon request  |
|  | <b>ESPA 4.4.4 interface</b>                                                      | ESPA 4.4.4       | Upon request  |
|  | <b>Modbus-TCP interface</b>                                                      | Modbus-TCP       | Upon request  |
|  | <b>ISP-IP licence for FAS converter</b><br>Standalone licence for Beckhoff PC-HW | FAS ISP IP LIC   | 20-1301004-01 |

## 7.5 Service Platform

### 7.5.1 Overview

The Schrack Seconet Service Platform is an intelligent, highly secure web application that integrates services for users and supports the commissioning, maintenance, troubleshooting and inspection of fire alarm systems.

The Service Platform is operated as a private cloud in our highly secure data centre, and all systems and locations can be efficiently managed via a clear dashboard.



#### The most important features

- Reliable product and knowledge management through always up-to-date content
- Location-independent system data management
- Digitally supported maintenance
- Permanent and automated system analysis
- Intelligent support for extension and modernisation
- Transparent and detailed system event management

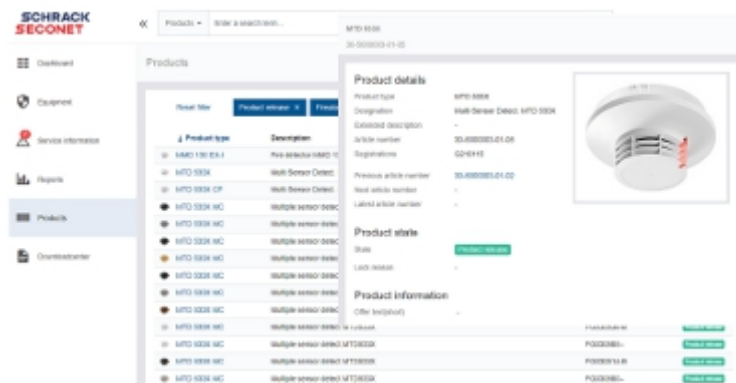
## 7.5.2 Functions

Our partners can choose from different packages, each containing different functions. The entry-level package Free is free of charge and already offers everything needed to manage a certain number of systems; the packages Basic and Premium offer different levels of expansion and increase the number of systems that can be managed.

### Basic functions

- Access to the Service Platform via standard internet browser
- User interface in German and English
- Global full text search function with different categories

### Product knowledge database



The Service Platform is a reliable and central source of information: it contains extensive information such as data sheets, installation manuals, planning tools, certificates and much more. All contents of this knowledge base are always up to date to support with the appropriate information in every situation of the entire system life cycle.

- Indication of products approved by Schrack Seconet
- View and download product documentation approved by Schrack Seconet
- Retrieve details of each product and associated product documentation

### System management

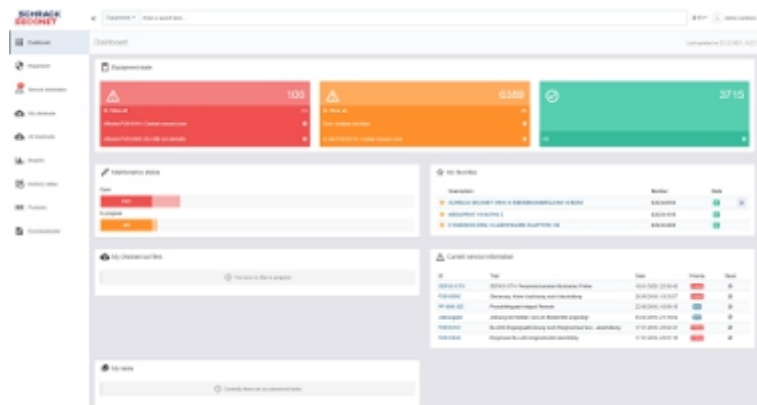


The system management provides a precise overview of the systems under management: All project information, programming, building plans, etc. are centrally organised here.

- Management of site master data and programming files for the sites
- Checking out and checking in programming files
- Automatic versioning of programming files
- Listing of installed device types and quantities for each location

- Indication of the structure of each location in detail incl. the installed hardware and all logical elements
- Listing of all tasks assigned to a location

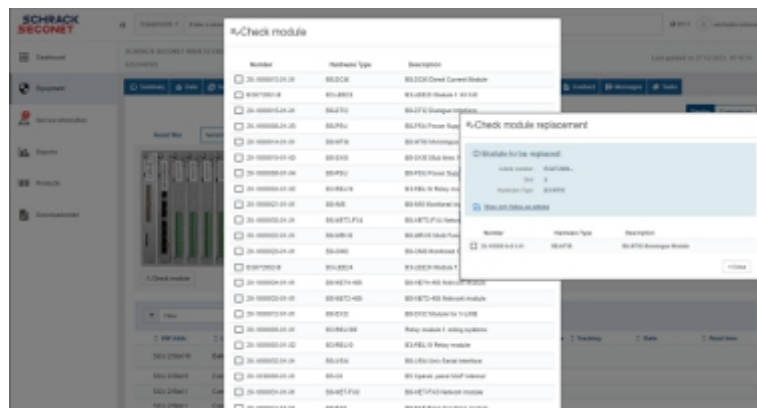
## System analysis



The system analysis takes over the permanent check of all systems. A clear dashboard shows all the results of the analysis and assigns them to the three traffic light colours. Situations requiring action are thus identified at an early stage, and measures can be planned in advance. The Service Platform also provides all the information needed for system improvements.

- Analysis of the location status based on the uploaded programming files
- Indication of the analysis result and the required measures for each site

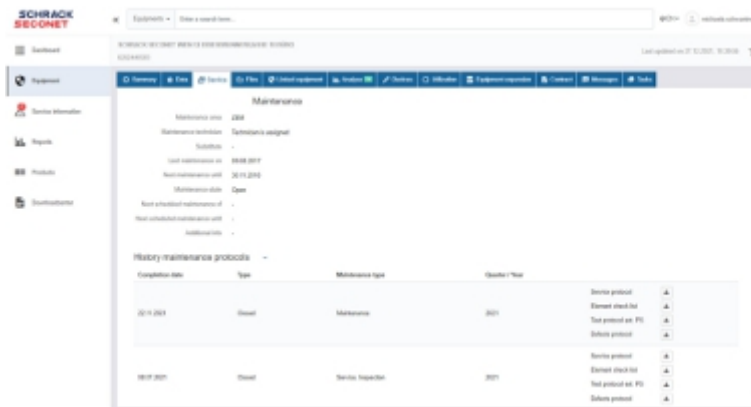
## Extension and modernisation



The extension and modernisation system checks the compatibility of the currently stored system programming with the manufacturer's information. Complex changes can thus be planned correctly from a distance and without time-consuming detailed research with little effort.

- Indication of the current software version, with a recommendation for an upgrade to a newer software version, if applicable
- Compatibility assistant to easily check whether a selected hardware is suitable for a location
- Indication of the products that are no longer available and the successor products suitable for the system
- Replacement recommendation for fire detectors

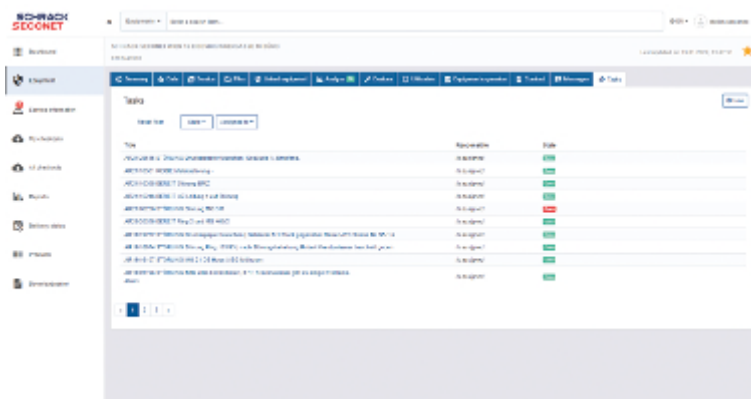
## Maintenance management



Maintenance management digitally supports all maintenance work. When testing each individual element of a system, the test report is created automatically (only in combination with a service router). Defects can be recorded even better via photo documentation, and integrated scheduling enables targeted planning and processing of future maintenance measures:

- Assistant for creating a digital maintenance report
- Documentation of defects with text and picture
- Maintenance report history
- Automatic logging of maintenance work (only in connection with Integral Remote)

### System state (only in connection with Integral Remote)



The detailed event management provides a constant real-time overview of the messages of all systems. Building on the information of the system management, a compact overview status or fault messages of all systems. In the sense of predictive maintenance, it is possible to react immediately or plan in a timely manner. The integrated team organisation functions offer further advantages: Tasks can be issued digitally and collaboration can be planned efficiently.

- Listing of messages from the fire alarm control panels
- Creation and management of tasks for site-related messages

## Integral Service App



The Integral Service App, included in the premium package of the Service Platform, facilitates the maintenance of Schrack Seconet fire alarm systems. The app offers a variety of functions that make the maintenance process efficient and structured.

Thanks to the checklist-based maintenance, the app guides you through all relevant maintenance steps one by one. A special function is the live view of tested elements in online systems, which makes testing much easier.

Defects can be documented, photographed and marked directly in the app. Inaccessible or defective elements can also be labelled, which increases the accuracy of maintenance work.

The app works both online and offline and synchronises logs and information directly with the Service Platform. This ensures that data is always up-to-date and supports digital logging.

Maintenance results can be exported in various languages, signed directly on mobile devices and sent by email. The system list provides a clear indication of all systems with important information such as contact information, location, contract data and past logs.

- Checklist-based maintenance
- Live view of checked elements for online systems
- Documentation and marking of defects
- Online and offline functionality
- Synchronisation with the Service Platform
- Export maintenance results to various languages and log types
- Sign on mobile devices and send via email
- Clear system list with systems and customer information



### 7.5.3   Licence packages for partners

|                                                               | FREE       | BASIC        | PREMIUM      |
|---------------------------------------------------------------|------------|--------------|--------------|
| Product knowledge management                                  | •          | •            | •            |
| System management                                             | •          | •            | •            |
| System analysis                                               | for 1 site | for 10 sites | for 50 sites |
| Extension and modernisation                                   | for 1 site | for 10 sites | for 50 sites |
| Maintenance management                                        | –          | for 1 site   | for 50 sites |
| Event management<br>(only in connection with Integral Remote) | –          | for 1 site   | for 50 sites |
| Available storage space                                       | 250 MB     | 500 MB       | 2 GB         |
| Integral Service App                                          | –          | –            | •            |



**NOTE**

Integral Remote router including activation are NOT included in the scope of services!

A site corresponds to a project file in the Service Platform.

## Licences for Service Platform

|                                                                                   | Designation                             | Type          | Article no.   |
|-----------------------------------------------------------------------------------|-----------------------------------------|---------------|---------------|
|  | <b>Service Platform licence FREE</b>    | SP-PA-FREE    | 23-2001000-01 |
|  | <b>Service Platform licence BASIC</b>   | SP-PA-BASIC   | 23-2001001-01 |
|  | <b>Service Platform Licence PREMIUM</b> | SP-PA-PREMIUM | 23-2001002-01 |

## 8 Peripheral

Peripheral devices (detectors, modules and alarm devices) are connected to the fire alarm control panels via stub line or loop circuit. They are responsible for the reliable detection (automatic and/or manual) and rapid alarming (acoustic and/or visual) of a fire and offer the possibility of controlling monitored consumers, integrating special detectors etc.

### 8.1 Point detectors and detector base

Point detectors are fire detectors that are placed on the ceiling and automatically detect a fire.

#### 8.1.1 Integral X-LINE

The following point fire detectors are devices on the X-LINE loop and can be individually addressed.

##### Setting options according to EN 54

| Standard | Typical applications                                                                                                                          | MTD 533X | MTD 533X-S | MTD 533X-SP<br>MTD 533X-SP EE | CMD 533X |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|-------------------------------|----------|
| EN 54-3  | Acoustic signal devices to warn staff in the event of a fire (e.g. hotel rooms, public buildings)                                             | —        | •          | •                             | —        |
| EN 54-5  | Heat detectors in areas where smoke is expected to be a deceptive quantity (e.g. smoking areas)                                               | •        | •          | •                             | •        |
| EN 54-7  | Smoke detectors in standard applications for rapid detection in the event of a fire with formation of smoke (e.g. office buildings)           | •        | •          | •                             | •        |
| EN 54-26 | CO detectors in the event of a fire with carbon monoxide development for purely technical alarms without forwarding to the fire brigade       | —        | —          | —                             | •        |
| EN 54-29 | Combined smoke and heat detectors where short-term sources of interference such as smoke, dust, insects and steam can occur (e.g. warehouses) | •        | •          | •                             | •        |
| EN 54-30 | Combined CO and heat detectors in areas where smoke and heat are expected to be a source of deceptive alarms (e.g. industrial kitchens)       | —        | —          | —                             | •        |

**No.: 30-5000003-01**

## MTD 533X multiple sensor detector

The multiple sensor detector MTD 533X is a combined smoke and heat detector and is used to detect a fire in buildings.

The detector provides early detection of smouldering and open fires by detecting and evaluating both fire characteristics smoke and heat. The CUBUS levelling automatically adjusts to the ambient conditions.

The Tyndall principle (scattered light) is used for smoke detection and for heat detection the NTC sensor principle is used. If the signal values specified in the detector are exceeded, the corresponding message is sent to the fire alarm control panel.

The type MTD 533X CP is available for difficult ambient conditions with improved protection against increased air humidity and resistance to corrosion.

The multiple sensor detector MTD 533X PG is provided with an additional protective grille fitted and is intended for environments with heavy insect loads.

Fitting a detector heater (not approved by VdS) enables the operation at low temperature to prevent icing or condensation.

|                                   |                                                                                   |
|-----------------------------------|-----------------------------------------------------------------------------------|
| Operating voltage range           | 12.6 to 31 V DC (without modulation deviation)                                    |
| Quiescent current                 | max. 0.15 mA, 0.12 mA typ.                                                        |
| Alarm output                      | programmable:                                                                     |
| Output current                    | 0.1 mA/1 mA/5 mA                                                                  |
| Current consumption               | 0.7 mA/2.1 mA/7.5 mA                                                              |
| Alarm LED active                  | max. 2.5 mA                                                                       |
| Output voltage                    | 5 V or 6.8 V DC                                                                   |
| Detector base                     | USB 501 or USB 502                                                                |
| Signal transmission               | serial, two-wire technology                                                       |
| Short circuit isolator            | integrated                                                                        |
| Response behaviour                | in accordance with EN 54-5 (category A1, A2, B, Index S and R), EN 54-7, EN 54-29 |
| Degree of protection with USB 502 | IP44                                                                              |
| Ambient temperature               |                                                                                   |
| Manufacturer specification        | –25 °C to +65 °C                                                                  |
| Approved by VdS                   | –10 °C to +65 °C                                                                  |
| Relative humidity                 | 10 to 95 % non-condensing                                                         |
| Air speed                         | max. 20 m/s                                                                       |
| Case material                     | ABS/PC                                                                            |
| Case colour                       | white, similar to RAL 9003                                                        |
| Dimensions                        | 119 × 58 mm (Ø × H)                                                               |
| Weight                            | 125 g                                                                             |
| VdS approval                      | G210115                                                                           |
| Declaration of Performance (DoP)  | CPR-30-21-014                                                                     |

## MTD 533X-S multiple sensor detector



**No.: 30-5000007-01**

The multiple sensor detector MTD 533X-S is a combined smoke and heat detector with integrated audio output and is used to detect a fire in buildings.

The detector provides early detection of smouldering and open fires by detecting and evaluating both fire characteristics smoke and heat. The CUBUS levelling automatically adjusts to the ambient conditions.

The Tyndall principle (scattered light) is used for smoke detection and for heat detection the NTC sensor principle is used. If the signal values specified in the detector are exceeded, the corresponding message is sent to the fire alarm control panel.

The detector has four adjustable tone types (DIN tone, Slow Whoop, Sweden tone and continuous tone) at three adjustable volume levels for different ambient conditions.

From version -03, an additional protective grille PG 533 PU11 can be attached for environments with heavy insect loads.

Fitting a detector heater (not approved by VdS) enables the operation at low temperature to prevent icing or condensation.

|                                   |                                                                                   |
|-----------------------------------|-----------------------------------------------------------------------------------|
| Operating voltage range           | 12.6 to 31 V DC (without modulation deviation)                                    |
| Quiescent current                 | max. 0.15 mA, 0.12 mA typ.                                                        |
| Alarm output                      | programmable:                                                                     |
| Output current                    | 0.1 mA/1 mA/5 mA                                                                  |
| Current consumption               | 0.7 mA/2.1 mA/7.5 mA                                                              |
| Alarm LED active                  | max. 2.5 mA                                                                       |
| Output voltage                    | 5 V or 6.8 V DC                                                                   |
| Detector base                     | USB 501 or USB 502                                                                |
| Signal transmission               | serial, two-wire technology                                                       |
| Short circuit isolator            | integrated                                                                        |
| Response behaviour                | in accordance with EN 54-5 (category A1, A2, B, Index S and R), EN 54-7, EN 54-29 |
| Tone types                        |                                                                                   |
| DIN tone                          | 1200 ~ 500 Hz                                                                     |
| Slow Whoop                        | 500 ~ 1200 Hz                                                                     |
| Sweden tone                       | 660 Hz (150 ms on, 150 ms off)                                                    |
| Continuous tone                   | 990 Hz                                                                            |
| Volume (DIN tone)                 | 92 dB/81 dB/69 dB                                                                 |
| Degree of protection with USB 502 | IP22                                                                              |
| Ambient temperature               |                                                                                   |
| Manufacturer specification        | –25 °C to +65 °C                                                                  |
| Approved by VdS                   | –10 °C to +65 °C                                                                  |
| Relative humidity                 | 10 to 95 % non-condensing                                                         |
| Air speed                         | max. 20 m/s                                                                       |
| Case material                     | ABS/PC                                                                            |
| Case colour                       | white, similar to RAL 9003                                                        |
| Dimensions                        | 119 × 58 mm (Ø × H)                                                               |
| Weight                            | 135 g                                                                             |
| VdS approval                      | G213051                                                                           |
| Declaration of Performance (DoP)  | CPR-30-21-016                                                                     |

## MTD 533X-SP/-SP EE multiple sensor detector



**No.: 30-5000010-01**  
**No.: 30-5000010-03**

The multiple sensor detector MTD 533X-SP/-SP EE is a combined smoke and heat detector with integrated tone and speech output and is used to detect and signal a fire in buildings.

The detector provides early detection of smouldering and open fires by detecting and evaluating both fire characteristics smoke and heat. The CUBUS levelling automatically adjusts to the ambient conditions.

The Tyndall principle (scattered light) is used for smoke detection and for heat detection the NTC sensor principle is used. If the signal values specified in the detector are exceeded, the corresponding message is sent to the fire alarm control panel.

The detector has four adjustable tone types (DIN tone, Slow Whoop, Sweden tone and continuous tone) at three adjustable volume levels for different ambient conditions.

The speech output is done with three possible text messages in two adjustable volumes.

MTD 533X-SP: German, English, French, Italian, Polish, Romanian, Russian

MTD 533X-SP EE: German, English, Dutch, Czech, Hungarian, Swedish, Croatian, Turkish, Hebrew, Slovak.

From version -04, an additional protective grille PG 533 PU11 can be attached for environments with heavy insect loads.

Fitting a detector heater (not approved by VdS) enables the operation at low temperature to prevent icing or condensation.

|                                   |                                                                                   |
|-----------------------------------|-----------------------------------------------------------------------------------|
| Operating voltage range           | 12.6 to 31 V DC (without modulation deviation)                                    |
| Quiescent current                 | max. 0.15 mA, 0.12 mA typ.                                                        |
| Alarm output                      | programmable:                                                                     |
| Output current                    | 0.1 mA/1 mA/5 mA                                                                  |
| Current consumption               | 0.7 mA/2.1 mA/7.5 mA                                                              |
| Alarm LED active                  | max. 2.5 mA                                                                       |
| Output voltage                    | 5 V or 6.8 V DC                                                                   |
| Detector base                     | USB 501 or USB 502                                                                |
| Signal transmission               | serial, two-wire technology                                                       |
| Short circuit isolator            | integrated                                                                        |
| Response behaviour                | in accordance with EN 54-5 (category A1, A2, B, Index S and R), EN 54-7, EN 54-29 |
| Tone types                        |                                                                                   |
| DIN tone                          | 1200 ~ 500 Hz                                                                     |
| Slow Whoop                        | 500 ~ 1200 Hz                                                                     |
| Sweden tone                       | 660 Hz (150 ms on, 150 ms off)                                                    |
| Continuous tone                   | 990 Hz                                                                            |
| Volume (DIN tone)                 | 92 dB/81 dB/69 dB                                                                 |
| Speech output                     | three text messages selectable                                                    |
| Volume                            | 70 to 78 dB/66 to 74 dB                                                           |
| Degree of protection with USB 502 | IP22                                                                              |
| Ambient temperature               |                                                                                   |
| Manufacturer specification        | –25 °C to +65 °C                                                                  |
| Approved by VdS                   | –10 °C to +65 °C                                                                  |
| Relative humidity                 | 10 to 95 % non-condensing                                                         |
| Air speed                         | max. 20 m/s                                                                       |
| Case material                     | ABS/PC                                                                            |
| Case colour                       | white, similar to RAL 9003                                                        |
| Dimensions                        | 119 × 58 mm (Ø × H)                                                               |
| Weight                            | 135 g                                                                             |
| VdS approval                      | G213051                                                                           |
| Declaration of Performance (DoP)  | CPR-30-13-023                                                                     |



## CMD 533X multiple sensor detector



**No.: 30-5000006-01**

The CMD 533X multiple sensor detector is a combined smoke, heat and carbon monoxide detector and is used to detect a fire in buildings.

The detector provides early detection of smouldering and open fires by detecting and evaluating both fire characteristics smoke and heat. The CUBUS levelling automatically adjusts to the ambient conditions.

The Tyndall principle (scattered light) is used for smoke detection and for heat detection the NTC sensor principle is used. If the signal values specified in the detector are exceeded, the corresponding message is sent to the fire alarm control panel.

Integrated alarm filter to reduce deceptive alarms and permanent monitoring of all integrated sensors that enable multi-standard use on three parallel channels (smoke, heat, CO).

Fitting a detector heater (not approved by VdS) enables the operation at low temperature to prevent icing or condensation.

|                                   |                                                                                             |
|-----------------------------------|---------------------------------------------------------------------------------------------|
| Operating voltage range           | 12.6 to 31 V DC (without modulation deviation)                                              |
| Quiescent current                 | max. 0.19 mA, 0.15 mA typ.                                                                  |
| Alarm output                      | programmable:                                                                               |
| Output current                    | 0.1 mA/1 mA/5 mA                                                                            |
| Current consumption               | 0.7 mA/2.1 mA/7.5 mA                                                                        |
| Alarm LED active                  | max. 2.5 mA                                                                                 |
| Output voltage                    | 5 V or 6.8 V DC                                                                             |
| Detector base                     | USB 501 or USB 502                                                                          |
| Signal transmission               | serial, two-wire technology                                                                 |
| Short circuit isolator            | integrated                                                                                  |
| Response behaviour                | in accordance with EN 54-5 (category A1, A2, B, Index S and R), EN 54-7, EN 54-29, EN 54-30 |
| CO gas sensitivity                | 40 ppm                                                                                      |
| Degree of protection with USB 502 | IP40                                                                                        |
| Ambient temperature               | -20 °C to +50 °C                                                                            |
| Storage temperature:              | 0 °C to +20 °C                                                                              |
| Relative humidity                 | 10 to 95 %                                                                                  |
| Air speed                         | max. 20 m/s                                                                                 |
| Case material                     | ABS/PC                                                                                      |
| Case colour                       | white, similar to RAL 9003                                                                  |
| Dimensions                        | 119 × 58 mm (Ø × H)                                                                         |
| Weight                            | 125 g                                                                                       |
| VdS approval                      | G212156                                                                                     |
| Declaration of Performance (DoP)  | CPR-30-21-001                                                                               |

**No.: 30-5500005-01**

## LKM-SET duct smoke detector case

The duct smoke detector is used for detecting smoke from fires in air ducts and consists of a plastic case with a built-in USB 502-1 detector base, an inlet pipe and a LKM 593X system detector.

The LKM 593X is designed for use in ventilation ducts from 150 mm to 3 m wide, or in circular ducts with a diameter of 200 mm to 3 m.

The detector base and all necessary plugs and seals are included; the duct smoke detector LKM 593X must be ordered separately.

|                                                 |                                              |
|-------------------------------------------------|----------------------------------------------|
| Area of use                                     | ventilation ducts                            |
| Operating voltage range                         | 12 to 31 V DC (without modulation deviation) |
| Quiescent current                               | max. 0.15 mA, 0.12 mA typ.                   |
| Ventilation duct rectangular                    | side lengths 150 mm to 3 m                   |
| Ventilation duct round                          | Ø 200 mm up to 3 m                           |
| Ventilation pipe length                         | 140 to 345 mm                                |
| Apertures for fittings<br>for inlet/outlet pipe | 2 × Ø 28 – 30 mm, 150 mm distance            |
| Fastening the case                              | 2 × max. Ø 6 mm, 206 mm distance             |
| Cable inlet                                     | 4 × Ø 6 to 10 mm                             |
| Suitable for detector type                      | LKM 593X                                     |
| Air speed                                       | max. 20 m/s                                  |
| Degree of protection on duct surface            | IP54                                         |
| Ambient temperature                             |                                              |
| Manufacturer specification                      | –25 °C to +65 °C                             |
| Approved by VdS                                 | –10 °C to +65 °C                             |
| Case material                                   | PC/anodised aluminium pipe                   |
| Case colour                                     | blue/transparent                             |
| Dimensions without pipe                         | 95.3 × 247 × 135 mm (H×W×D)                  |
| Weight                                          |                                              |
| with pipe                                       | approx. 485 g                                |
| without pipe                                    | approx. 392 g                                |
| VdS approval                                    | G214124                                      |
| Declaration of Performance (DoP)                | CPR-30-13-025                                |



**No.: 30-5500001-01**

## LKM 593X duct smoke detector

Exclusively for use in the LKM-SET.

|                                     |                                                |
|-------------------------------------|------------------------------------------------|
| Operating voltage range             | 12.6 to 31 V DC (without modulation deviation) |
| Quiescent current                   | 0.15 mA typ.                                   |
| Alarm current                       | 2.65 mA typ.                                   |
| Degree of protection in the LKM-SET | IP54                                           |
| Ambient temperature                 | -25 °C to +60 °C                               |
| Case material                       | ABS/PC                                         |
| Case colour                         | white, similar to RAL 9003                     |
| Dimensions                          | 119 × 58 mm (Ø × H)                            |
| Weight                              | 125 g                                          |
| VdS approval                        | G214124                                        |
| Declaration of Performance (DoP)    | CPR-30-13-025                                  |



**No.: 30-4100005-01**

## USB 502-1 detector base

Detector base for surface mounting in dry and damp rooms.

A four pin terminal block can be fitted in the designated snap-fit holder to form additional isolation points.

The detector base contains a green terminal block with a ring contact, the loop circuit is closed even without the detector being inserted.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Area of use                      | dry and damp rooms                             |
| Mounting                         | Surface mounting                               |
| Connection                       | screw-type terminals, max. 2.5 mm <sup>2</sup> |
| Degree of protection             | depending on the used detector                 |
| Ambient temperature              |                                                |
| Manufacturer specification       | –25 °C to +65 °C                               |
| Approved by VdS                  | –10 °C to +65 °C                               |
| Relative humidity                | 10 to 95 % non-condensing                      |
| Case material                    | ABS/PC                                         |
| Case colour                      | white, similar to RAL 9003                     |
| Dimensions                       | 119 × 28 mm (Ø × H)                            |
| Weight                           | approx. 70 g                                   |
| VdS approval                     | part of detector approvals                     |
| Declaration of Performance (DoP) | part of detector approvals                     |

USB 502-6 detector base without base contact



No.: 30-4100005-06

Detector base for surface mounting in dry and damp rooms.

A four pin terminal block can be fitted in the designated snap-fit holder to form additional isolation points.

The detector base contains a black terminal block without a ring contact, the loop circuit is only closed when the detector is inserted.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Area of use                      | dry and damp rooms                             |
| Mounting                         | Surface mounting                               |
| Connection                       | screw-type terminals, max. 2.5 mm <sup>2</sup> |
| Degree of protection             | depending on the used detector                 |
| Ambient temperature              |                                                |
| Manufacturer specification       | –25 °C to +65 °C                               |
| Approved by VdS                  | –10 °C to +65 °C                               |
| Relative humidity                | 10 to 95 % non-condensing                      |
| Case material                    | ABS/PC                                         |
| Case colour                      | white, similar to RAL 9003                     |
| Dimensions                       | 119 × 28 mm (Ø × H)                            |
| Weight                           | approx. 70 g                                   |
| VdS approval                     | part of detector approvals                     |
| Declaration of Performance (DoP) | part of detector approvals                     |

**No.: 30-4100005-02**

## USB 502-2 detector base for cavity ceiling

Detector base for flush mounting in each standard cavity ceiling consisting of the standard base USB 502-1, an installation ring with fastening clips, a collar and a bezel ring.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Area of use                      | dry rooms, cavity ceiling installation         |
| Mounting                         | Flush-mounted                                  |
| Connection                       | screw-type terminals, max. 2.5 mm <sup>2</sup> |
| Degree of protection             | depending on the used detector                 |
| Ambient temperature              |                                                |
| Manufacturer specification       | –25 °C to +65 °C                               |
| Approved by VdS                  | –10 °C to +65 °C                               |
| Relative humidity                | 10 to 95 % non-condensing                      |
| Case material                    | ABS/PC                                         |
| Case colour                      | white, similar to RAL 9003                     |
| Dimensions                       | 158 × 55 mm (Ø × H)                            |
| Weight                           | approx. 180 g                                  |
| VdS approval                     | part of detector approvals                     |
| Declaration of Performance (DoP) | part of detector approvals                     |

## USB 502-3 detector base for damp rooms



**No.: 30-4100005-03**

Detector base for surface mounting in damp rooms. Use in environments with damp ceilings consisting of a installation box with four cable inlets, standard base USB 502-1 and a sealing ring made of closed cell rubber.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Area of use                      | damp rooms                                     |
| Mounting                         | Surface mounting                               |
| Connection                       | screw-type terminals, max. 2.5 mm <sup>2</sup> |
| Degree of protection             | depending on the used detector                 |
| Ambient temperature              |                                                |
| Manufacturer specification       | –25 °C to +65 °C                               |
| Approved by VdS                  | –10 °C to +65 °C                               |
| Relative humidity                | 10 to 95 % non-condensing                      |
| Case material                    | ABS/PC                                         |
| Case colour                      | white, similar to RAL 9003                     |
| Dimensions                       | 124 × 53 mm (Ø × H)                            |
| Weight                           | approx. 150 g                                  |
| VdS approval                     | part of detector approvals                     |
| Declaration of Performance (DoP) | part of detector approvals                     |

**No.: 30-4100005-04**

## USB 502-4 detector base for concrete installation

Detector base for flush mounting in concrete. Is mounted on the formwork, poured into concrete and consists of the standard base USB 502-1, a concrete box, mounting ring with sleeve and gasket insert and a blind ring. The installation cable can be feed in via the concrete box.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Area of use                      | damp rooms                                     |
| Mounting                         | Flush-mounted                                  |
| Connection                       | screw-type terminals, max. 2.5 mm <sup>2</sup> |
| Degree of protection             | depending on the used detector                 |
| Ambient temperature              |                                                |
| Manufacturer specification       | –25 °C to +65 °C                               |
| Approved by VdS                  | –10 °C to +65 °C                               |
| Relative humidity                | 10 to 95 % non-condensing                      |
| Case material                    | ABS/PC                                         |
| Case colour                      | white, similar to RAL 9003                     |
| Dimensions                       | 158 × 97 mm (Ø × H)                            |
| Weight                           | approx. 220 g                                  |
| VdS approval                     | part of detector approvals                     |
| Declaration of Performance (DoP) | part of detector approvals                     |



## USB 502-5 detector base for intermediate floors



**No.: 30-4100005-05**

Detector base for installation in cable ducts and intermediate floors. Consists of a pipe clamp which can be used for attaching the base to pipes, braces or the like. The base can be rotated in order to align the detector.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Area of use                      | Intermediate floors and cable ducts            |
| Mounting                         | Surface mounting                               |
| Connection                       | screw-type terminals, max. 2.5 mm <sup>2</sup> |
| Degree of protection             | depending on the used detector                 |
| Ambient temperature              |                                                |
| Manufacturer specification       | –25 °C to +65 °C                               |
| Approved by VdS                  | –10 °C to +65 °C                               |
| Relative humidity                | 10 to 95 % non-condensing                      |
| Case material                    | ABS/PC                                         |
| Case colour                      | white, similar to RAL 9003                     |
| Dimensions                       | 206 × 73 mm (Ø × H)                            |
| Weight                           | approx. 220 g                                  |
| VdS approval                     | part of detector approvals                     |
| Declaration of Performance (DoP) | part of detector approvals                     |

**No.: 20-2100019-01**

## USB 502-20 detector base with illuminated ring

Detector base for surface mounting with integrated illuminated ring. The optical light pipe is integrated in the lower area of the base and provides an additional individual controllable visual indication to the alarm LED of the inserted detector.

The detector base contains a black terminal block without a ring contact, the loop circuit is only closed when the detector is inserted.

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| Area of use                            | dry and damp rooms                             |
| Mounting                               | Surface mounting                               |
| Current consumption                    | 0.9 mA typ.                                    |
| Signal transmission                    | serial, two-wire technology                    |
| Illuminated ring (not approved by VdS) | red (alarm)                                    |
| Colour                                 | 360°                                           |
| Visibility                             | 1.2 to 3 Hz                                    |
| Flash frequency                        | approx. 1 cd                                   |
| Light intensity                        |                                                |
| Connection                             | screw-type terminals, max. 2.5 mm <sup>2</sup> |
| Degree of protection                   | depending on the used detector                 |
| Ambient temperature                    |                                                |
| Manufacturer specification             | –25 °C to +65 °C                               |
| Approved by VdS                        | –10 °C to +65 °C                               |
| Relative humidity                      | 10 to 95 % non-condensing                      |
| Case material                          | ABS/PC                                         |
| Case colour                            | white, similar to RAL 9003                     |
| Dimensions                             | 118 × 28 mm (Ø × H)                            |
| Weight                                 | approx. 90 g                                   |
| VdS approval                           | part of detector approvals                     |
| Declaration of Performance (DoP)       | part of detector approvals                     |



**No.: Upon request**

## Coloured detectors

All multiple sensor detectors and detector bases are also available in coloured versions, the minimum order quantity is 15 pieces each. When ordering, please specify the type designation of the detector (respectively the detector base) with addition MC and the desired colour from the RAL Classic colour system (four-digit RAL number).

Example: MTD 533X-S MC – RAL 3001



### NOTE

All metal-containing and all fluorescent paints in this colour system are unavailable:

- RAL 1013 (pearl white)
- RAL 1035 (pearl beige)
- RAL 1036 (pearl gold)
- RAL 2013 (pearl orange)
- RAL 3032 (pearl ruby red)
- RAL 3033 (pearl pink)
- RAL 4011 (pearl violet)
- RAL 4012 (pearl blackberry)
- RAL 5025 (pearl gentian)
- RAL 5026 (pearl midnight blue)
- RAL 6035 (pearl green)
- RAL 6036 (pearl opal green)
- RAL 7048 (pearl mouse grey)
- RAL 8029 (pearl copper)
- RAL 9006 (pearl white aluminium)
- RAL 9007 (grey aluminium)
- RAL 9022 (pearl light grey)
- RAL 9023 (pearl dark grey)
- RAL 1026 (luminous yellow)
- RAL 2005 (luminous orange)
- RAL 2007 (luminous bright orange)
- RAL 3024 (luminous red)
- RAL 3026 (luminous bright red)

**No.: FG020480**

## Detector heater for USB

The detector heater allows the operation of multiple sensor detectors in critical ambient conditions, such as icing or moisture condensation in cold stores, collectors, cheese cellars, power stations, loading ramps. The temperature of the detector is increased by approximately 2 °C above the ambient temperature, which significantly reduces the risk of condensation. An external power supply unit is required for the detector heater's power supply, as this cannot be powered directly from the loop. The wiring is done via the base terminal block and attached to the detector base using cable tie mounts. As an alternative to the base terminal block, other terminals can also be used.

|                             |                                |
|-----------------------------|--------------------------------|
| Operating voltage range     | 20 to 30 V DC                  |
| Residual ripple             | max. 2 V                       |
| Operating current           | 35 to 55 mA                    |
| Power                       | 1.2 W                          |
| Resistance                  | 580 Ω                          |
| Wire cross section/terminal | 2 × 0.5 to 2.5 mm <sup>2</sup> |
| Ambient temperature         | –30 °C to +40 °C               |

**No.: FG020205, FG020206**

## Baffle plate for riser ducts

Hot-dip galvanized sheet steel plate for improving detection properties of smoke detectors in riser ducts, including drill holes for fitting and cable inlet for installation.

|            |                                         |
|------------|-----------------------------------------|
| Material   | sheet steel, 1.2 mm, hot-dip galvanised |
| Dimensions |                                         |
| FG020205   | 130 × 130 mm (H × W)                    |
| FG020206   | 300 × 300 mm (H × W)                    |

**No.: FG020520**

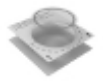
## Mounting bracket for detector base

The console is hinged with an angle of tilt of 0 to 90 degrees, and adjustable in height between 200 to 350 millimetres. The detector base is attached using two M4 screws. Detector not included.

|                   |                                          |
|-------------------|------------------------------------------|
| Adjustable height | 200 to 350 mm with inbus 4 mm            |
| Inclination angle | 0 to 90° with inbus 3 mm                 |
| Case material     | sheet steel, powder coated               |
| Case colour       | grey, RAL 7035                           |
| Dimensions        | 200 to 350 × 105 × 175 mm<br>(H × W × L) |

## X-LINE point detectors and detector bases

|                                                                                     | Designation                                                      | Type           | Article no.   |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------|---------------|
|    | <b>MTD 533X multiple sensor detector</b>                         | MTD 533X       | 30-5000003-01 |
|    | <b>MTD 533X CP multiple sensor detector</b>                      | MTD 533X CP    | 30-5000003-51 |
|    | <b>MTD 533X-S multiple sensor detector</b>                       | MTD 533X-S     | 30-5000007-01 |
|    | <b>MTD 533X-SP multiple sensor detector</b>                      | MTD 533X-SP    | 30-5000010-01 |
|    | <b>MTD 533X-SP EE multiple sensor detector</b>                   | MTD 533X-SP EE | 30-5000010-03 |
|    | <b>Multiple sensor detector with increased insect protection</b> | MTD 533X PG    | 30-5000025-01 |
|  | <b>CMD 533X multiple sensor detector</b>                         | CMD 533X       | 30-5000006-01 |
|  | <b>LKM case (without detector)</b>                               | LKM-SET        | 30-5500005-01 |
|  | <b>LKM 593X duct smoke detector</b>                              | LKM 593X       | 30-5500001-01 |
|  | <b>Detector base USB 502-1</b>                                   | USB 502-1      | 30-4100005-01 |
|  | <b>Detector base USB 502-6 without base contact</b>              | USB 502-6      | 30-4100005-06 |
|  | <b>Detector base USB 502-2 for cavity ceiling</b>                | USB 502-2      | 30-4100005-02 |
|  | <b>Detector base USB 502-3 for damp rooms</b>                    | USB 502-3      | 30-4100005-03 |
|  | <b>Detector base USB 502-4 for concrete installation</b>         | USB 502-4      | 30-4100005-04 |
|  | <b>Detector base USB 502-5 for intermediate floors</b>           | USB 502-5      | 30-4100005-05 |
|  | <b>Detector base USB 502-20 with illuminated ring</b>            | USB 502-20     | 20-2100019-01 |

|                                                                                     | Designation                                                                                                                                 | Type           | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------|
|    | <b>Detector heater for detector base USB</b>                                                                                                | FDBH291        | FG020480      |
|                                                                                     | <b>Adhesive cable tie mounts for detector heater</b>                                                                                        | MM KBH KL      | MM000047      |
|    | <b>Baffle plate for riser ducts</b><br>130 × 130 mm                                                                                         | STBLECH        | FG020205      |
|    | <b>Baffle plate for riser ducts</b><br>300 × 300 mm                                                                                         | STBLECH G      | FG020206      |
|    | <b>Mounting bracket for detector base</b>                                                                                                   | MMK 200/350    | FG020520      |
|    | <b>Support point clamp for USB 502-x detector base</b>                                                                                      | USB 502 STK    | 31-3100002-01 |
|    | <b>Connection strip black</b><br>10 pcs. without loop contact                                                                               | STE 01-BK PU10 | 30-4100002-01 |
|   | <b>Rubber cap made of transparent silicon to protect USB detector base against moisture.</b>                                                | G KAPPE 501    | FG020189      |
|  | <b>Mounting set for rubber cap</b><br>1 mounting bracket, 2 spacers and 2 M4 × 16 cylinder screws for mounting detector bases in damp rooms | MON SET GK     | MM000250      |
|  | <b>Dust cover</b><br>for MTD 533X and CMD 533X                                                                                              | DDC 533        | FG030398      |
|  | <b>Protective cage for detector</b><br>to prevent mechanical damage to the detector.<br>Dimensions: 160 × 110 mm (W×H)                      | SKORB          | FG020026      |
|  | <b>Protective grille for MTD 533X-S/-SP/-SP EE</b>                                                                                          | PG 533 PU11    | 30-4100003-01 |
|  | <b>Inscription label for detector base USB 50x-x</b><br>for labels up to 47 × 75 mm, white similar RAL 9003                                 | DNP 521/531    | FG030138      |
|  | <b>Labelling ring grey for heat detectors</b><br>1 PU = 1 package á 50 sticker, Ø 53 mm                                                     | DILH-VE50      | 30-6800115-01 |
|  | <b>Labelling strip for detector base USB</b><br>white, similar to RAL 9003, adhesive surface:<br>44 × 75 mm                                 | DNP 502        | 31-3100001-01 |
|  | <b>Label "Brandmelder" ZWD/ZWB</b><br>(100 × 23 mm) red/white, detector labelling in false ceilings                                         | S ZWBD         | 20-4900031-01 |

|                                                                                   | Designation                                                                           | Type       | Article no.   |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------|---------------|
|  | <b>Detector label for large room heights</b><br>with imprint (120 × 175 mm)           | S MBK GRH  | FG28399       |
|  | <b>Detector label for large room heights</b><br>without imprint (120 × 175 mm)        | S MBK GRH2 | FG28398       |
|  | <b>Detector labelling card</b><br>80 × 50 mm                                          | S BKKL     | 20-4900032-01 |
|  | <b>Mounting adapter for false ceiling</b><br>for mounting detectors on false ceilings | MON-AD-ZWD | 20-2400120-01 |

## 8.1.2 Fire detectors for hazardous areas

The following conventional point detectors cannot be directly addressed.

### MMD 130 Ex-i multiple sensor detector



No.: 30-5000005-01

The multiple sensor detector MMD 130 Ex-i is used in conjunction with the detector bases USB 502-7 Ex-i or USB 502-8 Ex-i to signal a fire alarm in hazardous areas of zones 1, 2 and 22 (IIIB). The connection is made with the interposition of an intrinsic safety barrier to a stub line (zone addressing).

|                                  |                                                                         |
|----------------------------------|-------------------------------------------------------------------------|
| Operating voltage range          | 10 to 28 V DC                                                           |
| Quiescent current                | 0.15 mA typ.                                                            |
| Alarm current                    | 27 mA typ.                                                              |
| Signal transmission              | Two-wire stub line, current increase                                    |
| Response behaviour               | in accordance with EN 54-5 (category A1, A2, B, Index S and R), EN 54-7 |
| Degree of protection             | IP44                                                                    |
| Ambient temperature              |                                                                         |
| Manufacturer specification       | –20 °C to +65 °C                                                        |
| Approved by VdS                  | –10 °C to +65 °C                                                        |
| Relative humidity                | 10 to 95 % non-condensing                                               |
| Dimensions                       |                                                                         |
| with USB 502-7 Ex-i base         | 175 × 96 mm (Ø × H)                                                     |
| with USB 502-8 Ex-i base         | 119 × 68 mm (Ø × H)                                                     |
| Case material                    | ABS/PC                                                                  |
| Case colour                      | white, similar to RAL 9003                                              |
| Weight                           |                                                                         |
| MMD 130 Ex-i                     | approx. 120 g                                                           |
| USB 502-7 Ex-i                   | approx. 170 g                                                           |
| USB 502-8 Ex-i                   | approx. 70 g                                                            |
| Ex-Designation                   | II 2G Ex ib op is IIC T4 Gb<br>II 3D Ex ib op is IIIB T130 °C Dc        |
| ATEX approval                    | EPS 11 ATEX 1346 X                                                      |
| VdS approval                     | G211094                                                                 |
| Declaration of Performance (DoP) | CPR-30-21-019                                                           |





**No.: 30-4100005-07**

## USB 502-7 detector base for hazardous areas

Detector base for surface mounting in damp rooms. In conjunction with the MMD 130 Ex-i multi sensor detector to signal a fire alarm in hazardous areas of zones 1, 2 and 22 (IIIB). The wiring is made with the interposition of an intrinsic safety barrier to a stub line (zone addressing). Consisting of a installation box with four cable inlets (two closing plugs M20 and two blue cable glands M16), standard base USB 502-6 and a sealing ring made of closed cell rubber.

The detector base contains a black terminal block without a ring contact, the loop circuit is only closed when the detector is inserted.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Area of use                      | damp rooms                                     |
| Mounting                         | Surface mounting                               |
| Connection                       | screw-type terminals, max. 2.5 mm <sup>2</sup> |
| Degree of protection             | depending on the used detector                 |
| Ambient temperature              |                                                |
| Manufacturer specification       | –20 °C to +65 °C                               |
| Approved by VdS                  | –10 °C to +65 °C                               |
| Relative humidity                | 10 to 95 % non-condensing                      |
| Case material                    | ABS/PC                                         |
| Case colour                      | white, similar to RAL 9003                     |
| Dimensions                       | 175 × 52 mm (Ø × H)                            |
| Weight                           | approx. 170 g                                  |
| VdS approval                     | part of detector approvals                     |
| Declaration of Performance (DoP) | part of detector approvals                     |

**No.: 30-4100005-08**

## USB 502-8 detector base for hazardous areas

Detector base equipped for surface mounting in dry rooms. In conjunction with the MMD 130 Ex-i multi sensor detector to signal a fire alarm in hazardous areas of zones 1, 2 and 22 (IIIB). The wiring is made with the interposition of an intrinsic safety barrier to a stub line (zone addressing).

The detector base contains a black terminal block without a ring contact, the loop circuit is only closed when the detector is inserted.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Area of use                      | dry rooms                                      |
| Mounting                         | Surface mounting                               |
| Connection                       | screw-type terminals, max. 2.5 mm <sup>2</sup> |
| Degree of protection             | depending on the used detector                 |
| Ambient temperature              |                                                |
| Manufacturer specification       | –20 °C to +65 °C                               |
| Approved by VdS                  | –10 °C to +65 °C                               |
| Relative humidity                | 10 to 95 % non-condensing                      |
| Case material                    | ABS/PC                                         |
| Case colour                      | white, similar to RAL 9003                     |
| Dimensions                       | 119 × 28 mm (Ø × H)                            |
| Weight                           | approx. 70 g                                   |
| VdS approval                     | part of detector approvals                     |
| Declaration of Performance (DoP) | part of detector approvals                     |

## Conventional point detectors and detector bases

|                                                                                   | Designation                                                           | Type            | Article no.   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------|---------------|
|  | <b>MMD 130 Ex-i multiple sensor detector</b><br>for hazardous areas   | MMD 130 Ex-i    | 30-5000005-01 |
|  | <b>Detector base USB 502-7 for hazardous areas</b><br>for MMD 130Ex-i | USB 502-7 EX-i  | 30-4100005-07 |
|  | <b>Ex-e screw cap M16</b><br>for USB 502-7                            | GHG9601952R0111 | 20-2400030-01 |
|  | <b>Detector base USB 502-8 for hazardous areas</b><br>for MMD 130Ex-i | USB 502-8 EX-i  | 30-4100005-08 |

## 8.2 Manual call points

Manual call points must be placed in a clearly visible position along escape and rescue routes, e.g. in corridors, stairwells, entrance halls and are designed for manual actuation of a fire alarm.

### 8.2.1 Integral X-LINE

The following manual call points are devices on the X-LINE loop and can be individually addressed.

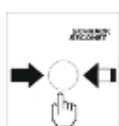
#### MCP 535X-1 and MCP 535X-3 manual call point



No.: 30-5700007-01



No.: 30-5700007-03



No.: FG030230

Manual call point in accordance with EN 54-11 (type B) for manually triggering a fire alarm in a red plastic case, suitable for connection to the loop. The alarm is triggered by smashing the glass panel and pressing the button. The push button remains locked. The built-in LED indicates the detector's triggered state. The detector can be installed on the same loop as point fire detectors thanks to the short circuit isolator that is integrated as standard. The degree of protection of the detector can be increased to IP54 by incorporating a rubber seal.

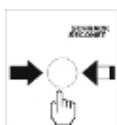
The insert sheet (hand symbol), outer label and the key to open the door must be ordered separately.

|                                  |                                                                           |
|----------------------------------|---------------------------------------------------------------------------|
| Operating voltage range          | 12.6 to 31 V DC (without modulation deviation)                            |
| Quiescent current                | max. 0.12 mA                                                              |
| Alarm current                    | max. 2.5 mA                                                               |
| Functional principle             | manual call point type B (indirect actuation) in accordance with EN 54-11 |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup>                            |
| Signal transmission              | serial, two-wire technology                                               |
| Short circuit isolator           | integrated                                                                |
| Degree of protection             | IP52 (optional IP54)                                                      |
| Ambient temperature              |                                                                           |
| Manufacturer specification       | –25 °C to +65 °C                                                          |
| Approved by VdS                  | –10 °C to +65 °C                                                          |
| Case material                    | Plastic                                                                   |
| Case colour                      | red, RAL 3001<br>blue, RAL 5005                                           |
| Dimensions                       | 134 × 134 × 36 mm (H × W × D)                                             |
| Weight                           | approx. 230 g                                                             |
| VdS approval                     | G210095                                                                   |
| Declaration of Performance (DoP) | CPR-30-13-007                                                             |

## MCP 535X-5 manual triggering device



No.: 30-5700007-05



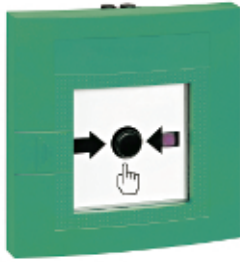
No.: FG030230

Manual triggering device for manual actuation of an extinguishing process with gaseous extinguishing agents as corresponding to EN 12094-3 for connection to the loop. In yellow plastic case with glass pane and freely selectable labelling. The gas extinguishing system is triggered by smashing the glass panel and pressing the button. The push button remains locked, and the actuated state is indicated with the built-in LED. The detector can be installed on the same loop as point fire detectors thanks to the short circuit isolator that is integrated as standard. Labelling is carried out with stickers.

The insert sheet (hand symbol), outer label and the key to open the door must be ordered separately.

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Operating voltage range          | 12.6 to 31 V DC (without modulation deviation)         |
| Quiescent current                | max. 0.12 mA                                           |
| Alarm current                    | max. 2.5 mA                                            |
| Functional principle             | manual triggering device in accordance with EN 12094-3 |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup>         |
| Signal transmission              | serial, two-wire technology                            |
| Short circuit isolator           | integrated                                             |
| Degree of protection             | IP52 (optional IP54)                                   |
| Ambient temperature              |                                                        |
| Manufacturer specification       | –25 °C to +65 °C                                       |
| Approved by VdS                  | –10 °C to +65 °C                                       |
| Case material                    | Plastic                                                |
| Case colour                      | yellow, RAL 1003                                       |
| Dimensions                       | 134 × 134 × 36 mm (H × W × D)                          |
| Weight                           | approx. 230 g                                          |
| VdS approval                     | G210096                                                |
| Declaration of Performance (DoP) | CPR-30-13-008                                          |

## MCP 535X-15 actuation button



**No.: 30-5700007-15**



**No.: FG030230**

Green push button for triggering fire incident control systems or as an secondary flooding device to release additional extinguishing agents after a gas extinguishing system has just been flooded. After breaking the glass panel, the push button can be pushed and thereby locked into the engaged position. Labelling is carried out with stickers.

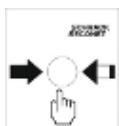
The insert sheet (hand symbol), outer label and the key to open the door must be ordered separately.

|                                  |                                                                         |
|----------------------------------|-------------------------------------------------------------------------|
| Operating voltage range          | 12.6 to 31 V DC (without modulation deviation)                          |
| Quiescent current                | max. 0.12 mA                                                            |
| Alarm current                    | max. 2.5 mA                                                             |
| Functional principle             | Actuation of fire incident control systems or secondary flooding device |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup>                          |
| Signal transmission              | serial, two-wire technology                                             |
| Short circuit isolator           | integrated                                                              |
| Degree of protection             | IP52 (optional IP54)                                                    |
| Ambient temperature              |                                                                         |
| Manufacturer specification       | –25 °C to +65 °C                                                        |
| Approved by VdS                  | –10 °C to +65 °C                                                        |
| Case material                    | Plastic                                                                 |
| Case colour                      | green, RAL 6002                                                         |
| Dimensions                       | 134 × 134 × 36 mm (H × W × D)                                           |
| Weight                           | approx. 230 g                                                           |
| VdS approval                     | G210097                                                                 |
| Declaration of Performance (DoP) | CPR-30-13-024                                                           |

## MCP 535X-7 stop device



No.: 30-5700007-07



No.: FG030230

Stop device for manual interruption of the triggering of an extinguishing process with gaseous extinguishing agents during the pre-warning period for connection to the loop. In blue plastic case with glass pane and freely selectable labelling. By smashing the glass panel and pressing the button, the extinguishing process is interrupted, and the control element does not lock. The detector can be installed on the same loop as point fire detectors thanks to the short circuit isolator that is integrated as standard. Labelling is carried out with stickers.

The insert sheet (hand symbol), outer label and the key to open the door must be ordered separately.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Operating voltage range          | 12.6 to 31 V DC (without modulation deviation) |
| Quiescent current                | max. 0.12 mA                                   |
| Alarm current                    | max. 2.5 mA                                    |
| Functional principle             | Stop device                                    |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup> |
| Signal transmission              | serial, two-wire technology                    |
| Short circuit isolator           | integrated                                     |
| Degree of protection             | IP54                                           |
| Ambient temperature              |                                                |
| Manufacturer specification       | –25 °C to +65 °C                               |
| Approved by VdS                  | –10 °C to +65 °C                               |
| Case material                    | Plastic                                        |
| Case colour                      | blue, RAL 5005                                 |
| Dimensions                       | 134 × 134 × 36 mm (H × W × D)                  |
| Weight                           | approx. 230 g                                  |
| VdS approval                     | G210097                                        |
| Declaration of Performance (DoP) | CPR-30-13-022                                  |

## Weather-resistant case for MCP 535X



No.: FG030235

Provides additional protection against the ingress of water on the top or back of MCP 535X series manual call points in case used in demanding ambient conditions (outdoors). The weather-resistant case contains four holes and can be screwed in place together with the manual call point.

|               |                                 |
|---------------|---------------------------------|
| Case material | sheet steel, 1 mm               |
| Case colour   | red, RAL 3001<br>blue, RAL 5005 |
| Dimensions    | 160 × 184 × 100 mm (H × W × D)  |

## MCP 545X manual call point



No.: 20-2302000-01



No.: 20-2302002-01



No.: 20-2302202-01

The MCP 545X manual call point is used to manually trigger a fire alarm, complies with EN 54-11 (type A) and EN 54-17, and is suitable for connection to the X-LINE.

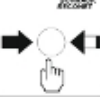
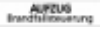
The alarm is triggered by pressing in the plastic plate. The triggered state is indicated by the built-in LED as well as the now visible yellow line. It remains until reset.

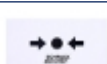
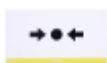
Delivery includes reset key and fitting materials.

|                                  |                                                                                                |
|----------------------------------|------------------------------------------------------------------------------------------------|
| Operating voltage range          | 12.6 to 31 V DC (without modulation deviation)                                                 |
| Quiescent current                | max. 0.12 mA                                                                                   |
| Alarm current                    | 2.5 mA typ.                                                                                    |
| Functional principle             | manual call point type A (direct actuation) in accordance with EN 54-11                        |
| Area of use                      |                                                                                                |
| MCP 545X-1                       | indoor use and surface mounting                                                                |
| MCP 545X-3                       | outdoor use and surface mounting<br>incl. M 20 junctions, blanking stopper and mounting screws |
| Connection                       | screw-type terminals, max. 2.5 mm <sup>2</sup>                                                 |
| Signal transmission              | serial, two-wire technology                                                                    |
| Short circuit isolator           | integrated                                                                                     |
| Degree of protection             |                                                                                                |
| MCP 545X-1                       | IP24                                                                                           |
| MCP 545X-3                       | IP67                                                                                           |
| Ambient temperature              |                                                                                                |
| Manufacturer specification       | –25 °C to +65 °C                                                                               |
| Approved by VdS                  | –10 °C to +65 °C                                                                               |
| Case material                    | plastic, glass-fibre reinforced                                                                |
| Case colour                      | red, RAL 3001<br>yellow, RAL 1006<br>blue, RAL 5002                                            |
| Dimensions                       |                                                                                                |
| MCP 545X-1                       | 93 × 89 × 59.5 mm (H×W×D)                                                                      |
| MCP 545X-3                       | 93 × 97.5 × 71 mm (H × W × D)                                                                  |
| Weight                           |                                                                                                |
| MCP 545X-1                       | 160 g                                                                                          |
| MCP 545X-3                       | 240 g                                                                                          |
| VdS approval                     | G210092 (red)                                                                                  |
| Declaration of Performance (DoP) | CPR-20-13-300 (red)                                                                            |



## X-LINE manual call points and accessories

|                                                                                     | Designation                                                                                                                                                                                                                                                                     | Type         | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|
|    | <b>MCP 535X-1 manual call point</b>                                                                                                                                                                                                                                             | MCP 535X-1   | 30-5700007-01 |
|    | <b>MCP 535X-3 manual call point</b>                                                                                                                                                                                                                                             | MCP 535X-3   | 30-5700007-03 |
|    | <b>MCP 535X-5 manual triggering device</b>                                                                                                                                                                                                                                      | MCP 535X-5   | 30-5700007-05 |
|    | <b>MCP 535X-15 actuation button</b>                                                                                                                                                                                                                                             | MCP 535X-15  | 30-5700007-15 |
|    | <b>MCP 535 X-7 stop button</b>                                                                                                                                                                                                                                                  | MCP 535X-7   | 30-5700007-07 |
|   | <b>Sticker hand symbol for MCP 535X</b><br>70 × 70 mm                                                                                                                                                                                                                           | MCP 535 AK   | FG030230      |
|  | <b>Sticker "Hausalarm" for MCP 535X</b><br>90 × 21 mm (24 pcs.)                                                                                                                                                                                                                 | S HA         | 20-4900001-01 |
|  | <b>Sticker "AUFZUG Brandfallsteuerung" for MCP 535X</b><br>90 × 21 mm                                                                                                                                                                                                           | S AZBFS      | 20-4900005-01 |
|  | <b>Labelling sheets for MCP 535X</b><br>(Auslösung alle Steuerungen, Building alarm, Fire Brigade, Prüfmelder, CO2-STOPP, STOPP-TASTER Gaslöschanlage, NACHFLUTEN Feuerlöschanlage, HANDAUSLÖSUNG Feuerlöschanlage, Close door, AMOK-ALARM, Roter Punkt (für Feststellanlagen)) | MCP 525/535D | 30-3700002-01 |
|  | <b>Weather-resistant case, red, for MCP 535X</b>                                                                                                                                                                                                                                | MCP WSG      | FG030235      |
|  | <b>Replacement circuit board for MCP 535X</b>                                                                                                                                                                                                                                   | MCP 535X LP  | 30-5700007-90 |
|  | <b>Replacement glass panel for MCP 535X</b>                                                                                                                                                                                                                                     | MCP 535 GLAS | 30-6800091-01 |
|  | <b>Rubber seal for MCP 535X</b><br>for indoor use                                                                                                                                                                                                                               | MCP 535 DG   | 30-4100001-01 |
|  | <b>Metal key (replacement)</b><br>for Integral EvoxX B, fire brigade operating panel, MCP 535X                                                                                                                                                                                  | DKM SCHL     | FG020015      |

|                                                                                     | Designation                                                                    | Type        | Article no.   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------|---------------|
|    | <b>MCP 545X-1 manual call point</b><br>red, IP24 with surface-mounted base     | MCP 545X-1R | 20-2302000-01 |
|    | <b>MCP 545X-1 manual call point</b><br>yellow, IP24 with surface-mounted base  | MCP 545X-1Y | 20-2302000-02 |
|    | <b>MCP 545X-1 manual call point</b><br>blue, IP24 with surface-mounted base    | MCP 545X-1B | 20-2302000-03 |
|    | <b>MCP 545X-3 manual call point</b><br>red, IP 67 (waterproof)                 | MCP 545X-3R | 20-2302002-01 |
|    | <b>MCP 545X-3 manual call point</b><br>yellow, IP67 (waterproof)               | MCP 545X-3Y | 20-2302002-02 |
|    | <b>MCP 545X-3 manual call point</b><br>blue, IP 67 (waterproof)                | MCP 545X-3B | 20-2302002-03 |
|   | <b>Replacement glass panel for MCP 545X</b><br>for MCP 545X, MCP 1A and WCP 1A | DKM K GLAS  | 20-2302200-01 |
|  | <b>Plastic release element</b><br>for MCP 545X, MCP 1A and WCP 1A              | PS210       | 20-2302201-01 |
|  | <b>Base for surface mounting of MCP</b><br>for MCP 545X-1/-2, and MCP 1A       | MUS041W     | 20-2302206-01 |
|  | <b>Transparent cover</b><br>for MCP 545X, MCP 1A and WCP 1A                    | PS200       | 20-2302202-01 |
|  | <b>Cover seal</b><br>50 pieces                                                 | SC083       | 20-2302203-01 |
|  | <b>Test key for MCP (10 pcs.)</b><br>for MCP 545X, MCP 1A and WCP 1A           | SC070       | 20-2302204-01 |

### 8.2.2 Conventional manual call points

The following conventional manual call points cannot be addressed.

#### MCP 525-7 manual call point



No.: FG020060

For manual actuation of a fire alarm in accordance with EN 54-11 (type B), suitable for connection to Integral DC technology.

The detector can be used as an external manual call point (main detector) for a TUS/Intranet connection.

By breaking the glass panel and pressing the button, the alarm is triggered and forwarded to the fire alarm control panel or directly to the emergency services. The activated state of the detector is indicated by the built-in LED. After pressing the alarm button, it must then be unlocked to enable an electrical reset on the fire alarm control panel.

|                                  |                                                                           |
|----------------------------------|---------------------------------------------------------------------------|
| Operating voltage range          | 19.6 to 30 V DC                                                           |
| Current consumption              | defined by the line technology                                            |
| Functional principle             | manual call point type B (indirect actuation) in accordance with EN 54-11 |
| Mounting                         | Surface mounting                                                          |
| Degree of protection             | IP52 (optional IP54)                                                      |
| Ambient temperature              | -10 °C to +55 °C                                                          |
| Case material                    | plastic/ASA                                                               |
| Case colour                      | red, RAL 3001                                                             |
| Dimensions                       | 134 × 134 × 36 mm (H × W × D)                                             |
| Weight                           | approx. 230 g                                                             |
| VdS approval                     | G207007                                                                   |
| Declaration of Performance (DoP) | CPR-30-13-026                                                             |

**No.: FG020061**

## MCP 525-9 manual call point

For manual actuation of a fire alarm in accordance with EN 54-11 (type B), suitable for connection to Integral DC technology.

By breaking the glass panel and pressing the button, the alarm is triggered and forwarded to the fire alarm control panel or directly to the emergency services. The activated state of the detector is indicated by the built-in LED. After pressing the alarm button, it must then be unlocked to enable an electrical reset on the fire alarm control panel.

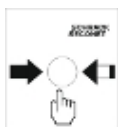
|                         |                                                                           |
|-------------------------|---------------------------------------------------------------------------|
| Operating voltage range | 19.6 to 30 V DC                                                           |
| Current consumption     | defined by the line technology                                            |
| Functional principle    | manual call point type B (indirect actuation) in accordance with EN 54-11 |
| Mounting                | Surface mounting                                                          |
| Degree of protection    | IP52 (optional IP54)                                                      |
| Ambient temperature     | -10 °C to +55 °C                                                          |
| Case material           | plastic/ASA                                                               |
| Case colour             | blue, RAL 5005                                                            |
| Dimensions              | 134 x 134 x 36 mm (H x W x D)                                             |
| Weight                  | approx. 230 g                                                             |

**No.: 20-2302250-01**

## MCP 525-11 manual triggering device

Manual triggering device for manual triggering of an extinguishing process with gaseous extinguishing agents as corresponding to EN 12094-3, suitable for connection to the Integral DC technology. The gas extinguishing system is triggered by smashing the glass panel and pressing the button. The actuator button remains engaged; the activated state is indicated via a built-in LED. The degree of protection of the detector can be increased to IP 54 by incorporating a rubber seal. Labelling is carried out with stickers.

The insert sheet (hand symbol), outer label and the key to open the door must be ordered separately.

**No.: FG030230**

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Operating voltage range          | 19.6 to 30 V DC                                        |
| Current consumption              | defined by the line technology                         |
| Functional principle             | manual triggering device in accordance with EN 12094-3 |
| Mounting                         | Surface mounting                                       |
| Degree of protection             | IP52 (optional IP54)                                   |
| Ambient temperature              | -10 °C to +55 °C                                       |
| Case material                    | plastic/ASA                                            |
| Case colour                      | yellow, RAL 1003                                       |
| Dimensions                       | 134 x 134 x 36 mm (H x W x D)                          |
| Weight                           | approx. 230 g                                          |
| VdS approval                     | G208106                                                |
| Declaration of Performance (DoP) | CPR-30-13-027                                          |



No.: 30-5700014-01

MCP 525-15 actuation button

For manual triggering fire incident control systems or as a secondary flooding device to release additional extinguishing agents after a gas extinguishing system has just been flooded. Suitable for wiring to Integral DC technology.

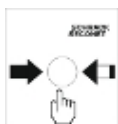
After breaking the glass panel, the push button can be pushed. Labelling is carried out with stickers.

|                         |                                                                         |
|-------------------------|-------------------------------------------------------------------------|
| Operating voltage range | 19.6 to 30 V DC                                                         |
| Current consumption     | defined by the line technology                                          |
| Functional principle    | Actuation of fire incident control systems or secondary flooding device |
| Mounting                | Surface mounting                                                        |
| Degree of protection    | IP52 (optional IP54)                                                    |
| Ambient temperature     | -10 °C to +55 °C                                                        |
| Case material           | plastic/ASA                                                             |
| Case colour             | green, RAL 6002                                                         |
| Dimensions              | 134 × 134 × 36 mm (H × W × D)                                           |
| Weight                  | approx. 230 g                                                           |
| VdS approval            | G208107                                                                 |

## MCP 525-14 stop device



**No.: 20-2302251-01**



**No.: FG030230**

For manual interruption of the triggering of an extinguishing process with gaseous extinguishing agents during the pre-warning period in accordance with EN 12094-3, suitable for wiring to the Integral DC technology. By smashing the glass panel and pressing the button, the extinguishing process is interrupted, and the control element does not lock. Labelling is carried out with stickers.

The insert sheet (hand symbol), outer label and the key to open the door must be ordered separately.

|                                  |                                     |
|----------------------------------|-------------------------------------|
| Operating voltage range          | 19.6 to 30 V DC                     |
| Current consumption              | defined by the line technology      |
| Functional principle             | Stop device according to EN 12094-3 |
| Mounting                         | Surface mounting                    |
| Degree of protection             | IP52 (optional IP54)                |
| Ambient temperature              | -10 °C to +55 °C                    |
| Case material                    | plastic/ASA                         |
| Case colour                      | blue, RAL 5005                      |
| Dimensions                       | 134 × 134 × 36 mm (H × W × D)       |
| Weight                           | approx. 230 g                       |
| VdS approval                     | G208106                             |
| Declaration of Performance (DoP) | CPR-30-13-027                       |

**No.: FG020285**

### C31 manual call point with degree of protection IP66

Manual call point for use outdoors or in damp rooms (type B in accordance with EN 54-11). By default, the detector comes with a built-in 560 Ohm resistor. The two 19k1 terminal resistors for connection to the BX-AIM loop module, or 11k8 terminal resistors for connection to the B8-DCI are not included. Enclosed in a robust dust and water-protected plastic case, suitable for both surface and flush mounting. The detector is available both with and without an LED alarm indication.

|                                  |                                                                           |
|----------------------------------|---------------------------------------------------------------------------|
| Operating voltage                | max. 31 V DC                                                              |
| Contact rating                   | 0.5 to 30 V/0.1 A                                                         |
| Functional principle             | manual call point type B (indirect actuation) in accordance with EN 54-11 |
| Connection                       | Screw terminal, 0.08 to 2.5 mm <sup>2</sup>                               |
| Cable inlet                      | 2 × M20 × 1,5 Ø 6 to 12 mm                                                |
| Degree of protection             | IP66                                                                      |
| Ambient temperature:             | –35 °C to +60 °C                                                          |
| Case material                    | Polycarbonate                                                             |
| Dimensions                       | 135 × 135 × 61 mm (H × W × D)                                             |
| Weight                           | 475 g                                                                     |
| VdS approval                     | G206113                                                                   |
| Declaration of Performance (DoP) | 0786-CPD-20309                                                            |

**No.: 20-2302300-01**

### C31 stop device with degree of protection IP66

Stop device for manual interruption of the triggering of an extinguishing process with gaseous extinguishing agents during the pre-warning period.

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Operating voltage                | max. 31 V DC                                |
| Contact rating                   | 0.5 to 30 V/0.1 A                           |
| Functional principle             | Stop device type B                          |
| Connection                       | Screw terminal, 0.08 to 2.5 mm <sup>2</sup> |
| Cable inlet                      | 2 × M20 × 1,5 Ø 6 to 12 mm                  |
| Degree of protection             | IP66                                        |
| Ambient temperature:             | –35 °C to +60 °C                            |
| Case material                    | Polycarbonate                               |
| Case colour                      | blue, RAL 5005                              |
| Dimensions                       | 135 × 135 × 61 mm (H × W × D)               |
| Weight                           | 475 g                                       |
| VdS approval                     | G207099                                     |
| Declaration of Performance (DoP) | 0786-CPD-20311                              |

**No.: FG020460**

## dC31 manual call point for hazardous areas

Manual call point for use in hazardous areas of Group II, Category 2GD (zone 1, 2, 21 and 22), corresponds to type B in accordance with EN 54-11. Three different versions are available for connection to the various line technologies, which can each be used as both series and terminal detectors. Junctions and blanking stoppers are included.

|                                       |                                                        |
|---------------------------------------|--------------------------------------------------------|
| Operating voltage                     | 30 V DC                                                |
| Series detector current consumption   | 0 mA                                                   |
| Terminal detector current consumption | 2 mA                                                   |
| with B8-DCI6                          | 1.5 mA                                                 |
| with BX-AIM                           |                                                        |
| Power loss                            | max. 1.3 W                                             |
| Connection                            | Screw terminal, 0.08 to 2.5 mm <sup>2</sup>            |
| Cable inlet                           | 2 × M20 × 1,5 Ø 6 to 12 mm                             |
| Degree of protection                  | IP66                                                   |
| Ambient temperature                   | –20 °C to +60 °C                                       |
| Case material                         | Polycarbonate                                          |
| Case colour                           | red, RAL 3000                                          |
| Dimensions                            | 135 × 135 × 61 mm (H × W × D)                          |
| Weight                                | 500 g                                                  |
| Ex-Designation                        | EX II2G Ex emb IIC T6<br>EX II2D Ex tD A21 IP6x T80 °C |
| ATEX approval                         | BVS 09 ATEX E 016 X                                    |
| VdS approval                          | G206113, G207079, G207099                              |
| Declaration of Performance (DoP)      | 0786-CPD-20309, 0786-CPD-20310,<br>0786-CPD-20311      |



Protective hood with depth extension frame for manual call points



No.: 30-6200002-02

To secure the detector against accidental triggering (e.g. ball protection) or if a glass panel cannot be used (e.g. in the food industry). Suitable for all MCP, C31 and dC31 manual call points. A sealing ring for IP 54 protection and a base plate for mounting on uneven surfaces are optionally available. Detector not included.

|                      |                                |
|----------------------|--------------------------------|
| Degree of protection | IP44                           |
| Ambient temperature  | –40 °C to +50 °C               |
| Case material        | PC                             |
| Case colour          | transparent                    |
| Dimensions           | 190 × 140 × 132 mm (H × W × D) |
| Weight               | 800 g                          |

Sealing ring for protective hood



No.: 30-6200004-01

Increases the protective hood's degree of protection from IP44 to IP54. The set includes one seal for a depth extension frame and 3 seals in different hole sizes for the cable inlets.

Mounting plate for protective hood



No.: 30-6200005-01

For mounting of the protective hood on uneven surfaces.

|             |                          |
|-------------|--------------------------|
| Dimensions: | 240 × 182 × 5 mm (HxWxD) |
|-------------|--------------------------|

## MCP/WCP 1A Ex-manual call point call point for hazardous areas



No.: 20-2302100-01



No.: 20-2302102-01



No.: 20-2302202-01

The intrinsically safe Ex-manual call points MCP/WCP 1A comply with both EN 54-11 (type A) and ATEX 100a and are connected to the BX-AIM input module via an interconnected intrinsic safety barrier. The different versions differ only in their case shape and IP degree of protection - the electronics, wiring and functions are identical for all models.

the MCP 1A is suitable for indoor application and surface or flush-mounting. the surface box being fastened to the wall using two screws. cable inlets required for surface mounting must be drilled into the case as required. for flush-mounting the manual call point is fitted straight into a standard size 1 (round or square) flush-mounted box.

the WCP 1A is also suitable for outdoor application and is surface mounted. The detector is rated to degree of protection IP 67 (waterproof); cable is let in from below or above via a M20 connection joints. two M20 junctions, two dummy junctions as well as mounting screws included.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Operating voltage range          | 15 to 30 V DC                                  |
| Quiescent current                | 0.9 mA typ.                                    |
| Resistance                       | 580 Ω                                          |
| Wiring                           | via BX-AIM/B3-IM8 and Z787                     |
| Connection                       | screw-type terminals, max. 2.5 mm <sup>2</sup> |
| Degree of protection             |                                                |
| MCP 1A                           | IP24                                           |
| WCP 1A                           | IP67                                           |
| Operating temperature (EN 54-11) | -25 °C to +70 °C                               |
| Ambient temperature (ATEX/IECEx) | -20 °C to +70 °C                               |
| Case material                    | plastic, glass-fibre reinforced                |
| Case colour                      | red, RAL 3001                                  |
| Dimensions                       |                                                |
| MCP 1A                           | 93 × 89 × 60 mm (H×W×D)                        |
| WCP 1A                           | 93 × 97.5 × 71 mm (H×W×D)                      |
| Weight                           |                                                |
| MCP 1A                           | 160 g                                          |
| WCP 1A                           | 240 g                                          |
| Ex-Designation                   |                                                |
| MCP 1A                           | II 1G Ex ia IIC T4 Ga Ta = -10 °C to +         |
| WCP 1A                           | 55 °C<br>II 1GD Ex ia IIC T4 Ga                |
| ATEX approval                    |                                                |
| MCP 1A                           | SIRA 04 ATEX 2350X                             |
| WCP 1A                           | SIRA 06 ATEX 2131X                             |

## Conventional manual call points and accessories

|                                                                                     | Designation                                                                                                  | Type       | Article no.   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|------------|---------------|
|    | <b>MCP 525-7 manual call point, red</b>                                                                      | MCP 525-7  | FG020060      |
|    | <b>MCP 525-9 manual call point, blue</b>                                                                     | MCP 525-9  | FG020061      |
|    | <b>MCP 525-11 manual triggering device</b><br>yellow, IP52                                                   | MCP 525-11 | 20-2302250-01 |
|    | <b>MCP 525-14 stop device</b><br>blue, IP54                                                                  | MCP 525-14 | 20-2302251-01 |
|    | <b>MCP 525-15 actuation button green</b>                                                                     | MCP525-15  | 30-5700014-01 |
|   | <b>C31 manual call point with degree of protection IP 66</b>                                                 | C31        | FG020285      |
|  | <b>C31 manual call point with LED</b>                                                                        | C31 LED    | FG020286      |
|  | <b>C31 stop device with degree of protection IP 66</b>                                                       | C31 BST    | 20-2302300-01 |
|  | <b>dC31 manual call point for hazardous areas</b><br>red 560R/11k8 for connection to B8-DCI                  | DC31       | FG020460      |
|  | <b>dC31 manual call point for hazardous areas</b><br>red 560R/19k1 for connection to BX-AIM                  | DC31       | FG020461      |
|  | <b>dC31 manual call point for hazardous areas</b><br>red 1k5/3k for connection to B3-IM8, B8-MTI8, B6-EIO    | DC31       | FG020462      |
|  | <b>dC31 manual call point for hazardous areas</b><br>yellow 1k5/3k for connection to B3-IM8, B8-MTI8, B6-EIO | DC31       | FG020465      |
|  | <b>dC31 manual call point for hazardous areas</b><br>blue 1k5/3k for connection to B3-IM8, B8-MTI8, B6-EIO   | DC31       | FG020466      |

|                                                                                     | Designation                                                                           | Type           | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------|---------------|
|    | <b>Replacement glass panel</b><br>for C31 and dC31 manual call points                 | C31 GV         | FG020464      |
|    | <b>Metal key</b><br>for C31 and dC31 manual call points                               | DKM SV         | FG020463      |
|    | <b>Protective hood for manual call points</b><br>with depth extension frame           | STI 1230/GM/UB | 30-6200002-02 |
|    | <b>Sealing ring for protective hood</b><br>Hood for C31 and dC31 manual call points   | STI 3002       | 30-6200004-01 |
|    | <b>Mounting plate for protective hood</b><br>Hood for C31 and dC31 manual call points | STI 1280       | 30-6200005-01 |
|    | <b>MCP 1A Ex-manual call point</b><br>red, IP24 (indoor), with surface-mounted base   | MCP 1A         | 20-2302100-01 |
|   | <b>WCP 1A Ex-manual call point</b><br>red, IP 67 (waterproof)                         | WCP 1A         | 20-2302102-01 |
|  | <b>Plastic release element</b><br>for MCP 545X, MCP 1A and WCP 1A                     | PS210          | 20-2302201-01 |
|  | <b>Transparent cover</b><br>for MCP 545X, MCP 1A and WCP 1A                           | PS200          | 20-2302202-01 |
|  | <b>Cover seal</b><br>50 pieces                                                        | SC083          | 20-2302203-01 |
|  | <b>Test key for MCP (10 pcs.)</b><br>for MCP 545X, MCP 1A and WCP 1A                  | SC070          | 20-2302204-01 |

## 8.3 Input and output modules

Depending on the type, input and output modules serve as monitored inputs for querying potential-free contacts, as a collectively addressable detector zone in DC technology, for indicating and monitoring various types of feedbacks, e.g. door contacts, for controlling monitored consumers, e.g. sirens, for integrating special detectors, e.g. flame and linear detectors, aspirating smoke detectors and for outputting switching pulses.

### 8.3.1 Integral X-LINE

The following input and output modules are devices on the X-LINE loop and can be individually addressed.



No.: 20-2100001-01

#### BX-OI3 input/output module

The BX-OI3 input/output module contains one potential-free bi-stable relay output with a programmable fail-safe position, two monitored inputs for querying potential-free contacts and an optocoupler input for monitoring external voltages.

It is particularly suitable for the integration of special detectors (flame and linear detectors, aspirating smoke detectors etc.) in the Integral X-LINE.

The case must be ordered separately.

|                                  |                                                                      |
|----------------------------------|----------------------------------------------------------------------|
| Operating voltage range          | 12 to 30 V DC                                                        |
| Quiescent current                | 0.55 mA typ.                                                         |
| Query current                    | 10 mA                                                                |
| Function                         | one relay output, 2 primary inputs, one optocoupler input            |
| Monitored inputs                 | for potential-free contacts                                          |
| Optocoupler input                | querying potential bound signals or external voltages of 0 – 30 V DC |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup>                       |
| Signal transmission              | serial, two-wire technology                                          |
| Short circuit isolator           | integrated                                                           |
| Degree of protection with case   | IP66                                                                 |
| Ambient temperature              |                                                                      |
| Manufacturer specification       | –20 °C to +60 °C                                                     |
| Approved by VdS                  | –10 °C to +55 °C                                                     |
| Relative humidity                | 5 to 95 % non-condensing                                             |
| Case material                    |                                                                      |
| Indoor applications              | Polystyrene                                                          |
| Outdoor applications             | Polycarbonate, glass-fibre reinforced                                |
| Case colour                      | light grey, RAL 7035                                                 |
| Dimensions                       |                                                                      |
| with case                        | 94 × 94 × 57 mm (H×W×D)                                              |
| without case                     | 67 × 67 × 20 mm (H×W×D)                                              |
| VdS approval                     | G210133                                                              |
| Declaration of Performance (DoP) | CPR-20-13-005                                                        |

**No.: 20-2100014-01**

## BX-O2I4 input/output module

The BX-O2I4 input/output module contains two potential-free bistable relay outputs for switching of loads of up to 2 A. In the event that loop voltage is lost, a fail-safe-position can be individually programmed for each output.

In addition the module contains four monitored primary inputs for the query of potential-free contacts. Every input can be configured with/without circuit monitoring, and moreover the element type input or detector zone can be assigned for each input.

The case must be ordered separately.

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| Operating voltage range          | 12 to 30 V DC                                         |
| Quiescent current                | 0.63 mA typ.                                          |
| Query current                    | 10 mA                                                 |
| Function                         | 2 relay output, 4 monitored primary inputs            |
| Relay output                     | bi-stable change-over contact 230 V / 2 A (max. 60 W) |
| Monitored inputs                 | for potential-free contacts                           |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup>        |
| Signal transmission              | serial, two-wire technology                           |
| Short circuit isolator           | integrated                                            |
| Degree of protection with case   | IP66                                                  |
| Ambient temperature              |                                                       |
| Manufacturer specification       | –20 °C to +60 °C                                      |
| Approved by VdS                  | –10 °C to +55 °C                                      |
| Relative humidity                | 5 to 95 % non-condensing                              |
| Case material                    |                                                       |
| Indoor applications              | Polystyrene                                           |
| Outdoor applications             | Polycarbonate, glass-fibre reinforced                 |
| Case colour                      | light grey, RAL 7035                                  |
| Dimensions                       |                                                       |
| with case                        | 130 × 94 × 57 mm (H×W×D)                              |
| without case                     | 100 × 67 × 20 mm (H×W×D)                              |
| VdS approval                     | G211050                                               |
| Declaration of Performance (DoP) | CPR-20-20-012                                         |

**No.: 20-2100023-01**

## **BX-02I4-HP input/output module HighPower**

The BX-02I4-HP input/output module contains two potential-free bistable relay outputs for switching of loads of up to 8 A. In the event that loop voltage is lost, a fail-safe-position can be individually programmed for each output.

In addition the module contains four monitored primary inputs for the query of potential-free contacts. Every input can be configured with/without circuit monitoring, and moreover the element type input or detector zone can be assigned for each input.

The case must be ordered separately.

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| Operating voltage range          | 12 to 30 V DC                                         |
| Quiescent current                | 0.63 mA typ.                                          |
| Query current                    | 9 mA                                                  |
| Function                         | 2 relay output, 4 monitored primary inputs            |
| Switching capacity               | max. 240 W (30 V DC, 8 A),<br>2000 VA (250 V AC, 8 A) |
| Monitored inputs                 | for potential-free contacts                           |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup>        |
| Signal transmission              | serial, two-wire technology                           |
| Short circuit isolator           | integrated                                            |
| Degree of protection with case   | IP66                                                  |
| Ambient temperature              |                                                       |
| Manufacturer specification       | –20 °C to +60 °C                                      |
| Approved by VdS                  | –10 °C to +55 °C                                      |
| Relative humidity                | 5 to 95 % non-condensing                              |
| Case material                    |                                                       |
| Indoor applications              | Polystyrene                                           |
| Outdoor applications             | Polycarbonate, glass-fibre reinforced                 |
| Case colour                      | light grey, RAL 7035                                  |
| Dimensions                       |                                                       |
| with case                        | 130 × 130 × 57 mm (H×W×D)                             |
| Circuit board with side parts    | 103 × 103 × 20 mm (H×W×D)                             |
| Circuit board without side parts | 103 × 72 × 20 mm (H×W×D)                              |
| VdS approval                     | G211050                                               |
| Declaration of Performance (DoP) | CPR-20-20-012                                         |

**No.: 20-2100002-01**

## BX-IOM input/output module

The BX-IOM input/output module has a short circuit resistant monitored primary output that is galvanically isolated from the X-LINE and a short circuit resistant monitored primary input for connecting potential-free signals. The module is intended for monitoring potential-free contacts and for activating consumers (X-LINE devices) that are supplied by an external current source. BX-IOM requires an external power supply for operation.

The case must be ordered separately.

|                                             |                                                                           |
|---------------------------------------------|---------------------------------------------------------------------------|
| Operating voltage range                     | 12 to 30 V DC                                                             |
| Quiescent current                           | 0.43 mA typ.                                                              |
| Monitoring current from the monitored input | 3.1 mA typ.                                                               |
| Function                                    | one short circuit resistant monitored output, one monitored primary input |
| Monitored output                            |                                                                           |
| Loads                                       | 20 Ω to 1 kΩ, three load ranges                                           |
| Output current                              | max. 1.3 A, short circuit resistant                                       |
| Output current according to VdS 2543        | max. 110 mA with max. 30 m wiring length                                  |
| Load range 1                                | max. 250 mA with max. 30 m wiring length                                  |
| Load range 2                                | max. 800 mA with max. 10 m wiring length                                  |
| Load range 3                                |                                                                           |
| Quiescent current                           | 1 to 15 mA via software                                                   |
| Monitored primary input                     |                                                                           |
| IM1+                                        | 20 to 30 V                                                                |
| VEXT                                        | 20 to 30 V                                                                |
| Connection                                  | screw-type terminals, max. 1.5 mm <sup>2</sup>                            |
| Signal transmission                         | serial, two-wire technology                                               |
| Short circuit isolator                      | integrated                                                                |
| Degree of protection with case              | IP66                                                                      |
| Ambient temperature                         |                                                                           |
| Manufacturer specification                  | –20 °C to +60 °C                                                          |
| Approved by VdS                             | –10 °C to +55 °C                                                          |
| Relative humidity                           | 5 to 95 % non-condensing                                                  |
| Case material                               |                                                                           |
| Indoor applications                         | Polystyrene                                                               |
| Outdoor applications                        | Polycarbonate, glass-fibre reinforced                                     |
| Case colour                                 | light grey, RAL 7035                                                      |
| Dimensions                                  |                                                                           |
| with case                                   | 94 × 94 × 57 mm (H×W×D)                                                   |
| without case                                | 67 × 67 × 20 mm (H×W×D)                                                   |
| VdS approval                                | G210132                                                                   |
| Declaration of Performance (DoP)            | CPR-20-13-006                                                             |



**No.: 20-2100005-01**

## BX-AIM input module

The BX-AIM input module can either be programmed as a monitored input for potential-free contacts or as a collectively addressable detector zone using DC technology.

The monitored input can, if required, be programmed as a standard extinguishing interface (in accordance with VdS directives). The primary input now contains a feature for comparing fault thresholds with the quiescent current levels (in accordance with standards EN 54-13 and VdS 2489).

By interconnecting an intrinsic safety barrier and by using intrinsically safe detectors (DC technology) it is also possible to monitor hazardous areas.

The case must be ordered separately.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Operating voltage range          | 12 to 30 V DC                                  |
| Quiescent current                |                                                |
| with DC branch                   | 1,8 mA typ.                                    |
| without DC branch                | 0.46 mA typ.                                   |
| Alarm current                    |                                                |
| with DC branch                   | 8.6 mA                                         |
| without DC branch                | 6.7 mA                                         |
| Function                         | DC branch, monitored input                     |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup> |
| Signal transmission              | serial, two-wire technology                    |
| Short circuit isolator           | integrated                                     |
| Degree of protection with case   | IP66                                           |
| Ambient temperature              |                                                |
| Manufacturer specification       | –20 °C to +60 °C                               |
| Approved by VdS                  | –10 °C to +55 °C                               |
| Relative humidity                | 5 to 95 % non-condensing                       |
| Case material                    |                                                |
| Indoor applications              | Polystyrene                                    |
| Outdoor applications             | Polycarbonate, glass-fibre reinforced          |
| Case colour                      | light grey, RAL 7035                           |
| Dimensions                       |                                                |
| with case                        | 94 × 94 × 57 mm (H×W×D)                        |
| without case                     | 67 × 67 × 20 mm (H×W×D)                        |
| VdS approval                     | G208138                                        |
| Declaration of Performance (DoP) | CPR-20-13-009                                  |

**No.: 20-2100017-01**

## BX-MDI8 input module

For connection of up to eight stub lines, which can be configured either as non-addressable detector zones in threshold technology or as monitored inputs (e.g. VdS extinguishing interface, primary inputs, valve monitoring).

The operating mode of the individual stub lines can be independently selected via programming and jumpers on the module. The monitoring of the primary lines complies with EN 54-13 (interruption and short circuit of the transmission path).

A maximum of 32 automatic threshold detectors (e.g. MSD 523), or a maximum of 10 manual call points of the MCP series may be connected per fire detection line. Up to 32 BX-MDI8 can be configured per loop.

The case must be ordered separately.

|                                  |                                                                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Operating voltage range          | 12 to 30 V DC                                                                                                   |
| External supply voltage          | 13 to 30 V DC                                                                                                   |
| Current consumption              | max. 1 A, depending on connected consumers                                                                      |
| Detector zones/inputs            |                                                                                                                 |
| Connectable detectors            | max. 32 automatic threshold detectors or a 10 manual call points per stub line                                  |
| Range                            | max. 400 m (cable diameter 0.6 mm)<br>max. 720 m (cable diameter 0.8 mm)<br>max. 1100 m (cable diameter 1.0 mm) |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup>                                                                  |
| Signal transmission              | serial, two-wire technology                                                                                     |
| Short circuit isolator           | integrated                                                                                                      |
| Degree of protection with case   | IP65                                                                                                            |
| Ambient temperature              |                                                                                                                 |
| Manufacturer specification       | –20 °C to +60 °C                                                                                                |
| Approved by VdS                  | –10 °C to +55 °C                                                                                                |
| Relative humidity                | 5 to 95 % non-condensing                                                                                        |
| Case material                    |                                                                                                                 |
| Indoor applications              | Polystyrene                                                                                                     |
| Outdoor applications             | Polycarbonate, glass-fibre reinforced                                                                           |
| Case colour                      | light grey, RAL 7035                                                                                            |
| Dimensions                       |                                                                                                                 |
| with case                        | 180 × 94 × 57 mm (H×W×D)                                                                                        |
| without case                     | 151 × 80 × 20 mm (H×W×D)                                                                                        |
| VdS approval                     | G215099                                                                                                         |
| Declaration of Performance (DoP) | CPR-20-13-015                                                                                                   |



**No.: 20-2100003-01**

## BX-IM4 input module

The BX-IM4 input module is used, among other things, to indicate and monitor various types of feedbacks, e.g. door contacts, fire dampers, extinguishing systems, sprinkler acknowledgements.

It contains four inputs for the monitored and non-monitored querying of potential-free contacts, which are suitable for detecting switching states of longer than 330 ms. The wiring length can be up to 30 m.

The case must be ordered separately.

|                                  |                                                                             |
|----------------------------------|-----------------------------------------------------------------------------|
| Operating voltage range          | 12 to 30 V DC                                                               |
| Quiescent current                | 0.45 mA typ.                                                                |
| Query current                    | 10 mA                                                                       |
| Function                         | 4 inputs for monitored or non-monitored querying of potential-free contacts |
| Wiring length                    | max. 30 m                                                                   |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup>                              |
| Signal transmission              | serial, two-wire technology                                                 |
| Short circuit isolator           | integrated                                                                  |
| Degree of protection with case   | IP66                                                                        |
| Ambient temperature              |                                                                             |
| Manufacturer specification       | –20 °C to +60 °C                                                            |
| Approved by VdS                  | –10 °C to +55 °C                                                            |
| Relative humidity                | 5 to 95 % non-condensing                                                    |
| Case material                    |                                                                             |
| Indoor applications              | Polystyrene                                                                 |
| Outdoor applications             | Polycarbonate, glass-fibre reinforced                                       |
| Case colour                      | light grey, RAL 7035                                                        |
| Dimensions                       |                                                                             |
| with case                        | 94 × 94 × 57 mm (H×W×D)                                                     |
| without case                     | 67 × 67 × 20 mm (H×W×D)                                                     |
| VdS approval                     | G210131                                                                     |
| Declaration of Performance (DoP) | CPR-20-13-007                                                               |

**No.: 20-2100016-01**

## BX-I2 input module

The input module contains a primary input for querying a potential-free contact. This can be inverted and parametrized with/without circuit monitoring. Furthermore, the element type input or the detector zone can be defined. The module also contains an optocoupler input for monitoring a potential bound signal or an external power supply (0 to 30 V DC). This can be parametrized inverted.

The case must be ordered separately.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Operating voltage range          | 12 to 30 V DC                                  |
| Quiescent current                | 0.46 mA typ.                                   |
| Query current                    | 10 mA                                          |
| Function                         | one primary input, one optocoupler input       |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup> |
| Signal transmission              | serial, two-wire technology                    |
| Short circuit isolator           | integrated                                     |
| Degree of protection with case   | IP66                                           |
| Ambient temperature              |                                                |
| Manufacturer specification       | –20 °C to +60 °C                               |
| Approved by VdS                  | –10 °C to +55 °C                               |
| Relative humidity                | 5 to 95 % non-condensing                       |
| Case material                    |                                                |
| Indoor applications              | Polystyrene                                    |
| Outdoor applications             | Polycarbonate, glass-fibre reinforced          |
| Case colour                      | light grey, RAL 7035                           |
| Dimensions                       |                                                |
| with case                        | 94 × 94 × 57 mm (H×W×D)                        |
| without case                     | 67 × 67 × 20 mm (H×W×D)                        |
| VdS approval                     | G212023                                        |
| Declaration of Performance (DoP) | CPR-20-13-014                                  |



No.: 20-2100015-01

**BX-O1 output module**

The BX-O1 output module contains a potential-free, bi-stable relay output for switching of loads from up to 2 A and up to 230 V (max. 60 W). In case of loss of the loop voltage, a fail-safe position can be programmed for the output.

The case must be ordered separately.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Operating voltage range          | 12 to 30 V DC                                  |
| Quiescent current                | 0.48 mA typ.                                   |
| Switching current                | max. 2 A                                       |
| Function                         | one potential-free, bi-stable relay output     |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup> |
| Signal transmission              | serial, two-wire technology                    |
| Short circuit isolator           | integrated                                     |
| Degree of protection with case   | IP66                                           |
| Ambient temperature              |                                                |
| Manufacturer specification       | –20 °C to +60 °C                               |
| Approved by VdS                  | –10 °C to +55 °C                               |
| Relative humidity                | 5 to 95 % non-condensing                       |
| Case material                    |                                                |
| Indoor applications              | Polystyrene                                    |
| Outdoor applications             | Polycarbonate, glass-fibre reinforced          |
| Case colour                      | light grey, RAL 7035                           |
| Dimensions                       |                                                |
| with case                        | 94 × 94 × 57 mm (H×W×D)                        |
| without case                     | 67 × 67 × 20 mm (H×W×D)                        |
| VdS approval                     | G212024                                        |
| Declaration of Performance (DoP) | CPR-20-13-013                                  |

**No.: 20-2100004-01**

## BX-REL4 relay module

The BX-REL4 relay module contains four relays each containing a potential-free double-throw contact with a switching capacity of up to 2 A and 230 V. The BX-REL4 is also suitable for outputting switching pulses.

The relay outputs can be switched to a fail-safe position if the voltage on the loop is lost, with the power supply also being internally monitored on the loop for undervoltage.

The case must be ordered separately.

|                                  |                                                            |
|----------------------------------|------------------------------------------------------------|
| Operating voltage range          | 12 to 30 V DC                                              |
| Quiescent current                | 0.51 mA typ.                                               |
| Switching current                | max. 2 A                                                   |
| Signal transmission              | serial, two-wire technology                                |
| Function                         | 4 potential-free relay outputs                             |
| Relay output                     | bistable change-over contact 230 V/<br>2 A                 |
| Switching capacity               | 60 W (230 V/0.25 A)                                        |
| Switching frequency              | max. 3125 Hz                                               |
| Pulse emission                   | 200 ms to 25 s in 100 ms intervals<br>(resolution +100 ms) |
| Wiring length                    | max. 100 m                                                 |
| Relay output connection          | screw-type terminals, max. 2.5 mm <sup>2</sup>             |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup>             |
| Short circuit isolator           | integrated                                                 |
| Degree of protection with case   | IP66                                                       |
| Ambient temperature              |                                                            |
| Manufacturer specification       | –20 °C to +60 °C                                           |
| Approved by VdS                  | –10 °C to +55 °C                                           |
| Relative humidity                | 5 to 95 % non-condensing                                   |
| Case material                    |                                                            |
| Indoor applications              | Polystyrene                                                |
| Outdoor applications             | Polycarbonate, glass-fibre reinforced                      |
| Case colour                      | light grey, RAL 7035                                       |
| Dimensions                       |                                                            |
| with case                        | 130 × 94 × 57 mm (H×W×D)                                   |
| without case                     | 100 × 67 × 20 mm (H×W×D)                                   |
| VdS approval                     | G210134                                                    |
| Declaration of Performance (DoP) | CPR-20-13-008                                              |

**No.: FG020234****No.: FG020235****No.: 20-4000550-01****No.: 20-2101013-01**

## Box for loop module – indoor use

Plastic case (heavy metal, PVC and silicone-free) for mounting X-LINE modules indoors.

|                                                                       |                               |
|-----------------------------------------------------------------------|-------------------------------|
| Cable entries                                                         | M16 and M20                   |
| IK degree of protection in accordance IK08 with DIN EN 5012, VDE 0470 |                               |
| Degree of protection                                                  | IP66                          |
| Ambient temperature                                                   | –25 °C to +35 °C              |
| Relative humidity                                                     | max. 50 % at +40 °C           |
| Case material                                                         | Polystyrene                   |
| Case colour                                                           | light grey, RAL 7035          |
| Dimensions                                                            |                               |
| GEH MOD IP66                                                          | 94 × 94 × 57 mm (H × W × D)   |
| GEH MOD2 IP66                                                         | 94 × 130 × 57 mm (H × W × D)  |
| GEH MOD3 IP66                                                         | 94 × 180 × 57 mm (H × W × D)  |
| TK PS 1313-7-M                                                        | 130 × 130 × 75 mm (H × W × D) |

**No.: 20-2101000-01****No.: 20-2101001-01****No.: 20-2101002-01****No.: 20-2101003-01**

## Box for loop module – outdoor use

Weatherproof plastic case (heavy metal, PVC and silicone-free) for mounting X-LINE modules outdoors.

|                                                                       |                                       |
|-----------------------------------------------------------------------|---------------------------------------|
| Cable entries                                                         | M16 and M20                           |
| IK degree of protection in accordance IK07 with DIN EN 5012, VDE 0470 |                                       |
| Degree of protection                                                  | IP66                                  |
| Ambient temperature:                                                  | –35 °C to +60 °C                      |
| Relative humidity                                                     | max. 50 % at +40 °C                   |
| Case material                                                         | Polycarbonate, glass-fibre reinforced |
| Case colour                                                           | light grey, RAL 7035                  |
| Dimensions                                                            |                                       |
| TK PC 99-6-M                                                          | 94 × 94 × 57 mm (H × W × D)           |
| TK PC 1309-6-M                                                        | 94 × 130 × 57 mm (H × W × D)          |
| TK PC 1809-6-M                                                        | 94 × 180 × 57 mm (H × W × D)          |
| TK PC 1313-7-M                                                        | 130 × 130 × 75 mm (H × W × D)         |

**No.: 20-2100007-01**

## BX-ESL end-position switch

The BX-ESL limit switch module is used for sprinkler monitoring and disable devices.

It contains an photoelectric sensor, which measures the movement of an actuation plunger. Thus the function as a limit switch is realized.

The module is installed in a plastic case with degree of protection IP65.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Operating voltage range          | 12 to 30 V DC                                  |
| Current consumption              |                                                |
| with lit LED                     | 1,3 mA typ.                                    |
| without lit LED                  | 0.4 mA typ.                                    |
| Signal transmission              | serial, two-wire technology                    |
| Function                         | one optical photoelectric sensor               |
| Reaction time                    | 500 ms                                         |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup> |
| Short circuit isolator           | integrated                                     |
| Degree of protection with case   | IP65                                           |
| Ambient temperature              |                                                |
| Manufacturer specification       | –20 °C to +60 °C                               |
| Approved by VdS                  | –10 °C to +55 °C                               |
| Relative humidity                | 5 to 95 % non-condensing                       |
| Case material                    | PA-Taromid (thermoplastic)                     |
| Case colour                      | red, RAL 3016                                  |
| Cover colour                     | black, RAL 9005                                |
| Dimensions with case             | 58 × 58 × 34 mm (H×W×D)                        |
| Weight                           | 95 g                                           |
| VdS approval                     | G210130                                        |
| Declaration of Performance (DoP) | CPR-20-13-011                                  |



## X-LINE modules and accessories

|                                                                                     | Designation                                                                              | Type          | Article no.   |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------|---------------|
|    | <b>BX-OI3 input/output module</b>                                                        | BX-OI3        | 20-2100001-01 |
|    | <b>BX-O2I4 input/output module</b>                                                       | BX-O2I4       | 20-2100014-01 |
|    | <b>BX-O2I4-HP input/output module</b>                                                    | BX-O2I4-HP    | 20-2100023-01 |
|    | <b>BX-IOM input/output module</b>                                                        | BX-IOM        | 20-2100002-01 |
|    | <b>BX-AIM input module</b>                                                               | BX-AIM        | 20-2100005-01 |
|    | <b>BX-MDI8 input module</b><br>8 monitored inputs                                        | BX-MDI8       | 20-2100017-01 |
|   | <b>BX-IM4 input module</b>                                                               | BX-IM4        | 20-2100003-01 |
|  | <b>BX-I2 input module</b>                                                                | BX-I2         | 20-2100016-01 |
|  | <b>BX-O1 output module</b>                                                               | BX-O1         | 20-2100015-01 |
|  | <b>BX-REL4 relay module</b>                                                              | BX-REL4       | 20-2100004-01 |
|  | <b>Resistor module 182R/182R (50 pcs.)</b><br>Alarm resistor 182R 0.5W/EOL-Wid 182R 0.5W | RES-182R-182R | 20-2400051-01 |
|  | <b>Resistor module 220R/220R (50 pcs.)</b><br>Alarm resistor 220R 0.5W/EOL-Wid 220R 0.5W | RES-220R-220R | 20-2400051-02 |
|  | <b>Resistor module 1K5/3K (10 Stk.)</b><br>Alarm resistor 1K5 0.5W/EOL-Wid 3K 0.5W       | RES-1K5-3K    | 20-2400051-03 |
|  | <b>Resistor module 18K2/26K7 (10 Stk.)</b><br>Alarm resistor 18K2 0.5W/EOL-Wid 26K7 0.5W | RES-18K2-26K7 | 20-2400051-04 |
|  | <b>182R/182R resistor module</b><br>2 pcs. alarm/EOL-res. 182R 0.5W                      | RES-182R-182R | 20-2400051-05 |
|  | <b>220R/220R resistor module</b><br>2 pcs. alarm/EOL-res. 220R 0.5W                      | RES-220R-220R | 20-2400051-06 |

|                                                                                     | Designation                                                                          | Type           | Article no.   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------|---------------|
|    | <b>Box for loop module – indoor use</b><br>94 × 94 × 57 mm, for BX-OI3/BX-AIM etc.   | GEH MOD IP66   | FG020234      |
|    | <b>Box for loop module – indoor use</b><br>94 × 130 × 57 mm, for BX-REL4/BX-O2I4     | GEH MOD2 IP66  | FG020235      |
|    | <b>Box for BX-MDI8 – indoor use</b><br>94 × 180 × 57 mm                              | GEH MOD3 IP66  | 20-4000550-01 |
|    | <b>Box for BX-O2I4-HP – indoor use</b><br>130 × 130 × 75 mm                          | TK PS 1313-7-M | 20-2101013-01 |
|    | <b>Box for loop module – outdoor use</b><br>94 × 94 × 57 mm, for BX-OI3/BX-AIM etc.  | TK PC 99-6-M   | 20-2101000-01 |
|    | <b>Box for loop module – outdoor use</b><br>94 × 130 × 57 mm, for BX-REL4/BX-O2I4    | TK PC 1309-6-M | 20-2101001-01 |
|    | <b>Box for BX-MDI8 – outdoor use</b><br>94 × 180 × 57 mm                             | TK PC 1809-6-M | 20-2101002-01 |
|   | <b>Box for BX-O2I4-HP – outdoor use</b><br>130 × 130 × 75 mm, for BX-OI3/BX-AIM etc. | TK PC 1313-7-M | 20-2101003-01 |
|  | <b>BX-ESL end position switch</b>                                                    | BX-ESL         | 20-2100007-01 |
|  | <b>Connection joint M16 (metric)</b>                                                 | MM ANB M16     | MM000185      |
|  | <b>Lock nut M16</b>                                                                  | MM GM M16      | MM000186      |
|  | <b>Step nipple M 20 (metric)</b><br>1 PU = 100 pcs.                                  | MM SN M20      | MM000181      |
|  | <b>Air vent M20</b>                                                                  | BST M20        | MM000201      |
|  | <b>Pressure compensation element M12</b>                                             | DAE M12        | MM000202      |
|  | <b>Fastening clamp for IP 66 case</b>                                                | BKL M5         | FG020238      |

## 8.4 Signal devices

The purpose of alarming is to warn people of danger. Visual, acoustic or combined signal devices can be used for the alarm.

### 8.4.1 Integral X-LINE

The following optical and acoustic signal devices are devices on the X-LINE loop and can be individually addressed.



No.: 20-2100009-01



No.: 20-2100009-04

#### BX-FOL flashlight

Addressable flashlight for optical signalling of a fire alarm in indoor areas, suitable for direct connection to the X-LINE. The BX-FOL is available in red or white, the flash rate is set via software.

|                                  |                                  |
|----------------------------------|----------------------------------|
| Operating voltage range          | 12 to 30 V DC                    |
| Quiescent current                | 0.5 mA typ.                      |
| Alarm current                    | max. 3.7 mA with 24 V DC         |
| Signal transmission              | Integral X-LINE                  |
| Flash frequency                  | 0.5 Hz (slow) or 1 Hz (fast)     |
| Light intensity                  | 1 cd                             |
| Short circuit isolator           | integrated                       |
| Degree of protection             | IP21C                            |
| Ambient temperature              | –10 °C to +50 °C                 |
| Case material                    | ABS                              |
| Case colour                      | white, RAL 9003 or red, RAL 3001 |
| Dome colour                      | red or orange                    |
| Dimensions                       | 93 × 54 mm (Ø × H)               |
| Weight                           | 110 g                            |
| VdS approval                     | G210085                          |
| Declaration of Performance (DoP) | CPR-20-15-102                    |



**No.: 10-2300007-01**



**No.: 20-2100030-01**

## BX-UPI universal parallel indicator

The BX-UPI parallel indicator is used for visual individual and collective indication of fire detectors in the event of an alarm and supplements the LED integrated in the detector or detector base. The BX-UPI can be used in various line techniques. Activation and supply is either directly via the alarm output of the fire detector or via a suitable loop module. The white plastic case with red illuminated surface and the electronics can be ordered separately.

|                         |                                               |
|-------------------------|-----------------------------------------------|
| Operating voltage range | 4.5 to 30 V DC                                |
| Current consumption     | 0.9 mA typ.                                   |
| Alarm output            |                                               |
| Output current          | 1 mA or 5 mA                                  |
| Flash frequency         | 1.2 to 3.0 Hz                                 |
| Light intensity         | 1 cd                                          |
| Connection              | screw terminals, max. 2 × 1.5 mm <sup>2</sup> |
| Degree of protection    | IP42                                          |
| Ambient temperature     | –20 °C to +60 °C                              |
| Relative humidity       | 5 to 95 % non-condensing                      |
| Dimensions              | 85 × 85 × 30 mm (H × W × D)                   |
| Weight                  | 50 g                                          |
| VdS approval            | G224023                                       |

## BX-SOL siren



**No.: 20-2100008-01**



**No.: 20-2100008-02**

Addressable signal device for acoustic notification of a fire alarm in interior areas, suitable for direct connection to the X-LINE. The siren is available in red or white, four different tone types and the volume can be set via the Integral software.

|                                  |                                            |
|----------------------------------|--------------------------------------------|
| Operating voltage range          | 12 to 30 V DC                              |
| Current consumption              |                                            |
| Low                              | max. 2.3 mA with 24 V DC                   |
| High                             | max. 4.7 mA with 24 V DC                   |
| Quiescent current                | 0.5 mA typ.                                |
| Volume                           | 89 dB (99 dB) $\pm 3$ dB(A)/m with 24 V DC |
| Tone types                       |                                            |
| DIN tone                         | 1200 ~ 500 Hz                              |
| Slow Whoop                       | 500 ~ 1200 Hz                              |
| Sweden tone                      | 660 Hz (150 ms on, 150 ms off)             |
| Continuous tone                  | 990 Hz (pulse can be set)                  |
| Short circuit isolator           | integrated                                 |
| Degree of protection             | IP21C                                      |
| Ambient temperature              | -10 °C to +55 °C                           |
| Case material                    | ABS                                        |
| Case colour                      | white, RAL 9003 or red, RAL 3001           |
| Dimensions                       | 108 x 91 mm (Ø x H)                        |
| Weight                           | 230 g                                      |
| VdS approval                     | G210086                                    |
| Declaration of Performance (DoP) | CPR-20-13-100                              |

**No.: 20-2100011-02**

## BX-SBL501 base siren

For acoustic alarm notification of a fire in interior areas (EN 54-3/type A), it is installed as a unit with a USB 502 detector base and connected directly to the X-LINE. The four different tones and the volume can be set in the Integrative Application Center. The cable inlet is from above; for side cable inlet the BX-SBL501-WDB model with a taller base is available.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Operating voltage range          | 12 to 30 V DC                                  |
| Quiescent current                | max. 0.5 mA                                    |
| Current consumption              |                                                |
| Low                              | max. 1.5 mA with 24 V DC                       |
| High                             | max. 4.0 mA with 24 V DC                       |
| Volume                           |                                                |
| Low                              | 80 dB(A) $\pm$ 3 dB(A) with 24 V DC            |
| High                             | 90 dB(A) $\pm$ 3 dB(A) with 24 V DC            |
| Tone types                       |                                                |
| DIN tone                         | 1200 ~ 500 Hz                                  |
| Slow Whoop                       | 500 ~ 1200 Hz                                  |
| Sweden tone                      | 660 Hz (150 ms on, 150 ms off)                 |
| Continuous tone                  | 990 Hz                                         |
| Connection                       | screw-type terminals, max. 2.5 mm <sup>2</sup> |
| Short circuit isolator           | integrated                                     |
| Degree of protection             | IP31D                                          |
| Ambient temperature              | -10 °C to +55 °C                               |
| Case material                    | ABS/PC                                         |
| Case colour                      | white, similar to RAL 9003                     |
| Dimensions                       |                                                |
| with standard base               | 117 × 41 mm (Ø × H)                            |
| with tall base                   | 117 × 45 mm (Ø × H)                            |
| Weight                           | 170 g                                          |
| VdS approval                     | G211029                                        |
| Declaration of Performance (DoP) | CPR-20-13-101                                  |

## BX-SBL502 platform siren



No.: 20-2100012-04



No.: 20-2100012-01

For acoustic alarm notification of a fire in interior areas (EN 54-3/type A), suitable for direct wiring to the X-LINE. The siren is available in red or white, four different tones and the volume can be set in the Integrative Application Center. The cable inlet is from above; for side cable inlet the BX-SBL502-WDB or BX-SBL502-RDB model with a taller base is available.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Operating voltage range          | 12 to 30 V DC                                  |
| Quiescent current                | max. 0.5 mA                                    |
| Current consumption              |                                                |
| Low                              | max. 1.5 mA with 24 V DC                       |
| High                             | max. 4.0 mA with 24 V DC                       |
| Volume                           |                                                |
| Low                              | 80 dB(A) ±3 dB(A) with 24 V DC                 |
| High                             | 90 dB(A) ±3 dB(A) with 24 V DC                 |
| Tone types                       |                                                |
| DIN tone                         | 1200 ~ 500 Hz                                  |
| Slow Whoop                       | 500 ~ 1200 Hz                                  |
| Sweden tone                      | 660 Hz (150 ms on, 150 ms off)                 |
| Continuous tone                  | 990 Hz                                         |
| Connection                       | screw-type terminals, max. 2.5 mm <sup>2</sup> |
| Short circuit isolator           | integrated                                     |
| Degree of protection             | IP31D                                          |
| Ambient temperature              | -10 °C to +55 °C                               |
| Case material                    | ABS/PC                                         |
| Case colour                      | white, RAL 9003 or red, RAL 3001               |
| Dimensions                       |                                                |
| with standard base               | 114 × 35 mm (Ø × H)                            |
| with tall base                   | 114 × 43 mm (Ø × H)                            |
| Weight                           | 165 g                                          |
| VdS approval                     | G211029                                        |
| Declaration of Performance (DoP) | CPR-20-13-101                                  |

## X-LINE alarm devices and accessories

|                                                                                     | Designation                                      | Type          | Article no.   |
|-------------------------------------------------------------------------------------|--------------------------------------------------|---------------|---------------|
|    | <b>BX-FOL loop flashlight red, red lens</b>      | BX-FOL-RR     | 20-2100009-01 |
|    | <b>BX-FOL loop flashlight white, red lens</b>    | BX-FOL-WR     | 20-2100009-02 |
|    | <b>BX-FOL loop flashlight red, orange lens</b>   | BX-FOL-RO     | 20-2100009-03 |
|    | <b>BX-FOL loop flashlight white, orange lens</b> | BX-FOL-WO     | 20-2100009-04 |
|    | <b>BX-UPI parallel indicator case</b>            | RAL 730RHE    | 10-2300007-01 |
|   | <b>BX-UPI parallel indicator electronics</b>     | BX-UPI        | 20-2100030-01 |
|  | <b>BX-SOL-R loop siren red</b>                   | BX-SOL-R      | 20-2100008-01 |
|  | <b>BX-SOL-W loop siren white</b>                 | BX-SOL-W      | 20-2100008-02 |
|  | <b>BX-SBL501 base siren white</b>                | BX-SBL501-W   | 20-2100011-02 |
|  | <b>BX-SBL501 base sounder, white tall</b>        | BX-SBL501-WDB | 20-2100011-01 |
|  | <b>BX-SBL502 platform sounder, white</b>         | BX-SBL502-W   | 20-2100012-04 |
|  | <b>BX-SBL502 platform sounder, white tall</b>    | BX-SBL502-WDB | 20-2100012-02 |
|  | <b>BX-SBL502 platform sounder, red tall</b>      | BX-SBL502-RDB | 20-2100012-01 |
|  | <b>Cover plate for SBL white</b>                 | SBL-AP        | 20-2100018-01 |



|                                                                                   | Designation               | Type   | Article no.   |
|-----------------------------------------------------------------------------------|---------------------------|--------|---------------|
|  | Design ring for SBL white | SBL-DR | 20-2100013-01 |

## 8.4.2 Conventional signal devices

The following conventional visual and acoustic signal devices cannot be addressed.

### Solex 10 flashlight



**No.: 20-4200003-02**

The Solex 10 flashlight is used for optical signalling of a fire alarm in the area of the fire brigade key safe (fire brigade attack route) in outdoor areas.

The compact and robust IP 65 flashlight ensures high reliability and a long lifespan, even in the presence of unfavourable ambient conditions in outdoor areas.

Suitable for wiring to monitored and unmonitored outputs of an Integral EvoxX fire alarm control panel.



**No.: 20-4200003-01**

The Solex 10 flashlight is surface-mounted. The cables are fed through the side of the base of the flashlight (M20).

|                         |                                |
|-------------------------|--------------------------------|
| Operating voltage range | 9 to 60 V DC                   |
| Current consumption     | 93 mA typ. with 24 V DC        |
| Flash frequency         | 1 Hz                           |
| Degree of protection    | IP65                           |
| Ambient temperature     | -25 °C to +70 °C               |
| Case material           | ABS                            |
| Case colour             | red, RAL 3001, white, RAL 9003 |
| Dome material           | Polycarbonate                  |
| Dome colour             | red or orange                  |
| Dimensions              | 93 × 93 mm (Ø × H)             |
| Weight                  | 180 g                          |
| VdS approval            | G207018                        |

## Sonos flashlight



**No.: 30-6300007-01**



**No.: 30-6300007-04**



**No.: 30-6300008-08**



**No.: 30-6300008-05**

Flashlight for wall or ceiling mounting, for visual indication of a fire alarm in interior areas in accordance with EN 54-23.

The signal devices are available with a base for degree of protection IP21c and IP65, each with a red or white dome colour and a red or white case.

The flashing frequency can be set using the DIP switches.

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Operating voltage range          | 17 to 60 V DC                                          |
| Alarm current                    | 20 mA typ./0.5 Hz, 40 mA typ./1 Hz                     |
| Flash frequency                  | 0.5 Hz or 1 Hz (can be set)                            |
| Degree of protection             | IP21C/IP65                                             |
| Case material                    | Polycarbonate                                          |
| Case colour                      | red or white                                           |
| Dome colour                      | red or white LED                                       |
| Dimensions                       |                                                        |
| Wall mounting, IP21C             | 100 × 100 mm (Ø × H)                                   |
| Wall mounting, IP65              | 98 × 122 mm (Ø × H)                                    |
| Ceiling mounting, IP21C          | 100 × 100 mm (Ø × H)                                   |
| Ceiling mounting, IP65           | 98 × 117 mm (Ø × H)                                    |
| Ambient temperature              | -25 °C to +70 °C                                       |
| Weight                           |                                                        |
| IP 21 C                          | 170 g                                                  |
| IP 65                            | 220 g                                                  |
| VdS approval                     | G214105, G214107                                       |
| Declaration of Performance (DoP) |                                                        |
| Wall-mounting                    | 2831-CPR-F0009 (white LED)<br>2831-CPR-F0150 (red LED) |
| Ceiling mounting                 | 2831-CPR-F0007 (white LED)<br>2831-CPR-F0148 (red LED) |

## Sonos S siren



**No.: 30-6300014-01**



**No.: 30-6300014-04**

The siren Sonos S is for acoustic signalling of a fire alarm and is available with red or white coloured case. It is available with bases for degrees of protection IP 21 C or IP 65. The compact and robust siren ensures high reliability and a long lifespan, even in the presence of unfavourable ambient conditions in outdoor areas.

The integrated electronic tone oscillator offers 32 different alarm tones, which can be set via a five-way DIP switch. The volume can be adjusted using a potentiometer.

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Operating voltage range          | 9 to 60 V DC                                   |
| Current consumption              | 13 mA typ. with 24 V DC                        |
| Volume                           | 94 to 106 dB, distance 1 m                     |
| Possible tone types              | 32                                             |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup> |
| Degree of protection             | IP21C/IP65                                     |
| Ambient temperature              | -25 °C to +70 °C                               |
| Case material                    | Polycarbonate                                  |
| Case colour                      | red, RAL 3001, white, RAL 9003                 |
| Dimensions                       |                                                |
| IP21C                            | 98 × 80 mm (Ø × H)                             |
| IP65                             | 98 × 105 mm (Ø × H)                            |
| Weight                           |                                                |
| IP 21 C                          | 220 g                                          |
| IP 65                            | 250 g                                          |
| VdS approval                     | G210098                                        |
| Declaration of Performance (DoP) | 2831-CPR-F1923                                 |

**No.: FG020661****No.: FG020660**

## AC siren for flush mounting

For acoustic indication of a fire alarm, suitable for mounting in a standard wall box. The siren has 32 selectable types of tones, which can be set via a five-way DIP switch. The volume is adjusted via a rotary switch.

The flush-mounted siren is suitable for connection to monitored and non-monitored outputs of the Integral IP fire alarm control panel.

|                                             |                               |
|---------------------------------------------|-------------------------------|
| Operating voltage range                     | 9 to 28 V DC                  |
| Current consumption                         | max. 35 mA                    |
| Signal level                                | 68 to 106 dB(A), distance 1 m |
| Possible tone types                         | 32                            |
| Degree of protection with flush-mounted box | IP54                          |
| Ambient temperature                         | -25 °C to +70 °C              |
| Case material                               | ABS                           |
| Case colour                                 | red or white                  |
| Dimensions                                  | 86 × 86 × 42 mm (H × W × D)   |
| Weight                                      | approx. 100 g                 |
| VdS approval                                | G206025                       |
| Declaration of Performance (DoP)            | 0832-CPD-1653                 |

## Sonos combined siren/flashlight



**No.: 30-6300009-08**



**No.: 30-6300009-05**



**No.: 30-6300010-01**



**No.: 30-6300010-04**

Combined siren/flashlight for ceiling or wall-mounting, for visual-acoustic indication of a fire alarm in interior areas in accordance with EN 54-3 and EN 54-23.

The signal devices are available with a base for degree of protection IP21c and IP65, each with a red or white dome colour and a red or white case.

The flashing frequency, volume and tones can be set using the DIP switches.

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Operating voltage range          | 17 to 60 V DC                                          |
| Flash frequency                  | 0.5 Hz or 1 Hz (can be set)                            |
| Degree of protection             | IP21C/IP65                                             |
| Case material                    | Polycarbonate                                          |
| Case colour                      | red or white                                           |
| Dome colour                      | red or white LED                                       |
| Dimensions                       |                                                        |
| Wall mounting, IP21C             | 100 × 100 mm (Ø × H)                                   |
| Wall mounting, IP65              | 98 × 122 mm (Ø × H)                                    |
| Ceiling mounting, IP21C          | 100 × 100 mm (Ø × H)                                   |
| Ceiling mounting, IP65           | 98 × 117 mm (Ø × H)                                    |
| Alarm current                    | 25 mA typ./0.5 Hz, 45 mA typ./1 Hz                     |
| Possible tone types              | 32                                                     |
| Volume                           | 97 dB(A) or attenuation by –8 dB(A) can be set         |
| Ambient temperature              |                                                        |
| visual variant                   | –20 °C to +70 °C                                       |
| optical/acoustic variant         | –10 °C to +55 °C                                       |
| Weight                           |                                                        |
| IP 21 C                          | 220 g                                                  |
| IP 65                            | 270 g                                                  |
| VdS approval                     | G214106, G214108                                       |
| Declaration of Performance (DoP) |                                                        |
| Wall-mounting                    | 2831-CPR-F0010 (white LED)<br>2831-CPR-F0149 (red LED) |
| Ceiling mounting                 | 2831-CPR-F0008 (white LED)<br>2831-CPR-F0147 (red LED) |

**VTB-32E combined siren/flashlight**



No.: FG020342



No.: FG020344

Combined siren with integrated orange flashlight, suitable for indoor and outdoor installation. The tone type and volume can be adjusted via DIP switches. The device is available in red or white, and optionally with degree of protection IP 43 or IP 65.

|                                  |                                                               |
|----------------------------------|---------------------------------------------------------------|
| Operating voltage range          | 21 to 28 V DC                                                 |
| Alarm current                    | max. 34.5 mA (depending on the tone)                          |
| Signal level                     | 76 to 104.6 dB, distance 1 m with 90° (depending on the tone) |
| Signal frequency                 | 440 to 2900 Hz                                                |
| Possible tone types              | 32                                                            |
| Degree of protection             | IP43/IP65                                                     |
| Ambient temperature              | –20 °C to +70 °C                                              |
| Case colour                      | red or white                                                  |
| Dome colour                      | orange                                                        |
| Dimensions                       |                                                               |
| IP43                             | 94 × 90 mm (Ø × H)                                            |
| IP65                             | 94 × 107 mm (Ø × H)                                           |
| Weight                           |                                                               |
| IP 43                            | 233 g                                                         |
| IP 65                            | 258 g                                                         |
| Declaration of Performance (DoP) | 0905-CPR-00060                                                |



**No.: 20-4200045-01**

## Alarm bell

Robust, motor-driven alarm bell with a sonorous tone and high output power, suitable for indoor installation.

|                      |                     |
|----------------------|---------------------|
| Operating voltage    | 24 V DC             |
| Alarm current        | 25 to 28 mA typ.    |
| Signal level         | 94 to 97 dB         |
| Degree of protection | IP21C               |
| Ambient temperature  | -10 °C to +55 °C    |
| Case material        | steel               |
| Case colour          | red                 |
| Base material        | Polycarbonate       |
| Base colour          | black               |
| Dimensions           | 203 × 67 mm (Ø × H) |



**No.: 20-4200040-01**

## COHP582GT24 signal horn 24 V DC

Electronic mini-horn with horn, suitable for indoor and outdoor installation.

|                         |                                     |
|-------------------------|-------------------------------------|
| Operating voltage range | 9 to 30 V DC                        |
| Current consumption     | 25 mA typ. with 24 V DC             |
| Volume                  | 98 dB(A)                            |
| Tone types              | continuous tone/pulse tone (400 Hz) |
| Degree of protection    | IP65                                |
| Ambient temperature     | -25 °C to +70 °C                    |
| Case material           | Polycarbonate/ABS, shock resistant  |
| Case colour             | light grey, RAL 7035                |
| Dimensions              | 74 × 180 mm (Ø × H)                 |



**No.: 20-4200041-01**

## COHP582GT230 signal horn 230 V AC

Electronic mini-horn with horn, suitable for indoor and outdoor installation.

|                      |                                     |
|----------------------|-------------------------------------|
| Operating voltage    | 230 V AC                            |
| Current consumption  | 30 mA typ.                          |
| Volume               | 98 dB(A)                            |
| Tone types           | continuous tone/pulse tone (400 Hz) |
| Degree of protection | IP65                                |
| Ambient temperature  | -25 °C to +70 °C                    |
| Case material        | Polycarbonate/ABS, shock resistant  |
| Case colour          | light grey, RAL 7035                |
| Dimensions           | 74 × 180 mm (Ø × H)                 |

**No.: 20-4200030-01**

## Revolving mirror light orange

Visual alarm device with screw drive and good visibility thanks to halogen lamps.

**No.: 20-4200031-01**

|                      |                      |
|----------------------|----------------------|
| Operating voltage    | 230 V AC             |
| Current consumption  | max. 230 mA          |
| Performance          | 55 W                 |
| Degree of protection | IP54                 |
| Ambient temperature  | -30 °C to +50 °C     |
| Case material        | Polycarbonate        |
| Case colour          | black                |
| Dome colour          | orange               |
| Dimensions           | 160 × 220 mm (Ø × H) |

## CWB ATEX Ex-flashlight



**No.: FG020380**



**No.: 20-4200061-01**

Flashlight with aluminium case, made of an explosion-proof construction and are used to visibly announcement a source of danger in category 2G, 2D, 3G and 3D in hazardous areas. The case is made of aluminium and is suitable for use in all chemical, petrochemical and offshore installations. Its high degree of protection and solid mechanical construction permit use in harsh ambient conditions.

|                         |                                                                                                                                       |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Operating voltage range | 12 to 48 V $\pm$ 10 %                                                                                                                 |
| Current consumption     | 230 mA typ.                                                                                                                           |
| Performance             | 5.6 W                                                                                                                                 |
| Flash frequency         | 1 Hz                                                                                                                                  |
| Connection              | screw-type terminals<br>max. 2 $\times$ 4 mm <sup>2</sup> , single wire<br>max. 2 $\times$ 2.5 mm <sup>2</sup> , fine-stranded        |
| Cable entry             | 1 $\times$ stuffing junctions M20 $\times$ 1.5<br>Clamping range 6 to 13 mm<br>1 $\times$ closing plugs, M20 $\times$ 1.5             |
| Degree of protection    | IP66                                                                                                                                  |
| Ambient temperature     | -20 °C to +50 °C                                                                                                                      |
| Relative humidity       | 90 % non-condensing                                                                                                                   |
| Case material           | aluminium alloy                                                                                                                       |
| Case colour             | black base, yellow case                                                                                                               |
| Dome material           | Polycarbonate                                                                                                                         |
| Dome colour             | red or clear                                                                                                                          |
| Weight                  | approx. 1.3 kg                                                                                                                        |
| Dimensions              | 70 $\times$ 260 mm (Ø $\times$ H)                                                                                                     |
| Ex-Designation          | II 2 G Ex d e IIC T6 Gb<br>II 2 G Ex d e IIC T5 Gb<br>II 2 D Ex tb IIIC T85 °C Db IP66 (T6)<br>II 2 D Ex tb IIIC T100 °C Db IP66 (T5) |
| ATEX approval           | LCIE 02 ATEX 6113                                                                                                                     |

**No.: 20-4200052-01**

## FL60 ex-flashlight

Robust, pressure-capsulated flashlight, designed and approved for use in hazardous areas.

|                      |                                                           |
|----------------------|-----------------------------------------------------------|
| Operating voltage    | 24 V DC                                                   |
| Current consumption  | 350 mA typ.                                               |
| Flash frequency      | 1 Hz                                                      |
| Degree of protection | IP66                                                      |
| Ambient temperature  | -40 °C to +60 °C                                          |
| Case colour          | red, similar to RAL 3020                                  |
| Dome colour          | orange                                                    |
| Dimensions           | 317 × 128 × 176 mm (H × W × D)                            |
| Weight               | 5.5 kg                                                    |
| Ex-Designation       | II 2 G Ex db eb IIC T4 Gb<br>II 2 D Ex tb IIIC T100 °C Db |

**No.: 20-4200051-02**

## YA60 ex-siren

Robust, pressure-capsulated siren incl. operating system mounting bracket for use in hazardous zones 1, 2, 21 and 22.

|                         |                                                                               |
|-------------------------|-------------------------------------------------------------------------------|
| Operating voltage range | 12 to 27.2 V DC                                                               |
| Current consumption     | max. 1 A with 24 V                                                            |
| Volume                  | 114 dB, distance 1 m                                                          |
| Possible tone types     | 4 tone channels and 64 preconfigured tones                                    |
| Degree of protection    | IP66                                                                          |
| Ambient temperature     | -40 °C to +70 °C                                                              |
| Case material           | aluminium with stainless steel fastenings                                     |
| Case colour             | red, similar to RAL 3020                                                      |
| Dimensions              | 319 × 176 × 128 mm (H × W × D)                                                |
| Weight                  | 6.2 kg                                                                        |
| Ex-Designation          | EX II 2 G Ex db eb IIC T6 / T4 Gb<br>EX II 2 D Ex tb IIIC T80 °C / T100 °C Db |

## IS-S-02 ex-siren



**No.: 20-4200004-01**

The compact and robust IP 66 Ex-siren is used for acoustic signalling of a fire alarm. It ensures high reliability and a long lifespan, even in the presence of unfavourable ambient conditions in outdoor areas. In addition, the Ex-siren is suitable and approved for use in hazardous areas (zone 1 and 2).

The integrated electronic tone oscillator offers 32 different types of tones, which can be set with a five-way DIP switch.

Suitable for wiring to monitored and unmonitored outputs of an Integral EvoxX fire alarm control panel.

The cable inlet (M20) can be on the bottom or at the side of the base.

|                                  |                                                     |
|----------------------------------|-----------------------------------------------------|
| Operating voltage range          | 16 to 28 V DC via intrinsic safety barrier          |
| Current consumption              | 33 mA typ. with 24 V DC                             |
| Volume                           | 105 dB, distance 1 m                                |
| Connection                       | screw-type terminals, max. 1.5 mm <sup>2</sup>      |
| Possible tone types              | 32                                                  |
| Degree of protection             | IP66                                                |
| Ambient temperature              | –40 °C to +55 °C                                    |
| Case material                    | Polycarbonate                                       |
| Case colour                      | red, RAL 3001                                       |
| Dimensions                       | 98 × 105 mm (Ø × H)                                 |
| Weight                           | 280 g                                               |
| Ex-Designation                   | Ex ia I MA<br>Ex ia IIC T6 Ga<br>Ex ia IIIC T85C Da |
| ATEX approval                    | EMT 17 ATEX 0011X                                   |
| LPCB-Approval                    | 1448a                                               |
| Declaration of Performance (DoP) | 2831-CPR-F2313                                      |



No.: 20-4200050-02

**YL60 combined ex-siren and flashlight**

Robust, pressure-capsulated combined siren/flashlight, designed and approved for use in hazardous areas. The acoustic and optical signals can be operated independently or in combination.

|                      |                                                           |
|----------------------|-----------------------------------------------------------|
| Operating voltage    | 24 V DC                                                   |
| Current consumption  | 1.35 A                                                    |
| Flash frequency      | 1 Hz                                                      |
| Volume               | 114 dB, distance 1 m                                      |
| Degree of protection | IP66                                                      |
| Ambient temperature  | –40 °C to +70 °C                                          |
| Case material        | Aluminium, powder-coated                                  |
| Case colour          | red, similar to RAL 3020                                  |
| Dome material        | Polycarbonate                                             |
| Dome colour          | red                                                       |
| Dimensions           | 422 × 128 × 176 mm (H × W × D)                            |
| Weight               | 6.6 kg                                                    |
| Ex-Designation       | II 2 G Ex db eb IIC T4 Gb<br>II 2 D Ex tb IIIC T100 °C Db |

## Conventional signal devices and accessories

|                                                                                     | Designation                                                                                 | Type                      | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------|---------------|
|    | <b>Solex 10 flashlight</b><br>Case red, dome red                                            | SOLEX 10                  | 20-4200003-02 |
|    | <b>Solex 10 flashlight</b><br>Case white, dome orange                                       | SOLEX 10                  | 20-4200003-01 |
|    | <b>Optical signal devices – wall mounting</b><br>Red case, IP21C, low base, red dome        | SONOS-BW<br>ESDA1000RRS   | 30-6300007-01 |
|    | <b>Optical signal devices – wall mounting</b><br>Red case, IP65, tall base, red dome        | SONOS-BW<br>ESDA1000RRD   | 30-6300007-02 |
|    | <b>Optical signal devices – wall mounting</b><br>Red case, IP21C, low base, white dome      | SONOS-BW ES-<br>BA4000RWS | 30-6300007-07 |
|    | <b>Optical signal devices – wall mounting</b><br>Red case, IP65, tall base, white dome      | SONOS-BW ES-<br>BA4000RWD | 30-6300007-08 |
|   | <b>Optical signal devices – wall mounting</b><br>White case, IP21C, low base, white dome    | SONOS-BW ES-<br>BA4000WWS | 30-6300007-03 |
|  | <b>Optical signal devices – wall mounting</b><br>White case, IP65, tall base, white dome    | SONOS-BW ES-<br>BA4000WWD | 30-6300007-04 |
|  | <b>Optical signal devices – wall mounting</b><br>White case, IP21C, low base, red dome      | SONOS-BW<br>ESDA1000WRS   | 30-6300007-05 |
|  | <b>Optical signal devices – wall mounting</b><br>White case, IP65, tall base, red dome      | SONOS-BW<br>ESDA1000WRD   | 30-6300007-06 |
|  | <b>Optical signal devices – ceiling mounting</b><br>Red case, IP21C, low base, red dome     | SONOS-BC<br>ESDA2000RRS   | 30-6300008-01 |
|  | <b>Optical signal devices – ceiling mounting</b><br>Red case, IP65, tall base, red dome     | SONOS-BC<br>ESDA2000RRD   | 30-6300008-02 |
|  | <b>Optical signal devices – ceiling mounting</b><br>Red case, IP21C, low base, white dome   | SONOS-BC ES-<br>BA3000RWS | 30-6300008-07 |
|  | <b>Optical signal devices – ceiling mounting</b><br>Red case, IP65, tall base, white dome   | SONOS-BC ES-<br>BA3000RWD | 30-6300008-08 |
|  | <b>Optical signal devices – ceiling mounting</b><br>White case, IP21C, low base, white dome | SONOS-BC ES-<br>BA3000WWS | 30-6300008-03 |

|                                                                                     | Designation                                                                                       | Type                  | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------|---------------|
|    | <b>Optical signal devices – ceiling mounting</b><br>White case, IP65, tall base, white dome       | SONOS-BC ES-BA3000WWD | 30-6300008-04 |
|    | <b>Optical signal devices – ceiling mounting</b><br>White case, IP21C, low base, red dome         | SONOS-BC ESDA2000WRS  | 30-6300008-05 |
|    | <b>Optical signal devices – ceiling mounting</b><br>White case, IP65, tall base, red dome         | SONOS-BC ESDA2000WRD  | 30-6300008-06 |
|    | <b>Sonos S siren case red, IP21C</b><br>flat base                                                 | PSS-0153/PSS-0084     | 30-6300014-01 |
|    | <b>Sonos S siren case red, IP65</b><br>high base                                                  | PSS-0154/PSS-0084     | 30-6300014-02 |
|    | <b>Sonos S siren case white, IP21C</b><br>flat base                                               | PSS-0155/PSS-0089     | 30-6300014-03 |
|   | <b>Sonos S siren case white, IP65</b><br>high base                                                | PSS-0156/PSS-0089     | 30-6300014-04 |
|  | <b>Siren for flush mounting, red</b>                                                              | ACR                   | FG020661      |
|  | <b>Siren for flush mounting, white</b>                                                            | ACW                   | FG020660      |
|  | <b>Optical signal devices/sounders – wall mounting</b><br>Red case, IP21C, low base, red dome     | SONOSSBW ESFA1000RRS  | 30-6300009-01 |
|  | <b>Optical signal devices/sounders – wall mounting</b><br>Red case, IP65, tall base, red dome     | SONOSSBW ESFA1000RRD  | 30-6300009-02 |
|  | <b>Optical signal devices/sounders – wall mounting</b><br>Red case, IP21C, low base, white dome   | SONOSSBW ESCA4000RWS  | 30-6300009-07 |
|  | <b>Optical signal devices/sounders – wall mounting</b><br>Red case, IP65, tall base, white dome   | SONOSSBW ESCA4000RWD  | 30-6300009-08 |
|  | <b>Optical signal devices/sounders – wall mounting</b><br>White case, IP21C, low base, white dome | SONOSSBW ESCA4000WWS  | 30-6300009-03 |
|  | <b>Optical signal devices/sounders – wall mounting</b><br>White case, IP65, tall base, white dome | SONOSSBW ESCA4000WWD  | 30-6300009-04 |

|                                                                                     | Designation                                                                                          | Type                    | Article no.   |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------|---------------|
|    | <b>Optical signal devices/sounders – wall mounting</b><br>White case, IP21C, low base, red dome      | SONOSSBW<br>ESFA1000WRS | 30-6300009-05 |
|    | <b>Optical signal devices/sounders – wall mounting</b><br>White case, IP65, tall base, red dome      | SONOSSBW<br>ESFA1000WRD | 30-6300009-06 |
|    | <b>Optical signal devices/sounders – ceiling mounting</b><br>Red case, IP21C, low base, red dome     | SONOSSBC<br>ESFA2000RRS | 30-6300010-01 |
|    | <b>Optical signal devices/sounders – ceiling mounting</b><br>Red case, IP65, tall base, red dome     | SONOSSBC<br>ESFA2000RRD | 30-6300010-02 |
|    | <b>Optical signal devices/sounders – ceiling mounting</b><br>Red case, IP21C, low base, white dome   | SONOSSBC<br>ESCA3000RWS | 30-6300010-07 |
|    | <b>Optical signal devices/sounders – ceiling mounting</b><br>Red case, IP65, tall base, white dome   | SONOSSBC<br>ESCA3000RWD | 30-6300010-08 |
|   | <b>Optical signal devices/sounders – ceiling mounting</b><br>White case, IP21C, low base, white dome | SONOSSBC<br>ESCA3000WWS | 30-6300010-03 |
|  | <b>Optical signal devices/sounders – ceiling mounting</b><br>White case, IP65, tall base, white dome | SONOSSBC<br>ESCA3000WWD | 30-6300010-04 |
|  | <b>Optical signal devices/sounders – ceiling mounting</b><br>White case, IP21C, low base, red dome   | SONOSSBC<br>ESFA2000WRS | 30-6300010-05 |
|  | <b>Optical signal devices/sounders – ceiling mounting</b><br>White case, IP65, tall base, red dome   | SONOSSBC<br>ESFA2000WRD | 30-6300010-06 |
|  | <b>Combined siren/flashlight case red, IP43</b>                                                      | VTB-32E-SB-RB/AL        | FG020342      |
|  | <b>Combined siren/flashlight case red, IP65</b>                                                      | VTB-32E-DB-RB/AL        | FG020343      |
|  | <b>Combined siren/flashlight case white, IP43</b>                                                    | VTB-32E-SB-WB/AL        | FG020344      |
|  | <b>Combined siren/flashlight case white, IP65</b>                                                    | VTB-32E-DB-WB/AL        | FG020345      |
|  | <b>Alarm bell 24 V DC/35 mA</b>                                                                      | CFB6D24                 | 20-4200045-01 |



|                                                                                     | Designation                                                             | Type                     | Article no.   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------|---------------|
|    | <b>Signal horn 24 V DC/25 mA</b><br>Protection class IP65               | COHP582GT24              | 20-4200040-01 |
|    | <b>Signal horn 230 V AC/30 mA</b><br>Protection class IP65              | COHP582GT230             | 20-4200041-01 |
|    | <b>Revolving mirror light orange</b><br>Protection class IP54, 230 V AC | COBL595H1RTH230AL        | 20-4200030-01 |
|    | <b>Wall mount for revolving mirror light</b><br>for COBL595H1RTH230AL   | COBL595H1RTHWM           | 20-4200031-01 |
|    | <b>CWB ATEX Ex-flashlight, red</b><br>incl. connection joint            | CWB EX RT                | FG020380      |
|    | <b>CWB ATEX Ex-flashlight, clear</b><br>incl. connection joint          | CWB EX KL                | 20-4200061-01 |
|   | <b>Mounting bracket for CWB ATEX</b><br>for wall-mounting               | CWB EX WW                | FG020382      |
|  | <b>EX-flashlight FL60, orange</b>                                       | FL60/324-<br>D0111-00AW3 | 20-4200052-01 |
|  | <b>Ex-siren YA60</b><br>Ex zones 1, 2, 21, 22, EN 54, max. 120 dB       | YA60/326-<br>DS001-00003 | 20-4200051-02 |
|  | <b>Ex-siren IS-S-02</b><br>Case red, IP66                               | IS-S-02                  | 20-4200004-01 |
|  | <b>YL60 Ex combination signal</b>                                       | YL60/324-<br>DS101-00RW3 | 20-4200050-02 |
|  | <b>Exd cable entry M20</b><br>for V6 EX, YL60, YA60                     | CAP806674V1              | 20-3002112-01 |
|  | <b>Exd dummy junction M20</b>                                           | CYA1200YXN               | 20-3002114-01 |
|  | <b>Exd cable entry M25</b>                                              | CAP806774V1              | 20-3002111-01 |
|  | <b>Exd dummy junction M25</b>                                           | CYA1300YXN               | 20-3002110-01 |

|                                                                                   | Designation         | Type       | Article no.   |
|-----------------------------------------------------------------------------------|---------------------|------------|---------------|
|  | Reduction M25 × M20 | BBA1312YXN | 20-3002113-01 |

## 8.5 Holding magnets and anchoring plates

### 8.5.1 Integral X-LINE

#### BX-MDH holding magnet



No.: 20-2100050-01



No.: FG030173

The BX-MDH magnetic door holder is used to hold doors open in idle mode and to close them in the case of an event.

Traditional magnets must be continuously supplied with current to keep the doors open, whereas for the BX-MDH doors are held open by the integrated permanent magnets - completely energy consumption-free. The triggering is done by a short current pulse: with the help of an integrated battery in the BX-MDH an inverted magnetic field is created, temporarily neutralising the permanent magnet's holding strength, thereby initiating the closing process for the door.

An integrated limit switch in the BX-MDH as well as an optional additional limit switch in the door frame can continuously monitor the door position, and in the event of a fault (e.g. door obstructed) can trigger the appropriate message. This is an important safety aspect when closing doors in critical sections in case of an event.

The BX-MDH magnetic door holder is operated in conjunction with automatic detectors, alarm devices and output modules on the same loop; due to the built-in short circuit isolator a high level of availability is provided in case of wire break or short circuit. Each magnet can be individually addressed and configured; this allows selective activation of each individual door, thereby being tailored according the individual requirements of the customer.

|                            |                                                |
|----------------------------|------------------------------------------------|
| Operating voltage range    | 12 to 30 V DC                                  |
| Quiescent current          | 0.55 mA typ.                                   |
| Fault                      |                                                |
| Door open                  | 0,34 mA typ.                                   |
| Door closed                | 0.12 mA typ.                                   |
| Signal transmission        | serial, two-wire technology                    |
| Monitored inputs           | 2 input for potential-free contacts            |
| Performance                | 2.1 W                                          |
| Max. holding strength      | 200 N                                          |
| Magnetic contact area      | Ø 48 mm                                        |
| Release processes          | approx. 100 000                                |
| Back-up battery            | 9 V lithium                                    |
| System connection          | max. 32 per loop                               |
| Connection                 | screw-type terminals, max. 1.5 mm <sup>2</sup> |
| Short circuit isolator     | integrated                                     |
| Degree of protection       | IP42                                           |
| Ambient temperature        |                                                |
| Manufacturer specification | –20 °C to +60 °C                               |
| Approved by VdS            | –10 °C to +55 °C                               |
| Relative humidity          | 5 to 95 % non-condensing                       |
| Case colour                | light grey, RAL 7035                           |
| Dimensions                 | 142 × 85 × 53 mm (H × W × D)                   |

X-LINE holding magnets and accessories

|                                                                                   | Designation                                                               | Type     | Article no.   |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------|---------------|
|  | <b>Surface-mounted holding magnet for X-LINE</b><br>incl. anchoring plate | BX-MDH   | 20-2100050-01 |
|  | <b>Lithium battery 9 V for BX-MDH</b>                                     | U9VL-J-P | FG030173      |

## 8.5.2 Conventional (non-addressable)

The following conventional holding magnets cannot be addressed.



**No.: 20-4001003-01**

### Holding magnet with mounting plate

Electric holding magnet on a plastic mounting plate with concealed connection terminal. A swivelling anchoring plate is included.

|                       |                             |
|-----------------------|-----------------------------|
| Operating voltage     | 24 V DC                     |
| Performance           | 1.6 W                       |
| Magnetic contact area | Ø 48 mm                     |
| Max. holding strength | 400 N                       |
| Degree of protection  | IP42                        |
| Dimensions            | 55 × 55 × 35 mm (H × W × D) |



**No.: 20-4001001-01**

### Holding magnet with breaker button

Electric holding magnet with circuit breaker button for bridging larger distances between door and wall. A swivelling anchoring plate is included.

|                       |                             |
|-----------------------|-----------------------------|
| Operating voltage     | 24 V DC                     |
| Performance           | 1.6 W                       |
| Magnetic contact area | Ø 48 mm                     |
| Max. holding strength | 400 N                       |
| Degree of protection  | IP42                        |
| Dimensions            | 70 × 70 × 65 mm (H × W × D) |



**No.: 20-4001000-01**

### Holding magnet for surface mounting 400 N

Electric holding magnet with circuit breaker button in a plastic case for surface mounting. Includes swivelling anchoring plate and blanking stopper.

|                       |                              |
|-----------------------|------------------------------|
| Operating voltage     | 24 V DC                      |
| Performance           | 1.6 W                        |
| Magnetic contact area | Ø 48 mm                      |
| Max. holding strength | 400 N                        |
| Degree of protection  | IP42                         |
| Dimensions            | 120 × 85 × 38 mm (H × W × D) |

**No.: 20-4001004-01**

## Holding magnet for flush mounting

Electric holding magnet without a circuit breaker button for flush mounting. A swivelling anchoring plate is included.

|                       |                             |
|-----------------------|-----------------------------|
| Operating voltage     | 24 V DC                     |
| Performance           | 1.6 W                       |
| Magnetic contact area | Ø 48 mm                     |
| Max. holding strength | 400 N                       |
| Degree of protection  | IP42                        |
| Dimensions            | 85 × 85 × 15 mm (H × W × D) |

**No.: 20-4001011-01**

## Floor-mounted holding magnet

Electric holding magnet for floor mounting in a die-cast aluminium case with circuit breaker button. The electrical connection is made prior to installation via a two-pin terminal.

|                       |                                |
|-----------------------|--------------------------------|
| Operating voltage     | 24 V DC                        |
| Performance           | 1.5 W                          |
| Magnetic contact area | Ø 50 mm (Ø 63 mm upon request) |
| Max. holding strength | 490 N                          |
| Degree of protection  | IP65                           |
| Dimensions            | 109 × 120 × 86 mm (H × W × D)  |

**No.: 20-4001002-01**

## Holding magnet for floor or wall mounting

Electric holding magnet with circuit breaker button with swivelling magnetic head for floor or wall-mounting. Three base lengths for different wall distances. A swivelling anchoring plate is included.

|                       |                                         |
|-----------------------|-----------------------------------------|
| Operating voltage     | 24 V DC                                 |
| Performance           | 1.6 W                                   |
| Magnetic contact area | Ø 48 mm                                 |
| Max. holding strength | 400 N                                   |
| Degree of protection  | IP42                                    |
| Dimensions            | 85 × 90 mm (W × D), L: 175, 325, 475 mm |

**No.: 20-4001030-01**

## Ex-Holding magnet for surface mounting

The electric holding magnet in an explosion-proof version in cast case is intended for use in hazardous areas and is surface-mounted. It is ATEX approved and has ignition protection type e (increased safety).

|                       |                                |
|-----------------------|--------------------------------|
| Operating voltage     | 24 V DC                        |
| Performance           | 3 W                            |
| Magnetic contact area | Ø 50 mm                        |
| Max. holding strength | 588 N                          |
| Dimensions            | 130 x 117 x 106 mm (H x W x D) |
| Ex-Designation        | EX II 2 G EEx m e II T6        |
| ATEX approval         | TÜV 01 ATEX 1778X              |

**No.: 20-4001006-01**

## Flexible anchoring plate

Flexible anchoring plate for holding magnets on a plastic mounting plate. It is mounted using four countersunk screws.

|                           |                         |
|---------------------------|-------------------------|
| Anchoring plate           | Ø 55 or 65 mm           |
| Dimensions mounting plate |                         |
| Anchor plate 55 mm        | 55 x 55 x 18 mm (HxWxD) |
| Anchor plate 65 mm        | 75 x 75 x 23 mm (HxWxD) |

**No.: 20-4001031-01**

## Flexible anchoring plate for Ex-holding magnet

Flexible nickel-plated anchor on a plastic mounting plate for Ex-holding magnets. It is mounted using four countersunk screws.

|                 |                             |
|-----------------|-----------------------------|
| Anchoring plate | Ø 55 mm                     |
| Dimensions      | 55 x 55 x 18 mm (H x W x D) |

**No.: 20-4001007-01**

## Swivelling anchoring plate

Swivelling anchoring plate for holding magnets on a plastic mounting plate. It is mounted using four countersunk screws.

|                 |                             |
|-----------------|-----------------------------|
| Anchoring plate | Ø 55 mm (others on request) |
| Slewing range   | 2 x 60°                     |
| Dimensions      | 55 x 55 x 50 mm (HxWxD)     |



**No.: 20-4001008-01**

## Telescopic anchor

Moveable anchoring plate with telescopic guide. It is mounted using four countersunk screws.

|                   |                             |
|-------------------|-----------------------------|
| Anchoring plate   | Ø 55 mm                     |
| Spring deflection | 20 mm                       |
| Dimensions        | 55 × 55 × 79 mm (H × W × D) |

**No.: 20-4001009-01**

## Wall-mounted bracket for holding magnet

Suitable for BX-MDH and GTR0480008 holding magnets, available in 150 mm or 300 mm version.

|            |                                                                     |
|------------|---------------------------------------------------------------------|
| Dimensions | 140 × 300 × 100 mm (H × W × D) or<br>140 × 150 × 100 mm (H × W × D) |
|------------|---------------------------------------------------------------------|

**No.: 20-4001009-02**

## Floor bracket for holding magnet

Suitable for BX-MDH and GTR0480008 holding magnets.

|            |                              |
|------------|------------------------------|
| Dimensions | 128 × 95 × 80 mm (H × W × D) |
|------------|------------------------------|

**No.: 20-4001010-01**

## Holding magnets, anchoring plates, and accessories

|                                                                                     | Designation                                                    | Type            | Article no.   |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------|---------------|
|    | <b>Holding magnet with mounting plate</b>                      | GTR0480002      | 20-4001003-01 |
|    | <b>Holding magnet with breaker button</b>                      | GTR0480007      | 20-4001001-01 |
|    | <b>Surface-mounted holding magnet with breaker button</b>      | GTR0480008      | 20-4001000-01 |
|    | <b>Flush-mounted holding magnet</b>                            | GTR0480004      | 20-4001004-01 |
|    | <b>Floor-mounted holding magnet</b>                            | GTR050.500002   | 20-4001011-01 |
|    | <b>Holding magnet floor/wall (150/175 mm)</b>                  | GTR0480011      | 20-4001002-01 |
|    | <b>Holding magnet floor/wall (300/325 mm)</b>                  | GTR0480014      | 20-4001002-02 |
|   | <b>Holding magnet floor/wall (450/475 mm)</b>                  | GTR0480015      | 20-4001002-03 |
|  | <b>Mounting base for 20-4001002-xx</b>                         | SZB000.257500   | 20-4001005-01 |
|  | <b>Ex-Holding magnet for surface mounting</b>                  | GT50R050        | 20-4001030-01 |
|  | <b>Flexible anchoring plate 55 mm on mounting plate, 55 mm</b> | GTX050.000101   | 20-4001006-01 |
|  | <b>Flexible anchoring plate 65 mm on mounting plate, 75 mm</b> | GTX063.000001   | 20-4001006-02 |
|  | <b>Flexible anchoring plate for Ex-holding magnet</b>          | GT50R105        | 20-4001031-01 |
|  | <b>Swivelling anchoring plate, 55 mm</b>                       | GTX050.000203   | 20-4001007-01 |
|  | <b>Telescopic anchor</b>                                       | GTX050.000310   | 20-4001008-01 |
|  | <b>Wall-mounted bracket for holding magnet, 150 mm</b>         | GTR048000A07800 | 20-4001009-01 |

|                                                                                   | Designation                                        | Type            | Article no.   |
|-----------------------------------------------------------------------------------|----------------------------------------------------|-----------------|---------------|
|  | Wall-mounted bracket for holding magnet,<br>300 mm | GTR048000A07900 | 20-4001009-02 |
|  | Floor bracket for holding magnet                   | GTR048000A12006 | 20-4001010-01 |

## 8.6 Testing devices



**No.: FG030200**

### UTP universal telescopic bar

Locking telescopic bar, available in three or four-metre lengths; the telescopic bar's range can be extended by 1.5 m to 6 m or 7 m respectively with the 1.3 m extender. Fits all Schrack detector removers and testing devices.

|                  |                                            |
|------------------|--------------------------------------------|
| Transport length |                                            |
| UTP3             | 1.7 m for installation heights up to 4.5 m |
| UTP4             | 2.2 m for installation heights up to 5.5 m |
| Weight           |                                            |
| UTP3             | 1 kg                                       |
| UTP4             | 1.2 kg                                     |



**No.: FG030209**

### UTP 30 kV universal telescopic bar

Telescopic bar with dielectric strength up to 30 kV for mounting heights up to 4.5 meter or 11 meter. Fits all Schrack detector removers and testing devices.

|                  |                                            |
|------------------|--------------------------------------------|
| Transport length |                                            |
| UTP3 30KV        | 1.7 m for installation heights up to 4.5 m |
| UTP10 30KV       | 1.7 m for installation heights up to 11 m  |
| Weight           |                                            |
| UTP3 30KV        | 2.2 kg                                     |
| UTP4 30KV        | 3.9 kg                                     |

FDT 533 testing devices and FDT 533 CO-set



No.: FG030202



No.: FG030202  
No.: 30-5600001-01



No.: FG030117



No.: FG030990

The FDT 533 testing device is used to test the smoke and heat functionality of fire detectors. With the optional expansion FDT 533 CO-SET, the CO functionality of a fire detector can also be tested.

The FDT 533 testing device consists of a holder for the test gas bottle (smoke/heat), a trigger lever with sliding mechanism and an adapter for mounting on a suitable testing bar.

The expansion FDT 533 CO-SET consists of a holder for the test gas bottle (CO), a trigger lever and a clamp mount for attaching to the FDT 533.

FDT 533

|                         |                               |
|-------------------------|-------------------------------|
| Case material           | PPE/PS                        |
| Dimensions              | 356 × 123 × 73 mm (H × W × D) |
| Weight without test gas | approx. 360 g                 |

FDT 533 CO kit

|                         |                               |
|-------------------------|-------------------------------|
| Case material           |                               |
| Clamping mount          | PA 6 GF 30                    |
| CO uptake               | polycarbonate/ABS             |
| Dimensions              | 185 × 210 × 85 mm (H × W × D) |
| Weight without test gas | approx. 302 g                 |

## UDR 533 detector remover



**No.: FG030240**

To install or to remove the CUBUS multiple sensor detector into/from the detector base.

The UDR 533S and UDR 533K detector remover tools can be mounted on the UTP series telescopic bars, whereby the UDR 533K detector remover tool is also suitable for offset insertion or removal of the detector due to the cardan joint.

The UDR 533A interchangeable insert can be used in the UDR 531K detector remover tool (for series 531 detectors).



**No.: FG030241**

### UDR 533 A

|            |                             |
|------------|-----------------------------|
| Dimensions | 98 x 71 x 62 mm (H x W x D) |
| Weight     | approx. 150 g               |

### UDR 533S

|            |                              |
|------------|------------------------------|
| Dimensions | 98 x 71 x 232 mm (H x W x D) |
| Weight     | approx. 200 g                |

### UDR 533K

|            |                                |
|------------|--------------------------------|
| Dimensions | 170 x 160 x 232 mm (H x W x D) |
| Weight     | approx. 530 g                  |



**No.: FG030242**

STB 01X testing device for loop



No.: 50-1000004-01



No.: 20-1400320-01

Portable device for easy testing of an installed Integral loop or X-LINE without a connected fire alarm control panel. Up to 1000 loops can be stored using the integrated SD memory card and provided in XML format using a converter.

Delivery includes the SD memory card, USB cable for firmware updates and power supply unit; the carrying case must be ordered separately.

|                                  |                                        |
|----------------------------------|----------------------------------------|
| Mains voltage                    | 230 V AC                               |
| Operating voltage range          | 20 to 30 V DC                          |
| Loop operating voltage           | 12 V DC or 24 V DC                     |
| Quiescent current                | 110 mA (without external consumers)    |
| Connection                       | plug-in terminals, 1.5 mm <sup>2</sup> |
| Degree of protection             | IP20                                   |
| Ambient temperature              | +5 °C to +40 °C                        |
| Case material                    | polyamide                              |
| Case colour                      | black grey, similar to RAL 7021        |
| Dimensions                       |                                        |
| STB 01X                          | 220 × 116 × 60 mm (H×W×D)              |
| Transport case                   | 400 × 300 × 183 mm (H×W×D)             |
| Weight without power supply unit | 480 g                                  |

## Testing devices and accessories

|                                                                                     | Designation                                    | Type           | Article no.   |
|-------------------------------------------------------------------------------------|------------------------------------------------|----------------|---------------|
|    | Universal telescopic bar 3 m                   | UTP3           | FG030200      |
|    | Universal telescopic bar 4 m                   | UTP4           | FG030201      |
|                                                                                     | 1.3 m extender for UTP 3 and 4                 | UTP V          | FG030208      |
|    | Universal telescopic bar 3 m 30 kV             | UTP3 30KV      | FG030209      |
|    | Universal telescopic bar 11 m 30 kV            | UTP10 30KV     | FG030210      |
|    | Testing device for smoke detectors             | FDT 533        | FG030202      |
|    | Testing gas 918/5 for smoke detectors          | PRUEFGAS       | FG030117      |
|   | Testing device for CO detectors                | FDT 533 CO-SET | 30-5600001-01 |
|  | Testing gas for CO detectors                   | SOLO C3        | FG030990      |
|  | UDR 533A detector remover                      | UDR 533A       | FG030240      |
|  | UDR 533S detector remover                      | UDR 533S       | FG030241      |
|  | UDR 533K detector remover                      | UDR 533K       | FG030242      |
|  | Replacement rubber for UDR 533                 | UDR 533 G      | FG030243      |
|  | Testing device for X-LINE<br>German labelling  | STB 01X-D      | 50-1000004-01 |
|  | Testing device for X-LINE<br>English labelling | STB 01X-E      | 50-1000004-02 |
|  | Case for STB 01X                               | STB01X CASE    | 20-1400320-01 |



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## 9 Special fire alarm systems

### 9.1 Aspirating smoke detectors

Aspirating smoke detectors continuously take air samples from an area to be monitored via sampling pipe networks with sampling points. The air samples are examined for smoke particles with the aid of highly sensitive smoke sensors. The smoke sensors are available in different sensitivity classes and can also be adapted in their sensitivity to the conditions.

A high-performance fan is integrated into the evaluation unit. The fan continuously transports air from the monitoring area via the sampling pipe into the evaluation unit. With the airflow monitoring the sampling pipe is monitored for pipe breakage and contamination of the sampling points.

The sampling pipe is constructed symmetrically and can be designed in an I, U, T, H or E-shape. Asymmetrical sampling pipe networks can also be realised using the ASD PipeFlow calculation software. If the sampling points and evaluation unit are located in different climate zones, the sampled air must be returned to the climate zone of the sampled air. The maximum length of the pipework for air recirculation must not exceed 20 metres.

Thanks to this type of detection and the good properties against extreme ambient conditions, aspirating smoke detectors are used where difficult conditions are to be expected during operation. These can be difficult-to-access monitoring areas or latent sources of interference. Conventional point fire detectors are not able to guarantee optimal protection in such cases. Aspirating smoke detectors are used especially in listed buildings or in aesthetically demanding interiors where point fire detectors on the ceiling would disturb the impression of the room.

## 9.1.1 ASD 200x devices and smoke sensors

### ASD 2001 aspirating smoke detector



**No.: 11-2100003-05**

The ASD is an aspirating smoke detector with highly sensitive smoke sensors; it samples and checks ambient air via a sampling pipe tube network. Airflow monitoring ensures that the sampled air flows to the smoke sensors in the correct amount and at the correct speed.

If the concentration of smoke particles exceeds an adjustable threshold value, the ASD triggers an alarm. In addition, a second alarm and 3 pre-signals can be configured. The ASD forwards the signals via relays to other fire alarm control panels.

Standards-compliant planning and project design is carried out with the PC application PipeFlow. The parameters calculated in this way are transferred to the ASD during commissioning using the ASD service configuration application. ASD service offers other functions for control and maintenance of the ASD as well as for reading out current events and live values.

|                                     |                                       |
|-------------------------------------|---------------------------------------|
| Operating voltage range             | 14 to 30 V DC                         |
| Current consumption                 |                                       |
| Idle mode                           | max. 412 mA                           |
| Alarm state (with sensor)           | max. 425 mA                           |
| Relay contacts                      | volt-free changeover contacts         |
| Switching voltage                   | max. 50 V DC                          |
| Switching current                   | max. 1 A                              |
| Switching capacity                  | max. 30 W                             |
| Open-collector output               |                                       |
| Voltage resistance                  | max. 30 V DC                          |
| Output current                      | max. 100 mA                           |
| Static negative pressure            | max. 1000 Pa                          |
| Fan speed                           | 7000 to 20 000 rpm                    |
| Sound pressure level                |                                       |
| at 7000 rpm                         | 21 dB(A)                              |
| at 20 000 rpm                       | 40 dB(A)                              |
| Total length of the sampling pipe   | up to 400 m                           |
| Internal/external pipe connection   | 20/25 mm (Ø)                          |
| Sampling points, class A/B/C        | max. 31/80/120                        |
| Distance to the last sampling point | up to 150 m                           |
| Monitoring area                     | max. 3000 m <sup>2</sup>              |
| Bluetooth range                     | typ. 20 m                             |
| Degree of protection                | IP54                                  |
| Ambient temperature                 | -30 °C to +60 °C                      |
| Storage temperature                 | -30 °C to +70 °C                      |
| Relative humidity                   | 10 to 95 % non-condensing             |
| Case material                       | ABS/PC                                |
| Case colour                         | anthracite, NCS S 8005-R80B           |
| Dimensions                          | 431 × 265 × 149 mm (H × W × D)        |
| Weight                              | 3 kg                                  |
| VdS approval                        | G225014                               |
| Declaration of Performance (DoP)    | CPR-11-25-114                         |
| Conformity (DoC)                    | 2014/53/EU (RED)<br>2011/65/EU (RoHS) |



No.: 11-2100004-05

## ASD 2002 aspirating smoke detector

The ASD is an aspirating smoke detector with highly sensitive smoke sensors; it samples and checks ambient air via a sampling pipe tube network. Airflow monitoring ensures that the sampled air flows to the smoke sensors in the correct amount and at the correct speed.

If the concentration of smoke particles exceeds an adjustable threshold value, the ASD triggers an alarm. In addition, a second alarm and 3 pre-signals can be configured. The ASD forwards the signals via relays to other fire alarm control panels.

Standards-compliant planning and project design is carried out with the PC application PipeFlow. The parameters calculated in this way are transferred to the ASD during commissioning using the ASD service configuration application. ASD service offers other functions for control and maintenance of the ASD as well as for reading out current events and live values.

|                                     |                                       |
|-------------------------------------|---------------------------------------|
| Operating voltage range             | 14 to 30 V DC                         |
| Current consumption                 |                                       |
| Idle mode                           | max. 447 mA                           |
| Alarm state (with 2 sensors)        | max. 468 mA                           |
| Relay contacts                      | volt-free changeover contacts         |
| Switching voltage                   | max. 50 V DC                          |
| Switching current                   | max. 1 A                              |
| Switching capacity                  | max. 30 W                             |
| Open-collector output               |                                       |
| Voltage resistance                  | max. 30 V DC                          |
| Output current                      | max. 100 mA                           |
| Static negative pressure            | max. 1000 Pa                          |
| Fan speed                           | 7000 to 20 000 rpm                    |
| Sound pressure level                |                                       |
| at 7000 rpm                         | 21 dB(A)                              |
| at 20 000 rpm                       | 40 dB(A)                              |
| Total length of sampling pipes      | up to 700 m                           |
| Internal/external pipe connection   | 20/25 mm (Ø)                          |
| Sampling points, class A/B/C        | max. 62/160/240                       |
| Distance to the last sampling point | up to 115 m                           |
| Monitoring area                     | max. 5760 m <sup>2</sup>              |
| Bluetooth range                     | typ. 20 m                             |
| Degree of protection                | IP54                                  |
| Ambient temperature                 | -30 °C to +60 °C                      |
| Storage temperature                 | -30 °C to +70 °C                      |
| Relative humidity                   | 10 to 95 % non-condensing             |
| Case material                       | ABS/PC                                |
| Case colour                         | anthracite, NCS S 8005-R80B           |
| Dimensions                          | 431 × 265 × 149 mm (H × W × D)        |
| Weight                              | 3.2 kg                                |
| VdS approval                        | G225014                               |
| Declaration of Performance (DoP)    | CPR-11-25-114                         |
| Conformity (DoC)                    | 2014/53/EU (RED)<br>2011/65/EU (RoHS) |

SSD 10x0 smoke sensor for ASD 200x



No.: 11-2100020-01



No.: 11-2100021-01



No.: 11-2100022-01

- Highly sensitive smoke sensor, compatible with all versions of the ASD 200x. The sensitivity of each smoke sensor is infinitely adjustable within the specified range.
- 90° scattered light LED for sensitive detection of smoke in the intake air
  - Integrated centrifugal separator filter
  - Separation of large and small particles
  - Contamination measurement
  - Maintenance-free design

|                   |                                |
|-------------------|--------------------------------|
| Operating voltage | 5 V DC                         |
| Sensitivity range |                                |
| SSD 1010          | 0.5 to 30 %/m                  |
| SSD 1020          | 0.1 to 30 %/m                  |
| SSD 1030          | 0.01 to 30 %/m                 |
| Case material     | ABS/PC                         |
| Case colour       | anthracite, NCS S 8005-R80B    |
| Dimensions        | 200 × 110 × 130 mm (H × W × D) |
| Weight            | 388 g                          |

## ASD 200x aspirating smoke detector and accessories

|                                                                                     | Designation                                                                               | Type        | Article no.   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------|---------------|
|    | <b>ASD 2001 aspirating smoke detector</b><br>1 channel system, 1 base excl. smoke sensor  | ASD 2001    | 11-2100003-05 |
|    | <b>ASD 2002 aspirating smoke detector</b><br>2 channel system, 2 bases excl. smoke sensor | ASD 2002    | 11-2100004-05 |
|    | <b>Smoke sensor SSD 1010</b><br>for ASD 200x                                              | SSD 1010    | 11-2100020-01 |
|    | <b>Smoke sensor SSD 1020</b><br>for ASD 200x                                              | SSD 1020    | 11-2100021-01 |
|    | <b>Smoke sensor SSD 1030</b><br>for ASD 200x                                              | SSD 1030    | 11-2100022-01 |
|   | <b>ASD circuit board</b><br>for ASD 200x                                                  | AMB 100     | 11-2200033-01 |
|  | <b>extension board</b><br>for ASD 200x                                                    | AEB 100     | 11-2200034-01 |
|  | <b>Basic control board</b><br>for ASD 200x                                                | BCB 100     | 11-2200035-01 |
|  | <b>Airflow sensor</b><br>for ASD 200x                                                     | AFS 100     | 11-2200040-01 |
|  | <b>Universal module holder</b><br>for ASD 200x                                            | UMS 1000    | 11-4000019-01 |
|  | <b>Mounting plate</b><br>for ASD 200x                                                     | MOP 200X    | 11-4000020-01 |
|  | <b>Insect screen</b><br>for ASD 200x                                                      | IPS 100     | 11-0000035-01 |
|  | <b>Blank insert</b><br>for ASD 200x                                                       | IPS-O 100   | 11-0000036-01 |
|  | <b>Replacement cable set</b><br>for ASD 200x                                              | RC ASD 2001 | 11-0000029-01 |
|  | <b>Replacement cable set</b><br>for ASD 200x                                              | RC ASD 2002 | 11-0000030-01 |

|                                                                                   | Designation                                    | Type       | Article no.   |
|-----------------------------------------------------------------------------------|------------------------------------------------|------------|---------------|
|  | <b>Replacement cable</b><br>for ASD 200x       | RC AMB-BCB | 11-0000032-01 |
|  | <b>Replacement cover hinge</b><br>for ASD 200x | RCH 100    | 11-0000037-01 |
|  | <b>Replacement cover screw</b><br>for ASD 200x | CLS 100    | 11-0000038-01 |

## 9.1.2 ASD 53x devices and smoke sensors

### ASD 531 aspirating smoke detector



No.: 11-2000002-01

Universal aspirating smoke detector without smoke level indication and with a built-in smoke sensor SSD 31 for monitoring small areas and facility monitoring (e.g. individual IT racks, lift shafts, clean rooms, ventilation ducts, cavity ceilings).

The SSD 31 smoke sensor is included in the ASD 531. This has an alarm sensitivity range of 0.02 %/m to 10 %/m.

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Operating voltage range          | 14 to 30 V DC                                          |
| Quiescent current                | 75 mA typ. with 24 V DC                                |
| Alarm current                    | 80 mA typ with 24 V DC                                 |
| Relay outputs                    | 2 potential-free contacts                              |
| Optional module                  | max. 2 pieces (XLM 35, RIM 36)                         |
| Sensitivity range                | 0.02 to 10 %/m                                         |
| Cable inlet                      | 3 × M20, 1 × M25                                       |
| Monitoring area                  | 720 m <sup>2</sup>                                     |
| Pipe length (EN 54-20)           | 75 m                                                   |
| Pipe diameter                    |                                                        |
| Inside                           | 20 mm                                                  |
| Outside                          | 25 mm                                                  |
| Tubing deformation stability     | up to +60 °C                                           |
| Fan                              | One speed                                              |
| Sound pressure level             | 25 dB (A) at 1 m                                       |
| Degree of protection             | IP54                                                   |
| Ambient temperature              | -10 °C to +55 °C                                       |
| Case material                    | ABS, UL 94-V0                                          |
| Case colour                      | light grey, RAL 280 70 05<br>anthracite, RAL 300 20 05 |
| Dimensions                       | 333 × 195 × 140 mm (H × W × D)                         |
| Weight                           | 1950 g                                                 |
| VdS approval                     | G215100                                                |
| Declaration of Performance (DoP) | CPR-11-16-106                                          |



## ASD 532 aspirating smoke detector



No.: 11-2000003-01

Universal aspirating smoke detector without smoke level indication and with a built-in smoke sensor SSD 532 for monitoring small and medium-sized areas and facility monitoring (e.g. lift shafts, prison cells, clean rooms, laboratories, IT racks, telecommunication facilities).

The aspirating smoke detector has two installation slots for fitting the following optional modules:

- XLM 35 loop module X-LINE
- RIM 36 relay interface module with five relays
- SIM 35 serial interface module



### NOTE

The smoke sensor SSD 532 of type 1, 2 or 3 must be ordered separately depending on the required sensitivity.

|                                         |                                                        |
|-----------------------------------------|--------------------------------------------------------|
| Operating voltage range                 | 14 to 30 V DC                                          |
| Quiescent current                       | 100 mA typ. with 24 V DC                               |
| Alarm current                           | 115 mA typ with 24 V DC                                |
| Relay outputs                           | 2 potential-free contacts                              |
| Optional module                         | max. 2 pieces ((XLM 35, RIM 36, SIM 35)                |
| Sensitivity range                       |                                                        |
| SSD 532-1                               | 0.5 to 10 %/m                                          |
| SSD 532-2                               | 0.1 to 10 %/m                                          |
| SSD 532-3                               | 0.02 to 10 %/m                                         |
| Cable inlet                             | 3 × M20, 1 × M25                                       |
| Monitoring area                         | 1280 m <sup>2</sup>                                    |
| Pipe length (EN 54-20)                  | 120 m                                                  |
| Pipe diameter                           |                                                        |
| Inside                                  | 20 mm                                                  |
| Outside                                 | 25 mm                                                  |
| Tubing deformation stability            | up to +60 °C                                           |
| Fan                                     | 3 speed stages                                         |
| Sound pressure level at fan speed 1/2/3 | 25/31/39 dB(A) at 1 m                                  |
| Degree of protection                    | IP54                                                   |
| Ambient temperature                     | –20 °C to +60 °C                                       |
| Case material                           | ABS, UL 94-V0                                          |
| Case colour                             | light grey, RAL 280 70 05<br>anthracite, RAL 300 20 05 |
| Dimensions                              | 333 × 195 × 140 mm (H × W × D)                         |
| Weight                                  | 2 kg                                                   |
| VdS approval                            | G215101                                                |
| Declaration of Performance (DoP)        | CPR-11-16-107                                          |

## SSD 532 smoke sensor for ASD 532



**No.: 11-2000004-01**



**No.: 11-2000004-02**



**No.: 11-2000004-03**

High-sensitivity HD sensor based on the scattered light principle for use in the various versions of the ASD 532. The sensor is designed for optimal smoke detection in connection with an aspirating smoke detector. The sensitivity of each smoke sensor is infinitely adjustable within the specified range.

- High-power LED with minimal air resistance and maximum resistance to contamination
- Fire characteristic sample comparison
- Intelligent intermediate alarm storage
- Alarm threshold adjustment with two-stage contamination indicator
- Dynamic particle suppression for detection and ignoring of dust particles
- Auto-learning function for critical ambient conditions

|                                  |                               |
|----------------------------------|-------------------------------|
| Operating voltage                | 5 V DC                        |
| Degree of protection             | IP44                          |
| Sensitivity range                |                               |
| SSD 532-1                        | 0.5 to 10 %/m                 |
| SSD 532-2                        | 0.1 to 10 %/m                 |
| SSD 532-3                        | 0.02 to 10 %/m                |
| Ambient temperature              | -20 °C to +60 °C              |
| Dimensions                       | 127 × 120 × 95 mm (H × W × D) |
| Case colour                      | grey                          |
| VdS approval                     | G215101                       |
| Declaration of Performance (DoP) | CPR-11-16-107                 |

## ASD 535 aspirating smoke detector



**No.: 11-2000015-01**

Universal aspirating smoke detector with or without smoke level indication and with one or two built-in smoke sensors SSD 535 for monitoring large areas and facility monitoring (e.g. high-bay warehouse, frozen storage, large data centres, historic buildings, high halls). The application in frozen storages and hazardous areas as well as the installation of the sampling pipes in concrete is possible in compliance with the application guideline.

An additional case (must be ordered separately) provides protection against mechanical damage (e.g. lift truck operations) resp. personal protection while monitoring hazardous areas.



**No.: 11-2000016-01**

The aspirating smoke detector has four installation slots for fitting the following optional modules:

- XLM 35 loop module X-LINE (no SLM 35 fitted)
- SLM 35 loop module (no XLM 35 fitted)
- RIM 35 relay interface module with five relays; enables the availability of all three pre-alarm signal stages as well as the states of the smoke sensor and the sampling pipe as relay contacts
- MCM 35 memory card module
- SIM 35 serial interface module



**No.: 11-2000017-01**



### NOTE

The smoke sensor SSD 535 of type 1, 2 or 3 must be ordered separately depending on the required sensitivity.



**No.: 11-2000018-01**

|                                             |                                                        |
|---------------------------------------------|--------------------------------------------------------|
| Operating voltage range                     | 10.5 to 30 V DC                                        |
| Quiescent current                           | 260 to 290 mA typ. with 24 V DC                        |
| Alarm current                               | 295 to 385 mA typ. with 24 V DC                        |
| Relay outputs                               | 3 potential-free contacts                              |
| Optional module                             | max. 4 pieces (XLM 35, MCM 35, RIM 35, SIM 35)         |
| Sensitivity range                           |                                                        |
| SSD 535-1                                   | 0.5 to 10 %/m                                          |
| SSD 535-2                                   | 0.1 to 10 %/m                                          |
| SSD 535-3                                   | 0.02 to 10 %/m                                         |
| Pre-alarm signal sensitivity range          | 0.002 to 10 %/m                                        |
| Cable inlet                                 | 4 × M20, 1 × M25                                       |
| Monitoring area                             | 5760 m <sup>2</sup>                                    |
| Pipe length (EN 54-20)                      | max. 2 × 240 m<br>max. 2 × 300 m                       |
| Pipe diameter                               |                                                        |
| Inside                                      | 20 mm                                                  |
| Outside                                     | 25 mm                                                  |
| Tubing deformation stability                | up to +60 °C                                           |
| Fan                                         | radial, 5 selectable speeds                            |
| Sound pressure level at fan speed 1/2/3/4/5 | 34/36/39/40/41 dB(A) at 1 m                            |
| Degree of protection                        | IP54                                                   |
| Ambient temperature                         | -30 °C to +60 °C                                       |
| Case material                               | ABS, UL 94-V0                                          |
| Case colour                                 | light grey, RAL 280 70 05<br>anthracite, RAL 300 20 05 |
| Dimensions                                  | 397 × 263 × 146 mm (H × W × D)                         |
| Weight                                      | 3.8 kg                                                 |
| VdS approval                                | G208154                                                |
| Declaration of Performance (DoP)            | CPR-11-13-101                                          |

## SSD 535 smoke sensor for ASD 535



**No.: 11-2000008-01**



**No.: 11-2000009-01**



**No.: 11-2000010-01**

High-sensitivity HD sensor based on the scattered light principle for use in the various versions of the ASD 535. The sensor is designed for optimal smoke detection in connection with an aspirating smoke detector. The sensitivity of each smoke sensor is infinitely adjustable within the specified range.

- High-power LED with minimal air resistance and maximum resistance to contamination
- Fire characteristic sample comparison
- Intelligent intermediate alarm storage
- Alarm threshold adjustment with two-stage contamination indicator
- Dynamic particle suppression for detection and ignoring of dust particles
- Auto-learning function for critical ambient conditions

|                                  |                               |
|----------------------------------|-------------------------------|
| Operating voltage                | 5 V DC                        |
| Sensitivity range                |                               |
| SSD 535-1                        | 0.5 to 10 %/m                 |
| SSD 535-2                        | 0.1 to 10 %/m                 |
| SSD 535-3                        | 0.02 to 10 %/m                |
| Degree of protection             | IP44                          |
| Ambient temperature              | -30 °C to +60 °C              |
| Case colour                      | grey                          |
| Dimensions                       | 145 × 120 × 95 mm (H × W × D) |
| VdS approval                     | G208154                       |
| Declaration of Performance (DoP) | CPR-11-13-101                 |

**No.: 11-2300147-01**

## REK 511 detector box

The REK 511 detector box is an additional device for the ASD 531 and ASD 535 aspirating smoke detectors. It is used wherever high demands are placed on the response sensitivity or fire location detection of an aspirating smoke detector. It is installed in individual pipe branches of the sampling pipe.

The SSD 515-1S and SSD 515-3S smoke detector must be ordered separately.

|                         |                               |
|-------------------------|-------------------------------|
| Operating voltage range | 18 to 28 V DC                 |
| Degree of protection    | IP53                          |
| Ambient temperature     | –20 °C to +60 °C              |
| Case colour             | light grey, RAL 7035          |
| Dimensions              | 195 × 122 × 85 mm (H × W × D) |
| Weight                  | 500 g                         |

## SSD 515 smoke detector for REK 511

The SSD 515 scattered light smoke detector is suitable for installation in the REK 511 single detector identification and is designed to optimally meet the special requirements of smoke detection in connection with an aspirating smoke detector. The detector has alarm threshold adjustment and is available in different sensitivities.

**No.: FG030379****No.: FG030381**

|                         |                    |
|-------------------------|--------------------|
| Operating voltage range | 18 to 28 V DC      |
| Sensitivity range       |                    |
| SSD 515–1S              | 1.2 %/m            |
| SSD 515–3S2             | 0.3 %/m            |
| Degree of protection    | IP44               |
| Ambient temperature     | –20 °C to +60 °C   |
| Case material           | PC                 |
| Case colour             | white              |
| Dimensions              | 80 × 56 mm (Ø × H) |
| Weight                  | 74 kg              |
| VdS approval            | G208154            |

## ASD 53x aspirating smoke detector and accessories

|                                                                                     | Designation                                                                                                          | Type      | Article no.   |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------|---------------|
|    | <b>ASD 531 aspirating smoke detector</b>                                                                             | ASD 531   | 11-2000002-01 |
|    | <b>SSD 31 smoke sensor for ASD 531</b><br>Sensitivity 0.02 to 10 %/m (spare part)                                    | SSD 31    | 11-2200009-01 |
|    | <b>Motherboard for ASD 531</b>                                                                                       | AMB 31    | 11-2200012-01 |
|    | <b>Ventilator for ASD 531</b>                                                                                        | AFU 32    | 11-2200008-01 |
|    | <b>Airflow sensor for ASD 531</b>                                                                                    | AFS 32    | 11-2200007-01 |
|    | <b>Lithium battery CR 2032</b>                                                                                       | CR 2032   | 5-BC112032    |
|    | <b>ASD 532 aspirating smoke detector</b>                                                                             | ASD 532   | 11-2000003-01 |
|   | <b>Smoke sensor SSD 532-1 for ASD 532</b><br>Sensitivity 0.5 to 10 %/m                                               | SSD 532-1 | 11-2000004-01 |
|  | <b>Smoke sensor SSD 532-2 for ASD 532</b><br>Sensitivity 0.1 to 10 %/m                                               | SSD 532-2 | 11-2000004-02 |
|  | <b>Smoke sensor SSD 532-3 for ASD 532</b><br>Sensitivity 0.02 to 10 %/m                                              | SSD 532-3 | 11-2000004-03 |
|  | <b>Motherboard for ASD 532</b>                                                                                       | AMB 32    | 11-2200013-01 |
|  | <b>ASD 535-1 aspirating smoke detector</b><br>1 sampling pipe, 1 detector without base                               | ASD 535-1 | 11-2000015-01 |
|  | <b>ASD 535-2 aspirating smoke detector</b><br>2 sampling pipes, 2 detectors without base                             | ASD 535-2 | 11-2000016-01 |
|  | <b>ASD 535-3 aspirating smoke detector</b><br>1 sampling pipe, 1 detector without base, with smoke level indicator   | ASD 535-3 | 11-2000017-01 |
|  | <b>ASD 535-4 aspirating smoke detector</b><br>2 sampling pipes, 2 detectors without base, with smoke level indicator | ASD 535-4 | 11-2000018-01 |
|  | <b>SSD 535-1 smoke detector for ASD 535</b><br>Sensitivity 0.5 to 10 %/m                                             | SSD 535-1 | 11-2000008-01 |

|                                                                                     | Designation                                                              | Type            | Article no.   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------|---------------|
|    | <b>SSD 535-2 smoke detector for ASD 535</b><br>Sensitivity 0.1 to 10 %/m | SSD 535-2       | 11-2000009-01 |
|    | <b>Smoke sensor SSD 535-3 for ASD 535</b><br>Sensitivity 0.02 to 10 %/m  | SSD 535-3       | 11-2000010-01 |
|    | <b>Motherboard for ASD 535-1 and ASD 535-3</b>                           | AMB 35-1        | 11-2200016-01 |
|    | <b>Motherboard for ASD 535-2 and ASD 535-4</b>                           | AMB 35-2        | 11-2200017-01 |
|    | <b>Airflow sensor</b><br>incl. connection cable                          | AFS 35          | 11-2200051-01 |
|    | <b>O-ring for AFS 35</b><br>Spare part for AFS; 1 PU = 50 pcs            | O-RING VE 50    | 11-2300036-01 |
|    | <b>Fan unit for ASD 535</b>                                              | AFU 35          | 11-2200052-01 |
|   | <b>Standard indication panel</b><br>for ASD 535-1 and -3                 | BCB 35          | 11-2200053-01 |
|  | <b>Extended indication panel</b><br>for ASD 535-2 and ASD 535-4          | ACB 35          | 11-2200050-01 |
|  | <b>Cover plate for ASD 535</b><br>1 PU = 50 pcs.                         | ASD 535 VERSCHL | 11-2300009-01 |
|  | <b>Detector box</b>                                                      | REK 511         | 11-2300147-01 |
|  | <b>SSD 515-1S smoke detector</b><br>Sensitivity 1.2 %                    | SSD 515-1S      | FG030379      |
|  | <b>SSD-515-3S smoke detector</b><br>Sensitivity 0.3 %                    | SSD 515-3S      | FG030381      |
|  | <b>Insect screen for ASD (2 pcs.)</b>                                    | IPS 35          | 11-2300012-01 |
|  | <b>Turn-snap lock</b><br>et for ASD 535/1 Set = 4 seals with spring      | RSL 35          | 11-2200062-01 |
|  | <b>ASD earthing clamp</b>                                                | GC 22 EX        | 50-0500215-02 |
|  | <b>Cable gland M20</b><br>for ASD/ADW, 10 pcs. pack                      | M20 VE10        | 11-4000003-01 |



|                                                                                   | Designation                                         | Type     | Article no.   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------|----------|---------------|
|  | <b>Cable gland M25</b><br>for ASD/ADW, 10 pcs. pack | M25 VE10 | 11-4000004-01 |

### 9.1.3 Optional modules and software

#### XLM 35 interface module



No.: 11-2200003-01

Optional module for connection of special detectors to the Integral X-LINE. The operation, configuration and retrieval of the special detector's data can be performed directly from the fire alarm control panel. Installation set included.

|                            |                             |
|----------------------------|-----------------------------|
| Operating voltage          | 5 V DC                      |
| Current consumption        | max. 0.3 mA                 |
| Degree of protection       | IP54                        |
| Ambient temperature        |                             |
| Manufacturer specification | –30 °C to +60 °C            |
| Approved by VdS            | –10 °C to +55 °C            |
| Dimensions                 | 58 × 95 × 17 mm (H × W × D) |
| Weight                     | 62 g                        |

#### RIM 35 relay interface module



No.: 11-2200031-01

Optional module for installation into the ASD 535 with five relays (potential-free change-over contacts). Depending on the device variant, the relays are assigned predefined criteria or are freely programmable via the ASD Config configuration software. Up to two RIM 35 can be used per ASD 535. Installation set included.

|                             |                             |
|-----------------------------|-----------------------------|
| Operating voltage           | 5 V DC                      |
| Current consumption         |                             |
| all operation modes         | 5 mA typ.                   |
| Fast alignment mode         | 33 mA typ.                  |
| Relay contact load capacity | max. 50 V DC/1 A/30 W       |
| Ambient temperature         | –30 °C to +60 °C            |
| Dimensions                  | 58 × 97 × 17 mm (H × W × D) |
| Weight                      | 85 g                        |

**No.: 11-2200005-01**

## RIM 36 relay interface module

Up to two RIM 36 can be installed in special fire detectors such as ASD aspirating smoke detectors or ADW line-type heat detectors. Depending on the device variant, the relays are assigned predefined criteria or are freely programmable via the ASD Config and ADW Config configuration software.

|                             |                             |
|-----------------------------|-----------------------------|
| Operating voltage           | 5 V DC                      |
| Current consumption         |                             |
| all operation modes         | 5 mA typ.                   |
| Fast alignment mode         | 33 mA typ.                  |
| Relay contact load capacity | max. 50 V DC/1 A/30 W       |
| Ambient temperature         | -30 °C to +70 °C            |
| Dimensions                  | 58 × 95 × 17 mm (H × W × D) |
| Weight                      | 85 g                        |

**No.: 11-2200057-01**

## MCM 35 memory card module

Optional module for installation in the ASD 535 for recording of operating data. The module enables long-term recordings of smoke concentrations and airflows (sensor 1 and 2), as well as the event log memory at one-second intervals. Max. 251 log files each with 28 800 entries or 251 event files each with 64 000 events can be stored. One SD memory card and an installation set are included.

|                     |                             |
|---------------------|-----------------------------|
| Operating voltage   | 5 V DC                      |
| Current consumption | max. 25 mA                  |
| Ambient temperature | -30 °C to +60 °C            |
| Dimensions          | 58 × 99 × 17 mm (H × W × D) |
| Weight              | 43 g                        |

**No.: 11-4000007-01**

## SIM 35 serial interface module

For networking of multiple ASD 535 via RS-485-bus. Via the ASD Config configuration software, all ASD 535 in the network can be visualised and operated from a PC. The SIM 35 provides a galvanic isolation between the RS-485 interface and the ASD 535. An activation with a dongle is required to visualise all ASDs simultaneously in the ASD Config.

|                     |                             |
|---------------------|-----------------------------|
| Operating voltage   | 5 V DC                      |
| Current consumption | max. 20 mA                  |
| Ambient temperature | -30 °C to +60 °C            |
| Dimensions          | 58 × 95 × 17 mm (H × W × D) |
| Weight              | 56 g                        |

**No.: 11-2200000-01**

**No.: 11-2200001-01**

## SMM 535 serial master module

Master module for networking several ASD 535 via RS-485 bus. The SMM 535 is connected to a PC via USB cable and provides the access point for ASD networking. The ASD Config configuration software is used as the user interface on the PC. The SMM 535 provides a galvanic isolation between the RS-485 interface and the USB interface. An activation with a dongle is required to visualise all ASD simultaneously in the ASD Config.

|                      |                             |
|----------------------|-----------------------------|
| Operating voltage:   | 5 V DC                      |
| Current consumption: | max. 100 mA                 |
| Ambient temperature: | –30 °C to +60 °C            |
| Dimensions:          | 89 × 82 × 55 mm (H×W×D)     |
| Weight:              | 165 g                       |
| Operating voltage    | 5 V DC                      |
| Current consumption  | max. 100 mA                 |
| Ambient temperature  | –30 °C to +60 °C            |
| Dimensions           | 89 × 82 × 55 mm (H × W × D) |
| Weight               | 165 g                       |



**No.: Upon request**

## **ASD PipeFlow calculation software**

For planning and calculation of symmetrical and asymmetrical sampling pipe networks in accordance with EN 54-20.

- Makes planning faster and easier
- Allows extended system limits
- Includes all types of tubes and accessories

Required Hard- and Software:

- Windows 7, Windows 10 operating system
- CPU with clockspeed min. 1 GHz
- 256 MB RAM
- 300 MB free hard disk space
- USB interface
- Administrator rights



**No.: Upon request**

## **ASD Config configuration software**

For commissioning and configuring the ASD 535.

- Visualisation of interconnection of aspirating smoke detectors
- Controlling the heating elements in frozen application
- Adjusting the smoke sensor alarm thresholds
- Adjustment of airflow monitoring
- Definition of pre-alarm signal assignment and the Auto Learning criteria
- Definition of day/night function and allocation of the relays
- Adjusting the fan speed
- Setting/readout of time and firmware update

Required Hard- and Software:

- Windows 7, Windows 10 operating system
- CPU with clockspeed min. 1 GHz
- 256 MB RAM
- 300 MB free hard disk space
- USB interface
- Administrator rights

## Optional modules and software

|                                                                                     | Designation                                       | Type          | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------|---------------|---------------|
|    | <b>SD memory card industrial</b>                  | SD-INDUSTRIAL | 11-4000007-01 |
|    | <b>XLM 35 interface module</b>                    | XLM 35        | 11-2200003-01 |
|    | <b>RIM 35 relay interface module</b>              | RIM 35        | 11-2200031-01 |
|    | <b>RIM 36 relay interface module</b>              | RIM 36        | 11-2200005-01 |
|    | <b>MCM 35 memory card module</b><br>incl. SD card | MCM 35        | 11-2200057-01 |
|    | <b>SIM 35 serial interface module</b>             | SIM 35        | 11-2200000-01 |
|    | <b>SMM 535 serial master module</b>               | SMM 535       | 11-2200001-01 |
|    | <b>ASD PipeFlow calculation software</b>          | ASD PIPEFLOW  | Upon request  |
|  | <b>ASD Config configuration software</b>          | ASD CONFIG    | Upon request  |
|  | <b>UMS 35 module adapter</b>                      | UMS 35        | FG030826      |
|  | <b>USB cable</b><br>4.5 m length                  | KAB USB 45    | 23-1020022-01 |

## 9.1.4 Sound and explosion protection

### DFA 22-x detonation flame arrester



No.: 50-0500674-01



No.: 50-0500675-01



No.: 50-0500676-01

Functions as an accessory for the ASD 535 aspirating smoke detector in category 2G (zone 1) and category 3G (zone 2) hazardous areas in accordance with Directive 2014/34/EU (ATEX 100a) to prevent flame breakouts in stable detonations and deflagrations. BAM and TÜV tested and approved for products of explosion group IIA up to a permissible standard gap width according to DIN ISO 16852 of 0.9 mm, for products of explosion group IIB up to a permissible standard gap width according to DIN ISO 16852 of 0.65 mm and for products of explosion group IIC up to a permissible standard gap width according to DIN ISO 16852 of 0.5 mm. Includes two junctions.



#### NOTE

The detonation flame arrester is used exclusively in connection with the ASD 535 aspirating smoke detector. The aspirating smoke detector must be installed outside the hazardous area!

|                                  |                                   |
|----------------------------------|-----------------------------------|
| Area of use                      |                                   |
| DFA 22-1 RB                      | for explosion group IIA           |
| DFA 22-2 RB                      | for explosion group IIB           |
| DFA 22-3 RB                      | for explosion group IIC           |
| Cable inlet                      | 2 changeovers to metal pipe (d22) |
| Case material                    | Stainless steel                   |
| Sealing material                 | PTFE                              |
| Flame filter material            | stainless steel, material: 1.4571 |
| Bolting material                 | Red brass, brass                  |
| Ambient temperature              | -30 °C to +60 °C                  |
| Weight                           | approx. 8 kg                      |
| ATEX approval                    |                                   |
| DFA 22-1 RB                      | IBExU10 ATEX 2147X                |
| DFA 22-2 RB                      | IBExU10 ATEX 2148X                |
| DFA 22-3 RB                      | IBExU10 ATEX 2149X                |
| VdS approval                     | G208154                           |
| Declaration of Performance (DoP) | 0768-CPR-20600                    |

## Sound and explosion protection

|                                                                                     | Designation                                                                               | Type              | Article no.   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------|---------------|
|    | <b>NIH ASD sound-insulating case</b><br>IP54; 500 × 500 × 300 mm                          | NIH ASD 532/535   | 50-0500073-01 |
|    | <b>AHO ASD extra case</b><br>for ASD 532 or ASD 535                                       | AHO ASD           | 50-1200001-01 |
|    | <b>AHO-L EX ASD 535 extra case</b><br>Sampling pipes and air recirculations on the left   | AHO-L EX ASD 535  | 50-1200016-01 |
|    | <b>AHO-R EX ASD 535 extra case</b><br>Sampling pipes and air recirculations on the right  | AHO-R EX ASD 535  | 50-1200016-02 |
|    | <b>AHO-U EX ASD 535 extra case</b><br>Sampling pipes and air recirculations on the bottom | AHO-U EX ASD 535  | 50-1200016-03 |
|    | <b>Detonation flame arrester</b><br>for explosion group IIA                               | DFA 22-1 RB (IIA) | 50-0500674-01 |
|   | <b>Detonation flame arrester</b><br>for explosion group IIB                               | DFA 22-2 RB (IIB) | 50-0500675-01 |
|  | <b>Detonation flame arrester</b><br>for explosion group IIC                               | DFA 22-3 RB (IIC) | 50-0500676-01 |
|  | <b>FBL 22 AL filter box</b>                                                               | FBL 22 AL         | 50-0500044-04 |
|  | <b>MV 22 ST three-way ball valve</b>                                                      | MV 22 ST          | 50-0500678-01 |
|  | <b>Flange for DF 22 CU ventilation duct</b>                                               | DF 22 CU          | 50-0500690-01 |
|  | <b>Flange for DF 22 ST ventilation duct</b>                                               | DF 22 ST          | 50-0500691-01 |
|  | <b>ASD RE 25-22 transition adapter</b>                                                    | RE 25-22          | 50-0500806-01 |
|  | <b>USB cable, angled - 5 m</b>                                                            | CAB AN 5M         | 50-0500681-01 |



## 9.1.5 Filter, cleaning and accessories

### DFU 911 dust filter



No.: 11-2300030-01

A dust filter unit can be used in the sampling pipe tube network of an aspirating smoke detector in applications with dust or dirt. This significantly increases the service life of the smoke sensors used and greatly reduces the likelihood of false alarms.

A filter monitoring function in the aspirating smoke detector can be activated to indicate when the defined application-specific service life of a filter expires so that you can replace the filter element at the optimal time.

The dust filter unit consists of a two-part case that can be opened by releasing the lock clamps to replace the replacement filter element. The two holes in the case base are for fastening the dust filter unit.

|                                 |                                                        |
|---------------------------------|--------------------------------------------------------|
| Ambient temperature             | 0 °C to +60 °C                                         |
| Relative humidity               | 70 % non-condensing                                    |
| Short-term without condensation | 95 %                                                   |
| Case material                   | ABS blend, UL 94-V0                                    |
| Case colour                     | light grey, RAL 280 70 05<br>anthracite, RAL 300 20 05 |
| Dimensions                      | 210 × 111 × 137 mm (H × W × D)                         |
| Weight                          | 490 g                                                  |
| VdS approval                    | included in aspirating smoke detectors                 |

**No.: 50-0500143-01**

## FBS 25 PC filter box small

The filter box small is used as an accessory for aspirating smoke detectors in areas with low temperatures (below 0 °C) and high dust levels to prevent deceptive alarms or to significantly increase the service life of the smoke sensors.

For deep-freeze or outdoor use and for areas with high air humidity.

The filter insert is designed for the separation of particles and foreign matters larger than 15 µm. Due to their particle size, smoke particles can pass through this filtration unhindered. This ensures reliable and fast fire detection.

|                     |                          |
|---------------------|--------------------------|
| Pipe connection     | diameter 25 mm           |
| Ambient temperature | -30 °C to +60 °C         |
| Case material       | Polycarbonate            |
| Case colour         | light grey, RAL 7035     |
| Dimensions          |                          |
| with junctions      | 150 × 82 × 85 mm (H×W×D) |
| without junctions   | 80 × 82 × 85 mm (H×W×D)  |
| Weight              | 279 g                    |

**No.: 50-0500044-03**

## FBL 25 PC filter box large

The filter box large is used as an accessory for aspirating smoke detectors in areas with normal temperatures (above 0 °C) and high dust levels to prevent deceptive alarms or to significantly increase the service life of the smoke sensors.

The filter insert is designed for the separation of particles and foreign matters larger than 15 µm. Due to their particle size, smoke particles can pass through this filtration unhindered. This ensures reliable and fast fire detection.

|                     |                               |
|---------------------|-------------------------------|
| Pipe connection     | diameter 25 mm                |
| Ambient temperature | 0 °C to +60 °C                |
| Case material       | Polycarbonate                 |
| Case colour         | light grey, RAL 7035          |
| Dimensions          | 120 × 122 × 85 mm (H × W × D) |
| Weight              | 400 g                         |

## FBX 25 PC filter box extra large



No.: 50-0500184-01

The filter box is used as an accessory for aspirating smoke detectors in areas with normal temperatures (above 0 °C) and high dust levels to prevent deceptive alarms or to significantly increase the service life of the smoke sensors.

The filter insert is designed for the separation of particles and foreign matters larger than 15 µm. Due to their particle size, smoke particles can pass through this filtration unhindered. This ensures reliable and fast fire detection.

|                                  |                               |
|----------------------------------|-------------------------------|
| Pipe connection                  | diameter 25 mm                |
| Cable entries                    | 2 × M32 incl. seal            |
| Ambient temperature              | 0 °C to +60 °C                |
| Case material                    | Polycarbonate                 |
| Case colour                      | light grey, RAL 7035          |
| Dimensions                       | 250 × 160 × 90 mm (H × W × D) |
| Weight                           | 760 g                         |
| VdS approval                     | G208154                       |
| Declaration of Performance (DoP) | 0768-CPR-20600                |



No.: 11-2300104-01

## MFS 25 magnetic filter system

To supplement the dust filter unit with the range of metal-containing dusts. Extends the service life of the smoke sensors used in the aspirating smoke detector. Prevents false alarms caused by metal-containing dust.

|                                     |                                |
|-------------------------------------|--------------------------------|
| Pipe connection                     | Diameter 25 or 40 mm           |
| High energy magnetic filter element | RS-22/250                      |
| Magnetic energy product             | 385 KJ/m3                      |
| Ambient temperature                 | -30 °C to +60 °C               |
| Case material                       | Polycarbonate                  |
| Case colour                         | grey, RAL 7016                 |
| Dimensions                          | 315 × 125 × 100 mm (H × W × D) |

**No.: 50-0500198-01**

## DTB 25 PC dust trap

Dirt trap box for use in rooms with high dust content. Is used in combination with the various dust filters and is installed in front of them.

|                     |                               |
|---------------------|-------------------------------|
| Pipe connection     | diameter 25 mm                |
| Ambient temperature | 0 °C to +60 °C                |
| Case material       | Polycarbonate                 |
| Case colour         | light grey, RAL 7035          |
| Dimensions          | 160 × 250 × 90 mm (H × W × D) |

**No.: 50-0500199-01**

## Water separator default WRB 25

For separating moisture in front of the dust filter unit, for use in rooms with high air humidity. The transition piece to the PVC or ABS sampling pipe is included in the scope of delivery.

|                     |                               |
|---------------------|-------------------------------|
| Pipe connection     | diameter 25 mm                |
| Ambient temperature | 0 °C to +60 °C                |
| Case material       | Polycarbonate                 |
| Case colour         | light grey, RAL 7035          |
| Dimensions          | 335 × 250 × 90 mm (H × W × D) |
| Weight              | 950 g                         |

**No.: 50-0500122-01**

## Air cooler and water separator LK 35

The air cooler and water separator has the task of preventing moisture from entering the aspirating smoke detector or, when used in very warm areas, of cooling the aspirated hot air before it enters the evaluation unit.

The air cooler and water separator are made of copper pipe. PVC or ABS transition sleeves with a diameter of 25 mm are provided at the inlet and outlet for connection to the sampling pipe.

|                     |                                |
|---------------------|--------------------------------|
| Pipe connection     | diameter 25 mm                 |
| Ambient temperature | 0 °C to +60 °C                 |
| Case material       | Copper                         |
| Dimensions          | 1000 × 730 × 80 mm (H × W × D) |
| Weight              | 8 kg                           |

**No.: 50-0500635-01**

## DRB 25 dust and cyclone separator

The dust separator (cyclone principle) is used as an accessory for aspirating smoke detectors in areas with very high dust and humidity to prevent deceptive alarms or to significantly increase the service life of the smoke sensors. It must be placed in the sampling pipe before the evaluation unit and the dust filter unit. The sampled air enters the funnel via the cyclone's inlet opening and has to move faster and faster until it reaches the outlet opening. At this point, a 180° rotation separates the air from most of the dust particles, which fall into the designated dust compartment.

|                     |                                                 |
|---------------------|-------------------------------------------------|
| Pipe connection     | diameter 25 mm                                  |
| Ambient temperature | 0 °C to +50 °C                                  |
| Case material       | PVC                                             |
| Case colour         | graphite black RAL 9011, platinum grey RAL 7036 |
| Dimensions          | 420 × 195 × 120 mm (H × W × D)                  |
| Weight              | 400 g                                           |

**No.: 50-0500571-01****No.: 50-0500571-02**

## ADB 500 automatic blow-through system

For automatic blowing and cleaning of one sampling pipe with compressed air in areas with very high dust pollution.

|                           |                                                                        |
|---------------------------|------------------------------------------------------------------------|
| Operating voltage range   | 15 to 30 V DC                                                          |
| Current consumption       |                                                                        |
| Idle                      | 18 mA typ.                                                             |
| Fault                     | 6.9 mA typ.                                                            |
| Blow out cycle            | 460 mA typ.                                                            |
| Relay contact             | 50 V DC/1 A/30 W                                                       |
| Compressed air pressure   | min. 4 bar                                                             |
| Blowing duration          | 10 s                                                                   |
| Adjustable blowing cycle  | 1, 4, 8 and 24 h                                                       |
| Compressed air connection | coupling connector NG 8 (G 1/4)<br>coupling socket NG 8 (for 7-8 hose) |
| Pipe connection           | diameter 25 mm                                                         |
| Degree of protection      | IP65                                                                   |
| Ambient temperature       | 0 °C to +50 °C                                                         |
| Case material             | aluminium                                                              |
| Case colour               | black                                                                  |
| Connection material       |                                                                        |
| ADB 500 PVC               | PVC                                                                    |
| ADB 500 ABS               | ABS                                                                    |
| Dimensions                | 235 × 205 × 90 mm (H × W × D)                                          |
| Weight                    | 3.6 kg                                                                 |

## ADB 1000 automatic blow-through system

For automatic blowing and cleaning of one sampling pipe with compressed air in areas with very high dust pollution.



No.: 50-0500520-01

|                           |                                                                        |
|---------------------------|------------------------------------------------------------------------|
| Operating voltage range   | 15 to 30 V DC                                                          |
| Current consumption       |                                                                        |
| Idle                      | 50 mA typ.                                                             |
| Fault                     | 55 mA typ.                                                             |
| Blow out cycle            | 900 mA typ.                                                            |
| Relay contact             | 50 V DC/1 A/30 W                                                       |
| Compressed air pressure   | 4 to 10 bar                                                            |
| Blowing duration          | 30 s                                                                   |
| Adjustable blowing cycle  | 1, 4, 8 and 24 h                                                       |
| Compressed air connection | coupling connector NG 8 (G 1/4)<br>coupling socket NG 8 (for 7-8 hose) |
| Pipe connection           | diameter 25 mm                                                         |
| Degree of protection      | IP54                                                                   |
| Ambient temperature       | 0 °C to +50 °C                                                         |
| Dimensions                | 380 × 315 × 165 mm (H × W × D)                                         |
| Weight                    | 7 kg                                                                   |

## ADB 2000 automatic blow-through system

For automatic blowing and cleaning of two sampling pipes with compressed air in areas with very high dust pollution.



No.: 50-0500523-01

|                           |                                                                        |
|---------------------------|------------------------------------------------------------------------|
| Operating voltage range   | 15 to 30 V DC                                                          |
| Current consumption       |                                                                        |
| Idle                      | 50 mA typ.                                                             |
| Fault                     | 45 mA typ.                                                             |
| Blow out cycle            | 910 mA typ.                                                            |
| Relay contact             | 50 V DC/1 A/30 W                                                       |
| Compressed air pressure   | 4 to 10 bar                                                            |
| Blowing duration          | 10 s or 30 s                                                           |
| Adjustable blowing cycle  | 1, 4, 8 and 24 h                                                       |
| Compressed air connection | coupling connector NG 8 (G 1/4)<br>coupling socket NG 8 (for 7-8 hose) |
| Pipe connection           | diameter 25 mm                                                         |
| Degree of protection      | IP54                                                                   |
| Ambient temperature       | 0 °C to +50 °C                                                         |
| Dimensions                | 560 × 364 × 225 mm (H × W × D)                                         |
| Weight                    | 15.2 kg                                                                |

**No.: 50-0500062-01**

## Cleaning kit for ASD

Electric compressor with very high performance for cleaning the sampling lines of aspirating smoke detectors. Cleaning can be carried out by blowing out and suction.

Including retaining strap and all accessories for adaptation to the sampling line or a three-way ball valve.

|                    |            |
|--------------------|------------|
| Operating voltage  | 230 V AC   |
| Performance        | 1100 W     |
| Air volume         | 1500 l/min |
| Operating pressure | 230 mbar   |
| Weight             | 3.4 kg     |

**No.: 50-0500095-01**

## Transport case for cleaning kit for ASD

For handy transport and safe storage of cleaning kit for ASD

|               |                                |
|---------------|--------------------------------|
| Case material | aluminium                      |
| Dimensions    | 317 × 457 × 262 mm (H × W × D) |
| Weight        | 2.9 kg                         |

## Filter, cleaning and accessories

|                                                                                     | Designation                                                                                   | Type        | Article no.   |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------|---------------|
|    | <b>DFU 911 dust filter</b><br>incl. filter                                                    | DFU 911     | 11-2300030-01 |
|    | <b>RFC 911 replacement filter</b><br>for dust filter DFU 911                                  | RFC 911     | 11-2300031-01 |
|    | <b>RFC 911 20 replacement filter</b><br>for dust filter DFU 911                               | RFC 911VE20 | 11-2300031-02 |
|    | <b>Filter box small d25</b><br>80 × 82 × 85 mm incl. filter                                   | FBS 25 PC   | 50-0500143-01 |
|    | <b>Replacement filter mat for filter box small (5 pcs.)</b>                                   | FBS 25 EFM  | 50-0500112-02 |
|    | <b>Dust filter unit large d25</b><br>incl. filter, 120 × 122 × 85 mm                          | FBL 25 PC   | 50-0500044-03 |
|   | <b>Replacement filter for dust filter unit large</b>                                          | FBL 25 EFM  | 50-0500410-02 |
|  | <b>Filter box extra large d25</b><br>250 × 160 × 90 mm incl. filter                           | FBX 25 PC   | 50-0500184-01 |
|  | <b>Spare filter mat block for FBX 25</b>                                                      | FBX 25 EFM  | 50-0500530-01 |
|  | <b>MFS 25 magnetic filter system</b><br>for metal-containing dust                             | MFS 25      | 11-2300104-01 |
|  | <b>Replacement cartridge for MFS 25</b>                                                       | MFS EP      | FG030391      |
|  | <b>Dust trap d25</b><br>160 × 250 × 90 mm                                                     | DTB 25 PC   | 50-0500198-01 |
|  | <b>Water separator standard d25</b><br>PVC                                                    | WRB 25 PVC  | 50-0500199-01 |
|  | <b>Water separator standard d25</b><br>ABS/PC                                                 | WRB 25 ABS  | 50-0500057-01 |
|  | <b>Sealing plate for water separator WRB 25</b><br>Foam rubber, black (H×W×D): 40 × 85 × 4 mm | WRB 25 SL   | 50-0500569-01 |
|  | <b>Air cooler and water separator PVC</b>                                                     | LK 35 PVC   | 50-0500122-01 |



|                                                                                     | Designation                                                                                     | Type            | Article no.   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------|---------------|
|    | <b>Air cooler and water separator ABS</b>                                                       | LK 35 ABS       | 50-0500123-01 |
|    | <b>Dust and cyclone separator</b>                                                               | DRB 25          | 50-0500635-01 |
|    | <b>ADB 500 PVC automatic blow-through system</b>                                                | ADB 500 PVC     | 50-0500571-01 |
|    | <b>ADB 500 ABS automatic blow-through system</b>                                                | ADB 500 ABS     | 50-0500571-02 |
|    | <b>ADB 1000 automatic blow-through system</b>                                                   | ADB 1000        | 50-0500520-01 |
|    | <b>Circuit board BMB 1000</b><br>Spare part for ADB 1000                                        | BMB 1000        | 50-0500521-01 |
|   | <b>ADB 2000 automatic blow-through system</b>                                                   | ADB 2000        | 50-0500523-01 |
|  | <b>Circuit board BMB 2000</b><br>Spare part for ADB 2000                                        | BMB 2000        | 50-0500524-01 |
|  | <b>Cleaning kit for ASD</b>                                                                     | ASD RK          | 50-0500062-01 |
|  | <b>Transport case for cleaning kit for ASD</b>                                                  | ASD RK - KOFFER | 50-0500095-01 |
|  | <b>Cable connection box for ASD 535</b><br>for inserting the silicone wire into the pipe system | WCU 535 PC      | 11-2300046-01 |

## 9.1.6 PVC materials for standard sampling pipes

The sampling pipes are part of the VdS device approval (EN 54-20). For this reason, only the following material tested with the unit may be used.

|                                                                                     | Designation                                                                                              | Type          | Article no.   |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------|---------------|
|    | <b>PVC pipe d25</b><br>Three-metre rod                                                                   | TU 25 PVC 3M  | FG020816      |
|    | <b>PVC pipe d25</b><br>Five-metre rod                                                                    | TU 25 PVC     | FG020805      |
|    | <b>PVC elbow 90° d25</b>                                                                                 | BE 25 PVC     | FG020806      |
|    | <b>PVC angle piece 45° d25</b>                                                                           | AN 25-45 PVC  | FG020808      |
|    | <b>PVC angle 90° d25</b>                                                                                 | AN 25-90 PVC  | FG020807      |
|    | <b>PVC T-piece d25</b>                                                                                   | TP 25 PVC     | FG020809      |
|    | <b>PVC crosspiece d25</b>                                                                                | CR 25 PVC     | FG020810      |
|    | <b>PVC sleeve d25</b>                                                                                    | SO 25 PVC     | FG020811      |
|   | <b>PVC end cap d25</b>                                                                                   | EC 25 PVC     | FG020812      |
|  | <b>PVC end cap with thread d25</b><br>with 3/4" internal thread                                          | ECS 25 PVC    | FG020832      |
|  | <b>PVC connection coupling d25</b><br>with external thread d=25/32x3/4"                                  | AD ECS 25 PVC | FG020833      |
|  | <b>PVC transition screw connection</b>                                                                   | SJ 25 PVC     | FG020829      |
|  | <b>PVC sampling point fitting set with heater, red</b><br>Sampling point 5.7 mm, corresponds to 3 mm     | HEAT 3.0 PVC  | 50-0500423-02 |
|  | <b>PVC sampling point fitting set with heater, blue</b><br>Sampling point 6.1 mm, corresponds to 3.5 mm  | HEAT 3.5 PVC  | 50-0500424-02 |
|  | <b>PVC sampling point fitting set with heater, green</b><br>Sampling point 6.3 mm, corresponds to 4.0 mm | HEAT 4.0 PVC  | 50-0500425-02 |

|                                                                                     | Designation                                                                                              | Type           | Article no.   |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------|---------------|
|    | <b>PVC sampling point fitting set with heater, black</b><br>Sampling point 6.7 mm, corresponds to 4.5 mm | HEAT 4.5 PVC   | 50-0500426-02 |
|    | <b>PVC sampling point fitting set with heater, brown</b><br>Sampling point 7.1 mm, corresponds to 5 mm   | HEAT 5.0 PVC   | 50-0500427-02 |
|    | <b>Sampling point clip 2.0 PA, red</b><br>2.0 mm sampling point                                          | CLIP 2.0 PA    | 50-0500833-01 |
|    | <b>Sampling point clip 2.5 PA, red</b><br>2.5 mm sampling point                                          | CLIP 2.5 PA    | 50-0500834-01 |
|    | <b>Sampling point clip 3.0 PA, red</b><br>3.0 mm sampling point                                          | CLIP 3.0 PA    | 50-0500835-01 |
|    | <b>Sampling point clip 3.5 PA, red</b><br>3.5 mm sampling point                                          | CLIP 3.5 PA    | 50-0500836-01 |
|   | <b>Sampling point clip 4.0 PA, red</b><br>4.0 mm sampling point                                          | CLIP 4.0 PA    | 50-0500837-01 |
|  | <b>Sampling point clip 4.5 PA, red</b><br>4.5 mm sampling point                                          | CLIP 4.5 PA    | 50-0500838-01 |
|  | <b>Sampling point clip 5.0 PA, red</b><br>5.0 mm sampling point                                          | CLIP 5.0 PA    | 50-0500839-01 |
|  | <b>Sampling point clip 5.5 PA, red</b><br>5.5 mm sampling point                                          | CLIP 5.5 PA    | 50-0500840-01 |
|  | <b>Sampling point clip 6.0 PA, red</b><br>6.0 mm sampling point                                          | CLIP 6.0 PA    | 50-0500841-01 |
|  | <b>Sampling point clip 6.5 PA, red</b><br>6.5 mm sampling point                                          | CLIP 6.5 PA    | 50-0500842-01 |
|  | <b>Sampling point clip 7.0 PA, red</b><br>7.0 mm sampling point                                          | CLIP 7.0 PA    | 50-0500843-01 |
|  | <b>Sampling point clip 2.0 PA, yellow</b><br>2.0 mm sampling point                                       | CLIP 2.0 PA YE | 50-0500845-01 |
|  | <b>Samplin point clip 2.5 PA, grey</b><br>2.5 mm sampling point                                          | CLIP 2.5 PA GY | 50-0500846-01 |
|  | <b>Sampling point clip 3.0 PA, ruby</b><br>3.0 mm sampling point                                         | CLIP 3.0 PA RU | 50-0500847-01 |

|                                                                                     | Designation                                                                                                                                                                 | Type           | Article no.   |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------|
|    | <b>Sampling point clip 3.5 PA, blue</b><br>3.5 mm sampling point                                                                                                            | CLIP 3.5 PA BL | 50-0500848-01 |
|    | <b>Sampling point clip 4.0 PA, green</b><br>4.0 mm sampling point                                                                                                           | CLIP 4.0 PA GN | 50-0500849-01 |
|    | <b>Sampling point clip 4.5 PA, black</b><br>4.5 mm sampling point                                                                                                           | CLIP 4.5 PA BK | 50-0500850-01 |
|    | <b>Sampling point clip 5.0 PA, brown</b><br>5.0 mm sampling point                                                                                                           | CLIP 5.0 PA BN | 50-0500851-01 |
|    | <b>Sampling point clip 5.5 PA, white</b><br>5.5 mm sampling point                                                                                                           | CLIP 5.5 PA WH | 50-0500852-01 |
|    | <b>Sampling point clip 6.0 PA, orange</b><br>6.0 mm sampling point                                                                                                          | CLIP 6.0 PA OG | 50-0500853-01 |
|    | <b>Sampling point clip 6.5 PA, mint</b><br>6.5 mm sampling point                                                                                                            | CLIP 6.5 PA MT | 50-0500854-01 |
|   | <b>Sampling point clip 7.0 PA, violet</b><br>7.0 mm sampling point                                                                                                          | CLIP 7.0 PA PU | 50-0500855-01 |
|  | <b>Sampling point clip REV PA, red</b><br>without hole                                                                                                                      | CLIP REV PA    | 50-0500844-01 |
|  | <b>PVC cable connector set</b><br>for branching of silicone wires with T, U and H-shaped pipes                                                                              | CCF 25 PVC     | 50-0500428-01 |
|  | <b>PVC sampling point set</b><br>sampling point for ceiling lead-through, threaded ring, two quick acting closures, T-piece, polywell hose (1.5 m)                          | SP M20 PVC-SET | 11-2300146-01 |
|  | <b>PVC ceiling lead-through M20</b><br>three parts                                                                                                                          | SP M20 PVC     | 11-2300145-01 |
|  | <b>PVC compressed air connection d25</b>                                                                                                                                    | CC 25 PVC      | 11-2300066-01 |
|  | <b>PVC capillary pipe</b><br>6 mm (5 m)                                                                                                                                     | TU 6 PVC       | 50-0500401-01 |
|  | <b>Reducing piece 25 to 6 mm</b><br>for capillary pipe TU 6 PVC                                                                                                             | RE 25-6-PVC    | 11-2300137-01 |
|  | <b>PVC capillary pipe set</b><br>D=6 mm, for installation in PVC sampling pipes of aspirating smoke detectors, incl. PVC T-piece d25 and reducing piece d25/6, length 1.5 m | CT 6/4 PVC-SET | 11-2300131-01 |
|  | <b>Flexible PVC hose d25</b>                                                                                                                                                | FH 25 PVC      | 50-0500111-01 |

|                                                                                     | Designation                                                                                                         | Type          | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------|---------------|
|    | <b>Flexible pipe PA</b><br>flexible, outside d=21.2 mm                                                              | FT 21 PA      | 11-2300074-01 |
|    | <b>M20 VE10 quick locking adapter</b><br>Connecting part for poly corrugated hose 21,2 mm                           | SC 20ST PA    | 11-2300085-01 |
|    | <b>PVC threaded ring M20 (10 pcs.)</b><br>Junction M20 to PVC pipe d25                                              | AD 20 PVC     | 11-2300059-01 |
|    | <b>Aspiration rosette PVC grey</b><br>for PVC pipe d25                                                              | SP 30 PVC     | 11-2300043-01 |
|    | <b>PVC sampling rosette 36</b><br>for PVC pipe d25                                                                  | SP 36 PVC     | 11-2300142-01 |
|    | <b>PVC three-way ball valve d25</b>                                                                                 | MV 25 PVC     | FG020867      |
|    | <b>Automatic PVC non-return valve</b>                                                                               | NV 25 PVC     | 11-2300134-01 |
|    | <b>Mounting clamp 25 PVC VE100</b><br>For sampling pipe r d=25 mm, PVC, dark grey;<br>1 PU = 100 pcs., price per PU | PC 25 PVC     | 11-2300083-01 |
|  | <b>PVC flange for ventilation duct d25</b>                                                                          | DF 25 PVC     | 50-0500187-01 |
|  | <b>PVC changeover 25 x 3/4"</b><br>d=25-3/4" female thread (metal ring), fitting for<br>PVC-pipe, d=25              | AD 25-3/4 PVC | 11-2300129-01 |

## 9.1.7 ABS material red

|                                                                                     | Designation                                          | Type                | Article no.   |
|-------------------------------------------------------------------------------------|------------------------------------------------------|---------------------|---------------|
|    | <b>Sampling pipe d25 ABS red 3 m</b>                 | TU 25 ABSRED        | 11-2300049-01 |
|    | <b>Elbow 90° d25 ABS red</b><br>1 PU = 10 pcs.       | BE 25 ABSRED        | 11-2300050-01 |
|    | <b>Angle piece 45° d25 ABS red</b><br>1 PU = 10 pcs. | AN 25-45 ABSRED     | 11-2300052-01 |
|    | <b>Angle piece 90° d25 ABS red</b><br>1 PU = 10 pcs. | AN 25-90 ABSRED     | 11-2300057-01 |
|    | <b>T-piece d25 ABS red</b><br>1 PU = 10 pcs.         | TP 25 ABSRED        | 11-2300053-01 |
|    | <b>Sleeve d25 ABS red</b><br>1 PU = 10 pcs.          | SO 25 ABSRED        | 11-2300051-01 |
|    | <b>End cap d25 ABS red</b><br>1 PU = 10 pcs.         | EC 25 ABSRED        | 11-2300054-01 |
|    | <b>Junction d25 ABS red</b>                          | SJ 25 ABSRED        | 11-2300055-01 |
|    | <b>Fastening clamp d25 ABS red</b><br>1 PU = 20 pcs. | PC 25 ABSRED        | 11-2300056-01 |
|  | <b>Capillary tube red 2 m</b>                        | CT 10/7 ABS-SPC-SET | 11-2300117-01 |
|  | <b>Capillary tube red 2 m</b>                        | CT 10/7 ABS-SPF-SET | 11-2300118-01 |
|  | <b>Capillary tube red 30 m</b>                       | CT 10/7 PA 30       | 11-2300119-01 |
|  | <b>Flexible hose PVC 1 m red</b>                     | FH 25 ABSRED SET1   | 11-2300120-01 |
|  | <b>Flexible hose PVC 30 cm red</b>                   | FH 25 ABSRED SET03  | 11-2300121-01 |
|  | <b>Sticker sampling points 100 pcs</b>               | SP STICKER          | 11-2300122-01 |
|  | <b>Sampling point conical grey</b>                   | SPC 10 PA           | 11-2300123-01 |
|  | <b>Sampling point flat grey</b>                      | SPF 10 PA           | 11-2300124-01 |
|  | <b>T-piece TP 25-10 red</b>                          | TP 25-10 ABSRED     | 11-2300125-01 |
|  | <b>Water separator pipe WRT 25</b>                   | WRT 25 ABSRED       | 11-2300126-01 |

## 9.1.8 ABS materials for deep-freeze applications

The ASD can be used to monitor frozen storage facilities down to minus 30 °C with response classes B and C in accordance with EN 54-20. Here, the use of halogen-free ABS plastic pipes is recommended due to their superior temperature resistance. In frozen storage facilities, special sampling points with heating elements must be used to prevent icing of the sampling points. When setting the parameters of the ASD in frozen storage facilities, the ASD Config configuration software is required, since it used to activate the heating elements.

|                                                                                     | Designation                                                                                              | Type         | Article no.   |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------|---------------|
|    | <b>ABS pipe d25</b><br>Five-metre rod                                                                    | TU 25 ABS    | FG020789      |
|    | <b>ABS elbow 90° d25</b>                                                                                 | BE 25 ABS    | FG020790      |
|    | <b>ABS angle piece 45° d25</b>                                                                           | AN 25-45 ABS | FG020791      |
|    | <b>ABS T-piece d25</b>                                                                                   | TP 25 ABS    | FG020792      |
|    | <b>ABS sleeve d25</b>                                                                                    | SO 25 ABS    | FG020794      |
|   | <b>ABS end cap d25</b>                                                                                   | EC 25 ABS    | FG020795      |
|  | <b>ABS transition junction d25</b>                                                                       | SJ 25 ABS    | FG020793      |
|  | <b>ABS sampling point fitting set with heater, red</b><br>Sampling point 5.7 mm, corresponds to 3 mm     | HEAT 3.0 ABS | 50-0500451-02 |
|  | <b>ABS sampling point fitting set with heater, blue</b><br>Sampling point 6.1 mm, corresponds to 3.5 mm  | HEAT 3.5 ABS | 50-0500452-02 |
|  | <b>ABS sampling point fitting set with heater, green</b><br>Sampling point 6.3 mm, corresponds to 4.0 mm | HEAT 4.0 ABS | 50-0500453-02 |
|  | <b>ABS sampling point fitting set with heater, black</b><br>Sampling point 6.7 mm, corresponds to 4.5 mm | HEAT 4.5 ABS | 50-0500454-02 |
|  | <b>ABS sampling point fitting set with heater, brown</b><br>Sampling point 7.1 mm, corresponds to 5 mm   | HEAT 5.0 ABS | 50-0500455-02 |
|  | <b>ABS cable connector set</b><br>for branching of silicone wires with T, U and H-shaped pipes           | CCF 25 ABS   | 50-0500456-01 |
|  | <b>ABS threaded ring M20 (10 pcs.)</b><br>Junction M20 to ABS pipe d25                                   | AD 20 ABS    | 11-2300058-01 |



|                                                                                     | Designation                                                                                                         | Type           | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|----------------|---------------|
|    | <b>Sampling funnel d25</b>                                                                                          | SF 25 ABS      | 11-2300140-01 |
|    | <b>ABS sampling rosette 36</b><br>for PVC pipe d25                                                                  | SP 36 ABS      | 11-2300141-01 |
|    | <b>ABS compressed air connection d25</b>                                                                            | CC 25 ABS      | 11-2300065-01 |
|    | <b>ABS three-way ball valve d25</b>                                                                                 | MV 25 ABS      | FG020890      |
|    | <b>ABS flange for ventilation duct d25</b>                                                                          | DF 25 ABS      | 50-0500186-01 |
|    | <b>ABS sampling point set</b><br>M20/d36 mm, grey                                                                   | SP M20 ABS-SET | 11-2300144-01 |
|    | <b>ABS ceiling lead-through M20</b><br>three parts                                                                  | SP M20 ABS     | 11-2300143-01 |
|    | <b>Automatic ABS non-return valve</b>                                                                               | NV 25 ABS      | 11-2300133-01 |
|   | <b>ABS connection 25 x 3/4"</b><br>d=25-3/4" female thread (metal ring)                                             | AD 25-3/4 ABS  | 11-2300128-01 |
|  | <b>Mounting clamp 25 PVC VE100</b><br>For sampling pipe r d=25 mm, PVC, dark grey;<br>1 PU = 100 pcs., price per PU | PC 25 PVC      | 11-2300083-01 |
|  | <b>Mounting clamp 25 PP grey VE20</b><br>suitable for PVC-/ABS pipes, d=25; 1 PU = 20<br>pcs., price per PU         | PC 25 PP       | 11-2300096-01 |
|  | <b>Fastening clamp grey VE50</b><br>for pipework installations in deep-freeze<br>environments down to -30 °C        | PC 25 PA12     | 11-0000058-01 |
|  | <b>Silicone stranded wire, white</b>                                                                                | SLW 0.5 WT     | 50-0500483-01 |
|  | <b>Silicone stranded wire, black</b>                                                                                | SLW 0.5 BK     | 50-0500482-01 |



## 9.1.9 Stainless steel materials for standard sampling pipes

The sampling pipes are part of the VdS device approval (EN 54-20). For this reason, only the following material tested with the unit may be used.

|                                                                                     | Designation                                                                                         | Type          | Article no.   |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------|---------------|
|    | <b>Stainless steel sampling pipe d22</b><br>Six-metre rod                                           | TU 22 ST      | 50-0500638-01 |
|    | <b>Stainless steel bend 90° d22</b><br>suitable for stainless steel pipe d22                        | BE 22 ST      | 50-0500489-01 |
|    | <b>Stainless steel end cap d22</b><br>suitable for stainless steel pipe d22                         | EC 22 ST      | 50-0500490-01 |
|    | <b>Stainless steel sleeve d22</b><br>suitable for stainless steel pipe d22                          | SO 22 ST      | 50-0500491-01 |
|    | <b>Stainless steel T-piece d22</b><br>suitable for stainless steel pipe d22                         | TP 22 ST      | 50-0500492-01 |
|    | <b>Stainless steel changeover 22 x 3/4"</b><br>suitable for stainless steel pipe d22                | AD 22-25 ST   | 50-0500493-01 |
|   | <b>Fastening clamp d22</b><br>for stainless steel and copper pipe d22                               | PC 22 CU/ST   | 50-0500552-01 |
|  | <b>Hanger bolt</b><br>for stainless steel and copper pipe d22                                       | FS 22 CU/ST   | 50-0500634-01 |
|  | <b>V2A ceiling lead-through</b><br>three-piece, incl. quick acting closure and locknut              | V2A           | 50-0500082-01 |
|  | <b>PVC changeover 25 x 3/4"</b><br>d=25-3/4" female thread (metal ring), fitting for PVC-pipe, d=25 | AD 25-3/4 PVC | 11-2300129-01 |

## 9.1.10 Material for mounting in concrete

For visual reasons, especially in historic buildings, museums etc. the installation of aspirating smoke detectors should occur in such a manner that sampling pipes are not visible. With suitable electric tubes the installation can be flush-mounted or mounted in concrete.

|                                                                                     | Designation                                                                        | Type          | Article no.   |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------|---------------|
|    | <b>Tube for concrete installation</b><br>Electric pipe KRF, diameter 32 mm, orange | KRF32M        | FG020780      |
|    | <b>T-branch</b><br>32 mm                                                           | TP 32C        | 11-2300116-01 |
|    | <b>Sampling point T-piece</b><br>32 mm                                             | SP 32CT       | 11-2300115-01 |
|    | <b>Sampling point end-piece</b><br>32 mm                                           | SP 32CL       | 11-2300114-01 |
|    | <b>PVC-U transition sleeve d25x20x1/2"</b><br>junction for concrete laying         | KIFV025020012 | FG020785      |
|    | <b>PVC-U pipe d20x1,5</b><br>Five-metre rod, transition for concrete laying        | PIPEV16020L   | FG020786      |
|  | <b>Reduction 3/4-25 PVC</b><br>Adapter for connecting pipe to concrete-laying hose | RE 3/4-25 PVC | 11-2300136-01 |

## 9.1.11 Adhesive and cleaner

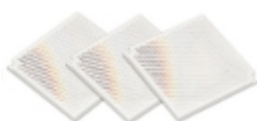
|                                                                                     | Designation                          | Type            | Article no. |
|-------------------------------------------------------------------------------------|--------------------------------------|-----------------|-------------|
|    | <b>ABS adhesive, 1 kg</b>            | GLUE 1000 ABS   | FG020796    |
|    | <b>ABS cleaner, 500 g</b>            | CLEANER 500 ABS | FG020797    |
|    | <b>PVC/U adhesive, 1 kg</b>          | GLUE 1000 PVC   | FG020801    |
|    | <b>PVC/U adhesive, 500 g</b>         | GLUE 500 PVC    | FG020800    |
|    | <b>PVC-U adhesive, 250 g, can</b>    | GLUE 250 PVC    | FG020813    |
|   | <b>PVC-U adhesive, 125 g, tube</b>   | GLUE 125 PVC    | FG020804    |
|  | <b>PVC/U-/PVC/C cleaner, 1 litre</b> | CLEANER 1000    | FG020802    |
|  | <b>PVC cleaner, 125 ml</b>           | CLEANER 125     | FG020814    |
|  | <b>Round brush 8 mm</b>              | RAS RP8         | FG020803    |

## 9.2 Line-type smoke detectors

### Line-type smoke detector Fireray One



**No.: 20-3000609-01**



**No.: 20-3000610-01**

The Fireray One is a standalone line-type smoke detector and consists of a combined transmitter/receiver unit and a reflector. The monitoring length can be configured between 5 to 50 metres and can be extended up to 120 metres with the Fireray Long Range Kit.

The system can be installed in places that could be exposed to sunlight such as skylights and glass atriums thanks to the patented Light Cancellation Technology™. No special tools or prior knowledge is required for its installation.

An integrated automatic alignment motor keeps the infrared beam in the optimal position, even if the building moves, e.g. through to seasonal changes. The optics are fully enclosed in an IP-rated casing with a flat surface for easy cleaning without affecting alignment.

The user interface at the front of the detector allows realignment and programming without having to dismount the detector and a special auto-alignment feature not only saves time during installation, the quality of alignment is also guaranteed by the automation protocol.

|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Operating voltage range          | 14 to 36 V DC                                |
| Current consumption              |                                              |
| all operation modes              | 5 mA typ.                                    |
| Fast alignment mode              | 33 mA typ.                                   |
| Monitoring length                | 5 to 50 m<br>50 to 120 m with Long Range Kit |
| Degree of protection             | IP55                                         |
| Ambient temperature              | -20 °C to +55 °C                             |
| Relative humidity                | 93 % non-condensing                          |
| Case material                    | polycarbonate/ABS                            |
| Case colour                      | white, RAL 1013                              |
| Dimensions                       |                                              |
| Control unit                     | 181 × 130 × 134 mm (H×W×D)                   |
| Prism                            | 100 × 100 × 10 mm (H×W×D)                    |
| Weight                           |                                              |
| Control unit                     | 675 g                                        |
| Prism                            | 50 g                                         |
| VdS approval                     | G218070                                      |
| Declaration of Performance (DoP) | 2831-CPR-F2237                               |

**No.: 20-3000644-01**

## Fireray One Lite line-type smoke detector

The Fireray One Lite is a standalone line-type smoke detector and consists of a combined transmitter/receiver unit and a reflector. The monitoring length can be configured between 5 to 50 metres and can be extended up to 100 metres with the Fireray Long Range Kit.

The system can be installed in places that could be exposed to sunlight such as skylights and glass atriums thanks to the patented Light Cancellation Technology™. No special tools or prior knowledge is required for its installation.

An integrated automatic alignment motor keeps the infrared beam in the optimal position, even if the building moves, e.g. through to seasonal changes. The optics are fully enclosed in an IP-rated casing with a flat surface for easy cleaning without affecting alignment.

The user interface at the front of the detector allows realignment and programming without having to dismount the detector and a special auto-alignment feature not only saves time during installation, the quality of alignment is also guaranteed by the automation protocol.

|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Operating voltage range          | 14 to 36 V DC                                |
| Current consumption              |                                              |
| all operation modes              | 5 mA typ.                                    |
| Fast alignment mode              | 33 mA typ.                                   |
| Monitoring length                | 5 to 50 m<br>50 to 100 m with Long Range Kit |
| Degree of protection             | IP55                                         |
| Ambient temperature              | -20 °C to +55 °C                             |
| Relative humidity                | 93 % non-condensing                          |
| Case material                    | polycarbonate/ABS                            |
| Case colour                      | white, RAL 1013                              |
| Dimensions                       |                                              |
| Control unit                     | 181 × 130 × 134 mm (H×W×D)                   |
| Prism                            | 100 × 100 × 10 mm (H×W×D)                    |
| Weight                           |                                              |
| Control unit                     | 675 g                                        |
| Prism                            | 50 g                                         |
| Declaration of Performance (DoP) | 2831-CPR-F5022                               |

## Fireray Hub line-type smoke detector



**No.: 20-3000613-01**



**No.: 20-3000614-01**



**No.: 20-3000615-01**

The Fireray Hub is a modular system and enables the operation of 3 sender/reflector pairs per control unit. The detectors can be connected to the control unit in parallel or in series. The monitoring length is 8 to 50 metres and can be extended to up to 120 metres with the Fireray Long Range Kit.

The system can be installed in places that could be exposed to sunlight such as skylights and glass atriums thanks to the patented Light Cancellation Technology™. No special tools or prior knowledge is required for its installation.

An integrated automatic alignment motor keeps the infrared beam in the optimal position, even if the building moves, e.g. through to seasonal changes. The optics are fully enclosed in an IP-rated casing with a flat surface for easy cleaning without affecting alignment.

The control unit enables centralised and simple operation of the detectors without the need for climbing aids. A special automatic alignment function not only saves time during installation, but also guarantees the quality of the alignment through an automation protocol.

|                               |                                              |
|-------------------------------|----------------------------------------------|
| Operating voltage range       | 14 to 36 V DC                                |
| Current consumption           |                                              |
| Standard alignment 1 detector | 12.5 mA                                      |
| Standard alignment 2 detector | 15 mA                                        |
| Standard alignment 3 detector | 17.5 mA                                      |
| Quick alignment               | 33 mA                                        |
| Monitoring length             | 8 to 50 m<br>50 to 120 m with Long Range Kit |
| Degree of protection          |                                              |
| Control unit                  | IP65                                         |
| Detectors                     | IP55                                         |
| Ambient temperature           | -10 °C to +55 °C                             |
| Relative humidity             | 93 % non-condensing                          |
| Case material                 | UL94 V0 polycarbonate                        |
| Case colour                   | white, RAL 9016, grey, RAL 7001              |
| Dimensions                    |                                              |
| Control unit                  | 170 × 274 × 73 mm (H×W×D)                    |
| Detectors                     | 131 × 134 × 131 mm (H×W×D)                   |
| Prism                         | 100 × 100 × 9 mm (H×W×D)                     |
| Weight                        |                                              |
| Control unit                  | 1050 g                                       |
| Detectors                     | 570 g                                        |
| Prism                         | 60 g                                         |

## Line-type smoke detector Fireray 3000



**No.: 20-3000607-01**



**No.: 20-3000608-01**

The Fireray 3000 is a line-type optical smoke detector for the detection of light and dark smoke over a distance of 5 – 120 metres.

Preferred areas of application are very large and high halls, e.g. aircraft hangars, factory buildings and similar areas where the use of point fire detectors is not possible. In addition, the detector is ideal for applications where the line of sight for the infrared beam is narrow and where the building structure includes reflective surfaces.

The transmitter unit sends an infrared beam, bundled by a lens, to the receiver unit. As soon as smoke appears and obscures the infrared beam, the signal strength at the receiver unit drops below a preset value, triggering an alarm state.

Both detector heads (transmitter/receiver unit) have integrated adjustment wheels for easy alignment. The receiver unit is connected to the control unit. Up to two receiver units can be connected to one control unit.

|                                  |                             |
|----------------------------------|-----------------------------|
| Operating voltage range          | 12 to 36 V DC               |
| Current consumption              |                             |
| 1 – 2 receiver units             | 14 mA                       |
| Transmitter                      | 9 mA                        |
| Monitoring length                | 5 to 120 m                  |
| Degree of protection             | IP54                        |
| Ambient temperature              | -10 °C to +55 °C            |
| Relative humidity                | 93 % non-condensing         |
| Case material                    | UL94 V2 PC                  |
| Dimensions                       |                             |
| Control unit                     | 124 × 203 × 71.5 mm (H×W×D) |
| Transmitter/receiver unit        | 77 × 78 × 161 mm (H×W×D)    |
| Weight                           |                             |
| Control unit                     | 606 g                       |
| Transmitter/receiver unit        | 207 g                       |
| VdS approval                     | G212034                     |
| Declaration of Performance (DoP) | CPR-DOP-301                 |

## ILIA line-type smoke detector



**No.: 11-3000007-01**



**No.: 11-3000009-01**



**No.: 11-3000016-01**

For fire detection in areas where point fire detectors cannot be used due to the room height (e.g. production halls, churches, warehouses, railway stations). The system is available in two versions: as transmitter/receiver unit ILIA S/E and as combined transmitter/receiver unit with reflector ILIA S/R.

The devices are connected to the fire alarm control panel via a control unit on which all settings can be adjusted and testing/maintenance work carried out. In the basic version, the connection of two systems is possible. Using an extension board, a total of eight systems can be interconnected.

All ILIA systems have an integrated infinitely variable pinhole, which in difficult optical conditions can be used e.g. with direct parallel solar radiation, strong reflections or extraneous light). For use in challenging ambient conditions (e.g. with elevated dust concentrations). The type ILIA PRO is available. This is exceptionally non-sensitive against faults caused by dust and steam. Contamination is compensated for to a certain extent.

|                                  |                                                                 |
|----------------------------------|-----------------------------------------------------------------|
| Operating voltage range          | 12 to 24 V DC                                                   |
| Quiescent current                |                                                                 |
| One detector                     | 48 to 98 mA                                                     |
| Eight detectors                  | 261 to 502 mA                                                   |
| Alarm current                    |                                                                 |
| One detector                     | 50 to 100 mA                                                    |
| Eight detectors                  | 270 to 512 mA                                                   |
| Monitoring length                |                                                                 |
| Transmitter/receiver unit        | 10 to 200 m                                                     |
| transmitter unit/reflector       | 10 to 150 m                                                     |
| Monitoring area                  | max. 1600 m <sup>2</sup> per detector                           |
| Monitoring width                 | max. 15 m                                                       |
| misalignment tolerance           | up to ±1° for transmitter unit (Tx) and receiver unit (Rx)      |
| Cable length                     |                                                                 |
| With 2 sensors                   | max. 1200 m with cable diameter 0.5 mm <sup>2</sup> and 4 cores |
| With 8 sensors                   | max. 1200 m with cable diameter 1.5 mm <sup>2</sup> and 4 cores |
| Degree of protection             | IP65                                                            |
| Ambient temperature              | -20 °C to +65 °C                                                |
| Case colour                      | black-blue, RAL 5004<br>pearl white, RAL 1013                   |
| Dimensions                       |                                                                 |
| Transmitter/receiver unit        | 162 × 145 × 19/+3 mm (H×W×D)                                    |
| Control unit                     | 145 × 177 × 68 mm (H×W×D)                                       |
| Weight                           |                                                                 |
| Transmitter/receiver unit        | approx. 780 g                                                   |
| Control unit                     | approx. 375 g                                                   |
| VdS approval                     | G209195                                                         |
| Declaration of Performance (DoP) | 0786-CPD-20925                                                  |



**No.: 20-3000611-01****No.: 20-3000612-01**

## Fireray 3000 Exd Line-type smoke detector

The line-type smoke detector Fireray 3000 Exd is ideal for protection against fires with formation of smoke in large areas with potentially explosive atmospheres, e.g. for oil platforms, refineries, ammunition depots and similar facilities. The system provides an early warning of smouldering or strongly smoke-generative fires, which may not be picked up by conventional fire detectors. The monitoring length can be configured between 10 and 80 metres.

The system consists of an infrared transmitter unit and a receiver unit, both of which are ATEX-certified for use in group 2 hazardous areas. The ATEX approval certifies the device category 2G and thus the use in zone 1.

The transmitter unit sends an infrared beam, bundled by a lens, to the receiver unit. As soon as smoke appears and obscures the infrared beam, the signal strength at the receiver unit drops below a preset value, triggering an alarm state.

The separate control unit has an LC display with an easy-to-use user interface and enables simple commissioning, testing and maintenance of the system. It is connected to receiver unit's power supply unit and must be mounted outside the hazardous area.

|                           |                                                                                    |
|---------------------------|------------------------------------------------------------------------------------|
| Operating voltage range   | 12 to 36 V DC                                                                      |
| Current consumption       | 14 mA typ.                                                                         |
| Monitoring length         | 10 to 80 m                                                                         |
| Degree of protection      |                                                                                    |
| Control unit              | IP54                                                                               |
| Transmitter/receiver unit | IP66                                                                               |
| Ambient temperature       | -10 °C to +55 °C                                                                   |
| Relative humidity         | 93 % non-condensing                                                                |
| Case material             |                                                                                    |
| Control unit              | UL94 V2 PC                                                                         |
| Transmitter/receiver unit | Aluminium Alloy LM25                                                               |
| Case colour               |                                                                                    |
| Control unit              | white                                                                              |
| Transmitter/receiver unit | red                                                                                |
| Dimensions                |                                                                                    |
| Transmitter/receiver unit | 172 × 149 × 190 mm (H×W×D)                                                         |
| Control unit              | 124 × 203 × 73.5 mm (H×W×D)                                                        |
| Weight                    |                                                                                    |
| Control unit              | 606 g                                                                              |
| Transmitter/receiver unit | 3.7 kg                                                                             |
| Ex-Designation            | II 2 GD<br>Ex db op is IIC T6 Gb<br>Ex tb IIIC T85 °C Db<br>Ta = -20 °C bis +55 °C |

## Line-type smoke detectors and accessories

|                                                                                     | Designation                                                                                           | Type        | Article no.   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-------------|---------------|
|    | <b>Fireray One</b><br>Line-type smoke detector 5 to 50 m                                              | 6010-100    | 20-3000609-01 |
|    | <b>Fireray One Long Range Kit</b><br>three reflectors to increase the monitoring length to 50 – 120 m | 1010-000    | 20-3000610-01 |
|    | <b>Fireray One detector heater</b>                                                                    | 1060-000    | 20-3000642-01 |
|    | <b>Fireray One Lite</b><br>Line-type smoke detector, 5 to 50 m                                        | 6180-100    | 20-3000644-01 |
|    | <b>Fireray Hub system</b><br>Controller with one detector                                             | 6020-100    | 20-3000613-01 |
|    | <b>Fireray Hub detector</b><br>Detector for Fireray Hub Reflective System                             | 6030-100    | 20-3000614-01 |
|   | <b>Fireray Hub Controller</b><br>Controller for the Fireray Hub Reflective System                     | 6080-100    | 20-3000615-01 |
|  | <b>Fireray 3000 System</b>                                                                            | EN=3000-101 | 20-3000607-01 |
|  | <b>Fireray 3000 detectors</b>                                                                         | EN=3000-015 | 20-3000608-01 |
|  | <b>Fireray 3000 detector heater</b>                                                                   | 3000-204    | 20-3000639-01 |
|  | <b>Fireray 3000 detector flush mounting plate</b>                                                     | 3000-202    | 20-3000621-01 |
|  | <b>Bracket for four prisms</b>                                                                        | 5000-007    | 20-3000624-01 |
|  | <b>Bracket for one prism</b>                                                                          | 5000-008    | 20-3000625-01 |
|  | <b>Prism mounting plate</b>                                                                           | 1031-000    | 20-3000626-01 |
|  | <b>Reflecting prism</b>                                                                               | 23901.01    | 20-3000627-01 |
|  | <b>Prism heater, black</b><br>for 1 or 4 Fireray prisms                                               | 5000-205    | 20-3000641-01 |

|                                                                                     | Designation                                                                                     | Type           | Article no.   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|----------------|---------------|
|    | <b>Prism heater, white</b><br>for one or four Fireray prisms                                    | 1090-000       | 20-3000641-02 |
|    | <b>Universal ceiling mount</b>                                                                  | 5000-014       | 20-3000628-01 |
|    | <b>Adjustment bracket 360°</b><br>for Fireray One/3000/5000                                     | 1170-000       | 20-3000643-01 |
|    | <b>Fireray test filter</b>                                                                      | 0209-02        | 20-3000634-01 |
|    | <b>ILIA S/E line-type smoke detector</b><br>Transmitter/receiver unit RAL 5004 (black-blue)     | ERHS0712       | 11-3000007-01 |
|    | <b>ILIA S/E line-type smoke detector</b><br>Transmitter/receiver unit RAL 1013 (pearl white)    | ERHS0712-1013  | 11-3000008-01 |
|    | <b>ILIA S/R line-type smoke detector</b><br>Transmitter unit/reflector RAL 5004 (black-blue)    | ERRHS0712      | 11-3000009-01 |
|    | <b>ILIA S/Rw line-type smoke detector</b><br>Transmitter unit/reflector RAL 1013 (pearl white)  | ERRHS0712-1013 | 11-3000010-01 |
|   | <b>ILIA PRO S/E line-type smoke detector</b><br>Transmitter/receiver unit RAL 5004 (black-blue) | ERHS0712-PRO   | 11-3000016-01 |
|  | <b>CSRLS-2 controller for ILIA</b><br>for connection of 2 pcs. ILIA systems                     | CSRLS-2        | 11-3000011-01 |
|  | <b>CSRLS,6 ILIA extension module</b><br>for connection of 6 pcs. additional ILIA systems        | SMLS           | 11-3000012-01 |
|  | <b>ILIA PRO control unit 2</b><br>for connection of 2 pcs. ILIA PRO systems                     | CSRLS-PRO      | 11-3000017-01 |
|  | <b>Control unit for 8 ILIA</b><br>XLM, CLI                                                      | CLI            | 11-3000013-01 |
|  | <b>Control unit for 8 ILIA-PRO</b><br>XLM, CLI-PRO                                              | CLI-PRO        | 11-3000018-01 |
|  | <b>Adjustable wall-mounted bracket for ILIA</b>                                                 | SACA-G         | 11-3000025-01 |
|  | <b>Protective case for ILIA</b>                                                                 | SOHI           | 11-3000026-01 |
|  | <b>Glass panel for protective case for ILIA</b>                                                 | FAPO-G         | 11-3000063-01 |
|  | <b>Purging air ring for ILIA SOHI</b><br>for 1 transmitter or 1 receiver                        | ASIS           | 11-3000049-01 |

|                                                                                   | Designation                                                                       | Type                 | Article no.   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------|---------------|
|  | <b>Protective cage for ILIA</b>                                                   | GDP                  | 11-3000028-01 |
|  | <b>Fireray 3000 Exd</b><br>Line-type smoke detector for hazardous areas           | FIRERAY 3000 EXD     | 20-3000611-01 |
|  | <b>Fireray 3000 Exd detectors</b><br>for extension of the Fireray 3000 Exd system | FIRERAY 3000 EXD S/E | 20-3000612-01 |

## 9.3 Line-type heat detectors

Line-type heat detectors are used for fire detection in areas where conventional fire detectors cannot be used due to more aggressive and critical ambient conditions (e.g. high air humidity, extreme temperatures, outdoor areas, corrosive gases, dust pollution etc.). Or where multiple heat detectors would be necessary due to huge monitoring areas/distances. Possible areas for deployment include cable ducts, car parks, parking garages, cold stores, industrial property protection, e.g. in conveyor belt systems, production lines, loading ramps, refineries, incineration plants, saw works, agricultural areas.

### 9.3.1 ADW line-type heat detectors

#### ADW 535 line-type heat detector



**No.: 11-1000000-01**



**No.: 11-1000000-02**

The ADW 535 is an integrating line-type heat detector with a heat differential and/or heat maximum response. The ADW 535 consists of an evaluation unit for the connection of one (ADW 535-1) or two (ADW 535-2) sensing tube(s). Depending on the ambient conditions, different materials are used for the sensing tubes (copper, stainless steel or Teflon). The ADW 535 contains four connection slots on which optional modules can be inserted.

The mode of operation is based on the volume expansion of the air due to heating in a pneumatically sealed sensing tube leads to an increase in pressure. This pressure is constantly monitored by a fully electronic pressure sensor and evaluated by a microprocessor, which compares it to pre-set alarm scenarios.

Due to its self-monitoring and the cyclical automatic checking process, the ADW 535 is particularly well suited for use in areas where the existing conditions make it impossible or difficult to carry out the legally prescribed function and maintenance checks.

- Adjustable response behaviour in accordance with EN 54-22 (heat detector class A1I, A2I, BI ... GI) and UL/FM with pre-alarm signal, main alarm and fault analysis
- Dynamic monitoring of the response threshold value (Dynamic Heat Watch) to avoid unwanted alarms
- Automatic testing of the air-tightness of the sensing tube in accordance with EN 54-22
- Ethernet interface for networking or PC connection
- Data logging via SD card for evidence after a fire and fine tuning of the system
- Calculation of the response behaviour with software
- Serial interface for PC connection for detailed analysis and individual adjustment in situ

|                                     |                                                        |
|-------------------------------------|--------------------------------------------------------|
| Operating voltage range             | 9 to 30 V DC                                           |
| Quiescent current                   |                                                        |
| ADW 535-1                           | 35 mA typ. with 24 V DC                                |
| ADW 535-2                           | 43 mA typ. with 24 V DC                                |
| Alarm current                       |                                                        |
| ADW 535-1                           | 42 mA typ. with 24 V DC                                |
| ADW 535-2                           | 57 mA typ. with 24 V DC                                |
| Optional module                     | max. 4 piece                                           |
| Connection lengths                  |                                                        |
| Copper/stainless steel              | max. 140 m per sensing tube                            |
| Teflon                              | max. 125 m per sensing tube                            |
| Monitoring width                    | max. 7 m                                               |
| Connection                          | plug-in terminals, 2.5 mm <sup>2</sup>                 |
| Cable inlet                         | M20 and M25                                            |
| Degree of protection                | IP65                                                   |
| Ambient temperature                 |                                                        |
| Evaluation unit                     | −30 °C to +70 °C                                       |
| Sensing tube copper/stainless steel | −40 °C to +300 °C                                      |
| Sensing tube Teflon                 | −40 °C to +85 °C                                       |
| Flexible hose                       | −40 °C to +100 °C                                      |
| Case material                       | ABS blend, UL 94-V0                                    |
| Case colour                         | light grey, RAL 280 70 05<br>anthracite, RAL 300 20 05 |
| Dimensions                          | 212 × 251 × 134 mm (H × W × D)                         |
| Weight                              |                                                        |
| ADW 535-1                           | 1500 g                                                 |
| ADW 535-2                           | 1970 g                                                 |
| VdS approval                        | G214076                                                |

## ADW 535 HDx line-type heat detector



No.: 11-1000001-01



No.: 11-1000001-02

The ADW 535HDx is suitable as equipment for use in zone 2 and 22 hazardous areas in accordance with VDE 0165 and IEC 60079-10. There are two variants:

- ADW 535-1HDx for one sensing tube, two relay/open collector outputs
- ADW 535-2HDx for two sensing tubes, four relay/open collector outputs

|                                     |                                                             |
|-------------------------------------|-------------------------------------------------------------|
| Operating voltage range             | 9 to 30 V DC                                                |
| Quiescent current                   |                                                             |
| ADW 535-1HDx                        | 35 mA typ. with 24 V DC                                     |
| ADW 535-2 HDx                       | 43 mA typ. with 24 V DC                                     |
| Alarm current                       |                                                             |
| ADW 535-1HDx                        | 42 mA typ. with 24 V DC                                     |
| ADW 535-2 HDx                       | 57 mA typ. with 24 V DC                                     |
| Optional module                     | max. 4 piece                                                |
| Connection lengths                  |                                                             |
| Copper/stainless steel              | max. 140 m per sensing tube                                 |
| Teflon                              | max. 125 m per sensing tube                                 |
| Monitoring width                    | max. 7 m                                                    |
| Connection                          | plug-in terminals, 2.5 mm <sup>2</sup>                      |
| Cable inlet                         | M20 and M25                                                 |
| Degree of protection                | IP66                                                        |
| Ambient temperature                 |                                                             |
| Evaluation unit                     | –30 °C to +70 °C<br>(ATEX –20 °C to +55 °C)                 |
| Sensing tube copper/stainless steel | –40 °C to +300 °C                                           |
| Sensing tube Teflon                 | –40 °C to +85 °C                                            |
| Flexible hose                       | –40 °C to +100 °C                                           |
| Case material                       | glass-fibre reinforced, thermosetting polyester, UL 94-V0   |
| Case colour                         | graphite black RAL 9011, platinum grey RAL 7036             |
| Dimensions                          | 203 × 260 × 134 mm (H × W × D)                              |
| Weight                              |                                                             |
| ADW 535-1HDx                        | 3050 g                                                      |
| ADW 535-2 HDx                       | 3420 g                                                      |
| Ex-Designation                      | EX II 3G Ex nA nC IIC T4 Gc<br>EX II 3D Ex tc IIIC T135° Dc |
| ATEX approval                       | SEV 15 ATEX 0125                                            |
| VdS approval                        | G214076                                                     |

## ADW 535-1 ATEX line-type heat detector



**No.: 50-0500259-01**

The ADW 535-1 ATEX is designed for intended use in hazardous areas of zone 1 (category 2G) in accordance with directive 2014/34/EU (ATEX).

The control and evaluation electronics are accommodated in a special case with ignition protection type II2G Ex d e IIC T6, which allows the complete evaluation unit to be mounted directly in hazardous zone 1 (category 2G). The response behaviour is adjustable, tested and approved according to EN 54-22, heat detector response class A1I – GI.

|                                     |                                |
|-------------------------------------|--------------------------------|
| Operating voltage range             | 9 to 30 V DC                   |
| Quiescent current                   | 35 mA typ. with 24 V DC        |
| Alarm current                       | 42 mA typ with 24 V DC         |
| Optional module                     | max. 4 piece                   |
| Connection lengths                  |                                |
| Copper/stainless steel              | max. 140 m per sensing tube    |
| Teflon                              | max. 125 m per sensing tube    |
| Monitoring area                     | 800 m <sup>2</sup>             |
| Cable inlet                         | M20 and M25                    |
| Degree of protection                | IP65                           |
| Ambient temperature                 |                                |
| Evaluation unit                     | –20 °C to +55 °C               |
| Sensing tube copper/stainless steel | –40 °C to +300 °C              |
| Sensing tube Teflon                 | –40 °C to +85 °C               |
| Flexible hose                       | –40 °C to +100 °C              |
| Case material                       | sheet steel                    |
| Case colour                         | grey, RAL 7032                 |
| Dimensions                          | 679 × 325 × 190 mm (H × W × D) |
| Weight                              | 27 kg                          |
| Ex-Designation                      | II G 2 Ex d e IIC T6           |
| ATEX approval                       |                                |
| Case                                | PTB 99 ATEX 1057               |
| Detonation flame arrester           | IBExU 06 ATEX 2003 X           |
| VdS approval                        | G214076                        |



**No.: 11-2200003-01**

## XLM 35 interface module

Optional module for connection of special detectors to the Integral X-LINE. The operation, configuration and retrieval of the special detector's data can be performed directly from the fire alarm control panel. Installation set included.

|                            |                             |
|----------------------------|-----------------------------|
| Operating voltage          | 5 V DC                      |
| Current consumption        | max. 0.3 mA                 |
| Degree of protection       | IP54                        |
| Ambient temperature        |                             |
| Manufacturer specification | –30 °C to +60 °C            |
| Approved by VdS            | –10 °C to +55 °C            |
| Dimensions                 | 58 × 95 × 17 mm (H × W × D) |
| Weight                     | 62 g                        |

**No.: 11-2200005-01**

## RIM 36 relay interface module

Up to two RIM 36 can be installed in special fire detectors such as ASD aspirating smoke detectors or ADW line-type heat detectors. Depending on the device variant, the relays are assigned predefined criteria or are freely programmable via the ASD Config and ADW Config configuration software.

|                             |                             |
|-----------------------------|-----------------------------|
| Operating voltage           | 5 V DC                      |
| Current consumption         |                             |
| all operation modes         | 5 mA typ.                   |
| Fast alignment mode         | 33 mA typ.                  |
| Relay contact load capacity | max. 50 V DC/1 A/30 W       |
| Ambient temperature         | –30 °C to +70 °C            |
| Dimensions                  | 58 × 95 × 17 mm (H × W × D) |
| Weight                      | 85 g                        |



**No.: Upon request**

## **ADW HeatCalc calculation software**

For drawing and planning of an ADW pipeline system. The calculation software indicates the parameters necessary for actuation in accordance with EN 54-22, which are subsequently programmed into the ADW 535.

- Calculation of symmetrical and asymmetrical sensor tube networks
- Makes planning faster and easier
- Allows extended system limits
- Includes all types of tubes and accessories

Required Hard- and Software:

- operating system Windows 7, Windows 10
- CPU with clockspeed min. 2 GHz
- 1 GB RAM
- 200 MB free hard disk space
- Ethernet interface



**No.: Upon request**

## **ADW Config configuration software**

For adjustment of the parameters for the differential and maximum alarm thresholds, as well as the delay times in accordance with the relevant standards and ambient conditions.

- Import the project file into the device
- Easy commissioning directly on the device
- Device settings and analysis function
- Visualization of interconnection of line-type heat detectors
- Adjustment of the sensor tube alarm thresholds
- Definition of pre-alarm signal assignment and the Auto Learning criteria
- Definition of day/night function and allocation of the relays
- Setting/readout of time and firmware update

Required Hard- and Software:

- operating system Windows 7, Windows 10
- CPU with clockspeed min. 2 GHz
- 1 GB RAM
- 200 MB free hard disk space
- Ethernet interface

## ADW line-type heat detectors, accessories and spare parts

|                                                                                     | Designation                                                                                  | Type                 | Article no.   |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------|---------------|
|    | <b>Line-type heat detector – 1 sensing tube</b>                                              | ADW 535-1            | 11-1000000-01 |
|    | <b>Line-type heat detector – 2 sensing tubes</b>                                             | ADW 535-2            | 11-1000000-02 |
|    | <b>Line-type heat detector Ex – 1 sensing tube</b>                                           | ADW 535-1HDX         | 11-1000001-01 |
|    | <b>Line-type heat detector Ex – 2 sensing tubes</b>                                          | ADW 535-2HDX         | 11-1000001-02 |
|    | <b>ADW 535-1 ATEX line-type heat detector</b><br>for hazardous areas zone 1/one sensing tube | ADW 535-1 ATEX       | 50-0500259-01 |
|    | <b>ADW reference temperature sensor</b>                                                      | ART 535-10           | 11-1000002-10 |
|    | <b>Temperature sensor 400 °C 10 m</b><br>for ADW 535-x                                       | ART 535-10 400       | 11-1300059-01 |
|  | <b>Temperature sensor 60 °C 30 m Ex 1</b><br>for ADW 535-x for hazardous areas zone 1        | ART 535-30 60 EX 1   | 11-1300060-01 |
|  | <b>Temperature sensor 60 °C 30 m Ex 21</b><br>for ADW 535-x for hazardous areas zone 21      | ART 535-30 60 EX 21  | 11-1300061-01 |
|  | <b>Temperature sensor 400 °C 30 m Ex 1</b><br>for ADW 535-x for hazardous areas zone 1       | ART 535-30 400 EX 1  | 11-1300062-01 |
|  | <b>Temperature sensor 400 °C 30 m Ex 21</b><br>for ADW 535-x for hazardous areas zone 21     | ART 535-30 400 EX 21 | 11-1300063-01 |
|  | <b>LMB 35 main circuit board</b><br>Spare part                                               | LMB 35               | 11-1200001-01 |
|  | <b>Lithium battery CR 2032</b>                                                               | CR 2032              | 5-BC112032    |
|  | <b>LEB 35 extension board</b><br>Spare part                                                  | LEB 35               | 11-1200002-01 |
|  | <b>Pressure measuring and monitoring device</b><br>Spare part                                | LSU 35               | 11-1200003-01 |
|  | <b>SD memory card industrial</b>                                                             | SD-INDUSTRIAL        | 11-4000007-01 |
|  | <b>XLM 35 interface module</b>                                                               | XLM 35               | 11-2200003-01 |

|                                                                                     | Designation                                             | Type          | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------|---------------|---------------|
|    | <b>RIM 36 relay interface module</b>                    | RIM 36        | 11-2200005-01 |
|    | <b>UMS 35 module adapter</b>                            | UMS 35        | FG030826      |
|    | <b>ADW HeatCalc calculation software</b>                | ADW HEATCALC  | Upon request  |
|    | <b>ADW Config configuration software</b>                | ADW CONFIG    | Upon request  |
|    | <b>Earthing clamp GC5-6-EX</b>                          | GC 5/6 EX     | 11-1300042-01 |
|    | <b>Cable gland M20</b><br>for ASD/ADW, 10 pcs. pack     | M20 VE10      | 11-4000003-01 |
|    | <b>Cable gland M25</b><br>for ASD/ADW, 10 pcs. pack     | M25 VE10      | 11-4000004-01 |
|    | <b>Cable gland M20</b><br>for ADW 535-HDx, 10 pcs. pack | M20 ATEX VE10 | 11-4000006-01 |
|  | <b>Cable gland M25</b><br>for ADW 535-HDx, 10 pcs. pack | M25 ATEX VE10 | 11-4000005-01 |

### 9.3.2 ADW 535 sensing tube, copper

|                                                                                     | Designation                                                            | Type         | Article no.   |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------|---------------|
|    | <b>Sensing tube 5/4 3 m copper</b><br>Rod 3 m                          | TU 5/4 CU 3M | 11-1300034-01 |
|    | <b>Sensing tube 5/4 5.5 m copper</b><br>Rod 5.5 m                      | TU 5/4 CU    | 11-1300008-01 |
|    | <b>Sensing tube 5/4 50 m copper</b><br>Roll 50 m                       | TU 5/4 CU 50 | 11-1300009-01 |
|    | <b>Junction, brass for TU 5/4 VE10</b><br>1 PU = 10 pcs., price per PU | SJ 5/4 CUZN  | 11-1300010-01 |
|    | <b>SJ 5/4 CuZn VE5 end plug</b><br>1 PU = 5 pcs., price per PU         | EP 5/4 CUZN  | 11-1300011-01 |
|    | <b>T-junction, brass for TU 5/4</b><br>Brass                           | TJ 5/4 CUZN  | 11-1300012-01 |
|    | <b>Detection coil TU 5/4 5 m</b>                                       | SC 5/4 CU 5  | 11-1300013-01 |
|   | <b>Testing coil TU 5/4 10 m</b>                                        | TC 5/4 CU 10 | 11-1300014-01 |
|  | <b>Compression ferrule for copper pipe, d=5/4</b><br>Brass             | CF 5/4 CUZN  | 11-1300040-01 |
|  | <b>Terminal nut for TU 5/4 Cu</b><br>Replacement part, included in ADW | CN 5/4 CUZN  | 11-1300041-01 |

### 9.3.3 ADW 535 sensing tube, stainless steel

|                                                                                     | Designation                                                                     | Type             | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------|---------------|
|    | <b>Sensing tube 5/4 3 m stainless steel</b><br>Rod 3 m                          | TU 5/4 ST 3M     | 11-1300035-01 |
|    | <b>Sensing tube 5/4 6 m stainless steel</b><br>Rod 6 m                          | TU 5/4 ST        | 11-1300015-01 |
|    | <b>Junction for TU 5/4 St VE5</b><br>1 PU = 5 pcs., price per PU                | SJ 5/4 ST        | 11-1300016-01 |
|    | <b>SJ 5/4 St VE5 end plug</b><br>1 PU = 5 pcs., price per PU                    | EP 5/4 ST        | 11-1300017-01 |
|    | <b>T-junction, stainless steel for TU 5/4 St</b>                                | TJ 5/4 ST        | 11-1300018-01 |
|    | <b>Detection coil 5/4 stainless steel</b><br>5 m                                | SC 5/4 ST 5      | 11-1300044-01 |
|    | <b>Test coil set 5/4 stainless steel</b><br>10 m                                | TC 5/4 ST 10 SET | 11-1300050-01 |
|   | <b>Transition piece 5/6 stainless steel set</b>                                 | AD 5/6 ST-SET    | 11-1300037-01 |
|  | <b>Junction set 6/4 stainless steel</b>                                         | SJ 6/4 ST-SET    | 11-1300046-01 |
|  | <b>Terminal set 6/4 stainless steel</b>                                         | TS 6/4 ST-SET    | 11-1300054-01 |
|  | <b>Supporting sleeve d=5 mm</b><br>Stainless steel, 1 PU= 10 pcs., price per PU | SS 5/3 ST 10ER   | 11-1300031-01 |
|  | <b>Compression ferrule stainless steel d=5/4</b>                                | RE 5-4 ST        | 50-0500224-01 |
|  | <b>Protective connection joint for sensing tube TU 5/4 St</b>                   | PS TU 5/4 ST     | 11-1300043-01 |

### 9.3.4 ADW 535 sensing tube, Teflon

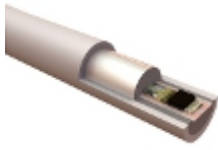
|                                                                                     | Designation                                                                                     | Type             | Article no.   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------|---------------|
|    | <b>Sensing tube 6/4 50 m Teflon</b><br>Roll 50 m                                                | TU 6/4 PTFE 50   | 11-1300019-01 |
|    | <b>Sensing tube 6/4 100 m Teflon</b><br>Roll 100 m                                              | TU 6/4 PTFE 100  | 11-1300020-01 |
|    | <b>Sensing tube, Teflon 6/4 mm Ex, roll 100 m</b>                                               | TU 6/4 PTFE/EX   | 11-1300055-01 |
|    | <b>Sensing tube 6/4 PTFE 25 m Ex</b>                                                            | TU 6/4 PTFE/EX25 | 11-1300069-01 |
|    | <b>Sensing tube 6/4 PTFE 50 m Ex</b>                                                            | TU 6/4 PTFE/EX50 | 11-1300070-01 |
|    | <b>Junction, for TU 6/4 PTFE</b><br>Set for Teflon tube, d=6/4, ATEX incl. 2 supporting sleeves | SJ 6/4 CUZN      | 11-1300025-01 |
|    | <b>End plug brass d=6/4</b><br>for SJ 6/4 CuZn                                                  | EP 6/4 CUZN      | 50-0500233-01 |
|   | <b>SJ6/4CuZn-FH5/3PA reducing pieces</b><br>for reduction from brass to SJ 6/4 CuZn-FH 5/3 PA   | RE 6-5 CUZN      | 11-1300026-01 |
|  | <b>Teflon T-junction, brass</b><br>Set for Teflon tube, d=6/4, ATEX, incl. 3 supporting sleeves | TJ 6/4 CUZN-SET  | 11-1300051-01 |
|  | <b>Junction, for TU 6/4 PTFE</b><br>Teflon                                                      | SJ 6/4 PVDF      | 11-1300022-01 |
|  | <b>End plug for TU 6/4 PTFE</b>                                                                 | EP 6/4 PVDF      | 11-1300023-01 |
|  | <b>T-junction for TU 6/4 PTFE</b><br>Teflon                                                     | TJ 6/4 PVDF      | 11-1300024-01 |
|  | <b>Changeover, ADW, TU 6/4 PTFE</b>                                                             | AD TU 6/4 CUZN   | 11-1300021-01 |
|  | <b>Supporting sleeve 6/4 CuZn</b><br>for TU 6/4 PTFE                                            | SS 4 CUZN        | 11-1300047-01 |
|  | <b>Compression ferrule Teflon d=6/4</b>                                                         | RE 6-5 CUZN      | 50-0500236-01 |
|  | <b>Supporting sleeve for FH 5/3 PA VE10</b><br>1 PU = 10 pcs., price per PU                     | SS 3 CUZN        | 11-1300029-01 |



### 9.3.5 ADW 535 hoses and accessories

|                                                                                   | Designation                                                                 | Type         | Article no.   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------|--------------|---------------|
|  | <b>Flexible connection hose 5/3 PA 25 m</b><br>Polyamide, roll = 25 m       | FH 5/3 PA 25 | 11-1300028-01 |
|  | <b>Mounting clamp 5/6 PA VE100</b><br>1 PU = 100 pcs., price per PU         | PC 5/6 PA    | 11-1300032-01 |
|  | <b>Mounting clamp 5/6 St VE10</b><br>1 PU = 10 pcs., price per PU           | PC 5/6 ST    | 11-1300033-01 |
|  | <b>Mounting clamp 5/6 PC</b><br>d=5/4, incl. 1 supporting sleeve brass 10/8 | PC 5/6 STG   | 11-1300056-01 |
|  | <b>Mounting clamp plastic</b><br>d=5/4 for ADW 535 (1 PU = 100 pcs.)        | PC 5/6 PP    | 50-0500211-03 |
|  | <b>Cleaning/maintenance set for ADW 535</b>                                 | ACMS 535     | 50-0500239-01 |

## 9.3.6 d-LIST-system



No.: 62-2000360-00

### Sensor cable SEC 15

Line-type heat detector with integrated temperature measuring points for monitoring potential sources of danger in buildings (industrial application) and outdoor areas.

Inside the sensor cable there are temperature measuring points at freely selectable intervals, which are electrically connected by means of a flat ribbon conductor.

The sensor cable is connected to the evaluation unit either directly or via a connection cable and junction box and is terminated with a heat shrinkable cap.

The measuring points have fixed addresses, ensuring that their physical location is precisely determined. A completely closed aluminium shield protects the cable from electromagnetic influences, the cable mantle being made of a flame retardant material and is halogen-free.

- Selectable sensor distance
- Cable bundles can be branched
- Simple cabling and fitting
- Complete protection against environmental influences
- Not sensitive to contamination
- Certified as a class A1 detector
- Halogen-free and flame retardant outer core

|                           |                                                |
|---------------------------|------------------------------------------------|
| Measuring points interval | 0.25 to 10 m (default: 1, 2, 3, 4, 5, 8, 10 m) |
| Measuring range           | –40 °C to +120 °C                              |
| Resolution                | 0.1 °C                                         |
| Cable diameter            | 15 mm                                          |
| Minimum bending radius    | 250 mm                                         |
| Length of sensor cable    | 2 × 320 m                                      |
| Number of sensors         | 2 × 100                                        |
| Sheath colour             | grey                                           |
| Weight                    | 350 g/m                                        |
| Ambient temperature       | –40 °C to +85 °C, briefly to +120 °C           |
| Installation temperature  | higher than +10 °C                             |
| VdS approval              | G221004                                        |



**No.: 62-2001001-04**

## Evaluation unit SCU 835

Central control unit with two alarm and two fault relays for connecting up to two d-LIST sensor cables with a length of up to 350 m (incl. supply cable) and a total of 200 sensors.

- LED collective display
- Two potential-free change-over contacts for alarm I and alarm II
- Two potential-free change-over contacts for sum fault I and II
- Reset input
- Aluminium case

|                                  |                                                                                     |
|----------------------------------|-------------------------------------------------------------------------------------|
| Operating voltage range          | 10.5 to 30 V DC                                                                     |
| Current consumption              |                                                                                     |
| SCU 835                          | max. 4,4 W with 10,5 V DC                                                           |
| SCU 835 with REL 835             | max. 5.5 W with 10.5 V DC                                                           |
| Outputs                          | one alarm/fault relay per connection<br>16 Section relays with REL 835              |
| Input                            | one reset input, galvanically isolated                                              |
| Response behaviour               | in accordance with EN 54-22                                                         |
| as non-integrating heat detector | A1N, A2N, BN, CN                                                                    |
| as integrating heat detector     | A1I, A2I, BI, CI                                                                    |
| Connections                      |                                                                                     |
| RS-232                           | for connection to external systems                                                  |
| RS-485                           | Parameterisation, networking, connection to external systems                        |
| USB                              | Parameterisation, firmware upgrade                                                  |
| LAN                              | 100Mb/s Ethernet interface for network communication, commissioning and maintenance |
| Degree of protection             | IP65                                                                                |
| Ambient temperature              | -25 °C to +70 °C                                                                    |
| Case material                    | aluminium                                                                           |
| Case colour                      | light grey, RAL 7035                                                                |
| Dimensions                       | 178 × 290 × 91 mm (H × W × D)                                                       |
| Weight                           |                                                                                     |
| SCU 835                          | 1950 g                                                                              |
| SCU 835 with REL 835             | 2100 g                                                                              |



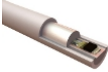
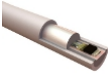
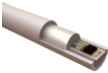
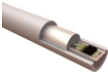
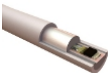
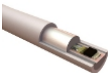
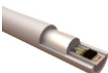
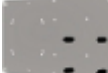
**No.: 62-2000353-00**

## LISTcontroller Master

Central evaluation unit without measuring function for use as a central, informal access point in extensive d-LIST systems.

|                     |                                                                      |
|---------------------|----------------------------------------------------------------------|
| Operating voltage   | 24 V DC                                                              |
| Current consumption | 5 W                                                                  |
| Current consumption | 175 mA with 24 V DC                                                  |
| Alarm current       | 212 mA typ with 24 V DC                                              |
| Switching voltage   | max. 48 V DC/32 V DC                                                 |
| Switching current   | max. 250 mA (resistive load)                                         |
| Ambient temperature | –5 °C to +70 °C                                                      |
| Case material       | aluminium                                                            |
| Dimensions          | 19" plug-in panels of 1 height unit<br>44 × 483 × 316 mm (H × W × D) |
| Weight              | 2.6 kg                                                               |

## d-LIST system, accessories and spare parts

|                                                                                     | Designation                                                                        | Type             | Article no.   |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------|---------------|
|    | <b>Sensor cable SEC 15</b><br>with 1 m distance between sensors                    | SEC 15/01        | 62-2000360-00 |
|    | <b>Sensor cable SEC 15</b><br>with 2 m distance between sensors                    | SEC 15/02        | 62-2000367-00 |
|    | <b>Sensor cable SEC 15 grey</b><br>with 3 m distance between sensors               | SEC 15/03        | 62-2000372-00 |
|    | <b>Sensor cable SEC 15</b><br>with 4 m distance between sensors                    | SEC 15/04        | 62-2000374-00 |
|    | <b>Sensor cable SEC 15</b><br>with 5 m distance between sensors                    | SEC 15/05        | 62-2000376-00 |
|    | <b>Sensor cable SEC 15/08</b><br>with 8 m sensor interval                          | SEC 15/08        | 62-2000458-01 |
|    | <b>Sensor cable SEC 15/10</b><br>with 10 m sensor interval                         | SEC 15/10        | 62-2001014-01 |
|   | <b>Sensor cable SEC 15 with other sensor intervals</b><br>min. 0.25 m to max. 10 m | SEC 15/..        | Upon request  |
|  | <b>Evaluation unit SCU 835</b>                                                     | SCU 835          | 62-2001001-04 |
|  | <b>Mainboard MB for SCU 835</b>                                                    | MB SCU 835       | 62-4001003-02 |
|  | <b>Junctions for SCU 835</b><br>Spare part                                         | AG1 DLCON/SCU835 | 62-4001011-01 |
|  | <b>Connector set for SCU 835</b><br>Spare part                                     | AP1 DLCON/SCU835 | 62-4001022-01 |
|  | <b>Connector set for SCU 835 option</b>                                            | AP2 DLCON/SCU835 | 62-4001023-01 |
|  | <b>LISTcontroller Master</b>                                                       | LCON MASTER      | 62-2000353-00 |
|  | <b>REL 835 relay module</b>                                                        | REL 835          | 62-4001004-01 |
|  | <b>Accessory set for REL 835</b><br>required for relay module REL 835              | ACCS-AP REL 835  | 62-4001009-01 |
|  | <b>Adapter plate for BX-OI3</b>                                                    | AP BX-OI3        | 62-4001001-01 |
|  | <b>Accessory pack adapter plate BX-OI3</b>                                         | ACCS-AP BX-OI3   | 62-4001002-01 |
|  | <b>Adapter plate for XLM 35</b>                                                    | AP XLM 35        | 62-4001001-04 |

|                                                                                     | Designation                                                                                                                                                                                                                                 | Type           | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------|
|    | <b>Accessory pack adapter plate XLM 35</b>                                                                                                                                                                                                  | ACCS-AP XLM 35 | 62-4001002-04 |
|    | <b>CBO 15-SEC connection box</b>                                                                                                                                                                                                            | CBO 15-SEC     | 62-2001004-01 |
|    | <b>CBO 15-SEC accessories</b>                                                                                                                                                                                                               | AG1 CBO 15-SEC | 62-4001008-01 |
|    | <b>UCM 15-SEC connection module</b>                                                                                                                                                                                                         | UCM 15-SEC     | 62-4001005-01 |
|    | <b>CBO 15-ESD connection box</b>                                                                                                                                                                                                            | CBO 15-ESD     | 62-2001004-02 |
|    | <b>CBO 15-ESD accessories</b>                                                                                                                                                                                                               | AG1 CBO 15-ESD | 62-4001008-02 |
|    | <b>UCM 15-ESD connection module</b>                                                                                                                                                                                                         | UCM 15-ESD     | 62-4001005-02 |
|    | <b>SEC 15 simulator CSM 30</b>                                                                                                                                                                                                              | CSM 30         | 62-2000435-01 |
|  | <b>ESD-A5-EL-01 individual sensor</b><br>Temperature sensor in stainless steel sleeve<br>8 mm square, with temperature-resistant<br>connection cable 1 m, ambient temperature: –<br>40 °C to +85 °C, measuring range: –40 °C to<br>+120 °C  | ESD-A5-EL-01   | 62-2000343-00 |
|  | <b>ESD-A5-EL-05 individual sensor</b><br>Temperature sensor in stainless steel sleeve<br>8 mm square, with temperature-resistant<br>connection cable 5 m, ambient temperature: –<br>40 °C to +85 °C, measuring range: –40 °C to<br>+120 °C  | ESD-A5-EL-05   | 62-2000346-00 |
|  | <b>ESD-A5-EL-10 individual sensor</b><br>Temperature sensor in stainless steel sleeve<br>8 mm square, with temperature-resistant<br>connection cable 10 m, ambient temperature: –<br>40 °C to +85 °C, measuring range: –40 °C to<br>+120 °C | ESD-A5-EL-10   | 62-2000499-00 |
|  | <b>ESD-A5-RL-01 individual sensor</b><br>Temperature sensor in stainless steel sleeve<br>8 mm round, with temperature-resistant<br>connection cable 1 m, ambient temperature: –<br>40 °C to +85 °C, measuring range: –40 °C to<br>+120 °C   | ESD-A5-RL-01   | 62-2000347-00 |
|  | <b>ESD-A5-RL-05 individual sensor</b><br>Temperature sensor in stainless steel sleeve<br>8 mm round, with temperature-resistant                                                                                                             | ESD-A5-RL-05   | 62-2000350-00 |

|                                                                                     | Designation                                                                                                                                                                                                                       | Type            | Article no.   |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|
|                                                                                     | connection cable 5 m, ambient temperature: – 40 °C to +85 °C, measuring range: –40 °C to +120 °C                                                                                                                                  |                 |               |
|    | <b>ESD-A5-RL-10 individual sensor</b><br>Temperature sensor in stainless steel sleeve<br>8 mm round, with temperature-resistant connection cable 10 m, ambient temperature: – 40 °C to +85 °C, measuring range: –40 °C to +120 °C | ESD-A5-RL-10    | 62-2000498-00 |
|    | <b>Shield connector for sensor cable SEC 15</b><br>for connection to the SCU circuit board                                                                                                                                        | SCON 15/0       | 62-4000315-00 |
|    | <b>Shield connector for sensor cable SEC 15</b><br>for connection in UCM or CCM 150-A                                                                                                                                             | SCON 15/1       | 62-4000316-00 |
|    | <b>CLS 2 Clincher connector (100 pcs.)</b><br>Ribbon cable crimp terminal, 2-core, connector                                                                                                                                      | CLS 2           | 62-8000316-00 |
|    | <b>CLB 2 clincher socket (100 pcs.)</b><br>Ribbon cable crimp terminal, 2-core, socket                                                                                                                                            | CLB 2           | 62-8000315-00 |
|    | <b>Repair set N15</b><br>for connection of SEC 15 cables                                                                                                                                                                          | N15 REPAIR      | 62-2000396-00 |
|  | <b>TOP 15 cable clamp (100 pcs.)</b><br>for SEC 15, polyamide, halogen-free, RAL7035                                                                                                                                              | CLIC 15         | 62-8000304-00 |
|  | <b>CLIC TOP 15 cable clamp</b>                                                                                                                                                                                                    | CLIC TOP 15     | 62-8000395-00 |
|  | <b>Sliding nut M6/A4 (100 pcs.)</b><br>for CLIC cable clamps, M6 Stainless steel, 1 PU = 100 pcs.                                                                                                                                 | SCHIEBER M6/A4  | 62-8000306-00 |
|  | <b>MDP 25 cable attachment</b><br>for LIST Sensor cable SEC 15; 1 PU=100 pcs.                                                                                                                                                     | MDP 25          | 62-4000325-00 |
|  | <b>MDC cable clamp</b><br>Stainless steel sleeve for SEC 15 with locking clip                                                                                                                                                     | MDC             | 62-8000344-00 |
|  | <b>MDJ cable clamp</b><br>Stainless steel clamp for LIST sensor cables, metal thickness 1.5 mm, height 40 mm                                                                                                                      | MDJ             | 62-8000349-00 |
|  | <b>J cable clamp 1.4529</b>                                                                                                                                                                                                       | J-SHELLE 1.4529 | 62-8000374-00 |
|  | <b>MDP 20 cable attachment</b>                                                                                                                                                                                                    | MDP 20          | 62-4000319-00 |
|  | <b>MDJ 40 cable attachment</b>                                                                                                                                                                                                    | MDJ 40          | 62-4000329-00 |
|  | <b>SDS 3L drill bit</b>                                                                                                                                                                                                           | SDS 3L          | 62-8000354-00 |

|                                                                                     | Designation                                                                                                                                | Type           | Article no.   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------|
|    | <b>Cable tie for catenary mounting</b><br>Length: 315 mm; material: polyamide (HIR)                                                        | FEMC           | 62-8000384-00 |
|    | <b>Stainless steel cable tie FECT 201-A4</b><br>Backup for MDJ clamp, length: 201 mm                                                       | FECT 201-A4    | 62-8000360-00 |
|    | <b>Connection cable for sensor cable SEC 15</b><br>1 x 2 x 0,8 shielded, red, JE-H(ST)H E30,                                               | CC 15          | 62-8000345-00 |
|    | <b>Clincher locking plate (100 pcs.)</b><br>to lock a clincher CLB with a pin header                                                       | CLVP           | 62-8000320-00 |
|    | <b>End cap</b><br>Heat-shrinkable cap to terminate the SEC 15 sensor cable                                                                 | END            | 62-8000503-00 |
|    | <b>SWM-SM 50 setting tool</b>                                                                                                              | SWM-SM 50      | 62-8000412-00 |
|    | <b>SWM-H setting tool</b>                                                                                                                  | SWM-H          | 62-8000413-00 |
|    | <b>GECKO Ethernet rail switch</b><br>Main device – requires MM SFP (Multi) SM (Single)                                                     | ETH RS GECKO   | 62-2001023-01 |
|    | <b>Preparation cable SECcon15-1</b><br>with connector, 3-pin and end cap                                                                   | SECCON 15-1    | 62-3000351-00 |
|    | <b>SECCON 15-2 pre-fitting</b>                                                                                                             | SECCON 15-2    | 62-3000352-00 |
|    | <b>CBO 15 pre-fitting</b>                                                                                                                  | PA-CBO 15      | 62-3001001-01 |
|    | <b>SECcon 15-C/f plug and socket connection</b><br>Coupling with socket (3-pin)                                                            | SECCON 15-CF   | 62-8000403-00 |
|  | <b>SECcon 15-C/m plug and socket connection</b><br>Coupling with connector, 3-pin                                                          | SECCON 15-CM   | 62-8000404-00 |
|  | <b>USB-RS-485 converter for PC's</b>                                                                                                       | USB-RS485      | 62-0000312-00 |
|  | <b>PC/SCU 800 connection cable</b><br>for PC to d-LIST evaluation unit SCU 800, 9-/9- female connector ; length: 3 m                       | VK232-S8-PC-03 | 62-4000172-00 |
|  | <b>CLCT crimping tool</b><br>for ribbon cable clincher                                                                                     | CLCT           | 62-8000347-00 |
|  | <b>LIST cable cutters</b><br>for sensor cable SEC 15 and SEC 20                                                                            | CUTTER SEC     | 62-0000427-00 |
|  | <b>SC 15/20 service case</b><br>Basic equipment for commissioning and repair, incl. crimping pliers, tools, connection and repair material | SC 15/20       | 62-2000432-00 |



## 9.3.7 LIST-system



**No.: 62-2000385-00**

### Sensor cable SEC 20

Line-type heat detector with integrated temperature measuring points for monitoring potential sources of danger in tunnels and large areas.

Inside the sensor cable there are temperature measuring points at freely selectable intervals, which are electrically connected by means of a flat ribbon conductor.

The measuring points have fixed addresses, ensuring that their physical location is precisely determined. A completely closed aluminium shield protects the cable from electromagnetic influences, the cable mantle being made of a flame retardant material and is halogen-free.

- Selectable sensor distance
- Cable bundles can be branched
- Simple cabling and fitting
- Complete protection against environmental influences
- Not sensitive to contamination
- Certified as a class A1 detector
- Halogen-free and flame retardant outer core

|                           |                                               |
|---------------------------|-----------------------------------------------|
| Measuring points interval | 0.5 to 10 m (default: 1, 2, 3, 4, 5, 8, 10 m) |
| Measuring range           | –40 °C to +200 °C                             |
| Resolution                | 0.1 °C                                        |
| Cable diameter            | 18 mm                                         |
| Minimum bending radius    | 300 mm                                        |
| Cable length              | max. 3200 m (incl. CC)                        |
| Number of sensors         | max. 500 (VdS approved 320)                   |
| Sheath colour             | grey                                          |
| Weight                    | 450 g/m                                       |
| Ambient temperature       | –40 °C to +85 °C, briefly to +200 °C          |
| Installation temperature  | higher than +10 °C                            |
| VdS approval              | G213072                                       |



**No.: 62-2000354-00**

## LISTcontroller SEC

Control and evaluation units for sensor cable SEC 20 with alphanumeric LC-display and control keys, one potential-free change-over contact for group fault/alarm, in a 19" module rack design for cabinet installation.

The LISTcontroller is the central evaluation unit which records and evaluates up to 3200 m of sensor cable or 350 individual sensor points every ten seconds with reference to various criteria.

A fire alarm is actuated if either the temperature at a measuring point exceeds a threshold value or a defined temperature increase is registered over a period of time (differential behaviour).

Both alarm thresholds can be freely programmed for up to 254 configurable fire zones.

|                     |                                                                                                        |
|---------------------|--------------------------------------------------------------------------------------------------------|
| Operating voltage   | 24 V DC                                                                                                |
| Current consumption | 5 W                                                                                                    |
| Current consumption | 175 mA with 24 V DC                                                                                    |
| Alarm current       | 212 mA typ with 24 V DC                                                                                |
| Relay outputs       | one relay each for alarm, pre-alarm and frost alarm<br>one relay for fault (active when without power) |
| Switching voltage   | max. 48 V DC/32 V DC                                                                                   |
| Switching current   | max. 250 mA (resistive load)                                                                           |
| Input               | an external reset input (5 to 36 V DC)                                                                 |
| Ambient temperature | -5 °C to +70 °C                                                                                        |
| Case material       | aluminium                                                                                              |
| Dimensions          | 19" plug-in panels of 1 height unit<br>44 x 483 x 316 mm (H x W x D)                                   |
| Weight              | 2.6 kg                                                                                                 |



**No.: 62-2000355-00**

## LISTcontroller LB

Control and evaluation units for sensor cable SEC 20 with a second sensor cable connection for loop-back or RDT operation, with alphanumeric LC-display and control keys, one potential-free change-over contact per cable for group fault/alarm, in 19" module rack design for cabinet installation.

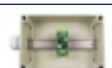
The LISTcontroller is the central evaluation unit which records and evaluates up to 3200 m of sensor cable or 350 individual sensor points every ten seconds with reference to various criteria.

A fire alarm is actuated if either the temperature at a measuring point exceeds a threshold value or a defined temperature increase is registered over a period of time (differential behaviour).

Both alarm thresholds can be freely programmed for up to 254 configurable fire zones.

|                     |                                                                                                        |
|---------------------|--------------------------------------------------------------------------------------------------------|
| Operating voltage   | 24 V DC                                                                                                |
| Current consumption | 5 W                                                                                                    |
| Current consumption | 175 mA with 24 V DC                                                                                    |
| Alarm current       | 212 mA typ with 24 V DC                                                                                |
| Relay outputs       | one relay each for alarm, pre-alarm and frost alarm<br>one relay for fault (active when without power) |
| Switching voltage   | max. 48 V DC/32 V DC                                                                                   |
| Switching current   | max. 250 mA (resistive load)                                                                           |
| Input               | an external reset input (5 to 36 V DC)                                                                 |
| Ambient temperature | -5 °C to +70 °C                                                                                        |
| Case material       | aluminium                                                                                              |
| Dimensions          | 19" plug-in panels of 1 height unit<br>44 × 483 × 316 mm (H × W × D)                                   |
| Weight              | 2.6 kg                                                                                                 |

## LIST system, accessories and spare parts

|                                                                                     | Designation                                                                                | Type            | Article no.   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------|---------------|
|    | <b>Sensor cable SEC 20</b><br>with 2 m distance between sensors                            | SEC 20/02       | 62-2000385-00 |
|    | <b>Sensor cable SEC 20</b><br>with 1 m sensor interval                                     | SEC 20/01       | 62-2000382-00 |
|    | <b>Sensor cable SEC 20</b><br>with 3 m sensor interval                                     | SEC 20/03       | 62-2000387-00 |
|    | <b>Sensor cable SEC 20</b><br>with 4 m distance between sensors                            | SEC 20/04       | 62-2000388-00 |
|    | <b>Sensor cable SEC 20</b><br>with 5 m distance between sensors                            | SEC 20/05       | 62-2000389-00 |
|    | <b>Sensor cable SEC 20</b><br>with 8 m distance between sensors                            | SEC 20/08       | 62-2000393-00 |
|   | <b>Sensor cable SEC 20</b><br>with 10 m distance between sensors                           | SEC 20/10       | 62-2000394-00 |
|  | <b>Sensor cable SEC 20 with other sensor intervals</b><br>min. 0.5 m to max. 10 m          | SEC 20/..       | Upon request  |
|  | <b>LISTcontroller SEC</b>                                                                  | LCON SEC        | 62-2000354-00 |
|  | <b>LISTcontroller LB</b>                                                                   | LCON LB         | 62-2000355-00 |
|  | <b>RDT function for LISTcontroller</b><br>for paired redundancy                            | LCON RDT        | 62-4000306-00 |
|  | <b>IP interface and protocol</b><br>MODBUS software function, MODBUS TCP to LISTcontroller | LCON I/P MODBUS | 62-4000314-00 |
|  | <b>IP interface and protocol</b><br>IEC 60870-5-104 software function to LISTcontroller    | LCON I/P IEC    | 62-4000314-01 |
|  | <b>IEC protocol LIST controller</b><br>LIST controller I/P IEC 60870-5-104                 | LIST IEC        | 62-4000454-00 |
|  | <b>CBO 20/0 connection box</b><br>between two sensor cables                                | CBO 20/0        | 62-2001011-01 |
|  | <b>CBO 20/1 connection box</b><br>for one sensor cable with connection module              | CBO 20/1        | 62-2001011-02 |
|  | <b>CBO 20/3 connection box</b><br>for two or three sensor cables                           | CBO 20/3        | 62-2001011-03 |
|  | <b>VKSEC-S4-KL-03 connection cable</b><br>3 m                                              | VKSEC-S4-KL-03  | 62-4000239-00 |
|  | <b>VK485-S4-MS-03 connection cable</b><br>3 m, RS-485 connection                           | VK485-S4-MS-03  | 62-4000240-00 |

|                                                                                     | Designation                                                                                                     | Type             | Article no.   |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------|---------------|
|    | <b>VK232-S4-KL-03 connection cable</b><br>3 m, RS-232 connection                                                | VK232-S4-KL-03   | 62-4000241-00 |
|    | <b>VKI/O-S4-KL-03 connection cable</b><br>3 m IO-connection                                                     | VKI/O-S4-KL-03   | 62-4000242-00 |
|    | <b>VK24-S4-KL-03 connection cable</b><br>3 m, 24 V connection                                                   | VK24-S4-KL-03    | 62-4000243-00 |
|    | <b>CSM 200 cable simulator</b>                                                                                  | CSM 200          | 62-2000264-00 |
|    | <b>N20 repair set</b><br>for connection of SEC 20 cables                                                        | N20 REPAIR       | 62-2000397-00 |
|    | <b>RELMOD relay module</b>                                                                                      | RELMOD           | 62-2000413-00 |
|    | <b>19" wall-mounted cabinet</b><br>Twelve height units, fully wired                                             | CAB 19/12        | 62-2000415-00 |
|    | <b>LCT 20 LIST cable tester</b>                                                                                 | LCT 20           | 62-2000417-00 |
|   | <b>Loop resistance board</b>                                                                                    | RELMOD-R         | 62-4000143-00 |
|  | <b>CAB 19 accessory bag</b>                                                                                     | CAB 19 ACC       | 62-4000418-00 |
|  | <b>CBO 20/0 accessory bag</b>                                                                                   | CBO 20/0 ACC     | 62-4000431-00 |
|  | <b>CBO 20/1 accessory bag</b>                                                                                   | CBO 20/1 ACC     | 62-4000432-00 |
|  | <b>CBO 20/3 accessory bag</b>                                                                                   | CBO 20/3 ACC     | 62-4000436-00 |
|  | <b>CBO 20/3 accessory bag, CCM jumper</b>                                                                       | CBO 20/3 ACC CCM | 62-4000437-00 |
|  | <b>Miniature fuse, fast-acting, 1.0 A</b>                                                                       | RELMOD-F         | 62-6000377-00 |
|  | <b>CBO 20 slotted screw</b>                                                                                     | CBO 20 SCREW     | 62-6000653-00 |
|  | <b>Wall holder for CAB 19/x</b>                                                                                 | CAB WALLHOLD     | 62-6000666-00 |
|  | <b>CLIC TOP 17 cable clamp</b><br>polyamide, halogen-free, light grey, RAL 7035                                 | CLIC TOP 17      | 62-8000300-00 |
|  | <b>Sliding nut M6/A4 (100 pcs.)</b><br>for CLIC cable clamps, M6 Stainless steel, 1 PU<br>= 100 pcs.            | SCHIEBER M6/A4   | 62-8000306-00 |
|  | <b>MDJ cable clamp</b><br>Stainless steel clamp for LIST sensor cables,<br>metal thickness 1.5 mm, height 40 mm | MDJ              | 62-8000349-00 |

|                                                                                     | Designation                                                                                                                                | Type           | Article no.   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------|
|    | <b>MDP 20 cable attachment</b>                                                                                                             | MDP 20         | 62-4000319-00 |
|    | <b>MDJ 40 cable attachment</b>                                                                                                             | MDJ 40         | 62-4000329-00 |
|    | <b>Cable tie for catenary mounting</b><br>Length: 315 mm; material: polyamide (HIR)                                                        | FEMC           | 62-8000384-00 |
|    | <b>Stainless steel cable tie FECT 201-A4</b><br>Backup for MDJ clamp, length: 201 mm                                                       | FECT 201-A4    | 62-8000360-00 |
|    | <b>CLB 4 clincher socket</b>                                                                                                               | CLB 4          | 62-8000317-00 |
|    | <b>CLS 4 clincher connector</b>                                                                                                            | CLS 4          | 62-8000318-00 |
|    | <b>Clincher locking plate (100 pcs.)</b><br>to lock a clincher CLB with a pin header                                                       | CLVP           | 62-8000320-00 |
|    | <b>End cap</b><br>Heat-shrinkable cap to terminate the SEC 15 sensor cable                                                                 | END            | 62-8000503-00 |
|  | <b>CC 20 connection cable</b>                                                                                                              | CC 20          | 62-8000341-00 |
|  | <b>VKLAN-S4-PC-03 connection cable</b><br>3 m, LAN/Ethernet                                                                                | VKLAN-S4-PC-03 | 62-8000367-00 |
|  | <b>SWM-SM 50 setting tool</b>                                                                                                              | SWM-SM 50      | 62-8000412-00 |
|  | <b>SWM-H setting tool</b>                                                                                                                  | SWM-H          | 62-8000413-00 |
|  | <b>SDS 3L drill bit</b>                                                                                                                    | SDS 3L         | 62-8000354-00 |
|  | <b>GECKO Ethernet rail switch</b><br>Main device – requires MM SFP (Multi) SM (Single)                                                     | ETH RS GECKO   | 62-2001023-01 |
|  | <b>MM SFP fibre optics Gbit Ethernet</b><br>Multi mode adapter for ETH RS GECKO                                                            | MM SFP         | 62-2001024-01 |
|  | <b>SM SFP fibre optics Gbit Ethernet</b><br>Single mode adapter for ETH RS GECKO                                                           | SM SFP         | 62-2001024-02 |
|  | <b>SCON 20/1 shield connector</b>                                                                                                          | SCON 20/1      | 62-4000317-00 |
|  | <b>SCON 20/2 shield connector</b>                                                                                                          | SCON 20/2      | 62-8000382-00 |
|  | <b>CLCT crimping tool</b><br>for ribbon cable clincher                                                                                     | CLCT           | 62-8000347-00 |
|  | <b>LIST cable cutters</b><br>for sensor cable SEC 15 and SEC 20                                                                            | CUTTER SEC     | 62-0000427-00 |
|  | <b>SC 15/20 service case</b><br>Basic equipment for commissioning and repair, incl. crimping pliers, tools, connection and repair material | SC 15/20       | 62-2000432-00 |

## 9.4 Flame detectors

### FMX5000 IR SET flame detector



**No.: 11-0000009-01**



**No.: im Set enthalten**



**No.: im Set enthalten**



**No.: im Set enthalten**

The FMX5000 IR three-channel infrared flame detector measures infrared radiation and can therefore quickly and reliably detect open flames caused by the combustion of carbon-containing substances such as methane, oil products, plastics or wood. The detector is designed for use in harsh industrial environments. It is equipped with three infrared sensors and uses specially developed algorithms to intelligently evaluate deceptive alarms (e.g. blanking out hot surfaces of machines, or solar radiation).

An integrated optics test ensures that all three sensors and the detector's optical window are always ready for detection.

The scope of delivery includes the FMX5000 IR flame detector, the MX5000 MX base, the Bracket MX5000 mounting bracket and the KMX5000 RK relay module.

|                                 |                           |
|---------------------------------|---------------------------|
| Detection principle             | 3 IR sensors              |
| Sensitivity class               | Adjustable x (50 m) 1,2,3 |
| Viewing angle                   | 90°                       |
| Operating voltage range         | 7.6 to 30 V DC            |
| Quiescent current               | 2.3 mA                    |
| Alarm current                   | approx. 15 mA             |
| Current fault indication        | approx. 15 mA             |
| Alarm indication                | LED red                   |
| Operation indicator             | LED flashing green        |
| Fault indication                | LED yellow                |
| Cable gland                     | 2 x M16 x 1.5             |
| Degree of protection (EN 60529) | IP66, IP67                |
| Operating temperature           | -40 °C to +80 °C          |
| Relative humidity               | 0 to 95 % non-condensing  |
| Case material                   | die-cast aluminum         |
| Dimensions                      | 100 x 50 mm (Ø x H)       |
| Weight                          | 820 g                     |
| VdS approval                    | G209141                   |



## FMX5000 IR EX SET flame detector



**No.: 11-0000013-01**



**No.: im Set enthalten**



**No.: im Set enthalten**



**No.: im Set enthalten**

The FMX5000 IR EX three-channel infrared flame detector measures infrared radiation and can therefore quickly and reliably detect open flames caused by the combustion of carbon-containing substances such as methane, oil products, plastics or wood. It features detection with three infrared sensors and uses specially developed algorithms for intelligent evaluation of deceptive alarms (e.g. blanking of hot surfaces of machines, or solar radiation). The FMX5000 IR EX three-channel infrared flame detector is intended for use in hazardous areas in zones 1, 2, 20, 21 and 22.

The integrated optical test ensures that all three sensors and the detector's optical window are always ready for detection.

The scope of delivery includes the FMX5000 IR EX flame detector, the MX5000 EX MX base, the Bracket MX5000 mounting bracket and the MTL5561 safety barrier.

|                                 |                           |
|---------------------------------|---------------------------|
| Detection principle             | 3 IR sensors              |
| Sensitivity class               | Adjustable × (50 m) 1,2,3 |
| Viewing angle                   | 90°                       |
| Operating voltage range         | 7.6 to 28 V DC            |
| Quiescent current               | 4.5 mA                    |
| Alarm current                   | approx. 15 mA             |
| Current fault indication        | approx. 15 mA             |
| Alarm indication                | LED red                   |
| Fault indication                | LED yellow                |
| Cable gland                     | 2 × M16 × 1.5             |
| Degree of protection (EN 60529) | IP66, IP67                |
| Operating temperature           | –40 °C to +80 °C          |
| Relative humidity               | 0 to 95 % non-condensing  |
| Case material                   | die-cast aluminum         |
| Dimensions                      | 100 × 50 mm (Ø × H)       |
| Weight                          | 820 g                     |
| VdS approval                    | G209141                   |



## FMX5000 UV SET flame detector



**No.: 11-0000015-01**



**No.: im Set enthalten**



**No.: im Set enthalten**



**No.: im Set enthalten**

The FMX5000 UV UV flame detector measures optical radiation in the ultra-violet range and can therefore quickly and reliably detect open flames caused by the combustion of gaseous, solid or liquid substances such as gases, alcohols or metal dusts. The detector is designed for use in harsh industrial environments and offers a high level of immunity against false alarms; thanks to intelligent evaluation algorithms, deceptive alarms (e.g. due to the suppression of lightning or solar radiation) are avoided.

The scope of delivery includes the FMX5000 UV flame detector, the MX5000 MX base, the Bracket MX5000 mounting bracket and the KMX5000 RK relay module.

|                                 |                          |
|---------------------------------|--------------------------|
| Detection principle             | UV sensor                |
| Sensitivity class               | 1                        |
| Viewing angle                   | 90°                      |
| Operating voltage range         | 7.6 to 30 V DC           |
| Quiescent current               | approx. 0.25 mA          |
| Alarm current                   | approx. 15 mA            |
| Current fault indication        | approx. 15 mA            |
| Alarm indication                | LED red                  |
| Operation indicator             | LED flashing green       |
| Fault indication                | LED yellow               |
| Cable gland                     | 2 × M16 × 1.5            |
| Degree of protection (EN 60529) | IP66, IP67               |
| Operating temperature           | –40 °C to +80 °C         |
| Relative humidity               | 0 to 95 % non-condensing |
| Case material                   | die-cast aluminum        |
| Dimensions                      | 100 × 50 mm (Ø × H)      |
| Weight                          | 820 g                    |



**No.: 20-3003000-01**

## FLS-IR3 infrared flame detector for hazardous areas

The FLS-IR3 triple infrared flame detector offers ultra-fast response, high performance and reliable detection of all types of hydrocarbon fires (visible and non-visible). The detector reacts to both slow- and fast-growing fires with improved triple infrared (IR3) technology. It is ideal for use in transformers, aerosol filling machines, shipping, turbine housings, paint mixing plants, storage, areas for IR drying ovens, engine test stands and test chambers.

|                                         |                                                                                                                                                                                                                                                                                         |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating voltage range                 | 18 to 32 V DC, 24 V DC typ.                                                                                                                                                                                                                                                             |
| Current consumption with window heating | max. 150 mA                                                                                                                                                                                                                                                                             |
| Quiescent current                       | 120 mA typ.                                                                                                                                                                                                                                                                             |
| Signal transmission                     | 3 potential-free relay outputs 30 V DC with 2 A                                                                                                                                                                                                                                         |
| Sensitivity                             | can be set to 5 levels: Extreme, High, Medium, Low, Very Low                                                                                                                                                                                                                            |
| Field of view                           | 90° horizontal, 75° vertical                                                                                                                                                                                                                                                            |
| Delay time                              | 0 to 30 s                                                                                                                                                                                                                                                                               |
| Self-test function                      | automatic, manually triggerable                                                                                                                                                                                                                                                         |
| Connection                              | Screw terminal, 0.35 to 2.5 mm <sup>2</sup>                                                                                                                                                                                                                                             |
| Response behaviour                      | in accordance with EN 54-10 (class 1)                                                                                                                                                                                                                                                   |
| Degree of protection                    | IP66                                                                                                                                                                                                                                                                                    |
| Ambient temperature                     | –55 °C to +85 °C                                                                                                                                                                                                                                                                        |
| Relative humidity                       | 99 % non-condensing                                                                                                                                                                                                                                                                     |
| Dimensions                              | 140 × 90 × 90 mm (H × W × D)                                                                                                                                                                                                                                                            |
| Case material                           | Stainless steel 316                                                                                                                                                                                                                                                                     |
| Weight                                  |                                                                                                                                                                                                                                                                                         |
| Detectors                               | 3.0 kg                                                                                                                                                                                                                                                                                  |
| Mounting plate                          | 1.5 kg                                                                                                                                                                                                                                                                                  |
| Ex-Designation                          | II 2 G D<br>Ex db IIC T6 Gb or Ex db eb IIC T6 Gb<br>Ex tb IIIC T80°C Db<br>Ta = –55 °C bis +60 °C<br>Ex db IIC T5 Gb or Ex db eb IIC T5 Gb<br>Ex tb IIIC T95°C Db<br>Ta = –55 °C bis +75 °C<br>Ex db IIC T4 Gb or Ex db eb IIC T4 Gb<br>Ex tb IIIC T105°C Db<br>Ta = –55 °C bis +85 °C |
| ATEX approval                           | ICQC 19 ATEX 0424X                                                                                                                                                                                                                                                                      |
| VdS approval                            | G225033                                                                                                                                                                                                                                                                                 |
| Declaration of Performance (DoP)        | DoP_X120V0030-03                                                                                                                                                                                                                                                                        |

## FLS-UV-IR infrared flame detector for hazardous areas



**No.: 20-3003001-01**

The FLS-UV-IR ultraviolet/infrared flame detector offers ultra-fast response, high performance and reliable detection of a wide range of fires, including hydrocarbon fires (visible and non-visible) as well as hydrogen and methane/hydrogen mix fires. The detector reacts to both slow- and fast-growing fires with improved ultraviolet infrared technology. It is ideal for use in turbine cases, battery rooms, metal processing, sulphur (UV only), and transformers.

|                                         |                                                                                                                                                                                                                                                                                         |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating voltage range                 | 18 to 32 V DC, 24 V DC typ.                                                                                                                                                                                                                                                             |
| Current consumption with window heating | max. 150 mA                                                                                                                                                                                                                                                                             |
| Quiescent current                       | 120 mA typ.                                                                                                                                                                                                                                                                             |
| Signal transmission                     | 3 potential-free relay outputs 30 V DC with 2 A                                                                                                                                                                                                                                         |
| Sensitivity                             | can be set to 4 levels: Extreme, High, Medium, Low                                                                                                                                                                                                                                      |
| Field of view                           | 90° horizontal, 80° vertical                                                                                                                                                                                                                                                            |
| Delay time                              | 0 to 30 s                                                                                                                                                                                                                                                                               |
| Self-test function                      | automatic, manually triggerable                                                                                                                                                                                                                                                         |
| Connection                              | Screw terminal, 0.35 to 2.5 mm <sup>2</sup>                                                                                                                                                                                                                                             |
| Response behaviour                      | in accordance with EN 54-10 (class 1)                                                                                                                                                                                                                                                   |
| Degree of protection                    | IP66                                                                                                                                                                                                                                                                                    |
| Ambient temperature                     | –55 °C to +85 °C                                                                                                                                                                                                                                                                        |
| Relative humidity                       | 99 % non-condensing                                                                                                                                                                                                                                                                     |
| Dimensions                              | 140 × 90 × 90 mm (H × W × D)                                                                                                                                                                                                                                                            |
| Case material                           | Stainless steel 316                                                                                                                                                                                                                                                                     |
| Weight                                  |                                                                                                                                                                                                                                                                                         |
| Detectors                               | 3.0 kg                                                                                                                                                                                                                                                                                  |
| Mounting plate                          | 1.5 kg                                                                                                                                                                                                                                                                                  |
| Ex-Designation                          | II 2 G D<br>Ex db IIC T6 Gb or Ex db eb IIC T6 Gb<br>Ex tb IIIC T80°C Db<br>Ta = –55 °C bis +60 °C<br>Ex db IIC T5 Gb or Ex db eb IIC T5 Gb<br>Ex tb IIIC T95°C Db<br>Ta = –55 °C bis +75 °C<br>Ex db IIC T4 Gb or Ex db eb IIC T4 Gb<br>Ex tb IIIC T105°C Db<br>Ta = –55 °C bis +85 °C |
| ATEX approval                           | ICQC 19 ATEX 0424X                                                                                                                                                                                                                                                                      |
| VdS approval                            | G225034                                                                                                                                                                                                                                                                                 |
| Declaration of Performance (DoP)        | DoP_X110V0030-03                                                                                                                                                                                                                                                                        |

## FLS-IR3-HD infrared flame detector for hazardous areas



**No.: 20-3003020-01**

The FLS-IR3-HD triple infrared flame detector offers ultra-fast response, high performance and reliable detection of all types of hydrocarbon fires (visible and non-visible).

The detector recognises both slow-burning and fast-spreading fires. It provides high-definition colour video output of the monitored area and delivers clear footage of fire incidents from a distance of up to 30 metres. For each alarm event, a video recording is generated with a 60-second pre-alarm period and a post-alarm period of up to 180 seconds. System integration is carried out using the ONVIF (Open Network Video Interface Forum) Profile S protocol.

It is ideal for use in transformers, aerosol filling machines, shipping, turbine housings, paint mixing plants, storage, areas for IR drying ovens, engine test stands and test chambers.

|                                         |                                                                                                                                                                                               |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating voltage range                 | 18 to 32 V DC, 24 V DC typ.                                                                                                                                                                   |
| Current consumption with window heating | max. 300 mA                                                                                                                                                                                   |
| Quiescent current                       | 180 mA                                                                                                                                                                                        |
| Signal transmission                     | 3 potential-free relay outputs 30 V DC with 2 A                                                                                                                                               |
| Sensitivity                             | can be set to 5 levels: Extreme, High, Medium, Low, Very Low                                                                                                                                  |
| Field of view                           | 90° horizontal, 80° vertical                                                                                                                                                                  |
| Delay time                              | 0 to 30 s                                                                                                                                                                                     |
| Self-test function                      | automatic, manually triggerable                                                                                                                                                               |
| Connection                              | Screw terminal, 0.35 to 2.5 mm <sup>2</sup>                                                                                                                                                   |
| Response behaviour                      | in accordance with EN 54-10 (class 1)                                                                                                                                                         |
| Degree of protection                    | IP66                                                                                                                                                                                          |
| Ambient temperature                     | –55 °C to +85 °C                                                                                                                                                                              |
| Relative humidity                       | 99 % non-condensing                                                                                                                                                                           |
| Dimensions                              | 200 × 130 × 130 mm (H × W × D)                                                                                                                                                                |
| Case material                           | Stainless steel 316                                                                                                                                                                           |
| Weight                                  |                                                                                                                                                                                               |
| Detectors                               | 4.4 kg                                                                                                                                                                                        |
| Mounting plate                          | 2.4 kg                                                                                                                                                                                        |
| Ex-Designation                          | II 2 G D<br>Ex db IIC T5 Gb or Ex db eb IIC T5 Gb<br>Ex tb IIIC T95°C Db<br>Ta = –55 °C bis +75 °C<br>Ex db IIC T4 Gb or Ex db eb IIC T4 Gb<br>Ex tb IIIC T105°C Db<br>Ta = –55 °C bis +85 °C |
| ATEX approval                           | ICQC 19 ATEX 0423X                                                                                                                                                                            |
| Declaration of Performance (DoP)        | DoP_X101V0030-04                                                                                                                                                                              |

**No.: 20-3003021-01**

## FLS-UV-IR-HD flame detector for hazardous areas

The FLS-UV-IR-HD ultraviolet/infrared flame detector offers ultra-fast response, high performance and reliable detection of a wide range of fires, including hydrocarbon fires (visible and non-visible) as well as hydrogen and methane/hydrogen mix fires.

The detector recognises both slow-burning and fast-spreading fires. It provides high-definition colour video output of the monitored area and delivers clear footage of fire incidents from a distance of up to 30 metres. For each alarm event, a video recording is generated with a 60-second pre-alarm period and a post-alarm period of up to 180 seconds. System integration is carried out using the ONVIF (Open Network Video Interface Forum) Profile S protocol.

It is ideal for use in turbine cases, battery rooms, metal processing, sulphur (UV only), and transformers.

|                                         |                                                                                                                                                                                               |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating voltage range                 | 18 to 32 V DC, 24 V DC typ.                                                                                                                                                                   |
| Current consumption with window heating | max. 300 mA                                                                                                                                                                                   |
| Quiescent current                       | 180 mA                                                                                                                                                                                        |
| Signal transmission                     | 3 potential-free relay outputs 30 V DC with 2 A                                                                                                                                               |
| Sensitivity                             | can be set to 4 levels: Extreme, High, Medium, Low                                                                                                                                            |
| Field of view                           | 90° horizontal, 80° vertical                                                                                                                                                                  |
| Delay time                              | 0 to 30 s                                                                                                                                                                                     |
| Self-test function                      | automatic, manually triggerable                                                                                                                                                               |
| Connection                              | Screw terminal, 0.35 to 2.5 mm <sup>2</sup>                                                                                                                                                   |
| Response behaviour                      | in accordance with EN 54-10 (class 1)                                                                                                                                                         |
| Degree of protection                    | IP66                                                                                                                                                                                          |
| Ambient temperature                     | –55 °C to +85 °C                                                                                                                                                                              |
| Relative humidity                       | 99 % non-condensing                                                                                                                                                                           |
| Dimensions                              | 200 × 130 × 130 mm (H × W × D)                                                                                                                                                                |
| Case material                           | Stainless steel 316                                                                                                                                                                           |
| Weight                                  |                                                                                                                                                                                               |
| Detectors                               | 4.4 kg                                                                                                                                                                                        |
| Mounting plate                          | 2.4 kg                                                                                                                                                                                        |
| Ex-Designation                          | II 2 G D<br>Ex db IIC T5 Gb or Ex db eb IIC T5 Gb<br>Ex tb IIIC T95°C Db<br>Ta = –55 °C bis +75 °C<br>Ex db IIC T4 Gb or Ex db eb IIC T4 Gb<br>Ex tb IIIC T105°C Db<br>Ta = –55 °C bis +85 °C |
| ATEX approval                           | ICQC 19 ATEX 0423X                                                                                                                                                                            |
| Declaration of Performance (DoP)        | DoP_X130V0030-04                                                                                                                                                                              |

## Flame detectors and accessories

|                                                                                     | Designation                                                                  | Type              | Article no.   |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-------------------|---------------|
|    | <b>MX IR flame detector set</b><br>FMX5000 IR, base, bracket, KMX5000        | FMX5000 IR SET    | 11-0000009-01 |
|    | <b>Flame detector MX IR Ex Set</b><br>FMX5000 IR Ex, base, bracket, MTL 5561 | FMX5000 IR EX SET | 11-0000013-01 |
|    | <b>MX UV flame detector set</b><br>FMX5000 UV, base, bracket, KMX5000        | FMX5000 UV SET    | 11-0000015-01 |
|    | <b>Air purge for FMX5000</b>                                                 | AIR SHIELD MX5000 | 11-0000018-01 |
|    | <b>Weather protection for FMX5000</b>                                        | WP MX5000         | 11-0000019-01 |
|    | <b>UV tester for FMX5000 UV</b>                                              | UVG 93            | 11-0000027-01 |
|   | <b>IR test lamp</b><br>for UniVario FMX 5000 IR (EX)                         | FLS-1 EX          | 11-0000061-01 |
|  | <b>FlameSpec IR3 flame detector</b><br>Cable inputs with M25 thread          | FLS-IR3           | 20-3003000-01 |
|  | <b>FlameSpec UV-IR flame detector</b><br>Cable inputs with M25 thread        | FLS-UV-IR         | 20-3003001-01 |
|  | <b>FlameSpec mounting bracket</b><br>for FlameSpec flame detectors           | FLS-TMO-S01       | 20-3003002-01 |
|  | <b>FlameSpec weather protection hood</b><br>for FlameSpec flame detectors    | FLS-WCO-S01       | 20-3003003-01 |
|  | <b>FlameSpec air purge</b><br>for FlameSpec flame detectors                  | FLS-ASD-S01       | 20-3003004-01 |
|  | <b>FlameSpec IR3-HD flame detector</b><br>Cable inputs with M25 thread       | FLS-IR3-HD        | 20-3003020-01 |
|  | <b>FlameSpec IR3-HD flame detector</b><br>Cable inputs with M25 thread       | FLS-UV-IR-HD      | 20-3003021-01 |
|  | <b>FlameSpec HD mounting bracket</b><br>for FlameSpec HD flame detectors     | FLS-TMO-S02       | 20-3003022-01 |
|  | <b>FlameSpec HD weatherproof cover</b><br>for FlameSpec HD flame detectors   | FLS-WCO-S02       | 20-3003023-01 |

|                                                                                    | Designation                                                                                 | Type               | Article no.   |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------|---------------|
|   | <b>FlameSpec HD air purge</b><br>for FlameSpec HD flame detectors                           | FLS-ASD-S02        | 20-3003024-01 |
|   | <b>FlameSpec pole mount 2-3"</b><br>for masts with 2 to 3 inch diameter                     | FLS-PMA-S23        | 20-3003005-01 |
|   | <b>FlameSpec pole mount 6"</b><br>for masts with 6 inch diameter                            | FLS-PMA-S06        | 20-3003006-01 |
|   | <b>FlameSpec USB adapter incl. SW</b><br>for the configuration of FlameSpec flame detectors | FLS-USB            | 20-3003007-01 |
|   | <b>FlameSpec test lamp IR3</b><br>for testing FlameSpec IR3 flame detectors                 | FLS-FSIM-IR3-KIT   | 20-3003008-01 |
|   | <b>FlameSpec test lamp UV-IR</b><br>for testing FlameSpec UV-IR flame detectors             | FLS-FSIM-UV-IR-KIT | 20-3003009-01 |
|  | <b>FlameSpec FlameView Kit</b><br>for setting up FLS flame detectors                        | FLS-FVU-KIT        | 20-3003010-01 |

## 9.5 Radio fire detectors

### FDOOT271-O radio fire detector



No.: 20-3001000-01  
No.: 20-3001003-01



No.: 20-3001002-01

Wireless multiple sensor detector for the extension of fire alarm systems in areas where structural aspects or specific operations do not permit cable routing (e.g. in historic buildings, hotels, museums).

The system consists of one or more radio fire detectors FDOOT271-O and a radio gateway BX-WGW (receiver unit), which is integrated directly into the Integral X-LINE. Up to 31 radio fire detectors can communicate with one gateway.

The information transmission between radio fire detectors and the receiver unit is bidirectional and takes place in the frequency range 868 to 870 MHz, respectively 433 to 435 MHz whereby the highest operational reliability is ensured. The detector's power supply is provided by a battery pack. The receiver unit's power supply is provided via the loop circuit.

The detector base and the battery pack BAT3.6-10 must be ordered separately.

|                           |                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------|
| Power supply              | BAT3.6-10 battery pack                                                               |
| Battery life              | min. 3 years (depending on the ambient conditions)                                   |
| Frequency bands           | 868 to 870 MHz in band 48, 49, 50, 54 and 56b<br>433.05 to 434.79 MHz in band 44b    |
| Channel spacing           | 50 kHz                                                                               |
| Number of channels        | 27 in the 868-MHz band<br>20 in the 433-MHz band                                     |
| Transmission power        | ≤ 10 mW ERP in band 44b, 49<br>10 mW ERP typ. (max. ≤ 25) in band 48, 50, 54 and 56b |
| Radio link                | max. 30 m                                                                            |
| Transmitter/receiver unit | dual-band antenna                                                                    |
| Degree of protection      | IP44                                                                                 |
| Ambient temperature       | -10 °C to +55 °C                                                                     |
| Relative humidity         | 5 to 95 % non-condensing                                                             |
| Case material             | ABS                                                                                  |
| Case colour               | white, similar to RAL 9010                                                           |
| Dimensions                | 117 × 64 mm (Ø × H)                                                                  |
| Weight                    |                                                                                      |
| Detectors                 | approx. 130 g                                                                        |
| Base                      | approx. 40 g                                                                         |
| Battery pack              | approx. 93 g                                                                         |
| VdS approval              | G216094                                                                              |





**No.: Upon request**

## Coloured detectors

The radio fire detectors and the detector base are also available in colour on request. When ordering, please specify the type designation of the detector (respectively the detector base) and the desired colour from the RAL Classic colour system (four-digit RAL number).

## FDM273-O radio manual call point



**No.: 20-3001051-01**  
**No.: 20-3001050-01**



**No.: 20-3001002-01**

For manual actuation of a fire alarm in areas where architectural aspects or particular operating procedures do not permit the laying of wiring circuits. The alarm is triggered by smashing the glass panel and pressing the button.

The system consists of one or more radio manual call points and a radio gateway BX-WGW (receiver unit), which is integrated directly into the Integral X-LINE. Up to 31 radio manual call points can communicate with one gateway.

The information transmission between radio manual call points and the receiver unit is bidirectional and takes place in the frequency range 868 to 870 MHz, respectively 433 to 435 MHz whereby the highest operational reliability is ensured. The detector's power supply is provided by a battery pack, the receiver unit's power supply is provided via the loop circuit.

The case, the switching unit and the battery pack BAT3.6-10 must be ordered separately.

|                                  |                                                                                      |
|----------------------------------|--------------------------------------------------------------------------------------|
| Power supply                     | BAT3.6-10 battery pack                                                               |
| Battery life                     | min. 3 years (depending on the ambient conditions)                                   |
| Functional principle             | Manual call point type B (indirect actuation)                                        |
| Frequency bands                  | 868 to 870 MHz in band 48, 49, 50, 54 and 56b<br>433.05 to 434.79 MHz in band 44b    |
| Channel spacing                  | 50 kHz                                                                               |
| Number of channels               | 27 in the 868-MHz band<br>20 in the 433-MHz band                                     |
| Transmission power               | ≤ 10 mW ERP in band 44b, 49<br>10 mW ERP typ. (max. ≤ 25) in band 48, 50, 54 and 56b |
| Radio link                       | max. 30 m                                                                            |
| Transmitter/receiver unit        | dual-band antenna                                                                    |
| Degree of protection             | IP44                                                                                 |
| Ambient temperature              | -10 °C to +55 °C                                                                     |
| Relative humidity                | 5 to 95 % non-condensing                                                             |
| Case material                    | Polycarbonate                                                                        |
| Case colour                      | red, RAL 3000                                                                        |
| Dimensions                       | 135 × 135 × 58 mm (H × W × D)                                                        |
| Weight                           |                                                                                      |
| Detectors                        | approx. 377 g                                                                        |
| Battery pack                     | approx. 93 g                                                                         |
| VdS approval                     | G216095                                                                              |
| Declaration of Performance (DoP) | 0786-CPR-21528                                                                       |

## FDM275-O radio manual call point



No.: 20-3001100-01



No.: 20-3001002-01

For manual actuation of a fire alarm in areas where architectural aspects or particular operating procedures do not permit the laying of cable. The alarm is triggered by pushing the plastic element or the glass panel.

The system consists of one or more radio manual call points and a radio gateway BX-WGW (receiver unit), which is integrated directly into the Integral X-LINE. Up to 31 radio manual call points can communicate with one gateway.

The information transmission between radio manual call points and the receiver unit is bidirectional and takes place in the frequency range 868 to 870 MHz, respectively 433 to 435 MHz whereby the highest operational reliability is ensured. The detector's power supply is provided by a battery pack, the receiver unit's power supply is provided via the loop circuit.

The battery pack BAT3.6-10 must be ordered separately.

|                                  |                                                                                      |
|----------------------------------|--------------------------------------------------------------------------------------|
| Power supply                     | BAT3.6-10 battery pack                                                               |
| Battery life                     | min. 3 years (depending on the ambient conditions)                                   |
| Functional principle             | manual call point type A (direct actuation)                                          |
| Frequency bands                  | 868 to 870 MHz in band 48, 49, 50, 54 and 56b<br>433.05 to 434.79 MHz in band 44b    |
| Channel spacing                  | 50 kHz                                                                               |
| Number of channels               | 27 in the 868-MHz band<br>20 in the 433-MHz band                                     |
| Transmission power               | ≤ 10 mW ERP in band 44b, 49<br>10 mW ERP typ. (max. ≤ 25) in band 48, 50, 54 and 56b |
| Radio link                       | max. 30 m                                                                            |
| Transmitter/receiver unit        | dual-band antenna                                                                    |
| Degree of protection             | IP24D                                                                                |
| Ambient temperature              | -10 °C to +55 °C                                                                     |
| Relative humidity                | 5 to 95 % non-condensing                                                             |
| Case material                    | Polycarbonate                                                                        |
| Case colour                      | red, RAL 3000                                                                        |
| Dimensions                       | 87 × 87 × 63 mm (H × W × D)                                                          |
| Weight                           |                                                                                      |
| Detectors                        | approx. 216 g                                                                        |
| Battery pack                     | approx. 93 g                                                                         |
| VdS approval                     | G216096                                                                              |
| Declaration of Performance (DoP) | 0786-CPR-21529                                                                       |

## BX-WGW radio gateway



**No.: 20-2100021-01**



**No.: 20-3001002-01**

Communication interface between the fire alarm control panel and the radio fire detectors or the radio manual call points. The battery pack is used for commissioning, or to maintain the power supply in case of revision.

The battery pack BAT3.6-10 must be ordered separately.

|                                  |                                                                                             |
|----------------------------------|---------------------------------------------------------------------------------------------|
| Operating voltage range          | 16 to 33 V DC                                                                               |
| Current consumption              | 7.5 mA typ.                                                                                 |
| Back-up battery                  | BAT3.6-10 battery pack                                                                      |
| Battery life                     | max. 6 years (with default supply via Integral X-LINE, depending on the ambient conditions) |
| Frequency bands                  | 868 to 870 MHz in band 48, 49, 50, 54 and 56b<br>433.05 to 434.79 MHz in band 44b           |
| Channel spacing                  | 50 kHz                                                                                      |
| Number of channels               | 27 in the 868-MHz band<br>20 in the 433-MHz band                                            |
| Connectable detectors            | max. 31                                                                                     |
| Numbers of gateways              | max. 14 per Integral X-LINE                                                                 |
| Range in buildings               | up to 60 m (each direction 30 m, with direct intervisibility, without walls)                |
| Antenna                          | integrated                                                                                  |
| Degree of protection with case   | IP40                                                                                        |
| Ambient temperature              |                                                                                             |
| Manufacturer specification       | –20 °C to +60 °C                                                                            |
| Approved by VdS                  | –10 °C to +55 °C                                                                            |
| Relative humidity                | 5 to 95 % non-condensing                                                                    |
| Case material                    | ABS                                                                                         |
| Case colour                      | white, similar to RAL 9010                                                                  |
| Dimensions                       |                                                                                             |
| with case                        | 167 × 89 × 28 mm (H×W×D)                                                                    |
| without case                     | 110 × 80 × 14 mm (H×W×D)                                                                    |
| Weight                           |                                                                                             |
| Gateway                          | approx. 157 g                                                                               |
| Battery pack                     | approx. 93 g                                                                                |
| VdS approval                     | G217001                                                                                     |
| Declaration of Performance (DoP) | CPR-20-17-021                                                                               |



No.: 20-3001002-01

Battery pack for radio devices

3.6 V lithium battery pack for the power supply of the radio devices and the radio gateway during commissioning and to maintain the configuration in case of revision. Battery pack with cable and reverse polarity plug.

|                      |                                  |
|----------------------|----------------------------------|
| System:              | Lithium thionyl chloride battery |
| Label:               | BAT3.6-10 LI-SOCI2               |
| Rated voltage:       | 3.6 V                            |
| Wattage:             | 10 Ah                            |
| Ambient temperature: | up to 100 °C                     |
| Weight:              | approx. 93 g                     |

## Radio detectors and accessories

|                                                                                     | Designation                                                                                        | Type       | Article no.   |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------|---------------|
|    | <b>Radio fire detectors</b>                                                                        | FDOOT271-O | 20-3001000-01 |
|    | <b>Base for radio fire detectors</b><br>for FDOOT271-O                                             | FDB271     | 20-3001003-01 |
|    | <b>Case for radio manual call points</b><br>for radio manual call points Type B                    | FDMH273-R  | 20-3001051-01 |
|    | <b>Switching unit for radio manual call points</b><br>for radio manual call points Type B          | FDME273-O  | 20-3001050-01 |
|    | <b>Radio manual call point</b><br>Type A, incl. plastic release element                            | FDM275-O   | 20-3001100-01 |
|    | <b>BX-WGW radio gateway</b>                                                                        | BX-WGW     | 20-2100021-01 |
|   | <b>Battery pack for radio devices</b><br>3.6 V, 10 Ah                                              | BAT3.6-10  | 20-3001002-01 |
|  | <b>MCL radio USB adapter</b><br>USB service device, incl. cinch/USB cable                          | FDUZ227    | 20-3001150-01 |
|  | <b>Lock pin for radio detector</b><br>for FDOOT271-O                                               | FDBZ293    | 20-3001001-01 |
|  | <b>Designation plate for FDOOT271-O</b><br>Push-in strips 60 x 18 mm or adhesive label 60 x 16 mm  | FDBZ291    | 20-3001004-01 |
|  | <b>Protective cover for radio manual call points</b><br>for radio manual call points Type B        | DMZ1197-AC | 20-3001052-01 |
|  | <b>Replacement glass panel for radio manual call points</b><br>for radio manual call points Type B | DMZ1196-AC | 20-3001053-01 |
|  | <b>Key for radio manual call points</b><br>for radio manual call points Type B                     | DMZ1195    | 20-3001054-01 |
|  | <b>Protective cover for radio manual call points</b><br>for radio manual call points Type A        | FDMC295    | 20-3001101-01 |
|  | <b>Key for radio manual call points</b><br>for radio manual call points Type A                     | FDMK295    | 20-3001102-01 |
|  | <b>Replacement glass panel for radio manual call points</b><br>for radio manual call points Type A | FDMG295    | 20-3001103-01 |

|                                                                                   | <b>Designation</b>                                                    | <b>Type</b> | <b>Article no.</b> |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|-------------|--------------------|
|  | <b>Plastic release element</b><br>for radio manual call points Type A | FDMP295     | 20-3001104-01      |
|  | <b>Detector removers for radio detectors</b><br>for FDOOT271-O        | FDUD291     | 20-3001151-01      |
|  | <b>Adapter for radio detector remover</b>                             | UTP 918     | 20-3001152-01      |

## 9.6 Fire detection units

### 27121 fire detection unit



No.: 20-3000400-01

The fire detection element is used in areas with higher ambient temperatures (e.g. in saunas, near boilers). The high degree of protection ensures good function under ambient conditions, such as dust or humidity, in which the trigger temperature of other heat detectors is exceeded.

The element works according to the differential expansion principle. The contact system in the end faces of the sensing tube results in different linear expansion when heated, which causes the contacts to close. The contact point (nominal value) is pre-set at the factory.

The fire detection element detects slowly rising temperatures (e.g. smouldering fires) as well as rapidly rising temperatures (e.g. propellant-based fires). Temporary harmless sources that influence the temperature (e.g. warm air when oven doors are opened) do not trigger an alarm.

The fire detection element is mounted on the wall, which is possible both horizontally and vertically (depending on the application and installation instruction).

|                       |                                |
|-----------------------|--------------------------------|
| Switching capacity    | max. 2 A/24 V DC               |
| Actuation temperature | 107 °C, 135 °C, 162 °C, 182 °C |
| Contact               | NO (normally open)             |
| Mounting              | horizontal or vertical         |
| Rod heat sensor       |                                |
| Monitoring area       | max. 30 m <sup>2</sup>         |
| Monitoring height     | max. 6 m                       |
| Degree of protection  | IP67                           |
| Material              | stainless steel, brass head    |
| Dimensions            | 26 × 126 mm (Ø × H)            |
| Weight                | 200 g                          |
| Case material         | die-cast aluminum              |
| Degree of protection  | IP64                           |
| Dimensions            | 80 × 57 × 59 mm (H × W × D)    |
| Weight                | 300 g                          |



**No.: 20-3000420-01**

## 27021 fire detection unit

The fire detection element is used in areas with higher ambient temperatures (e.g. in saunas, near boilers). The high degree of protection ensures good function under ambient conditions, such as dust or humidity, in which the trigger temperature of other heat detectors is exceeded.

The element works according to the differential expansion principle. The contact system in the end faces of the sensing tube results in different linear expansion when heated, which causes the contacts to close. The contact point (nominal value) is pre-set at the factory.

The fire detection element detects slowly rising temperatures (e.g. smouldering fires) as well as rapidly rising temperatures (e.g. propellant-based fires). Temporary harmless sources that influence the temperature (e.g. warm air when oven doors are opened) do not trigger an alarm.

The fire detection element is mounted on the ceiling. This fire detection unit may only be used outside the scope of the construction products regulation (CPR).

|                       |                                   |
|-----------------------|-----------------------------------|
| Switching capacity    | max. 2 A/24 V DC                  |
| Actuation temperature | 87 °C, 107 °C, 135 °C, 162 °C     |
| Contact               | NO (normally open)                |
| Mounting              | horizontal (ceiling installation) |
| Degree of protection  | IP65                              |
| Sensor material       | stainless steel                   |
| Case material         | sheet steel                       |
| Dimensions            | 115 × 50 mm (Ø × H)               |
| Weight                | 260 g                             |

## Fire detection units and accessories

|                                                                                     | Designation                                                                | Type        | Article no.   |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------|---------------|
|    | <b>27121 fire detection unit – 107 °C</b>                                  | 27121-0-225 | 20-3000400-01 |
|    | <b>27121 fire detection unit – 135 °C</b>                                  | 27121-0-275 | 20-3000401-01 |
|    | <b>27121 fire detection unit – 162 °C</b>                                  | 27121-0-325 | 20-3000402-01 |
|    | <b>27121 fire detection unit – 162 °C</b><br>Ambient temperature over 140° | 27121-0-325 | 20-3000402-02 |
|    | <b>27121 fire detection unit – 182 °C</b>                                  | 27121-0-360 | 20-3000403-01 |
|    | <b>27121 fire detection unit – 182 °C</b><br>Ambient temperature over 140° | 27121-0-360 | 20-3000403-02 |
|    | <b>27021 fire detection unit – 87 °C</b>                                   | 27021-1-190 | 20-3000420-01 |
|    | <b>27021 fire detection unit – 107 °C</b>                                  | 27021-1-225 | 20-3000421-01 |
|  | <b>27021 fire detection unit – 135 °C</b>                                  | 27021-1-275 | 20-3000422-01 |
|  | <b>27021 fire detection unit – 162 °C</b>                                  | 27021-1-325 | 20-3000423-01 |

## 9.7 Thermal imaging-based fire detection

### MX-M73TA-C640R050M73A thermal video fire detector EN 54 kit



No.: 20-3000930-01

The MX-M73TA-C640R050 thermal video fire detector has an extended field of view thanks to its 95° wide-angle thermal imaging sensor. This makes it particularly suitable for the reliable monitoring of open, large-scale and complex areas.

The thermal video fire detector is suitable for early fire detection in indoor and outdoor areas, as well as in critical environments where thermal monitoring is required. Thermal detection enables critical heat events to be detected at a very early stage, even in the absence of visible smoke or regardless of the lighting conditions at the scene.

The EN 54 bundle is designed as a ready-to-use system unit for connection to fire alarm systems and, in addition to the M73A thermal video fire detector, also contains the components MX-F-4IOA and MX-F-NPAA required for signal transmission and power supply.

A MX-O-M7SA-8DN050 optical sensor module can be added as an option for visual verification.

The scope of delivery includes the M73A thermal video fire detector, the thermal imaging sensor module, a dummy module, the MX-F-4IOA input/output box and the MX-F-NPAA PoE adapter.

---

Power consumption PoE+ (802.3at), max. 25 W

Class 4

|                         |                                |
|-------------------------|--------------------------------|
| Thermal imaging sensor  | VGA, 640 × 480 pixels          |
| Viewing angle           | 95° horizontally               |
| Interfaces              | Ethernet 1000BASE-T, MiniUSB   |
| Degree of protection    | IP66                           |
| IK degree of protection | IK10                           |
| Ambient temperature     | –40 °C to +65 °C               |
| Case material           | Aluminium, PBT-30GF            |
| Case colour             | white                          |
| Dimensions              | 228 × 153 × 232 mm (H × W × D) |

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**No.: 20-3000935-01**

## **MX-O-M7SA-8DN050 M73A optical sensor module**

Optical sensor module to complement the MX-M73TA-C640R050 thermal video fire detector for the visual verification of events. The sensor module supports the display of image data both day and night and is particularly suitable for quickly assessing the situation in the event of an alarm.

|                      |                              |
|----------------------|------------------------------|
| Resolution           | 4K UHD, 3840 × 2160 pixels   |
| Viewing angle        | 95° horizontal, 50° vertical |
| Focal length         | 5 mm                         |
| Faceplate            | f/1.8                        |
| Degree of protection | IP66                         |
| Case colour          | white                        |

**MX-M73TA-C640R100 M73A thermal video fire detector EN 54 kit**



**No.: 20-3000931-01**

The MX-M73TA-B640R100 thermal video fire detector is characterised by a directional field of view thanks to its 50° thermal imaging sensor. This makes it particularly suitable for the targeted surveillance of areas with a restricted field of view.

The thermal video fire detector is suitable for early fire detection in indoor and outdoor areas, as well as in critical environments where thermal monitoring is required. Thermal detection enables critical heat events to be detected at a very early stage, even in the absence of visible smoke or regardless of the lighting conditions at the scene.

The EN 54 bundle is designed as a ready-to-use system unit for connection to fire alarm systems and, in addition to the M73A thermal video fire detector, also contains the components MX-F-4IOA and MX-F-NPAA required for signal transmission and power supply.

A MX-O-M7SA-8DN100 optical sensor module can be added as an option for visual verification.

The scope of delivery includes the M73A thermal video fire detector, the thermal imaging sensor module, a dummy module, the MX-F-4IOA input/output box and the MX-F-NPAA PoE adapter.

|                                             |                                |
|---------------------------------------------|--------------------------------|
| Power consumption PoE+ (802.3at), max. 25 W |                                |
| Class 4                                     |                                |
| Thermal imaging sensor                      | VGA, 640 × 480 pixels          |
| Viewing angle                               | 50° horizontally               |
| Interfaces                                  | Ethernet 1000BASE-T, MiniUSB   |
| Degree of protection                        | IP66                           |
| IK degree of protection                     | IK10                           |
| Ambient temperature                         | –40 °C to +65 °C               |
| Case material                               | Aluminium, PBT-30GF            |
| Case colour                                 | white                          |
| Dimensions                                  | 228 × 153 × 232 mm (H × W × D) |

## MX-M73TA-B336R100 M73A thermal video fire detector EN 54 kit



**No.: 20-3000932-01**

The MX-M73TA-B336R100 thermal video fire detector is characterised by a directional field of view thanks to its 45° thermal imaging sensor. It offers a cost-effective solution and is particularly suitable for targeted monitoring.

The thermal video fire detector is suitable for early fire detection in indoor and outdoor areas, as well as in critical environments where thermal monitoring is required. Thermal detection enables critical heat events to be detected at a very early stage, even in the absence of visible smoke or regardless of the lighting conditions at the scene.

The EN 54 bundle is designed as a ready-to-use system unit for connection to fire alarm systems and, in addition to the M73A thermal video fire detector, also contains the components MX-F-4IOA and MX-F-NPAA required for signal transmission and power supply.

A MX-O-M7SA-8DN100 optical sensor module can be added as an option for visual verification.

The scope of delivery includes the M73A thermal video fire detector, the thermal imaging sensor module, a dummy module, the MX-F-4IOA input/output box and the MX-F-NPAA PoE adapter.

|                                             |                                |
|---------------------------------------------|--------------------------------|
| Power consumption PoE+ (802.3at), max. 25 W |                                |
| Class 4                                     |                                |
| Thermal imaging sensor                      | CIF, 336 × 252 pixels          |
| Viewing angle                               | 45° horizontally               |
| Interfaces                                  | Ethernet 1000BASE-T, MiniUSB   |
| Degree of protection                        | IP66                           |
| IK degree of protection                     | IK10                           |
| Ambient temperature                         | –40 °C to +65 °C               |
| Case material                               | Aluminium, PBT-30GF            |
| Case colour                                 | white                          |
| Dimensions                                  | 228 × 153 × 232 mm (H × W × D) |



**No.: 20-3000936-01**

## MX-O-M7SA-8DN100 M73A optical sensor module

Optical sensor module to complement the MX-M73TA-B640R100 and MX-M73TA-B336R100 thermal video fire detectors for the visual verification of events. The sensor module supports the display of image data both day and night and is particularly suitable for focused fields of view and more detailed observation of objects.

|                      |                              |
|----------------------|------------------------------|
| Resolution           | 4K UHD, 3840 × 2160 pixels   |
| Viewing angle        | 45° horizontal, 25° vertical |
| Focal length         | 10 mm                        |
| Faceplate            | f/1.8                        |
| Degree of protection | IP66                         |
| Case colour          | white                        |

## Thermal imaging-based fire detection and accessories

|                                                                                     | Designation                                                                                                   | Type               | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------|---------------|
|    | <b>M73A Thermal Video EN 54 kit</b><br>VGA 95° thermal video fire detector, incl. 4IOA and NPAA               | MX-M73TA-C640R050  | 20-3000930-01 |
|    | <b>M73A optical sensor module</b><br>95° 4K IR-cut day and night wide-angle sensor                            | MX-O-M7SA-8DN050   | 20-3000935-01 |
|    | <b>M73A thermal video fire detector EN 54 kit</b><br>VGA 50° thermal video fire detector, incl. 4IOA and NPAA | MX-M73TA-C640R100  | 20-3000931-01 |
|    | <b>M73A thermal video fire detector EN 54 kit</b><br>CIF 45° thermal video fire detector, incl. 4IOA and NPAA | MX-M73TA-B336R100  | 20-3000932-01 |
|    | <b>M73A optical sensor module</b><br>45° 4K IR-cut day and night default sensor                               | MX-O-M7SA-8DN100   | 20-3000936-01 |
|   | <b>LSA overvoltage protection</b><br>Protection module for PoE interface, LSA                                 | MX-OVP-LSA         | 20-3000940-01 |
|  | <b>RJ45 overvoltage protection</b><br>Protection module for PoE interface, RJ45                               | MX-OVP-RJ45        | 20-3000940-02 |
|  | <b>PoE adapter EN 54</b><br>12 to 24 V DC and network connection, IP66                                        | MX-F-NPAA          | 20-3000941-01 |
|  | <b>Input/output box EN 54</b><br>4 relay outputs, 4 inputs, IP66                                              | MX-F-4IOA          | 20-3000942-01 |
|  | <b>M73 USB cable</b><br>Angled Mini USB-C to Mini USB – 5 m straight                                          | MX-CBL-MUC-AN-MU-5 | 20-3000943-01 |
|  | <b>M73 ceiling bracket</b><br>white, die-cast, incl. mounting accessories                                     | MX-M-CM-M73        | 20-3000960-01 |
|  | <b>M73 wall bracket</b><br>white, die-cast, incl. mounting accessories                                        | MX-M-OW-M73        | 20-3000961-01 |
|  | <b>M73 mast bracket</b><br>white, VA, incl. mounting accessories for diameters from 60 to 180 mm              | MX-M-PM-M73        | 20-3000962-01 |
|  | <b>Thermal Validation App</b><br>TR optimisation for fire protection, deceptive alarm filters                 | MX-APP-MX-TVA      | 20-3000970-01 |
|                                                                                     | <b>Mobotix HUB L2 Basic Licence</b>                                                                           | MX-HUB-L2-BAS      | 20-3000971-01 |
|                                                                                     | <b>Mobotix HUB L2 Device Licence</b>                                                                          | MX-HUB-L2-DEV      | 20-3000972-01 |



## 10 Accessories

### 10.1 Fire brigade peripherals

#### Fire brigade key safe FSS 850



No.: 20-4201010-01



No.: 20-4201011-01

The fire brigade key safe is used for the theft-protected and copy-protected storage of an object key (e.g. the master key) outside the building. The object key enables the fire brigade to access the building quickly and without violence in the event of a fire.

In the event of a fire, the key safe is released for the fire brigade by the fire alarm control panel. The illuminated field in the cover flap flashes to indicate unlocking directly on the fire brigade key safe. The fire brigade can open the lock behind it (with the key exclusively in their possession) and the monitored object key can be removed.

|                      |                                                |
|----------------------|------------------------------------------------|
| Operating voltage    | 24 V DC +20 %/-10 %                            |
| Current consumption  | 30 mA typ. (idle), max. 800 mA                 |
| Cable inlet          | rear of case                                   |
| Connection           | screw-type terminals, max. 2.5 mm <sup>2</sup> |
| Locking cylinder     | integrated half cylinder, l = 40 mm            |
| Degree of protection | IP44                                           |
| Ambient temperature  | -25 °C to +60 °C                               |
| Case material        | stainless steel, 5 mm                          |
| Dimensions           | 350 × 280 × 110 mm (H × W × D)                 |
| Weight               | 10.2 kg                                        |
| Test number          | FT 14/851/06/15 (ÖNORM F 3032)                 |

#### EZ 850-1 built-in frame

Installation frame for flush mounting for fire brigade key safe



No.: 20-4201016-01

|               |                                       |
|---------------|---------------------------------------|
| Case material | sheet steel, 2 mm, hot-dip galvanised |
| Dimensions    | 300 × 250 × 120 mm (H × W × D)        |
| Weight        | 2.6 kg                                |



No.: 20-4201015-01

## AG 850-1 surface-mounted housing

Surface-mounted case for fire brigade key safe

|               |                                |
|---------------|--------------------------------|
| Case material | stainless steel, 3 mm          |
| Dimensions    | 358 x 287 x 115 mm (H x W x D) |
| Weight        | 6.2 kg                         |



No.: 20-4201020-01

## SZG 850-1 control device

The control device is built into a red sheet steel case and is used to monitor and control the fire brigade key safe.

|                      |                                |
|----------------------|--------------------------------|
| Operating voltage    | 24 V DC +20 %/-10 %            |
| Current consumption  | 25 mA typ. (idle), max. 50 mA  |
| Degree of protection | IP30                           |
| Ambient temperature  | -5 °C to +50 °C                |
| Case material        | sheet steel                    |
| Case colour          | red, RAL 3000                  |
| Dimensions           | 300 x 200 x 50 mm (H x W x D)  |
| Weight               | 2 kg                           |
| Test number          | FT 14/851/06/15 (ÖNORM F 3032) |



No.: FG020513

## FSS FASB fire brigade key box

The fire brigade key box is an addition to the fire brigade key safe without electrical unlocking. Particularly suitable for the storage of gate and engine room keys for fire brigade access, lift companies, power stations and rescue services. The plate installation cylinder is not included and must be ordered separately.

|             |                               |
|-------------|-------------------------------|
| Dimensions  | 150 x 150 x 57 mm (H x W x D) |
| Case colour | grey, RAL 7032                |



No.: FG020511

## MHZ52NI fire brigade plan case

Metal cabinet for storing the fire protection plans required by the fire brigade. The plan case is equipped with the fire brigade lock, which is also be used for fire brigade operating panels and manual call points. One key and three mounting screws are included with the box.

|               |                                |
|---------------|--------------------------------|
| Case material | sheet steel, 1 mm              |
| Case colour   | red, RAL 3000                  |
| Dimensions    | 400 x 350 x 110 mm (H x W x D) |
| Weight        | approx. 4.2 kg                 |



No.: 20-4201000-01

**FWP-3 fire brigade plan case with folding table**

Metal cabinet for storing the fire protection plans required by the fire brigade. The interior of the plan case provides ample space for an DIN A4 folder with a 7.5 cm spine.

The door is opened downwards and can be used as a writing desk or simply for storing the plans. Thus, the fire brigade plan case fulfills the requirements of TRVB S 123 for a place to store the guide means.

The coated metal cabinet is intended for wall-mounting and must be placed to the fire brigade's main attack route in accordance with TRVB O 119.

The plan case is equipped with the fire brigade lock, which is also be used for fire brigade operating panels and manual call points. Alternatively, a plate installation cylinder can be fitted. Key included.

|               |                                |
|---------------|--------------------------------|
| Case material | sheet steel, 1.5 mm            |
| Case colour   | red, RAL 3000                  |
| Dimensions    | 440 × 350 × 110 mm (H × W × D) |
| Weight        | approx. 4.5 kg                 |

## Fire brigade peripherals and accessories

|                                                                                     | Designation                                                                                       | Type                  | Article no.   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------|---------------|
|    | <b>FSS 850-1 fire brigade key safe</b>                                                            | FSS 850-1             | 20-4201010-01 |
|    | <b>FSS 850-2 fire brigade key safe</b><br>with integrated release element                         | FSS 850-2             | 20-4201011-01 |
|    | <b>FSS 850-1 fire brigade key safe</b><br>RAL 7032 pebble grey, matt                              | FSS 850-1             | 20-4201010-02 |
|    | <b>FSS 850-1 fire brigade key safe</b><br>RAL 9005 black, matt                                    | FSS 850-1             | 20-4201010-03 |
|    | <b>FSS 850-1 fire brigade key safe</b><br>RAL 7021 black grey, matt                               | FSS 850-1             | 20-4201010-04 |
|   | <b>FSS 850-1 fire brigade key safe</b><br>RAL 9001 cream white matt                               | FSS 850-1             | 20-4201010-05 |
|  | <b>Built-in frame for fire brigade key safe</b>                                                   | EZ 850-1              | 20-4201016-01 |
|  | <b>Surface-mounted housing for fire brigade key safe</b>                                          | AG 850-1              | 20-4201015-01 |
|  | <b>Control unit for fire brigade key safe</b>                                                     | SZG 850-1             | 20-4201020-01 |
|  | <b>Locking pin for fire brigade key safe (replacement)</b>                                        | ZN 60323              | 20-4201030-01 |
|  | <b>Sealed key-ring</b><br>for fire brigade key safe                                               | SCHLÜSSELPLOMBE<br>K1 | 20-4201040-01 |
|  | <b>Mounting set for EZ 800-1</b><br>for installation of FSS 850 in installation frame<br>EZ 800-1 | MS 850-1              | 20-4201032-01 |
|  | <b>FASB fire brigade key box</b>                                                                  | FSS FASB              | FG020513      |
|  | <b>MHZ52NI fire brigade cylinder, Austria</b>                                                     | FSS ZYL A             | FG020510      |
|  | <b>MHZ52NI Fire brigade sheet metal mounting cylinder</b><br>for fire brigade key safe FASB       | FSS ZYL B             | FG020514      |

|                                                                                   | Designation                                                          | Type        | Article no.   |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------|---------------|
|  | <b>Temporary customer cylinder</b><br>for fire brigade key safe FASB | FSS ZYL K   | FG020516      |
|  | <b>Fire brigade plan case</b>                                        | FWPK AP     | FG020511      |
|  | <b>Fire brigade plan case with folding table</b>                     | FWP-3       | 20-4201000-01 |
|  | <b>Sticker "Feuerwehr" (replacement)</b>                             | FSS AK      | 20-4201031-01 |
|  | <b>Sticker "Feuerwehrpläne" (replacement)</b><br>297 × 105 mm        | S FWP       | 20-4900020-01 |
|  | <b>Schrack Seconet logo sticker, resin coated</b><br>40 × 10 mm      | S FSS LOGO1 | 20-4900028-01 |

## 10.2 External power supply units

### BE-PSE01/BE-PSE01-IOM power supply unit cabinet



No.: 20-4000121-01

The power supply equipment serves in the first instance for battery-backed DC power supply for peripheral devices, which cannot be supplied by the fire alarm control panel's power supply unit for current consumption reasons (e.g. special detector, sirens or holding magnets).

The device is optionally available with a built-in BX-IOM input/output module.

The mains voltage and the battery circuit are constantly monitored, with the loading current of the batteries being temperature-monitored.

In the event of an overload, the maximum output current is limited accordingly, and in the event of the voltage falling below the cut-off voltage, total discharge protection ensures that automatic load shedding occurs.

The power supply equipment is fitted with potential-free contacts, to allow the battery status to be queried and forwarded onto a superordinated system.

|                                              |                                                           |
|----------------------------------------------|-----------------------------------------------------------|
| Mains voltage                                | 100 to 240 V AC $\pm 10\%$                                |
| Approved by VdS                              | 230 V AC $+10\%/-15\%$                                    |
| Mains frequency                              | 47 to 63 Hz                                               |
| Current consumption                          | 60 VA                                                     |
| Inrush current                               | max. 35 A/2 ms                                            |
| Output voltage (PELV/SELV compliant)         | 24 V DC                                                   |
| Rated output current                         | max. 1.6 A                                                |
| End-of-charge voltage                        | 27.4 V DC $\pm 0.4\%$ (25 °C)                             |
| Signal contact load                          | max. 30 V DC/10 mA                                        |
| Rechargeable battery type                    | lead rechargeable battery, maintenance-free, 2.3 Ah       |
| Total discharge protection and load shedding | 20,4 V DC without BX-IOM<br>20,1 V DC with BX-IOM         |
| Efficiency                                   | 78 %                                                      |
| Mains fuse                                   | 4 A (slow), 250 V                                         |
| Rechargeable battery fuse                    | 3 A, FK2/FKS                                              |
| Consumer fuse                                | 2 $\times$ 1 A, FK2/FKS<br>1 $\times$ 2 A, FK2/FKS        |
| Degree of protection with case               | IP30                                                      |
| Ambient temperature                          | -5 °C to +40 °C (observe rechargeable battery life)       |
| Storage temperature:                         | -5 °C to +50 °C                                           |
| Relative humidity                            | 5 to 95 % non-condensing                                  |
| Case colour                                  | light grey, RAL 7035                                      |
| Dimensions                                   | 204 $\times$ 200 $\times$ 80 mm (H $\times$ W $\times$ D) |
| Weight with rechargeable batteries           | 3.2 kg                                                    |
| VdS approval                                 | G220002                                                   |
| Declaration of Performance (DoP)             | CPR-20-20-205                                             |

## BE-PSE02/BE-PSE02-IOM power supply unit cabinet



**No.: 20-4000125-01**

The power supply equipment is used for the battery-backed DC power supply of peripheral devices that cannot be supplied by the power supply unit of the fire alarm control panel due to their current consumption (e.g. special detectors, sirens or holding magnets).

The device is optionally available with a built-in BX-IOM input/output module.

The mains voltage and the battery circuit are constantly monitored, with the loading current of the batteries being temperature-monitored.

In the event of an overload, the maximum output current is limited accordingly, and in the event of the voltage falling below the cut-off voltage, total discharge protection ensures that automatic load shedding occurs.

The power supply equipment is fitted with potential-free contacts, to allow the battery status to be queried and forwarded onto a superordinated system.

|                                              |                                                               |
|----------------------------------------------|---------------------------------------------------------------|
| Mains voltage                                | 100 to 240 V AC $\pm 10$ %                                    |
| Approved by VdS                              | 230 V AC $+10$ %/ $-15$ %                                     |
| Mains frequency                              | 47 to 63 Hz                                                   |
| Current consumption                          | 60 VA                                                         |
| Inrush current                               | max. 35 A/2 ms                                                |
| Output voltage (PELV/SELV compliant)         | 24 V DC                                                       |
| Rated output current                         | max. 1.6 A                                                    |
| End-of-charge voltage                        | 27.4 V DC $\pm 0.4$ % (25 °C)                                 |
| Signal contact load                          | max. 30 V DC/10 mA                                            |
| Rechargeable battery type                    | excl. lead rechargeable battery, maintenance-free, 7 Ah/12 Ah |
| Total discharge protection and load shedding | 20,4 V DC without BX-IOM<br>20,1 V DC with BX-IOM             |
| Efficiency                                   | 78 %                                                          |
| Mains fuse                                   | 4 A (slow), 250 V                                             |
| Rechargeable battery fuse                    | 3 A, FK2/FKS                                                  |
| Consumer fuse                                | 2 $\times$ 1 A, FK2/FKS<br>1 $\times$ 2 A, FK2/FKS            |
| Degree of protection with case               | IP30                                                          |
| Ambient temperature                          | $-5$ °C to $+40$ °C (observe rechargeable battery life)       |
| Storage temperature:                         | $-5$ °C to $+50$ °C                                           |
| Relative humidity                            | 5 to 95 % non-condensing                                      |
| Case colour                                  | light grey, RAL 7035                                          |
| Dimensions                                   | 289 $\times$ 253 $\times$ 129 mm (H $\times$ W $\times$ D)    |
| Weight without rechargeable batteries        | approx. 2.8 kg                                                |
| VdS approval                                 | G220002                                                       |
| Declaration of Performance (DoP)             | CPR-20-20-205                                                 |

**No.: 20-4000209-01**

## PSE03-C power supply unit

The power supply equipment is used for the battery-backed DC power supply of peripheral devices that cannot be supplied by the power supply unit of the fire alarm control panel due to their current consumption (e.g. special detectors, sirens or holding magnets).

It has an output voltage of 24 V and an output current of 3 A.

The case contains up to 10 monitored output fuses and offers space for installation of 2 rechargeable batteries (max. 26 Ah) and an input/output module.

The mains voltage and the battery circuit are constantly monitored, with the loading current of the batteries being temperature-monitored.

In the event of an overload, the maximum output current is limited accordingly, and in the event of the voltage falling below the cut-off voltage, total discharge protection ensures that automatic load shedding occurs.

The power supply unit has potential-free contacts. This allows for the operating status to be queried and forwarded to a superordinate system.

Various functions and events can be read in and out via an additional service interface.

|                                              |                                                         |
|----------------------------------------------|---------------------------------------------------------|
| Nominal input voltage approved by VdS        | 230 V AC +10 %/-15 %                                    |
| Mains frequency                              | 50/60 Hz ±3 Hz                                          |
| Current consumption                          | max. 93 VA                                              |
| Nominal output voltage (PELV/SELV compliant) | 24 V DC                                                 |
| Output voltage                               | 20.8 to 28.6 V DC                                       |
| End-of-charge voltage                        | 26.5 to 28.6 V DC                                       |
| load shedding                                | 20.8 V DC                                               |
| Output nominal current $I_{\text{maxb}}$     | 3 A                                                     |
| Signal contacts load                         | 30 V DC/0.5 A; potential-free relay contact             |
| Mains voltage fuse                           | 2 A (T)                                                 |
| DC rechargeable battery circuit fuse         | 5 A (T), FK2/FKS                                        |
| Consumer fuse                                | max. 3 A each, max. 5 A in total                        |
| Rechargeable battery type                    | Lead-acid battery, maintenance-free                     |
| Ambient temperature                          |                                                         |
| Approved by VdS                              | -5 °C to +40 °C (observe rechargeable battery lifespan) |
| Storage temperature                          | -10 °C to +50 °C                                        |
| Degree of protection with case               | IP30                                                    |
| Dimensions                                   | 376 × 458 × 189 mm (H × W × D)                          |
| Weight without rechargeable batteries        | 8 kg                                                    |
| VdS approval                                 | G209172                                                 |



**No.: 20-4000210-01**

## PSE03-P power supply unit

The power supply equipment is used for the battery-backed DC power supply of peripheral devices that cannot be supplied by the power supply unit of the fire alarm control panel due to their current consumption (e.g. special detectors, sirens or holding magnets).

It has an output voltage of 24 V and an output current of 3 A.

The cabinet contains up to 10 monitored output fuses and offers space for installation of 2 rechargeable batteries (max. 45 Ah) and an input/output module.

The mains voltage and the battery circuit are constantly monitored, with the loading current of the batteries being temperature-monitored.

In the event of an overload, the maximum output current is limited accordingly, and in the event of the voltage falling below the cut-off voltage, total discharge protection ensures that automatic load shedding occurs.

The power supply unit has potential-free contacts. This allows for the operating status to be queried and forwarded to a superordinate system.

Various functions and events can be read in and out via an additional service interface.

|                                              |                                                         |
|----------------------------------------------|---------------------------------------------------------|
| Nominal input voltage approved by VdS        | 230 V AC +10 %/–15 %                                    |
| Mains frequency                              | 50/60 Hz ±3 Hz                                          |
| Current consumption                          | max. 93 VA                                              |
| Nominal output voltage (PELV/SELV compliant) | 24 V DC                                                 |
| Output voltage                               | 20.8 to 28.6 V DC                                       |
| End-of-charge voltage                        | 26.5 to 28.6 V DC                                       |
| load shedding                                | 20.8 V DC                                               |
| Output nominal current $I_{\text{maxb}}$     | 3 A                                                     |
| Signal contacts load                         | 30 V DC/0.5 A; potential-free relay contact             |
| Mains voltage fuse                           | 2 A (T)                                                 |
| DC rechargeable battery circuit fuse         | 5 A (T), FK2/FKS                                        |
| Consumer fuse                                | max. 3 A each, max. 5 A in total                        |
| Rechargeable battery type                    | Lead-acid battery, maintenance-free                     |
| Ambient temperature                          |                                                         |
| Approved by VdS                              | –5 °C to +40 °C (observe rechargeable battery lifespan) |
| Storage temperature                          | –10 °C to +50 °C                                        |
| Degree of protection with case               | IP54                                                    |
| Dimensions                                   | 500 × 500 × 307 mm (H × W × D)                          |
| Weight without rechargeable batteries        | 23 kg                                                   |
| VdS approval                                 | G209172                                                 |



No.: 20-4000200-01

## PSE12-C power supply unit

The power supply equipment is used for the battery-backed DC power supply of peripheral devices that cannot be supplied by the power supply unit of the fire alarm control panel due to their current consumption (e.g. special detectors, sirens or holding magnets).

It has an output voltage of 24 V and an output current of 12 A.

The case contains up to 20 monitored output fuses and offers space for installation of 2 rechargeable batteries (max. 65 Ah) and an input/output module.

The mains voltage and the battery circuit are constantly monitored, with the loading current of the batteries being temperature-monitored.

In the event of an overload, the maximum output current is limited accordingly, and in the event of the voltage falling below the cut-off voltage, total discharge protection ensures that automatic load shedding occurs.

The power supply unit has potential-free contacts. This allows for the operating status to be queried and forwarded to a superordinate system.

Various functions and events can be read in and out via an additional service interface.

|                                          |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Nominal input voltage approved by VdS    | 230 V AC +10 %/-15 %                                    |
| Mains frequency                          | 50/60 Hz ±3 Hz                                          |
| Current consumption                      | max. 366 VA                                             |
| Output voltage (PELV/SELV compliant)     | 24 V DC                                                 |
| Output voltage                           | 20.7 to 28.6 V DC ±4 %                                  |
| End-of-charge voltage                    | 26.5 to 28.6 V DC                                       |
| load shedding                            | 20.7 V DC                                               |
| Output nominal current $I_{\text{maxb}}$ | 12 A                                                    |
| Signal contacts load                     | 30 V DC/0.5 A; potential-free relay contact             |
| Mains voltage fuse                       | 5 A (T)                                                 |
| DC rechargeable battery circuit fuse     | 15 A (T), FK2/FKS                                       |
| Consumer fuse                            | max. 10 A each, max. 12 A in total                      |
| Rechargeable battery type                | Lead-acid battery, maintenance-free                     |
| Ambient temperature                      |                                                         |
| Approved by VdS                          | -5 °C to +40 °C (observe rechargeable battery lifespan) |
| Storage temperature                      | -10 °C to +50 °C                                        |
| Degree of protection with case           | IP30                                                    |
| Dimensions                               | 606 × 463 × 215 mm (H × W × D)                          |
| Weight without rechargeable batteries    | approx. 14 kg                                           |
| VdS approval                             | G209173                                                 |
| Declaration of Performance (DoP)         | CPR-20-25-300                                           |

**No.: 20-4000201-01**

## PSE12-P45 power supply unit

The power supply equipment is used for the battery-backed DC power supply of peripheral devices that cannot be supplied by the power supply unit of the fire alarm control panel due to their current consumption (e.g. special detectors, sirens or holding magnets).

It has an output voltage of 24 V and an output current of 12 A.

The cabinet contains up to 20 monitored output fuses and offers space for installation of 2 rechargeable batteries (max. 45 Ah) and an input/output module.

The mains voltage and the battery circuit are constantly monitored, with the loading current of the batteries being temperature-monitored.

In the event of an overload, the maximum output current is limited accordingly, and in the event of the voltage falling below the cut-off voltage, total discharge protection ensures that automatic load shedding occurs.

The power supply unit has potential-free contacts. This allows for the operating status to be queried and forwarded to a superordinate system.

Various functions and events can be read in and out via an additional service interface.

|                                          |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Nominal input voltage approved by VdS    | 230 V AC +10 %/–15 %                                    |
| Mains frequency                          | 50/60 Hz ±3 Hz                                          |
| Current consumption                      | max. 366 VA                                             |
| Output voltage (PELV/SELV compliant)     | 24 V DC                                                 |
| Output voltage                           | 20.6 to 28.6 V DC ±4 %                                  |
| End-of-charge voltage                    | 26.5 to 28.6 V DC                                       |
| load shedding                            | 20.6 V DC                                               |
| Output nominal current $I_{\text{maxb}}$ | 12 A                                                    |
| Signal contacts load                     | 30 V DC/0.5 A; potential-free relay contact             |
| Mains voltage fuse                       | 5 A (T)                                                 |
| DC rechargeable battery circuit fuse     | 15 A (T), FK2/FKS                                       |
| Consumer fuse                            | max. 10 A each, max. 12 A in total                      |
| Rechargeable battery type                | Lead-acid battery, maintenance-free                     |
| Ambient temperature                      |                                                         |
| Approved by VdS                          | –5 °C to +40 °C (observe rechargeable battery lifespan) |
| Storage temperature                      | –10 °C to +50 °C                                        |
| Degree of protection with case           | IP54                                                    |
| Dimensions                               | 500 × 500 × 307 mm (H × W × D)                          |
| Weight without rechargeable batteries    | approx. 24 kg                                           |
| VdS approval                             | G209173                                                 |
| Declaration of Performance (DoP)         | CPR-20-25-300                                           |



No.: 20-4000202-01

## PSE12-P200 power supply unit

The power supply equipment is used for the battery-backed DC power supply of peripheral devices that cannot be supplied by the power supply unit of the fire alarm control panel due to their current consumption (e.g. special detectors, sirens or holding magnets).

It has an output voltage of 24 V and an output current of 12 A.

The cabinet contains up to 20 monitored output fuses and offers space for installation of 4 rechargeable batteries (max. 100 Ah) and an input/output module.

The mains voltage and the battery circuit are constantly monitored, with the loading current of the batteries being temperature-monitored.

In the event of an overload, the maximum output current is limited accordingly, and in the event of the voltage falling below the cut-off voltage, total discharge protection ensures that automatic load shedding occurs.

The power supply unit has potential-free contacts. This allows for the operating status to be queried and forwarded to a superordinate system.

Various functions and events can be read in and out via an additional service interface.

|                                          |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Nominal input voltage approved by VdS    | 230 V AC +10 %/-15 %                                    |
| Mains frequency                          | 50/60 Hz ±3 Hz                                          |
| Current consumption                      | max. 366 VA                                             |
| Output voltage (PELV/SELV compliant)     | 24 V DC                                                 |
| Output voltage                           | 20.6 to 28.6 V DC ±4 %                                  |
| End-of-charge voltage                    | 26.5 to 28.6 V DC                                       |
| load shedding                            | 20.6 V DC                                               |
| Output nominal current $I_{\text{maxb}}$ | 12 A                                                    |
| Signal contacts load                     | 30 V DC/0.5 A; potential-free relay contact             |
| Mains voltage fuse                       | 5 A (T)                                                 |
| DC rechargeable battery circuit fuse     | 15 A (T), FK2/FKS                                       |
| Consumer fuse                            | max. 10 A each, max. 12 A in total                      |
| Rechargeable battery type                | Lead-acid battery, maintenance-free                     |
| Ambient temperature                      |                                                         |
| Approved by VdS                          | -5 °C to +40 °C (observe rechargeable battery lifespan) |
| Storage temperature                      | -10 °C to +50 °C                                        |
| Degree of protection with case           | IP54                                                    |
| Dimensions                               | 1000 × 800 × 307 mm (H × W × D)                         |
| Weight without rechargeable batteries    | approx. 64 kg                                           |
| VdS approval                             | G209173                                                 |
| Declaration of Performance (DoP)         | CPR-20-25-300                                           |

**No.: 20-4000203-01**

## PSE24-P200 power supply unit

The power supply equipment is used for the battery-backed DC power supply of peripheral devices that cannot be supplied by the power supply unit of the fire alarm control panel due to their current consumption (e.g. special detectors, sirens or holding magnets).

It has an output voltage of 24 V and an output current of 24 A.

The cabinet contains up to 40 monitored output fuses and offers space for installation of 4 rechargeable batteries (max. 100 Ah) and an input/output module.

The mains voltage and the battery circuit are constantly monitored, with the loading current of the batteries being temperature-monitored.

In the event of an overload, the maximum output current is limited accordingly, and in the event of the voltage falling below the cut-off voltage, total discharge protection ensures that automatic load shedding occurs.

The power supply unit has potential-free contacts. This allows for the operating status to be queried and forwarded to a superordinate system.

Various functions and events can be read in and out via an additional service interface.

|                                          |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Nominal input voltage approved by VdS    | 230 V AC +10 %/-15 %                                    |
| Mains frequency                          | 50/60 Hz $\pm$ 3 Hz                                     |
| Current consumption                      | max. 732 VA                                             |
| Output voltage (PELV/SELV compliant)     | 24 V DC                                                 |
| Output voltage                           | 20.6 to 28.6 V DC $\pm$ 4 %                             |
| End-of-charge voltage                    | 26.5 to 28.6 V DC                                       |
| load shedding                            | 20.6 V DC                                               |
| Output nominal current $I_{\text{maxb}}$ | 24 A                                                    |
| Signal contacts load                     | 30 V DC/0.5 A; potential-free relay contact             |
| Mains voltage fuse                       | 5 A (T)                                                 |
| DC rechargeable battery circuit fuse     | 30 A (T), FK2/FKS                                       |
| Consumer fuse                            | max. 10 A one or two outputs, max. 24 A in total        |
| Rechargeable battery type                | Lead-acid battery, maintenance-free                     |
| Ambient temperature                      |                                                         |
| Approved by VdS                          | -5 °C to +40 °C (observe rechargeable battery lifespan) |
| Storage temperature                      | -10 °C to +50 °C                                        |
| Degree of protection with case           | IP54                                                    |
| Dimensions                               | 1000 × 800 × 307 mm (H × W × D)                         |
| Weight without rechargeable batteries    | approx. 65 kg                                           |
| VdS approval                             | G209173                                                 |
| Declaration of Performance (DoP)         | CPR-20-25-300                                           |

## CBE12-C empty case for rechargeable batteries



**No.: 20-4000204-01**

For expansion of the rechargeable batteries capacity; provides space for the installation of 2 rechargeable batteries (max. 65 Ah).

|                                       |                                |
|---------------------------------------|--------------------------------|
| Degree of protection                  | IP30                           |
| Dimensions                            | 606 × 463 × 215 mm (H × W × D) |
| Weight without rechargeable batteries | approx. 12 kg                  |

## External power supply units and accessories

|                                                                                     | Designation                                                                                                                      | Type         | Article no.   |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|
|    | <b>Power supply 24V/1A</b><br>in the IP30 cabinet                                                                                | BE-PSE01     | 20-4000121-01 |
|    | <b>Power supply 24V/1A</b><br>in an IP30 cabinet, including BX-IOM                                                               | BE-PSE01-IOM | 20-4000121-02 |
|    | <b>Top rail hat holder</b><br>for BE-PSE01                                                                                       | BE-THRH      | 20-4000122-01 |
|    | <b>Power supply 24V/1A</b><br>in the IP30 cabinet                                                                                | BE-PSE02     | 20-4000125-01 |
|    | <b>Power supply 24V/1A</b><br>in an IP30 cabinet, including BX-IOM                                                               | BE-PSE02-IOM | 20-4000125-02 |
|    | <b>Power supply unit 24V/3A IP30</b><br>In the IP30 cabinet, rechargeable battery max.<br>26 Ah, temperature sensor on the board | PSE03-C      | 20-4000209-01 |
|  | <b>Power supply unit 24 V/3 A (replacement)</b><br>for PSE03-C                                                                   | PSU03-OF     | 20-4000211-01 |
|  | <b>Fuse board (replacement)</b><br>with 5 fuses, for PSE03-C, incl. temperature<br>sensor                                        | FIB05-C      | 20-4000208-01 |
|  | <b>Power supply unit 24V/3A IP54</b><br>in the IP54 cabinet, rechargeable battery max.<br>45 Ah, incl. temperature sensor        | PSE03-P      | 20-4000210-01 |
|  | <b>Power supply unit 24 V/3 A (replacement)</b><br>for PSE03-P, incl. temperature sensor                                         | PSU03-CF     | 20-4000212-01 |
|  | <b>Fuse board (replacement)</b><br>with 5 fuses, for PSE03-P                                                                     | FIB05-P      | 20-4000214-01 |
|  | <b>Power supply unit 24V/12A IP30</b><br>in the IP30 cabinet, rechargeable battery max.<br>65 Ah, incl. temperature sensor       | PSE12-C      | 20-4000200-01 |
|  | <b>Power supply unit 24 V/12 A<br/>(replacement)</b><br>for PSE12-C                                                              | PSU12-OF     | 20-4000205-01 |
|  | <b>Fuse board (replacement)</b><br>for PSE12-C                                                                                   | FIB10-C      | 20-4000207-01 |

|                                                                                     | Designation                                                                                                                 | Type               | Article no.   |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------|---------------|
|    | <b>Power supply unit 24V/12A IP54</b><br>in the IP54 cabinet, rechargeable battery max.<br>45 Ah, incl. temperature sensor  | PSE12-P45          | 20-4000201-01 |
|    | <b>Power supply unit 24V/12A IP54</b><br>in the IP54 cabinet, rechargeable battery max.<br>200 Ah, incl. temperature sensor | PSE12-P200         | 20-4000202-01 |
|    | <b>Power supply 2 x 24V/12A IP54</b><br>in the IP54 cabinet, rechargeable battery max.<br>200 Ah, incl. temperature sensor  | PSE24-P200         | 20-4000203-01 |
|    | <b>Power supply unit 24 V/12 A<br/>(replacement)</b><br>for PSE12-P, including temperature sensor                           | PSU12-CF           | 20-4000206-01 |
|    | <b>Fuse board (replacement)</b><br>for PSE12-P                                                                              | FIB10-P            | 20-4000213-01 |
|    | <b>Empty case for rechargeable batteries</b>                                                                                | CBE12-C            | 20-4000204-01 |
|   | <b>Temperature sensor for PSE (replacement)</b>                                                                             | TSENS              | 20-4000219-01 |
|  | <b>BX-OI3 input/output module</b>                                                                                           | BX-OI3             | 20-2100001-01 |
|  | <b>BX-IM4 input module</b>                                                                                                  | BX-IM4             | 20-2100003-01 |
|  | <b>Box for loop module – indoor use</b><br>94 x 94 x 57 mm, for BX-OI3/BX-AIM etc.                                          | GEH MOD IP66       | FG020234      |
|  | <b>Fastening clamp for IP 66 case</b>                                                                                       | BKL M5             | FG020238      |
|                                                                                     | <b>Cylinder head screws M5 x 10</b><br>for mounting clamp 1 PU = 2000 pcs.                                                  | MS ZKS M5-10       | MS00845010    |
|  | <b>Measuring adapter (replacement)</b><br>for BE-PSE/PSE                                                                    | MAKKU              | 20-4000220-01 |
|                                                                                     | <b>Battery connection cables (replacement)</b><br>with 5 A and 15 A fuses                                                   | BATTKAB            | 20-4000230-01 |
|  | <b>USB-C/USB-C cable 3 m</b>                                                                                                | KAB USB-C/USB-C 3M | 20-1400215-01 |
|  | <b>FKS 1A flat fuse</b>                                                                                                     | FKS 1A             | MM000499      |



|                                                                                   | Designation              | Type    | Article no. |
|-----------------------------------------------------------------------------------|--------------------------|---------|-------------|
|  | <b>FKS 2A flat fuse</b>  | FKS 2A  | MM000496    |
|  | <b>FKS 3A flat fuse</b>  | FKS 3A  | MM000497    |
|  | <b>FKS 4A flat fuse</b>  | FKS 4A  | MM000498    |
|  | <b>FKS 5A flat fuse</b>  | FKS 5A  | MM000500    |
|  | <b>FKS 10A flat fuse</b> | FKS 10A | MM000502    |
|  | <b>FKS 15A flat fuse</b> | FKS 15A | MM000501    |

## 10.3 Rechargeable batteries for power supply unit cabinets

|                                                                                     | Designation                      | Type     | Article no. |
|-------------------------------------------------------------------------------------|----------------------------------|----------|-------------|
|    | Rechargeable battery 12 V/1.2 Ah | AKKU 1,2 | HG691014    |
|    | Rechargeable battery 12 V/2.1 Ah | AKKU 2,1 | HG691020    |
|    | Rechargeable battery 12 V/7 Ah   | AKKU 7   | HG691021    |
|    | Rechargeable battery 12 V/12 Ah  | AKKU 12  | HG691022    |
|    | Rechargeable battery 12 V/17 Ah  | AKKU 17  | HG691013    |
|    | Rechargeable battery 12 V/24 Ah  | AKKU 24  | HG691023    |
|   | Rechargeable battery 12 V/44 Ah  | AKKU 44  | HG691017    |
|  | Rechargeable battery 12 V/65 Ah  | AKKU 65  | HG691018    |
|  | Rechargeable battery 12 V/85 Ah  | AKKU 85  | HG691019    |

## 10.4 Overvoltage protection

The protection modules are used to supplement the overvoltage protection concept if peripheral devices (outputs or detectors) cannot be installed within the protected zone 1 (in accordance with VdS guideline 2833). The use of these components requires a proper overvoltage and earthing concept for the entire building.



No.: 20-4000500-01

### Base for protection module

Four pin terminal universal feed-through terminal to hold an arrester module without signal interruption. Safe earthing of the arrester module is provided via the top-hat rail support foot with a snap-on mounting.

|                      |                                                                                   |
|----------------------|-----------------------------------------------------------------------------------|
| Mounting             | DIN top-hat rail, 35 mm, in accordance with EN 60715                              |
| Connection           | Screw terminal, 0.08 to 4 mm <sup>2</sup>                                         |
| Tightening torque    | 0.4 Nm (connection terminals)                                                     |
| Earthing             | via 35 mm top-hat rail in accordance with EN 60715                                |
| Degree of protection | IP20                                                                              |
| Ambient temperature  | –40 °C to +80 °C                                                                  |
| Case material        | polyamide/PA 6.6                                                                  |
| Case colour          | yellow                                                                            |
| Dimensions           | 90 × 50 × 12 mm (H × W × D)                                                       |
| Ex-Designation       | DEKRA 11ATEX0089 X: II 3 G Ex nA I IC T4 Gc<br>IECEx DEK 11.0032X: Ex nA II T4 Gc |
| Approvals            | CSA, UL, GOST                                                                     |

**No.: 20-4000501-01**

## Protection module 24 V

Combined arrester module for connection to the BXT BAS base unit to protect four single lines with common reference potential as well as asymmetric interfaces. For use in accordance with the lightning protection zones concept at boundaries 0 – 2 A.

|                            |                                                                                                                                        |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Area of use                | Integral loop technology (B3/B4-DAI), conventional stub lines (DCI/MTI) and (monitored) outputs with a nominal current of up to 0.75 A |
| Arrester class             | type 1/P1                                                                                                                              |
| Nominal voltage            | 24 V DC                                                                                                                                |
| Highest continuous voltage | 33 V DC/23.3 V AC                                                                                                                      |
| Nominal current            | 0.75 A (with +45 °C)                                                                                                                   |
| Lightning impulse current  | 2.5 kA per wire                                                                                                                        |
| Nominal discharge current  | 10 kA per wire                                                                                                                         |
| Series impedance per wire  | 1.8 Ω                                                                                                                                  |
| Wire-to-wire capacitance   | ≤ 0,5 nF                                                                                                                               |
| Wire-to-PG capacitance     | ≤ 1,0 nF                                                                                                                               |
| Earthing                   | via base unit                                                                                                                          |
| Degree of protection       | IP20 (connected)                                                                                                                       |
| Ambient temperature        | –40 °C to +80 °C                                                                                                                       |
| Case material              | polyamide/PA 6.6                                                                                                                       |
| Case colour                | yellow                                                                                                                                 |
| Dimensions                 | 45 × 51 × 12 mm (H × W × D)                                                                                                            |
| Testing standards          | IEC 61643-21, UL 497B                                                                                                                  |
| Ex-Designation             | DEKRA 11ATEX0089 X: II 3 G Ex nA I<br>IC T4 Gc<br>IECEx DEK 11.0032X: Ex nA II T4 Gc                                                   |
| Approvals                  | CSA, UL, GOST                                                                                                                          |

**No.: 20-4000502-01**

## Protection module 36 V/four cores

Combined arrester module for connection to the BXT BAS base unit to protect four single lines with common reference potential as well as asymmetric interfaces. For use in accordance with the lightning protection zones concept at boundaries 0 – 2 A.

|                            |                                                                                      |
|----------------------------|--------------------------------------------------------------------------------------|
| Arrester class             | type 1/P1                                                                            |
| Nominal voltage            | 36 V DC                                                                              |
| Highest continuous voltage | 45 V DC/31 V AC                                                                      |
| Nominal current            | 1.8 A (with +45 °C)                                                                  |
| Lightning impulse current  | 2.5 kA per wire                                                                      |
| Nominal discharge current  | 10 kA per wire                                                                       |
| Series impedance per wire  | 0.43 Ω                                                                               |
| Wire-to-wire capacitance   | ≤ 0,8 nF                                                                             |
| Wire-to-PG capacitance     | ≤ 1,6 nF                                                                             |
| Earthing                   | via base unit                                                                        |
| Degree of protection       | IP20 (connected)                                                                     |
| Ambient temperature        | –40 °C to +80 °C                                                                     |
| Case material              | polyamide/PA 6.6                                                                     |
| Case colour                | yellow                                                                               |
| Dimensions                 | 45 × 51 × 12 mm (H × W × D)                                                          |
| Testing standard           | IEC 61643-21                                                                         |
| Ex-Designation             | DEKRA 11ATEX0089 X: II 3 G Ex nA I<br>IC T4 Gc<br>IECEX DEK 11.0032X: Ex nA II T4 Gc |
| Approval                   | GOST                                                                                 |

**No.: 20-4000503-01**

## Protection module 36 V/two cores

Combination arrester module for plugging into the BXT BAS base unit, for protection of two single cores, optionally indirect or direct shield earthing. With integrated LifeCheck for non-contact arrester testing.

|                            |                             |
|----------------------------|-----------------------------|
| Arrester class             | type 1/P1                   |
| Nominal voltage            | 36 V DC                     |
| Highest continuous voltage | 45 V DC/31 V AC             |
| Nominal current            | 1.8 A (with +45 °C)         |
| Lightning impulse current  | 2.5 kA per wire             |
| Nominal discharge current  | 10 kA per wire              |
| Series impedance per wire  | 0.43 Ω                      |
| Wire-to-wire capacitance   | ≤ 0,8 nF                    |
| Wire-to-PG capacitance     | ≤ 1,6 nF                    |
| Earthing                   | via base unit               |
| Degree of protection       | IP20 (connected)            |
| Ambient temperature        | –40 °C to +80 °C            |
| Case material              | polyamide/PA 6.6            |
| Case colour                | yellow                      |
| Dimensions                 | 45 × 51 × 12 mm (H × W × D) |
| Testing standards          | IEC 61643-21/EN 61643-21    |

## Overvoltage protection and accessories

|                                                                                   | Designation                                                              | Type            | Article no.   |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------|---------------|
|  | <b>Base for protection module</b>                                        | BXT BAS         | 20-4000500-01 |
|  | <b>Protection module 24 V</b>                                            | BXT ML4 BE 24   | 20-4000501-01 |
|  | <b>Protection module 36 V</b><br>for the protection of four single cores | BXT ML4 BE 36   | 20-4000502-01 |
|  | <b>Protection module 36V</b><br>for the protection of two single cores   | BXT ML2 BE S 36 | 20-4000503-01 |

## 10.5 Ex-barriers



No.: FG020121

### Z787 safety barrier

This safety barrier for intrinsically safe detector zones prevents excessive energy from entering a hazardous area and generating ignition spark by discharging there. The safety barrier is connected in series in the detector zone wiring and is tested and approved for use in hazardous areas in compliance with the requirements of ATEX 100a.

|                              |                                        |
|------------------------------|----------------------------------------|
| Operating voltage            | max. 28 V DC                           |
| Operating current            | 35 mA                                  |
| Short circuit current        | max. 93 mA                             |
| Maximum external capacitance | 0.083 µF/0.65 µF (IIC/IIB)             |
| Maximum external inductance  | 4.11 mH/16.44 mH (IIC/IIB)             |
| End-to-end resistance        | 300 Ω, max. 327 Ω                      |
| Wiring length                | max. 700 m                             |
| Ambient temperature          | –20 °C to +60 °C                       |
| Dimensions                   | 115 × 110 × 13 mm (H × W × D)          |
| Ex-Designation               | EX II 3 G EEx n A IIc T4               |
| ATEX approval                | TÜV 99 ATEX 1484 X<br>BAS 01 ATEX 7005 |



No.: FG020430

### Z787F safety barrier

Equivalent in function and structure to the Z787 safety barrier, but with integrated pre-fuse holders in the safe area. The safety barrier is intended for use in exposed locations where overvoltage, lightning strikes, potential shifts etc. can result in destruction of the safety barrier. The selective pre-fuses prevent the destruction of the internal fuses and can be replaced.

|                              |                                        |
|------------------------------|----------------------------------------|
| Operating voltage            | max. 28 V DC                           |
| Operating current            | 35 mA                                  |
| Short circuit current        | max. 93 mA                             |
| Maximum external capacitance | 0.083 µF/0.65 µF (IIC/IIB)             |
| Maximum external inductance  | 4.11 mH/16.44 mH (IIC/IIB)             |
| End-to-end resistance        | 300 Ω, max. 341 Ω                      |
| Wiring length                | max. 350 m                             |
| Ambient temperature          | –20 °C to +60 °C                       |
| Dimensions                   | 115 × 110 × 13 mm (H × W × D)          |
| Ex-Designation               | EX II 3 G EEx n A IIc T4               |
| ATEX approval                | TÜV 99 ATEX 1484 X<br>BAS 00 ATEX 7096 |



Case for safety barriers IP66



No.: 30-6800070-01

Case with integrated 35 mm mounting bracket for installation of up to three Z787 or Z787F safety barriers. When installing only one safety barrier, the required protective earthing conductor can also be placed directly in the case. The case features 14 M12/20 cable inlets and four M16/25 cable inlets.

|                      |                                        |
|----------------------|----------------------------------------|
| Mounting             | Surface mounting                       |
| Sealable             | yes                                    |
| Cable inlet          | 4 × M12/20, 4 × M16/25,<br>10 × M12/20 |
| Degree of protection | IP66                                   |
| Ambient temperature  | –40 °C to +80 °C                       |
| Case material        | Polycarbonate, glass-fibre reinforced  |
| Cover material       | Polycarbonate                          |
| Case colour          | light grey, RAL 7035                   |
| Dimensions           | 175 × 175 × 100 mm (H × W × D)         |

## Ex-barriers and accessories

|                                                                                     | Designation                                              | Type       | Article no.   |
|-------------------------------------------------------------------------------------|----------------------------------------------------------|------------|---------------|
|    | <b>Z787 safety barrier</b>                               | Z787       | FG020121      |
|    | <b>Z787F safety barrier</b>                              | Z787F      | FG020430      |
|    | <b>G-fuse 50 mA F 5 x 20</b><br>for Z787.F (replacement) | Z787F SI   | FG020431      |
|    | <b>Case with top-hat rail</b><br>for Ex-barriers IP 66   | GEH HS TP  | 30-6800070-01 |
|    | <b>Connection joint M12 (metric)</b>                     | MM ANB M12 | MM000191      |
|    | <b>Lock nut M12</b>                                      | MM GM M12  | MM000195      |
|   | <b>Connection joint M16 (metric)</b>                     | MM ANB M16 | MM000185      |
|  | <b>Lock nut M16</b>                                      | MM GM M16  | MM000186      |
|  | <b>Step nipple M 20 (metric)</b><br>1 PU = 100 pcs.      | MM SN M20  | MM000181      |

## 10.6 Hold-open systems



**No.: FG030600**



**No.: FG030602**

### ORS 142 optical smoke switch

For detection of smouldering and open fires with formation of smoke, and the control of locking systems on doors and gates. An additional temperature sensor is activated at an ambient temperature of 70 °C. The alarm threshold adjustment ensures a permanent monitoring of contamination levels and automatically adjusts the alarm threshold accordingly. The operating states are indicated visually via LED.

|                         |                            |
|-------------------------|----------------------------|
| Operating voltage range | 18 to 28 V DC              |
| Quiescent current       | 22 mA typ. with 28 V DC    |
| Alarm current           | 11 mA typ. with 28 V DC    |
| Fault                   | 16 mA with 28 V DC         |
| Sensitivity             |                            |
| Smoke                   | in accordance with EN 54-7 |
| Heat                    | +70 °C                     |
| Relay contact           | break contact              |
| Switching voltage       | 30 V DC                    |
| Switching current       | 1 A                        |
| Switching capacity      | 30 W                       |
| Degree of protection    | IP42                       |
| Ambient temperature     | –20 °C to +60 °C           |
| Case colour             | white, similar to RAL 9010 |
| Dimensions incl. base   | 80 × 65 mm (Ø × H)         |
| Weight                  | 120 g                      |
| DIBt approval           | Z-6.5-1725, Z-6.5-1891     |

**No.: FG030605**

## ORS 142 EX optical smoke switch

For the detection of smouldering fires and open fires with smoke formation. An additional temperature sensor is activated at an ambient temperature of 70 °C. This means that it can also be used in Ex zones 1, 2 and 22 for the activation of a hold-open system. The alarm threshold adjustment ensures a permanent monitoring of contamination levels and automatically adjusts the alarm threshold accordingly. The operating states are indicated visually via LED.

|                         |                                                                              |
|-------------------------|------------------------------------------------------------------------------|
| Operating voltage range | 20 to 28 V DC                                                                |
| Quiescent current       | max. 10.5 mA with 24 V DC                                                    |
| Alarm current           | max. 1.7 mA with 24 V DC                                                     |
| Fault                   | max. 2.3 mA with 24 V DC                                                     |
| Sensitivity             |                                                                              |
| Smoke                   | in accordance with EN 54-7                                                   |
| Heat                    | +75 °C ±5 °C                                                                 |
| Relay contact           | break contact                                                                |
| Switching voltage       | 30 V DC                                                                      |
| Switching current       | 1 A                                                                          |
| Switching capacity      | 30 W                                                                         |
| Degree of protection    |                                                                              |
| Connection box          | IP54                                                                         |
| Smoke switch            | IP42                                                                         |
| Ambient temperature     | –20 °C to +70 °C                                                             |
| Dimensions              |                                                                              |
| Connection box          | 76 × 190 × 56 mm (H × W × D)                                                 |
| Smoke switch            | 80 × 66 mm (Ø × H)                                                           |
| Weight                  | 1052 g                                                                       |
| DIBt approval           | Z-6.5-1725<br>Z-6.500-2359<br>Z-6.500-2393<br>Z-6.500-2394                   |
| Ex-Designation          | EX II 2G Ex eb mb [ib Gb] IIC T4 Gb<br>EX II 3D Ex tc [ic Dc] IIIB T130°C Dc |

**No.: FG030601****No.: FG030602**

## TDS 247 thermal switch

Thermal differential switch with maximum threshold to detect open fires with or without smoke. Ideal for areas in which sources of interference such as dust, smoke or steam are produced during normal operations. Both the high rate of increase of temperature and the exceeding of the set threshold value are detected. The operating states are indicated visually via LED.

|                         |                                          |
|-------------------------|------------------------------------------|
| Operating voltage range | 18 to 28 V DC                            |
| Quiescent current       | 22 mA typ. with 28 V DC                  |
| Alarm current           | 11 mA typ. with 28 V DC                  |
| Fault                   | 16 mA with 28 V DC                       |
| Sensitivity             |                                          |
| Heat                    | category A1 (in accordance with EN 54-5) |
| Maximum threshold       | +54 °C to +65 °C                         |
| Relay contact           | break contact                            |
| Switching voltage       | 30 V DC                                  |
| Switching current       | 1 A                                      |
| Switching capacity      | 30 W                                     |
| Degree of protection    | IP42                                     |
| Ambient temperature     | –20 °C to +80 °C                         |
| Case colour             | white, similar to RAL 9010               |
| Dimensions incl. base   | 80 × 65 mm (Ø × H)                       |
| DIBt approval           | Z-6.5-1725, Z-6.5-1891                   |

**No.: 31-5000006-01**

## LRS 04 Ex duct smoke switch system

The duct smoke switch system is used for smoke monitoring in ventilation ducts with explosive atmospheres in buildings and consists of the duct smoke base LKS 02, the optical smoke switch ORS 221 Ex and the ORS 142 Ex interface (connection box). These components are mounted on the mounting plate and are pre-wired.

The LRS 04 Ex system is mounted on the ventilation duct from the outside and is designed for use in rectangular ventilation ducts from 150 mm to 1 m. In circular ventilation ducts, the use of diameter of 200 mm to 1 m is possible (for monitoring larger ducts, it is necessary to use several devices).

The LRS 04 Ex system is ATEX approved and can be used in explosion zones 1 and 2. The connection to the fire alarm control panel is made via input modules.

|                              |                                                                                                                                               |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Operating voltage range      | 20 to 28 V DC                                                                                                                                 |
| Quiescent current            | 12 mA typ.                                                                                                                                    |
| Alarm current                | 1.8 mA typ.                                                                                                                                   |
| Fault                        | 2.7 mA                                                                                                                                        |
| Relay contact                |                                                                                                                                               |
| Switching voltage            | 30 V DC/30 V AC                                                                                                                               |
| Switching current            | 1 A                                                                                                                                           |
| Switching capacity           | 30 W                                                                                                                                          |
| Ventilation duct rectangular | side lengths 150 mm to 1 m                                                                                                                    |
| Ventilation duct round       | Ø 200 mm up to 1 m                                                                                                                            |
| Ventilation pipe length      | 130 to 336 mm                                                                                                                                 |
| Openings                     | 2 × Ø 28 to 30 mm/150 mm distance for mounting in the case<br>3 × max. 6 mm or three pairs of openings for the passage of three tension bands |
| Cable inlet                  | M16 × 1,5 Ø 4 to 8 mm                                                                                                                         |
| Air speed                    | max. 20 m/s                                                                                                                                   |
| Degree of protection         | IP54                                                                                                                                          |
| Ambient temperature          | –20 °C to +70 °C                                                                                                                              |
| Case material                | polycarbonate, polyester, aluminium tube                                                                                                      |
| Case colour                  | blue, black/white, transparent                                                                                                                |
| Dimensions without pipe      | 105 × 520 × 135 mm (H×W×D)                                                                                                                    |
| Weight                       |                                                                                                                                               |
| LRS 04 Ex                    | 2395 g                                                                                                                                        |
| ORS 221 Ex                   | 80 g                                                                                                                                          |
| Inlet pipe                   | 110 g                                                                                                                                         |
| Ex-Designation               |                                                                                                                                               |
| Smoke switch                 | Ex II 2G Ex ib IIC T4                                                                                                                         |
| Connection box               | Ex II 2G Ex e mb [ib] IIC T4                                                                                                                  |



**No.: 31-5400002-01**

## FSZ Base hold-open system control panel

The FSZ Base is a power supply unit, manual release button, alarm memory and reset button in a single device. Together with approved smoke switches and door holding magnets, it forms a hold-open system for the activation of fire and smoke control doors and gates.

- Short circuit resistant, primary switched switch-mode power supply
- Stabilised output voltage, rated value 24 V DC
- Tested in accordance with DIN EN 14637
- Relay with potential-free changeover contact freely available
- 24 V door-holding magnet-output with free-wheeling diode and function monitoring
- Integrated reset button
- Integrated, standard-compliant manual release button
- Variable labelling of the manual release button
- Connection for external manual release button
- Connection for external reset button
- Selectable alarm memory
- Selectable circuit monitoring of the smoke switch and external manual release button wiring
- With activated circuit monitoring, connection of two smoke detector stub lines is possible
- The fault cause can be determined via the LED flash code on the operating panel

|                                   |                                          |
|-----------------------------------|------------------------------------------|
| Rated input voltage               | 230 V AC                                 |
| Rated output voltage              | 24 V DC                                  |
| Rated output current              | max. 400 mA                              |
| Switched magnetic output          | 24 V DC                                  |
| Potential-free changeover contact | 250 V AC/5 A<br>30 V DC/3 A              |
| Mounting                          | Surface-mounted, optionally top-hat rail |
| Cable inlet                       |                                          |
| top/bottom                        | 6 × M16, 2 × M20                         |
| back                              | 2 slots                                  |
| Ambient temperature               | –10 °C to +50 °C                         |
| Storage temperature               | –10 °C to +60 °C                         |
| Dimensions                        | 146 × 146 × 60.5 mm (H × W × D)          |
| DIBt approval                     | Z-6.5-1725                               |
| VdS approval                      | G213091                                  |



No.: FG030640

## HAT 02 manual release button

Manual actuation switch for installation in dry areas, for manual actuation of hold-open devices in accordance with DIBt guidelines.

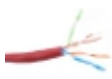
|                      |                          |
|----------------------|--------------------------|
| Relay contact        | break contact            |
| Switching voltage    | 30 V DC                  |
| Switching current    | 1 A                      |
| Mounting             | Surface or flush-mounted |
| Labelling            | <b>Close door</b>        |
| Degree of protection | IP20                     |
| Case colour          | white, red rocker switch |



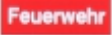
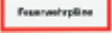
## Hold-open systems and accessories

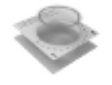
|                                                                                     | Designation                                                                              | Type           | Article no.   |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------|---------------|
|    | <b>ORS 142 optical smoke switch</b>                                                      | ORS 142        | FG030600      |
|    | <b>ORS 142 EX optical smoke switch</b><br>ATEX approved, for hazardous areas 1, 2 and 22 | ORS 142 EX     | FG030605      |
|    | <b>TDS 247 thermal switch</b>                                                            | TDS 247        | FG030601      |
|    | <b>143A mounting base</b>                                                                | 143A           | FG030602      |
|    | <b>LRS 02 duct smoke switch system</b>                                                   | LRS 02         | FG030610      |
|    | <b>LRS 03 duct smoke switch system</b>                                                   | LRS 03         | FG030611      |
|   | <b>Ex duct smoke switch system</b><br>incl. ORS 221 EX                                   | LRS 04 EX      | 31-5000006-01 |
|  | <b>Optical smoke switch Ex</b><br>Replacement smoke switch for LRS 04 EX                 | ORS 221 EX     | 31-5000005-01 |
|  | <b>FSZ Base hold-open system control panel</b>                                           | FSZ BASIS      | 31-5400002-01 |
|                                                                                     | <b>Accessory set for Base hold-open system control panel</b>                             | ZUBEHÖRSET FSZ | 31-4100010-02 |
|  | <b>AM 142 final module</b><br>for Base hold-open system control panel                    | AM 142         | 31-5700002-01 |
|  | <b>HAT 02 manual release button</b>                                                      | HAT 02         | FG030640      |

## 10.7 Cables

|                                                                                     | Designation                                                                                  | Type                 | Article no.   |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------|---------------|
|    | <b>Integral LAN data cable</b><br>Cat 5e UTP (AWG24), halogen-free, red                      | UTP 100 FRH          | 20-4100000-01 |
|    | <b>Ground cable Cat 7 4 × 2 × AWG23 sw</b><br>for Integral LAN/WAN/MMI-bus                   | STP-C(L)2Y-100 KAT.7 | 20-4300001-01 |
|    | <b>Fire alarm cable, red, shielded 1 × 2 × 0.8</b><br>for loop technology                    | JB-Y(ST)Y 1X2X0,8RT  | L198200804    |
|    | <b>Fire alarm cable, red, shielded 1 × 2 × 0.8</b><br>for loop technology, halogen-free      | KAB 1*2*0,8 S HF     | L198200803    |
|    | <b>Fire alarm cable, blue, shielded 1 × 2 × 0.8</b><br>for hazardous areas -20 °C to +105 °C | JB-Y(ST)Y 1X2X0,8BL  | L198200805    |
|    | <b>Cable for high temperature detector, orange, 2 × 0.75</b><br>-50 °C to +180 °C            | SIHF-O 2X0,75        | L198275800    |
|    | <b>Fire alarm cable, red, 4 × 0.8</b>                                                        | BM-YY 4X0,8 RT       | 20-4300010-01 |
|    | <b>Fire alarm cable, red, 5 × 2 × 0.6</b>                                                    | F-YAY 5X2X0,6 RT     | 20-4300011-01 |
|   | <b>Fire alarm cable, red, 20 × 2 × 0.6</b>                                                   | F-YAY 20X2X0,6 RT    | 20-4300012-01 |
|  | <b>Cable YMM, grey, 2 × 2.5</b>                                                              | KAB 2*2,5            | MM000110      |
|  | <b>Kabel YYSCH, grey, 3 × 0.6, 100 m</b>                                                     | KAB 3*0,6 GR         | MM000111      |
|  | <b>Kabel YYSCH, grey, 5 × 0.6, 100 m</b>                                                     | KAB 5*0,6 GR         | MM000112      |
|  | <b>Kabel YMM-O without inscription, red, 3 × 1.5</b>                                         | KAB 3*1,5            | MM000113      |
|  | <b>Kabel YMM-O without inscription, red, 3 × 2.5</b>                                         | KAB 3*2,5            | MM000114      |

## 10.8 Inscription label and stickers

|                                                                                     | Designation                                                                                                                                        | Type          | Article no.   |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|
|    | <b>Sticker "Brandmelderzentrale"</b><br>161 × 33 mm                                                                                                | S BMZ MINI    | 20-4900025-01 |
|    | <b>Sticker "Brandmelderzentrale"</b><br>173 × 51 mm                                                                                                | S BMZKL       | 20-4900023-01 |
|    | <b>Sticker "Brandmelderzentrale"</b><br>297 × 105 mm                                                                                               | S BMZGR       | FG28405       |
|    | <b>Sticker "Brandmeldesystem Teilzentrale/Blackbox"</b><br>173 × 51 mm                                                                             | S BMSTZ       | 20-4900021-01 |
|    | <b>Sticker "Externes Anzeigefeld"</b><br>161 × 33 mm                                                                                               | S EXT ANZ     | 20-4900024-01 |
|    | <b>Sticker "Externes Anzeigefeld"</b><br>110 × 22 mm                                                                                               | S EXT ANZ 2   | 20-4900034-01 |
|    | <b>Sticker "Externe Energieversorgungseinrichtung für Brandmeldeanlage"</b><br>252 × 54 mm                                                         | S EXT NG      | FG27811       |
|  | <b>Sticker "Externe Energieversorgungseinrichtung für Brandmeldeanlage"</b><br>180 × 38 mm                                                         | S EXT NG2     | 20-4900000-01 |
|  | <b>Sticker "Feuerwehr" (replacement)</b>                                                                                                           | FSS AK        | 20-4201031-01 |
|  | <b>Sticker "Feuerwehrpläne" (replacement)</b><br>297 × 105 mm                                                                                      | S FWP         | 20-4900020-01 |
|  | <b>Sticker "Feuerwehrbedienfeld"</b><br>297 × 110 mm                                                                                               | S FWB         | 20-4900026-01 |
|  | <b>Arrow sticker</b><br>294 × 103 mm                                                                                                               | S PFL         | 20-4900022-01 |
|  | <b>Sign "Brandmelder" ZWD/ZWB</b><br>Foil sticker white/red 100 × 23 mm                                                                            | S ZWBD        | 20-4900031-01 |
|  | <b>Schrack Seconet logo sticker, resin coated</b><br>40 × 10 mm                                                                                    | S FSS LOGO1   | 20-4900028-01 |
|  | <b>Labelling card for detector base USB 502-1 and USB 502-6</b><br>for labels up to 44 × 75 mm, white, similar RAL 9003, 1 PU = 10 labelling cards | DNP 502 VE 10 | 31-3100001-01 |
|  | <b>Labelling panel for FDOOT271-O</b><br>62 × 34 mm, push-in strips 60 × 18 mm or adhesive label 60 × 16 mm                                        | FDBZ291       | 20-3001004-01 |
|  | <b>Detector label for large room heights</b><br>with imprint: 120 × 175 mm                                                                         | S MBK GRH     | FG28399       |
|  | <b>Detector label for large room heights</b><br>without imprint: 120 × 175 mm                                                                      | S MBK GRH2    | FG28398       |

|                                                                                     | Designation                                                                                                                                                                                                                                                                    | Type         | Article no.   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|
|    | <b>Detector labelling card</b><br>80 x 50 mm                                                                                                                                                                                                                                   | S BKKL       | 20-4900032-01 |
|    | <b>Sticker "Alarmzähler" for Integral MAP (28 pcs.)</b><br>38 x 12 mm                                                                                                                                                                                                          | S AZ         | FG28423       |
|    | <b>Sticker "Anzeigetest" for Integral MAP (28 pcs.)</b><br>38 x 12 mm                                                                                                                                                                                                          | S AT         | FG28424       |
|    | <b>Sticker "Erkundung" and "Auslösungen" for Integral PIP operating panels (2 pcs.)</b><br>38 x 30 mm                                                                                                                                                                          | S PIP EA     | FG28425       |
|    | <b>Warning information sticker "Achtung Brandfallsteuerungen" (6 pcs.)</b><br>172 x 15 mm                                                                                                                                                                                      | S BFST1      | 20-4900029-01 |
|    | <b>Warning information stickers without imprint (6 pcs.)</b><br>172 x 15 mm                                                                                                                                                                                                    | S BFST2      | 20-4900030-01 |
|    | <b>Security seal (20 pcs.)</b><br>50 x 20 mm                                                                                                                                                                                                                                   | S SEAL       | 20-4900033-01 |
|   | <b>Sticker hand symbol for MCP 535X</b><br>70 x 70 mm                                                                                                                                                                                                                          | MCP 535 AK   | FG030230      |
|  | <b>Sticker "Hausalarm" for MCP 535X</b><br>90 x 21 mm (24 pcs.)                                                                                                                                                                                                                | S HA         | 20-4900001-01 |
|  | <b>Inscription label for detector base USB 50x-x</b><br>for labels up to 47 x 75 mm, white similar RAL 9003                                                                                                                                                                    | DNP 521/531  | FG030138      |
|  | <b>Sticker "AUFZUG Brandfallsteuerung" for MCP 535X</b><br>90 x 21 mm                                                                                                                                                                                                          | S AZBFS      | 20-4900005-01 |
|  | <b>Labelling ring grey for heat detectors</b><br>1 PU = 1 package á 50 sticker, Ø 53 mm                                                                                                                                                                                        | DILH-VE50    | 30-6800115-01 |
|  | <b>Labelling sheets for MCP 535X</b><br>(Auslösung alle Steuerungen, Building alarm, Fire Brigade, Prüfmelder, CO2-STOPP, STOPP-TASTER Gaslöschanlage, NACHFLUTEN Feuerlöschanlage, HANDAUSLÖSUNG Feuerlöschanlage, Close door, AMOK-ALARM, Roter Punkt (für Feststellanlagen) | MCP 525/535D | 30-3700002-01 |

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**Schrack Seconet AG**  
Eibesbrunnnergasse 18  
A-1120 Vienna | +43 50 857  
office@schrack-seconet.com

**schrack-seconet.com**

Czech Rep., CZ-149 00 Prague 4, Štítová 283 | +420 2 74784422  
Hungary, HU-1119 Budapest, Fehérvári út 89-95 | +36 1 4644300  
India, IN-122102 Gurgaon, C-704A, Pioneer Urban Square, Sec-62 | +91 124 4141501  
Poland, PL-02-972 Warsaw, ul. Branickiego 15, Wilanów Office Park, bud. B1 | +48 22 3300620  
Romania, RO-023961 București, Str. Mântuleasa nr. 15A/1 | +40 372 756316  
Russia, RU-123001 Moscow, B. Sadovaya str. 5, build. 1 office 514 | +7 495 5105015  
Slovakia, SK-831 06 Bratislava, Mudrochova 2 | +421 2 44635595  
Sweden, SE-126 30 Hägersten, Vretenborgsvägen 28, Floor 9 | +46 8 6801860  
Turkey, TR-34718 Kadıköy-İstanbul, Koşuyolu Mah. İsmailpaşa Sk. No. 78 | +90 216 3455199