



Visual signalling device

Series FX15/2

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1 General information

1.1 Manufacturer

R. STAHL Schaltgeräte GmbH
Business Unit Lighting & Signalling
Nordstr. 10
99427 Weimar
Germany

Tel.: +49 3643 4324
Fax: +49 3643 4221-76
Internet: r-stahl.com
E-mail: info@r-stahl.com

R. STAHL Schaltgeräte GmbH

Am Bahnhof 30
74638 Waldenburg
Germany

Tel.: +49 7942 943-0
Fax: +49 7942 943-4333
Internet: r-stahl.com
E-mail: info@r-stahl.com

1.2 Information regarding the operating instructions

ID no.: 283935 / FX1560300190
Publication code: 2022-03-04·BA00·III·en·01

The original instructions are the English edition.
They are legally binding in all legal affairs.

1.3 Further documents

- Data sheet
- For documents in other languages, see r-stahl.com.

1.4 Conformity with standards and regulations

IECEX, ATEX, EU Declaration of Conformity and further national certificates can be downloaded via the following link: <https://r-stahl.com/en/global/support/downloads/>.
IECEX is also available at: <http://iecex.iec.ch/>

2 Explanation of symbols

2.1 Symbols used in these operating instructions

| Symbol | Meaning |
|--------|---|
| | Tips and recommendations on the use of the device |
| | General danger |
| | Danger due to explosive atmosphere |






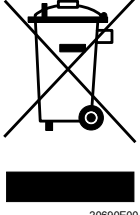
2.2 Warning notes

Warning notes must be observed under all circumstances, in order to minimise the risk resulting from design engineering and operation. The warning notes have the following structure:

- Signalling word: DANGER, WARNING, CAUTION, NOTICE
- Type and source of danger/damage
- Consequences of danger
- Taking countermeasures to avoid the danger or damage

| | |
|---|---|
| | DANGER |
| | Danger to persons Non-compliance with the instruction results in severe or fatal injuries to persons. |
| | WARNING |
| | Danger to persons Non-compliance with the instruction can result in severe or fatal injuries to persons. |
| | CAUTION |
| | Danger to persons Non-compliance with the instruction can result in light injuries to persons. |
| NOTICE | |
| Avoiding material damage Non-compliance with these instructions can result in material damage to the device and/or its surroundings. | |

2.3 Symbols on the device

| Symbol | Meaning |
|---|---|
|  05594E00 | CE marking according to the current applicable directive. |
|  02198E00 | Device certified for hazardous areas according to the marking. |
|  15649E00 | Input |
|  15648E00 | Output |
|  11048E00 | Safety notes that must always be observed: The corresponding data and/or safety-related instructions contained in the operating instructions must be followed for devices with this symbol! |
|  20690E00 | Marking according to WEEE Directive 2012/19/EU |

3 Safety notes

3.1 Operating instructions storage

- Carefully read the operating instructions.
- Store the operating instructions at the mounting location of the device.
- Observe applicable documents and operating instructions of the devices to be connected.

3.2 Personnel qualification

Qualified specialist personnel is required to perform the activities described in these operating instructions. This primarily applies to work in the following areas

- Project engineering
- Mounting/dismounting the device
- (Electrical) installation
- Commissioning
- Maintenance, repair, cleaning

Specialists who perform these activities must have a level of knowledge that meets applicable national standards and regulations.

Additional knowledge is required for any activity in hazardous areas!

R. STAHL recommends having a level of knowledge equal to that described in the following standards:

- IEC/EN 60079-14 (Project engineering, selection and construction of electrical systems)
- IEC/EN 60079-17 (Electrical Installations Inspection and Maintenance)
- IEC/EN 60079-19 (Equipment repair, overhaul and reclamation)

3.3 Safe use

Before mounting

- Read and observe the safety notes in these operating instructions!
- Ensure that the contents of these operating instructions are fully understood by the personnel in charge.
- Use the device in accordance with its intended and approved purpose only.
- Always consult R. STAHL Schaltgeräte GmbH if using the device under operating conditions which are not covered by the technical data.
- Make sure that the device is not damaged.
- We cannot be held liable for damage to the device caused by incorrect or unauthorised use or non-compliance with these operating instructions.



For mounting and installation

- Have mounting and installation performed only by qualified and authorised persons (see chapter "Personnel qualification").
- The device is only to be installed in areas for which it is suited based on its marking.
- During installation and operation, observe the information (characteristic values and rated operating conditions) on the rating, data and information plates located on the device.
- Before installation, make sure that the device is not damaged.


Commissioning, maintenance, repair

- Only have commissioning and repairs performed by qualified and authorised persons (see chapter "Personnel qualification").
- Before commissioning, make sure that the device is not damaged.
- Perform only maintenance work described in these operating instructions.

3.4 Modifications and alterations

| | |
|---|---|
|  | DANGER |
| | <p>Explosion hazard due to modifications and alterations to the device! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Do not modify or change the device. |
|  | <p>No liability or warranty for damage resulting from modifications and alterations.</p> |

4 Function and device design

| | |
|--|--|
|  | DANGER |
| | <p>Explosion hazard due to improper use! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Use the device only according to the operating conditions described in these operating instructions. • Use the device only for the intended purpose specified in these operating instructions. |

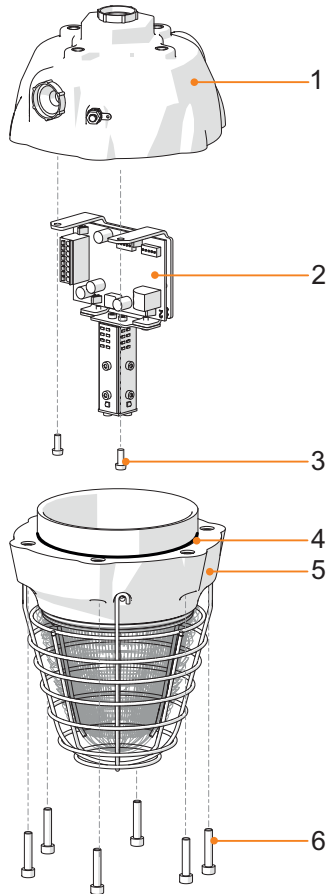
4.1 Function**Application range**

The series FX15/2 visual signalling device is intended for use in hazardous areas. It can be used in hazardous areas according to ATEX/IECEx in Zones 1 and 2 of gas group IIB or IIC or in Zones 21 and 22 for dust group IIC as well as in safe areas.

Mode of operation

When activated, the signalling device emits a visual signal, depending on the configuration and device version.

4.2 Device design



23047E00

- 1 Device base
- 2 PCB
- 3 Screws

- 4 Seal
- 5 Top part
- 6 Cheese-head screws

5 Technical data

Explosion protection

Global (IECEX)

Gas and dust | IECEx EPS 20.0036X
 Ex db IIC T. *) Gb
 Ex tb IIIC T... °C*) Db

Europe (ATEX)

Gas and dust | EPS 20 ATEX 1 076 X
 Ⓢ II 2 G Ex db IIC T. *) Gb
 Ⓢ II 2 D Ex tb IIIC T... °C*) Db

| | | |
|-------------------------------|-----------------------------|-----------------------------|
| *) Temperature class | T6 | T4 |
| Max. surface temperature (tb) | T80 °C | T100 °C |
| Ambient temperature range | -60 to +50 °C ¹⁾ | -60 to +70 °C ²⁾ |

¹⁾ Loop in/loop out wiring up to max. 10 A

²⁾ Loop in/loop out wiring up to max. 10 A, connection line and cable entries with permissible operating temperature ≥ +90 °C required

Special conditions "X"

Repair work on flameproof joints is only permissible in accordance with the values specified by the manufacturer.

The protective covers must be installed so that they are protected against electrostatic charge.

The strength class of the screws used must be at least A2-70.

Certifications and certificates

Certifications | IECEx, ATEX

Technical data

Technical data

Product weight | 2.4 kg

Electrical data

Rated operational voltage | 21.1 to 24 V DC

| Average input power/ max. current consumption | Max. current consumption [mA] | Average power [W] |
|---|-------------------------------------|-------------------------|
| XENON 5J | 350 | 6.5 |
| LED | 400 | 6.5 |
| In flash mode | 1,200 | 6.5 |

Class | I (PE connection) (internal + external)

Ambient conditions

Functional ambient temperature range | min. -40 °C
max. ambient temperature see certificate

Mechanical data

Degree of protection | IP66 (IEC/EN 60529)

Material

Enclosure | Glass fibre reinforced polyester

Enclosure colours | Black

Calotte cover | Polycarbonate

Protective grid | Stainless steel

Cable entries | 3 x M20, product supplied with 3 x dust caps

Technical data

Visual data

Calculated
max. range

| LED disc: | | Inform | | Alert | |
|------------|---------|------------------|------------------|------------------|------------------|
| Function | | Flashing 1 Hz | Blinking 1 Hz | Flashing 1 Hz | Blinking 1 Hz |
| Colour | red | 45 m | 58 m | 10 m | 13 m |
| | amber | 69 m | 89 m | 15 m | 20 m |
| | blue | 38 m | 48 m | 8 m | 11 m |
| | green | 36 m | 46 m | 8 m | 10 m |
| | clear | 86 m | 111 m | 19 m | 25 m |
| | opal | 74 m | 94 m | 16 m | 21 m |
| | yellow | 83 m | 106 m | 19 m | 24 m |
| | magenta | 19 m | 25 m | 4 m | 6 m |
| LED tower: | | Inform | | Alert | |
| Function | | Flashing 1 Hz | Blinking 1 Hz | Flashing 1 Hz | Blinking 1 Hz |
| Colour | red | 52 m | 67 m | 12 m | 15 m |
| | amber | 87 m | 111 m | 19 m | 25 m |
| | blue | 47 m | 61 m | 11 m | 14 m |
| | green | 45 m | 57 m | 10 m | 13 m |
| | clear | 109 m | 139 m | 24 m | 31 m |
| | opal | 92 m | 118 m | 21 m | 26 m |
| | yellow | 104 m | 133 m | 23 m | 30 m |
| | magenta | 24 m | 31 m | 5 m | 7 m |
| XENON: | | Inform | | Alert | |
| Function | | Flashing 1 Hz | | Flashing 1 Hz | |
| Colour | red | 35 m | | 8 m | |
| | amber | 62 m | | 14 m | |
| | blue | 32 m | | 7 m | |
| | green | 32 m | | 7 m | |
| | clear | 82 m | | 18 m | |
| | opal | 57 m | | 13 m | |
| | yellow | 77 m | | 17 m | |
| | magenta | 21 m | | 5 m | |

Technical data

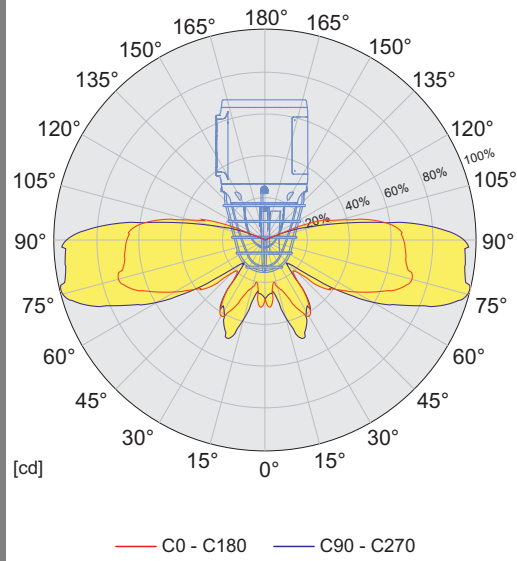
Luminous characteristics

| Effective luminous intensity | Type | | LED disc | | LED tower | | XENON |
|------------------------------|----------|---------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|
| | Function | | Flash- ing 1 Hz | Blink- ing 1 Hz | Flash- ing 1 Hz | Blink- ing 1 Hz | Flashing 1 Hz |
| | Colour | red | 41 cd | 67 cd | 55 cd | 90 cd | 24 cd |
| | | amber | 96 cd | 157 cd | 151 cd | 248 cd | 76 cd |
| | | blue | 28 cd | 47 cd | 45 cd | 74 cd | 20 cd |
| | | green | 25 cd | 42 cd | 40 cd | 66 cd | 21 cd |
| | | clear | 150 cd | 245 cd | 236 cd | 387 cd | 136 cd |
| | | opal | 108 cd | 178 cd | 171 cd | 280 cd | 66 cd |
| | | yellow | 138 cd | 226 cd | 217 cd | 356 cd | 119 cd |
| | | magenta | 7 cd | 12 cd | 12 cd | 19 cd | 9 cd |
| Luminous flux | Type | | LED disc | | LED tower | | |
| | Function | | Continuous light | | Continuous light | | |
| | Colour | red | 99 lm | | 236 lm | | |
| | | amber | 233 lm | | 573 lm | | |
| | | blue | 69 lm | | 170 lm | | |
| | | green | 62 lm | | 152 lm | | |
| | | clear | 365 lm | | 895 lm | | |
| | | opal | 264 lm | | 648 lm | | |
| yellow | | 335 lm | | 824 lm | | | |
| magenta | 18 lm | | 45 lm | | | | |

Technical data

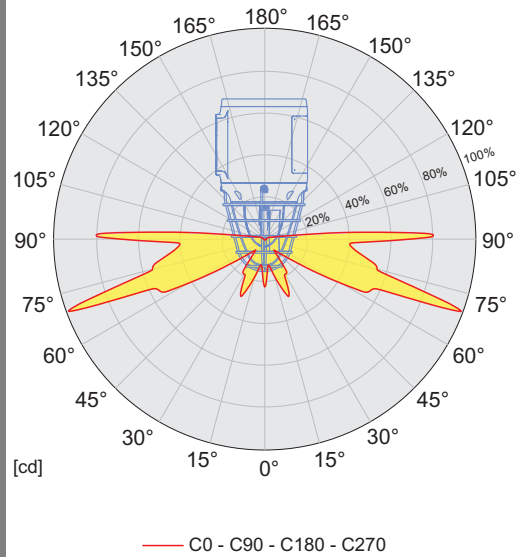
Pole diagram

XENON:



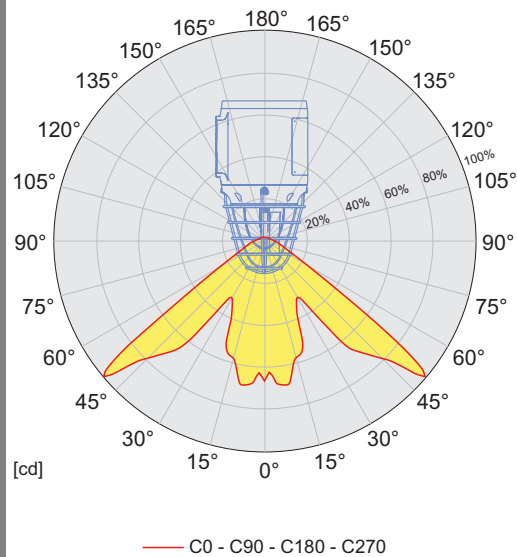
22498E00

LED tower:



22497E00

LED disc:



22496E00

Technical data

| | |
|-----------------|--|
| Flash energy | XENON: 5 J |
| Signal function | LED: <ul style="list-style-type: none"> - Continuous light (maximum, dimmed) - Flashing light (single flash, double flash, triple flash 1 Hz/2 Hz/3 Hz) - Blinking light (1 Hz/1.5 Hz/2 Hz) - Rotating light (90^{rpm}, 120^{rpm}, 180^{rpm}) - Chaos light XENON: <ul style="list-style-type: none"> - Flashing light (single flash, 1 Hz) |

Mounting/installation

| | |
|----------------------|--|
| Connection type | PUSH-IN terminal |
| Connection terminals | Solid: 0.5 to 2.5 mm ² Finely stranded: 0.5 to 2.5 mm ² |
| Scope of delivery | <ul style="list-style-type: none"> - Signalling device according to configuration - L-bracket - Dust caps |

For further technical data, see r-stahl.com.

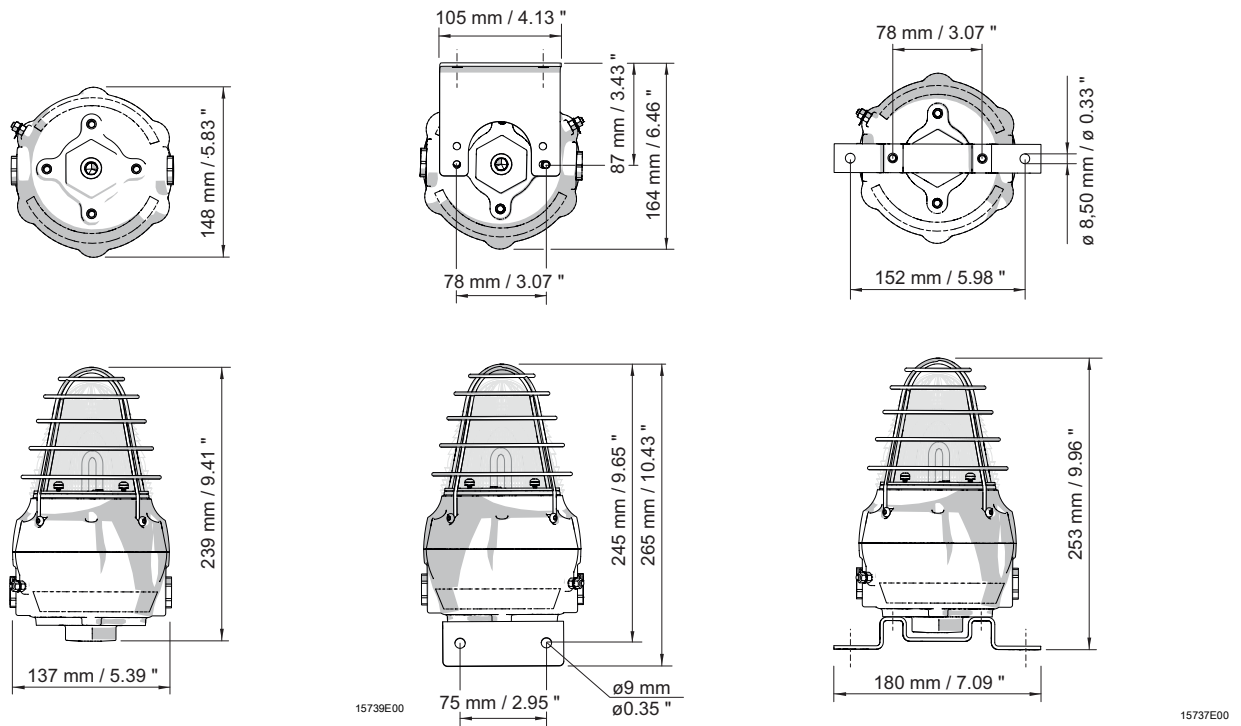
6 Transport and storage

- Transport and store the device only in the original packaging.
- Store the device in a dry place (no condensation) free of vibrations.
- Do not drop the device.

7 Mounting and installation

7.1 Dimensions/fastening dimensions

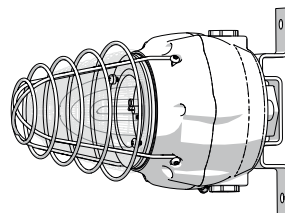
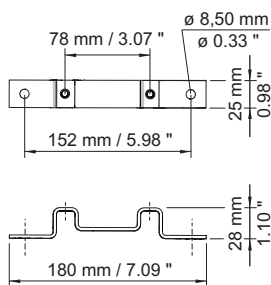
Dimensional drawings (all dimensions in mm [inch]) – Subject to change



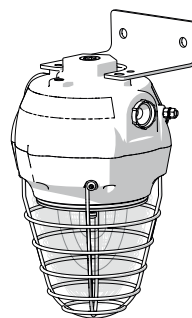
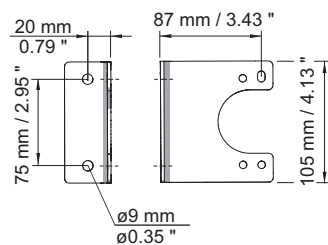
FX15/2 flashing beacon

FX15/2 flashing beacon with L-bracket

FX15/2 flashing beacon with mounting bracket






Mounting bracket



L-shaped bracket

7.2 Mounting/dismounting, operating position

| | |
|---|--|
|  | <p style="text-align: center;">DANGER</p> <p>Explosion hazard due to improper mounting! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Only operate the device if it is not damaged. If the thread is damaged, replace the device immediately. • Only install the device in a clean and dry operating environment. • Only mount the device on a wall or on a suitable surface. • Carefully protect exposed joint surfaces from damage, dust and dirt. • Install end flanges without applying force (without hammer and tool) in straight alignment. • If necessary, fit core end sleeves gas-tight and using a suitable tool. |
|  | <p style="text-align: center;">DANGER</p> <p>Explosion hazard due to electrostatic discharge! Non-compliance results in severe or fatal injuries.</p> <p>Do not use the device in strong charge-generating environments!</p> <p>The following processes/activities should be avoided:</p> <ul style="list-style-type: none"> • Accidental friction • Particle flows |
|  | <p style="text-align: center;">DANGER</p> <p>Explosion hazard due to open drilled holes, unused cable entries and cable glands! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Only use cable entries and stopping plugs that have been separately checked and certified in accordance with Directive 2014/34/EU (ATEX) and IECEx (CoC), and which technically correspond to the state of technology given in the certificate. • The IP level of protection of the cable entries and stopping plugs must at least correspond to the IP level of protection of the device (see marking on the device). • When selecting cable entries, observe the type of thread and thread size in the component documentation. • Seal the thread with non-curing thread sealant in order to guarantee the IP66 degree of protection. • Always close unused drilled holes, cable entries and cable glands using approved stopping plugs or plugs. Observe IEC/EN 60079-14 for this. • Installation of the cable gland must be performed in accordance with the manufacturer's instructions. • The cable entry temperature may exceed 70 °C. |

NOTICE

Malfunction or device damage from electrostatic discharge.
Electronic components can be destroyed if touched.
Non-compliance may lead to material damage!

- Do not touch the LED PCBs!

- Select a mounting location that is suitable for the signal effect of the device, as well as the required mounting and installation parameters (see "Technical data" chapter).
- Mount the device on a flat surface using the L-bracket and screw holes.
- Mount suitable approved electrical lines (see "Technical data" chapter) using a suitable flameproof cable entry.
- Close unused entries using certified, flameproof stopping plugs.

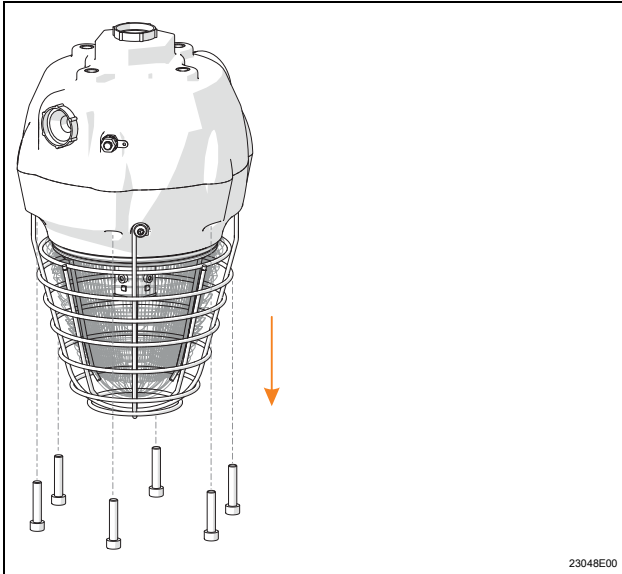
7.3 Installation

The electrical installation and configuration of the device is performed in the following sequence:

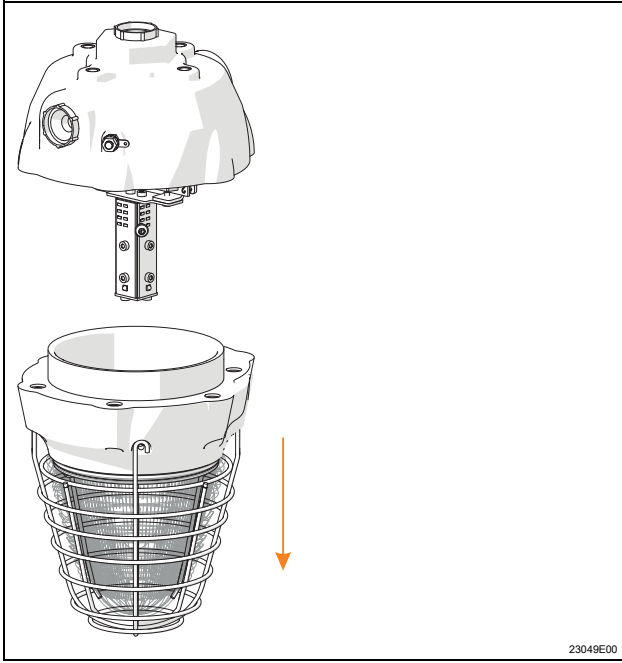
- Dismounting the device (see chapter 7.3.1)
- Electrical connections (see chapter 7.3.2)
- Configuration (see chapter 7.3.3)
- Mounting the device (see chapter 7.3.4)
- Mounting the earth connection (see chapter 7.3.5)

7.3.1 Dismounting the device

i The figure depicts the xenon flash tube variant for the FX15/2. The upper PCB components of the LED variant are different to the xenon variant. However, the fundamental structure of both products is the same.




- Loosen the 6 cheese-head screws.

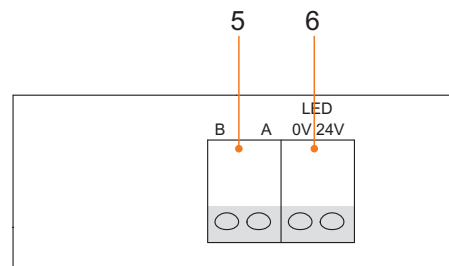
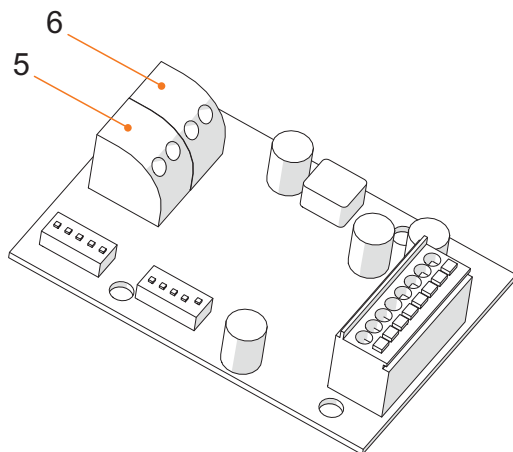


- Carefully remove the top part.
- Set the top part aside.

7.3.2 Electrical connections

| | |
|---|--|
|  | DANGER |
| | <p>Explosion hazard due to insufficient protective measures! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> Select suitable conductors to ensure that the maximum permissible conductor temperatures are not exceeded. When using core end sleeves, attach them using a suitable tool. The conductor insulation must be touching the terminal. Do not damage the conductor (e.g. nicking) when stripping it. Finally, check the conductor to ensure that it is secure (fixed). |

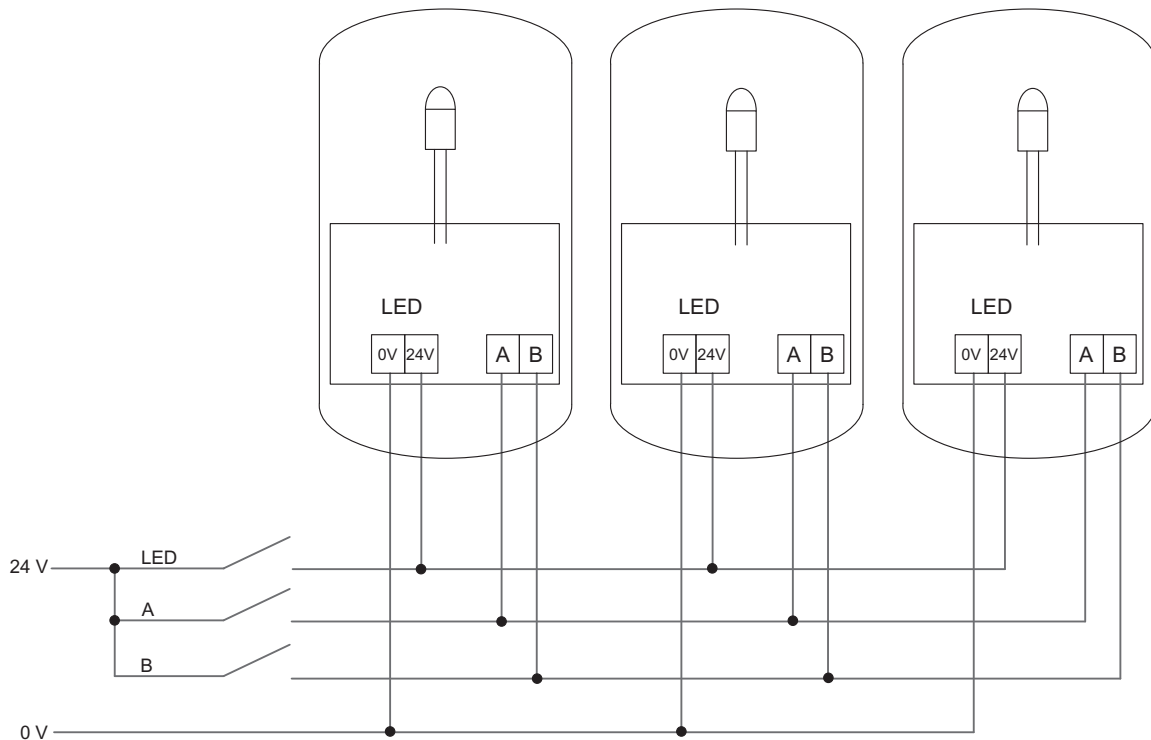
- Lay the pre-installed cabling in the intended electrical connections – see figure.



22797E00

22796E00

- 5 Control (A/B signal)
- 6 Power supply



22798E00

Example: Connection diagram for combining multiple devices

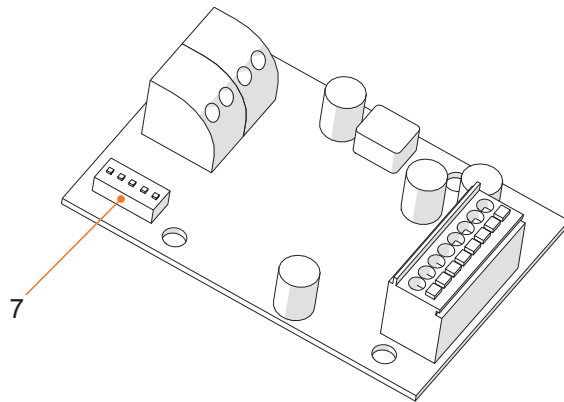
When doing so:

- Observe the maximum permissible single wire cross-sections for the connection terminals – see "Technical data" chapter.
- Only such cable entries and stopping plugs may be installed that have been separately tested and certified according to Directive 2014/34/EU (ATEX) and IECEx (CoC); they must also comply technically with the standard version stated in the certificate.
- Use electrical lines with a minimum length of 3 m or a cable gland with compound.

7.3.3 Configuration

The configuration of the device is performed by adjusting the DIP switch on the PCB. The following general/visual configuration options are available:

XENON circuit board



22846E00

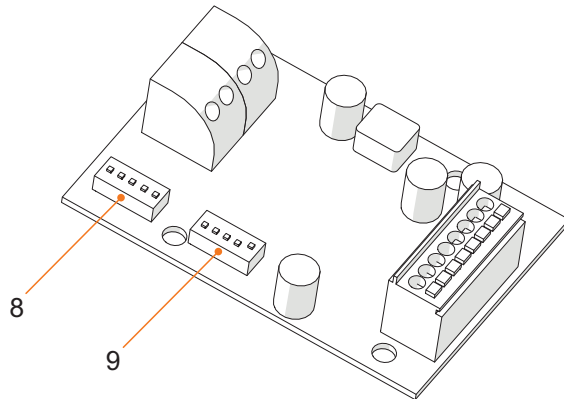
| | DIP switch designation | Function |
|---|------------------------|------------------|
| 7 | SW1 | General settings |

"SW1" DIP switch

| 1 | 2 | 3 | 4 | 5 | |
|-----|-----|-----|-----|-----|--|
| | | | | ON | Reserved |
| | | | | OFF | Reserved |
| | | | ON | | Reserved |
| | | | OFF | | Reserved |
| | | ON | | | Reserved |
| | | OFF | | | Reserved |
| | ON | | | | Reserved |
| | OFF | | | | Reserved |
| ON | | | | | RI ACTIVATION Active switching via B signal |
| OFF | | | | | RI DEACTIVATION Regular switching |

| RI ACTIVATION | A/B control signal | | Emitted signal | |
|------------------|--------------------|---|--------------------|------------------|
| | A | B | Signal | Signal selection |
| 0 | 0 | 0 | XENON 1 Hz | SW1 |
| 0 | 1 | 0 | XENON 1 Hz | SW1 |
| 0 | 0 | 1 | XENON 1 Hz | SW1 |
| 0 | 1 | 1 | XENON 1 Hz | SW1 |
| 1 | 0 | 0 | Signal deactivated | SW1 |
| 1 | 1 | 0 | Signal deactivated | SW1 |
| 1 | 0 | 1 | XENON 1 Hz | SW1 |
| 1 | 1 | 1 | XENON 1 Hz | SW1 |

LED circuit board



22799E00

| | DIP switch designation | Function |
|---|------------------------|------------------|
| 8 | SW1 | Visual functions |
| 9 | SW2 | General settings |

"SW2" DIP switch

| 1 | 2 | 3 | 4 | 5 | |
|-----|-----|-----|-----|-----|--|
| | | | | ON | LED ECO MODE (current consumption reduced by up to 50%) |
| | | | | OFF | LED POWER MODE (max. power) |
| | | | ON | | LED disc |
| | | | OFF | | LED tower |
| | | ON | | | Reserved |
| | | OFF | | | Reserved |
| | ON | | | | Reserved |
| | OFF | | | | Reserved |
| ON | | | | | RI ACTIVATION Active switching via B signal |
| OFF | | | | | RI DEACTIVATION Regular switching |

| RI ACTIVATION | A/B control signal | | Emitted signal | |
|------------------|--------------------|---|--------------------|------------------|
| | A | B | Signal | Signal selection |
| 0 | 0 | 0 | LED prog.1 | SW1 |
| 0 | 1 | 0 | LED prog.2 | SW1 |
| 0 | 0 | 1 | LED prog.3 | SW1 |
| 0 | 1 | 1 | LED prog.4 | SW1 |
| 1 | 0 | 0 | Signal deactivated | SW1 |
| 1 | 1 | 0 | Signal deactivated | SW1 |
| 1 | 0 | 1 | LED prog.1 | SW1 |
| 1 | 1 | 1 | LED prog.2 | SW1 |

Visual settings

DIP switch "SW1" function tower, monochrome

| SW3 | | | | | LED prog1 | | LED prog2 | | LED prog3 | | LED prog4 | |
|-----|---|---|---|---|-----------------------|---|---------------------------|---|------------------------|---|------------------------|---|
| 1 | 2 | 3 | 4 | 5 | A | B | A | B | A | B | A | B |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | Continuous light | | Double flash 1 Hz | | Blinking light 1 Hz | | Rotating light 120 rpm | |
| 1 | 0 | 0 | 0 | 0 | Blinking light 1 Hz | | Continuous light (dimmed) | | Blinking light 1.5 Hz | | Blinking light 2 Hz | |
| 0 | 1 | 0 | 0 | 0 | Blinking light 1.5 Hz | | Continuous light | | Blinking light 1 Hz | | Triple flash 1 Hz | |
| 1 | 1 | 0 | 0 | 0 | Blinking light 2 Hz | | Continuous light | | Blinking light 1 Hz | | Triple flash 1 Hz | |
| 0 | 0 | 1 | 0 | 0 | Single flash 1 Hz | | Continuous light | | Double flash 1 Hz | | Triple flash 1 Hz | |
| 1 | 0 | 1 | 0 | 0 | Double flash 1 Hz | | Continuous light | | Triple flash 1 Hz | | Triple flash 2 Hz | |
| 0 | 1 | 1 | 0 | 0 | Triple flash 1 Hz | | Continuous light | | Triple flash 2 Hz | | Single flash 1 Hz | |
| 1 | 1 | 1 | 0 | 0 | Single flash 2 Hz | | Continuous light | | Double flash 2 Hz | | Triple flash 2 Hz | |
| 0 | 0 | 0 | 1 | 0 | Continuous light | | Rotating light 90 rpm | | Rotating light 120 rpm | | Rotating light 180 rpm | |
| 1 | 0 | 0 | 1 | 0 | Continuous light | | Rotating light 90 rpm | | Blinking light 1 Hz | | Blinking light 2 Hz | |
| 0 | 1 | 0 | 1 | 0 | Continuous light | | Rotating light 120 rpm | | Blinking light 1 Hz | | Blinking light 2 Hz | |
| 1 | 1 | 0 | 1 | 0 | Continuous light | | Rotating light 180 rpm | | Blinking light 1 Hz | | Blinking light 2 Hz | |
| 0 | 0 | 1 | 1 | 0 | Continuous light | | Rotating light 90 rpm | | Single flash 1 Hz | | Triple flash 1 Hz | |
| 1 | 0 | 1 | 1 | 0 | Continuous light | | Rotating light 120 rpm | | Single flash 1 Hz | | Triple flash 1 Hz | |
| 0 | 1 | 1 | 1 | 0 | Continuous light | | Rotating light 180 rpm | | Single flash 1 Hz | | Triple flash 1 Hz | |
| 1 | 1 | 1 | 1 | 0 | Continuous light | | Rotating light 90 rpm | | Triple flash 1 Hz | | Chaos light | |

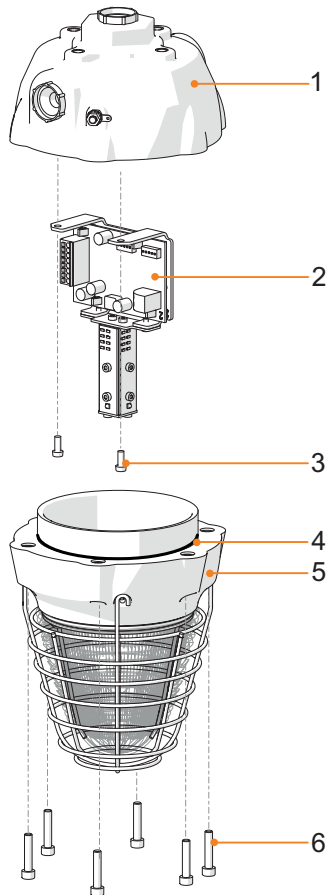
| SW3 | | | | | B = RI/TI | |
|-----|---|---|---|---|-----------------------|---|
| 1 | 2 | 3 | 4 | 5 | A | A |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 0 | Continuous light | |
| 1 | 0 | 0 | 0 | 0 | Blinking light 1 Hz | |
| 0 | 1 | 0 | 0 | 0 | Blinking light 1.5 Hz | |
| 1 | 1 | 0 | 0 | 0 | Blinking light 2 Hz | |
| 0 | 0 | 1 | 0 | 0 | Single flash 1 Hz | |
| 1 | 0 | 1 | 0 | 0 | Double flash 1 Hz | |
| 0 | 1 | 1 | 0 | 0 | Triple flash 1 Hz | |
| 1 | 1 | 1 | 0 | 0 | Single flash 2 Hz | |
| 0 | 0 | 0 | 1 | 0 | Continuous light | |
| 1 | 0 | 0 | 1 | 0 | Continuous light | |
| 0 | 1 | 0 | 1 | 0 | Continuous light | |
| 1 | 1 | 0 | 1 | 0 | Continuous light | |
| 0 | 0 | 1 | 1 | 0 | Continuous light | |
| 1 | 0 | 1 | 1 | 0 | Continuous light | |
| 0 | 1 | 1 | 1 | 0 | Continuous light | |
| 1 | 1 | 1 | 1 | 0 | Continuous light | |

DIP switch "SW1" function disc, monochrome

| | | | | | LED prog1 | | LED prog2 | | LED prog3 | | LED prog4 | |
|-----|---|---|---|---|-----------------------|---|---------------------------|---|-----------------------|---|---------------------------|---|
| SW3 | | | | | A | B | A | B | A | B | A | B |
| 1 | 2 | 3 | 4 | 5 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | Continuous light | | Double flash 1 Hz | | Blinking light 1 Hz | | Continuous light (dimmed) | |
| 1 | 0 | 0 | 0 | 0 | Blinking light 1 Hz | | Continuous light (dimmed) | | Blinking light 1.5 Hz | | Blinking light 2 Hz | |
| 0 | 1 | 0 | 0 | 0 | Blinking light 1.5 Hz | | Continuous light | | Blinking light 1 Hz | | Triple flash 1 Hz | |
| 1 | 1 | 0 | 0 | 0 | Blinking light 2 Hz | | Continuous light | | Blinking light 1 Hz | | Triple flash 1 Hz | |
| 0 | 0 | 1 | 0 | 0 | Single flash 1 Hz | | Continuous light | | Double flash 1 Hz | | Triple flash 1 Hz | |
| 1 | 0 | 1 | 0 | 0 | Double flash 1 Hz | | Continuous light | | Triple flash 1 Hz | | Triple flash 2 Hz | |
| 0 | 1 | 1 | 0 | 0 | Triple flash 1 Hz | | Continuous light | | Triple flash 2 Hz | | Single flash 1 Hz | |
| 1 | 1 | 1 | 0 | 0 | Single flash 2 Hz | | Continuous light | | Double flash 2 Hz | | Triple flash 2 Hz | |

| | | | | | B = RI/TI | | B = RI/TI | | |
|-----|---|---|---|---|-----------------------|---|---------------------------|--|--|
| SW3 | | | | | A | A | | | |
| 1 | 2 | 3 | 4 | 5 | 0 | 1 | | | |
| 0 | 0 | 0 | 0 | 0 | Continuous light | | Double flash 1 Hz | | |
| 1 | 0 | 0 | 0 | 0 | Blinking light 1 Hz | | Continuous light (dimmed) | | |
| 0 | 1 | 0 | 0 | 0 | Blinking light 1.5 Hz | | Continuous light | | |
| 1 | 1 | 0 | 0 | 0 | Blinking light 2 Hz | | Continuous light | | |
| 0 | 0 | 1 | 0 | 0 | Single flash 1 Hz | | Continuous light | | |
| 1 | 0 | 1 | 0 | 0 | Double flash 1 Hz | | Continuous light | | |
| 0 | 1 | 1 | 0 | 0 | Triple flash 1 Hz | | Continuous light | | |
| 1 | 1 | 1 | 0 | 0 | Single flash 2 Hz | | Continuous light | | |

7.3.4 Mounting the device



- 1 Device base
- 2 PCB
- 3 Screws

- 4 Seal
- 5 Top part
- 6 Cheese-head screws

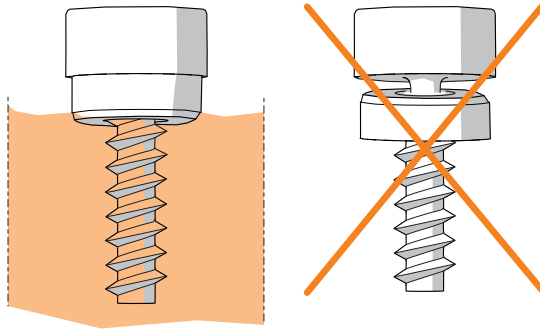
23047E00



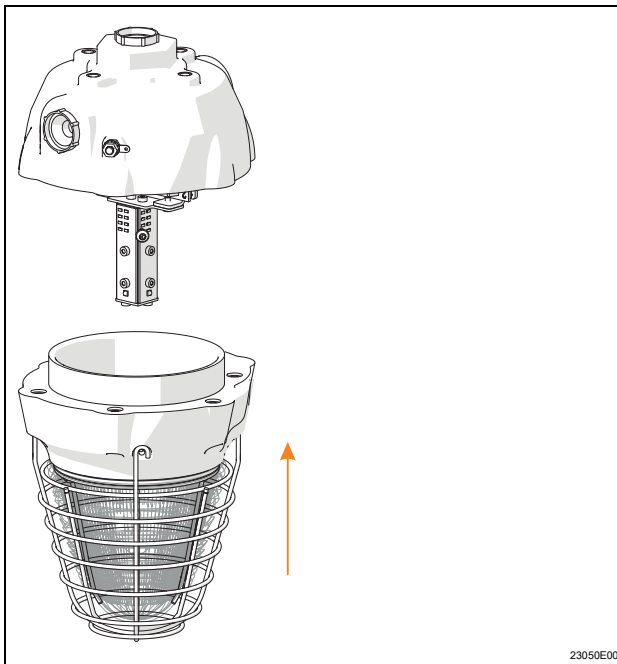
Screws and seals

The cheese-head screws are delivered with Nyltite seals.

- Before mounting, check the seals for damage.
- Replace damaged seals.
- Use seals a maximum of 5 times.
- When using screws on a flat surface, note the seal on the screw head – see figure.

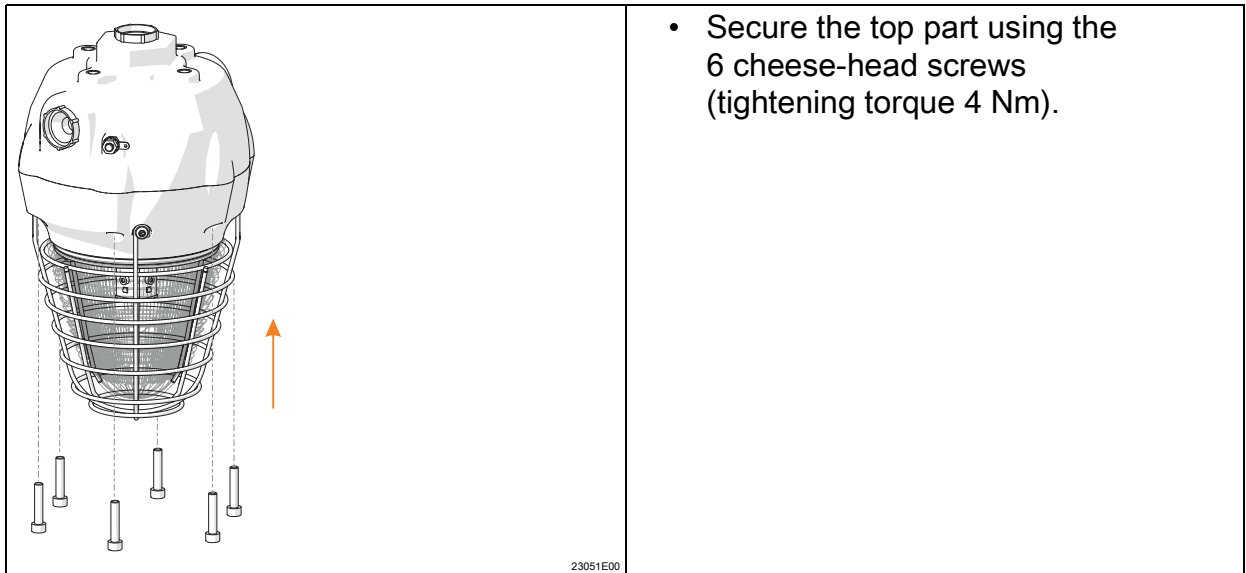


15748E00



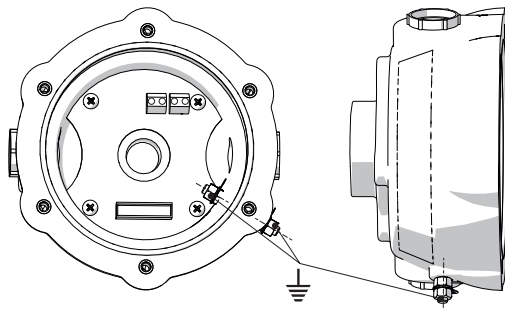
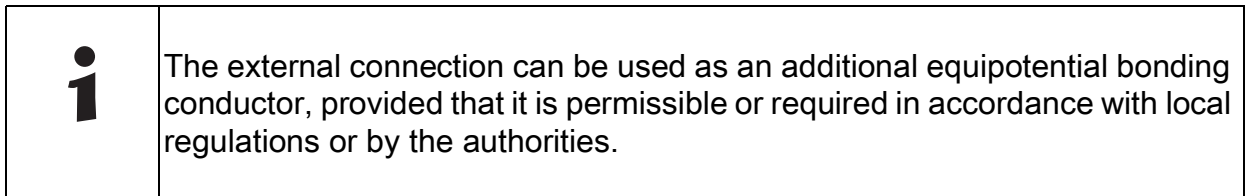
23050E00

- Connect the connector to the connection PCB.
- Carefully place the top part on the base. Take care to insert the structure straight into the base without applying force.



7.3.5 Mounting the earth connection


- Connect the internal earth connection as the primary connection point.



15761E00

8 Commissioning

8.1 Prerequisites

| | |
|---|---|
|  | DANGER |
| | <p>Explosion hazard due to incorrect installation! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> Check the device for proper installation before commissioning. Comply with national regulations. |

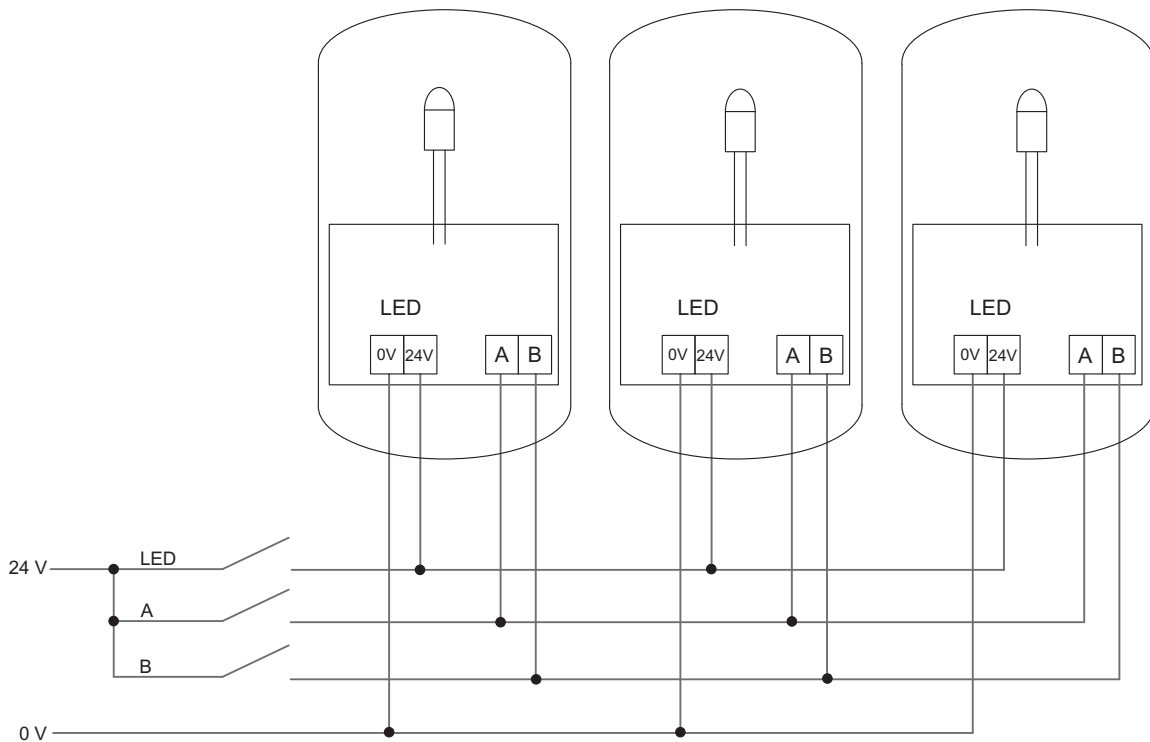
Before commissioning, ensure that:

- the device has been installed according to regulations.
- the line voltage and the rated operational voltage of the device are consistent.
- the permissible cable diameter for the cable entries has been used.
- the cable entries and stopping plugs have been securely tightened.
- the electrical lines have been inserted correctly.
- the connection has been performed correctly.
- all screws and nuts have been tightened according to regulations.
- the connection chamber is clean.
- the device is not damaged.
- there are no foreign objects inside the device.
- the device is closed according to regulations.

8.2 Testing

For commissioning, the line voltage must correspond to the rated operational voltage. When doing so, the following pre-configured functions can be tested, see figure:

- Visual signal
- Control functions (A/B signal)



22798E00

9 Operation

The device is used to warn and alert by means of

- a visual signal.

9.1 Troubleshooting

If the error cannot be eliminated using the specified procedures:

- Contact R. STAHL Schaltgeräte GmbH.


For rapid processing, have the following information ready:

- Type and serial number of the device
- Purchase information
- Error description
- Intended purpose (especially input/output circuit)

10 Maintenance, overhaul, repair

10.1 Maintenance and overhaul


- Consult the relevant national regulations to determine the type and extent of inspections.
- Tailor inspection intervals to the operating conditions.
- Perform maintenance and repair work in accordance with IEC 60079-17 and IEC 60079-19.

| | |
|---|--|
|  | Observe the relevant national regulations in the country of use. |
|---|--|

At a minimum, check the following points during maintenance on the device:

- Whether the clamping screws holding the electrical lines fit securely
- Whether the device has cracks or other visible signs of damage
- Whether the seals have aged or been damaged
- Whether the permissible temperatures are complied with (according to EN 60079)
- Whether the device is used as intended and functions properly

10.2 Repair

| | |
|---|--|
|  | DANGER |
| | <p>Explosion hazard due to improper repair! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Repair work on the devices must be performed only by R. STAHL Schaltgeräte GmbH. |

10.3 Returning the device

- Only return or package the devices after consulting R. STAHL!
Contact the responsible representative from R. STAHL.

R. STAHL's customer service is available to handle returns if repair or service is required.

- Contact customer service personally.

or

- Go to the r-stahl.com website.
- Under "Support" > "RMA" > select "RMA-REQUEST".
- Fill out the form and send it.
You will automatically receive an RMA form via email.
Please print this file off.
- Send the device along with the RMA form in the packaging to
R. STAHL Schaltgeräte GmbH (refer to chapter 1.1 for the address).


11 Cleaning

- Devices located in hazardous areas may only be cleaned with a damp cloth to avoid electrostatic charge.
- When cleaning with a damp cloth, use water or mild, non-abrasive, non-scratching cleaning agents.
- Do not use abrasive cleaning agents or solvents.
- Never clean the device with a strong water jet, e.g. a pressure washer.

12 Disposal

- Observe national, local and statutory regulations regarding disposal.
- Separate materials for recycling.
- Ensure environmentally friendly disposal of all components according to statutory regulations.

13 Accessories and spare parts

| NOTICE | |
|--|--|
| <p>Malfunction or damage to the device due to the use of non-original components. Non-compliance may lead to material damage!</p> <ul style="list-style-type: none"> • Use only original accessories and spare parts from R. STAHL Schaltgeräte GmbH. | |
|  | <p>For accessories and spare parts, see the data sheet on our homepage r-stahl.com.</p> |

EU-Konformitätserklärung
EU Declaration of Conformity
Déclaration de Conformité UE





R. STAHL Schaltgeräte GmbH • Am Bahnhof 30 • 74638 Waldenburg, Germany
 erklärt in alleiniger Verantwortung, *declares in its sole responsibility, déclare sous sa seule responsabilité,*

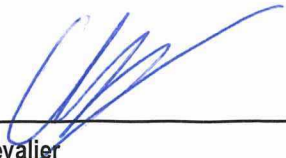
dass das Produkt: **Akustische und optische Signalgeräte**
that the product: Audible and visual signalling devices
que le produit: Appareil de signalisation sonore et lumineux

Typ(en), type(s), type(s): **YL6S/2, YA6S/2, FL6S/2, FX15/2**

mit den Anforderungen der folgenden Richtlinien und Normen übereinstimmt.
is in conformity with the requirements of the following directives and standards.
est conforme aux exigences des directives et des normes suivantes.

| Richtlinie(n) / Directive(s) / Directive(s) | Norm(en) / Standard(s) / Norme(s) |
|--|---|
| 2014/34/EU ATEX-Richtlinie 2014/34/EU <i>ATEX Directive</i> 2014/34/UE <i>Directive ATEX</i> | EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-31:2014 |
| Kennzeichnung, marking, marquage: |  II 2 G Ex db IIC T6/T4 Gb II 2 D Ex tb IIIC T 80 °C/T100 °C Db  |
| EU-Baumusterprüfbescheinigung: <i>EU Type Examination Certificate:</i> <i>Attestation d'examen UE de type:</i> | EPS 20 ATEX 1076 X (Bureau Veritas Consumer Products Services Germany GmbH, Businesspark A96, 86842 Tuerkheim, Germany) |
| Produktnormen nach Niederspannungsrichtlinie: <i>Product standards according to Low Voltage Directive:</i> <i>Normes des produit pour la Directive Basse Tension:</i> | EN 60598-1:2015/ A1:2018 EN 62471:2008 |
| 2014/30/EU EMV-Richtlinie 2014/30/EU <i>EMC Directive</i> 2014/30/UE <i>Directive CEM</i> | EN 50130-4:2011/ A1:2014 EN 61000-3-2:2014 EN 61000-3-3:2013 EN 61000-6-3:2007/+ A1:2011/ AC:2012 |
| 2011/65/EU RoHS-Richtlinie 2011/65/EU <i>RoHS Directive</i> 2011/65/UE <i>Directive RoHS</i> | EN IEC 63000:2018 |

Waldenburg, 2021-12-02
 Ort und Datum
Place and date
Lieu et date

i.V. 
 Dr. C. Chevalier
Vice President BU Lighting & Signalling
Vice-Président BU Eclairage & Appareils de signalisation

i.V. 
 J. Freimüller
Vice President global Quality Management
Vice-Président globale Gestion de Qualité