



## Emergency luminaire for fluorescent lamps

Series EXLUX 6409/5

## Contents

1	General Information .....	3
1.1	Manufacturer .....	3
1.2	Information regarding the operating instructions .....	3
1.3	Further documents .....	3
1.4	Conformity with standards and regulations .....	3
2	Explanation of the symbols .....	4
2.1	Symbols in these operating instructions .....	4
2.2	Warning notes .....	4
2.3	Symbols on the device .....	5
3	Safety notes .....	5
3.1	Operating instructions storage .....	5
3.2	Safe use .....	5
3.3	Intended Use .....	6
3.4	Modifications and alterations .....	6
4	Function and device design .....	6
4.1	Function .....	6
4.2	Device design .....	7
5	Technical data .....	8
6	Engineering .....	12
6.1	Mains operation .....	12
6.2	Emergency light blocking .....	13
7	Transport and storage .....	15
7.1	General .....	15
7.2	Batteries .....	15
8	Mounting and installation .....	15
8.1	Dimensions / fastening dimensions .....	16
8.2	Removing protective foil .....	18
8.3	Mounting / dismantling, operating position .....	18
8.4	Installation .....	22
9	Commissioning .....	26
10	Operation .....	27
10.1	Operating Modes .....	27
10.2	Functional and rated operating time test .....	28
10.3	Indications .....	29
10.4	Troubleshooting .....	30
11	Maintenance, Overhaul, Repair .....	31
11.1	Maintenance .....	31
11.2	Repair .....	36
11.3	Returning the device .....	36
12	Cleaning .....	37
13	Disposal .....	37
14	Accessories and Spare parts .....	37

# 1 General Information

## 1.1 Manufacturer

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Business Unit Lighting & Signalling  
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## 1.2 Information regarding the operating instructions

ID-No.: 240622 / 640960300010  
Publication Code: 2022-03-11·BA00·III·en·06

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

## 1.3 Further documents

- Data sheet

For documents in additional 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 the symbols

### 2.1 Symbols in these operating instructions

Symbol	Meaning
	Tips and recommendations on the use of the device
	Danger due to explosive atmosphere
	Danger due to live components

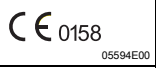

### 2.2 Warning notes

Warnings must be observed under all circumstances, in order to minimize the risk due to construction 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

	<b>DANGER</b>
	Danger to persons Non-compliance with the instruction results in severe or fatal injuries to persons.
	<b>WARNING</b>
	Danger to persons Non-compliance with the instruction can result in severe or fatal injuries to persons.
	<b>CAUTION</b>
	Danger to persons Non-compliance with the instruction can result in light injuries to persons.
<b>NOTICE</b>	
Avoiding material damage Non-compliance with the instruction can result in material damage to the device and / or its environment.	

## 2.3 Symbols on the device

Symbol	Meaning
 0158 05594E00	CE marking according to the currently applicable directive.
 02198E00	According to marking, device approved for hazardous areas.

## 3 Safety notes

### 3.1 Operating instructions storage

- Read the operating instructions carefully.
- 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 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.
- We cannot be held liable for damage to the device caused by incorrect or unauthorised use or non-compliance with these operating instructions.

#### For assembly and installation

- Observe national assembly and installation regulations (e.g. IEC/EN 60079-14).
- Observe national safety and accident prevention regulations.
- During installation and operation, observe the information (characteristic values and rated operating conditions) on the type plates and data plates and information signs located on the device.
- Before installation, make sure that the device is not damaged.

#### Maintenance, repair, commissioning



- Before commissioning, make sure that the device is not damaged.
- Work on the device, such as installation, maintenance, overhaul, repair, may only be carried out by appropriately authorised and trained personnel.
- Perform only maintenance work or repair described in these operating instructions.

### 3.3 Intended Use


The light fitting 6409/5 is equipment

- for lighting areas, work spaces and objects
- for emergency lighting in case of power failure.
- can be used indoors and outdoors
- for stationary mounting
- for use in Zones 21, 2, 22 and in the safe area

### 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"> <li>• Do not modify or alter the device.</li> </ul>
	No liability or warranty for damage resulting from modifications and alterations.

## 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"> <li>• Use the device only in accordance with the operating conditions described in these operating instructions.</li> <li>• Use the device only for the intended purpose specified in these operating instructions.</li> </ul>

### 4.1 Function

#### Application range

The luminaire 6409/5 is used as equipment for lighting areas, work equipment and objects.

It can be used indoors or outdoors and is suitable for emergency lighting in case of power failure.

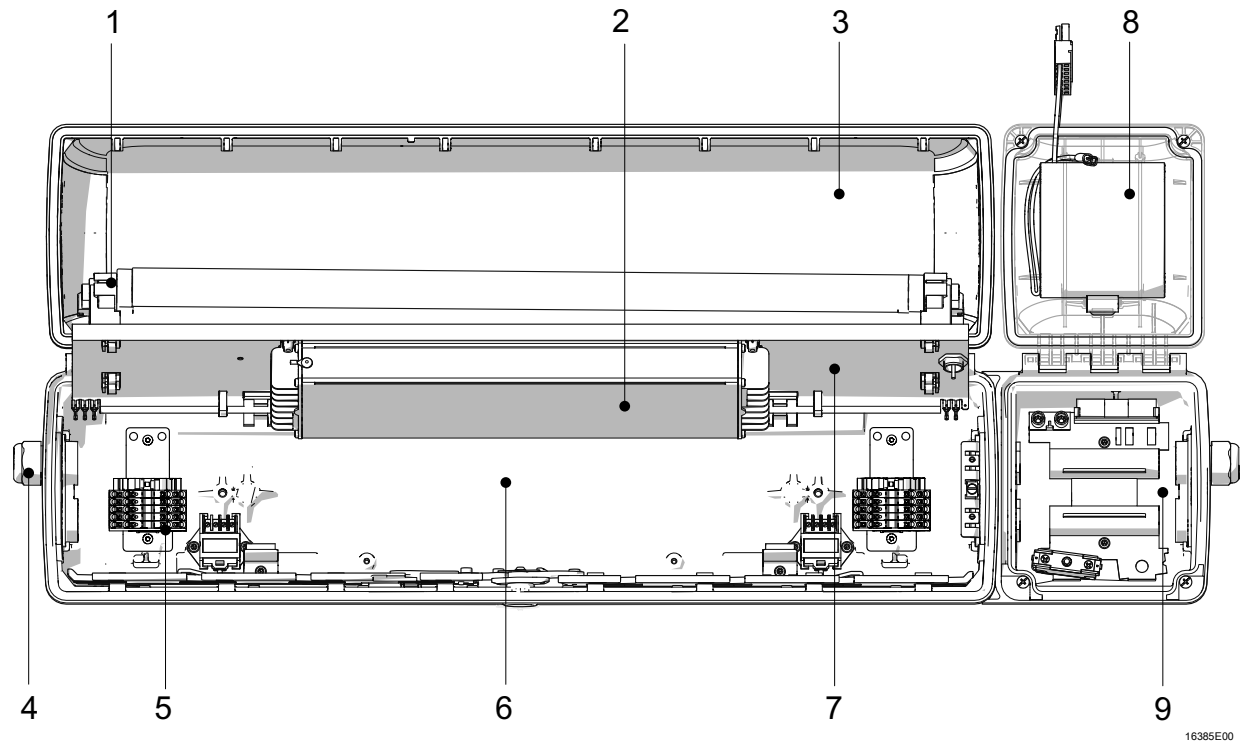
The luminaire is approved for use in hazardous areas of Zones 21, 2 and 22.

#### Mode of operation

A weekly functional test has been permanently integrated. An annual rated operating time test can be deactivated and activated.

When opened using a central lock, the light fitting switches off automatically (standard version).

## 4.2 Device design



- |   |                     |   |                         |
|---|---------------------|---|-------------------------|
| 1 | Lamp holder         | 6 | Light fitting enclosure |
| 2 | Control gear        | 7 | Reflector plate         |
| 3 | Translucent cover   | 8 | Battery                 |
| 4 | Cable entry         | 9 | Battery enclosure       |
| 5 | Connection terminal |   |                         |

## 5 Technical data

### Explosion Protection

#### Global (IECEX)

Gas and dust	IECEX PTB 14.0043 Ex db ec mb IIC T4 Gc Ex tb IIIC T80 °C Db Ex tc IIIC T80 °C Dc
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#### Europe (ATEX)

Dust	PTB 14 ATEX 2021 ⊕ II 2 D Ex tb IIIC T80 °C Db
Gas and dust	PTB 14 ATEX 2022 ⊕ II 3 G Ex db ec mb IIC T4 Gc ⊕ II 3 D Ex tc IIIC T80 °C Dc

#### Certifications and certificates

Certificates	IECEX, ATEX
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### Technical Data

#### Electrical data

Rated operational voltage	Standard:	220 to 240 V ±10%, 50 / 60 Hz (luminaires in accordance with IEC 60081)			
	Optional:	110 to 127 V ±10%, 50 / 60 Hz (luminaires in accordance with IEC 60081) 120 V ±10%, 50 / 60 Hz (luminaires in accordance with ANSI IEC C78.81)			
Rated insulation voltage	320 V				
Rated operational current	<b>Voltage</b>	<b>Lamp standard</b>	<b>Size 2</b>	<b>Size 4</b>	
	230 V	IEC 60081	max. 210 mA	max. 340 mA	
	110 V	IEC 60081	max. 410 mA	max. 750 mA	
	120 V	ANSI IEC C78.81	max. 370 mA	max. 670 mA	
Inrush current	$I_{peak} = 52 \text{ A}; \Delta t = 130 \mu\text{s}$ Maximum number of luminaires per miniature circuit breaker <sup>1)</sup> :				
	<b>Type</b>	<b>10 A</b>	<b>16 A</b>	<b>20 A</b>	<b>25 A</b>
	<b>B</b>	11	18	23	30
	<b>C</b>	19	32	40	50
	<b>K</b>	40	65	81	102
<sup>1)</sup> Typical value for 1-pole miniature circuit breaker at +25 °C and nominal voltage 230 V AC; the exact number depends on the miniature circuit breaker used					



**Technical Data**

Power factor	<b>Voltage</b>	<b>Lamp standard</b>	<b>Power factor</b>	
	230 V	IEC 60081	≥ 0.93	
	110 V	IEC 60081	≥ 0.97	
	120 V	ANSI IEC C78.81	≥ 0.97	
THD	<b>Voltage</b>	<b>Lamp standard</b>	<b>Size 2</b>	<b>Size 4</b>
	230 V	IEC 60081	11.9%	10.8%
	110 V	IEC 60081	10.8%	9.6%
	120 V	ANSI IEC C78.81	9.7%	8.0%
Disconnection of the light	<p><b>When opening the luminaire</b>                      Switch with safety lock; when opening the central lock, all poles of the voltage supply to the control gear are disconnected; contacts of the switching element are positive opening, they can only be switched on again when the translucent cover and the central locking system are closed.</p> <p><b>In case of a lamp failure</b>, the control gear disconnects the defective lamp from the power supply.</p>			
Protection class	I (with internal PE connection)			
<b>Luminous characteristics</b>				
Lamps	2 x 18 W; 2 x 36 W (in accordance with IEC 60081) 2 x 17 W; 2 x 32 W (in accordance with ANSI IEC C78.81)			
Measures for light guidance	Standard: Wide-beam, the luminaire reflector is white Lateral glare reduction in the translucent cover			
<b>Ambient conditions</b>				
Functional ambient temperature range	without through wiring	-30 to +55 °C (1, 2)		
	I <sub>N</sub> through wiring ≤ 8 A	-30 to +55 °C (1, 2)		
	I <sub>N</sub> through wiring ≤ 16 A	-30 to +50 °C (1)		
Storage temperature	<p>(1) <b>Rated operating time during emergency light operation</b>                      is guaranteed within an ambient temperature range of -5 to +50 °C. This also applies to charging and discharging of the battery. The rated operating time might be reduced if used outside this temperature range.</p> <p>(2) <b>Battery service life</b>                      is guaranteed within an ambient temperature range of -30 to +50 °C according to IEC/EN 60598-2-22.</p>			
	-30 to +55 °C			

**Technical Data**

**Mechanical data**

Degree of protection	IP66 / IP67 (IEC 60598) IP64 if a breather is used
Impact strength (IK code)	IK10 (IEC 62262)
Material	
Enclosure	Polyester resin, glass fibre reinforced
Enclosure colours	Grey colour, similar to RAL 7035
Lamp cover	Polycarbonate
Seal	Silicone seal, foamed into the translucent cover
Luminaire locking	Central lock for M8 / A/F 13 box spanner; the translucent cover can be swivelled on its hinge

**Mounting / Installation**

Cable glands

**Standard luminaire**

Plastic:	2 x M25 x 1.5 cable entry 8161 and 2 x M25 x 1.5 stopping plugs 8290 (enclosed)
Metal:	2 x metal plates M20 x 1.5 connected by means of PE for metal cable entries Attention: cable entries must be ordered separately
Special version:	max. 4 drilled holes for M20, M25, NPSM ½" max. 2 drilled holes for NPT ¾"
	Metal cable glands: M20 x 1.5, M25 x 1.5; earthing metal cable entries using metal plates

Connection

Spring clamp terminals  
6-pole: L1, L2, L3, L', N, PE  
Clamping range:  
1 x 1.5 to 6 mm<sup>2</sup> (solid)  
1 x 1.5 to 4 mm<sup>2</sup> (finely stranded)  
1 x 1.5 to 6 mm<sup>2</sup> (finely stranded with core end sleeve)  
(2 free clamping units per pole available)

Through wiring

<b>Standard luminaire</b>	<b>with</b> Luminaires are equipped with internal through wiring. Connection of ingoing and outgoing leads on opposite sites is possible. Terminals: See Tech. data Wiring cross section of the supply line connection: 2.5 mm <sup>2</sup> for max. 16 A (Observe service temperature)
<b>Optional</b>	<b>without</b> On the connection side, there are 2 bores M25 x 1.5 for cable entries for through wiring of the connection line (ingoing and outgoing leads on one side).

**Technical Data**

<p>Assembly</p>	<p><b>Standard luminaire</b></p> <p>Standard: 2 x M8 insert nuts in the enclosure</p> <p>Special version: Mounting grooves in the enclosure for use of mounting and tops rails for variable luminaire mounting (variable mounting distances for luminaires Size 2: 320 to 480 mm; size 4: 670 to 930 mm)</p>													
<p><b>Control gear</b></p> <p>Emergency light mode</p> <p>Rated operating time</p>	<p>In the emergency light mode, only one lamp is used, which results in reduced light output</p> <p>At optimal ambient temperature of the battery:</p> <table border="1"> <thead> <tr> <th rowspan="2">Battery capacity</th> <th rowspan="2">Rated operating time</th> <th colspan="2">Emergency light output</th> </tr> <tr> <th>Size 2</th> <th>Size 4</th> </tr> </thead> <tbody> <tr> <td rowspan="2">7 Ah</td> <td>1.5 h</td> <td>100%</td> <td>60%</td> </tr> <tr> <td>3.0 h</td> <td>60%</td> <td>30%</td> </tr> </tbody> </table>	Battery capacity	Rated operating time	Emergency light output		Size 2	Size 4	7 Ah	1.5 h	100%	60%	3.0 h	60%	30%
Battery capacity	Rated operating time			Emergency light output										
		Size 2	Size 4											
7 Ah	1.5 h	100%	60%											
	3.0 h	60%	30%											
<p>Switchover voltage</p>	<p>From mains to battery operation at <math>U &lt; 0.74 \times U_N</math> From battery to mains operation at <math>U &gt; 0.80 \times U_N</math></p>													
<p><b>Battery set</b></p> <p>Version</p> <p>Operating voltage</p> <p>Capacity</p> <p>Replacing the battery set</p>	<p>NiCd battery, gas-tight</p> <p>6 V</p> <p>7 Ah</p> <p>When opening the battery enclosure, the connection between the battery and the control gear is disconnected by means of a switch. The battery set can be replaced after disconnecting the plug-in contacts.</p>													
<p><b>Optional</b></p> <p>Breather</p>	<p>Breather 8162/1 from R.STAHL Schaltgeräte GmbH The breather guarantees compliance with degree of protection IP64 in all mounting positions. The breather may not be used in atmospheres with corrosive gases.</p>													

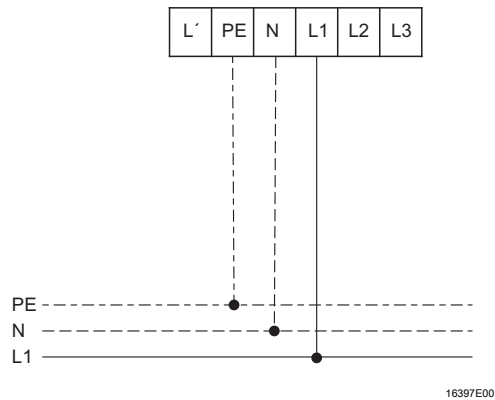
For further technical data, see [r-stahl.com](http://r-stahl.com).

## 6 Engineering

### 6.1 Mains operation

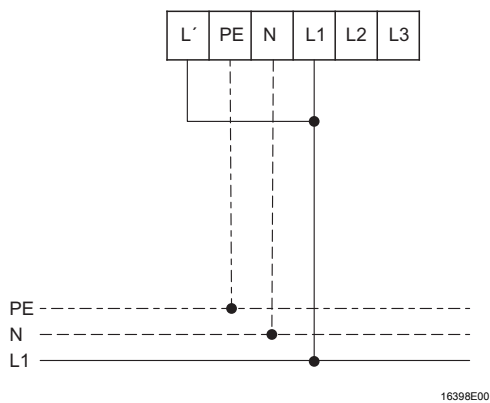
#### 6.1.1 Stand-by operation

- The light fitting is switched off.



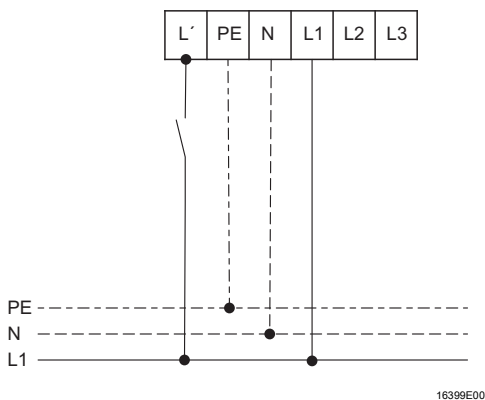
#### 6.1.2 Continuous operation

- The light fitting is switched on.



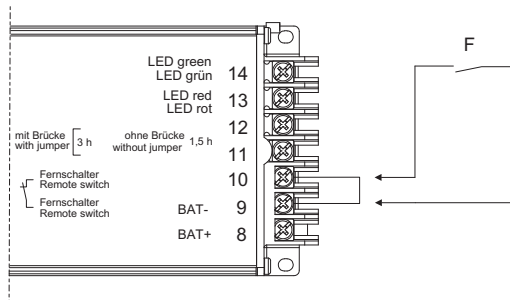
#### 6.1.3 Normal lighting operation

- The light fitting is operated by normal lighting.



## 6.2 Emergency light blocking

A remote switch for emergency light blocking can be connected to terminals 9 and 10 of the control gear.



16400E00

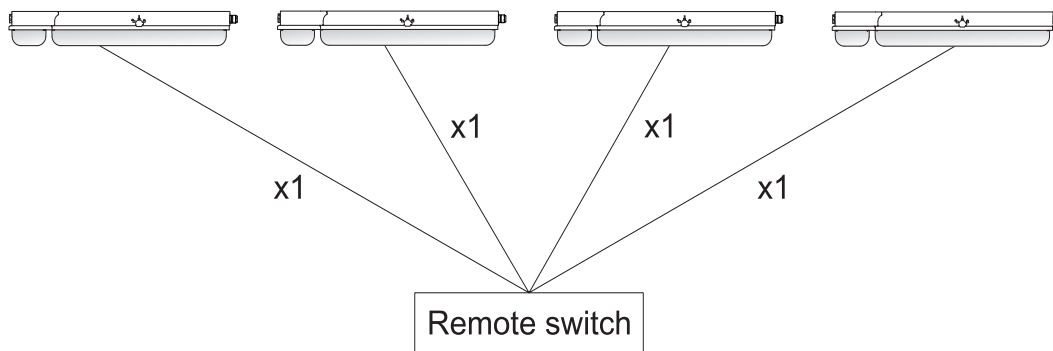
	<b>Remote switch is closed</b>	<b>Remote switch is opened</b>
Power supply operation	Switching on the luminaire depending on operating mode	Switching on the luminaire depending on operating mode
Power failure	Emergency light function	No emergency light function

### 6.2.1 Connection version remote switch

The remote switch is directly connected to the control gear.

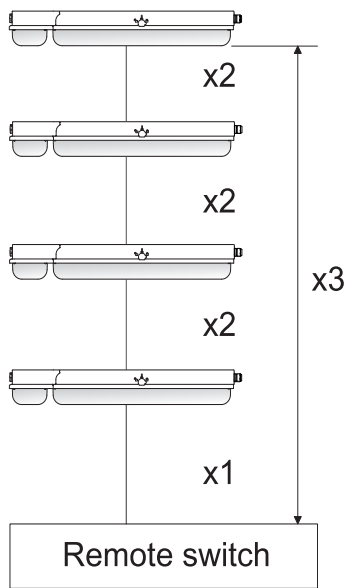
The following connection versions are possible:

#### Point-to-point connection



18474E00

**Linear connection**



18473E00

The following conductor specifications must be observed during connection.

	Point-to-point connection	Linear connection
maximum conductor length		
x 1	500 m	100 m
x 2		50 m
x 3		500 m
maximum number of light fittings	50	30
Cable cross section	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>

## 7 Transport and storage

### 7.1 General

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


### 7.2 Batteries

- Do not transport together with other materials.
- Do not transport in explosive dust atmosphere.
- Handle with care.
- Store protected from fire, sources of dust, harmful gases and liquids.
- Store in a dry and cool location.

#### Recommendation:

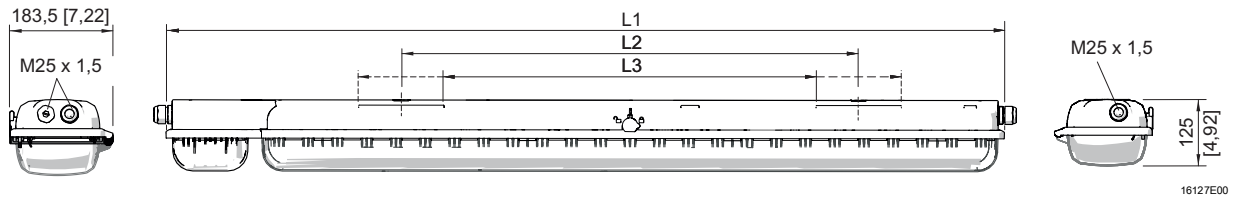
- Store battery at an ambient temperature of +5 to +25 °C and a relative humidity of 65 ±5 %. The storage period is reduced of up to one month if stored outside this temperature range.

## 8 Mounting and installation

	DANGER
	<p>Explosion hazard due to incorrect installation of the device! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> <li>• Carry out installation strictly according to the instructions and national safety and accident prevention regulations to maintain the explosion protection.</li> <li>• Select and install the electrical device so that explosion protection is not affected due to external influences, i.e. pressure conditions, chemical, mechanical, thermal and electric impact such as vibration, humidity and corrosion (see IEC/EN 60079-14).</li> <li>• The device must only be installed by trained qualified personnel who is familiar with the relevant standards.</li> </ul>
NOTICE	
<p>Malfunction or device damage caused by condensation. Non-compliance can result in material damage!</p> <ul style="list-style-type: none"> <li>• operate the luminaire continuously or periodically over extended periods of time.</li> <li>• avoid thermal bridges.</li> </ul>	

### 8.1 Dimensions / fastening dimensions

Dimensional drawings (all dimensions in mm [inches]) – Subject to modification



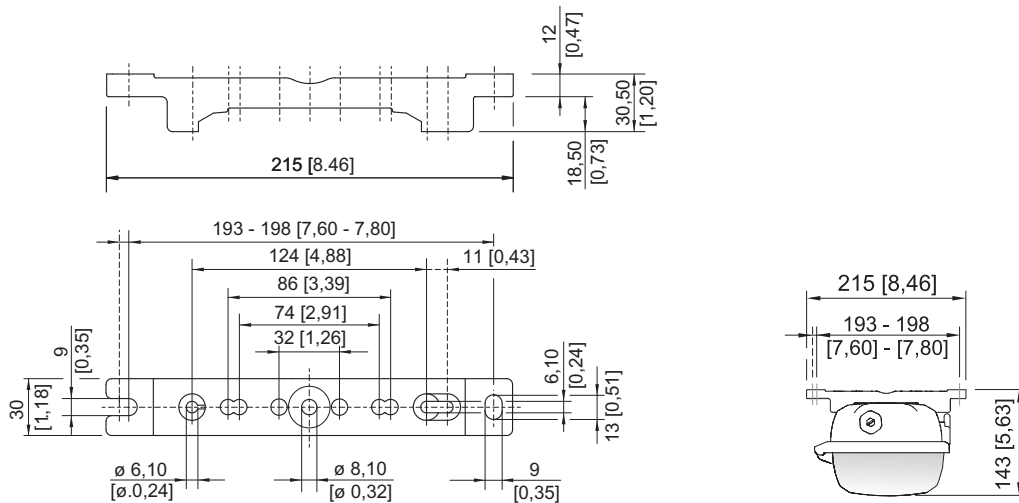
Dimensions	Light fitting	
	Size 2	Size 4
L1	857 [33.74]	1467 [57.76]
L2 <sup>1)</sup>	400 [15.75]	800 [31.50]
L3 <sup>2)</sup>	320 to 480 [12.60 to 18.90]	670 to 930 [26.38 to 36.61]

<sup>1)</sup> fixed mounting distance

<sup>2)</sup> variable mounting distance

### EXLUX 6409/5

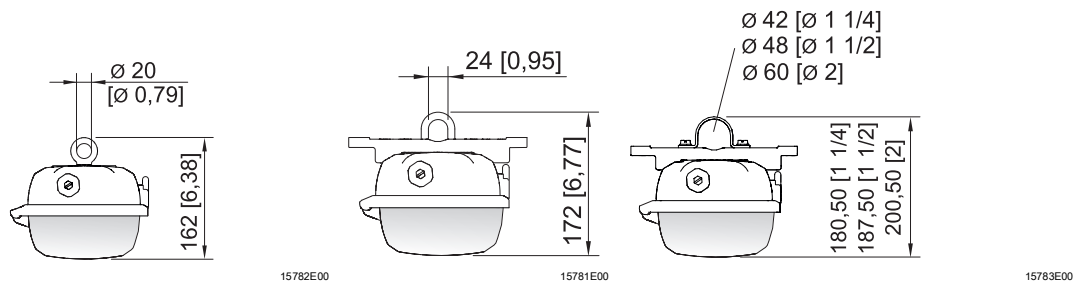
Dimensional drawings for assembly parts and accessories (all dimensions in mm) – Subject to alterations



### Mounting rail



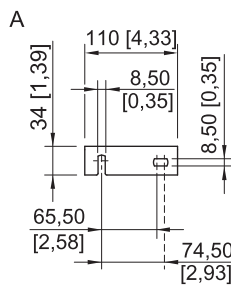
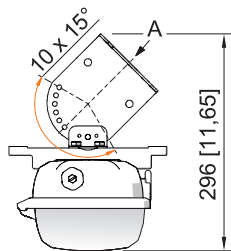
**Dimensional drawings for assembly parts and accessories**  
(all dimensions in mm) – Subject to alterations



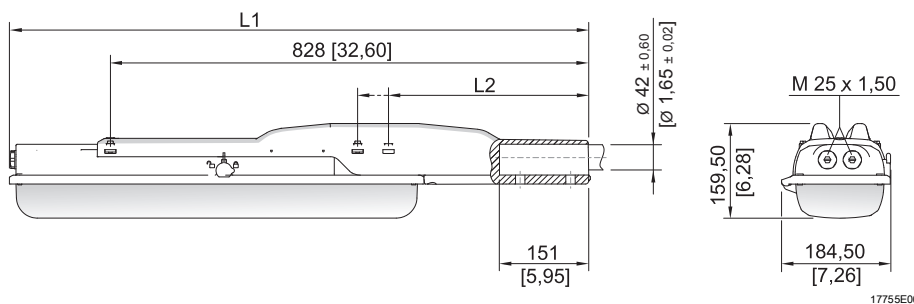
**Ring bolt fitted in insert nut of the luminaire**

**Mounting bracket fitted in mounting rail**

**Pipe clamp fitted in mounting rail**



**Wall mounting bracket fitted in mounting rail**




Dimensions	Light fitting	
	Size 2	Size 4
L1	1135 [44.69]	1744 [68.66]
L2	390 [15.35]	338 [13.31]

**Linear luminaire EXLUX with pole mounting sleeve**


### 8.2 Removing protective foil


As standard, the luminaire is generally delivered with protective foil on the translucent cover. However, in some cases, it can be delivered without protective foil.

	DANGER
	<p>Explosion hazard due to electrostatic discharge!                  Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> <li>• Only remove protective foil in safe areas.</li> </ul>

- If protective foil is available:  
 Remove protective foil prior to commissioning.

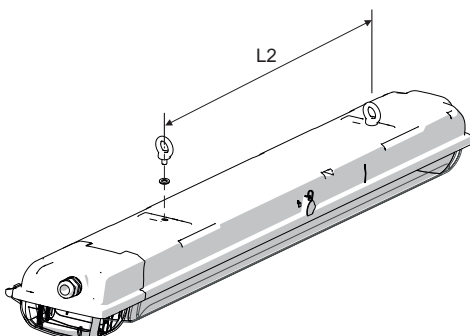
### 8.3 Mounting / dismantling, operating position

	DANGER
	<p>Explosion hazard due to electrostatic discharge!                  Non-compliance results in severe or fatal injuries.</p> <p>Do not use the luminaire in strong charge generating environments!</p> <p>The following processes/activities should be avoided:</p> <ul style="list-style-type: none"> <li>• accidental friction</li> <li>• particle currents</li> </ul>

	DANGER
	<p>Explosion hazard due to inadmissible heating!                  Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> <li>• Avoid external heat sources and/or direct sunlight (risk of change of temperature class or change of maximum permissible surface temperature).</li> <li>• Do not exceed the maximum ambient temperature due to external heat sources (premature failure of equipment).</li> </ul>

i	<p>The luminaire is suitable for wall and ceiling mounting.                  In event of wall mounting in outdoor areas, avoid installation with central lock at top.                  The mounting position with upward light emission in outdoor areas is prohibited.</p>
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#### Suspension at fixed mounting points

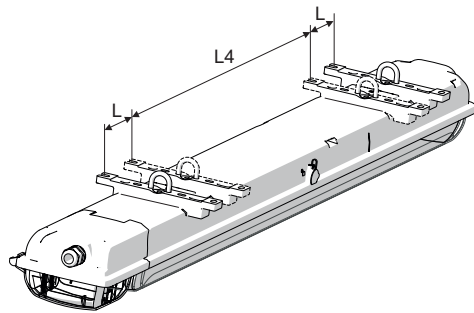


Size	L2 mm [inch]
2	400 [15.75]
4	800 [31.50]

max. screw-in depth 10 mm [0.39]

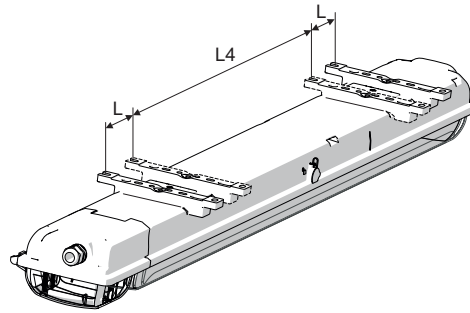
16324E00

### Suspension at movable mounting parts



16325E00

Mounting bracket



16326E00

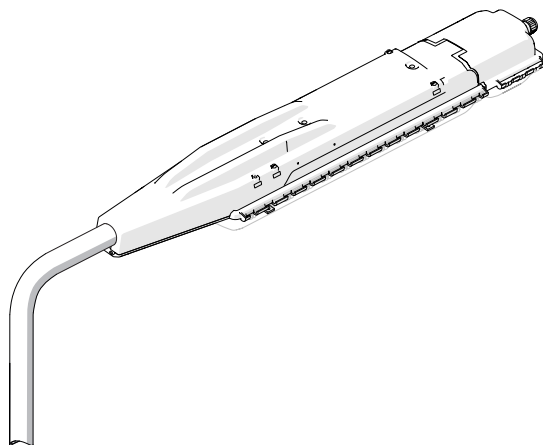
Top rail

Size	L4 mm [inch]	L mm [inch]
2	320 [12.60]	80 [3.15]
4	670 [26.38]	130 [5.12]

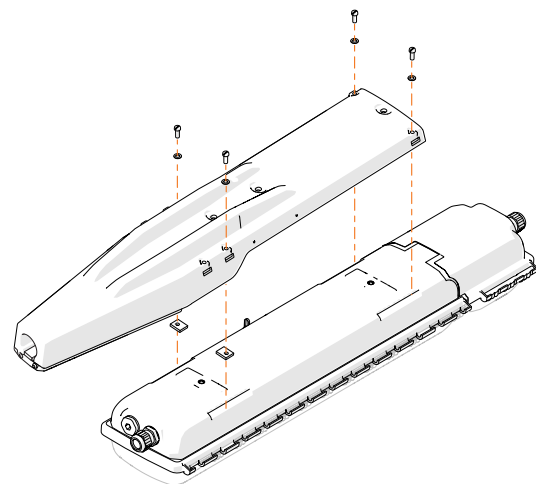
Lateral mounting pockets for variable points of suspension.

<b>i</b>	<p>When mounting the luminaire using top rails, ensure that the mounting surface is flat. Otherwise, the enclosure might be mounted in a warped/ twisted way. The result is leakage of the luminaire and difficulties in replacing the translucent cover.</p>
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### Pole mounting using pole mounting sleeve

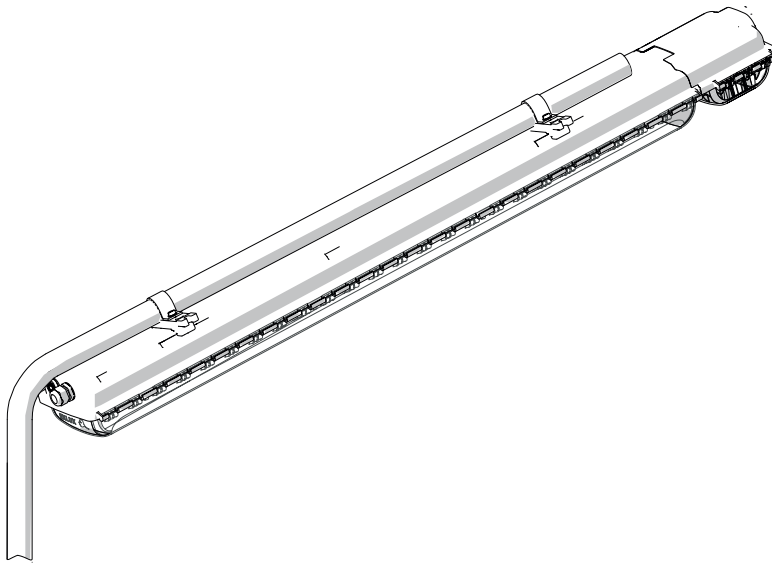


18483E00

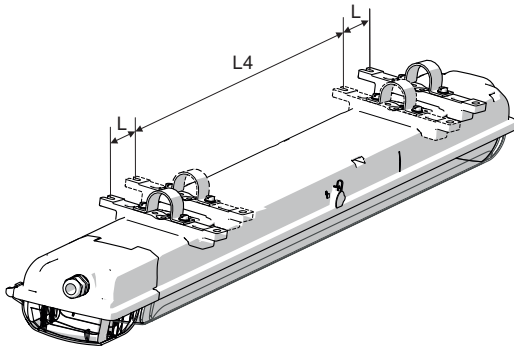


18482E00

**Pole suspension**  
**Pole mounting using pipe clamps**



16327E00

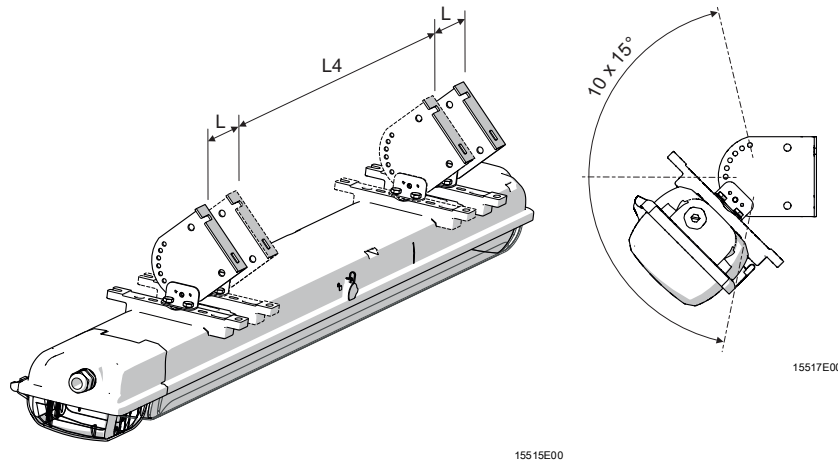


16328E00

Size	L4 mm [inch]	L mm [inch]
2	320 [12.60]	80 [3.15]
4	670 [26.38]	130 [5.12]

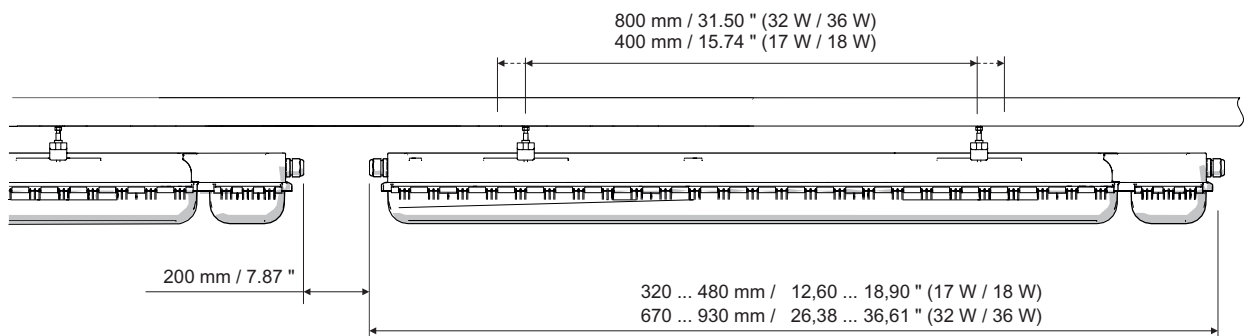
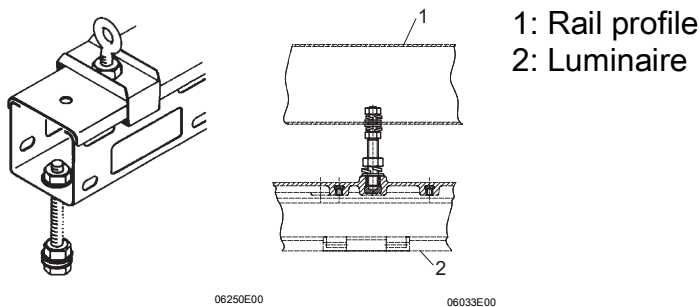
<b>i</b>	<p>For pipe clamp mounting, use the solution of R. STAHL Schaltgeräte GmbH with integrated mounting rail providing reliable and stable four-point fixing! In case of point suspension using pipe clamps, R. STAHL Schaltgeräte GmbH does not guarantee the strength and tightness of the luminaire!</p>
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### Wall bracket mounting



Size	L4 mm [inch]	L mm [inch]
2	320 [12.60]	80 [3.15]
4	670 [26.38]	130 [5.12]

### Continuous row mounting



### R. STAHL Schaltgeräte GmbH - rail profile for continuous row mounting of linear luminaires EXLUX



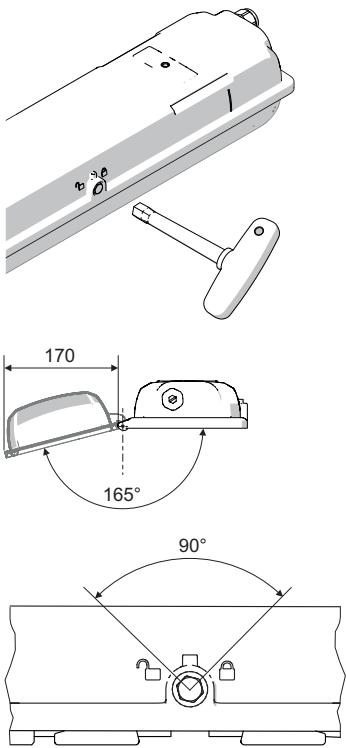

The rail profile facilitates row mounting and installation of the luminaires.

The rail profile can also be used as a cable duct.

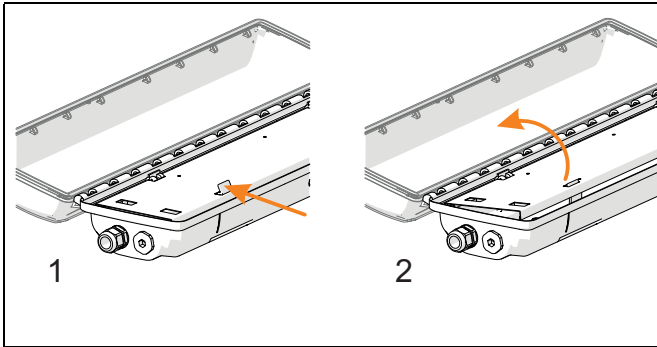
Always use mounting rails to adjust the luminaires to the hole pattern of the rail profile.

## 8.4 Installation

### 8.4.1 Opening and Closing of the Enclosure

	<p style="text-align: center;"><b>DANGER</b></p> <p>Risk of electric shock due to improper opening! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> <li>• Open luminaires without switch only in de-energized state (see information plate on the lock)!</li> </ul>
	<p><b>Recommendation</b></p> <p>Opening and closing of the luminaire by using a socket wrench from R. STAHL Schaltgeräte GmbH.</p>
 <p style="text-align: right; font-size: small;">15448E00 15451E00 15436E00</p>	<ul style="list-style-type: none"> <li>• Remove the closing cap of the central lock.</li> <li>• Turn the central lock using a box spanner M8, spanner size 13, by 90° to the left as far as it will go.</li> <li>• Swivel down the translucent cover.</li> <li>• Proceed in reverse order to close.</li> <li>• The seal of the translucent cover must lie correctly on the sealing edge.</li> <li>• Push the closing cap onto the central lock opening (protection against dirt).</li> </ul>
	<p>Observe the following during mounting and dismantling:</p> <ul style="list-style-type: none"> <li>• Version without switch: Disconnect the luminaire from the power supply, secure it against being switched on again and open the battery case in order to disconnect from the battery voltage.</li> <li>• Do not use force when opening or closing the enclosure.</li> </ul> <p><b>Central lock</b></p> <ul style="list-style-type: none"> <li>• Version with switch: The luminaire is positively disconnected from the power supply by actuating the central lock.</li> <li>• In open end position and with translucent cover swivelled down, an anti-pumping device prevents the central lock from being actuated.</li> </ul>

### Opening and closing the reflector plate



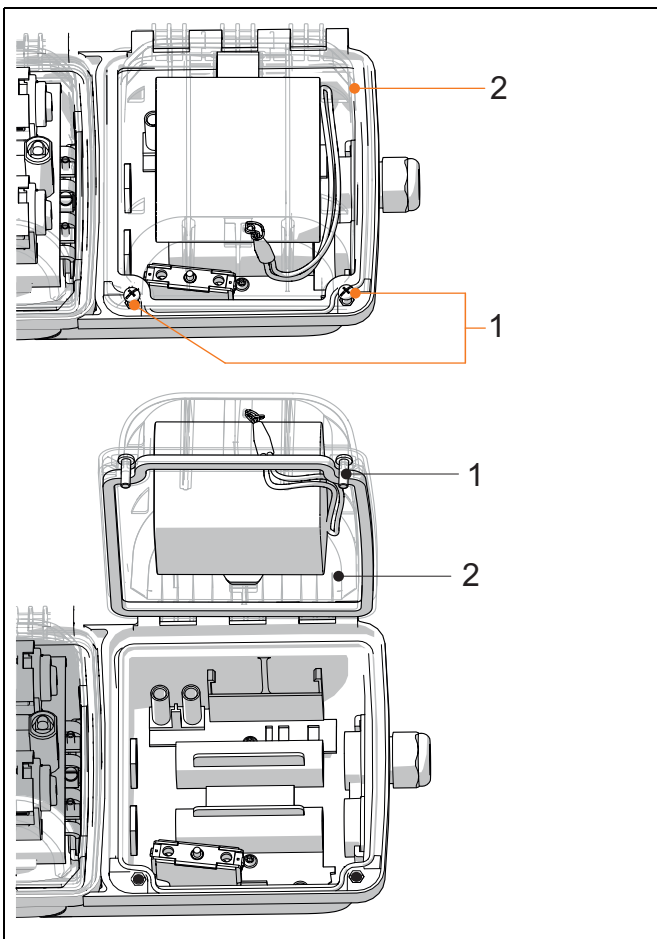
#### Opening:

- Open the reflector plate by pressing down on the safety latch (1).
- Swivel down the reflector plate (2).

#### Closing:

- Flip up the reflector plate and snap it into place.

### Opening and closing the battery case



#### Opening:

- Loosen the screws (1) (cross head H2).
- Open the battery cover (2).

#### Closing:

- Close the battery cover (2).
- Tighten the screws (1) (cross head H2) firmly (2 Nm).

### 8.4.2 Electrical connections

#### Electrical connection

Observe the maximum clamping possibility of the connecting terminals (see chapter "Technical data").

Observe the following when connecting to the main supply:

- Clamping must be carried out precisely!
- Do not clamp any part of the conductor insulation!
- Do not mix up the conductors!
- Observe the technical regulations when connecting the conductor!
- Clamp the conductor firmly.
- The phase L1 must be directly connected to the grid which functions as charging phase for the battery!

#### NOTICE

Danger due to wrong connection.

Malfunction

- Phases L and L1 must be connected in phase.

#### Connection terminals

##### Clamping range:

1 x 1.5 to 6 mm<sup>2</sup> (solid)

1 x 1.5 to 4 mm<sup>2</sup> (finely stranded)

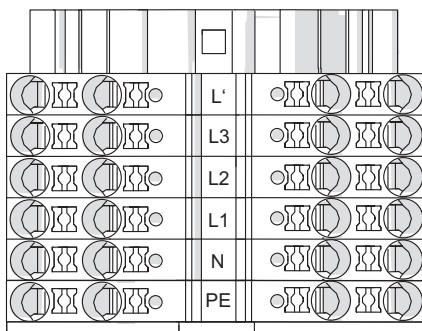
1 x 1.5 to 6 mm<sup>2</sup> (finely stranded with core end sleeve)

(2 free clamping units per pole available)

##### Stripping length:

10 to 12 mm

##### Standard:



- L' = switched phase
- L1 = charging phase
- L2, L3 = phase
- N = neutral conductor
- PE = protective conductor

20294E00

#### Through wiring of the mains supply connection

i

Through wiring with 2.5 mm<sup>2</sup> cross section for max. 16 A.



### 8.4.3 Cable entries

The standard luminaire is delivered with 3 lead-in holes, 2 cable glands and 2 stopping plug.


#### Tightening torques for components from R. STAHL Schaltgeräte GmbH

Luminaires with installed cable entries and stopping plugs from

R. STAHL Schaltgeräte GmbH must be tightened using the following values:

		Tightening torque	
		Connection thread	Pressure screw
Cable entry 8161	M20 x 1.5	2.3 Nm	1.5 Nm
	M25 x 1.5	3.0 Nm	2.0 Nm
Stopping plugs 8290	M20 x 1.5	1.0 Nm	–
	M25 x 1.5	1.5 Nm	–


#### Luminaires with cable entries and stopping plugs which are not supplied by R. STAHL Schaltgeräte GmbH

	<b>DANGER</b>
	<p>Explosion hazard due to impermissible cable entries and stopping plugs! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> <li>• Only use separately certified cable glands and stopping plugs which have been tested and certified according to Directive 2014/34/EU (ATEX) or IECEx (CoC) and which comply with the standard version stated in the certificate of the luminaire.</li> </ul>

Please observe the following:

- the required dust resistance!
- the required type of protection!
- the required temperature resistance!
- the IP degree of protection according to the rating plate!
- the operating instructions of the cable entries and stopping plugs!
- the required tightening torques!
- the range of the permissible cable diameter!
- Insert the metal cable entries and/or stopping plugs into the PE!

## 9 Commissioning

	DANGER
	<p>Explosion hazard due to incorrect installation! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> <li>• Check the device for proper installation before commissioning.</li> <li>• Comply with national regulations.</li> </ul>
NOTICE	
<p>Malfunction or device damage caused by condensation. Non-compliance can result in material damage!</p> <ul style="list-style-type: none"> <li>• operate the luminaire continuously or periodically over extended periods of time.</li> <li>• avoid thermal bridges.</li> </ul>	

Before commissioning, ensure the following:

- Check the mounting and installation.
- Check the device for damage.
- If necessary, remove foreign bodies.
- If necessary, clean the connection chamber.
- Check if the conductors have been inserted correctly.
- Check if all screws and nuts have been tightened firmly.
- Check if all drilled holes are closed.
- Check whether all the cable entries and stopping plugs have been tightened firmly.
- Check if all conductors have been clamped firmly.
- Check if the line voltage and the rated operational voltage are consistent.
- Check if the permissible conductor diameter for the corresponding cable entries have been used.
- Check if the device is closed according to regulations.
- Check if the battery is connected.
- If necessary remove transport protection (foam cushion).
- Check that there is no protective foil on the translucent cover.

## 10 Operation

### 10.1 Operating Modes

#### Power supply operation:

Stand-by switching	The luminaire is switched off regardless of normal lighting.
Continuous mode	The luminaire is switched on regardless of normal lighting.
Normal lighting operation	The light fitting is operated by normal lighting.

#### Emergency light operation:

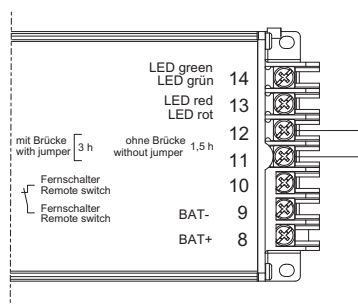
In the event of a power failure, the luminaire switches to emergency light operation.

The emergency lamp

- is marked with a green dot on the lamp holder.
- is switched on regardless of the operation mode of the selected rated operating time.

If the emergency lamp is defective, the light will be switched to the secondary lamp.

#### Rated operating time

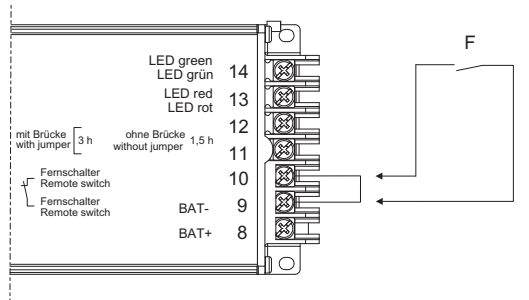


16403E00

Rated operating time	Jumper between terminals 11 and 12 of the control gear
1.5 hours	open (Standard in delivery)
3.0 hours	closed

### Emergency light blocking

A remote switch for emergency light blocking can be connected to terminals 9 and 10 of the control gear.



16400E00

	Remote switch is closed	Remote switch is opened
Power supply operation	Switching on the luminaire depending on operating mode	Switching on the luminaire depending on operating mode
Power failure	Emergency light function	No emergency light function

## 10.2 Functional and rated operating time test

To carry out the test, the following prerequisites must be fulfilled:

- the time interval has expired.
- the power supply operation was active for at least 1 hour.
- the remote switch is closed.

The test result is shown on the LED indicator. During a test the luminaire is switched on.

### Function test

- starts within 24 hours after commissioning.
- is carried out every 7 days.
- takes 1 minute.
- tests the function of the luminaires and the battery.

### Rated operating time test

- starts within 44 days after commissioning.
- is carried out once a year.
- discharges the battery up to the final discharge voltage.
- tests the function of the luminaires and the capacity of the battery.
- can be deactivated and activated.

Deactivating and activating the rated operating time test:

- switch of the supply voltage.
- switch on the supply voltage.
- within 60 seconds, switch the luminaire on and off 3 times for 5 seconds each.

The result will be shown on the LED display for 30 seconds.

### 10.3 Indications

#### When connecting to the power supply

Initialisation within 30 seconds

Seconds	Description	
0 to 10	Function test green LED	
10 to 20	Function test red LED	
20 to 30	Status of rated operating time test	Green LED flashes - rated operating time test active Red LED flashes - rated operating time test active

Then, the LED indicator switches to operating mode.

#### During power supply operation

Blinking: 1 second on, 1 second off

Flashing: 0.25 seconds on, 0.75 seconds off

Green	Luminaire is ready for operation	
Blinking green	Luminaire is ready for operation	Function or rated operating time test activated
Red	Error	Battery is defective or electric circuit is interrupted
Blinking red	Error	Battery capacity is too low
Flashing red	Error	The luminaire has reached its end of service life or is defective
Blinking green/red	Luminaire is ready for operation No emergency light operation	Emergency light operation is deactivated by remote switch

#### During emergency light operation

The LED indicator is switched off.

## 10.4 Troubleshooting

Observe the following troubleshooting plan for troubleshooting:

<b>Cause of error</b>	<b>Troubleshooting</b>
The lamp was incorrectly inserted.	Insert the lamp correctly.
The lamp is defective.	Replace the lamp.
The control gear is defective.	Replace the control gear.
The switch is defective.	Replace the switch.
The lamp reached its end of service life.	Replace the lamp.

### **LED display red**

The battery is defective.	Replace the battery.
The switch in the battery case is defective.	Replace the switch.
The switch in the light fitting is defective.	Replace the switch.

### **LED display blinking red**

The battery capacity is too low.	Replace the battery.
----------------------------------	----------------------


If the error cannot be eliminated using the mentioned procedures:

- Contact R. STAHL Schaltgeräte GmbH.

For fast processing, have the following information ready:


- Type and serial number of the device
- Purchase information
- Error description
- Intended use (in particular input / output wiring)

## 11 Maintenance, Overhaul, Repair

	<b>CAUTION</b>
	<p>Risk of electric shock or malfunction of the device due to unauthorized work! Non-compliance can result in light injuries!</p> <ul style="list-style-type: none"> <li>• Before carrying out work on the device, switch off voltage supply.</li> <li>• Work performed on the device must only be carried out by authorized and appropriately trained qualified electricians.</li> </ul>

### 11.1 Maintenance

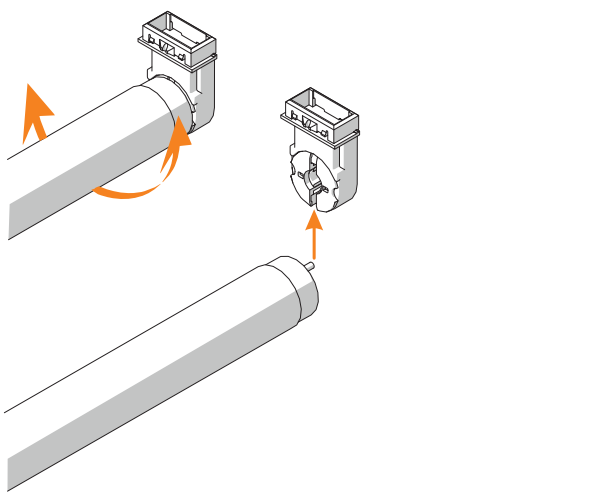
- Consult the relevant national regulations to determine the type and extent of inspections.
- Adapt inspection intervals to the operating conditions.
- Perform maintenance and repair work in accordance with IEC 60079-17 and IEC 60079-19.

	<p>Observe the relevant national regulations in the country of use.</p>
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As a minimum, check the following points during maintenance work on the device:

- Whether the clamping screws holding the cables are securely seated
- Whether the device has cracks or other visible signs of damage
- Whether the seal shows signs of ageing or damage (completely replace enclosure components with damaged foamed seal)
- Whether the device is clean inside and out
- Whether the permissible temperatures (in accordance with EN 60079) are complied with
- Whether the cable entry is intact and securely tightened
- Whether the cables and lines show signs of ageing and damage
- Intended use and function.

## 11.1.1 Replacement of lamps

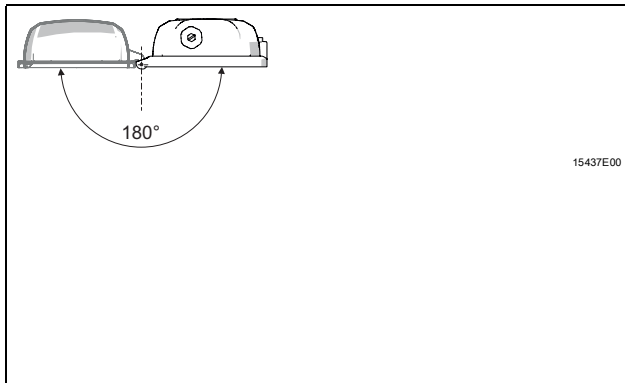
<b>i</b>	Only use fluorescent lamps with pins made of brass.
	<ul style="list-style-type: none"> <li>• Insert both lamp bases of the lamp into the holder slots as far as possible.</li> <li>• Turn the lamp clockwise or anticlockwise to bring it into the operating position.</li> <li>• Dismounting is carried out in reverse order.</li> </ul>

When replacing the lamps, ensure the following:



- Undamaged lamp bases
- Fit of the lamp; a secure lamp fit after rotation
- Timely replacement of the lamps
- Service life of the device according to manufacturer's specifications
- EOL safety shutdown: The control gear switches off the lamp at the end of the service life.

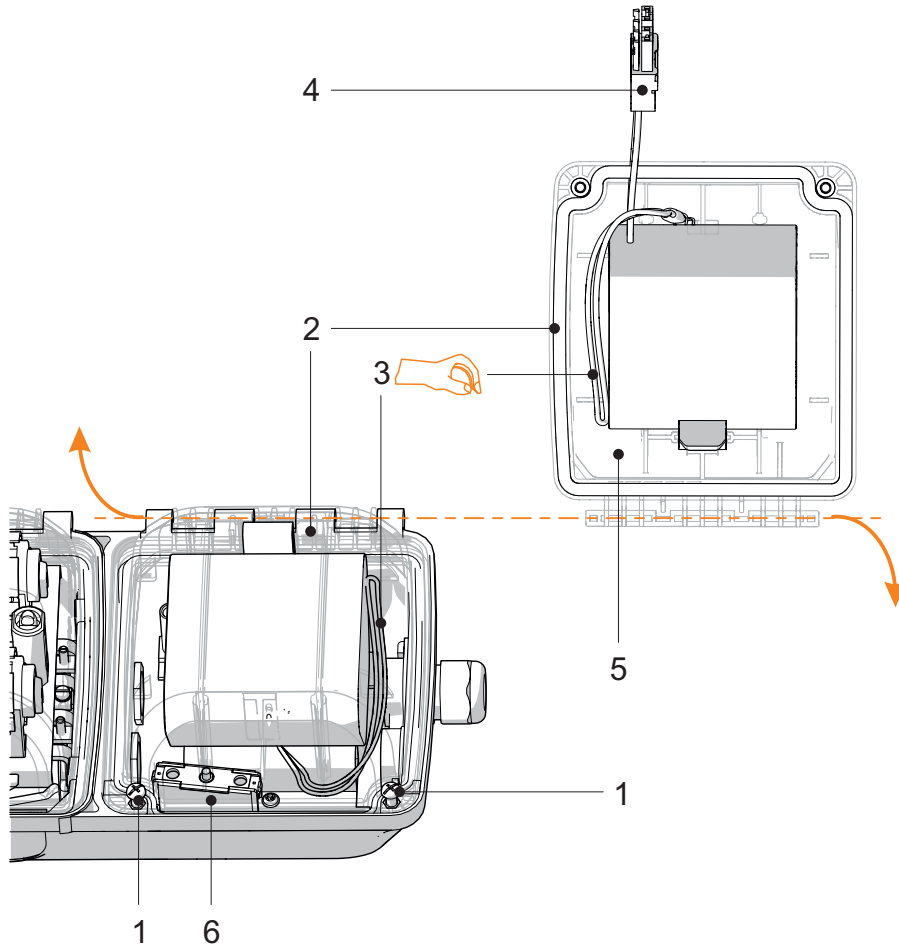


### 11.1.2 Replacing the luminaire cover

	<ul style="list-style-type: none"> <li>• Open the luminaire.</li> <li>• Swivel the translucent cover backwards by 180°.</li> <li>• Lift the translucent cover to detach it from the hinge.</li> <li>• Insert new translucent cover into the hinge.</li> <li>• All hinges must engage correctly.</li> <li>• Close the luminaire.</li> <li>• Observe safety notes!</li> </ul>
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### 11.1.3 Battery replacement

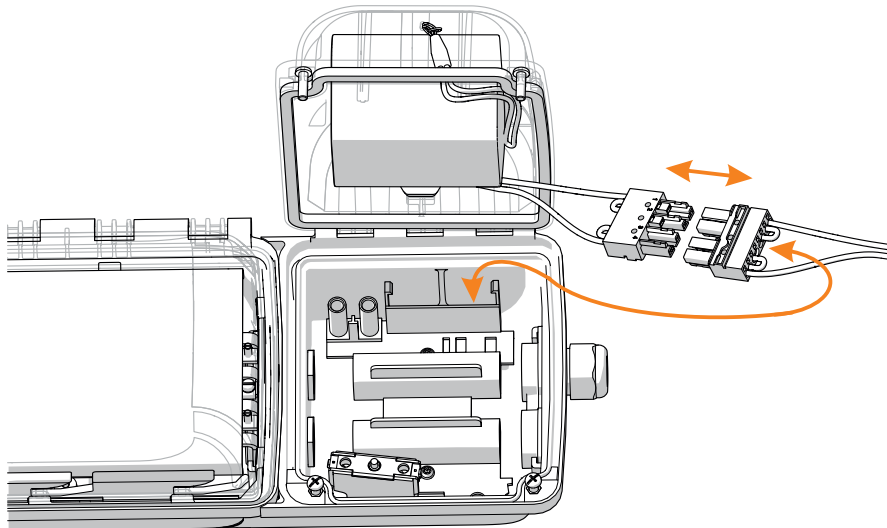
	<p style="text-align: center;"><b>DANGER</b></p> <p>Explosion hazard due to explosive dust atmosphere! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> <li>• Do not replace or transport the battery in explosive dust atmosphere!</li> </ul>
	<p style="text-align: center;"><b>WARNING</b></p> <p>Danger due to sparking! Explosion protection is impaired!</p> <ul style="list-style-type: none"> <li>• Carry the battery cover with built-in battery secured on the wrist.</li> <li>• Put the strap of the battery case around the wrist.</li> </ul>



16387E00

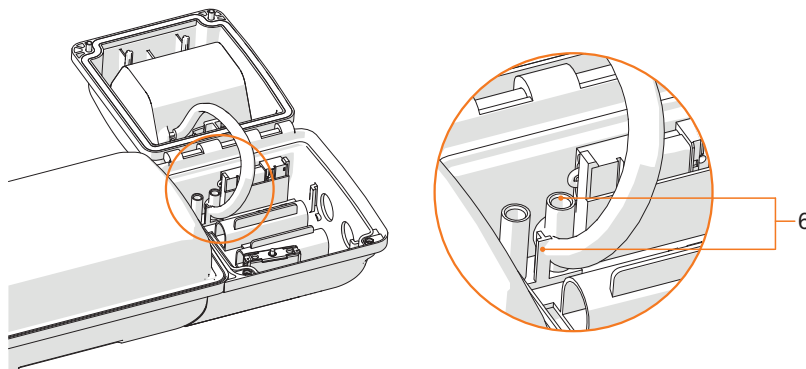
1	Screws	4	Battery plug
2	Battery cover	5	Battery
3	Strap	6	Switch

- Loosen the screws (1) (cross head H2) in the battery cover (2).
- Open the battery case.
- The switch (6) disconnects the battery circuit.
- Secure the battery cover with installed battery to your wrist using the strap (3).



16406E00


- Remove the battery plug from the chamber.
- Disconnect the battery plug (4).
- Take off the battery cover with installed battery (5).
- Put on and secure the battery cover with installed battery (5).
- Connect the battery plug (4).
- Loosen the strap (3) from the wrist and store it in the battery case.



21447E00


- Close the battery case. Fix battery conductors in place to protect them against getting caught between the plastic domes (6).
- Tighten the screws (1) (cross head H2) firmly (2 Nm).

## Resetting the error indication "blinking red" after replacing the battery

	<p>The error indication "blinking red" remains active after successfully replacing the battery.</p> <p><b>Deactivation:</b></p> <p>Automatic:</p> <ul style="list-style-type: none"> <li>• After replacing the battery, a rated operating time test is carried out automatically within 36 hours.</li> <li>• The error will be reset once this test has been passed successfully.</li> </ul> <p>Manual:</p> <ul style="list-style-type: none"> <li>• The line voltage must be switched on.</li> <li>• Actuate the switch in the battery case for 5 seconds.</li> <li>• Release the switch.</li> <li>• Actuate the switch twice within 10 seconds for a duration of 2 seconds.</li> <li>• Resetting of the error will be shown on the LED indicator for 5 seconds by flashing red/green lights.</li> <li>• The error is reset.</li> <li>• Close the battery case.</li> </ul>
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Further error indications will be reset right after troubleshooting.

## 11.2 Repair

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

## 11.3 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](http://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).

## 12 Cleaning

- To avoid electrostatic charging, the devices located in potentially explosive areas may only be cleaned using a damp cloth.
- When cleaning with a damp cloth, use water or mild, non-abrasive, non-scratching cleaning agents.
- Do not use aggressive detergents or solvents.
- Never clean the device with a strong water jet, e.g. using a high-pressure washer!

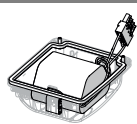
## 13 Disposal


- Observe national and local regulations and statutory regulation regarding disposal.
- Separate materials when sending it for recycling.
- Ensure environmentally friendly disposal of all components according to the statutory regulations.

CAUTION	
	<p>Danger due to chemical reactions! Human health and the environment are at risk!</p> <p>Batteries</p> <ul style="list-style-type: none"> <li>• collect them separately</li> <li>• dispose of them in controlled fashion</li> <li>• do not dispose of them in the domestic waste</li> <li>• return them to public collection points or to the supplier</li> </ul>

## 14 Accessories and Spare parts

NOTICE	
<p>Malfunction or damage to the device due to the use of non-original components. Non-compliance can result in material damage.</p> <ul style="list-style-type: none"> <li>• Use only original accessories and spare parts from R. STAHL Schaltgeräte GmbH.</li> </ul>	

Figure	Description	Art. no.	Weight kg
 16332E00	Battery cover with built-in battery. Gas-tight NiCd battery; 7 Ah / 6 V	223532	1.195

	<p>For accessories and spare parts, see data sheet on our homepage <a href="http://r-stahl.com">r-stahl.com</a>.</p>
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**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:** **Notlichtleuchte mit Leuchtstofflampen**  
*that the product:* *Emergency Luminaire for Fluorescent Lamps*  
*que le produit:* *Luminaire de secours*

**Typ(en), type(s), type(s):** **6409/5..-....-.....-**

**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.*

<b>Richtlinie(n) / Directive(s) / Directive(s)</b>	<b>Norm(en) / Standard(s) / Norme(s)</b>
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2014/34/EU <b>ATEX-Richtlinie</b> 2014/34/EU <i>ATEX Directive</i> 2014/34/UE <i>Directive ATEX</i>	EN IEC 60079-0:2018 EN 60079-31:2014
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**Kennzeichnung, marking, marquage:** **II 2 D Ex tb IIIC T80 °C Db**

**EU-Baumusterprüfbescheinigung:** **PTB 14 ATEX 2021**  
*EU Type Examination Certificate:* *(Physikalisch-Technische Bundesanstalt,*  
*Attestation d'examen UE de type:* *Bundesallee 100, 38116 Braunschweig, Germany)*

**Produktnormen nach Niederspannungsrichtlinie:** EN 60598-1:2015 + A1:2018  
*Product standards according to Low Voltage Directive:* EN 60598-2-22:2014 + A1:2020  
*Normes des produit pour la Directive Basse Tension:* EN 62471:2008

2014/30/EU <b>EMV-Richtlinie</b> 2014/30/EU <i>EMC Directive</i> 2014/30/UE <i>Directive CEM</i>	EN 55015:2019 + A11:2020 EN 61547:2009 EN 61000-3-2:2014 EN 61000-3-3:2013
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2011/65/EU <b>RoHS-Richtlinie</b> 2011/65/EU <i>RoHS Directive</i> 2011/65/UE <i>Directive RoHS</i>	EN IEC 63000:2018
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Waldenburg, 2021-03-16

**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*

**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,*



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<b>Richtlinie(n) / Directive(s) / Directive(s)</b>	<b>Norm(en) / Standard(s) / Norme(s)</b>
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2014/34/EU <b>ATEX-Richtlinie</b> 2014/34/EU <i>ATEX Directive</i> 2014/34/UE <i>Directive ATEX</i>	EN IEC 60079-0:2018 EN IEC 60079-7:2015 + A1:2018 EN 60079-31:2014
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**Kennzeichnung, marking, marquage:**  **II 3 G Ex db ec mb IIC T4 Gc**   
 II 3 D Ex tc IIIC T80 °C Dc

**Konformitätsaussage:** **PTB 14 ATEX 2022**  
*Conformity Statement:* *(Physikalisch-Technische Bundesanstalt,*  
*Déclaration de Conformité:* *Bundesallee 100, 38116 Braunschweig, Germany)*

**Produktnormen nach Niederspannungsrichtlinie:** EN 60598-1:2015 + A1:2018  
*Product standards according to Low Voltage Directive:* EN 60598-2-22:2014 + A1:2020  
*Normes des produit pour la Directive Basse Tension:* EN 62471:2008

2014/30/EU <b>EMV-Richtlinie</b> 2014/30/EU <i>EMC Directive</i> 2014/30/UE <i>Directive CEM</i>	EN 55015:2019 + A11:2020 EN 61547:2009 EN 61000-3-2:2014 EN 61000-3-3:2013
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2011/65/EU <b>RoHS-Richtlinie</b> 2011/65/EU <i>RoHS Directive</i> 2011/65/UE <i>Directive RoHS</i>	EN IEC 63000:2018
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Waldenburg, 2021-03-16

**Ort und Datum**  
*Place and date*  
*Lieu et date*

i.V.

  
**Dr. C. Chevalier**  
*Vice President BU Lighting & Signalling*  
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