



Linear luminaire with LED

Series EXLUX 6402/4

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1 General information

1.1 Manufacturer

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1.2 Information regarding the operating instructions

ID no.: 266299 / 640260300140
Publication code: 2023-07-27·BA00·III·en·09

The original instructions are the German 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

For certificates and declaration of conformity, see r-stahl.com.

2 Explanation of symbols

2.1 Symbols used 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

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
 0158 <small>05594E00</small>	CE marking according to the current applicable directive.
 8505 <small>23486E00</small>	UKCA marking according to the currently applicable directive.
 <small>02198E00</small>	Device certified for hazardous areas according to the marking.

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 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 mounting and installation

- Observe national mounting 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 rating, data and information plates 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.
- Only perform the maintenance work and repairs described in these operating instructions.

3.3 Intended use


The luminaire is equipment

- for lighting areas, work spaces and objects
- that can be used indoors and outdoors
- for stationary mounting
- Size 2 and size 4 for use in Zones 21, 2, 22 and in the safe area.
- Size 6 for use in Zones 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"> • Do not modify or change the device.
	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"> • 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 luminaire 6402/4 is equipment used for lighting areas, work equipment and objects. It can be used indoors and outdoors.

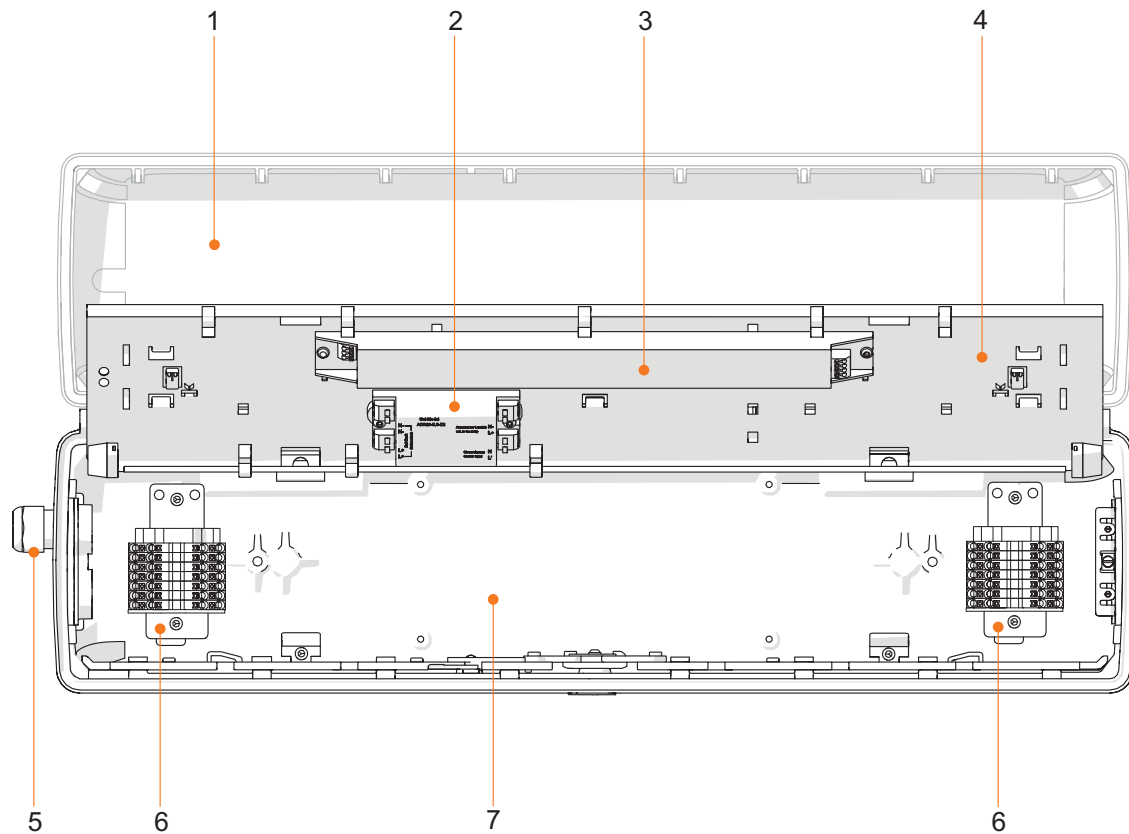
The luminaire is approved for use in hazardous areas of Zones 2 and 22. Size 2 and 4 luminaires are also approved for use in hazardous areas of Zone 21.

Mode of operation

When opened using a central lock, the luminaire switches off automatically (optional). The operating hours can be determined and the luminaire can be dimmed and switched (optional) via a DALI interface.

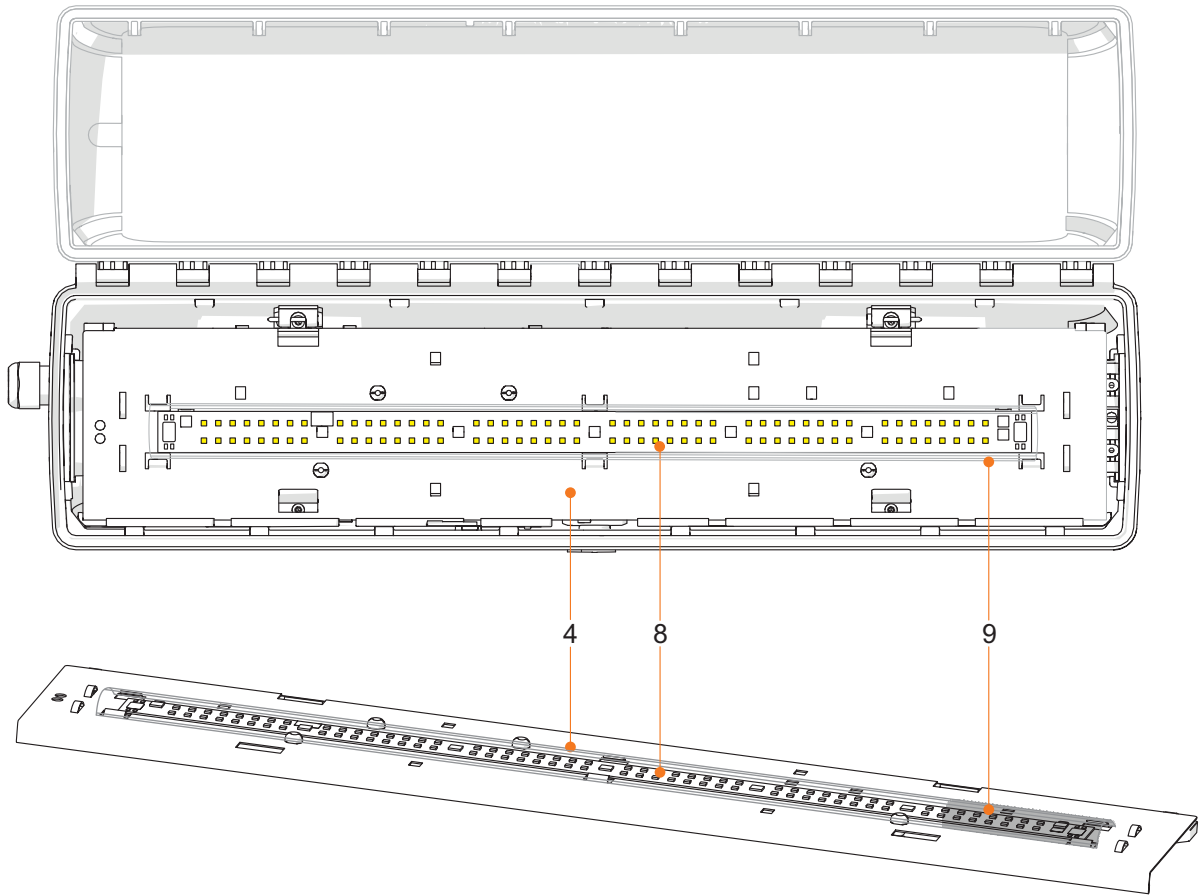
An address module can be used for luminaire control and monitoring with a central battery unit from R. STAHL (optional).

4.2 Device design



- | | | | |
|---|---------------------------|---|---------------------|
| 1 | Translucent cover | 5 | Cable entry |
| 2 | Address module (optional) | 6 | Connection terminal |
| 3 | Control gear | 7 | Luminaire enclosure |
| 4 | Mounting plate | | |

23198E00



20223E00

- 4 Mounting plate
- 8 LED PCB

- 9 Diffuser

5 Technical data

Explosion protection

Global (IECEX)

Gas and dust

IECEX IBE 14.0080
 Ex ec IIC T4 Gc
 Ex db ec IIC T4 Gc ¹⁾
 Ex ec nC IIC T4 Gc ²⁾
 Ex db ec nC IIC T4 Gc ^{1) 2)}
 Ex tb op is IIIC T100 °C Db
 Ex tc IIIC T100 °C Dc

Europe (ATEX, UKEX)

Gas and dust

IBExU 14 ATEX 1292, CML 21UKEX1560
 Ⓢ II 3 G Ex ec IIC T4 Gc
 Ⓢ II 3 G Ex db ec IIC T4 Gc ¹⁾
 Ⓢ II 3 G Ex ec nC IIC T4 Gc ²⁾
 Ⓢ II 3 G Ex db ec nC IIC T4 Gc ^{1) 2)}
 Ⓢ II 2 D Ex tb op is IIIC T100 °C Db
 Ⓢ II 3 D Ex tc IIIC T100 °C Dc

Notice

¹⁾ Luminaires with all-pole disconnection
²⁾ Luminaires with address module

Certifications and certificates

Certifications

IECEX, ATEX, UKEX, India (PESO)

Technical data

Electrical data

Rated operational voltage

IECEX, ATEX:

Standard + DALI Size 2, Size 4	with address module Size 2, Size 4, Size 6	Standard + DALI Size 6
100 to 240 V AC ±10%, 50 to 60 Hz	220 to 230 V AC ±10%, 50 Hz	220 to 240 V AC ±10%, 50 to 60 Hz
110 to 250 V DC ±10%	194 to 250 V DC ±10%	200 to 250 V DC ±10%

India (PESO):

Standard + DALI Size 2, Size 4	with address module Size 2, Size 4
220 to 240 V AC ±10%, 50 to 60 Hz	220 to 230 V AC ±10%, 50 Hz
200 to 250 V DC ±10%	194 to 250 V DC ±10%

Rated operational current

	Size 2	Size 4	Size 6
230 V; 50 Hz	100 mA	190 mA	230 mA
110 V; 60 Hz	185 mA	350 mA	–

Start-up current

$I_{peak} = 53.5 \text{ A}; \Delta t = 124.8 \mu\text{s}$
Maximum number of luminaires per miniature circuit breaker

Type	10 A	16 A	20 A	25 A
B	12	19	24	30
C	20	32	40	50
K	40	64	80	100

Power factor

	Size 2	Size 4	Size 6
230 V; 50 Hz	≥ 0.88	≥ 0.95	≥ 0.95
110 V; 60 Hz	≥ 0.97	≥ 0.98	–

Class

I (with internal PE connection)

Protective conductor current

≤ 0.5 mA

THD

	Size 2	Size 4	Size 6
230 V; 50 Hz	≤ 15%	≤ 7%	≤ 7%
110 V; 50 Hz	≤ 7%	≤ 9%	–

Technical data

Luminous characteristics

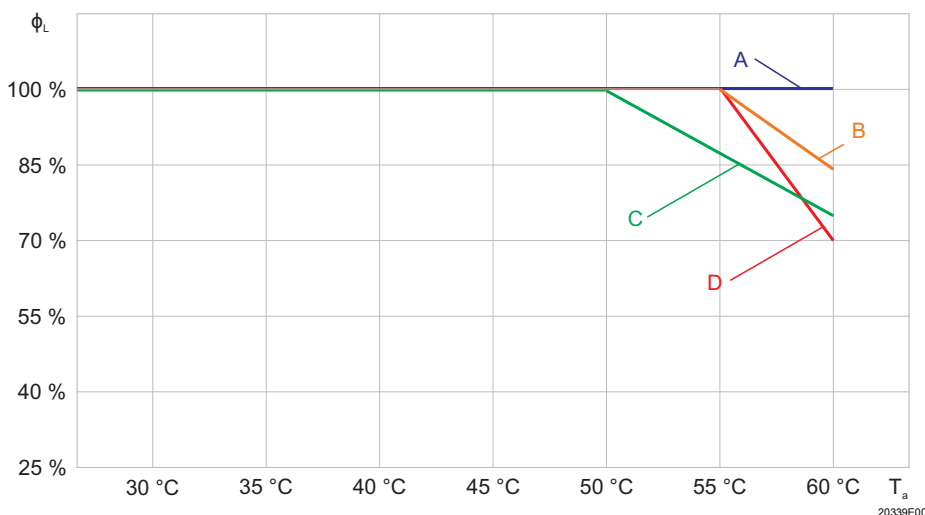
Colour rendering $R_a \geq 80$
 Colour temperature Depending on the variant, 2700 K (warm white), 4000 K (warm neutral white), 5000 K (standard light colour, neutral white), 5700 K (cool white) or 6500 K (daylight white)

Luminous flux	Size 2		Size 4		Size 6	
	with	without	with	without	with	without
Size	2		4		6	
Power consumption [W]	22		42		50	
Luminous flux [lm]	2,910	3,230	5,810	6,460	6,960	7,720
Luminaire efficacy [lm/W]	132	147	138	154	139	154

Values apply to $T_a = +25\text{ °C}$.

Energy efficiency class of the light source The device contains a light source in energy efficiency class D (according to the Energy Labelling Regulation for light sources)

- Luminous flux decline
- during DC operation to 50% (standard)
 - during DC operation without luminous flux decline (optional)
 - at ambient temperature



- A: Size 2; 110 to 230 V
- B: Size 4; 230 V
- C: Size 4; 110 V
- D: Size 6; 230 V

Technical data

Ambient conditions

Functional ambient temperature range	Standard + DALI Size 2, Size 4	Standard + DALI Size 6	with address module Size 2, Size 4	with address module Size 6
without through wiring	-40 to +60 °C	-20 to +60 °C	-30 to +50 °C	-20 to +50 °C
I_N Through wiring ≤ 10 A	-40 to +60 °C	-20 to +60 °C	-30 to +50 °C	-20 to +50 °C
I_N Through wiring ≤ 16 A	-40 to +55 °C	-20 to +55 °C	-30 to +45 °C	-20 to +45 °C
Storage	-40 to +75 °C			

Service life

LED	$L_{90B_{50}} > 100,000$ h			
	$L_x B_y$ At the end of the service life:			
	<ul style="list-style-type: none"> Luminous flux declines to "x" percent up to "y" percent of all luminaires do not reach "x" 			
LED control gear	Standard + DALI Size 2, Size 4	with address module Size 2, Size 4, Size 6	Standard + DALI Size 6	
	C10 at 50 °C	$\geq 100,000$ h	$\geq 50,000$ h	$\geq 100,000$ h
	C10 at 60 °C	$\geq 100,000$ h	$\geq 50,000$ h	$\geq 50,000$ h

Mechanical data

Degree of protection according to IEC 60598	Size 2	Size 4	Size 6
R. STAHL cable entries	IP66/IP67	IP66/IP67	IP66
8162/1 breather	IP64	IP64	IP64
Impact strength (IK code)	IK10 (IEC 62262)		
Material			
Enclosure	Polyester resin, glass fibre reinforced		
Enclosure colours	Grey colour, similar to RAL 7035		
Translucent cover	Polycarbonate		
Seal	Silicone seal, foamed into the translucent cover		
Luminaire lock	Central lock for M8 / A/F 13 box spanner; the translucent cover can be swivelled on its hinge		

Technical data

Mounting/installation

Cable entries	Openings	Standard	Connection side, 2 drilled holes for M25 (for loop in/loop out wiring) Output side, 1 drilled hole for M25 (for through wiring of the connection line)
		optional	max. 4 drilled holes for M20, M25, NPSM 1/2" or max. 2 drilled holes for NPT 3/4"
Threaded plate		Standard	2 x plastic M25 x 1.5
		optional	2 x metal M25 x 1.5 or M20 x 1.5 connected by means of PE for metal cable entries Seawater-resistant version on request Attention: cable entries must be ordered separately
Accessories		Standard	Plastic, 2 x M25 x 1.5 cable entries 8161 and 2 x M25 x 1.5 stopping plugs 8290 (included)
		optional	Metal cable glands: M20 x 1.5, M25 x 1.5; earthing of metal cable entries via metal plates (further cable entries possible on request)
Connection			Spring clamp terminals for max. 16 A Standard: 5-pole: L1, L2, L3, N, PE with address module: 5-pole: L+, N-, PE, L', N' with DALI: 7-pole: L1, L2, L3, N, PE, D1, D2 Clamping range: 1 x 1.5 to 4 mm ² (finely stranded) 1 x 1.5 to 6 mm ² (solid and finely stranded with core end sleeve) (2 free clamping units per pole available)
Through wiring		Standard	with Luminaires are equipped with internal through wiring. Connection of ingoing and outgoing leads on opposite sides is possible. Terminals: See technical data Wiring cross section of the supply line connection: 2.5 mm ² for max. 16 A (Observe operating temperature)
		optional	without On the connection side, there are 2 M25 x 1.5 bores for cable entries for loop in/loop out wiring of the connection line (ingoing and outgoing lead on one side).

Technical data


<p>Mounting</p>	<p>Standard optional</p>	<p>2 x M8 insert nuts in the enclosure Mounting grooves in the enclosure for use of mounting and top rails for variable luminaire mounting (variable mounting distances for luminaires Size 2: 320 to 480 mm Size 4, size 6: 670 to 930 mm)</p>
<p>Optional</p>		
<p>Interface</p>	<p>DALI-2 (according to IEC 62386): • Device type 6 (LED driver)</p>	
<p>Address module</p>	<p>Control input: Rated voltage: 220 to 230 V 50 Hz AC/DC Function: Address and switching module for R. STAHL emergency lighting systems according to VDE 0108: The module is used for monitoring individual luminaires and for the control of mains and emergency luminaires. The module offers the following functions:</p> <ul style="list-style-type: none"> • Control of the luminaire (ON/OFF) and calling up the function • Up to 20 addresses can be configured for each electrical circuit by means of software • The type of connection (continuous light, stand-by light or switched light) of the luminaire is freely programmable • Mixed operation within a circuit is possible 	
<p>Breather</p>	<ul style="list-style-type: none"> • Breather 8162/1 from R. STAHL Schaltgeräte GmbH <p>Notice: No breather may be used in atmospheres with corrosive gases.</p>	

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

6 Transport and storage

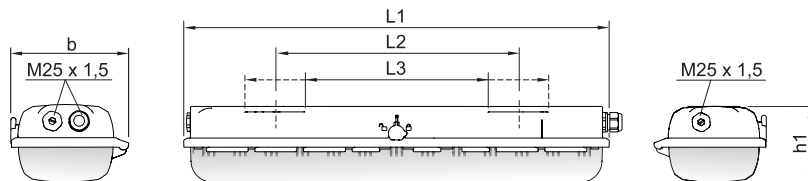
- Transport and store the device only in the original packaging.
- Store the device in a dry place (no condensation) free of vibrations.
- Do not drop the device.

7 Mounting and installation

	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"> • Carry out installation strictly according to the instructions and national safety and accident prevention regulations to maintain explosion protection. • Select and install the electrical device so that explosion protection is not affected due to external influences (see IEC/EN 60079-14). • The device must only be installed by trained qualified personnel who are familiar with the relevant standards.

7.1 Dimensions/fastening dimensions

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



15440E00

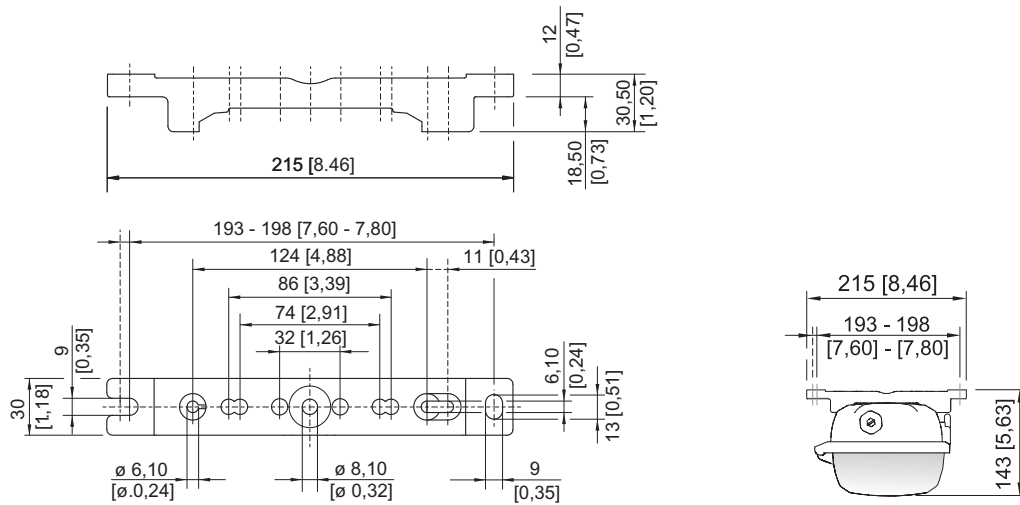
Dimensions	Luminaire		
	Size 2	Size 4	Size 6
L1	700 [27.56]	1310 [51.57]	1610 [63.39]
L2 ¹⁾	400 [15.75]	800 [31.50]	800 [31.50]
L3 ²⁾	320 to 480 [12.60 to 18.90]	670 to 930 [26.38 to 36.61]	670 to 930 [26.38 to 36.61]
b	184 [7.24]	184 [7.24]	184 [7.24]
h1	125 [4.92]	125 [4.92]	125 [4.92]

¹⁾ fixed mounting distance

²⁾ variable mounting distance

EXLUX 6402/4 standard luminaire

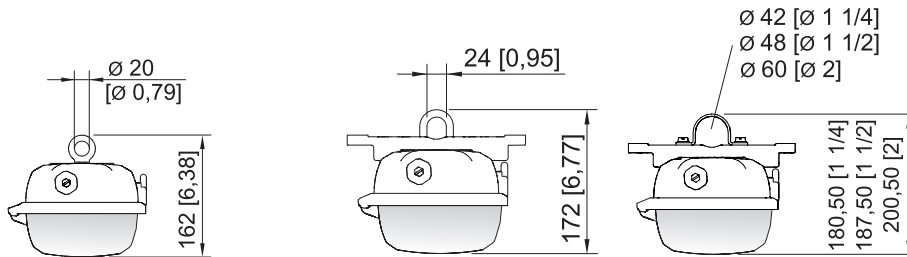
Dimensional drawings for assembly parts and accessories (all dimensions in mm [inch]) – Subject to change



15778E00

15779E00

Mounting rail



15782E00

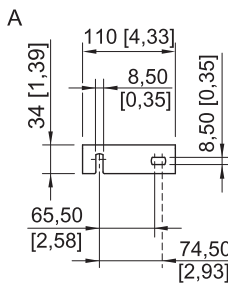
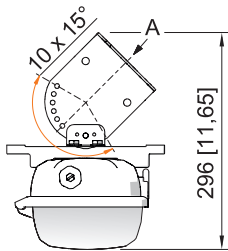
15781E00

15783E00

Ring bolt installed in insert nut of the luminaire

Mounting bracket fitted in mounting rail

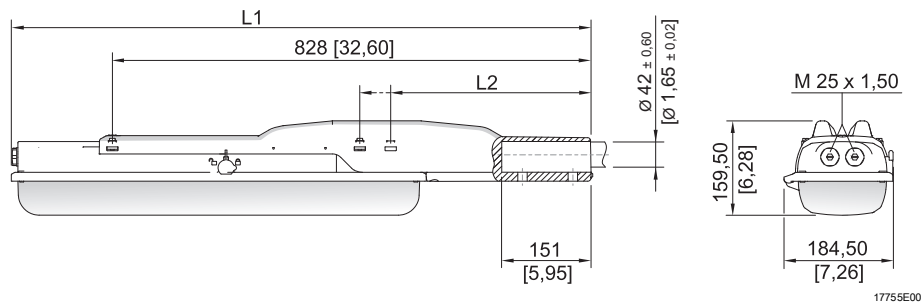
Pipe clamp installed in mounting rail



15780E00

Wall mounting bracket installed in mounting rail

Dimensional drawings for assembly parts and accessories (all dimensions in mm [inch]) – Subject to change



Dimensions	Luminaire	
	Size 2	Size 4
L1	978 [38.50]	1587 [62.48]
L2	390 [15.35]	338 [13.31]

Linear luminaire EXLUX with pole mounting sleeve




7.2 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.

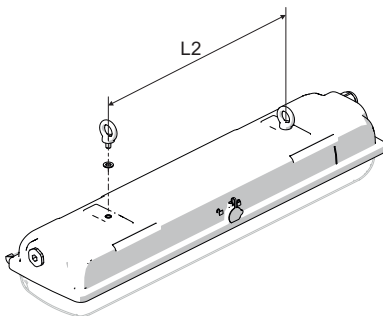
	DANGER
	<p>Explosion hazard due to electrostatic discharge! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Only remove protective foil in safe areas.

- If protective foil is present:
 Remove the protective foil before commissioning.

7.3 Mounting/dismounting, operating position

	DANGER
	<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
	DANGER
	<p>Explosion hazard due to impermissible heating! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Avoid external heat sources – comply with the ambient temperature range (risk of change of temperature class or change of maximum permissible surface temperature). • Do not exceed the maximum ambient temperature due to external heat sources (premature failure of equipment).
	<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.</p>
	<p>The mounting position with light emission upwards is prohibited in outdoor areas.</p>

Suspension at fixed mounting points

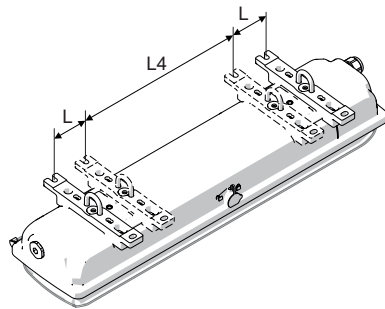


15446E00

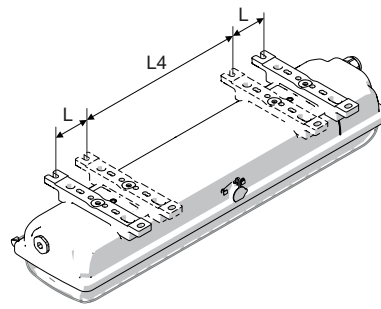
Size	L2 mm [inch]
2	400 [15.75]
4	800 [31.50]
6	800 [31.50]

max. screw-in depth 10 mm [0.39]

Suspension on movable assembly parts



15442E00



15447E00

Mounting bracket

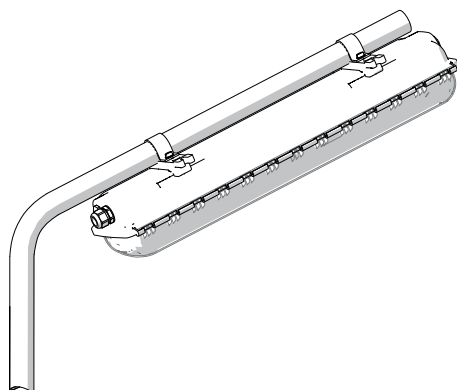
Top rail

Size	L4 mm [inch]	L mm [inch]
2	320 [12.60]	80 [3.15]
4	670 [26.38]	130 [5.12]
6	670 [26.38]	130 [5.12]

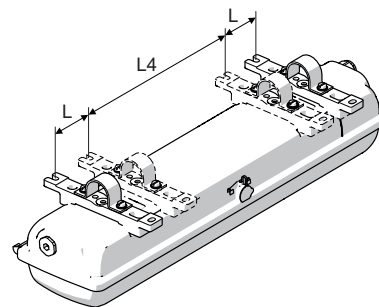
Lateral mounting pockets for variable points of suspension.

i	<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>
----------	--

Pole suspension Pole mounting using pipe clamps



15445E00



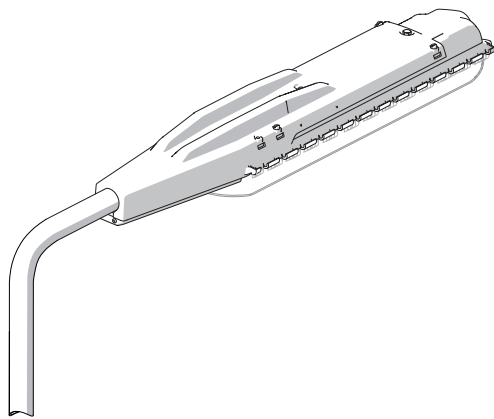
15443E00

Size	L4 mm [inch]	L mm [inch]
2	320 [12.60]	80 [3.15]
4	670 [26.38]	130 [5.12]
6	670 [26.38]	130 [5.12]

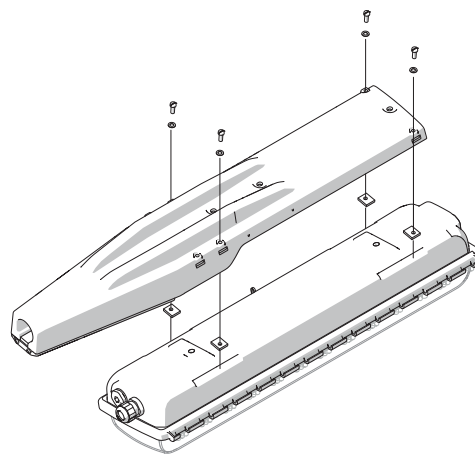
i For pipe clamp mounting, use the solution from R. STAHL Schaltgeräte GmbH with integrated mounting rail, providing reliable and stable four-point fixing!
 In case of point suspension using pipe clamps, R. STAHL Schaltgeräte GmbH does not guarantee the strength and tightness of the luminaire!

Pole mounting using pole mounting sleeve

i Only for size 2 and size 4

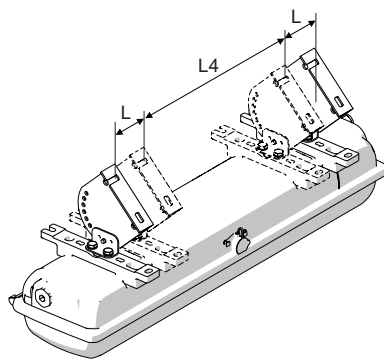


17761E00

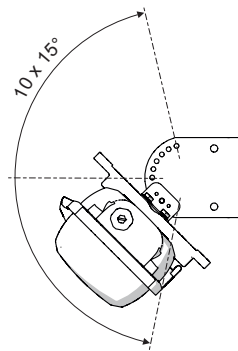


17762E00

Wall bracket mounting



15515E00



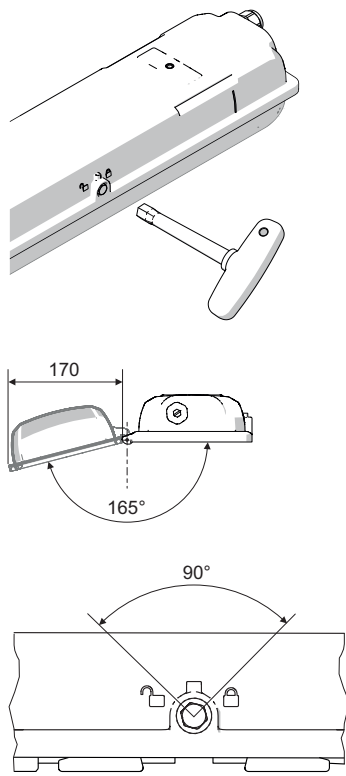



15517E00

Size	L4 mm [inch]	L mm [inch]
2	320 [12.60]	80 [3.15]
4	670 [26.38]	130 [5.12]
6	670 [26.38]	130 [5.12]

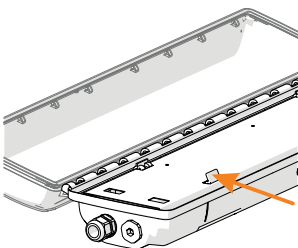
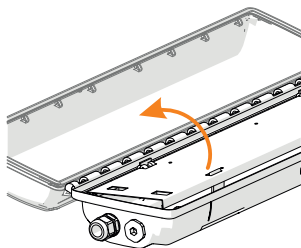
7.4 Installation

7.4.1 Opening and closing the enclosure

	<p style="text-align: center;">DANGER</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"> • Open luminaires without switches only in de-energised state (see information plate on the lock)!
<p style="text-align: center;">NOTICE</p> <p>Danger due to electrostatic discharge. Electronic components can be destroyed if touched.</p> <ul style="list-style-type: none"> • Do not touch the LED PCBs! 	
	<p>Recommendation</p> <p>Open and close the luminaire using the box spanner from R. STAHL Schaltgeräte GmbH.</p>
 <p style="text-align: right; font-size: small;">15448E00 15451E00 15436E00</p>	<ul style="list-style-type: none"> • Remove the closing cap of the central lock. • Turn the central lock using a box spanner M8, spanner size 13, by 90° to the left as far as it will go. • Swivel down the translucent cover. • Proceed in reverse order to close. • The seal of the translucent cover must lie correctly on the sealing edge. • Push the closing cap onto the central lock opening (protection against dirt).

	<p>Observe the following during mounting and dismantling:</p> <ul style="list-style-type: none"> • Version without switch: Disconnect the luminaire from the power supply and secure it against being switched on again. • Do not use force when opening or closing the enclosure! <p>Central lock</p> <ul style="list-style-type: none"> • Version with switches: The luminaire is positively disconnected from the power supply by actuating the central lock. • In the open end position and with the translucent cover swivelled down, the anti-pumping device prevents the central lock from being actuated.
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Opening and closing the reflector plate

 <p>1</p>	 <p>2</p>	<p>Opening:</p> <ul style="list-style-type: none"> • Open the reflector plate by pressing down on the safety latch (1). • Swivel down the reflector plate (2). <p>Closing:</p> <ul style="list-style-type: none"> • Flip up the reflector plate and snap it into place.
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7.4.2 Electrical connections

Mains connection

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

Observe the following when connecting to the mains connection:

- 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.

Connection terminals

Clamping range:

1 x 1.5 to 4 mm² (finely stranded)

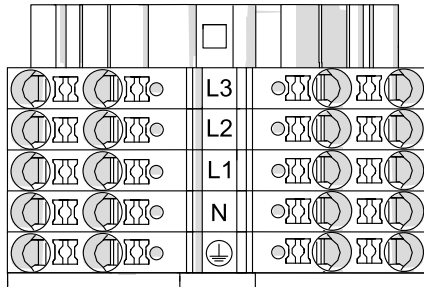
1 x 1.5 to 6 mm² (solid and finely stranded with core end sleeve)

(2 free clamping units per pole available)

Stripping length:

10 to 12 mm

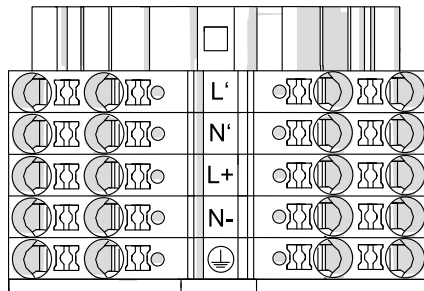
Standard:



- L1, L2, L3 = phase
- N = neutral conductor
- ⊕ = protective conductor

20219E00

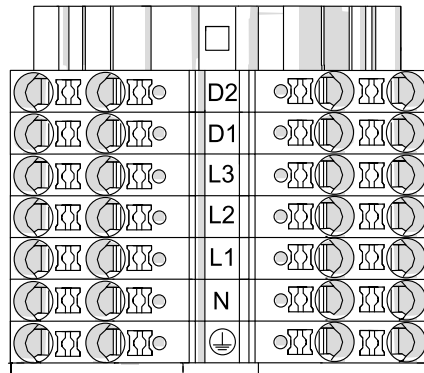
with address module:



- L', N' = control input
- L+, N- = final electrical circuit
- ⊕ = protective conductor

20220E00

with DALI connection:



- D1, D2 = DALI connection
- L1, L2, L3 = phase
- N = neutral conductor
- ⊕ = protective conductor

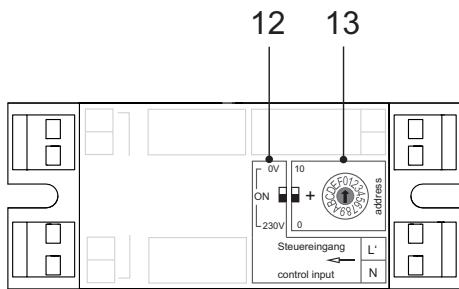
20221E00

Through wiring of the mains supply connection

i	Through wiring with 2.5 mm ² Cross section for max. 16 A.
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7.4.3 Luminaires with address module

i	Before operating an emergency lighting central battery system, luminaire addressing is to be performed by means of a 4 mm slot screwdriver.
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18812E00

- 12 Logic switch
- 13 Address switch

Address setting

Address switch (13):

Slide switch 0 / 10	Rotary switch 0 / F	Luminaire address
0	0	0 (invalid)
0	1	1
0	2	2
...
0	9	9
0	A	10
10	0	10
10	1	11
...
10	9	19
10	A	20
10	B ... E	invalid
10	F	Addressing via software

Control input (L', N'):

The address module provides the opportunity to connect a control line for switching the luminaire together with the general lighting.

Logic switch (12):

Slide switch 0 V / 230 V	Function
0 V	negative logic
230 V	positive logic

Switching options:

positive logic (230 V)	negative logic (0 V)
<p>switched light to switch on the luminaire together with other luminaires</p> <p style="text-align: right; font-size: small;">19025E00</p>	<p>switched light to switch on the luminaire in case of power failure</p> <p style="text-align: right; font-size: small;">19026E00</p>

- L, N Power supply network
- FZB Battery system
- S General lighting switch

- 10 Control line
- 14 Emergency lighting
- 15 General lighting

7.4.4 Cable entries, stopping plugs and breathers


The standard luminaire is delivered with 3 entries, 2 cable entries and 2 stopping plugs.

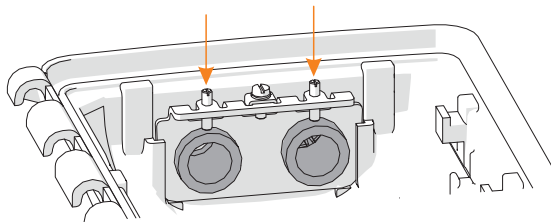
Tightening torques for components from R. STAHL Schaltgeräte GmbH

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 plug 8290	M20 x 1.5	1.0 Nm	–
	M25 x 1.5	1.5 Nm	–
Breather 8162/1	M25	3.0 Nm	–


Cable entry or breather made of metal

	DANGER
	<p>Explosion hazard due to unprotected earthing contacts! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> Contact threaded pins for a combination of a metal insertion plate with metal cable entries or breather (see figure).



23080E00

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

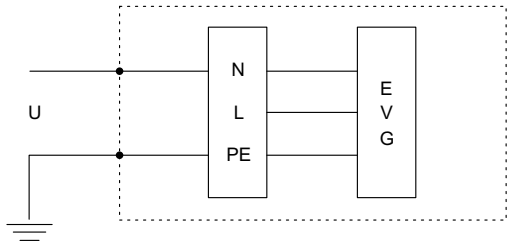
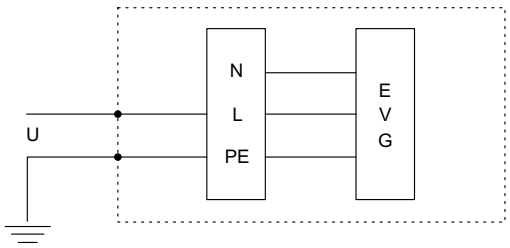
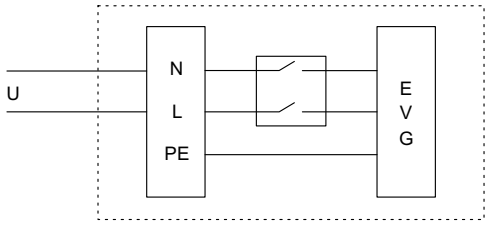
	DANGER
	<p>Explosion hazard due to impermissible cable entries and stopping plugs! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none">• Use cable entries and stopping plugs which have been separately tested according to Directive 2014/34/EU (ATEX) or IECEx (CoC),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

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 label on the device!
- the operating instructions of the cable entries and stopping plugs!
- the required tightening torques!
- the area for the permissible conductor diameter!
- insert the metal cable entries and/or stopping plugs into the PE!

7.4.5 Lighting system insulation test

A DC voltage insulation test in electrical circuits is permissible up to 500 V DC under the following conditions:

Test location/condition	Circuit diagram
<p>1. Between neutral conductor and protective conductor</p>	 <p style="text-align: right; font-size: small;">22952E00</p>
<p>2. Between phase and protective conductor</p>	 <p style="text-align: right; font-size: small;">22953E00</p>
<p>3. Between phase and neutral conductor</p> <p>For a measurement between phase and the neutral conductor, the control gear must be disconnected from the mains power!</p> <p>NOTICE! Destruction of the device and/or electrical components if the disconnecter is missing! Non-compliance may lead to material damage!</p> <ul style="list-style-type: none"> ▶ Only disconnect the device from the mains power using an internal switch before the insulation test. 	 <p style="text-align: right; font-size: small;">22954E00</p>


8 Commissioning

	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.
NOTICE	
<p>Malfunction or device damage caused by condensation. Non-compliance may lead to material damage!</p> <ul style="list-style-type: none"> • Operate the luminaire continuously or periodically over extended periods of time. • Avoid thermal bridges, use suitable installation accessories. 	

Before commissioning, ensure the following:


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

9 Maintenance, overhaul, repair

	CAUTION
	<p>Risk of electric shock or malfunction of the device due to unauthorised work! Non-compliance can result in minor injuries!</p> <ul style="list-style-type: none"> • Switch off the voltage supply before working on the device. • Work performed on the device must only be carried out by authorised and appropriately trained qualified electricians.

9.1 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.
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During maintenance/overhaul of the device, the following points must be checked:

- Whether the clamping screws holding the electrical lines fit securely
- 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 are complied with (according to EN 60079)
- Whether the cable entry is intact and securely tightened
- Whether the cables and electrical lines show signs of ageing and damage
- Whether the device is used as intended and functions properly

9.2 Repair

	DANGER
	<p>Explosion hazard due to improper repair! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Only perform repairs on the device using original spare parts from R. STAHL Schaltgeräte GmbH, taking the associated installation instructions into account.

Repairs carried out on the mounting plate are not permitted. Replace the mounting plate completely in case of error.

9.3 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).

10 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.

11 Disposal

- Observe national, local and statutory regulations regarding disposal.
- Separate materials for recycling.
- Ensure environmentally friendly disposal of all components according to statutory regulations.
- Removal of components at the end of their service life:
 - Remove and open luminaires according to the operating instructions.
 - Disconnect cables from the LED PCB and control gear.
 - Control gear: Loosen the mounting screws and remove the device.
 - LED PCB: Push the barbs on the underside together using suitable pliers and remove the PCB upwards.

12 Accessories and spare parts

NOTICE

Malfunction or damage to the device due to the use of non-original components.
Non-compliance may lead to material damage!

- Use only original accessories and spare parts from R. STAHL Schaltgeräte GmbH.



For accessories and spare parts, see the data sheet on our homepage r-stahl.com.

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: LED Langfeldleuchte
that the product: LED Linear Luminaire
que le produit: LED Luminaire Linéaire

Typ(en), type(s), type(s): 6402/4...-...-...-...-...

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 2014/34/EU 2014/34/UE ATEX-Richtlinie ATEX Directive Directive ATEX	EN IEC 60079-0:2018 EN 60079-1:2014 EN IEC 60079-7:2015/A1:2018 EN IEC 60079-15:2019 EN 60079-28:2015 EN 60079-31:2014
Kennzeichnung, marking, marquage:	II 3 G Ex ec IIC T4 Gc II 3G Ex db ec IIC T4 Gc II 3G Ex ec nC IIC T4 Gc II 3G Ex db ec nC IIC T4 Gc II 3 D Ex tc IIIC T100 °C Dc II 2 D Ex tb op is IIIC T100°C Db  
EU-Baumusterprüfbescheinigung: <i>EU Type Examination Certificate:</i> <i>Attestation d'examen UE de type:</i>	IBExU 14 ATEX 1292 (IBExU Institut für Sicherheitstechnik GmbH Fuchsmühlenweg 7, 09599 Freiberg, 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 60598-2-22:2014/AC:2015 EN 62471:2008
2014/30/EU 2014/30/EU 2014/30/UE EMV-Richtlinie EMC Directive Directive CEM	EN 61547:2009 EN 55015:2013 EN 61000-3-2:2014 EN 61000-3-3:2013
2011/65/EU 2011/65/EU 2011/65/UE RoHS-Richtlinie RoHS Directive Directive RoHS	EN 50581:2012

Waldenburg 2020-08-10

Ort und Datum
Place and date
Lieu et date

i.V.


Dr. A. Kaufmann
Leiter BU Leuchten & Signalgeräte
Head of BU Lightings & Signalling
Directeur BU Eclairage & Appareils de signalisation

i.V.


J. Freimüller
Leiter Qualitätsmanagement
Director Quality Management
Directeur Assurance de Qualité

R. STAHL Schaltgeräte GmbH • Am Bahnhof 30 • 74638 Waldenburg, Germany
 represented locally by, *lokal vertreten durch*
R. STAHL LTD. • 2nd Floor, Bromwich Court, Gorseley Lane, Coleshill • Birmingham B46 1JU, UK
 declares in its sole responsibility, *erklärt in alleiniger Verantwortung,*


that the product: **LED Linear Luminaire**
 dass das Produkt: *LED Langfeldleuchte*

Type(s), *Typ(en)*: **6402/4.**

is in conformity with the requirements of the following regulations and standards.
mit den Anforderungen der folgenden Verordnungen und Normen übereinstimmt.

Regulation(s) / <i>Verordnung(en)</i>	Standard(s) / <i>Norm(en)</i>
S.I. 2016/1107 Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations <i>S.I. 2016/1107 Verordnung für Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen</i>	EN IEC 60079-0:2018 EN 60079-1:2014 EN IEC 60079-7:2015 + A1: 2018 EN IEC 60079-15:2019 EN 60079-28:2015 EN 60079-31:2014

Marking, *Kennzeichnung*:

II 3 G Ex ec IIC T4 Gc
II 3G Ex db ec IIC T4 Gc
 **II 3G Ex ec nC IIC T4 Gc**
II 3G Ex db ec nC IIC T4 Gc
II 3 D Ex tc IIIC T100 °C Dc
II 2 D Ex tb op is IIIC T100°C Db

**UK
CA 8505**

UK Type Examination Certificate:
UK-Baumusterprüfbescheinigung:

CML 21UKEX1560
 (Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, Cheshire, CH65 4LZ, UK, AB2503)

Product standards according to S.I. 2016/1101 Electrical Equipment (Safety) Regulation <i>Produktnormen nach S.I. 2016/1101 (Sicherheits-) Verordnung für elektronische Geräte</i>	EN 60598-1:2015 + A1:2018 EN 60598-2-22:2014 + A1:2020 EN 62471:2008
S.I. 2016/1091 EMC Regulations <i>S.I. 2016/1091 EMV-Verordnung</i>	EN 61547:2009 EN IEC 55015:2019 + A11:2020 EN 61000-3-2:2014 EN 61000-3-3: 2013
S.I. 2012/3032 RoHS Regulations <i>S.I. 2012/3032 RoHS-Verordnung</i>	EN IEC 63000:2018

Waldenburg, 2023-07-27

Place and date
Ort und Datum

i.V.


S. Holtz
 Head of R&D - BU Lighting & Signalling
Leiter Entwicklung Leuchten und Signalgerät

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D. Groth
 Director Quality Management Systems
Leiter Qualitätsmanagementsysteme