Operating instructions

Additional languages r-stahl.com

EN

Linear luminaire with LED

Series EXLUX 6002/4

STAHL

EN

Contents

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1 General information

1.1 Manufacturer

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1.2 Information regarding the operating instructions

ID no.: 265138 / 600260300080
Publication code: 2023-05-16·BA00·III·en·05

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.

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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
CE 0158 05594E00	CE marking according to the current applicable directive.
UKCA 8505 23486E00	UKCA marking according to the currently applicable directive.
Ex 02198E00	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.

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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
- for use in Zones 1, 21, 2, 22 and in the safe area

3.4 Modifications and alterations

	**DANGER** Explosion hazard due to modifications and alterations to the device! Non-compliance results in severe or fatal injuries. • Do not modify or change the device.
	No liability or warranty for damage resulting from modifications and alterations.

4 Function and device design

	**DANGER** Explosion hazard due to improper use! Non-compliance results in severe or fatal injuries. • 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 6002/4 is equipment used for lighting areas, work equipment and objects. It can be used indoors and outdoors.

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.

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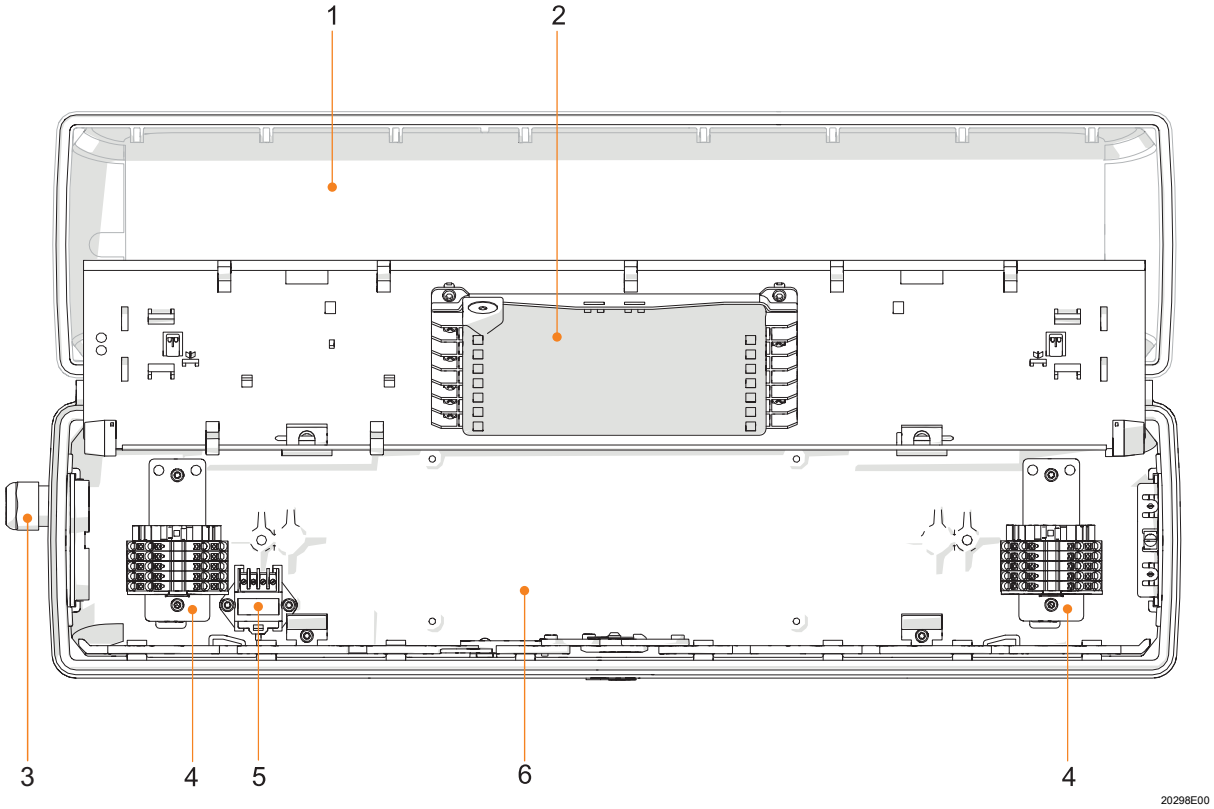
4.2 Device design



1	Translucent cover	4	Connection terminal
2	Control gear	5	Switch (optional)
3	Cable entry	6	Luminaire enclosure

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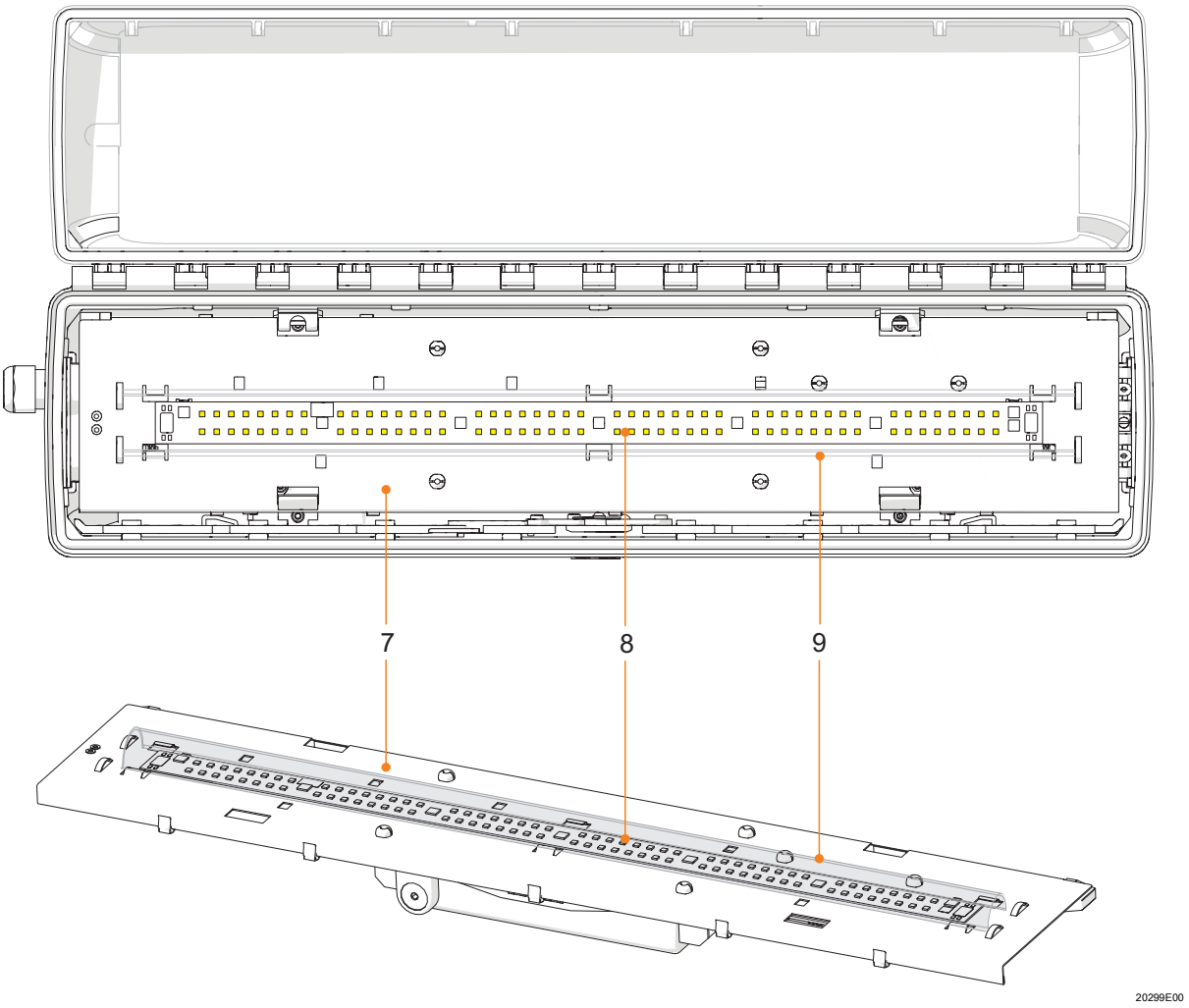

7	Mounting plate	9	Diffuser
8	LED PCB		

5 Technical data

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Explosion protection

Global (IECEx)

Gas and dust	IECEx IBE 14.0035 Ex db eb ib op is IIC T4 Gb Ex tb op is IIIC T100 °C Db

Europe (ATEX, UKEX)

Gas and dust	IBExU 14 ATEX 1088, CML 21UKEX1553 ⟨Ex⟩ II 2 G Ex db eb ib op is IIC T4 Gb ⟨Ex⟩ II 2 D Ex tb op is IIIC T100 °C Db

Certifications and certificates

Certifications	IECEx, ATEX, UKEX

Technical data

Electrical data

Rated operational voltage

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

Rated operational current

	Size 2	Size 4	Size 6
230 V; 50 Hz	110 mA	190 mA	230 mA
110 V; 60 Hz	200 mA	400 mA	470 mA

Start-up current

I_{peak} = 51 A; Δt = 127 µs

Maximum number of luminaires per miniature circuit breaker [1)]

Type	10 A	16 A	20 A	25 A
B	12	19	24	31
C	20	33	41	51
K	41	66	82	103

[1)] Typical values 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

Power factor

	Size 2	Size 4	Size 6
230 V; 50 Hz	≥ 0.89	≥ 0.95	≥ 0.95
110 V; 60 Hz	≥ 0.98	≥ 0.99	≥ 0.99

Class	I (with internal PE connection)
Protective conductor current	≤ 0.5 mA

THD

	Size 2	Size 4	Size 6
230 V; 50 Hz	< 17%	< 10%	< 9%
110 V; 60 Hz	< 12%	< 7%	< 6%

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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) or 6500 K (daylight white)

Luminous flux

	6002/4.2.		6002/4.4.		6002/4.6.	
Size	2		4		6	
Power consumption [W]	22		42		50	
Diffuser	with	without	with	without	with	without
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 °C.

Yellow phosphorus converted

	6002/4.2.		6002/4.4.		6002/4.6.	
Size	2		4		6	
Power consumption [W]	19		36		36	
Diffuser	with	without	with	without	with	without
Luminous flux [lm]	2,180	2,420	4,360	4,840	4,360	4,840
Luminaire efficacy [lm/W]	115	127	121	134	121	134

Application example: No impact on animals in lighting

Green

	6002/4.2.		6002/4.4.		6002/4.6.	
Size	2		4		6	
Power consumption [W]	18		35		35	
Diffuser	with	without	with	without	with	without
Luminous flux [lm]	2,110	2,340	4,240	4,710	4,240	4,710
Luminaire efficacy [lm/W]	117	130	121	135	121	135

Application example: Eyewash stations, safety showers and in the offshore area or near ports

Red

	6002/4.4.		6002/4.6.	
Size	4		6	
Power consumption [W]	26		26	
Diffuser	with	without	with	without
Luminous flux [lm]	1,540	1,710	1,540	1,710
Luminaire efficacy [lm/W]	59	66	59	66

Application example: Offshore area or near ports

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Technical data

Blue

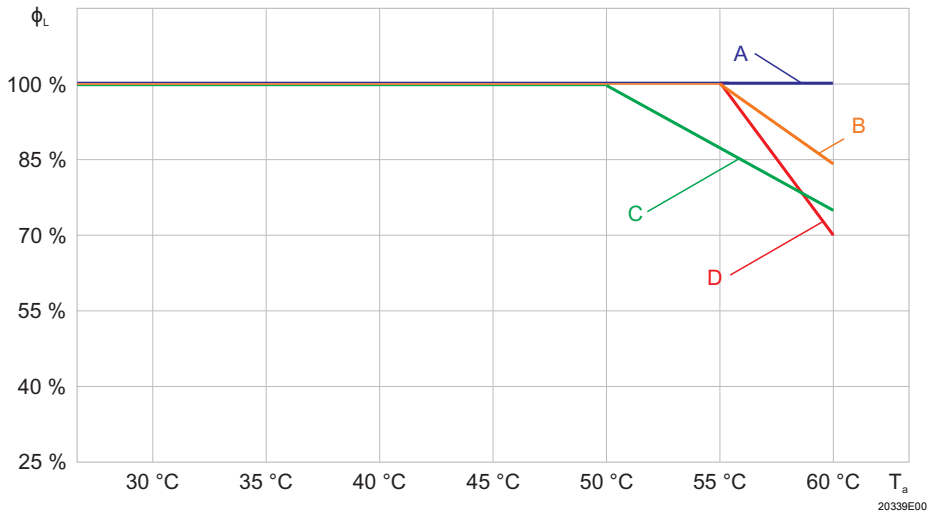
	6002/4.2.		6002/4.4.		6002/4.6.	
Size	2		4		6	
Power consumption [W]	18		35		35	
Diffuser	with	without	with	without	with	without
Luminous flux [lm]	930	1,030	1,860	2,060	1,860	2,060
Luminaire efficacy [lm/W]	52	57	53	59	53	59

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 and size 6; 110 V

D: Size 6; 230 V

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Technical data

Ambient conditions

Functional ambient temperature range

Size 2, 4:

Variant: With or without DALI
Light colour: White tones, red, yellow phosphorus converted and blue
without through wiring: -40 to +60 °C
I_N Through wiring ≤ 10 A: -40 to +60 °C
I_N Through wiring ≤ 16 A: -40 to +50 °C

Light colour: Green
without through wiring: 40 to +50 °C
I_N Through wiring ≤ 10 A: -40 to +50 °C
I_N Through wiring ≤ 16 A: -40 to +50 °C

Variant: With address module
Light colour: White tones, red, yellow phosphorus converted and blue
without through wiring: -30 to +60 °C
I_N Through wiring ≤ 10 A: -30 to +60 °C
I_N Through wiring ≤ 16 A: -30 to +50 °C

Size 6:

Variant: With or without DALI
Light colour: White tones, red, yellow phosphorus converted and blue
without through wiring: -20 to +60 °C
I_N Through wiring ≤ 10 A: -20 to +60 °C
I_N Through wiring ≤ 16 A: -20 to +50 °C

Light colour: Green
without through wiring: 20 to +50 °C
I_N Through wiring ≤ 10 A: -20 to +50 °C
I_N Through wiring ≤ 16 A: -20 to +50 °C

Variant: With address module
Light colour: White tones, red, yellow phosphorus converted and blue
without through wiring: 20 to +60 °C
I_N Through wiring ≤ 10 A: -20 to +60 °C
I_N Through wiring ≤ 16 A: -20 to +50 °C

Storage

-40 to +75 °C

Service life

LED

	White tones, red	Yellow phosphorus converted	Green	Blue
$L_{90}B_{50}$	> 100,000 h	> 33,000 h	> 30,000 h	> 86,000 h

L_xB_y
At the end of the service life:
- Luminous flux declines to "x" percent
- up to "y" percent of all luminaires do not reach "x"

LED control gear

	Standard + DALI	with address module
C10 at 50 °C	≥ 100,000 h	≥ 50,000 h
C10 at 60 °C	≥ 50,000 h	≥ 50,000 h

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Technical data

Mechanical data

Degree of protection according to IEC 60598	**Size 2**	**Size 4**	**Size 6**
R. STAHL cable entries	IP66/IP67	IP66/IP67	IP66
PMF 200400 breather	IP66	IP66	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		

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)		

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Technical data

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).
Mounting	Standard	2 x M8 insert nuts in the enclosure
	optional	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)

Optional

Interface	DALI-2 (according to IEC 62386): • Device type 6 (LED driver) • Device type 51 (energy report) • Device type 52 (diagnostics & maintenance)
Address module	**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: • 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
Breather	• Breather 8162/1 from R. STAHL Schaltgeräte GmbH • Gore PMF200400 breather, only in combination with reducer from R. STAHL Schaltgeräte GmbH (enclosed) Note: No breather may be used in atmospheres with corrosive gases. Gore PMF200400 breather only in combination with threaded plates made of metal.

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

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6 Transport and storage

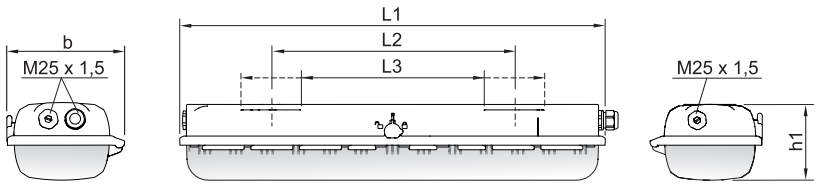
- Transport and store the device only in the original packaging.
- Store the device in a dry place (no condensation) free of vibrations.
- Do not drop the device.

7 Mounting and installation

	DANGER
EX	Explosion hazard due to incorrect installation of the device! Non-compliance results in severe or fatal injuries. • 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



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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 6002/4 standard luminaire

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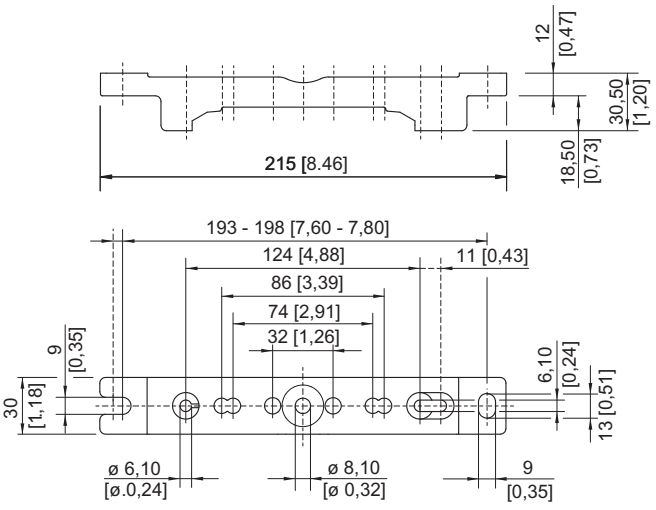
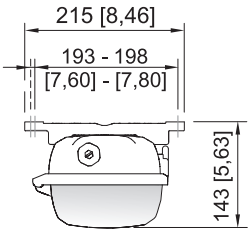
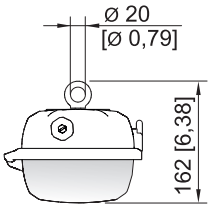
Dimensional drawings for assembly parts and accessories (all dimensions in mm [inch]) – Subject to change

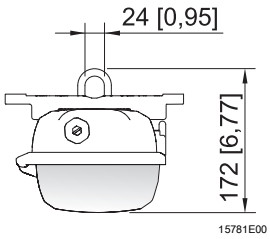




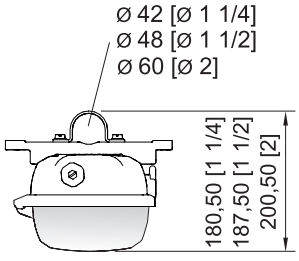
Mounting rail



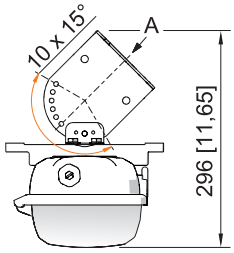
Ring bolt installed in insert nut of the luminaire

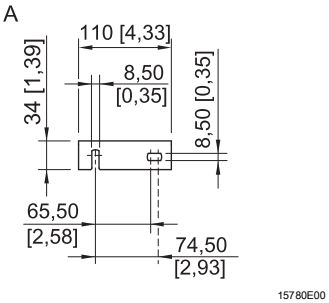


Mounting bracket fitted in mounting rail



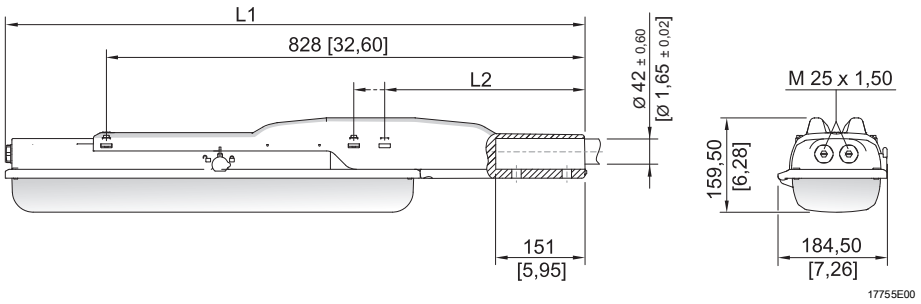
Pipe clamp installed in mounting rail





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
EX	Explosion hazard due to electrostatic discharge! Non-compliance results in severe or fatal injuries. • Only remove protective foil in safe areas.

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

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7.3 Mounting/dismounting, operating position

DANGER

Explosion hazard due to electrostatic discharge!
Non-compliance results in severe or fatal injuries.

Do not use the device in strong charge-generating environments!

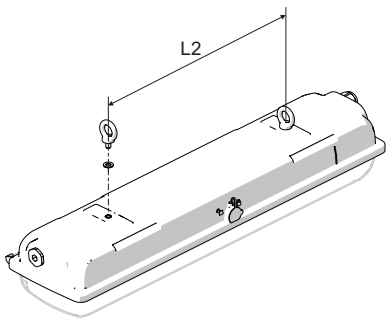
The following processes/activities should be avoided:
- Accidental friction
- Particle flows

DANGER

Explosion hazard due to impermissible heating!
Non-compliance results in severe or fatal injuries.
- 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).

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 light emission upwards is prohibited in outdoor areas.

Suspension at fixed mounting points



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

max. screw-in depth 10 mm [0.39]

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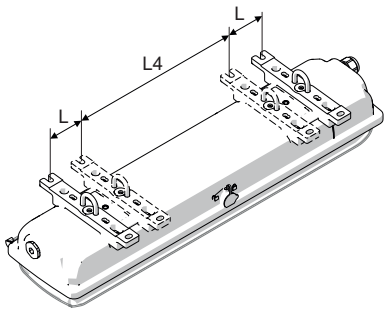
Suspension on movable assembly parts



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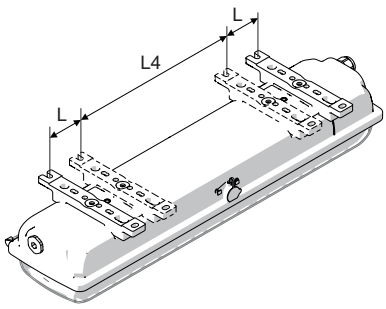
Mounting bracket



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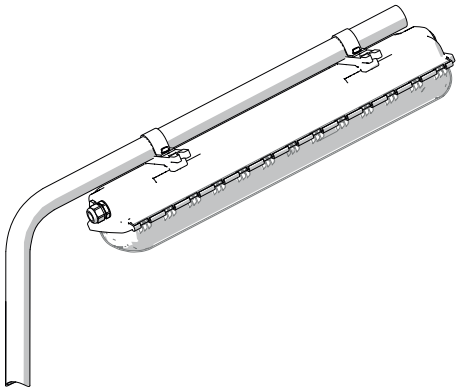
Top rail

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	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.

Pole suspension
Pole mounting using pipe clamps



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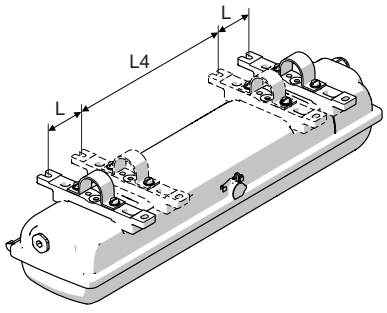

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Size	L4 mm [inch]	L mm [inch]
2	320 [12.60]	80 [3.15]
4	670 [26.38]	130 [5.12]
6	670 [26.38]	130 [5.12]

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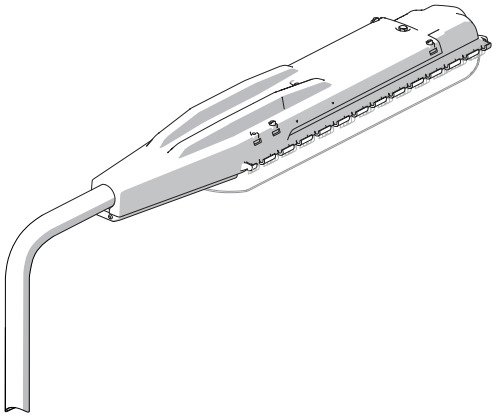
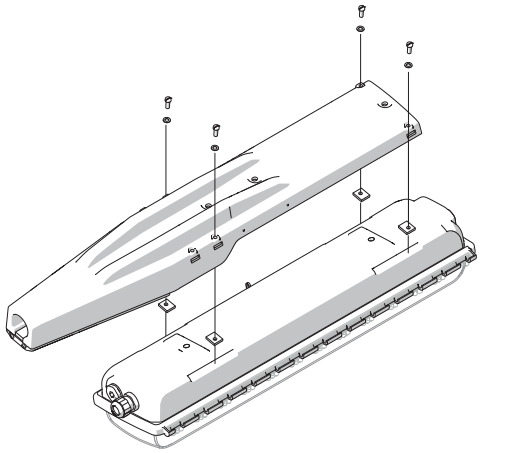
i	For pipe clamp mounting, use the solution from R. STAHL Schaltgeräte GmbH with integrated mounting rail providing reliable and stable four-point fixing! In case of point suspension using pipe clamps, R. STAHL Schaltgeräte GmbH does not guarantee the strength and tightness of the luminaire!

Pole mounting using pole mounting sleeve

i	Only for size 2 and size 4

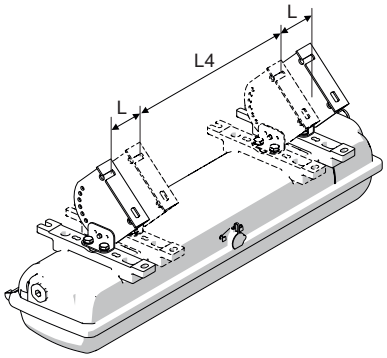


17761E00

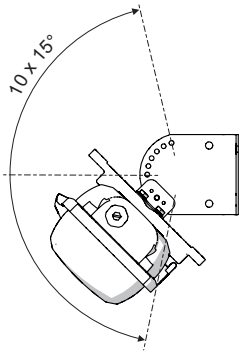


17762E00

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]

EN

7.4 Installation

7.4.1 Opening and closing the enclosure

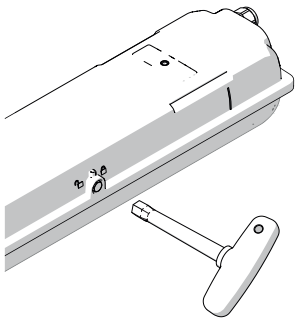
DANGER

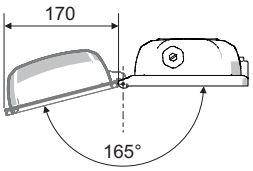
Risk of electric shock due to improper opening!
Non-compliance results in severe or fatal injuries.
- Open luminaires without switches only in de-energised state (see information plate on the lock)!

NOTICE

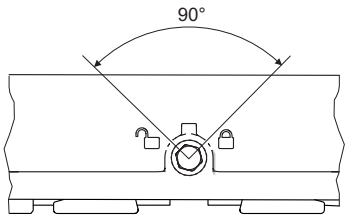
Danger due to electrostatic discharge.
Electronic components can be destroyed if touched.
- Do not touch the LED PCBs!

Recommendation
Open and close the luminaire using the box spanner from R. STAHL Schaltgeräte GmbH.


15448E00



15451E00



15436E00

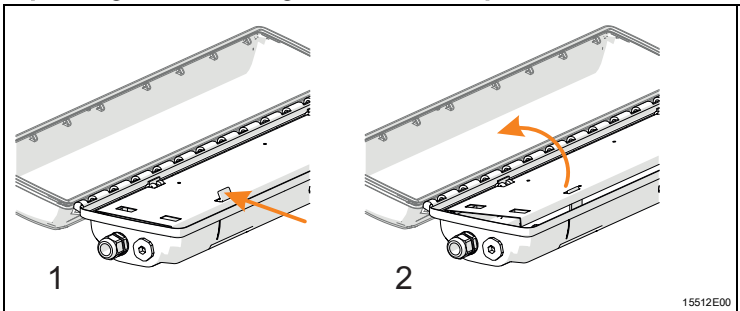
- Remove the closing cap of the central lock.
- Turn the central lock using a box spanner M8, spanner size 13, by 90° to the left as far as it will go.
- Swivel down the translucent cover.
- Proceed in reverse order to close.
- The seal of the translucent cover must lie correctly on the sealing edge.
- Push the closing cap onto the central lock opening (protection against dirt).

EN

Observe the following during mounting and dismounting:
- 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!

Central lock
- 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.

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.

7.4.2 Electrical connections

Mains connection

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

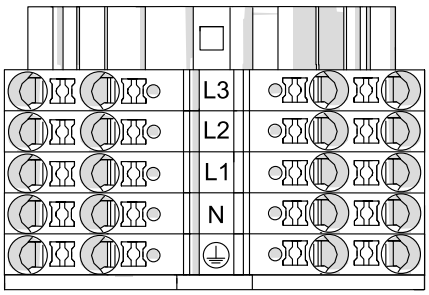
Observe the following when connecting to the mains connection:
- Clamping must be carried out precisely!
- Do not clamp any part of the conductor insulation!
- Do not mix up the conductors.
- Observe the technical regulations when connecting the conductor.
- Clamp the conductor firmly.

EN

Connection terminals

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)
Stripping length:
10 to 12 mm

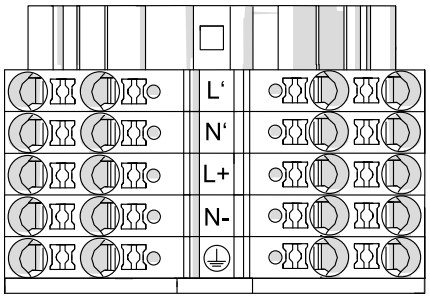
Standard:



20219E00

L1, L2, L3 = phase
N = neutral conductor
⏚ = protective conductor

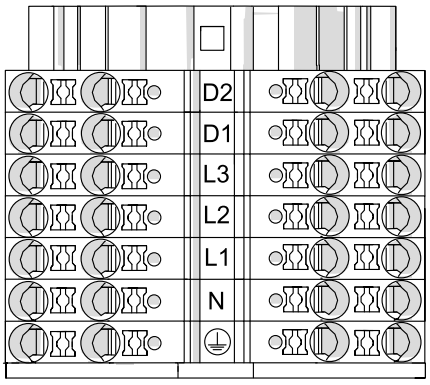
with address module:



20220E00

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

with DALI connection:



20221E00

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

EN

Through wiring of the mains supply connection

i	Through wiring with 2.5 mm^2 cross-section for max. 16 A.

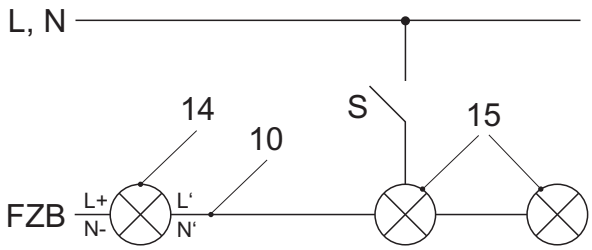
7.4.3 Luminaires with address module

The address module is integrated into the control gear. Each control gear with an integrated address module has a unique serial number. This serial number is on the control gear and can also be recorded with a QR code scanner. The luminaire address is assigned using the configuration software for the central battery unit or with a programming device available as an accessory.

i	There are four removable labels with the serial number on the control gear (1x label for the control gear, 1x label for the exterior luminaire, 2x for customer documents). During installation, write down the location and position of the luminaire and the serial number. This simplifies configuration of the central battery unit. Further information on configuration can be found in the software description and the central battery unit manual.

Control input (L', N'):

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



19025E00

L, N	Power supply network	10	Control line
FZB	Battery system	14	Emergency lighting
S	General lighting switch	15	General lighting

EN

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:

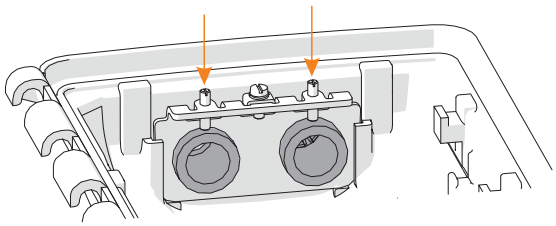
		Tightening torque	
		Connection thread	Pressure screw
Cable entry 8161	M20 x 1.5	2.3 Nm	1.5 Nm
	M25 x 1.5	3.0 Nm	2.0 Nm
Stopping plug 8290	M20 x 1.5	1.0 Nm	–
	M25 x 1.5	1.5 Nm	–
Breather 8162/1	M25	3.0 Nm	–
Breather PMF200400	–	0.9 Nm	–
Reducer for PMF200400 breather	M25	3.0 Nm	–

Cable entry or breather made of metal

DANGER

Explosion hazard due to unprotected earthing contacts!
Non-compliance results in severe or fatal injuries.

- Contact threaded pins for a combination of a metal insertion plate with metal cable entries or breather (see figure).



23080E00

EN

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

DANGER

Explosion hazard due to impermissible cable entries and stopping plugs!
Non-compliance results in severe or fatal injuries.

- Use cable entries and stopping plugs that have been tested and certified according to Directive 2014/34/EU (ATEX) and IECEx (CoC).

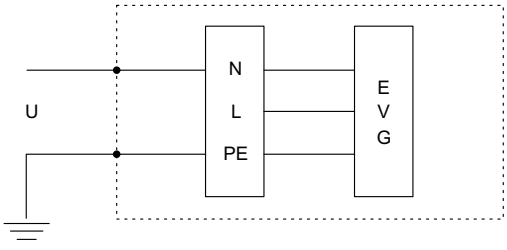
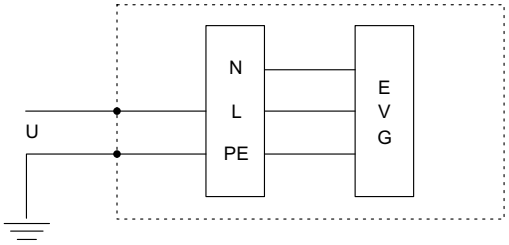
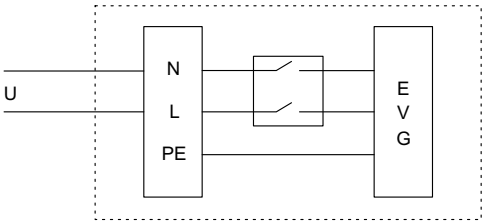
Please observe the following:

- 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 area for the permissible conductor diameter!
- insert the metal cable entries and/or stopping plugs into the PE!

EN

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
1. Between neutral conductor and protective conductor	
2. Between phase and protective conductor	
3. Between phase and neutral conductor For a measurement between phase and the neutral conductor, the control gear must be disconnected from the mains power! **NOTICE!** **Destruction of the device and/or electrical components if the disconnector is missing!** Non-compliance may lead to material damage! ▸ Only disconnect the device from the mains power using an internal switch before the insulation test.	

EN

8 Commissioning

DANGER

Explosion hazard due to incorrect installation!
Non-compliance results in severe or fatal injuries.
- Check the device for proper installation before commissioning.
- Comply with national regulations.

NOTICE

Malfunction or device damage caused by condensation.
Non-compliance may lead to material damage!
- 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

Risk of electric shock or malfunction of the device due to unauthorised work!
Non-compliance can result in minor injuries!
- 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.

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**
	Explosion hazard due to improper repair! Non-compliance results in severe or fatal injuries. • 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.

EN

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.

i	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: *that the product:* *que le produit:*	**LED Langfeldleuchte** *LED Linear Luminaire* *LED Luminaire Linéaire*
Typ(en), *type(s), type(s):*	**6002/4.**

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 **ATEX-Richtlinie** *2014/34/EU* *ATEX Directive* *2014/34/UE* *Directive ATEX*	EN IEC 60079-0:2018 EN 60079-1:2014 EN IEC 60079-7:2015 + A1:2018 EN 60079-11:2012 EN 60079-18:2015 + A1:2017 EN 60079-28:2015 EN 60079-31:2014
Kennzeichnung, *marking, marquage:*	**II 2G Ex db eb ib mb op is IIC T4 Gb** **II 2G Ex db eb ib op is IIC T4 Gb** **II 2D Ex tb op is IIIC T 100°C Db** CE 0158
EU-Baumusterprüfbescheinigung: *EU Type Examination Certificate:* *Attestation d'examen UE de type:*	**IBExU 14 ATEX 1088** (IBExU Institut für Sicherheitstechnik GmbH Fuchsmühlenweg 7, 09599 Freiberg, Germany)
Produktnormen nach Niederspannungsrichtlinie: *Product standards according to Low Voltage Directive:* *Normes des produit pour la Directive Basse Tension:*	EN 60598-1:2015 + A1:2018 EN 60598-2-22:2014 + A1:2020 EN 62471:2008
2014/30/EU **EMV-Richtlinie** *2014/30/EU* *EMC Directive* *2014/30/UE* *Directive CEM*	EN 61547:2009 EN IEC 55015:2019 + A11:2020 EN IEC 61000-3-2:2019 EN 61000-3-3:2013 + A1:2019
2011/65/EU **RoHS-Richtlinie** *2011/65/EU* *RoHS Directive* *2011/65/UE* *Directive RoHS*	EN IEC 63000:2018

Waldenburg, 2022-02-18 i.V. i.V.

Ort und Datum
Place and date
Lieu et date

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

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

UK Declaration of Conformity
UK-Konformitätserklärung

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

that the product: *dass das Produkt:*	**LED Linear Luminaire** *LED Langfeldleuchte*
Type(s), *Typ(en):*	**6002/4.**

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

Regulation(s) / *Verordnung(en)*	**Standard(s)** / *Norm(en)*
S.I. 2016/1107 Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations *S.I. 2016/1107 Verordnung für Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen*	EN IEC 60079-0:2018 EN 60079-1:2014 EN IEC 60079-7:2015 + A1: 2018 EN 60079-11:2012 EN 60079-18:2015 + A1:2017 EN 60079-28:2015 EN 60079-31:2014
Marking, *Kennzeichnung:*	**II 2 G Ex db eb ib mb op is IIC T4 Gb** **II 2 G Ex db eb ib op is IIC T4 Gb** **II 2 D Ex tb op is IIIC T100 °C Db** **UK CA 8505**
UK Type Examination Certificate: *UK-Baumusterprüfbescheinigung:*	**CML 21UKEX1553** (Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, Cheshire, CH65 4LZ, UK, AB2503)
S.I. 2016/1101 Electrical Equipment (Safety) Regulation *S.I. 2016/1101 (Sicherheits-) Verordnung für elektronische Geräte*	EN 60598-1:2015 + A1:2018 EN 60598-2-22:2014 + A1:2020 EN 62471:2008
S.I. 2016/1091 EMC Regulations *S.I. 2016/1091 EMV-Verordnung*	EN 61547:2009 EN IEC 55015:2019 + A11:2020 EN IEC 61000-3-2:2019 EN 61000-3-3: 2013+A1:2019
S.I. 2012/3032 RoHS Regulations *S.I. 2012/3032 RoHS-Verordnung*	EN IEC 63000:2018

Waldenburg, 2023-05-11
Place and date
Ort und Datum

i.V.
S. Holtz
Head of R&D - BU Lighting & Signalling
Leiter Entwicklung BU Leuchten & Signalgeräte

i.V.
D. Groth
Director Quality Management Systems
Leiter Qualitätsmanagementsysteme