

KERN-EX2/21

Technical conditions for mounting luminaire

ENG

23.03.2026/ rev.4
www.vyrtych.cz**KERN-EX2/21****FTZÚ 25 ATEX 0018X**

Ex II 3G Ex nR IIC T6 Gc

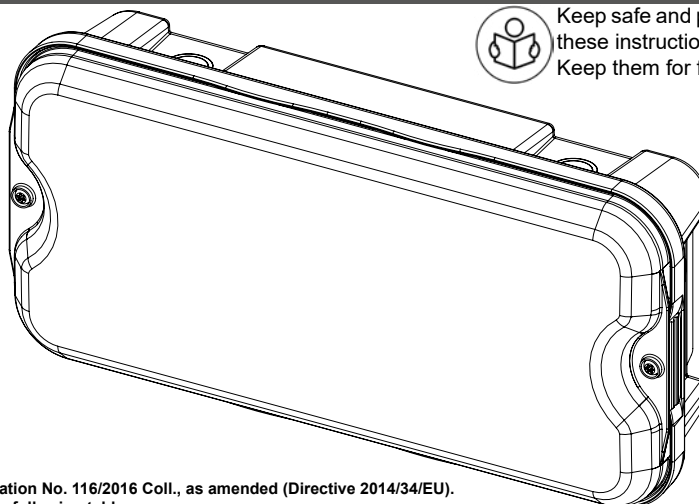
Ex II 2D Ex tb IIIC T85°C Db

IECEx FTZÚ 25.0013X

Ex nR IIC T6 Gc

Ex tb IIIC T85°C Db

IP66/ IP67, class I

Keep safe and proper usage by following these instructions.
Keep them for future reference.

These luminaires comply with the requirements of Government Regulation No. 116/2016 Coll., as amended (Directive 2014/34/EU). They are intended for use in explosive atmospheres as specified in the following table:

Hazardous area	Designation of external influences	Classification of areas	
		Designation	Establishing regulation
Danger of explosion of inflammable dusts	BE3N1	ZONE 21, ZONE 22	EN 60079-14 / IEC 60079-14 EN 60079-10-2/ IEC 60079-10-2
Danger of explosion of inflammable gases and vapours	BE3N2	ZONE 2	EN 60079-14/ IEC 60079-14 EN IEC 60079-10-1/ IEC 60079-10-1

Permissible operating temperature range:

Type	Ta	W	IP	Temperature class	Maximum surface temperature
KERN-EX2/21-α-L04-YYY-1200-0ND-06-PD	-30°C - +60°C	7	66/67	T6	85 °C
KERN-EX2/21-α-L04-YYY-1800/2400-0ND-06-PD	-30°C - +55°C	10/13			
KERN-EX2/21-α-L04-YYY-2900/3400-0ND-06-PD	-30°C - +50°C	16/20			
KERN-EX2/21-α-L04-YYY-4000-0ND-06-PD	-30°C - +45°C	23			
KERN-EX2/21-α-L04-YYY-1200-0D2-06-PD	-30°C - +60°C	7			
KERN-EX2/21-α-L04-YYY-1800/2400-0D2-06-PD	-30°C - +55°C	10/13			
KERN-EX2/21-α-L04-YYY-2900/3400-0D2-06-PD	-30°C - +50°C	16/20			
KERN-EX2/21-α-L04-YYY-4000-0D2-06-PD	-30°C - +45°C	23			
KERN-EX2/21-α-L04-YYY-1200/1800-εM3/εM3A-06-PD	0°C - +40°C	7/10			
KERN-EX2/21-α-L04-YYY-1200/1800-εD3D2-06-PD	0°C - +40°C	7/10			
KERN-EX2/21-α-L04-YYY-2400-εM3/εM3A-06-PD	0°C - +40°C	13			
KERN-EX2/21-α-L04-YYY-2400-εD3D2-06-PD	0°C - +40°C	13			
KERN-EX2/21-α-L04-YYY-2900/3400/4000-εM3/εM3A-06-PD	0°C - +30°C	16/20/23			
KERN-EX2/21-α-L04-YYY-2900/3400/4000-εD3D2-06-PD	0°C - +30°C	16/20/23			
KERN-EX2/21-α-L04-YYY-400-εNM3/εM3A-06-PD	0°C - +45°C	3/3			
KERN-EX2/21-α-L04-YYY-400-εNMD3-06-PD	0°C - +45°C	4			

Rated voltage and frequency:for LED drivers TCI: 220-240V, 0/50/60Hz
for LED drivers OSRAM: 220-240V, 0/50/60Hz
for emergency unit TRIDONIC: 220-240V, 50/60HzKERN-EX2/21-G-L04-YYY-δδδ00-εεεε-06-PD - IP67 - according to the standards EN 60529
KERN-EX2/21-H-L04-YYY-δδδ00-εεεε-06-PD - IP66,67 - according to the standards EN 60529**Luminaire marking:**

VYRTYCH
Židněves 116, 294 06 Březno, Czech Republic

① KERN-EX2/21-α-L04-YYY-δδδ00-εεεε-ζζ-PD
② 220-240V, 50/60Hz, 220-240V DC, class I, 15W
③ -30°C ≤ ta ≤ +50°C, IP66/67
④ FTZÚ 25 ATEX 0018X/ IECEx FTZU 25.0013X
⑤ Ex II 3G Ex nR IIC Tx Gc/ Ex nR IIC Tx Gc
⑥ Ex II 2D Ex tb IIIC Txx°C Db/ Ex tb IIIC Txx°C Db
⑦ art.n.: 61 657 ⑧ Product Type: W011204012-84AA0PD660000S

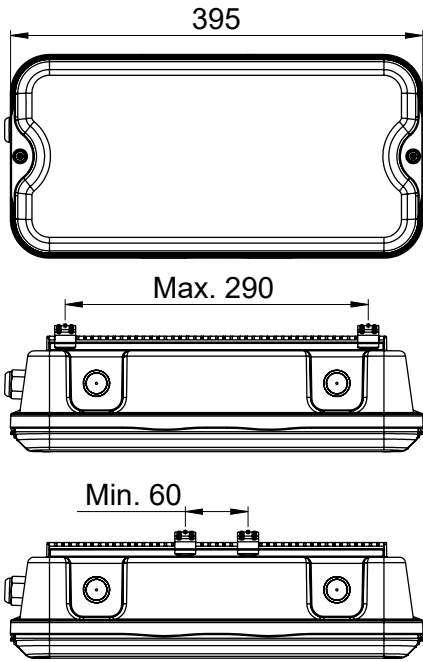
123456

CE 1026

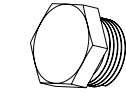
Luminaire marking:

- Name of the luminaire**
KERN - name of the luminaire
EX2/21 - luminaire certified for zone 2/21
α - type of luminaire closure G - silicon gasket / H - EPDM gasket
L04 - luminaire length 395mm
YYY - CR/ CCT
δδδ00 - designation of the luminous flux of the LED source
εεεε - connection type
ζζ - internal marking
PD - polycarbonate opal cover
- Designation of the operating voltage, frequency, insulation class of the luminaire power**
- Designation of the allowable ambient temperature range, and luminaire IP protection rating**
- Certificate designation**
- FTZU - abbreviation of the certification authority that issued the certificate
- 25 - year of issuance of the certificate
- ATEX / IECEx - abbreviation of certificate type
- 0018X / 25.0013X - certificate number
- Luminaire protection marking against the risk of explosion from flammable gases and vapors**
- Luminaire protection marking against the risk of dust explosion**
- Item number**
- Luminaire product number**
- Notified body number**
- Lin cod**

Luminaire dimensions:



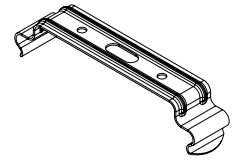
Standard equipment:



2x Ex plastic cable plug M20



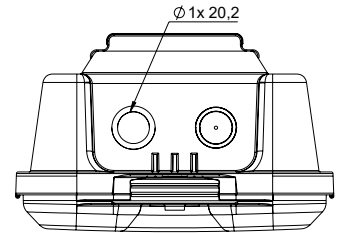
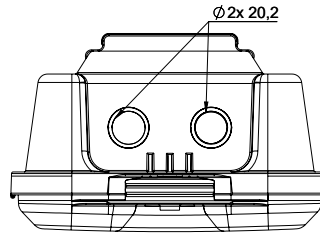
2x Ex plastic cable gland M20



2x stainless mounting clip (AISI304)

The luminaire is normally equipped with 3x openings with a diameter of 20.2 mm. The wall thickness of the luminaire is 2.5 mm.

When using your own cable glands, they must comply with the required type of seal, IP protection rating, temperature range (the same as for the glands we supply), and other technical parameters. Always carry out the installation according to the installation instructions provided by the gland manufacturer. In case of any doubts, please contact technical support at: podpora@vyrtych.cz



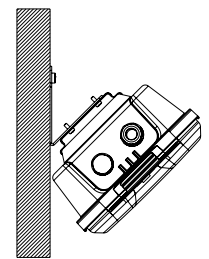
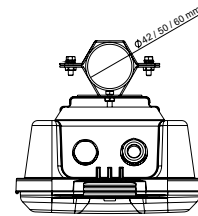
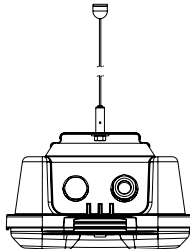
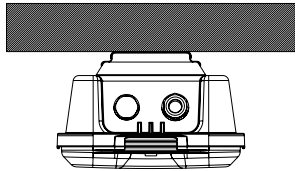
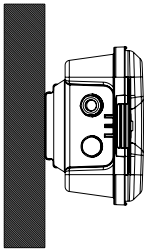
Additional holes may only be drilled in locations specified by the manufacturer. Always use a step drill to ensure the correct hole diameter. Carefully deburr the edges of the hole until smooth. If any other part of the luminaire is damaged, do not continue using it.

Types of mounting: Mounting procedure using fastening brackets directly onto the supporting surface

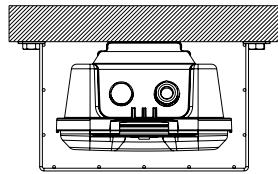
With suspensions bracket

Mounting procedure using a tube bracket

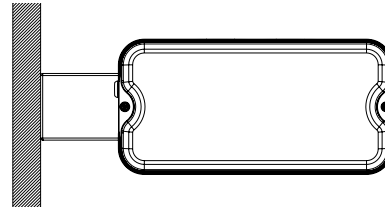
With wall bracket - angle 45°



With protective cage

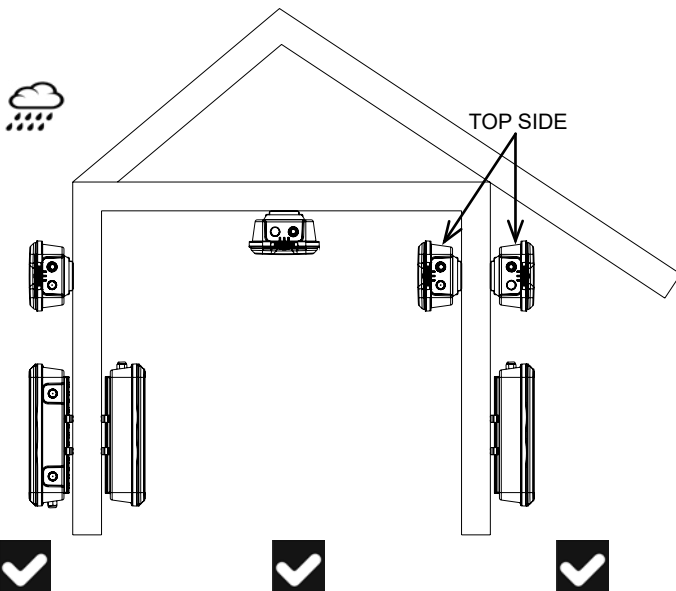


With wall bracket

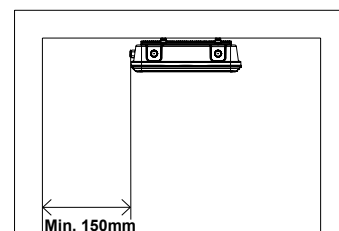
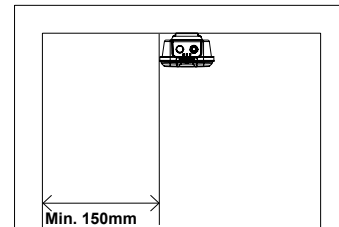


Picture. 5
Conditions of outdoor assembly

The light fixture can be installed in both covered and uncovered outdoor areas.

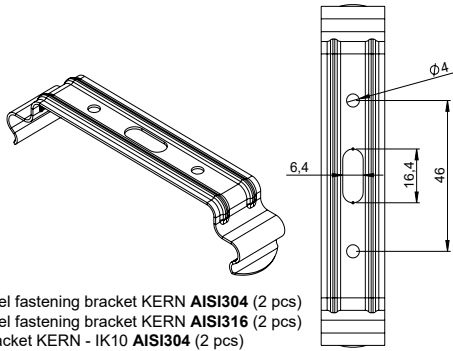


Minimum distance of the light fixture from the wall



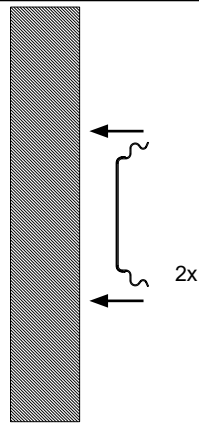
Mounting procedure using fastening brackets directly onto the supporting surface:

1

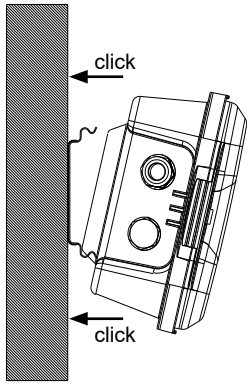


69104 - Set of stainless steel fastening bracket KERN **AISI304** (2 pcs)
 69105 - Set of stainless steel fastening bracket KERN **AISI316** (2 pcs)
 66947 - Set of fastening bracket KERN - IK10 **AISI304** (2 pcs)
 66948 - Set of fastening bracket KERN - IK10 **AISI316L** (2 pcs)

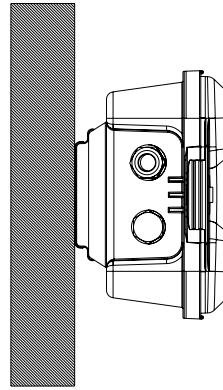
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3

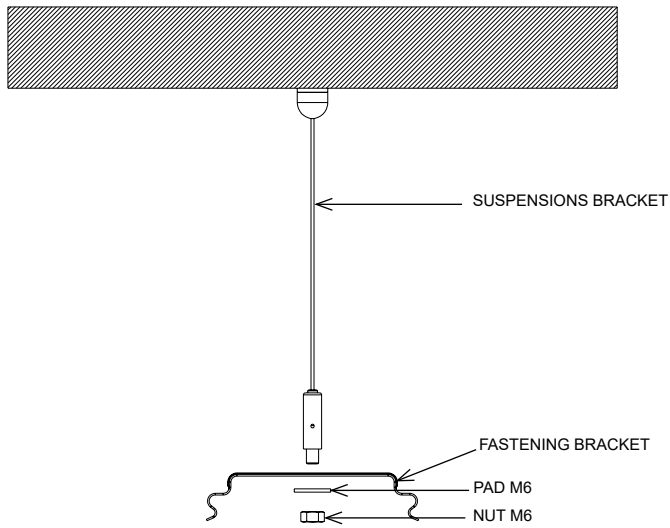


4



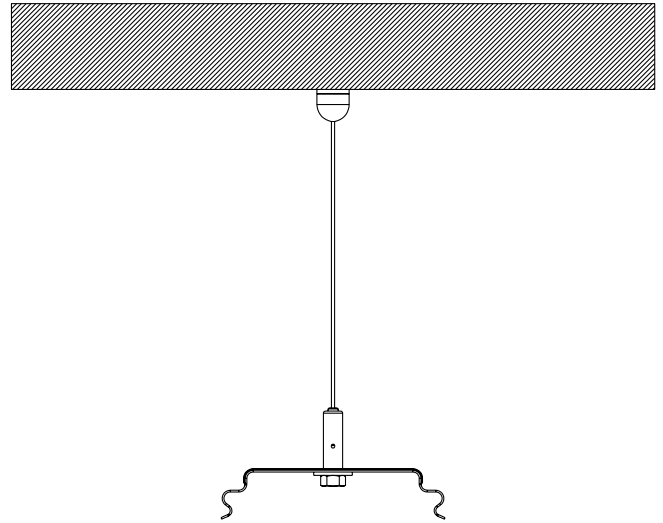
Mounting with suspensions bracket:

1

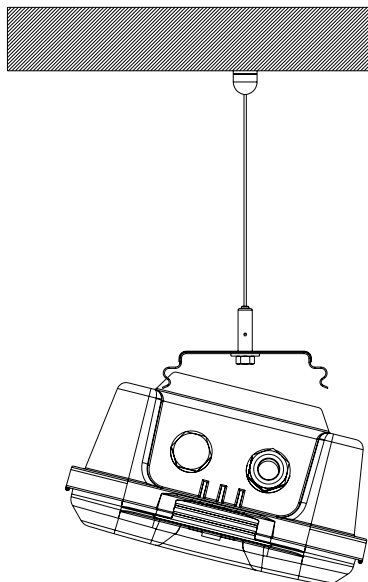


3575 - Set of cable suspenders - 3 m (2 pcs)

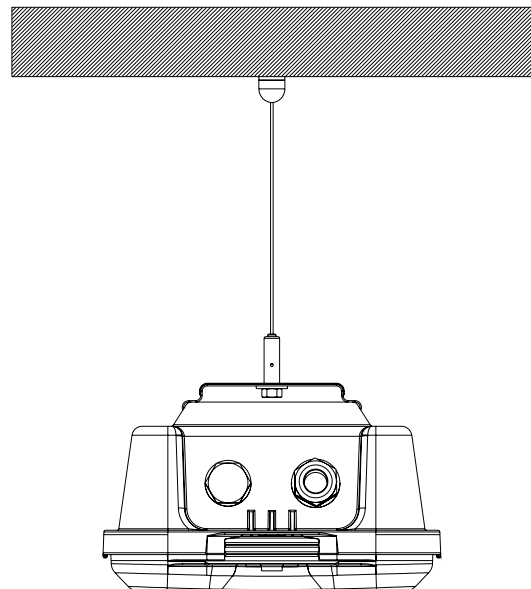
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3

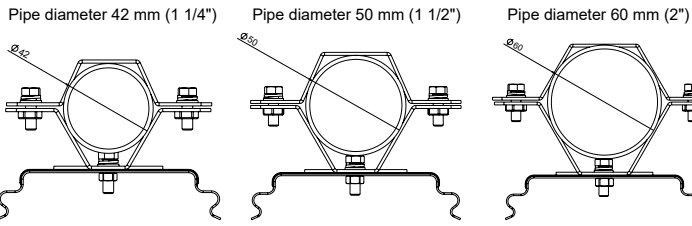


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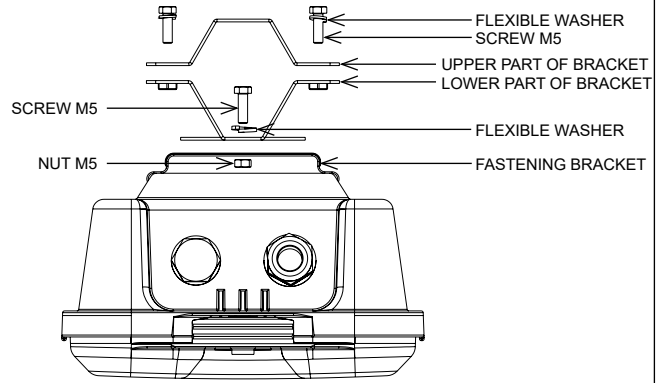
Mounting procedure using a tube bracket:

1

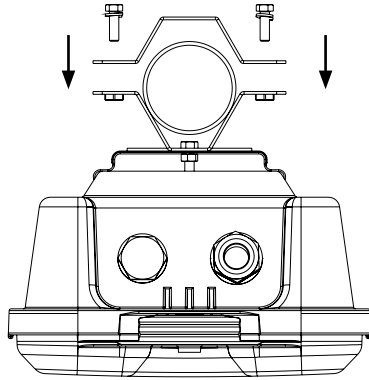


60091 - Set of pole brackets Ø 42 mm (1 1/4") AISI304 (2pcs) / 60090 - Ø 50 mm (1 1/2") / 60089 - Ø 60 mm (2")
 66931 - Set of pole brackets Ø 42 mm (1 1/4") AISI316 (2pcs) / 66930 - Ø 50 mm (1 1/2") / 66929 - Ø 60 mm (2")

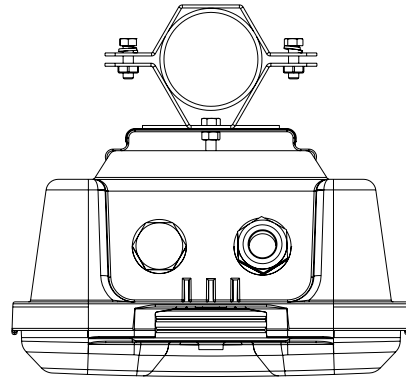
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3

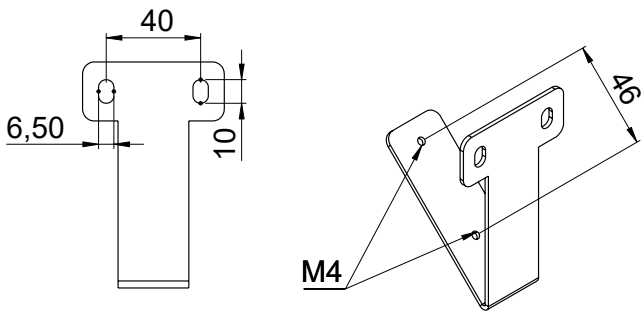


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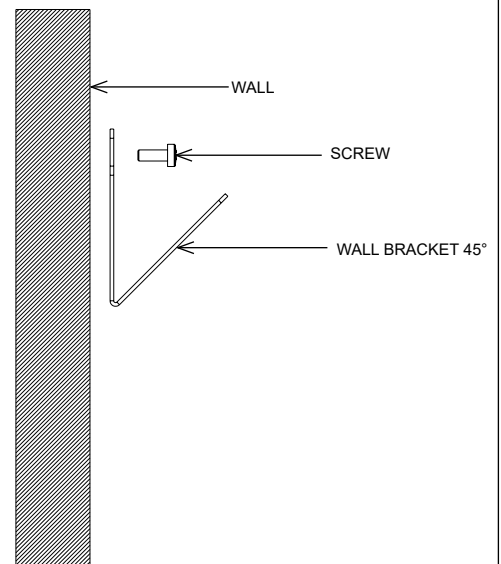
Mounting procedure using a 45° wall bracket:

1

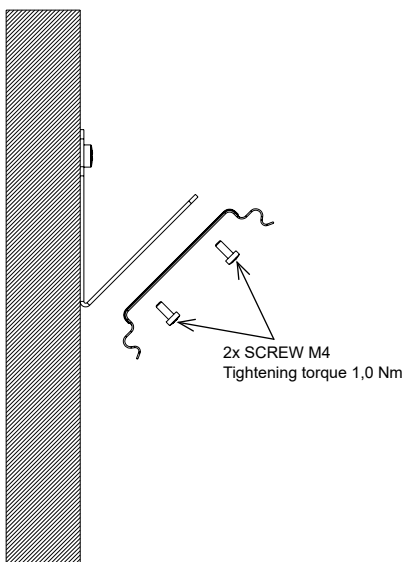


63139 - Set of wall brackets - 45° angle KERN AISI304 (2 pcs)
 66937 - Set of wall brackets - 45° angle KERN AISI316 (2 pcs)

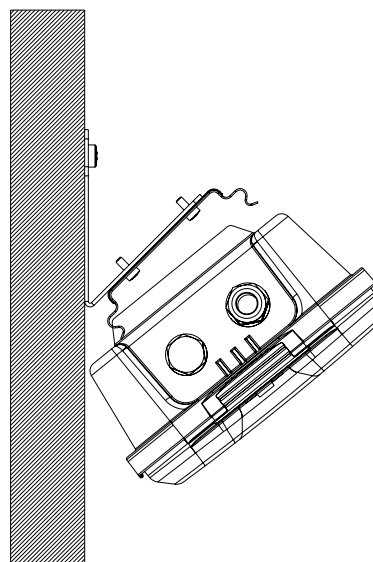
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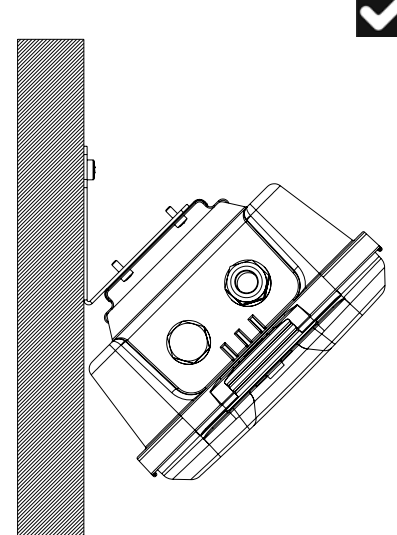
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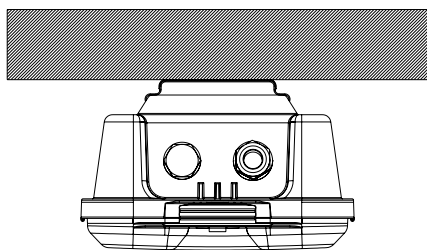


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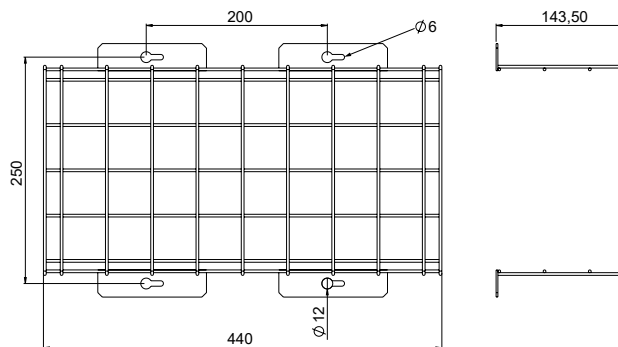


Mounting procedure with protective cage:

1

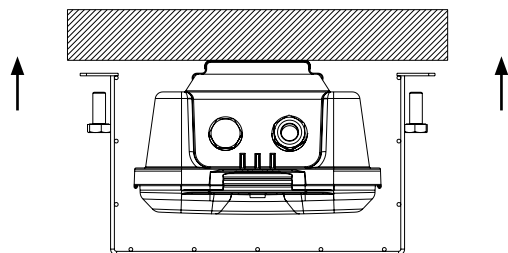


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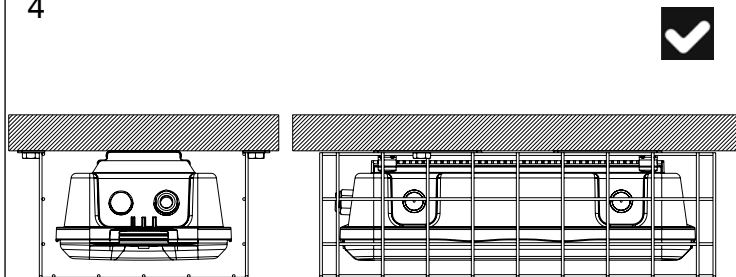


62858 - Protective cage KERN - L04

3



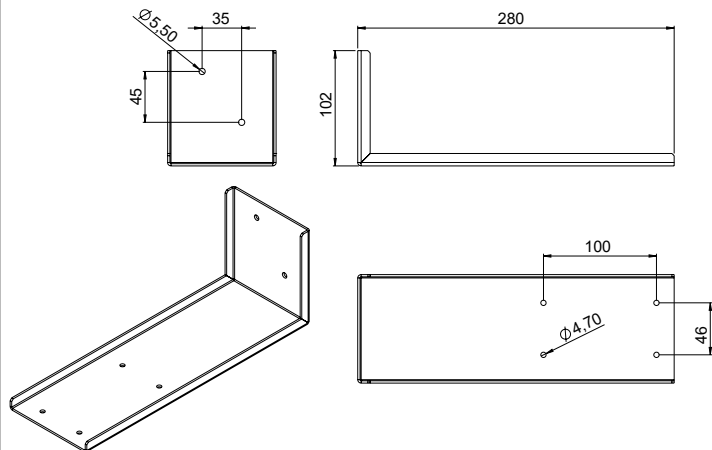
4



⚠ When installing the protective cage, cable glands must not be mounted on the side of the luminaire. Always install the glands at the front of the luminaire.

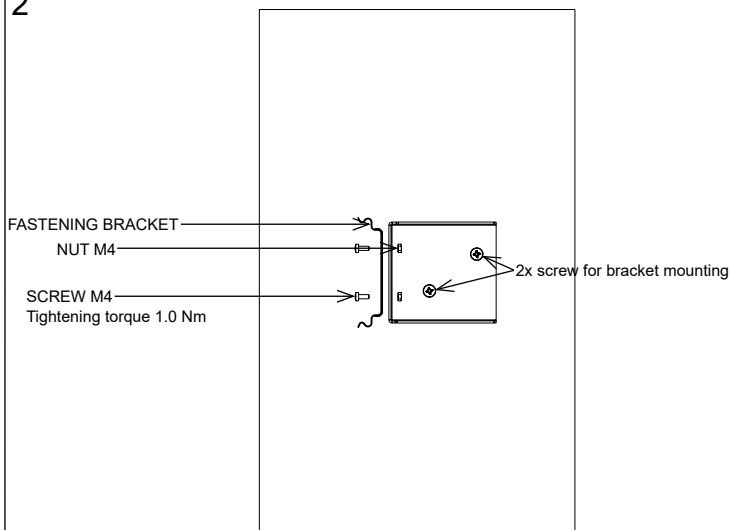
Mounting procedure with wall bracket:

1

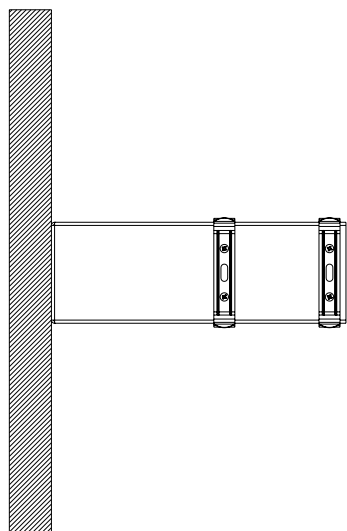


6902 - Wall bracket

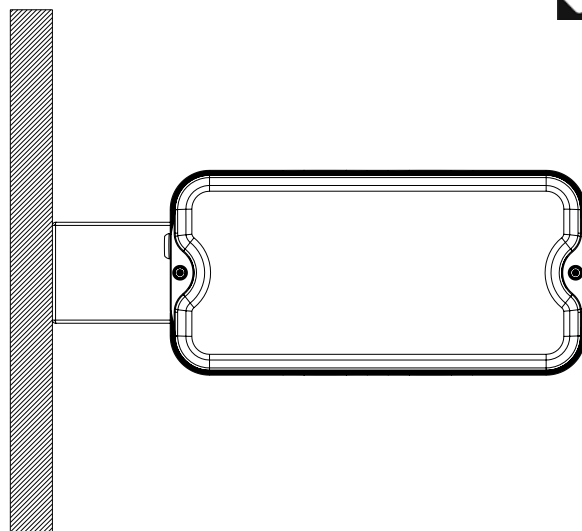
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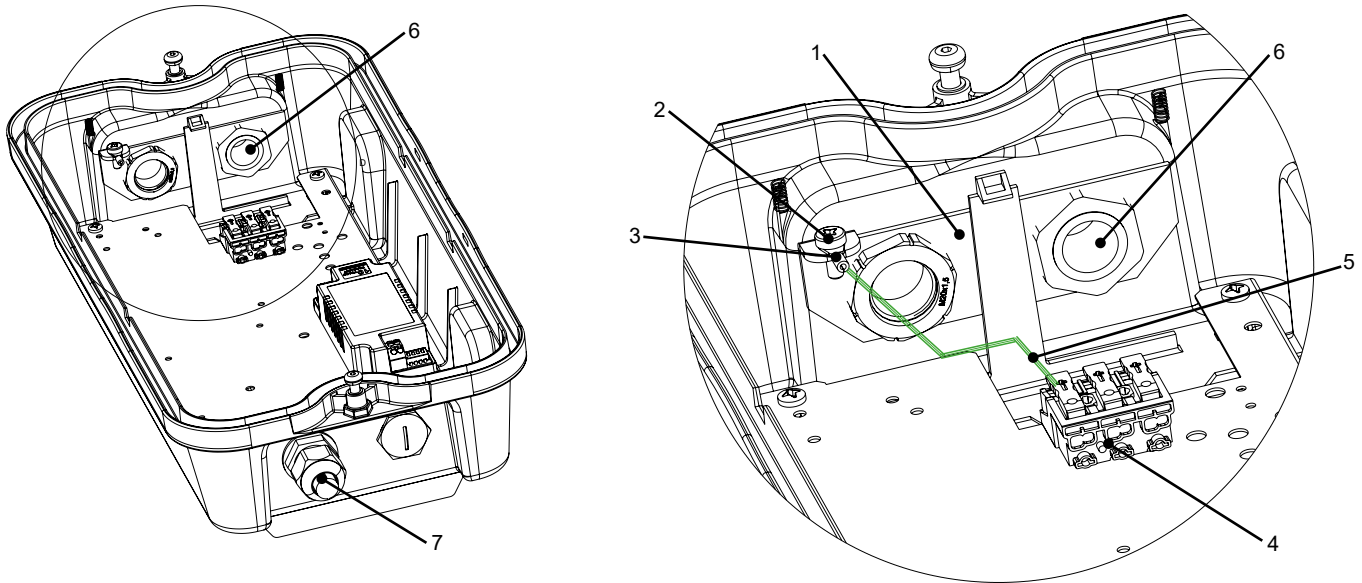
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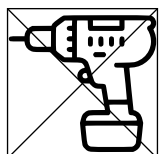
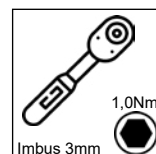
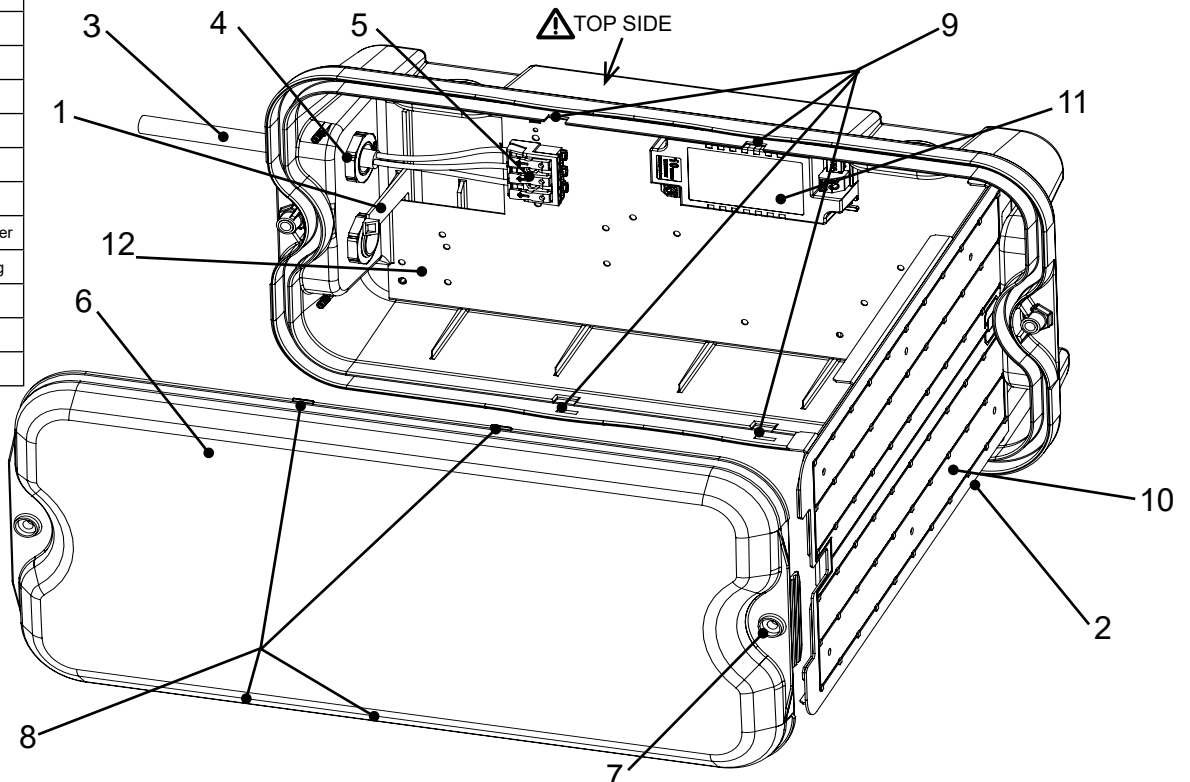
Grounding of metal cable glands with armored cable: 63458 – KERN accessories – glands M20 for armored cable
 66889 – KERN – Grounding washer for cable glands M20; – 1 pc



1	Grounding washer
2	M4 screw
3	Cable eye
4	Terminal block
5	Protective wire
6	Metal cable gland
7	Testing port

Luminaire components	
1	Plastic hook
2	Metal reflector
3	Supply cable
4	Ex cable gland
5	Terminal block
6	Luminaire cover
7	Stainless screw M5
8	Latches on the luminaire cover
9	Lock on the luminaire housing
10	LED module
11	LED driver
12	Component mounting plate

Luminaire construction



Installation instructions:

1. Remove the plastic cover from the luminaire.
2. Release the plastic hook (1) securing the metal reflector (2), then carefully tilt the reflector open. Do not touch the LED module. Support the reflector with one hand to avoid damage.
3. Install the cable gland, cable plug, and test port on the luminaire. Tighten to the luminaire with a torque of 2.7 Nm. Each cable gland must be secured with two nuts.
4. Feed the supply cable (3) through the cable gland (4). Tighten the gland until the rubber gasket is slightly deformed. Torque: 2.0 Nm.

Cable gland	Sealing area	Tightening torque of the cable gland	Operating temperature of the cable gland
M20x1,5	7 - 13 mm	2,0 Nm	-30°C +60°C

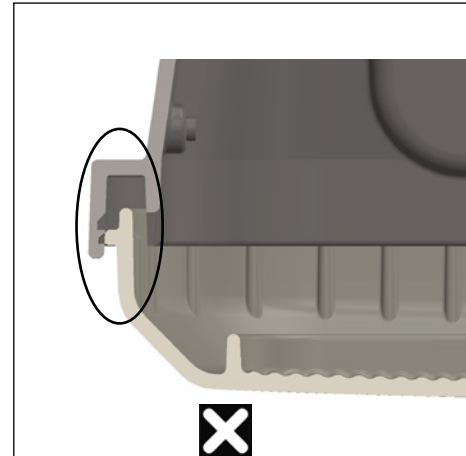
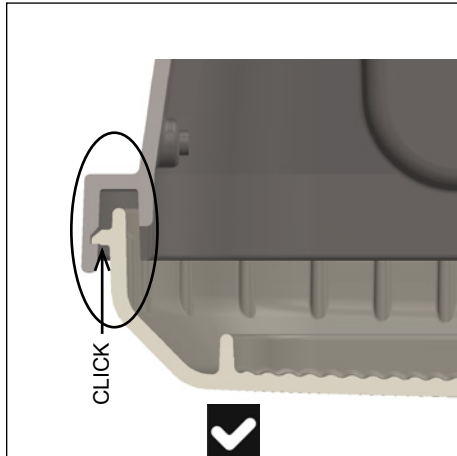
5. Plug the power cord into the free part of the supply terminal block (5) as follows:

CLAMP	TYPE OF LUMINAIRE								STRIPPING THE WIRE
	0ND	0D2	NM3A	NM3	NNM3	NNM3A	ND3D2	NNMD3	
L1	phase wire	phase wire	charging phase wire	charging phase wire	charging phase wire	charging phase wire	charging phase wire	charging phase wire	
L2	-	-	switched phase wire	switched phase wire	-	-	switched phase wire	-	
DA+	-	DALI +	-	-	-	-	DALI +	DALI +	
DA-	-	DALI -	-	-	-	-	DALI -	DALI -	
N	neutral wire	neutral wire	neutral wire	neutral wire	neutral wire	neutral wire	neutral wire	neutral wire	
Ⓢ	protective wire	protective wire	protective wire	protective wire	protective wire	protective wire	protective wire	protective wire	

- 0ND - ON/OFF driver NM3A - Emergency unit 3H Autotest + ON/OFF driver NNM3 - Emergency unit 3H + pictogram ND3D2 - Emergency unit 3H DALI + DALI2 driver
 0D2 - DALI2 driver NM3 - Emergency unit 3H Basic + ON/OFF driver NNM3A - Emergency unit 3H AUTOTEST + pictogram NNMD3 - Emergency unit 3H DALI + pictogram

6. Tilt the reflector (2) into its final position until it is secured by the plastic hook (1).
7. Install the luminaire cover (6) and secure it with M5 screws (7), torque 1.0 Nm.
8. Secure the cover with four latches (8) by pressing the cover against the housing until the latches snap into the locks (9), see picture 6.
9. The initial inspection must be provide according to EN 60079-17, Table 1.

Picture. 6
Latches in the correct position



Maximum number of lights connected to a circuit breaker: Maximal short circuit current must not be higher than 10kA.

Type	B10A	B16A	C10A	C16A
KERN-EX2/21-α-L04-γγγ-1200-0ND-06-PD	31	50	52	85
KERN-EX2/21-α-L04-γγγ-1800-0ND-06-PD				
KERN-EX2/21-α-L04-γγγ-2400-0ND-06-PD				
KERN-EX2/21-α-L04-γγγ-2900-0ND-06-PD				
KERN-EX2/21-α-L04-γγγ-3400-0ND-06-PD				
KERN-EX2/21-α-L04-γγγ-4000-0ND-06-PD				
KERN-EX2/21-α-L04-γγγ-1200-0D2-06-PD				
KERN-EX2/21-α-L04-γγγ-1800-0D2-06-PD				
KERN-EX2/21-α-L04-γγγ-2400-0D2-06-PD				
KERN-EX2/21-α-L04-γγγ-2900-0D2-06-PD				
KERN-EX2/21-α-L04-γγγ-3400-0D2-06-PD				
KERN-EX2/21-α-L04-γγγ-4000-0D2-06-PD				

Pictogram table: according to EN ISO 7010:

Applications	Order code	Type	Viewing distance
	62832	Pictogram KERN - figure + arrow left	30 m
	62833	Pictogram KERN - figure + arrow right	30 m
	62834	Pictogram KERN - figure + arrow down	30 m
	62835	Pictogram KERN - figure + arrow up	30 m
	62836	Pictogram KERN - EXIT	30 m

Size of the pictogram:



Functionality Test of the Emergency Lighting System:

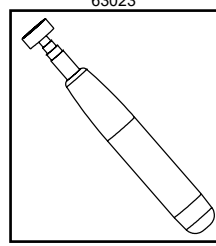
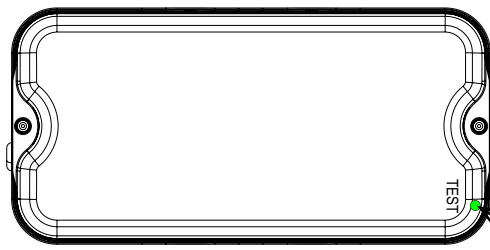
To ensure proper operation of the light fixture, it is necessary to follow the attached emergency lighting test record.

To perform a functionality test of the emergency light, place the magnet (accessory no. 63023) over the indicator LED marked with the TEST label – see picture 7.

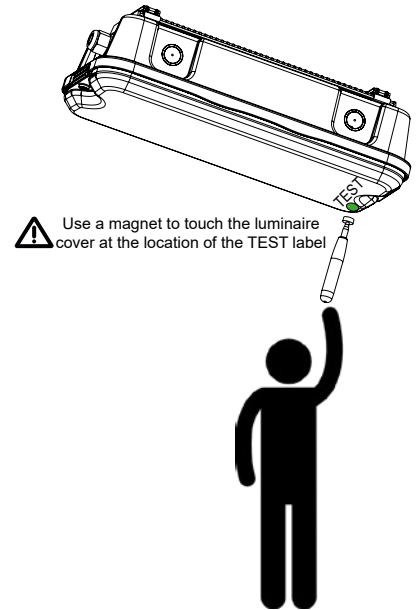
If the emergency power source turns off before the autonomy time has elapsed, even though the battery is fully charged, the battery must be replaced with a new one.

Note: The battery reaches full capacity after approximately three charge/discharge cycles.

Picture. 7
Functionality test of the emergency lighting system



Signalling LED diode



Use a magnet to touch the luminaire cover at the location of the TEST label

Battery replacement:

Battery replacement is necessary once the luminaire no longer meets the requirements of its rated operating duration.

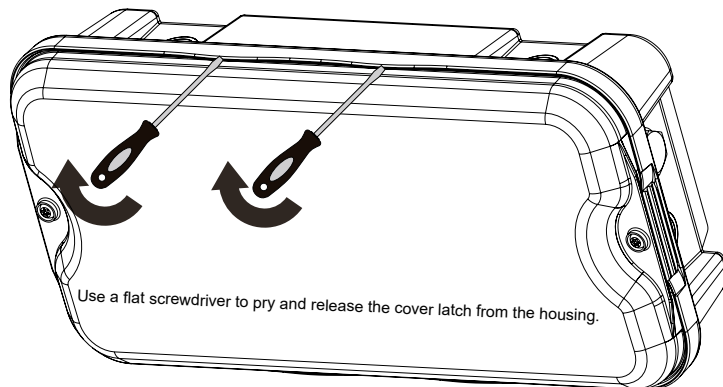
Replace the battery in a non-explosion-hazardous environment.

1. Disconnect the luminaire from the power supply.
2. Loosen the M5 locking screws on the optical cover.
3. Remove the cover using a flathead screwdriver (picture. 8).
4. Release the reflector hook and tilt it.
5. Disconnect and remove the old battery using a Phillips screwdriver to unscrew the two screws holding the battery (see picture 9).
6. Mount the new battery (mark installation date).
7. Connect the battery to the emergency unit.
8. Return the reflector to its final position until secured.
9. Reattach the luminaire cover and secure it with M5 screws using a tightening torque of 1.0 Nm. Snap the latches into the correct position (see picture 6).
10. Reconnect to power and verify emergency operation.
11. Confirm that battery charging is indicated properly.

WARNING: Use only batteries of the same type and parameters as indicated on the battery label.

Picture. 8

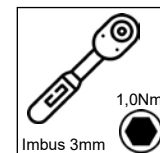
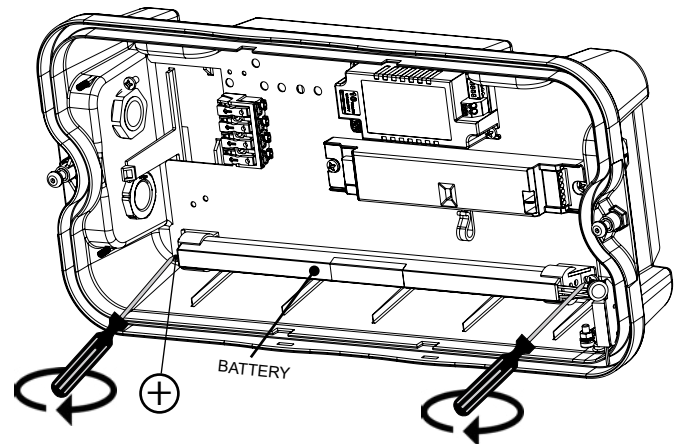
Remove the cover using a flathead screwdriver



Use a flat screwdriver to pry and release the cover latch from the housing.

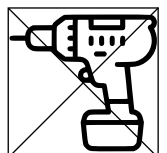
Picture. 9

Battery disconnection and removal using a Phillips screwdriver



Imbus 3mm

1,0Nm





During the installation and operation of luminaires in explosive atmospheres, it is essential to follow the relevant safety measures in accordance with national regulations and standards. KERN-Ex2/21 luminaires are plastic, dust-tight, and water-tight fixtures designed for illuminating areas with a risk of explosion.

Connection of the luminaire to the electrical network may only be carried out by a person with the appropriate qualification, in accordance with the valid regulation on electrical competence. When installing the luminaire, ESD safety precautions must be observed using appropriate tools and equipment.

The light source, seals, cable glands, or plugs in this luminaire may only be replaced by the manufacturer, its authorized service technician, or a similarly qualified person. Any modification or replacement of components that affect explosion protection is strictly prohibited. Repairs may only be performed by qualified personnel and only using original spare parts.



WARNING!!!

Potential risk of electrostatic charging.

The luminaire must be installed in a way that prevents accidental contact by persons or objects.

The luminaire is intended for fixed installation only.

Clean the luminaire using a damp cloth only. Regular cleaning intervals must be observed.

Do not open while energized.

Replace any cracked protective cover immediately.

The battery in the luminaire must only be replaced with a battery of the same type or specifications!

The manufacturer is not liable for any damage resulting from failure to follow the installation instructions.



The manufacturer is registered in the take-back system for electrical and electronic equipment and waste according to applicable regulations, and also participates in the packaging take-back and recycling system operated by EKO-KOM. (EK-F06070058).

Accessories to order:

In luminaire data sheet.

Basic instructions:

For users of luminaires

For users of emergency luminaires

For DALI system users



After clicking on the QR code, you will be redirected to the relevant website.