Operating instructions EN

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Pendant Light Fitting IEC

Series 6470/2

STAHL

EN

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1 General Information

1.1 Manufacturer

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1.2 Information regarding the operating instructions

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Publication Code: 2016-08-05·BA00·III·en·01

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

1.3 Conformity with standards and regulations

See certificates and EU Declaration of Conformity: www.stahl-ex.com.
The device has IECEx approval. See IECEx homepage: http://iecex.iec.ch/
Further national certificates can be downloaded via the following link:
http://www.r-stahl.com/downloads/certificates.html.

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2 Explanation of the symbols

2.1 Symbols in these operating instructions

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

2.2 Warning notes

Warning notes must be observed under all circumstances, in order to minimize the risk due to construction and operation. The warning notes have the following structure:

- Signalling word: DANGER, WARNING, CAUTION, NOTICE
- Type and source of danger/damage
- Consequences of danger
- Taking countermeasures to avoid the danger/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 the instruction can result in material damage to the device and / or its environment.

2.3 Symbols on the device

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

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3 Safety notes

3.1 Operating instructions storage

- Read the operating instructions carefully and store them at the mounting location of the device.
- Observe applicable documents and operating instructions of the devices to be connected.

3.2 Safe use

- Read and observe the safety notes in these operating instructions!
- Observe characteristic values and rated operating conditions on the rating and data plates!
- Observe additional information plates on the device!
- Use the device in accordance with its intended and approved purpose only!
- We cannot be held liable for damage caused by incorrect or unauthorized use or by non-compliance with these operating instructions.
- Before installation and commissioning, make sure that the device is not damaged!
- Work on the device (installation, maintenance, overhaul, repair) may only be carried out by appropriately authorized and trained personnel.

3.3 Intended Use

The pendant light fitting 6470 is equipment

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

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 alter the device.

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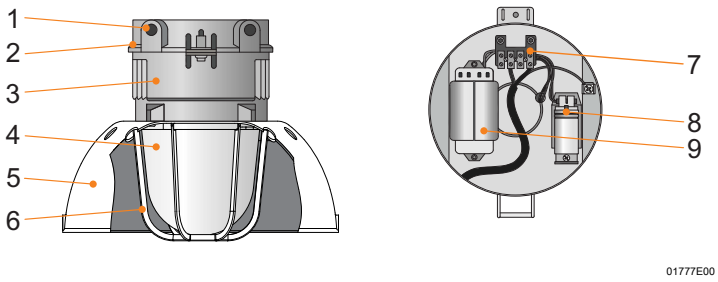
4 Function and device design

	DANGER
EX	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.

4.1 Function

- for lighting areas, work spaces and objects

4.2 Device design



1 - Cable gland
2 - Enclosure cover
3 - Enclosure
4 - Glass dome
5 - Reflector
6 - Wire guard
7 - Connection terminal of the luminaire
8 - Capacitor [1)]
9 - Ballast [1)]
[1)] - depending on the version

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5 Technical data

Explosion Protection

Global (IECEx)

Gas and dust	IECEx PTB 06.0007 Ex nR IIC T* Gc Ex tb IIIC T* °C Db Ex tc IIIC T* °C Dc * temperature classes and surface temperatures see selection table

Europe (ATEX)

Gas and dust	PTB 05 ATEX 2045 (Zones 2, 22) PTB 05 ATEX 2043 (Zone 21) Ⓔx II 3 G Ex nR IIC T* Gc Ⓔx II 2 D Ex tb IIIC T* °C Db Ⓔx II 3 D Ex tc IIIC T* °C Dc * temperature classes and surface temperatures see selection table

Certifications and certificates

Certificates	IECEx, ATEX, Kazakhstan (TR), Russia (TR), Taiwan (ITRI), Ukraine (TR), Belarus (TR)
Ship approval	GL

Technical Data

Electrical data

Lamps

QT	IEC 60357
HIT	IEC 61167
HST	IEC 60662

Ballast

QT	without
HIT / HST	magnetical ballast

Rated operational voltage U_e

	Lamps							
	QT			HIT/HST				
	150 W	250 W	500 W	70 W	100 W	150 W	250 W	400 W
230 (+/- 6%) V AC, 50 Hz	x	x	x	x	x	x	x	x
240 (+/- 6%) V AC, 50 Hz				x	x	x	x	x
208 (+/- 6%) V AC, 60 Hz				x		x		x
220 (+/- 6%) V AC, 60 Hz	x	x	x	x	x	x	x	x
240 (+/- 6%) V AC, 60 Hz				x	x	x	x	x

Technical Data

Current consumption

Lamp	Lamp power	Supply current in A
220 ... 230 V AC/DC 0, 50, 60Hz		
QT	150 W	0.65
QT	250 W	1.08
QT	500 W	2.17

		Compensated			Uncompensated		
Lamp	Lamp power	Power factor cos φ	Supply current in A	Inrush current in A	Power factor cos φ	Supply current in A	Inrush current in A
230 V AC / 240 V AC, 50 Hz							
HIT / HST	70 W	0.96	0.38	0.50	0.37	1.00	1.30
HIT / HST	100 W	0.90	0.56	0.80	0.41	1.20	1.70
HIT / HST	150 W	0.95	0.79	1.50	0.40	1.80	2.70
HIT / HST	250 W	0.92	1.30	2.00	0.40	3.00	4.20
HIT	400 W	0.93	2.00	2.40	0.43	4.20	5.80
HST	400 W	0.91	2.10	2.50	0.43	4.45	6.00
208 V AC, 60 Hz							
HIT / HST	70 W	0.92	0.39	0.50	0.37	1.00	1.30
HIT / HST	150 W	0.94	0,80	1.50	0.42	1.80	2.70
HIT	400 W	0.97	1,90	2.50	0.44	4.20	5.80
HST	400 W	0.96	2,30	2.80	0.44	4.45	6.00
220 V AC / 240 V AC, 60 Hz							
HIT / HST	70 W	0.95	0.36	0.50	0.37	1.00	1.30
HIT / HST	100 W	0.91	0.62	0.80	0.44	1.20	1.70
HIT / HST	150 W	0.96	0.75	1.50	0.42	1.80	2.70
HIT / HST	250 W	0.90	1.50	2.00	0.40	3.00	4.20
HIT	400 W	0.98	1.80	2.40	0.44	4.20	5.80
HST	400 W	0.98	2.20	2.70	0.44	4.45	6.00

Technical Data

Inrush current

max. light fittings per circuit breaker with the maximum network impedance of 1 Ohm:

				compensated [uncompensated]				
	QT			HIT/HST				
	150 W	250 W	500 W	70 W	100 W	150 W	250 W	400 W
B10A	11	7	4	8 [5]	7 [4]	5 [2]	3 [1]	2 [1]
B16A	22	13	7	13 [8]	11 [6]	8 [4]	5 [2]	3 [1]
B20A	28	17	9	16 [9]	14 [8]	10 [5]	6 [3]	4 [2]
B25A	35	21	11	20 [12]	17 [10]	12 [6]	8 [4]	5 [2]
C10A	11	7	4	12 [7]	10 [6]	7 [4]	5 [2]	3 [1]
C16A	22	13	7	18 [11]	16 [9]	11 [6]	7 [3]	4 [2]
C20A	28	17	9	23 [14]	20 [11]	14 [7]	9 [4]	5 [3]
C25A	35	21	11	29 [17]	25 [14]	17 [9]	11 [5]	7 [4]

Energy efficiency class

EEI A2

Ambient conditions

Ambient temperature

6470/21	-20 ... +40 °C	all variants
	-30 ... +55 °C	HSE, HIE
	-50 ... +55 °C	QT
6470/22	-20 ... +40 °C	all variants
	-30 ... +55 °C	HSE 100 W, 150 W
	-30 ... +40 °C	HSE 250 W, HIE 250 W
6470/23	-20 ... +40 °C	all variants
	-30 ... +55 °C	HSE 250 W, 400 W, HIE 250 W, 400 W
	-50 ... +55 °C	QT 500 W

Mechanical data

Degree of protection	IP66 (IEC 60598)
Protection class	I (PE-connection)
Material	
Enclosure material	saltwater-resistant aluminium
Glass cover	thermal shock resistant borosilicate glass
Cover seal	silicone rubber
Glass seal	silicone rubber
Mounting bracket	Stainless steel
External reflector	powder coated galvanised sheet steel / glass fibre reinforced polyester
Wire guard	saltwater-resistant aluminium
Enclosure lock	Mounting screw M8 (stainless steel)

Technical Data

Mounting / Installation

Operating position	pendant mounting or slewing angle (30° and 45°)
Mounting	wall and ceiling, pole, pendant by means of ring bolts or mounting brackets
Cable glands	Specially certified cable entries (according to Directive 94/9/EC) - risk of mechanical hazard "high" - with a minimum type of protection of IP66 must be used. The number of cable entries depends on the mounting version. Standard 2x M25 and 2x M20 Special entry others on request
Connection option	Spring clamp terminal 0.5 ... 4 mm ^{2} Strip length 10 ... 11 mm 3-pole (2x L1, 2x N, 2x PE)
Screw-in thread for pole mounting	1 $^1/_4$“ BSP, 1 $^1/_2$“ BSP
Wire guard and external reflector	can easily be mounted later using a mounting screw M6

Selection Table

Version	Lamps [1]	Lamp holder	Lamp wattage	Temperature class at Ta =		$T_{S\ max}$ at Ta = 55 °C	Weight
				40 °C	55 °C		kg
Pendant light fitting IEC Series 6470 size 1 up to 150 W	QT	E27	150 W	T4	T4	121 °C	5.900
			250 W	T4	T3	149 °C	5.300
	HIE	E27	100 W	T4	T4	125 °C	7.197
			150 W	T4	T3	147 °C	8.115
	HSE	E27	50 W	T5	T5	112 °C	6.297
			70 W	T4	T4	112 °C	6.797
Pendant light fitting IEC Series 6470 size 2 up to 250 W	HIE	E40	250 W	T3	- -	152 °C *	9.596
	HSE	E40	100 W	T4	T4	117 °C	10.000
			150 W	T3	T3	140 °C	9.260
			250 W	T3	T3	167 °C	9.596
Pendant light fitting IEC Series 6470 size 3 up to 600 W	QT	E40	500 W	T4	T3	142 °C	10.868
	HIE	E40	250 W	T4	T3	136 °C	14.834
			400 W	T3	T3	162 °C	15.545
	HSE	E40	250 W	T4	T3	145 °C	14.834
			400 W	T3	T3	154 °C	15.545
			600 W	T3	- -	176 °C *	18.103

* at maximum ambient temperature of 40 °C

Notes: [1] QT → Halogen lamp
HIE → Metal halide lamp
HSE → High-pressure sodium lamp

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6 Transport and storage

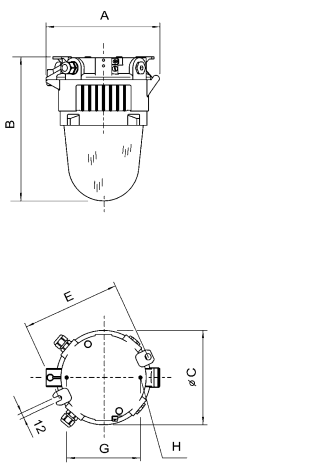
- Transport and store the device only in the original packaging.
- Store the device in a dry place (no condensation) and vibration-free.
- Do not drop the device.

7 Mounting and installation

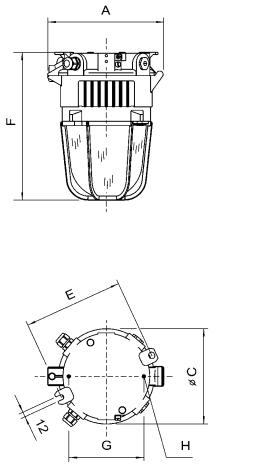
	DANGER
	Explosion hazard due to incorrect installation of the device! Non-compliance results in severe or fatal injuries. • Carry out installation strictly according to the instructions and national safety and accident prevention regulations to maintain the explosion protection. • Select and install the electrical device so that explosion protection is not affected due to external influences, i.e. pressure conditions, chemical, mechanical, thermal and electric impact such as vibration, humidity and corrosion (see IEC/EN 60079-14). • The device must only be installed by trained qualified personnel who is familiar with the relevant standards.

7.1 Dimensions / fastening dimensions

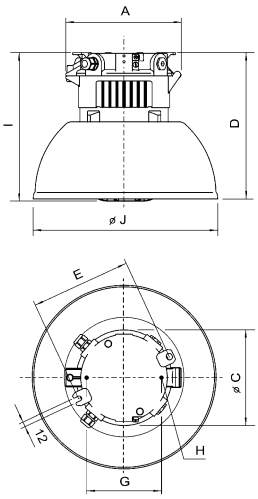
Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



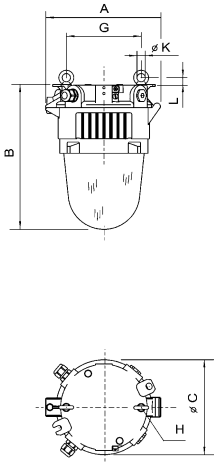
Ceiling mounting without wire guard



Ceiling mounting with wire guard



Ceiling mounting with reflector



Pendant mounting by means of ring bolts

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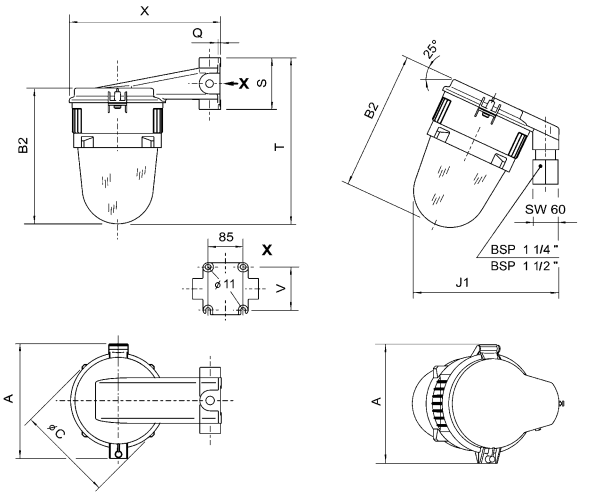
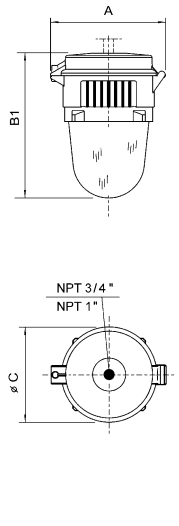
Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



Wall mounting **Pole mounting 25°**



Tube mounting

	6470/21	6470/22	6470/23
A	277 [10.91]		372 [14.65]
B	352 [13.86]	414 [16.30]	514 [20.24]
B2	331	393	498
C	230 [9.06]		310 [12.20]
D	347 [13.66]		525 [20.67]
E	240 [9.45]		329 [12.95]
F	357 [14.06]	423 [16.65]	533 [20.98]
G	180 180		260
H	M 8 M 8		M 10
I	358	424	535
J	444 444		715
J1	340	367	511
K	20 20		25
L	18 18		22.5
Q	7 7		8
S	105	125	160
T	405	466	592
V	105 105		139
X	366.5 366.5		579

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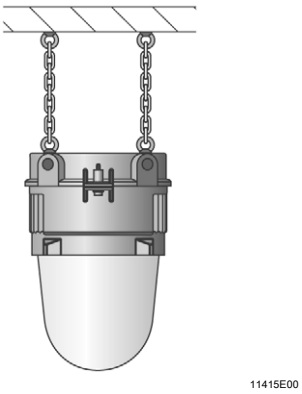
7.2 Mounting / dismounting, operating position

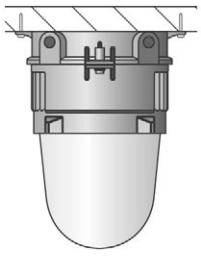
	DANGER
EX	Explosion hazard due to electrostatic discharge Non-complicance results in severe or fatal injuries. Do not use the luminaire in strong charge generating environments! The following processes/activities should be avoided: • accidental friction • particle currents

	DANGER
EX	Explosion hazard due to inadmissible heating! Non-compliance results in severe or fatal injuries. • Avoid external heat sources and/or direct sunlight (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).

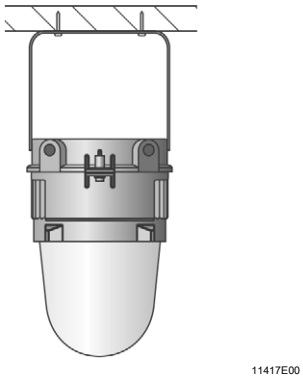
7.2.1 Mounting types



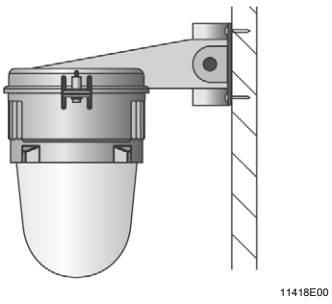
Ring eye mounting



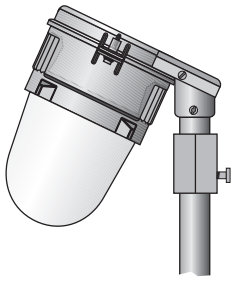
Ceiling mounting



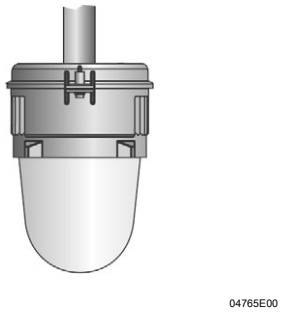
Retaining bracket



Wall mounting



Pole mounting 25°



Tube mounting

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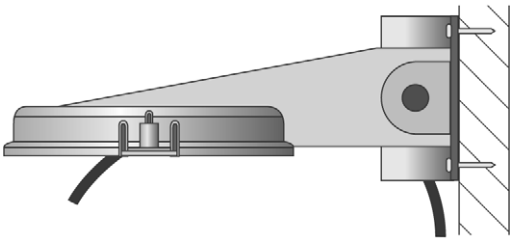
7.2.2 Fitting the fixture

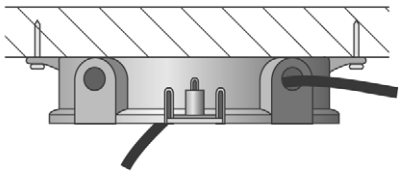
Wall mounting



11421E00

- Feed the connection cable through the corresponding cable gland and mounting part.
- Attach the mounting part with 4 screws (see dimensional drawings).

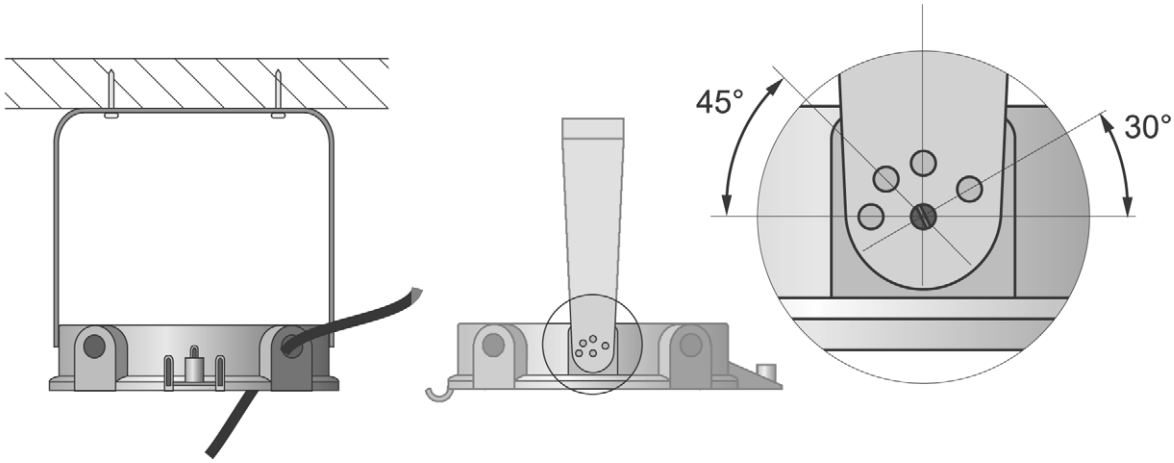
Ceiling mounting



11422E00

- Feed the connection cable through the corresponding cable gland and mounting part.
- Attach the mounting part with 2 screws (see dimensional drawings).

Retaining bracket mounting



11423E00

- Depending on required slewing angle, attach retaining bracket to mounting part using 4 screws.
- Feed the connection cable through the corresponding cable gland.

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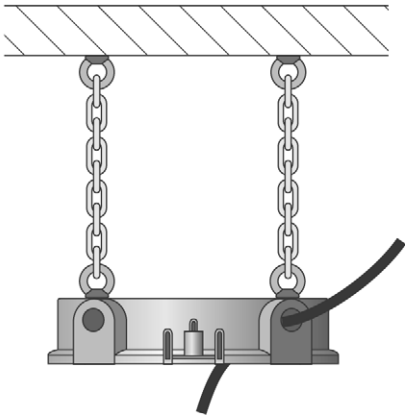
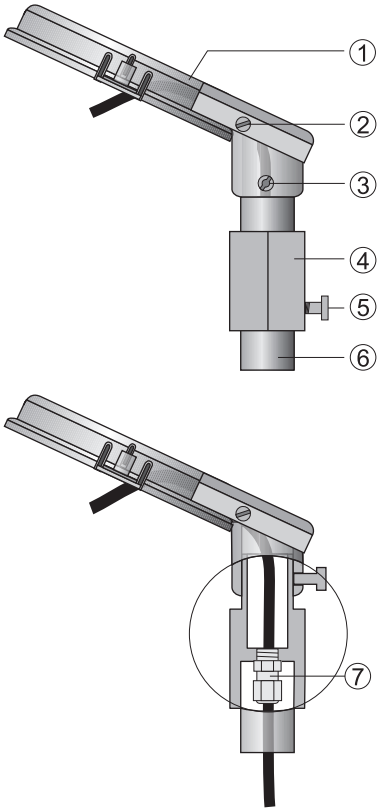
Ring eye mounting



11424E00

- Screw the 2 ring eyes into the mounting part.
- Attach the mounting part (i.e. with chains) to the ceiling.
- Feed the connection cable through the corresponding cable gland.

Pole mounting



16543E00

1 Pole arm
2 Opening for inspection of restricted breathing
3 2x Safety screw pole arm - adaptor
4 Adaptor
5 Safety screw adaptor - pole
6 Pole
7 Cable gland

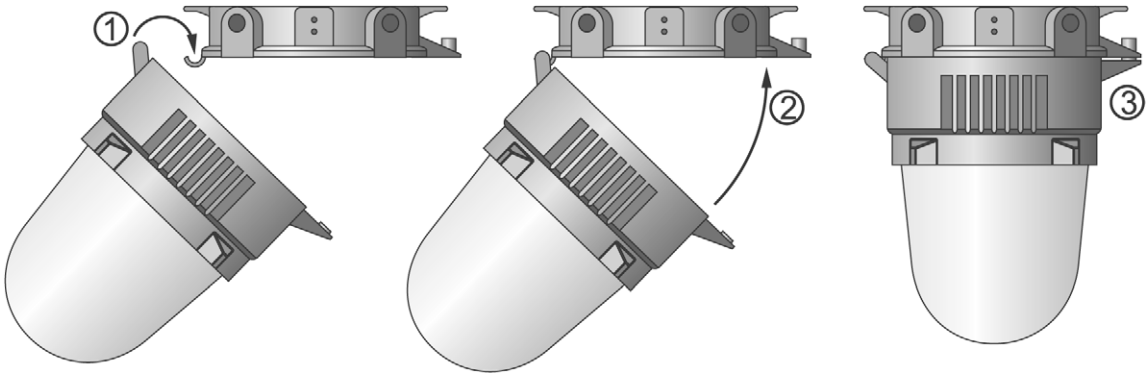
- Feed the connection cable through the cable gland (7), adaptor (4) and pole arm (1).
- Tighten the cable gland nut (7) (2.3 Nm).
- Screw adaptor on the pole by at least 4 turns and secure it by means of a screw (5) (4 Nm).

Tube mounting

04765E00E00

- Connect rigit NPT conduit to the cover suitable for tube mounting.
- Tighten and secure with set screw.
- Route the supply conducters through the conduit into the fixture.

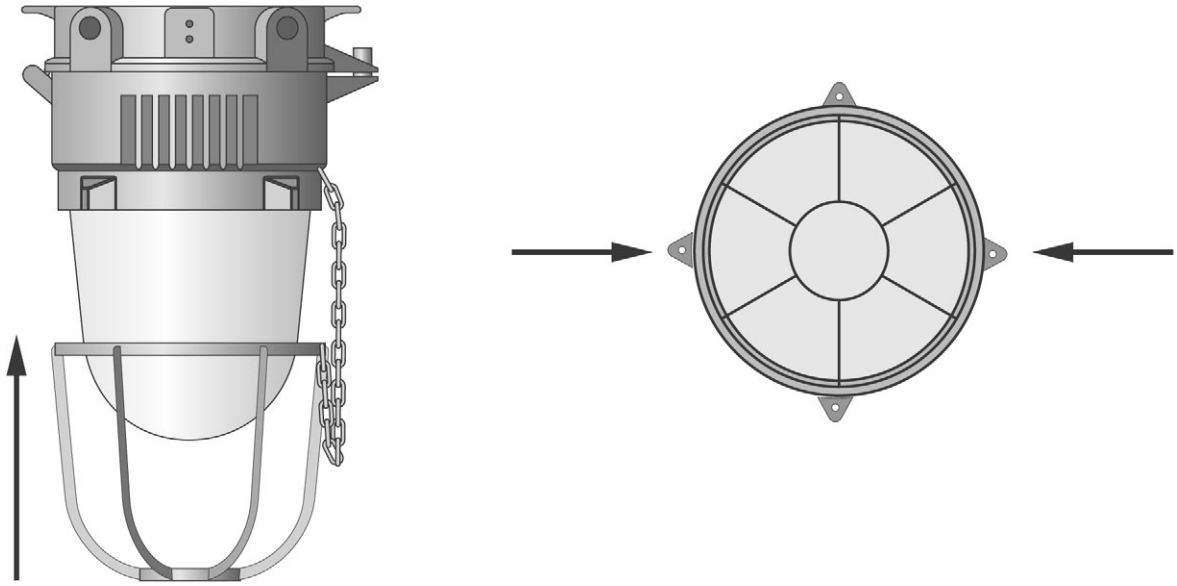
7.2.3 Mounting the body of the light fitting



11426E00

- Carefully hang the body of the light fitting into the mounting part (1).
- Swivel the body of the light fitting towards the mounting part (2).
- Tighten (3) Combi-TORX (M8).

7.2.4 Wire Guard Assembly



11427E00

- Place the wire guard onto the glass dome from below and fasten it using a carrying chain.
- Fasten the wire guard with 2 screws.

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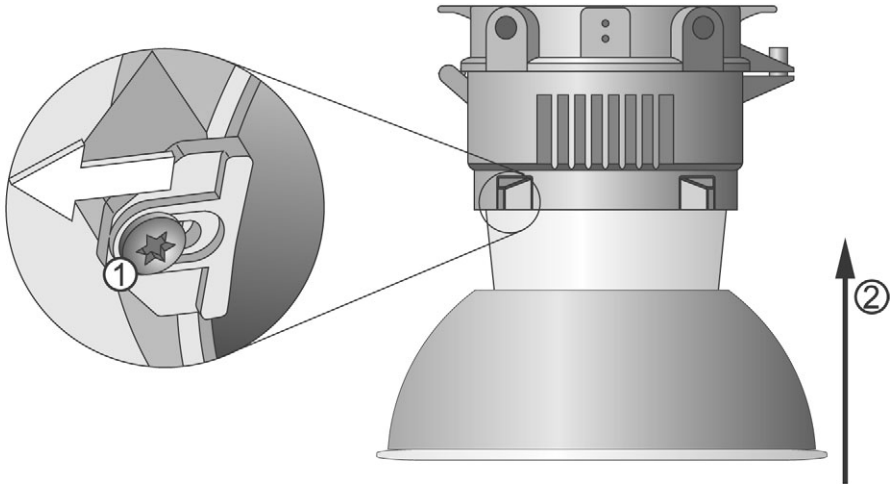
7.2.5 Mounting the reflector

NOTICE
Danger due to incorrect mounting! Non-compliance can result in material damage! • Ensure correct orientation of the locking plate (position 4)!



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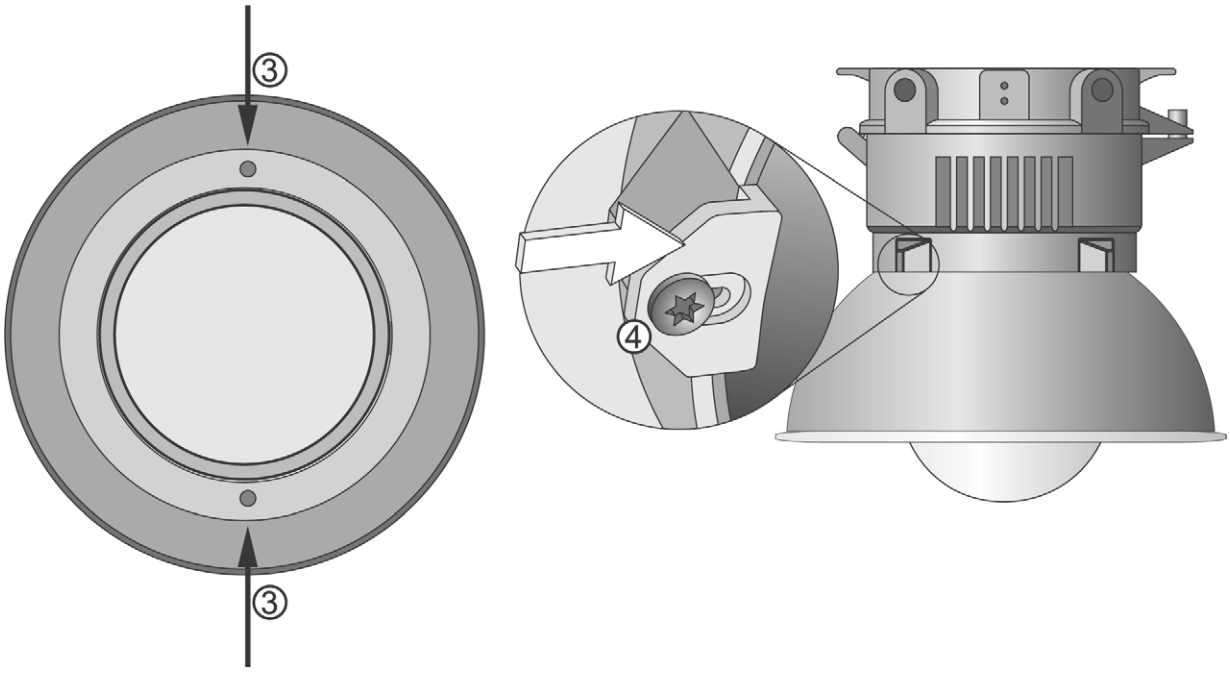
- Loosen the safety screw and remove the locking plate (1).
- Place the reflector onto the glass from below (2).



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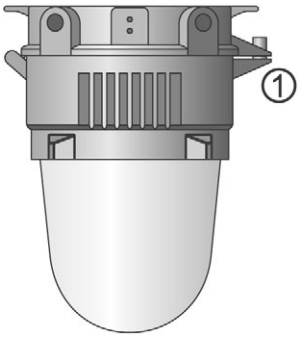
- Fasten the reflector with 2 screws (3).
- Turn the locking plate, push it against the glass and tighten the safety screw (4).

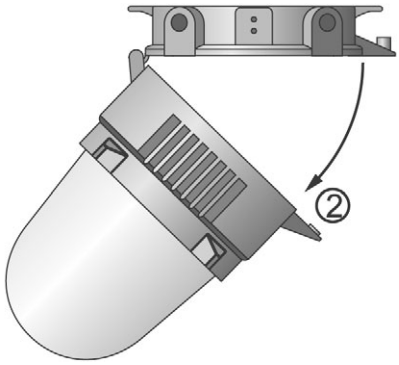
EN

7.3 Installation

7.3.1 Opening of light fitting

	DANGER
	Risk of electric shock! Risk of fatal injuries! • Luminaires without switch must not be opened when they are supplied with power (see information plate on the lock)!





- Loosen (1) Combi-TORX (M8).
- Carefully swivel (2) the body of the light fitting away from the mounting part or the pole arm and let it hang down freely.

7.3.2 Cable entries

	WARNING
	Not approved cable glands and stopping plugs. Explosion protection is impaired! • Only use separately certified cable glands and stopping plugs.

Cable glands and stopping plugs must be approved for the following types of protection:
a) restricted breathing (nR) and dust (IIIC)
b) increased safety (e)

	Recommendation: Use of cable glands and stopping plugs supplied by R. STAHL Schaltgeräte GmbH. • see data sheet on our homepage www.stahl-ex.com.

EN

Please observe the following, if cable glands and stopping plugs are used, but not provided by R. STAHL Schaltgeräte GmbH:
- Permissible cable diameter range, torques, temperature range of use
- IP level of protection, at least IP 65 or according to details on rating plate
- Operating instructions of the cable glands and stopping plugs

additionally, observe the following for cable glands and stopping plugs of the type of protection "increased safety" (e):
- valid EC type examination certificate and
- confirmation of the manufacturer for the combination of the cable and screw connection

	DANGER
EX	Explosion hazard if breathers are used! Accidents or fatal injury are almost certain to happen! • Do not use breathers.

7.3.3 Electrical connections

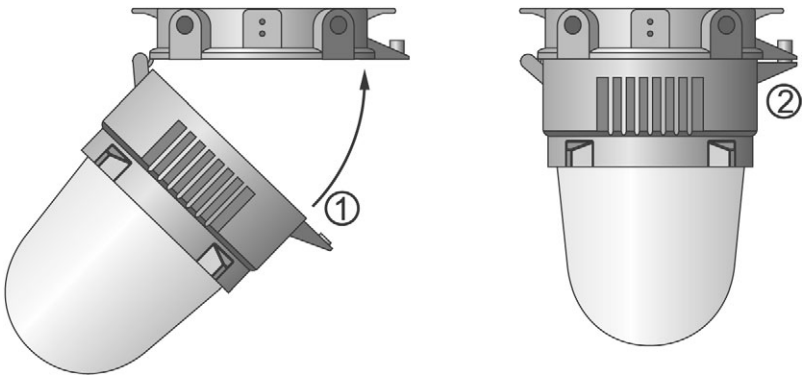
Earth connection

Earth connection internal or external possible.

i 15461E00	Ballast and ignitor are wired as delivered according to the lamp used. No further installation work is required on these elements.

- Slide silicon hoses (2 or 4 pieces) included in delivery over single cores L and N.
- Insert connection cable into corresponding terminal blocks and fix it (1).
- Protective conductor is factory fitted to PE connection on the enclosure cover.
- Fix protective conductor of cover and connection cable to the enclosure (2).
- Close the cable entry (3).
- Securely install the installation cable and secure it against pulling out.

7.3.4 Closing of light fitting



- Swivel the body of the light fitting towards the mounting part or the pole arm (1).
- Tighten (2) Combi-TORX (M8).

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.

DANGER

Explosion hazard due to incorrect installation!
Non-compliance results in severe or fatal injuries.
- Carry out the restricted breathing test prior to first commissioning. (See chapter "Restricted breathing test")

Before commissioning, ensure that
- the device has been installed according to regulations.
- the power supply voltage and the rated operational voltage are identical.
- the required cable diameter for cable glands has been used.
- the cable entries and stopping plugs have been securely tightened.
- the cables are correctly connected.
- the connection has been performed correctly.
- all screws and nuts are tightened according to regulations.
- the connection chamber is clean.
- the device is not damaged.
- no foreign bodies are inside the device.
- the device is sealed according to regulations.

NOTE

Condensation
due to specific environmental and operating conditions condensation cannot be avoided completely.
- operate the luminaire continuously or periodically over extended periods of time!
- avoid thermal bridges!

EN

9 Maintenance and repair

As requested at standards EN 60079-17 and EN 60079-19.

WARNING

Risk of electric shock or malfunctioning of the device due to unauthorized work!
Non-compliance can result in severe injuries and material damage.

- Before carrying out work on the device, switch off voltage supply.
- Work performed on the device must only be carried out by appropriately authorized and qualified electricians.

DANGER

Explosion hazard due to hot built-in components!
Accidents or fatal injury are almost certain to happen!

- Only open the enclosure in switched-off state.
- The device must be allowed to cool down for at least 15 minutes before opening it.

9.1 Maintenance

Observe the relevant national regulations in the country of use.

- Determine the type and extent of inspections in compliance with the relevant national regulations.
- Adapt inspection intervals to the operating conditions.

The following tests and measures must be carried out during regular maintenance.

Check	Measures
the permissible ambient temperature	If exceeding the permissible ambient temperature or falling below the device must be taken out of operation.
the enclosure components for formation of cracks and damage.	Replace the exchangeable enclosure components. If the enclosure components are non-exchangeable, the device must be taken out of operation.
its intended use	If the device is not used according to its intended use, it must be taken out of operation.
if the conductors are clamped properly	clamp loose conductors tightly.
the cables for ageing and damage	replace damaged or aged cables.

Check	Measures
the seals for ageing and damage	replace damaged, aged and porous seals and completely change enclosure components with foamed seal.
the inside and outside of the luminaire for pollution	clean the luminaire.

- Restricted breathing of enclosure (see chapter "Restricted breathing test").

i	If the restricted breathing test has failed, take the device out of operation!

NOTICE

Moisture inside the light fitting
can result in damage to electric and electronic components.
- Remove moisture with a cloth!
- Determine the source and eliminate the cause!
- Avoid condensation and thermal bridges!

WARNING

Restricted breathing is not guaranteed any longer!
Explosion protection is impaired!
- After replacing seals or enclosure components carry out the restricted breathing test acc. to IEC/EN 60079-15, para. 23.2.3.2.1.1.

9.1.1 Restricted breathing test

The luminaire is equipped with a test device for restricted breathing.
Restricted breathing must be checked after installation and during regular maintenance acc. to IEC/EN 60079-15.

Inspection according to IEC/EN 60079-15, para. 23.2.3.2.1.1

i	Recommendation Check the luminaire by using the handheld testing instrument for restricted breathing from R. Stahl Schaltgeräte GmbH (see data sheet).

i	The test should only be carried out at constant temperature conditions.

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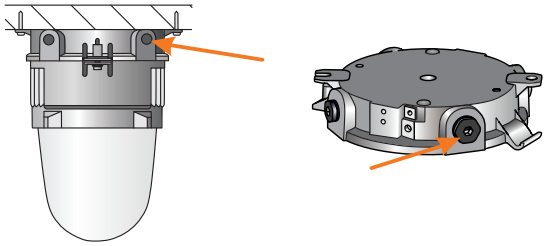
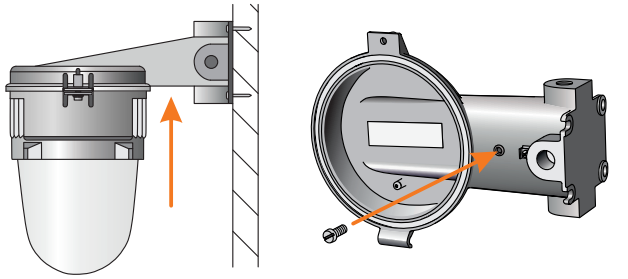
Preparing the luminaire for test:

For ceiling mounting, pendant light fitting or light fitting with bracket



- Remove stopping plug.
- Insert M20 cable gland.

For wall mounting or pole mounting light fitting



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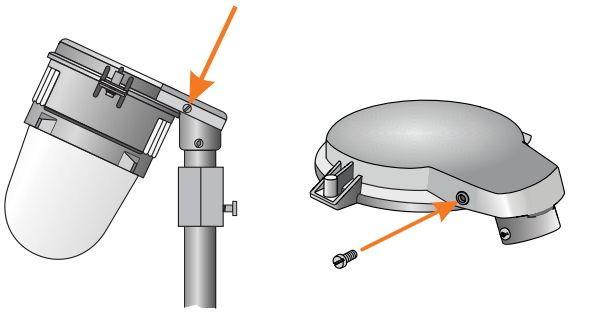
- Remove screw with sealing.



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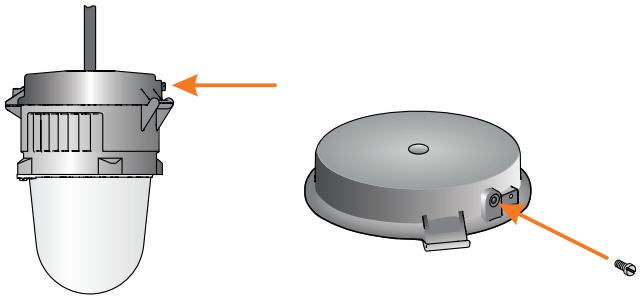

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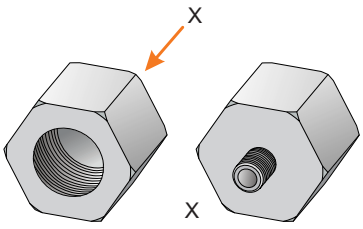


17143E00

- Use the test adapter in the thread
- Insert a M20 cable gland into test adapter

EN

Test:

- Insert the hose of the test device into the cable entry for testing restricted breathing.
- Hand-tighten the cable entry.
- Use the hand pump to create a vacuum of 0.3 kPa (3 mbar).

The test has been passed if after 90 seconds a vacuum of at least 0.15 kPa (1.5 mbar) is still present in the luminaire.

After inspection:

- Remove the hose of the test device for testing restricted breathing from the cable entry.

For ceiling mounting, pendant light fitting or light fitting with bracket

- Remove M20 cable gland.
- Insert stopping plug.

For wall mounting or pole mounting light fitting

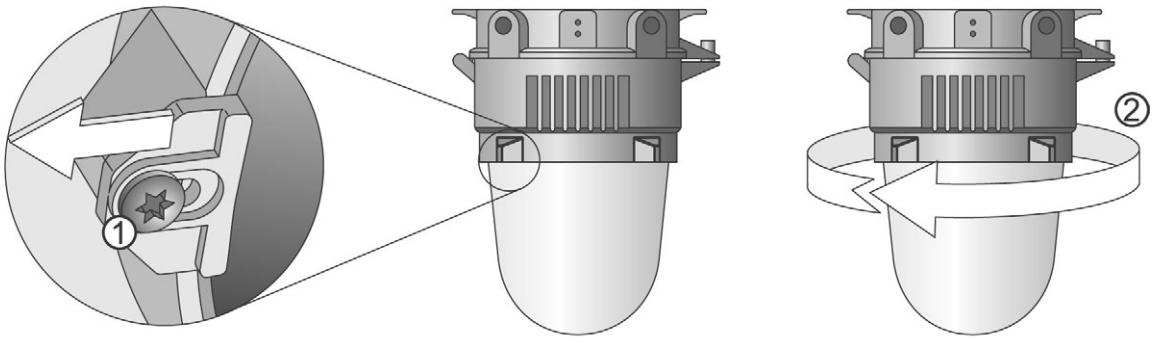
- Remove M20 cable gland.
- Remove the test adapter.
- Close the thread with screw and sealing.

Alternative pressure and time specifications:

	Alternative 1	Alternative 2
Vacuum at start of test	3.0 kPa (30 mbar)	0.3 kPa (3 mbar)
Test duration	14 seconds	14 seconds
Vacuum after testing	2.7 kPa (27 mbar)	0.27 kPa (2.7 mbar)

i	If the luminaire is only marked with the type of protection for dust (IIIC), the cable entries and stopping plugs do not need to meet the requirements for restricted breathing (nR).

9.1.2 Replacement of lamps



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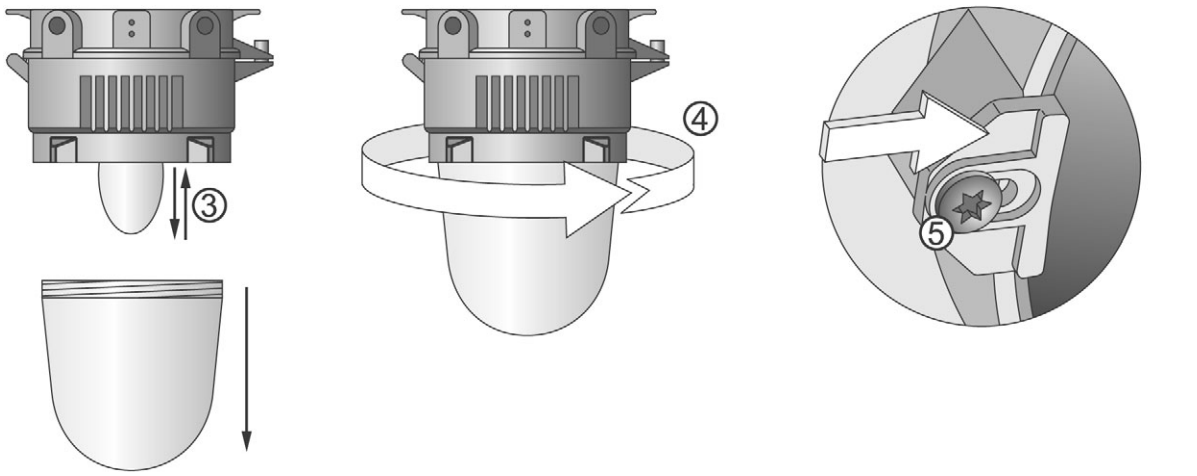
- Loosen safety screw and pull locking plate away from the glass (1).
- Turn the protective glass counterclockwise in order to unscrew it (2).

EN



- Carefully put the protective glass aside.
- Remove defective lamp (3).
- Select new lamp according to circuitry and screw it in (3).
- Screw in protective glass clockwise and **hand-tighten** it (4).
- Push locking plate against glass and tighten the safety screw (5).
- Check seal below the closing cover if correctly positioned.
- Check restricted breathing (see chapter "Restricted breathing test").

9.1.3 Cleaning

- Clean the device only with a damp cloth.
- Use water or mild cleaning agents.
- Do not use abrasive, scratching and aggressive detergents or solvents.

9.2 Repair

	DANGER
EX	Explosion hazard due to improper repair! Non-compliance results in severe or fatal injuries. • Repair work on the devices must be performed only by R. STAHL Schaltgeräte GmbH.

9.3 Returning the device

Use the "Service form" to return the device when repair/service is required. On the internet site "www.stahl-ex.com" under "Downloads > Customer service":

- Download the service form and fill it out.
- Send the device along with the service form in the original packaging to R. STAHL Schaltgeräte GmbH.

10 Disposal

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

11 Accessories and Spare parts

NOTICE
Malfunction or damage to the device due to the use of non-original components. Non-compliance can result in material damage. • Use only original accessories and spare parts from R. STAHL Schaltgeräte GmbH.

i	For accessories and spare parts, see data sheet on our homepage www.stahl-ex.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:*	**Hängeleuchte** *Pendant light fitting* *Lanterne*
Typ(en), *type(s), type(s):*	**6470/1...** **6470/2....**

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

Richtlinie(n) / *Directive(s) / Directive(s)*	Norm(en) / *Standard(s) / Norme(s)*
2014/34/EU **ATEX-Richtlinie** *2014/34/EU* *ATEX Directive* *2014/34/UE* *Directive ATEX*	EN 60079-0:2012 + A11:2013 EN 60079-15:2010 EN 60079-31:2014
Kennzeichnung, *marking, marquage:*	**II 3 G Ex nR IIC T. Gc** **II 3 D Ex tc IIIC T... °C Dc** CE
Konformitätsaussage: *Conformity Statement:* *Déclaration de conformité:*	**PTB 05 ATEX 2045** (Physikalisch-Technische Bundesanstalt, Bundesallee 100, 38116 Braunschweig, Germany, NB 0102)
Produktnormen nach Niederspannungsrichtlinie: *Product standards according to Low Voltage Directive:* *Normes des produit pour la Directive Basse Tension:*	EN 60598-1:2015 EN 62471:2008 EN 62493:2015
2014/30/EU **EMV-Richtlinie** *2014/30/EU* *EMC Directive* *2014/30/UE* *Directive CEM*	EN 61547:2009 EN 55015:2013 + A1:2015 EN 61000-3-2:2014 EN 61000-3-3: 2013
2011/65/EU **RoHS-Richtlinie** *2011/65/EU* *RoHS Directive* *2011/65/UE* *Directive RoHS*	EN 50581:2012

Waldenburg, 2017-03-07
Ort und Datum
Place and date
Lieu et date

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Leiter Qualitätsmanagement
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Kennzeichnung, *marking, marquage:*	Ⓔx **II 2 D Ex tb IIIC T... °C Db** **CE 0158**
EG/EU-Baumusterprüfbescheinigung: *EC/EU Type Examination Certificate:* *Attestation d'examen CE/UE de type:*	**PTB 05 ATEX 2043** (Physikalisch-Technische Bundesanstalt, Bundesallee 100, 38116 Braunschweig, Germany, NB 0102)
Produktnormen nach Niederspannungsrichtlinie: *Product standards according to Low Voltage Directive:* *Normes des produit pour la Directive Basse Tension:*	EN 60598-1:2015 EN 62471:2008 EN 62493:2015
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2011/65/EU **RoHS-Richtlinie** *2011/65/EU* *RoHS Directive* *2011/65/UE* *Directive RoHS*	EN 50581:2012

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