



Tubular light fitting with LED

Series 6036/3

– Save for future use! –

Contents

1 General information 3

1.1 Manufacturer 3

1.2 About these operating instructions 3

1.3 Further documents 3

1.4 Conformity with standards and regulations 3

2 Explanation of symbols 4

2.1 Symbols used in these operating instructions 4

2.2 Symbols on the device 4

3 Safety 5

3.1 Intended use 5

3.2 Personnel qualification 5

3.3 Residual risks 6

4 Transport and storage 8

5 Mounting and installation 8

5.1 Mounting/dismounting 8

5.2 Installation 10

6 Commissioning 12

7 Maintenance, overhaul, repair 12

7.1 Maintenance 12

7.2 Maintenance 13

7.3 Repair 13

8 Operation 13

9 Returning the device 14

10 Cleaning 14

11 Disposal 14

12 Accessories and spare parts 15

13 Appendix A 15

13.1 Technical data 15

14 Appendix B 22

14.1 Device design 22

14.2 Dimensions/fastening dimensions 22

1 General information

1.1 Manufacturer

R. STAHL Schaltgeräte GmbH
Business Unit Lighting & Signalling
Nordstr. 10
99427 Weimar
Germany

Tel.: +49 3643 4324
Fax: +49 3643 4221-76
Internet: r-stahl.com
E-mail: info@r-stahl.com

R. STAHL Schaltgeräte GmbH

Am Bahnhof 30
74638 Waldenburg
Germany

Tel.: +49 7942 943-0
Fax: +49 7942 943-4333
Internet: r-stahl.com
E-mail: info@r-stahl.com

1.2 About these operating instructions

- ▶ Read these operating instructions, especially the safety notes, carefully before use.
- ▶ Observe all other applicable documents (see also chapter 1.3).
- ▶ Keep the operating instructions throughout the service life of the device.
- ▶ Make the operating instructions accessible to operating and maintenance staff at all times.
- ▶ Pass the operating instructions on to each subsequent owner or user of the device.
- ▶ Update the operating instructions every time R. STAHL issues an amendment.

ID no.: 309948 / 603660300190

Publication code: 2024-02-22·BA00·III·en·01

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

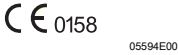



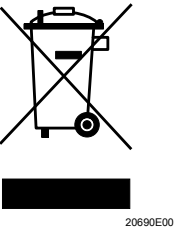
For certificates and the declaration of conformity, see r-stahl.com.

2 Explanation of symbols

2.1 Symbols used in these operating instructions

| Symbol | Meaning |
|---|---|
|  | Handy hint for making work easier |
|  DANGER! | Dangerous situation which can result in fatal or severe injuries causing permanent damage if the safety measures are not complied with. |
|  WARNING! | Dangerous situation which can result in severe injuries if the safety measures are not complied with. |
|  CAUTION! | Dangerous situation which can result in minor injuries if the safety measures are not complied with. |
| NOTICE! | Dangerous situation which can result in material damage if the safety measures are not complied with. |

2.2 Symbols on the device

| Symbol | Meaning |
|---|---|
|  | CE marking according to the current applicable directive. |
|  | UKCA marking according to the currently applicable directive. |
|  | Device certified for hazardous areas according to the marking. |
|  | Safety notes that must always be observed: The corresponding data and/or safety-related instructions contained in the operating instructions must be followed for devices with this symbol! |
|  | Marking according to WEEE Directive 2012/19/EU |

3 Safety

The device has been manufactured according to the state of the art of technology while observing recognised safety-related rules. When using the device, it is nevertheless possible for hazards to occur to life and limb of the user or third parties or for the device, environment or material assets to be compromised.

- ▶ Use the device only
 - if it is not damaged
 - in accordance with its intended use, taking into account safety and hazards
 - in accordance with these operating instructions

The system operator is responsible for ensuring the safety of the system, device and operating personnel involved. For this purpose, they must observe the relevant national laws, standards and regulations (such as IEC/EN 60079-14, IEC/EN 60079-17 and IEC/EN 60079-19).

3.1 Intended use

The 6036/3 light fittings are for lighting surfaces, work areas and objects. The light fitting can be used indoors and outdoors and is intended for stationary mounting.

It is explosion-protected equipment approved for use in hazardous areas of Zones 1, 2, 21 and 22, in mines susceptible to firedamp, and in safe areas.

"Intended use" includes complying with these operating instructions and the other applicable documents, e.g. the data sheet. All other uses are only intended after being approved by R. STAHL.

3.2 Personnel qualification

Qualified specialist personnel is required to perform the activities described in these operating instructions. This primarily applies to work in the following areas

- Mounting/dismounting the device
- Installation
- Commissioning
- Maintenance, repair, cleaning

Specialists who perform these activities must have a level of knowledge that meets applicable national standards and regulations.

Additional knowledge is required for any activity in hazardous areas! R. STAHL recommends having a level of knowledge equal to that described in the following standards:

- IEC/EN 60079-14 (Electrical installations design, selection and erection)
- IEC/EN 60079-17 (Electrical installations inspection and maintenance)
- IEC/EN 60079-19 (Equipment repair, overhaul and reclamation)

3.3 Residual risks

3.3.1 Explosion hazard

To reduce the risk in hazardous areas, it is essential to note the following points.

- ▶ Perform all work steps in hazardous areas with the utmost care at all times!
- ▶ Transport, store, plan, mount and operate the device exclusively in compliance with the technical data (see the "Technical data" chapter).

Possible hazards ("residual risks") can be categorized according to the following causes:

Mechanical damage

The device may be damaged during transport, mounting or commissioning. This kind of damage may, for example, render the device's explosion protection partially or completely ineffective. This may result in explosions causing serious or even fatal injury.

- ▶ Transport the device only in its original packaging or in equivalent packaging.
- ▶ Do not damage the light fitting or cables when mounting them (e.g. when using a knife to unpack them).
- ▶ Check the packaging and the device for damage. Report any damage to R. STAHL immediately. Do not commission a damaged device.
- ▶ Transport and store the device in its original packaging in a dry place (with no condensation), and make sure that it is stable and protected against the effects of vibrations and knocks.

Excessive heating or electrostatic charge

Operation outside of approved conditions or improper cleaning can cause the device to heat up severely or to become electrostatically charged, causing it to produce sparks. This may result in explosions causing serious or even fatal injury.

- ▶ Operate the device within the prescribed operating conditions only (see the label on the device and the "Technical data" chapter).
- ▶ Install the device in such a way that it is always operated within the permissible temperature range.
- ▶ Do not use the device in environments with kerosene, ammonia or phosphorus vapours.
- ▶ Do not use the device in strong charge-generating environments.
- ▶ Avoid friction and flow of particle streams.
- ▶ Clean the device with a damp cloth only.

Improper mounting, installation, commissioning, maintenance operation or cleaning

Basic work such as installation, commissioning, maintenance or cleaning of the device must be performed only in accordance with the applicable national regulations of the country of use and only by qualified persons. Otherwise, the explosion protection may be rendered ineffective. This may result in explosions causing serious or even fatal injury.

- ▶ Only have mounting, installation, commissioning and maintenance work performed by qualified and authorised persons (see chapter 3.2).
- ▶ Prior to commissioning, check the device is correctly mounted (see chapter 7).
- ▶ Only fit the device in the permitted assembly position (see chapter 5.1).
- ▶ Install the device on a level surface only.
- ▶ Do not damage the enclosure, cables, cable entry or cover cap with anti-fall mechanism during mounting.
- ▶ Do not remove or modify the cable entry.
- ▶ Only install the connection line if it is undamaged, and ensure it is mounted securely.
- ▶ Do not change or modify the device.
- ▶ Repair work on the device must be performed only by R. STAHL.
- ▶ Gently clean the device with a damp cloth only – do not use scratching, abrasive or aggressive cleaning agents or solutions.

3.3.2 Risk of injury

Falling devices or components

The heavy device or components can fall during transport and mounting, causing severe injury to persons in the form of bruises and contusions.

- ▶ Adhere to the operator's safety regulations, e.g. regarding the use of personal protective equipment (safety shoes).
- ▶ Use transporting and lifting equipment suitable for the size and weight of the device when transporting and mounting it.
- ▶ Observe the weight and the maximum load-bearing capacity of the device; see specifications on the shipping label or on the packaging.
- ▶ Use suitable mounting materials for mounting (see accessories) and optionally the anti-fall mechanism for the light fitting.

Insufficient personal protective equipment when in direct contact with the device

Anyone not using personal protective equipment when near the device may be injured due to optical radiation.

- ▶ Use personal protective equipment (safety goggles) during mounting, installation, commissioning, maintenance and repair.
- ▶ Never look directly into the light fitting during commissioning.
- ▶ Switch off the device before maintenance or cleaning.

Electric shock

During operation and maintenance, the device has high voltage applied to it at times. Because of this, the device must be de-energised during mounting, installation, maintenance, cleaning and dismounting.

Persons coming into contact with cables carrying excessive voltage can suffer severe electric shocks and, consequently, injuries.

- ▶ Always disconnect the device from the power supply before mounting it.

3.3.3 Device damage

The device or individual components can be damaged so significantly as a result of unsuitable operating conditions or careless contact that it will not operate correctly or will fail completely.

- ▶ Ensure that the maximum ambient temperature is never exceeded.
- ▶ In an environment with a very high level of humidity, e.g. sewage treatment plants and rainwater retention basins, switch on the device for at least two hours every day. This will avoid moisture inside the device and prevent premature failure of the electronic elements.

4 Transport and storage

- ▶ Transport and store the device carefully and in accordance with the safety notes (see the "Safety" chapter).

5 Mounting and installation

5.1 Mounting/dismounting

- ▶ Mount the device carefully and only in accordance with the safety notes (see the "Safety" chapter).
- ▶ Read through the following installation conditions and assembly instructions carefully and follow them precisely.

5.1.1 Mounting



The device is suitable for wall and ceiling mounting.

The device is delivered with a connection cable.

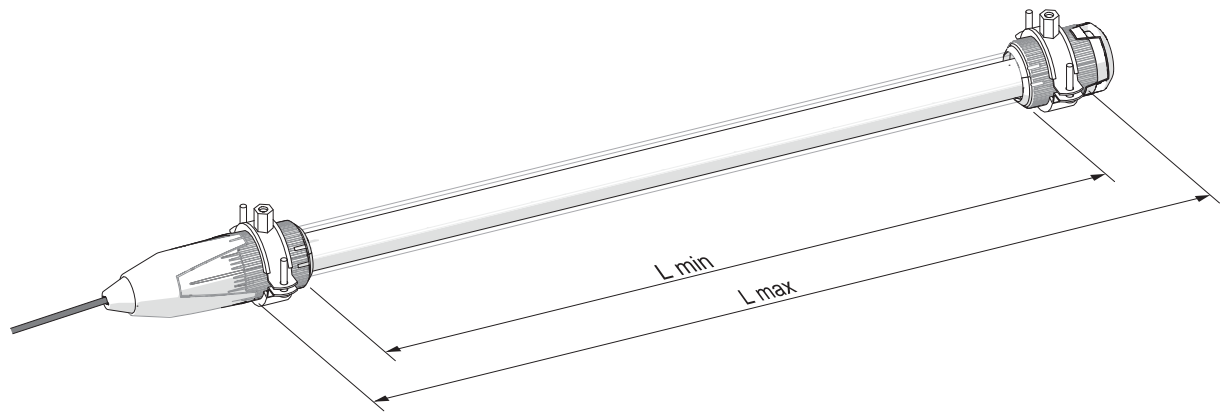
The mounting position with cable outlet upwards is prohibited in outdoor areas.



DANGER! The connection cable poses a risk of strangulation injury!

Non-compliance results in severe or fatal injuries.

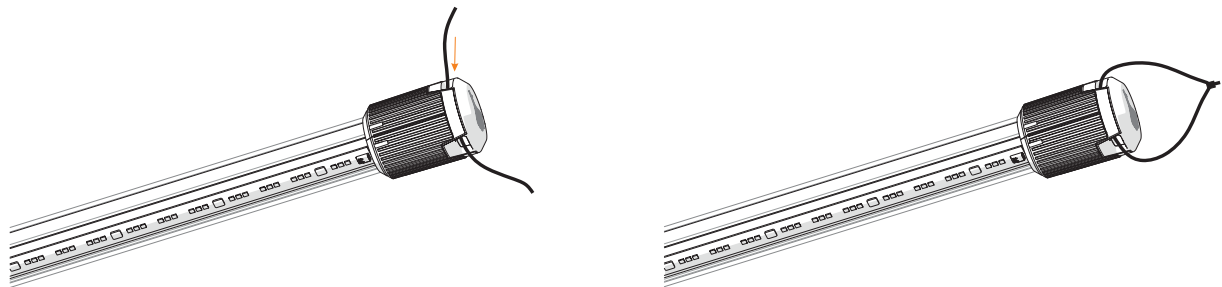
- Securely attach the flexible cabling connected to this device to the wall if the cabling is within easy reach.



23994E00

| Size | Lmin in mm [inches] | Lmax in mm [inches] |
|------|---------------------|---------------------|
| 1 | 320 [12.6] | 410 [16.1] |
| 2 | 620 [24.4] | 710 [28] |
| 3 | 920 [36.2] | 1010 [39.8] |
| 4 | 1220 [48] | 1310 [51.6] |

- ▶ Use a clamping range between Lmin and Lmax for the installation accessories (dia. 54 mm).
- ▶ Fit suitable hanger bolts and pipe clamps (accessories).
- ▶ Screw the pipe clamps onto the hanger bolts.
- ▶ Mount the tubular light fitting inside the pipe clamps.



24110E00

- ▶ Use the ex-factory anti-fall mechanism.



5.1.2 Dismounting

- ▶ Disconnect the device from the power supply before dismounting.
- ▶ Remove the tubular light fitting from the pipe clamps.


5.2 Installation

5.2.1 Electrical connections

Mains connection

-  The device is delivered with a connection cable.
-  The connection to the power supply must be established using a terminal box or a plug.

Shortening the connection cable


-  **DANGER! Explosion hazard if the cable is shortened too much!**
Non-compliance results in severe or fatal injuries.
 - Do not shorten the cable connected ex-factory to a length of < 1 m.

5.2.2 Light fittings with DALI connection

DALI-2 (according to IEC 62386):

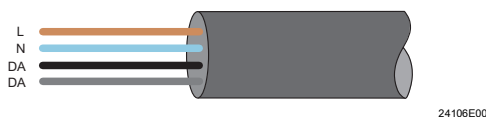
- Device type 6 (LED driver)
- Device type 49 (integrated bus power supply ≤ 50 mA) – sizes 3 and 4 only on request
- Device type 51 (energy report)
- Device type 52 (diagnostics and maintenance)

The operating hours can be determined and the light fitting can be dimmed and switched via a DALI interface.

-  For size 3 and 4 light fittings, it is essential to consider the polarity (DA+, DA-) when connecting to an external DALI network.

Size 1/size 2

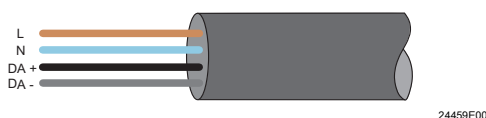
Example: H07RN8-F, 4 x 1.5 mm²



| | |
|------------|---------------------|
| L (brown) | = phase |
| N (blue) | = neutral conductor |
| DA (black) | = DALI bus |
| DA (grey) | = DALI bus |

Size 3/size 4

Example: H07RN8-F, 4 x 1.5 mm²



| | |
|--------------|---------------------|
| L (brown) | = phase |
| N (blue) | = neutral conductor |
| DA + (black) | = DALI bus + |
| DA - (grey) | = DALI bus - |

5.2.3 Light fittings with address module

Function

Address and switching module for R. STAHL emergency lighting systems according to VDE 0108:

The module is used for monitoring individual light fittings and for controlling mains and emergency luminaires together.

The module offers the following functions:

- Controlling the light fitting (ON/OFF) and calling up the function
- Up to 20 addresses can be configured for each electrical circuit by means of software
- Freely programmable type of connection (continuous light, stand-by light or switched light of the light fitting)
- Mixed operation within a circuit is possible

Addressing

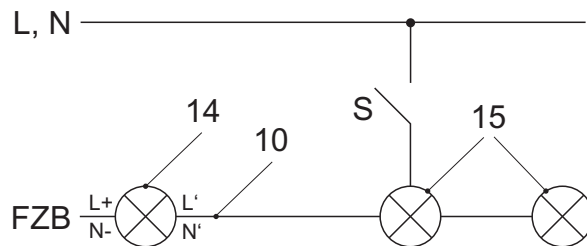
Each light fitting with an integrated address module also has a unique serial number.

This serial number is on the light fitting itself and can also be recorded with a QR code scanner. The light fitting address is assigned using the configuration software for the central battery unit or with a programming device available as an accessory.

Control input

Rated voltage: 220 to 240 V AC/DC, 50 Hz

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



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

19025E00

Example: H07RN8-F, 4 x 1.5 mm²



24107E00

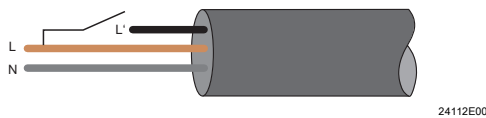
| | |
|------------|---------------------|
| L (brown) | = phase |
| N (blue) | = neutral conductor |
| L' (black) | = control line |
| N' (grey) | = control line |

5.2.4 Light fittings with L' function (switchable light reduction)

To reduce the luminous intensity, the light fitting can optionally be equipped with a switching phase.

| | Switch closed | Switch open |
|--------------------|---------------|-------------|
| Luminous intensity | 100% | 50% |

Example: H07RN8-F, 3 x 1.5 mm²



L' (black) = switching phase
 L (brown) = phase
 N (grey) = neutral conductor

6 Commissioning

Before commissioning, carry out the following checks:

- ▶ Check the mounting and installation.
- ▶ Check the device for damage.
- ▶ Remove any foreign objects.
- ▶ Check whether the light fitting is securely installed.
- ▶ Check whether the line voltage and the rated operational voltage are the same.
- ▶ Check whether the light fitting in the hazardous area is being operated with both of the original cover caps fitted.
- ▶ Check whether the connection cable is undamaged and is attached correctly and securely.
- ▶ Put the device into operation according to the applicable national regulations and the safety notes in these operating instructions ("Safety" chapter).

7 Maintenance, overhaul, repair

- ▶ Observe the relevant national standards and regulations in the country of use, e.g. IEC/EN 60079-14, IEC/EN 60079-17, IEC/EN 60079-19.

7.1 Maintenance

Check the following points in addition to the national regulations:

- Whether the device has cracks or other visible signs of damage
- Whether the interior and exterior of the device are clean
- Whether the cables and electrical lines show signs of ageing and damage
- Whether the device is used as intended and functions properly

7.2 Maintenance

- ▶ Perform overhaul of the device according to the applicable national regulations and the safety notes in these operating instructions ("Safety" chapter).

7.3 Repair

- ▶ Repair work on the device must be performed only by R. STAHL.

8 Operation

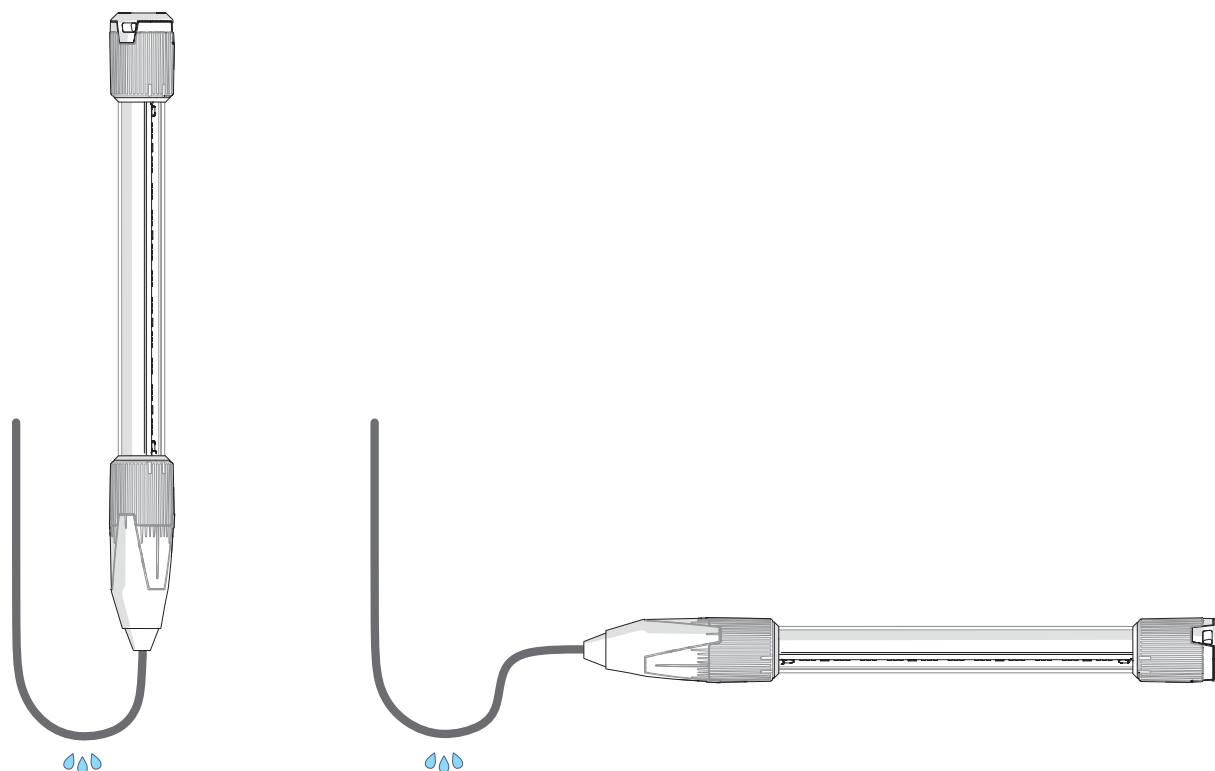
The functionality and safety of the device must be ensured at all times during operation.



DANGER! Explosion hazard due to short circuit caused by moisture ingress!

Non-compliance results in severe or fatal injuries.

- ▶ Ensure that cable entries are only located on the side or underside of the device (not on the top).



24109E00

9 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

- ▶ Switch off the device before cleaning it.
- ▶ Check the device for damage before and after cleaning it.
Decommission damaged devices immediately.
- ▶ 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.

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 the cover cap on the cable side and unscrew the light fitting.
 - Disconnect the cables from the LED PCB and control gear.
 - Remove the control gear from the aluminium profile.
 - LED PCB: Release the barbs using suitable pliers (turn 90°) and pull the PCB upwards to remove it..

12 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 (see data sheet).

13 Appendix A

13.1 Technical data

Explosion protection

Global (IECEX)

| | |
|----------------------|---|
| Gas, dust and mining | IECEX EPS 13.0027 Ex db op is IIC T* Gb Ex tb IIIC T* °C Db Ex db op is I Mb * For temperature classes and surface temperatures, see the technical data |
|----------------------|---|

Europe (ATEX, UKEX)

| | |
|----------------------|--|
| Gas, dust and mining | EPS 13 ATEX 1 597, EPS 22UKEX 1400 ⊕ II 2 G Ex db op is IIC T* Gb ⊕ II 2 D Ex tb IIIC T* °C Db ⊕ I M 2 Ex db op is I Mb * For temperature classes and surface temperatures, see the technical data |
|----------------------|--|

Certifications and certificates

| | |
|----------------|---|
| Certifications | IECEX, ATEX, UKEX; for other certificates, see r-stahl.com |
|----------------|---|

Technical data

Electrical data

| | | | | | |
|---------------------------|--|---|---------------|---------------|---------------|
| Rated operational voltage | Standard + DALI Size 1, size 2, size 3, size 4 | with address module Size 2, size 3, size 4 | | | |
| | 100 to 277 V AC, 50 to 60 Hz | 220 to 240 V AC, 50 Hz | | | |
| | 190 to 250 V DC | 194 to 250 V DC | | | |
| Rated operational current | | Size 1 | Size 2 | Size 3 | Size 4 |
| | 230 V; 50 Hz | 60 mA | 110 mA | 170 mA | 220 mA |
| | 110 V; 60 Hz | 120 mA | 240 mA | 360 mA | 510 mA |
| | 277 V; 60 Hz | 60 mA | 100 mA | 160 mA | 210 mA |
| Start-up current | $I_{\text{peak}} = 0.33 \text{ A}; \Delta t = 11 \text{ ms}$ | | | | |
| | Maximum number of light fittings per miniature circuit breaker ¹⁾ | | | | |
| | Type | 10 A | 16 A | 20 A | 25 A |
| | B, C, K | 26 | 42 | 53 | 66 |
| | 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 1 | Size 2 | Size 3 | Size 4 |
| | 230 V; 50 Hz | ≥ 0.90 | ≥ 0.95 | ≥ 0.90 | ≥ 0.92 |
| | 110 V; 60 Hz | ≥ 0.98 | ≥ 0.98 | ≥ 0.98 | ≥ 0.98 |
| | 277 V; 60 Hz | ≥ 0.86 | ≥ 0.92 | ≥ 0.81 | ≥ 0.86 |
| Typical power consumption | White tones | | | | |
| | | Size 1 | Size 2 | Size 3 | Size 4 |
| | 230 V; 50 Hz | 13 W | 25 W | 36 W | 48 W |
| Class THD | II | | | | |
| | | Size 1 | Size 2 | Size 3 | Size 4 |
| | 230 V; 50 Hz | ≤ 20% | ≤ 12% | ≤ 12% | ≤ 12% |
| | 110 V; 50 Hz | ≤ 15% | ≤ 10% | ≤ 10% | ≤ 10% |
| | 277 V; 60 Hz | ≤ 20% | ≤ 15% | ≤ 15% | ≤ 15% |

Technical data**Luminous characteristics**

| | | | | |
|---------------------------|--|---------------|---------------|---------------|
| Colour rendering | 2700 K, 4000 K and 6500 K: $R_a \geq 90$ 5000 K: $R_a \geq 80$ | | | |
| Colour temperature | Depending on the variant, 2,700 K (warm white), 4,000 K (warm neutral white), 5,000 K (standard light colour, neutral white) or 6,500 K (daylight white) | | | |
| Luminous flux | Size 1 | Size 2 | Size 3 | Size 4 |
| | with diffuser | | | |
| | with 20° optics | | | |
| Colour temperature | | | | |
| 2700 K | | | | |
| Luminous flux [lm] | 1260 | 2530 | 3790 | 5060 |
| Luminaire efficacy [lm/W] | 96 | 105 | 105 | 108 |
| 4000 K | | | | |
| Luminous flux [lm] | 1350 | 2700 | 4050 | 5400 |
| Luminaire efficacy [lm/W] | 104 | 113 | 113 | 115 |
| 5000 K | | | | |
| Luminous flux [lm] | 1510 | 3050 | 4620 | 6040 |
| Luminaire efficacy [lm/W] | 116 | 127 | 128 | 128 |
| 6500 K | | | | |
| Luminous flux [lm] | 1350 | 2700 | 4050 | 5400 |
| Luminaire efficacy [lm/W] | 104 | 113 | 113 | 115 |
| PC yellow | | | | |
| Luminous flux [lm] | 1210 | 2430 | 3720 | 4950 |
| Luminaire efficacy [lm/W] | 93 | 101 | 103 | 105 |
| Monochromatic yellow | | | | |
| Luminous flux [lm] | 350 | 710 | 1070 | 1430 |
| Luminaire efficacy [lm/W] | 35 | 37 | 38 | 39 |
| Green | | | | |
| Luminous flux [lm] | 1110 | 2240 | 3370 | 4490 |
| Luminaire efficacy [lm/W] | 85 | 93 | 94 | 96 |
| Red | | | | |
| Luminous flux [lm] | 430 | 860 | 1290 | 1720 |
| Luminaire efficacy [lm/W] | 43 | 48 | 48 | 49 |
| Blue | | | | |
| Luminous flux [lm] | 510 | 1020 | 1530 | 2040 |
| Luminaire efficacy [lm/W] | 39 | 43 | 44 | 44 |

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

Application example: Lighting of work areas

Technical data

Luminous flux

| | Size 1 | Size 2 | Size 3 | Size 4 |
|---------------------------|---------------------|--------|--------|--------|
| | with batwing optics | | | |
| Colour temperature | | | | |
| 2700 K | | | | |
| Luminous flux [lm] | 1200 | 2410 | 3610 | 4820 |
| Luminaire efficacy [lm/W] | 92 | 100 | 100 | 103 |
| 4000 K | | | | |
| Luminous flux [lm] | 1290 | 2580 | 3870 | 5160 |
| Luminaire efficacy [lm/W] | 99 | 108 | 108 | 110 |
| 5000 K | | | | |
| Luminous flux [lm] | 1450 | 2940 | 4400 | 5760 |
| Luminaire efficacy [lm/W] | 112 | 123 | 122 | 123 |
| 6500 K | | | | |
| Luminous flux [lm] | 1290 | 2580 | 3870 | 5160 |
| Luminaire efficacy [lm/W] | 99 | 108 | 108 | 110 |
| PC yellow | | | | |
| Luminous flux [lm] | 1160 | 2330 | 3560 | 4750 |
| Luminaire efficacy [lm/W] | 89 | 97 | 99 | 101 |
| Monochromatic yellow | | | | |
| Luminous flux [lm] | 330 | 680 | 1030 | 1360 |
| Luminaire efficacy [lm/W] | 33 | 36 | 37 | 37 |
| Green | | | | |
| Luminous flux [lm] | 1070 | 2140 | 3210 | 4280 |
| Luminaire efficacy [lm/W] | 82 | 89 | 89 | 91 |
| Red | | | | |
| Luminous flux [lm] | 410 | 820 | 1230 | 1640 |
| Luminaire efficacy [lm/W] | 41 | 46 | 46 | 47 |
| Blue | | | | |
| Luminous flux [lm] | 480 | 970 | 1450 | 1940 |
| Luminaire efficacy [lm/W] | 37 | 40 | 41 | 42 |

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

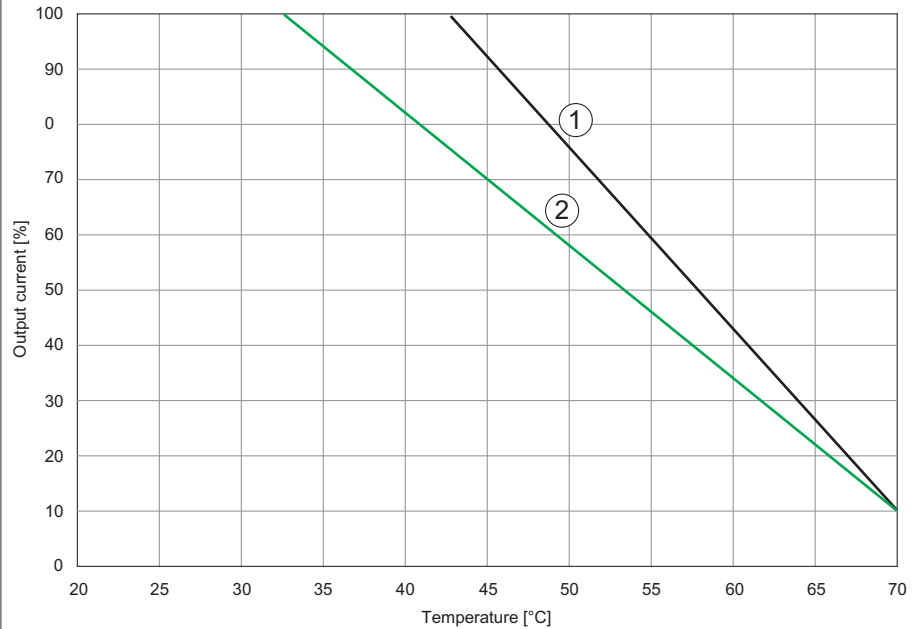
Application example: Lighting of work areas

Technical data

Energy efficiency class of the light source
Luminous flux decline

The device contains a light source in energy efficiency class D ($R_a \geq 80$, 5000 K) or E ($R_a \geq 90$, 2700 K, 4000 K, 6500 K).
(according to the Regulation with regard to energy labelling of light sources)

- during DC operation to 50%
- at ambient temperature



24111E0200

- 1: All white tones, size 1 to 4
2: All colours, size 1 to 4

Ambient conditions

Temperature class, max. surface temperature

| Variant | Temperature class | Surface temperature |
|-----------|-------------------|---------------------|
| 6036/3 T4 | T4 | 100 °C |
| 6036/3 T6 | T6 | 80 °C |

Technical data

| Functional ambient temperature range | Cable | Variant T4 | Variant T6 | | | |
|--------------------------------------|---|------------------------|---------------|-----------------------|------------|------------|
| | H07RN8-F; 2 x 1.5 mm ² | -55 to +70 °C | -55 to +50 °C | | | |
| | H07RN8-F; 3 x 1.5 mm ² (for L') | -55 to +70 °C | -55 to +50 °C | | | |
| | H07RN8-F; 4 x 1.5 mm ² (for DALI or address module) | -55 to +70 °C | -55 to +50 °C | | | |
| | HXSLHXÖ; 2 x 1.5 mm ² | -40 to +70 °C | -40 to +50 °C | | | |
| | RCO 52261; 2 x 1.5 mm ² | -55 to +70 °C | -55 to +50 °C | | | |
| | BFOU P5-P12; 2 x 1.5 mm ² | -52 to +70 °C | -52 to +50 °C | | | |
| | (N)SSHÖU; 2 x 1.5 mm ² | -45 to +70 °C | -45 to +50 °C | | | |
| | RADOX, MFH-S B; 2 x 1.5 mm ² | -50 to +70 °C | -50 to +50 °C | | | |
| | Data applies to fixed cables. (-40 °C for use in mines susceptible to firedamp) | | | | | |
| | The light fitting must be switched on above -40 °C. | | | | | |
| Storage | -40 to +70 °C (max. storage duration 12 months) | | | | | |
| Service life | | | | | | |
| LED | | White tones, red | PC yellow | Mono-chromatic yellow | Green | Blue |
| | L ₉₀ B ₅₀ at T _a max | > 100,000 h | > 33,000 h | > 43,000 h | > 30,000 h | > 86,000 h |
| | L _x B _y At the end of the service life: | | | | | |
| | <ul style="list-style-type: none"> Luminous flux declines to "x" percent Up to "y" percent of all luminaires do not reach "x" | | | | | |
| Control gear | | T _a ≤ 70 °C | | | | |
| | C ₁₀ | ≥ 100,000 h | | | | |
| | C ₁₀ = failure rate 10% | | | | | |

Technical data**Mechanical data**

| | |
|------------------------------|---|
| Degree of protection | IP66/IP67 IP68 (10 m/1 h) acc. to IEC 60598 |
| Impact strength (IK code) | IK10 (IEC 62262) |
| Material | |
| Enclosure tube | Polycarbonate |
| Enclosure caps | Polycarbonate/TPE |
| Notice | The light fitting is silicone-free. |

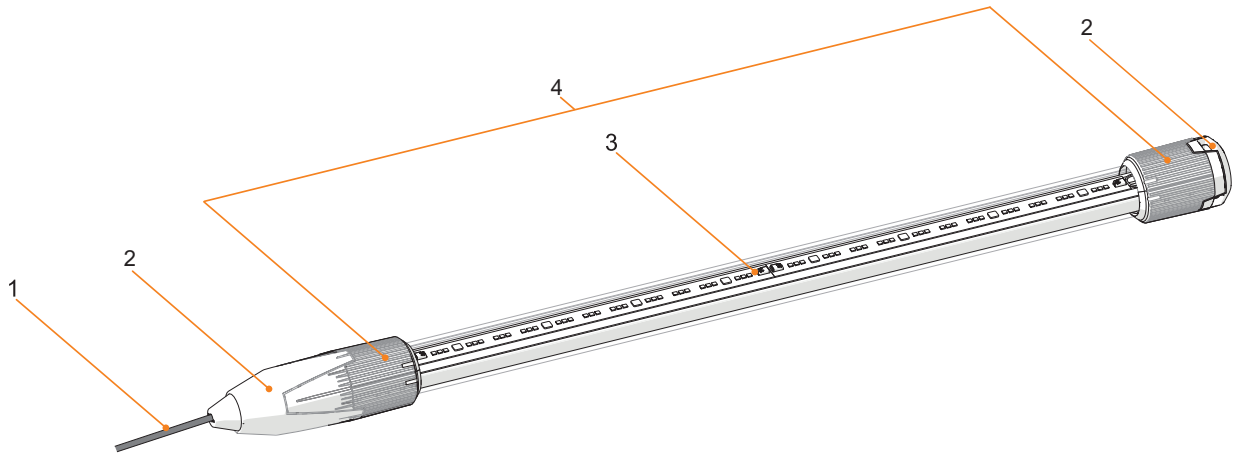
Mounting/installation

| | | |
|------------------|---|---|
| Connection cable | The connection cable must be laid securely. | |
| | Designation | Application |
| | H07RN8-F | Standard, environment with a very high level of humidity, mixed water, groundwater, seawater, suitable for open-pit mines, certified for use in hazardous areas |
| | HXSLHXÖ | Increased flame resistance, halogen-free, acid-resistant |
| | RCO 52261 | Special applications, shielded cable |
| | BFOU P5-P12 | Increased flame resistance, offshore, slurry, drilling and cleaning fluids |
| | (N)SSHÖU | Voltage-proof up to 1 kV, mining |
| | RADOX, MFH-S B | Offshore, marine, halogen-free |
| Cable entry | - CMP-20sA2F KLE MsNi M20 (installed ex-factory) or - CMP-25sA2F KLE MsNi M25 (installed ex-factory) | |
| Mounting | Fastening options: | |
| | Pipe clamp: | Rubber-coated, clamping range dia. 54 mm |
| | Double pipe clamp: | Made from plastic for mounting on pipes with a diameter of 54 mm (screws and nuts made from stainless steel V2A) |

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

14 Appendix B

14.1 Device design

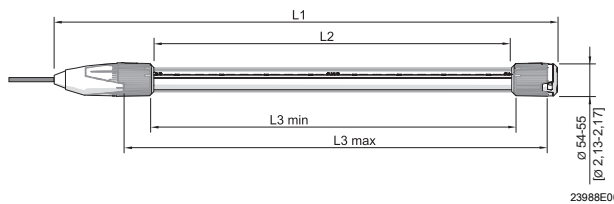


23993E00

| # | Device element |
|---|------------------------------------|
| 1 | Connection cable |
| 2 | Cover caps |
| 3 | Polycarbonate tube with LED insert |
| 4 | Mounting surfaces |

14.2 Dimensions/fastening dimensions

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



| | L1 | L2 | L3min | L3max |
|--------|-----------------|-----------------|-----------------|-----------------|
| Size 1 | 550 [21.65] | 305 [12.00] | 320 [12.60] | 410 [16.10] |
| Size 2 | 850 [33.46] | 605 [23.82] | 620 [24.40] | 710 [28.00] |
| Size 3 | 1150 [45.28] | 905 [35.63] | 920 [36.20] | 1010 [39.80] |
| Size 4 | 1450 [57.09] | 1205 [47.44] | 1220 [48.00] | 1310 [51.60] |

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: **Rohrleuchte**
that the product: *Tubular light fitting*
que le produit: *Appareil d'éclairage tubulaire*

Typ(en), type(s), type(s): **6036/.**

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

| Richtlinie(n) / Directive(s) / Directive(s) | | Norm(en) / Standard(s) / Norme(s) |
|--|--|--|
| 2014/34/EU 2014/34/EU 2014/34/UE (OJ L 96, 29/03/2014, p. 309–356) | ATEX-Richtlinie <i>ATEX Directive</i> <i>Directive ATEX</i> | EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-28:2015 EN 60079-31:2014 |
| Kennzeichnung, marking, marquage: | |  II 2 G Ex db op is IIC T6/T4 Gb II 2 D Ex tb IIIC T80 °C/T100 °C Db I M2 Ex db op is I Mb  0158 |
| EU Baumusterprüfbescheinigung: <i>EU Type Examination Certificate:</i> <i>Attestation d'examen UE de type:</i> | | EPS 13 ATEX 1597 (Bureau Veritas Consumer Products Services Germany GmbH, Businesspark A96, 86842 Tuerkheim, Gemany, NB 2004) |
| Produktnormen nach Niederspannungsrichtlinie: <i>Product standards according to Low Voltage Directive:</i> <i>Normes des produit pour la Directive Basse Tension:</i> | | EN IEC 60598-1:2021+A11:2022 EN IEC 60598-2-22:2022 EN 62471:2008 |
| 2014/30/EU 2014/30/EU 2014/30/UE (OJ L 96, 29/03/2014, p. 79–106) | EMV-Richtlinie <i>EMC Directive</i> <i>Directive CEM</i> | EN 61547:2009 EN IEC 55015:2019+A11:2020 EN 61000-3-2:2014 EN 61000-3-3:2013 |
| 2011/65/EU & (EU) 2015/863 RoHS-Richtlinien <i>2011/65/EU & (EU) 2015/863 RoHS Directives</i> <i>2011/65/UE & (UE) 2015/863 Directives RoHS</i> (OJ L 174, 1/07/2011, p. 88–110 & OJ L 137, 04/06/2015, p. 10-12) | | EN IEC 63000:2018 |

Unterzeichnet für und im Namen von: / signed for and on behalf of: / signé pour et au nom de:

R. STAHL Schaltgeräte GmbH

Waldenburg, 2023-09-06

Ort und Datum
Place and date
Lieu et date

Steffen Holtz
Leiter Entwicklung Leuchten und Signalgeräte
Director R&D Lighting and Signalling
Directeur R&D Eclairage & Appareils de signalisation

Daniel Groth
Leiter Qualitätsmanagement Systeme
Director Quality Management Systems
Directeur Systèmes de Management de la 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, Gorse Lane, Coleshill • Birmingham B46 1JU, UK
 declares in its sole responsibility, erklärt in alleiniger Verantwortung,



that the product: **Tubular light fitting**
 dass das Produkt: **Rohrleuchte**

Type(s), Typ(en): **6036/.**

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 <i>S.I. 2016/1107 Verordnung für Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen</i> | EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-28:2015 EN 60079-31:2014 |

Marking, Kennzeichnung:

 II 2 G Ex db op is IIC T6/T4 Gb
 II 2 D Ex tb IIIC T80 °C/T100 °C Db 
 I M2 Ex db op is I Mb

UK Type Examination Certificate:
 UK-Baumusterprüfbescheinigung:

EPS 23 UKEX 1400
 (Bureau Veritas Consumer Products Services UK Ltd, 31 Kingsland Grange, Woolston, Warrington, WA1 4RW, UK, AB8507)

| | |
|--|---|
| Product standards according to S.I. 2016/1101 Electrical Equipment (Safety) Regulation <i>Produktnormen nach S.I. 2016/1101 (Sicherheits-) Verordnung für elektronische Geräte</i> | EN IEC 60598-1:2021+A11:2022 EN IEC 60598-2-22:2022 EN 62471:2008 |
| S.I. 2016/1091 EMC Regulations <i>S.I. 2016/1091 EMV-Verordnung</i> | EN 61547:2009 EN IEC 55015:2019+A11:2020 EN 61000-3-2:2014 EN 61000-3-3:2013 |
| S.I. 2012/3032 RoHS Regulations <i>S.I. 2012/3032 RoHS-Verordnung</i> | EN IEC 63000:2018 |

Waldenburg, 2023-09-05

Place and date
 Ort und Datum

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

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