Operating Instructions

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Explosion-proof LED-Handlamp

ExSPECT

Series e9310



The safety of people and equipment in hazardous areas depends on the observance of all safety standards. Exact knowledge about all applicable regulations and standards is mandatory for installation maintenance and repair of explosion proof equipment, especially

- the determinations of IEC/EN 60079-14 and IEC/EN 60079-17 for maintenance of explosion-proof appliances
- the generally accepted rules of the technical side
- the national rules for prevention of accidents and for safety standards
- the safety instructions of these operating instructions
- the characteristic data on the type plate and the instruction plates

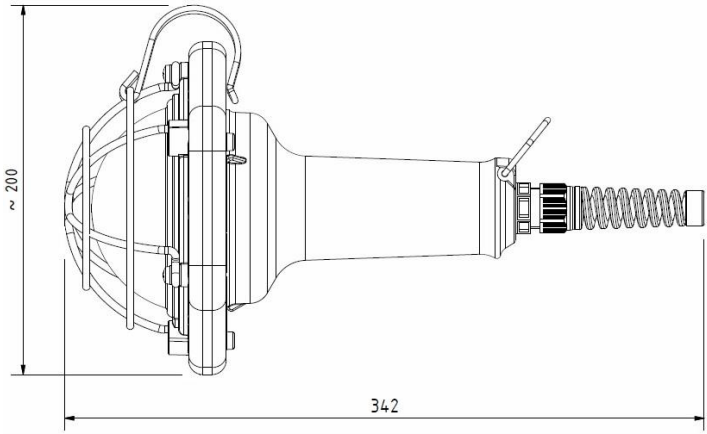
1. Safety Instructions

- Mounting and installation must be done in accordance with the respective regulations.
- The light fitting must be protected against overvoltage, overcurrent, short circuits and other electrical failures.
- The light fitting must be operated in an undamaged condition only.
- Any inappropriate use of the light fitting (e.g. holding or lowering the light fitting on the connection cable) is not allowed.
- The operation of the light fitting is allowed within its assessment thresholds only.
- In regard to the minimum and maximum admissible ambient temperature potential sources of cold and heat (e.g. direct heat or solar radiation, cooling units) have to be considered.
- If the light fitting is subject to particular stresses - chemical, mechanical, thermal and electrical, as well as vibrations or moisture - prior consultation with Adolf Schuch GmbH is required.
- Every structural modification will cause dangerous situations and consequently the certification of this light fitting will be null and void.
- **The light fitting is not allowed to be used in process areas where strong electrical fields may occur (i.e. HV Sparkling Electrodes or Particle Streams). Reason is to avoid any electrostatic charge of the light fitting itself.**
- Replace damaged parts by original spare parts from the Adolf Schuch GmbH only.
- The LED-module with integrated control gear of this light fitting must be replaced by A. Schuch GmbH, by a service technician who is instructed from Schuch or by any other person with equivalent qualification only.

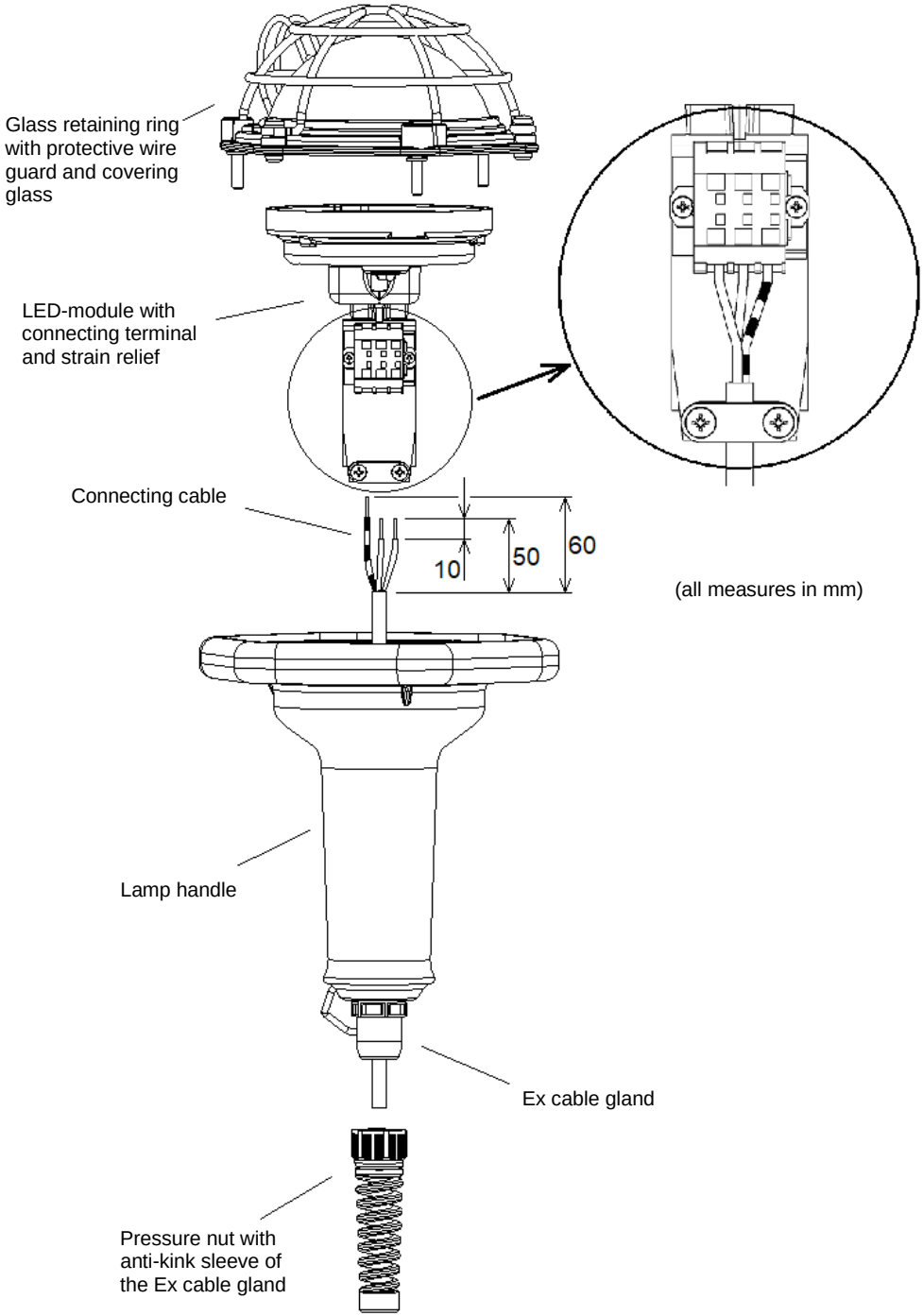
2. Operating Advice

- Any application of the light fitting that is incorrect or even forbidden will lead to the fact that the manufacturer's warranty is lost.
- LED are sensitive electronic components. Please ensure that the LED-module is protected against mechanical and electrostatic attacks whenever the light fitting is open.
- Due to harmful gases and other corrosive substances (e.g. ammoniac, sulphur- or chlorine compounds) it may come to damages of the LEDs. Depending on the substance, the concentration, the temperature and the dwell time, damages up to total black-out are possible. This may occur also to fittings with high degree of protection. The suitability of the light fitting for the respective application can only be checked by running a test at site.

3. Technical Data

Series:	e9310 Explosion-proof LED hand lamp for operating in hazardous areas of zones 1, 2, 21 and 22.
Explosion protection:	Ⓔx II 2 G Ex eb mb op is IIC T4 Gb Ⓔx II 2 D Ex op is tb IIIC T80°C Db
Certification:	IBExU19ATEX1134 IECEx IBE 19.0028
Rated voltage:	220…240 V AC; 50/60 Hz 198…264 V DC
Power consumption:	ca. 11 W
Isolation class:	I
Ingress protection:	IP66
Ambient temperatur:	-25 °C ... +40 °C
Energy efficiency class:	This light fitting contains a light source of the energy efficiency class: G
Dimensions: (all measures in mm)	
Operation position:	in any direction
Connection cable:	Acc. to IEC 60079-14: Three-conducter connection cable with cable sheath made from heavy polychloroprene or of any other equal, robust structure. The connection cable must stand the expected mechanical, chemical and thermal influences. Diameter: 7 mm to 12 mm
Cable entry:	Ex cable gland with thread size M20 x 1.5 and bend protection Torques: Connection thread 2.3 Nm; Pressing screw with bend protection 1.5 Nm
Connection per terminal:	Clamping range: 1.0 - 2.5 mm² Required stripping length: 9 - 10 mm

4. Installation



- The safety of this light fitting is only guaranteed as long as it is operated within its assessment threshold. Maintenance must be done in accordance with the respective regulations!
- The connection of the connection cable must be done by an Ex-skilled electrician only!
- In regard to the minimum and maximum admissible ambient temperature potential sources of cold and heat (e.g. direct heat or solar radiation, cooling units) have to be considered!
- The application of this light fitting in an explosive dust atmosphere is depending on the properties of the surrounding dust. Please ensure that there will be an adequate difference between the maximum surface temperature of the fitting and the glowing and the ignition temperature of the respective dust!

4.1 How to open the light fitting

- It is allowed to open the light fitting only when it is de-energized!

– loose the fastening screws of the glass retaining ring.

– remove the glass retaining ring with protective wire guard and the covering glass.

4.2 Electrical connection

– Pull the LED-module with connecting terminal and strain relief out of the lamp handle and firstly put it aside.

– Screw the Ex cabel gland with anti-kink sleeve in the lamp handle (torque connecting thread sea section 3, Technical Data).

– Pass the connecting cable through the clamps of the strain relief.

– Connect the conductors of the connecting cable to the connection terminals on the LED module as per marking.
To do this, insert a small screwdriver (3.5 x 0.5 mm blade) into the front upper opening of the terminal. By pressing the screwdriver on the spring in the opening of the terminal, the terminal opens and the conductor can be inserted laterally into the terminal.

- The conductors must not be damaged when skinning the cable!
- When stripping the cable special attention needs to be paid to the correct length of the conductor end sections (see section 3, Technical Data)!
- It is important to ensure that the bare conductor is fully inserted into the terminal and that no cable insulation is clamped!

– Tighten the clamp of the strain relief.

– Plug the LED-module into the lamp handle. Make sure that the bases in the LED module are located in the slots of the lamp handle.

– Tighten the pressure nut of the anti-kink sleeve of the Ex cable gland (Torque see section 3, Technical Data).

4.3 Replacing the LED-module

The replacement of the LED-module is described in a separate manual which is included to the spare part delivery.

4.4 How to close the light fitting

- Place the glass retaining ring with protective wire guard and covering glass on the lamp handle.
- Screw tightly the glass retaining ring with the fixing screws on the lamp handle (torque?).

5. Commissioning

Before commissioning this explosion-proof lighting fitting please check and ensure that:

- the connection cable is able to stand the expected mechanical, chemical and thermal influences.
- the electrical connection of the connecting cable has been carried out correctly.
- the strain relief is effective.
- the connecting cable is properly sealed by the Ex cabel gland with anti-kink sleeve.
- the hand lamp is properly closed by the fixing screws of the glass retaining ring.
- the covering glass is pressed firmly through the glass retaining ring on the lamp handle and seals it properly.
- the light fitting is not damaged whatsoever.

6. Maintenance

6.1 Repair- and maintenance works



- The light fitting may only be opened if it has been disconnected from the mains supply completely!
- Working on the light fitting must be carried out if no hazardous atmosphere is present!
- Replace damaged parts by original spare parts from the Adolf Schuch GmbH only!

6.2 Cleaning the light fitting



- If possible the light fitting shall be cleaned with water only. When using any kind of cleaning agent make sure that there is no damaging influence at all!

Pay attention to the following in case of application of this light fitting in dusty atmospheres:
Dust deposits show heat-insulating properties and thus reduce the service life of the light fitting. It is necessary to clean the fitting from dust regularly. In case the dust layer may be higher than 5 mm it must be ensured that the surface temperature of the light fitting does not exceed the maximum permissible surface temperature of the specific dust considering the thickness of the dust layer. The dust layer must not exceed 50 mm at any time.

6.3 Regular maintenance work



- Follow the instructions of section 6.1!

Explosion-proof light fittings need regular maintenance according to the national rules of the country they are installed. Especially components which are important for the Explosion Category have to be carefully checked. Therefore it must to be checked very carefully:

- covering glass, lamp handle and connection cable for any kind of damages.
- that the connecting cable is sealed by the Ex cable gland with anti-kink sleeve in the lamp handle.
- all parts of plastic inside the light fitting to attend to colour change, deformation and damaging.
- that the hand lamp is properly and tightly closed by the fastening screws of the glass retaining ring.

EU-Konformitätserklärung
EU-Declaration of Conformity
Déclaration UE de Conformité

SCHUCH

Bezeichnung des Betriebsmittels Name of product Nom du produit	e 9310...
Beschreibung des Betriebsmittels Description of product Description du produit	Explosionsgeschützte Leuchte Explosion-proof luminaire Luminaire antidéflagrant
EG/EU-Baumusterprüfbescheinigung EC/EU type examination certificate Attestation d'examen CE/UE de type	IBExU 19 ATEX 1134 IBExU - Institut für Sicherheitstechnik GmbH (0637) Fuchsmühlenweg 7, D-09599 Freiberg
Relevante EU-Richtlinie Relevant EU directive Directive UE importante	2014/34/EU ATEX-Richtlinie (ABL L 96 29.03.2014 S. 309) 2014/34/EU ATEX Directive (OJ L 96 29.03.2014 S. 309) 2014/34/UE Directive ATEX (JOUE L 96 29.03.2014 S. 309)
Angewandte Normen Applied standards Normes appliquées	EN IEC 60079-0:2018/AC:2020-02, EN IEC 60079-7:2015+A1:2018, EN 60079-28:2015, EN 60079-31:2014 EN 60598-1:2015+A1:2018, EN 60598-2-8:2013
Relevante EU-Richtlinie Relevant EU directive Directive UE importante	2014/30/EU EMV-Richtlinie (ABL L 96 29.03.2014 S. 79) 2014/30/EU Electromagnetic compatibility (OJ L 96 29.03.2014 S. 79) 2014/30/UE Compatibilité électromagnétique (JOUE L 96 29.03.2014 S. 79)
Angewandte Normen Applied standards Normes appliquées	EN IEC 55015:2019+A11:2020, EN IEC 61000-3-2:2019+A1:2021-04, EN 61000-3-3:2013+A1:2019, EN 61547:2009
Relevante EU-Richtlinie Relevant EU directive Directive UE importante	2011/65/EU RoHS-Richtlinie (ABL L 174 01.07.2011 S. 88) 2011/65/EU RoHS-Directive (OJ L 174 01.07.2011 S. 88) 2011/65/UE Directive RoHS (JOUE L 174 01.07.2011 S. 88)
Angewandte Normen Applied standards Normes appliquées	EN IEC 63000:2018

Hiermit erklären wir in alleiniger Verantwortung, dass das oben aufgeführte Produkt mit den Anforderungen der angegebenen Richtlinien und Normen übereinstimmt.
We hereby declare in our sole responsibility that the product above complies with the requirements of the specified directives and standards.
Nous déclarons de notre seule responsabilité que le produit mentionné ci-dessus est conforme aux exigences des directives et des normes indiquées.

Adolf Schuch GmbH - Mainzer Str. 172, 67547 Worms, GERMANY

Worms, 17.02.2022
Ort und Datum
Place and date
Lieu et date

ppa. Prof. Dr. Bruno Weis
Technischer Leiter
Technical Director
Directeur de technique

IBExU 19 ATEX 1134-02/SB-00

The test certificates are ready to be loaded down from our homepage - www.schuch.de - or we shall send it on request.

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