



[1] **EU-TYPE EXAMINATION CERTIFICATE - Translation**

[2] Equipment or protective systems
intended for use in potentially explosive atmospheres, Directive 2014/34/EU

[3] EU-type examination certificate number **IBExU17ATEX1048 X** | Issue 0

[4] Product: **Helmet light**
Type: KS-6800

[5] Manufacturer: KSE-Lights GmbH

[6] Address: Thüngenfeld 8
58256 Ennepetal
GERMANY

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, notified body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.



The examination and test results are recorded in the confidential test report IB-16-3-063.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:
EN 60079-0:2012+A11:2013 EN 60079-11:2012 EN 60079-28:2015
except in respect of those requirements listed at item [18] of the schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

[11] This EU-type examination certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the following:

 **II 1G Ex ia op is IIC T4 Ga**
 **II 2D Ex ia op is IIIC T130°C Db**
-20 °C ≤ T_a ≤ +50 °C

IBExU Institut für Sicherheitstechnik GmbH
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By order

Dipl.-Ing. (FH) A. Henker



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Certificates without signature and seal are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

Freiberg, 2017-04-26

[13] **Schedule**

[14] **Certificate number IBExU17ATEX1048 X | Issue 0**

[15] **Description of product**

The helmet light type KS-6800 is a compact LED light that is intended for use in potentially explosive atmospheres of zone 0 and 21. The light is equipped with the two LED light sources and is powered by an integrated rechargeable Lithium ion cell. In total, there are 4 different illumination modes (area light / distance light, each with low / high intensity) that can be activated one after another by pressing the power button multiple times. The helmet light is implemented in type of protection intrinsic safety "ia" and inherently safe optical radiation "op is". Charging of the Lithium ion cell is performed outside of the explosion hazard area using a special charging device.

Technical data:

- Ambient temperature: -20 °C...+50 °C
- Battery: Lithium ion cell
 - Nominal voltage: 3.7 V
 - Capacity (min./typ.): 1620 mAh / 1700 mAh
- Associated charging device: AC charging adapter
 - Input: 110 V...265 V AC; 150 mA / 5 V DC; 600 mA
 - Output: 6 V DC

[16] **Test report**

The test results are recorded in the confidential test report IB-16-3-063 of 2017-04-26. The test documents are part of the test report and they are listed there.

Summary of the test results

The helmet light type KS-6800 fulfils the requirements of explosion protection for equipment of Group II, Category 1G and 2D, in type of protection intrinsic safety "i" and inherently safe optical radiation "op is" for explosion group IIC and IIIC and temperature class T4 / T130°C.

[17] **Specific conditions of use**

1. The helmet light can be used in an extended ambient temperature range of -20 °C to + 50 °C.
2. The test of resistance to impact in accordance with EN 60079-0, clause 26.4.2 was conducted with reduced impact energy (2 J at light emission window; 4 J at lamp enclosure) for low risk of mechanical danger. Accordingly, the helmet light has to be protected from mechanical hazard. Damaged devices must be deactivated and removed from the explosion hazard area immediately.
3. Charging of the helmet light is only permitted outside of the explosion hazard area with the associated charging device.

[18] **Essential health and safety requirements**

Fulfilled by compliance with the standards listed at item [9]

[19] **Drawings and Documents**

The documents are listed in the test report.

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