



[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 **IBExU20ATEX1130 X** | Issue 0

[4] Product: **Hand light HERO**
Type: KS-8000 and KS-8000-0S

[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-20-3-0053.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:
EN IEC 60079-0:2018 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:

 **I M1 Ex ia op is I + H2 Ma**
 **II 1G Ex ia op is IIC T4 Ga**
 **II 2D Ex ia op is IIC T200°C Db**
-15 °C ≤ T_a ≤ +50 °C

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By order

Dipl.-Ing. (FH) A. Henker



(notified body number 0637)

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, 2020-11-03

[13]

Schedule

[14]

Certificate number IBExU20ATEX1130 X | Issue 0

[15]

Description of product

The hand light HERO type KS-8000 and KS-8000-0S is a LED light that is intended for use in potentially explosive atmospheres of zone 0 and zone 21 as well as in mines susceptible to firedamp. It is equipped with the two LED light sources and is powered by an integrated rechargeable Lithium ion battery. The hand light is implemented in type of protection intrinsic safety "ia" and inherently safe optical radiation "op is", and provides several illumination modes (distance / area light with flashlight function) that can be activated one after another by pressing the power button multiple times. Charging of the battery is performed outside the explosion hazard area using a special charging adapter. The charging process is wireless using inductive energy transfer.

Technical data:

- Ambient temperature	-15 °C...+50 °C
- Battery	2x Lithium ion cell
▪ Nominal voltage	3.7 V
▪ Capacity (min./typ.)	2x 1620 mAh / 1700 mAh
- Associated charging adapter	HERO Charger (for inductive charging)
▪ Transmitter	Transmitter module (in charging adapter)
○ Rated input voltage	4.75 V DC...9.5 V DC
○ Rated input current	up to 2 A
○ Maximum input voltage (U_m)	15 V
○ Transmitter coil	6.5 μ H \pm 10 % at 100 kHz (approx. 10 turns)
○ Output:	up to 10 W transmission power
▪ Receiver	Receiver module (in hand light)
○ Input	\leq 10 W reception power
○ Receiver coil	8.2 μ H \pm 10 % at 100 kHz (approx. 12 turns)
○ Nominal output voltage	6 V DC
○ Rated output current	up to 1 A

[16] Test report

The test results are recorded in the confidential test report IB-20-3-0053 of 2020-10-30. The test documents are part of the test report and they are listed there.

Summary of the test results

The hand light HERO type KS-8000 and KS-8000-0S complies with the requirements of explosion protection for equipment of Group I, Category M1, as well as Group II, Category 1G and 2D, in type of protection intrinsic safety "i" and inherently safe optical radiation "op is" for explosive atmospheres of Group I + H2, Group IIC - temperature class T4 and Group IIIC - maximum surface temperature T200°C.

[17] Specific conditions of use

1. The light-transmitting protective cover of the hand light must not be covered.
2. Charging of the hand light is only permitted outside of the explosion hazard area with the associated charging adapter at an ambient temperature range of 0 °C...+35 °C.
3. The maximum input voltage (U_m) of the charging adapter shall not be greater than 15 V. This voltage may be provided by one of the following means in accordance with IEC 60079-14:
 - where U_m does not exceed 50 V AC or 120 V DC, in a SELV or PELV system
 - via a safety isolating transformer complying with the requirements of IEC 61558-2-6 or a technically equivalent standard

- directly connected to apparatus complying with the IEC 60950 series, IEC 61010-1 or a technically equivalent standard
- fed directly from cells or batteries

[18] Essential health and safety requirements

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report:

None

[19] Drawings and Documents

The documents are listed in the test report.

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By order



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Freiberg, 2020-11-03

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