



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: **IECEX IBE 20.0032X** Page 1 of 3 [Certificate history:](#)  
Status: **Current** Issue No: 0  
Date of Issue: 2020-11-03  
Applicant: **KSE-LIGHTS GmbH**  
Thüngenfeld 8  
58256 Ennepetal  
Germany  
Equipment: **Hand light HERO type KS-8000 and KS-8000-0S**  
Optional accessory:  
Type of Protection: **Intrinsic safety "i" and inherently safe optical radiation "op is"**  
Marking: **Ex ia op is I + H2 Ma**  
**Ex ia op is IIC T4 Ga**  
**Ex ia op is IIIC T200°C Db**  
**-15 °C ≤ Ta ≤ +50 °C**

Approved for issue on behalf of the IECEx  
Certification Body:

Alexander Henker

Position:

Deputy Head of department Certification Body

Signature:  
(for printed version)

Date:

2020-11-03

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Certificate issued by:

**IBExU Institut für Sicherheitstechnik GmbH**  
Fuchsmühlenweg 7  
09599 Freiberg  
Germany





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Page 2 of 3

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Manufacturer: **KSE-Lights GmbH**  
Thüngenfeld 8  
58256 Ennepetal  
**Germany**

Additional  
manufacturing  
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

#### STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

**IEC 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

**IEC 60079-28:2015** Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation  
Edition:2

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

#### TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[DE/IBE/ExTR20.0037/00](#)

Quality Assessment Report:

[DE/BVS/QAR17.0001/03](#)



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Page 3 of 3

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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

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, which are 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	2 x Lithium ion cell
Nominal voltage	3.7 V
Capacity (min./typ.)	2 x 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 $\mu$ 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 $\mu$ H $\pm$ 10 % at 100 kHz (approx. 12 turns)
Nominal output voltage	6 V DC
Rated output current	up to 1 A

## SPECIFIC CONDITIONS OF USE: YES as shown below:

The light-transmitting protective cover of the hand light must not be covered.

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.

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