

IBExU Institut für Sicherheitstechnik GmbH, Fuchsmühlenweg 7, D-09599 Freiberg

EINGEGANGEN
28. JUNI 2013

KSE-LIGHTS GmbH
Herrn Seel
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Brand- und Explosionsschutz Störfallvorsorge

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Freiberg, 27.06.2013
Gz/Leh 4620/13

- Ihr Auftrag mit Schreiben vom 02.04.2013
- Unsere Bearbeitungs-Nr.: IB-13-3-067

Sehr geehrter Herr Seel,

beiliegend erhalten Sie zu o. g. Vorgang die EG-Baumusterprüfbescheinigung IBExU13ATEX1061 in englischer Sprache.

Mit freundlichen Grüßen

IBExU
Institut für Sicherheitstechnik

Im Auftrag


(Dipl.-Ing. Götze)



[1] **EC-TYPE EXAMINATION CERTIFICATE**

according to Directive 94/9/EC, Annex III

(Translation)

[2] Equipment and Protective Systems intended for use in Potentially Explosive Atmospheres, **Directive 94/9/EC**

[3] EC-Type Examination Certificate Number: **IBExU13ATEX1061**

[4] Equipment: **LED Cap Lamp**
Type KS-****-MX

[5] Manufacturer: KSE-LIGHT GmbH

[6] Address: Brunnenstraße 8
58285 Gevelsberg
GERMANY

[7] The design of the equipment mentioned in [4] and any acceptable variations thereto are specified in the schedule to this EC-Type Examination Certificate.

[8] IBExU Institut für Sicherheitstechnik GmbH, NOTIFIED BODY number 0637 in accordance with article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that the equipment mentioned in [4] has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The test results are recorded in the test report IB-13-3-067 of 5 June 2013.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012, EN 60079-11:2012, EN 60079-26:2007 and EN 50303:2000.

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in [17] in the schedule to this EC-Type Examination Certificate.

[11] This EC-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this directive apply to the manufacture and supply of this equipment.

[12] The marking of the equipment mentioned in [4] shall include the following:

I M1 Ex ia I or **I M1 Ex ia I/II(H₂)**
 II 1G Ex ia IIC T4 or **II 2G Ex ib IIC T4**
 II 2D Ex ia IIC T130 °C -20 °C ≤ T_a ≤ 60 °C

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Authorised for certifications
- Explosion protection -

By order

(Dr. Wagner)



- Seal-
(ID no. 0637)

Freiberg, 25 June 2013

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.

Schedule

[13] **Schedule**

[14] **to the EC-TYPE EXAMINATION CERTIFICATE IBExU13ATEX1061**

[15] **Description of the equipment**

LED Cap Lamps consist of a compact housing and an optional fastening device for the cap. They contain a rechargeable battery with protective electronics and a switchable LED main light as well as an additional LED light. Opening the cap lamps is not intended. The cap lamps are charged outside the potentially explosive area.

Technical data

Working temperature range: -20 °C to +60 °C

Type	Ex marking
KS-7600-MX KS-7610-MX	⊕ Ex II 2G Ex ib IIC T4
KS-7700-MX KS-7710-MX	⊕ Ex I M1 Ex ia I
KS-7700-H2MX	⊕ Ex I M1 Ex ia I/II(H ₂)
KS-7810-MX	⊕ Ex II 1G Ex ia IIC T4 ⊕ Ex II 2D Ex ia IIIC T130 °C

Battery AE803450P6H_2P
3.7 V, 2800 mAh

Special battery charger charging voltage max. 5.2 V
charging current max. 500 mA

[16] **Test report**

The proof of the explosion protection is explained in detail in the Test Report IB-13-3-067. The test documents are part of the test report and are listed there.

Summarisation of the test results:

The LED Cap Lamps fulfil the requirements of the explosion protection for Equipment Group I, Category M1 (incl. H₂) and Equipment Group II, Category 1G or 2G and 2D in type of protection Intrinsic Safety for explosive gas atmospheres of the Explosion Group IIC.

[17] **Special conditions**
none

[18] **Essential Health and Safety Requirements**
Confirmed by compliance with standards (see [9]).

By order



(Dr. Wagner)

Freiberg, 25 June 2013

