



(1) **EC-TYPE-EXAMINATION CERTIFICATE**
(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 07 ATEX 1045



(4) Equipment: Repair light, type ISL *00-Ex

(5) Manufacturer: ecom instruments GmbH

(6) Address: Industriestraße 2, 97959 Assamstadt, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report PTB Ex 07-17245.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2004

EN 60079-1:2004

EN 61241-0:2006

EN 61241-1:2004

(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 the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

II 2 G Ex d IIC T4

II 2 D Ex tD A21 IP6x T 105 °C to 120 °C

Zertifizierungsstelle Explosionsschutz

Braunschweig, July 30, 2007

By order:

Dipl.-Phys.



1st SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 07 ATEX 1045

(Translation)

Equipment: Repair light, type ISL 440-Ex resp. ISL 450-Ex



Marking:  II 2 G Ex d IIC T4

 II 2 D Ex tD A21 IP6x T 105 °C bis T 120 °C

Manufacturer: ecom instruments GmbH

Address: Industriestraße 2, 97959 Assamstadt, Germany

Description of supplements and modifications

- Update of the standards, therefore the marking changes as follows:
 -  II 2 G Ex d IIC TX Gb or Ex db IIC TX
 -  II 2 D Ex tb IIIC TXXX °C Db or Ex tb IIIC TXXX °C
- Two new lamp versions with type name ISL 440-Ex resp. ISL 450-Ex, which use LEDs as illuminant, are introduced.

Electrical data for the LED versions:

Type	ISL 440-Ex (single row)				
LED	SZW05A0A, max. 120 lumen at I _F = 350 mA				
Rated voltage	12 V DC	24 V to 48 V AC/DC		110 V to 240 V AC/DC	
Temperature class	T4	T6	T4	T6	T4
Max. surface temperature	T100 °C	T 80 °C	T 100 °C	T 80°C	T 100 °C
Max. permissible ambient temperature:	40 °C	40 °C	60 °C	40 °C	60 °C

ZSEx10101e.dot

Type	ISL 450-Ex (double row)				
LED	STW8Q2PA, STW8Q14B, STW0Q2PA max. 40 lumen at $I_f = 100$ mA				
Rated voltage	12 V DC	24 V...48 V AC/DC		110 V...240 V AC/DC	
Temperature class	T4	T6	T4	T6	T4
Max. surface temperature	T100 °C	T 80 °C	T 100 °C	T 80°C	T100 °C
Max. permissible ambient temperature:	40 °C	40 °C	60 °C	40 °C	60 °C

The lower value of the permissible ambient temperatures is limited to -40 °C. The ambient temperatures may be further limited by the selected components and designs.

Applied standards

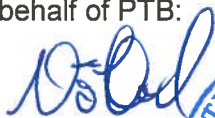
EN 60079-0:2009, EN 60079-1:2007, EN 60079-31:2009

The limiting values in EN 60079-28:2007 were used for evaluation of the optical radiation. Marking in compliance with this standard will not be made.

Assessment and test report: PTB Ex 13-13176

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, November 19, 2013



Dipl.-Phys. U. Völkel

