

[1] **TYPE EXAMINATION CERTIFICATE**
(Translation)



[2] **for electrical equipment of Equipment Group II, Equipment Category 3**

[3] Type Examination Certificate Number: **IBExU11ATEXB008**

[4] Equipment: **Flame detector**
Type D-L */ 87 Ex, serie D-LX 200 and D-LX 720

[5] Manufacturer: **DURAG GmbH**

[6] Address: **Kollastr. 105**
22453 Hamburg
GERMANY

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

[8] IBExU Institut für Sicherheitstechnik GmbH 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 94/9/EC.
The test results are recorded in the Test Report IB-10-3-342/3 of 4 July 2011.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2009, EN 60079-15:2010 and EN 60079-31:2009.

[10] If the sign „X“ is placed after the certificate number and the marking mentioned in [12], it indicates that the equipment is subject to special conditions for safe use specified in [17] in the schedule to this Type Examination Certificate and in the operating instruction.

[11] This 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:

II 3G Ex nAnC IIC T6 resp. T4 Gc
 II 3D Ex tc IIIC T 85 °C resp. T135 °C Dc
-40 °C ≤ T_a ≤ +40 °C resp. +65 °C

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Freiberg, 4 July 2011

By order

(Dr. Wagner)

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- Stamp -

Certificates without signature and stamp 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 TYPE EXAMINATION CERTIFICATE IBExU11ATEXB008**

[15] **Description of equipment**

In an enclosure produced from aluminium are a photoelectric cell, an evaluation electronic and a switching device. Some types are applicable for use with a fibre optic system. The electrical connections are carried out with a terminal bar.

Types

Series D-LX 200: D-LX 200 UA-yy / 87 Ex
D-LX 200 UAF-yy / 87 Ex
D-LX 200 IG-yy / 87 Ex

Series D-LX 720: D-LX 720 UA-yy / 87 Ex
D-LX 720 UAF-yy / 87 Ex
D-LX 720 IG-yy / 87 Ex

The letter after the 3-digit number described the spectral sensibility of the set-in nozzle photoelectric cell. The two „y“ signal the existence or non-existence of a SIL-certification.

Technical data

Ambient temperature range T6: -40 °C to +40 °C
Ambient temperature range T4: -40 °C to +65 °C
Degree of protection of the enclosure: IP66 according to EN 60529

Electrical data

Rated voltage 24 ±20% V DC
Dissipation: max. 3.7 W
Switching output: 24 VDC, max. 2 x 0.5 A

[16] **Test report**

The proof of the explosion protection is explained in detail in the Test Report IB-10-3-342/3. The test documents are part of the test report and are listed there.

Summary

The Flame detector type D-L */ 87 Ex fulfills the requirements of explosion protection for apparatus of the Equipment Group II and Category 3 G in type of protection non-sparking “nA” and encapsulated devices “nC” for gases of Explosion Group IIC as well as the requirements of the category 3D in type of protection Protection by enclosure “tc” for explosion group IIIC.

[17] **Special conditions for safe use**
none

[18] **Essential Health and Safety Requirements**

Confirmed by compliance with standards (see [9])

By order



(Dr. Wagner)

Freiberg, 4 July 2011