

IBExU Institut für Sicherheitstechnik GmbH
An-Institut der TU Bergakademie Freiberg



[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 **IBExU10ATEX1186 X** | Issue 1

[4] Product: **pressure measuring devices**
Types: DX15A LMK_NNN H and DX15A LMP_NNN H

[5] Manufacturer: BD SENSORS GmbH

[6] Address: BD-Sensors-Str. 1
95199 Thierstein
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-17-3-0062.

[9] Compliance with the essential health and safety requirements has been assured by compliance with: EN 60079-0:2012+A11:2013 and EN 60079-11:2012
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:

Device	Ex-marking gas	Ex-marking dust	C _i	C _{gnd}
LMK 358H	⊕ II 1G Ex ia IIB T4 Ga	⊕ II 1D Ex ia IIIC T85 °C Da	13.2 nF	27 nF
LMK 381H	⊕ II 1G Ex ia IIB T4 Ga	⊕ II 1D Ex ia IIIC T85 °C Da	13.2 nF	27 nF
LMK 382H	⊕ II 1G Ex ia IIB T4 Ga	⊕ II 1D Ex ia IIIC T85 °C Da	13.2 nF	27 nF
LMP 309H	⊕ II 1G Ex ia IIB T4 Ga	⊕ II 1D Ex ia IIIC T85 °C Da	13.2 nF	27 nF
LMK 457H	⊕ II 1G Ex ia IIB T4 Ga	⊕ II 1D Ex ia IIIC T85 °C Da	94.6 nF	110 nF
LMK 458H	⊕ II 1G Ex ia IIB T4 Ga	⊕ II 1D Ex ia IIIC T85 °C Da	94.6 nF	110 nF

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By order

Dipl.-Ing. Wilfamowski



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, 2017-05-03

[13] **Schedule**

[14] **Certificate number IBExU10ATEX1186 X | Issue 1**

[15] **Description of product**

The pressure measuring devices types DX15A LMK_NNN H and DX15A LMP_NNN H are pressure transmitter in the high-grade steel enclosure or made off with CuNi10Fe1Mn. In addition, there is also a variant with titanium housing, whereby special operating conditions must be observed. The equipment is intended for use in potentially hazardous areas, where category 1G or 1D devices are required. They are powered by an intrinsically safe power supply.

Technical data

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

Electrical data

Supply and signal circuit in protection type intrinsic safety Ex ia IIB

(+/-)	U _i	28V
	I _i	93 mA
	P _i	660 mW
Effective internal capacitance	C _i	13.2 nF (LMK 358H, LMK 381H, LMK 382H and LMK 309H)
Effective internal inductance	L _i	94.6 nF (LMK 457H and LMK 458H) negligible

The supply connections have an internal capacity of max. 27 nF (LMK 358H, LMK 381H, LMK 382H and LMK 309H) or 110 nF (LMK 457H and LMK 458H).

Variations compared to the basic certificate:

Add a housing variant with titanium.

[16] **Test report**

The test results are recorded in the confidential test report IB-17-3-0062 of 2017-05-03.

The test documents are part of the test report and they are listed there.

Summary of the test results

The pressure measuring devices types DX15A LMK_NNN H and DX15A LMP_NNN H fulfill the requirements of type of protection Intrinsic safety 'ia' for an electrical component for equipment group II category 1G, explosion group IIC or IIB and temperature class T4 and Category 1D with a maximum surface temperature of 85 °C.

[17] **Specific conditions of use**

- The ambient temperature range is fixed from -25 °C to +70 °C.
- The safety and assembly notes contained in the operating instructions have to be observed.
- For devices made of titanium impact and friction sparks are to be avoided by contact with other bodies and objects.

[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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