

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 **IBExU07ATEX1180 X** | Issue 1

[4] Product: **pressure measuring devices**
Types: DX14A DMK 456, DX14A DMK 458 and DX14A LMK 458

[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-17-3-0063.

[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	Connection	Kind	Ex-marking	Ambient temperature range
DMK 456	terminal	pressure transmitter	⊕ II 1G Ex ia IIC T6	-20 °C to +60 °C
DMK 458	terminal	pressure transmitter	⊕ II 1G Ex ia IIC T4	-25 °C to +70 °C
DMK 458	plug, cable	pressure transmitter	⊕ II 1G Ex ia IIB T4	-25 °C to +70 °C
LMK 458	cable	hydrostatic probe	⊕ II 1G Ex ia IIB T4	-25 °C to +70 °C

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By order


Dipl.-Ing. Willamowski



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 IBExU07ATEX1180 X | Issue 1**

[15] **Description of product**

The pressure measuring devices types DX14A DMK 456 and DMK 458 is a pressure transmitter in the high-grade steel enclosure with process tap. The type DX14A LMK 458 is designed as hydrostatic probe. 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 devices are required. They are powered by an intrinsically safe power supply.

Technical data

Ambient temperature range: -20 °C to +60 °C (DMK 456)
-25 °C to +70 °C (DMK 458+LMK 458)

Electrical data

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

Circuit diagram (XS1 and XS2)	U_i	28V
	I_i	93 mA
	P_i	660 mW
Effective internal capacitance	C_i	52.3 nF (DMK 456);
	C_i	105 nF (DMK 458 and LMK 458)
Effective internal inductance	L_i	negligible

The supply connections have an internal capacity of max. 90.2 nF (DMK 456) or 140 nF (DMK 458 and LMK 458).

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-17-3-0063 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 DX14A DMK 456, DMK 458 and LMK 458 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 T6 or T4.

[17] **Specific conditions of use**

- The ambient temperature range is fixed for type DX14A DMK 456 from -20 °C to +60 °C and for the types DX14A DMK 458 and DX14A LMK 458 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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