

## [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 **IBExU08ATEX1125 X** | Issue 2
- [4] Product: **Difference pressure sensors**  
Type: DX13A DMD 331 and DX13A DMD 331\_54X
- [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-24-3-0060.
- [9] Compliance with the essential health and safety requirements has been assured by compliance with: EN IEC 60079-0:2018 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 one of the following depending on the used components:

Type DX13A DMD 331:

II 2 G Ex ia IIC T4 Gb

II 2 D Ex ia IIIC T85 °C Db

Type DX13A DMD 331\_54X:

II 1 G Ex ia IIC T4 Ga

II 1 D Ex ia IIIC T<sub>200</sub> 85 °C Da

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By order

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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, 2024-12-16



[13]

**Schedule**

[14]

**Certificate number IBExU08ATEX1125 X | Issue 2****[15] Description of product**

The difference pressure sensors DX13A DMD 331 and DX13A DMD 331\_54X serves the pressure measuring and change the difference pressure into a standardized current signal. The equipment is provided for use in potentially hazardous areas, where category 2 G, 2 D or 1 G, 1 D devices are required. As power supply specified intrinsically safe power supplies of the category „ia“ can to be used. The electronics assembly and the sensor are in an aluminium or stainless steel housing. The electrical connection is carried out via a plug.

Technical Data:

Ambient temperature range                      from -25 °C to +60 °C  
Medium temperature range:                      from -25 °C to +60 °C

**Electrical Data:**

Supply electric circuit in type of protection Intrinsic Safety Ex ia  
(+ and -)

$U_i$             28 V DC

$I_i$             93 mA

$P_i$             660 mW

effective inner capacity                       $C_i$             1 nF

effective inner inductivity                       $L_i$             10 µH

The supply connections have an inner capacity of max. 27 nF opposite the housing.

*Variations compared to issue 1 of this certificate:**Variation 1*

The differential pressure sensors DX13A DMD 331 and DX13A DMD 331\_54X also meet the requirements of the EN IEC 60079-0:2018 standard.

*Variation 2*

The ambient and medium temperature have been reduced to +60 °C.

**[16] Test report**

The test results are recorded in the confidential test report IB-24-3-0060 of 2024-11-14.  
The test documents are part of the test report and they are listed there.

*Summary of the test results*

The difference pressure sensor DX13A DMD 331 fulfills the requirements of type of protection Intrinsically safety 'ia' on an electrical component for Equipment Group II Category 2 G or 2 D, Explosion Group IIC or IIIC and temperature class T4 or a max. surface temperature of 85 °C.

The difference pressure sensor DX13A DMD 331\_54X fulfills the requirements of type of protection Intrinsically safety 'ia' on an electrical component for Equipment Group II Category 1 G or 1 D, Explosion Group IIC or IIIC and temperature class T4 or a max. surface temperature of 85 °C.

**[17] Specific conditions of use**

- The safety and assembly notes contained in the operating instructions and the ambient temperature range  $-25\text{ °C} \leq T_a \leq +60\text{ °C}$  have to be observed.
- The device may only operate in explosive atmospheres which requires equipment of Category 1, if there are atmospheric conditions (temperature from -20 °C to +60 °C pressure from 0.8 bar to 1.1 bar).
- The device must be protected from electrostatic charge. It is only to be cleaned with a damp cloth.

**[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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