



[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 1

[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-16-3-059.

[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 one of the following depending on the used components:

Type DX13A DMD 331 II 2G Ex ia IIC T4 Gb, II 2D Ex ia IIIC T85 °C Db
Type DX13A DMD 331_54X II 1G Ex ia IIC T4 Ga, II 1D Ex ia IIIC T85 °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, 2016-08-16

[13]

Schedule

[14]

Certificate number IBExU08ATEX1125 X | Issue 1

[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 2G or 1G 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

Supply electric circuit in type of protection Intrinsic Safety Ex ia IIC

(+ and -)	Ui	28 V DC
	Ii	93 mA
	Pi	660 mW
effective inner capacity	Ci	1 nF
effective inner inductivity	Li	10 µH

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

Ambient temperature range from -25 °C to +65 °C

Variations compared to issue 0 of this certificate:

Variation 1

Extend the certification for use in flammable dust atmospheres

[16] **Test report**

The test results are recorded in the confidential test report IB-16-3-059 of 2016-08-16.

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 en electrical component for Equipment Group II Category 2G or 2D, 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 en electrical component for Equipment Group II Category 1G or 1D, 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 $-25\text{ °C} \leq T_a \leq +65\text{ °C}$ 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).

[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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