

[1] **EC-TYPE EXAMINATION CERTIFICATE**  
according to Directive 94/9/EC, Annex III



(Translation)

- [2] Equipment and Protective Systems intended for use in Potentially Explosive Atmospheres, Directive 94/9/EC
- [3] EC-Type Examination Certificate Number: **IBExU08ATEX1124 X**
- [4] Equipment: Difference pressure sensors DX3A DMD 331 and DX3A DMD 331\_540
- [5] Manufacturer: BD SENSORS s.r.o.
- [6] Address: Hradistska 817  
687 08 Buchlovice  
CZECH REPUBLIC
- [7] This equipment mentioned under [4] and any acceptable variation thereto are specified in the schedule to this EC-Type Examination Certificate.
- [8] IBExU Institut für Sicherheitstechnik GmbH, NOTIFIED BODY number 0637 in accordance with article 9 of the Council Directive 94/9/EC of 23<sup>th</sup> March 1994, certifies that the under [4] mentioned equipment 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.  
The examination and test results are recorded in confidential test report IB-08-3-162 of 22<sup>nd</sup> October 2008.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2006, EN 60079-11:2007 and EN 60079-26:2004.
- [10] If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified under [17] in the schedule to this EC-Type Examination Certificate.
- [11] This EC-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:

DX3A DMD 331

II 2G Ex ia IIC T4

DX3A DMD 331\_540

II 1G Ex ia IIC T4

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Authorised for certifications Explosion protection

By order

(Dr. Lösch)



- Seal-  
(ID no. 0637 )

Freiberg, 24<sup>th</sup> October 2008

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.

**Schedule**

[13] **Schedule**

[14] **to the EC-TYPE EXAMINATION CERTIFICATE IBExU08ATEX1124 X**

[15] **Description of equipment**

The difference pressure sensors DX3A DMD 331 and DX3A DMD //331\_540// serve 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 a 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 -)

	$U_i$	28 V DC
	$I_i$	93 mA
	$P_i$	660 mW
effective inner capacity	$C_i$	1 nF
effective inner inductivity	$L_i$	10 $\mu$ H

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

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

[16] **Test report**

The test results are recorded in the test report IB-08-3-162. The test documents are part of the test report and listed there.

Summary of the Test Result:

The difference pressure sensor DX3A DMD 331 fulfills the requirements of type of protection Intrinsically safety 'ia' on an electrical component for Equipment Group II Category 2G, Explosion Group IIC and temperature class T4.

The difference pressure sensor DX3A DMD 331\_540 fulfills the requirements of type of protection Intrinsically safety 'ia' on an electrical component for Equipment Group II Category 1G, Explosion Group IIC and temperature class T4.

[17] **Special conditions**

- 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**

Confirmed by norms (see [9]).

By order



(Dr. Lösch)

Freiberg, 24<sup>th</sup> October 2008



- [1] **1<sup>st</sup> Addition to**  
**EC-TYPE EXAMINATION CERTIFICATE IBExU08ATEX1124 X**  
according to Directive 94/9/EC, Annex III  
**- Translation -**

- [2] Equipment: **Differential pressure transmitter**  
  
types in accordance with IBExU08ATEX1124 X: DX3A DMD 331 and DX3A DMD 331\_540  
  
new type designation: DX3A DMD 331 and DX3A DMD 331\_54X

- [3] Manufacturer: BD SENSORS s.r.o.

- [4] Address: Hradistska 817  
687 08 Buchlovice  
CZECH REPUBLIC

- [5] **Addition / Alteration**

The additions / alterations of the equipment mentioned in [2] compared with the equipment already certified concern in detail:

- Add two new types with altered nominal pressure ranges.
- The device fulfils the requirements with the current standards.

All other parameters correspond to the basic certification.

- [6] **Test Report**

The proof of the explosion protection of the equipment mentioned in [2] is documented in the Test Report IB-13-3-172 of 8 August 2013. The test documents are part of the Test Report.

- [7] **Test result**

IBExU certifies that the equipment mentioned in [2] fulfils the in Annex II of the Directive 94/9/EC fixed Essential Health and Safety Requirements by compliance with EN 60079-0:2012, EN 60079-11:2012 and EN 60079-26:2007.

The equipment mentioned in [2] fulfils the requirements of explosion protection for Equipment Group II, Equipment Category 1G or 2G, type of protection Intrinsic safety "ia", Explosion Group IIC and Temperature Class T4.

The marking on the equipment mentioned in [2] must contain the following characteristics:

Type DX3A DMD 331                      II 2G Ex ia IIC T4 Gb

Type DX3A DMD 331\_54X                      II 1G Ex ia IIC T4 Ga

**This addition is only valid in combination with the EC-Type Examination Certificate IBExU08ATEX1124 X of 24 October 2008.**

**The special conditions for safe use have unchanged to be taken into account furthermore.**

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Authorized for certifications  
- Explosion protection -

By order

(Dr. Wagner)



- Seal -

(Identification No. 0637)

Freiberg, 8 August 2013

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In case of dispute, the German text shall prevail.

[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 **IBExU08ATEX1124 X** | Issue 1

[4] Product: **Difference pressure sensors**  
Type: DX3A DMD 331 and DX3A DMD 331\_54X

[5] Manufacturer: **BD SENSORS s.r.o.**

[6] Address: **Hradistska 817  
687 08 Buchlovice  
CZECH REPUBLIC**

[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 DX3A DMD 331      II 2G Ex ia IIC T4 Gb, II 2D Ex ia IIIC T85 °C Db

Type DX3A DMD 331\_54X      II 1G Ex ia IIC T4 Ga, II 1D Ex ia IIIC T85 °C Da

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Freiberg, 2016-08-16

**[13] Schedule****[14] Certificate number IBExU08ATEX1124 X | Issue 1****[15] Description of product**

The difference pressure sensors DX3A DMD 331 and DX3A 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 DX3A DMD 331 fulfills the requirements of type of protection Intrinsically safety ‚ia‘ on an 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 DX3A DMD 331\_54X fulfills the requirements of type of protection Intrinsically safety ‚ia‘ on an 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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Freiberg, 2016-08-16