



[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 **IBExU06ATEX1050 X** | Issue 1

[4] Product: **Pressure switch**  
Type: AX14 – DS4XX or DS2XX  
and Plug-on Display AX14 – PA430

[5] Manufacturer: **BD SENSORS GmbH**

[6] Address: **BD-Sensors-Str. 1**  
**D - 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-20-3-0128.

[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 following:

Type AX14 - DS4XX: II 1G Ex ia IIC T4 Ga or II 1G Ex ia IIB T4 Ga  
 II 1D Ex ia IIIC T135 °C Da

Type AX14 - DS2XX: II 2G Ex ia IIC T4 Gb or II 2G Ex ia IIB T4 Gb

Type AX14 - PA430: II 2G Ex ia IIC T4 Gb

IBExU Institut für Sicherheitstechnik GmbH  
Fuchsmühlenweg 7  
09599 Freiberg, GERMANY

By order

Dipl.-Ing.(FH) Henker



(notified body number 0637)

Tel: + 49 (0) 37 31 / 38 05 0  
Fax: + 49 (0) 37 31 / 38 05 10

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, 2020-09-10

[13] **Schedule**

[14] **Certificate number IBExU06ATEX1050 X | Issue 1**

[15] **Description of product**

The Pressure switch type AX14 – DS4XX or DS2XX serves in intrinsic safety electrical plants for the transformation of a pressure signal in a 4...20 mA two-wire sensor signal, for measured value indication and produces up to 2 PNP-Open collector switching outputs for a limiting value control.

The sensor of the pressure measuring 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).

**Technical data:**

Ambient temperature range: from -25 °C to +70 °C

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

(UB+ and UB-)	$U_i$	= 28 V DC
	$I_i$	= 93 mA
	$P_i$	= 660 mW

effective internal capacitance  $C_i$  negligible

effective internal inductance  $L_i$  negligible

plus cable inductivities 1 µH/m and cable capacities 100 pF/m

*Variations compared to EG-Type Examination Certificate IBExU06ATEX1050 X and its additions:*

- The pressure switch complies with the requirements of EN IEC 60079-0:2018.
- For the type AX14 - DS40X: Modification of the existing electronics was carried out and laid out as a new electronic board.

[16] **Test report**

The test results are recorded in the confidential test report IB-20-3-0128 of 2020-09-10.

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

*Summary of the test results*

The Pressure switch type AX14 – DS4XX also fulfil the requirements of type of protection Intrinsically safety 'ia' on an electrical component for Equipment Group II, Category 1G and 1D, Explosion Group IIC/IIB or IIIC and temperature class T4 with a maximum surface temperature of 135 °C.

The Pressure switch type AX14 – DS2XX also fulfil the requirements of type of protection Intrinsically safety 'ia' on an electrical component for Equipment Group II, Category 2G, Explosion Group IIC/IIB and temperature class T4.

The Plug-on Display type AX14 – PA430 also fulfil 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.

[17] **Specific conditions of use**

- No energy may be supply from the outside into the active switching exits.
- The equipment designed with connector have to be installed in such a way, that the Degree of protection IP20 always will be kept.
- The safety and assembly notes contained in the operating instructions and the ambient temperature range  $-25\text{ °C} \leq T_a \leq +70\text{ °C}$  have to be observed.

[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.

IBExU Institut für Sicherheitstechnik GmbH  
Fuchsmühlenweg 7  
09599 Freiberg, GERMANY

By order



Dipl.-Ing.(FH) Henker

Freiberg, 2020-09-10