



[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: **IBExU05ATEX1070 X**
- [4] Equipment: Pressure measuring device type DX14 XXX\_NNN
- [5] Manufacturer: BD Sensors GmbH
- [6] Address: BD-Sensors-Strasse 1, D-95199 Thierstein
- [7] The equipment mentioned in [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 this 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 test report IB-05-3-092/1 of 13<sup>th</sup> July 2005.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 50014:1997+A1-A2, EN 50020:2002, EN 50284:1999 and EN 50281-1-1:1998+A1.
- [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:

 **II 1G, II 1/2G or II 2G EEx ia IIC/IIB T4**  
 **II 1D, II 1/2D or II 2D IP 6X T 85 °C**  
-25 °C ≤ T<sub>a</sub> ≤ +70 °C

The validity of the marking for the type of protection goes by the marking table in test report.

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Authorised for certifications Explosion protection

By order

(Dr. Lösch)



- Seal-  
(ID no. 0637 )

Freiberg, 14<sup>th</sup> July 2005

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 IBExU05ATEX1070 X**

[15] **Description of equipment**

The equipment series type DX14 XXX\_NNN pressure transmitter, screwed probes and immersion probes represent more variously system-unit cover variants the piece. It serves in intrinsic safety electrical plants for the transformation of a pressure signal in a proportional electrical signal.

Category 1 equipment

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).

Category 1/2 equipment

The electronics case with the cable connection is installed areas in hazardous areas which require equipment of the Category 2. The process connection elements are built in into the partition wall which separates the areas, in which equipment of Category 2 or 1 are required. The sensor surface is set up in areas which require equipment of the Category 1.

Category 2 equipment

Screwed probes with plastic housings with the smallest, at present practicable measurement range of 60 mbar, may be only used in areas, which require equipment of Category 2. They get the marking 2G.

Ambient temperature range	from -25 °C to +70 °C
Degree of protection:	better IP 66

Supply and signal electric circuit in type of protection Intrinsic Safety EEx ia IIC/IIB

Circuit diagram (XS1 and XS2)	$U_i$	= 28 V
	$I_i$	= 93 mA
	$P_i$	= 660 mW
effective inner capacity	$C_i$	= 27 nF
effective inner inductivity	$L_i$	= 5 µH

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

[16] **Test report**

The test results are recorded in detail in the test report IB-05-3-092/1 of 13<sup>th</sup> July 2005.

Summary of the Test Result:

The Pressure measuring device type DX14 XXX\_NNN fulfils the requirements of the type of protection Intrinsic Safety for an electrical apparatus for the Group II, depending on execution Explosion Group IIC or IIB and the Categories 1G, 1/2G or 2G as well as requirements of Dust Explosion Protection.

[17] **Special conditions**

- The equipment designed with connector have to be installed in such a way, that the Degree of protection IP20, respectively IP6X at explosive dust atmosphere, always will be kept.
- At pressure measuring devices with cable protection of corrugated pipe, the ground clamp at the coupling has to be connected with the equipotential bonding.
- The safety and assembly notes contained in the operating instructions have to be observed.

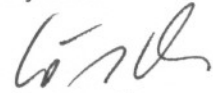
- At screwed probes with the marking category 1/2 equipment, the sensor diaphragm serves as partition wall and has to be protected against mechanical damages.

**[18] Essential Health and Safety Requirements**

Confirmed by norms (see [9]).

By order

Freiberg, 14<sup>th</sup> July 2005

  
(Dr. Lösch)