



Translation

(1) **EC TYPE-EXAMINATION CERTIFICATE**

(2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 94/9/EC**



(3) EC-Type Examination Certificate Number

TÜV 03 ATEX 2006 X

(4) Equipment: Pressure transmitter type DX13-... with two-wire system

(5) Manufacturer: BD SENSORS GmbH

(6) Address: D-95199 Thierstein, Sechsamterstraße 2

(7) This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The TÜV NORD CERT GmbH & Co. KG, TÜV CERT-Certification Body, notified body number N° 0032 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential report N° 03 YEX 550365-01.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014:1997 EN 50020:1994 EN 50284:1999 EN 50 281-1-1:1999

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type examination certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment or protective system must include the following:



II 1 G EEx ia IIC T4 resp. II 1 D T 85°C

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TÜV CERT-Certification Body
Am TÜV 1
D-30519 Hannover
Tel.: 0511 986-1470
Fax: 0511 986-2555

Hanover, 2003-03-05



TÜV NORD CERT

G. Wöhl

Head of the
Certification Body

(13) **SCHEDULE**

(14) **EC-TYPE EXAMINATION CERTIFICATE N° TÜV 03 ATEX 2006 X**

(15) Description of equipment

The pressure transmitter type DX13-... with two-wire system is used for the acquisition of static and dynamic pressure values of gaseous and fluidal media. It is possible to measure gauge pressure (negative pressure and overpressure) and absolute pressure, as well.
The pressure value is transformed into a standardized electrical signal.

The sensor of pressure transmitter must only be operated in hazardous areas that require apparatus of category 1 when atmospheric conditions are present (temperature from -20°C to +60°C, pressure from 0.8 bar to 1.1 bar).

In case that the potentially explosive atmosphere does not require apparatus of category 1 the maximum permissible ambient temperature is 70°C.

Electrical data

Supply and signal
circuit
(plug or prefabricated cable)

in type of protection "Intrinsic Safety" EEx ia IIC
only for the connection to certified intrinsically safe circuits
with the following maximum values:

$$\begin{aligned}U_i &= 28 \text{ V} \\I_i &= 93 \text{ mA} \\P_i &= 660 \text{ mW}\end{aligned}$$

The effective internal capacitance and inductance of the
supply and the signal circuits are negligibly small.
Capacitance to earth $\leq 27 \text{ nF}$

(16) Test documents are listed in the test report No.: 03 YEX 550365-01.

(17) Special conditions for safe use

The pressure transmitter with plug connection has to be erected in such a way that a degree of protection at least IP 20 according to EN 60529 is achieved for the connector plug.

(18) Essential Health and Safety Requirements

no additional ones

1. SUPPLEMENT to

EC-TYPE EXAMINATION CERTIFICATE No. TÜV 03 ATEX 2006 X

of the company: BD SENSORS GmbH
Sechsämterstraße 2
D-95199 Thierstein

In the future, the pressure transmitter type DX13-... with two-wire system may also be manufactured and operated according to the test documents listed in the test report.

The amendments concern the internal design, the extension of the marking and the optional installation of a Pt100 temperature sensor.

The marking is in dependence on the type:

II 1 G resp. II 2 G EEx ia IIC T4 resp. II 1 D T 85°C

Electrical data

Supply and signal
circuit (pressure)
(plug or prefabricated cable)

in type of protection "Intrinsic Safety" EEx ia IIC
only for the connection to certified intrinsically safe circuits
with the following maximum values:

$$\begin{aligned}U_i &= 28 \text{ V} \\I_i &= 93 \text{ mA} \\P_i &= 660 \text{ mW}\end{aligned}$$

The effective internal capacitance and inductance of the
supply and the signal circuits are negligibly small.
Capacitance to earth $\leq 27 \text{ nF}$

Temperature sensor circuit
(plug or prefabricated cable)

in type of protection "Intrinsic Safety" EEx ia IIC
only for the connection to certified intrinsically safe
circuits with the following maximum values:

$$\begin{aligned}U_i &= 19 \text{ V} \\I_i &= 31 \text{ mA} \\P_i &= 145 \text{ mW}\end{aligned}$$

The effective internal capacitance and inductance of the
temperature sensor circuit are negligibly small.

The temperature sensor circuit is safely galvanically separated from the supply and signal circuit (pressure).

All further data and the special condition for safe use apply unchanged for this supplement.

(16) Test documents are listed in the test report N° 03 YEX 550636-1.

(17) Special conditions for safe use

The pressure transmitter with plug connection has to be erected in such a way that a degree of protection at least IP 20 according to EN 60529 is achieved for the connector plug.

(18) Essential Health and Safety Requirements
no additional ones

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Tel.: 0511 986-1470
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Hannover, 2003-08-12

A handwritten signature in blue ink, appearing to read 'J. Kroll'.

Head of the
Certification Body

Translation

2. SUPPLEMENT to

EC TYPE-EXAMINATION CERTIFICATE No. TÜV 03 ATEX 2006 X

of the company: BD SENSORS GmbH
BD-Sensors-Straße 1
D-95199 Thierstein

In the future, the pressure transmitter type DX13-... with two-wire system may also be manufactured and operated according to the test documents listed in the test report.
The amendments concern the internal and outer design as well as the special conditions for safe use.

Electrical data

Supply and signal circuit
(plug or prefabricated cable) in type of protection "Intrinsic Safety" EEx ia IIC
only for the connection to certified intrinsically safe circuits
with the following maximum values:

$$\begin{aligned}U_i &= 28 \text{ V} \\I_i &= 93 \text{ mA} \\P_i &= 660 \text{ mW}\end{aligned}$$

effective internal capacitance $C_i \leq 1 \text{ nF}$;
effective internal inductance $L_i \leq 10 \text{ }\mu\text{H}$;
effective internal capacitance to earth $\leq 27 \text{ nF}$

All further data apply unchanged for this supplement.

(16) Test documents are listed in the test report N° 04 YEX 551571-1.

(17) Special conditions for safe use

The pressure transmitter with plug connection has to be erected in such a way that a degree of protection at least IP 20 according to EN 60529 is achieved for the connector plug.
At pressure transmitters with cable protection realized by a corrugated pipe, the earthing terminal at the sleeve has to be connected with the potential equalization system.

(18) Essential Health and Safety Requirements

no additional ones

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Hanover, 2004-06-24


Head of the
Certification Body

Translation

3. SUPPLEMENT to

EC-TYPE EXAMINATION CERTIFICATE No. TÜV 03 ATEX 2006 X

Equipment: Pressure transmitter type DX13-... with two-wire system
Manufacturer: BD SENSORS GmbH.
Address: BD Sensors Straße 1
D-95199 Thierstein

In the future, the pressure transmitter type DX13-... with two-wire system may also be manufactured and operated according to the documents listed in the test report.

The amendments concern the internal design.

The electrical data and all other data apply unchanged for this supplement.

The test documents are listed in the test report N° 05 YEX 552222-1

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Hannover, 2005-05-26

A handwritten signature in blue ink, appearing to read "Skowall", written over a horizontal line.

Head of the
Certification Body