

Translation

(1) **EC-Type Examination Certificate**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 94/9/EC**



(3) **Certificate Number** TÜV 13 ATEX 118658 X

(4) for the equipment: Pressure transmitter type PRESSURIX ... Ex ...

(5) of the manufacturer: FAFNIR GmbH

(6) Address: Bahrenfelder Straße 19  
22765 Hamburg  
Germany

Order number: 8000419392

Date of issue: 2013-06-26


- (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, notified body No. 0044 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 No. 13 203 118658.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-0:2009**

**EN 60079-11:2012**

**EN 60079-26:2007**

- (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 1/2 G Ex ia IIC T4/T5/T6 Ga/Gb resp. II 2 G Ex ia IIC T4/T5/T6 Gb resp.  
II 2 D Ex ia IIIC T60 °C / T80 °C / T100 °C / T105 °C Db resp.  
II 2 D Ex ia IIIC T65 °C / T85 °C / T105 °C / T110 °C Db

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, notified by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the notified body



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(13) **SCHEDULE**

(14) **EC-Type Examination Certificate No. TÜV 13 ATEX 118658 X**

(15) Description of equipment

The pressure transmitters PRESSURIX ... Ex ... are used for the pressure measurement of gases, vapours, and liquids in vessels and pipes. The housing may be mounted in explosion hazardous areas that require apparatus of the category 2G. The pressure port may be mounted in explosion hazardous areas that require apparatus of the category 1G.

The pressure transmitters PRESSURIX ... Ex ... may also be erected in explosion hazardous areas, which require apparatus of category 2D.

Electrical data

**Type PRESSURIX ... Ex ...**

Supply and signal circuit ..... in type of protection "Intrinsic Safety" Ex ia IIC resp. Ex ia IIIC  
(Terminals only for the connection to a certified intrinsically safe circuit.

1[+], 2[-], 3[PE] resp.

Maximum values:

Terminals at the plug connector

$$U_i = 30 \text{ V}$$

1[+], 3[-], 4[PE])

$$I_i = 150 \text{ mA}$$

$$P_i = 1 \text{ W}$$

$$L_i = 20 \text{ } \mu\text{H}$$

$$C_i = 4.8 \text{ nF}$$

**Type PRESSURIX ... Ex PA ... (PROFIBUS)**

Supply and signal circuit ..... in type of protection "Intrinsic Safety" Ex ia IIC resp. Ex ia IIIC  
(Terminals at the plug connector only for the connection to a certified intrinsically safe circuit

1[+], 3[-], 4[screen])

according to EN 60079-11 (FISCO)

Maximum values:

$$U_i = 17.5 \text{ V}$$

$$I_i = 380 \text{ mA}$$

$$P_i = 5.32 \text{ W}$$

$$L_i = 10 \text{ } \mu\text{H}$$

$$C_i = \text{negligibly small}$$

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### Temperatures

The permissible temperature ranges, the temperature classes respectively the maximum surface temperatures for pressure transmitters have to be taken from the following tables:

**Table 1: Pressure transmitters type PRESSURIX ... Ex ... of category 1/2 G**

Temperature class	Ambient temperature range	Medium temperature range
T6	-20 °C to +60 °C	-20 °C to +60 °C
T5	-20 °C to +80 °C	-20 °C to +60 °C
T4	-20 °C to +85 °C	-20 °C to +60 °C

**Table 2: Pressure transmitters type PRESSURIX ... Ex ... of category 2 G**

Temperature class	Ambient and medium temperature range
T6	-20 °C to +60 °C
T5	-20 °C to +80 °C
T4	-20 °C to +85 °C

**Table 3: Pressure transmitters type PRESSURIX ... Ex ... of category 2 D**

Max. surface temperature	Ambient and medium temperature
+60 °C	+40 °C
+80 °C	+60 °C
+100 °C	+80 °C
+105 °C	+85 °C

**Table 4: Pressure transmitters type PRESSURIX ... Ex PA ... of category 1/2 G (PROFIBUS)**

Temperature class	Ambient temperature range	Medium temperature range
T6	-20 °C to +60 °C	-20 °C to +55 °C
T5	-20 °C to +80 °C	-20 °C to +60 °C
T4	-20 °C to +85 °C	-20 °C to +60 °C

**Table 5: Pressure transmitters type PRESSURIX ... Ex PA ... of category 2 G (PROFIBUS)**

Temperature class	Ambient and medium temperature range
T6	-20 °C to +55 °C
T5	-20 °C to +80 °C
T4	-20 °C to +85 °C

**Table 6: Pressure transmitters type PRESSURIX ... Ex PA ... of category 2 D (PROFIBUS)**

Max. surface temperature	Ambient and medium temperature
+65 °C	+40 °C
+85 °C	+60 °C
+105 °C	+80 °C
+110 °C	+85 °C

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(16) Test documents are listed in the test report No. 13 203 118658.

(17) Special conditions for safe use

1. The pressure port of the pressure transmitter PRESSURIX ... Ex ... is allowed to be operated in an explosion hazardous atmosphere, which requires apparatus of the category 1, only if atmospheric conditions exist (temperature from -20 °C to +60 °C, pressure from 0.8 bar to 1.1 bar).  
If the explosion hazardous atmosphere on the pressure port requires apparatus of category 1, the maximum permissible medium temperatures are valid according to table 1 resp. table 4.  
The permissible operating pressures have to be taken from the regarding data of the manufacturer (technical documentation), if no explosion hazardous gas mixtures exist.
2. Since the intrinsically safe circuits are connected with the earth potential for safety reasons, potential equalization has to exist in the complete course of the erection of the intrinsically safe circuit (not valid for the PROFIBUS version).
3. The maximum surface temperature regarding dust explosion protection was determined without dust layer. Additional information has to be taken from EN 60079-14.

(18) Essential Health and Safety Requirements

no additional ones