

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 08 ATEX 554955 X**
- (4) for the equipment: Durchflussmesser
TRIO WIRL Typ VT42. / ST42. / VR42. / SR42 bzw.
Durchflussmesser
FV4000 Typ VT42. / VR42.
FS4000 Typ ST42. / SR42.
- (5) of the manufacturer: **ABB Automation Products GmbH**
- (6) Address: Dransfelder Str. 2
37079 Göttingen
Germany

Order number: 8000554955

Date of issue: 2008-10-20

- (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. 08 203 554955.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- | | | |
|------------------------|-------------------------|------------------------|
| EN 60079-0:2006 | EN 60079-11:2007 | EN 60079-1:2007 |
| EN 61241-0:2006 | EN 61241-1:2004 | |
- (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 2 G Ex d [ib] IIC T4
II 2 G Ex ib IIC T4 bzw.
II 2 D Ex tD A21 T85°C...T_{Medium} IP67

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited 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 certification body

Schwedt

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(13) **SCHEDULE**

(14) **EC-Type Examination Certificate No. TÜV 08 ATEX 554955 X**

(15) Description of equipment

The TRIO-WIRL Typ VT42., VR42. and TRIO-WIRL Typ ST42., SR42. transporting and metering the flowrate of liquids, gases (including unstable gases) and steam and measuring the actual volume flow at operating conditions. They measure in mass or normal flow units at constant operating conditions (pressure, temperature) and the saturated steam flow in mass units under varying temperature / pressure conditions when a temperature sensor (option) is installed in the instrument.

Technical data:

Ex ib IIC:

Supply circuit
(terminal 31, 32)

in type of protection Intrinsic Safety Ex ib IIC
only for the connection of certified intrinsically safe circuit with
the following maximum values:

$$U_i = 28 \text{ V}$$

$$I_i = 110 \text{ mA}$$

$$P_i = 0.77 \text{ W}$$

$$\text{effective internal capacitance } C_i = 14.6 \text{ nF}$$

$$\text{eff. int. cap. against equipotential bonding } C_i = 24.4 \text{ nF}$$

$$\text{effective internal inductance } L_i = 0.27 \text{ mH}$$

switching output
(terminal 41, 42)

in type of protection Intrinsic Safety Ex ib IIC
only for the connection of certified intrinsically safe circuit with
the following maximum values:

$$U_i = 15 \text{ V}$$

$$I_i = 30 \text{ mA}$$

$$P_i = 115 \text{ mW}$$

$$\text{effective internal capacitance } C_i = 11.6 \text{ nF}$$

$$\text{eff. int. cap. against equipotential bonding } C_i = 19.6 \text{ nF}$$

$$\text{effective internal inductance } L_i = 0,14 \text{ mH}$$

Type VR4_ and SR4_
piezo sensor
(terminal 85, 86, 87)

in type of protection Intrinsic Safety Ex ib IIC
only for the connection of certified intrinsically safe circuit
with

and
PT circuit
(terminal 81, 82, 83, 84)

the following maximum values:

$$U_o = 7.2 \text{ V}$$

$$I_o = 965 \text{ mA}$$

$$P_o = 1740 \text{ mW}$$

$$\text{effective internal capacitance } C_i = \text{negligible small}$$

$$\text{effective internal inductance } L_i = \text{negligible small}$$

$$U_m = 60 \text{ V}$$

(16) Test documents are listed in the test report No. 08 203 554955.

Schedule EC-Type Examination Certificate No. TÜV 08 ATEX 554955 X

(17) Special conditions for safe use

- The over voltage category III / II must not be exceeded by connected non mains / mains circuits.

(18) Essential Health and Safety Requirements

no additional ones