

Translation

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

TÜV NORD

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



- (3) **Certificate Number** TÜV 07 ATEX 345770
- (4) for the equipment: Measurement analysis system type UM-... Ex
- (5) of the manufacturer: FAFNIR GmbH
- (6) Address: Bahrenfelder Str. 19
22765 Hamburg
Germany

Order number: 8000345770

Date of issue: 2007-02-26

- (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. 07203345770.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN 50 014:1997 +A1+A2 EN 50 020:2002**
- (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/IIB**

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

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(13) **SCHEDULE**

(14) **EC-Type Examination Certificate No. TÜV 07 ATEX 345770**

(15) Description of equipment

The measurement analysis system UM-... Ex is used for the supply, display and limit value indication of level sensors equipped with a 4 to 20 mA interface.

The permissible ambient temperature range is 0 °C to +50 °C.

Electrical data

Auxiliary power circuit
(terminals 20, 21 and 22)

U = 230 V AC, ± 10 %, 50...60 Hz, approx. 7.5 VA or
U = 24 V AC, ± 10 %, 50...60 Hz, approx. 7.5 VA or
U = 24 V DC, ± 20 %, approx. 4.7 W
U_m = 253 V

Sensor circuit
(terminals 1 and 2)

in type of protection "intrinsic safety" EEx ia IIC
or EEx ia IIB

Maximum values: U_o = 28.4 V
I_o = 99.5 mA
R = 285 Ω
P_o = 705 mW

Characteristic: linear

C_i negligibly small
L_i negligibly small

The permissible maximum values for the outer inductance (L_o) and capacitance (C_o) must be looked up in the following table:

	EEx ia IIC		EEx ia IIB	
L _o	0.68 mH	0.2 mH	2 mH	0.2 mH
C _o	59 nF	83 nF	290 nF	570 nF

Output circuit
(terminals 3 to 17)

U ≤ 250 V, I ≤ 5 A, P ≤ 500 VA, cos φ ≥ 0.7 or
U ≤ 250 V, I ≤ 0.25 A, P ≤ 50 W

The sensor circuit is safely galvanically separated from the auxiliary power circuit and output circuit up to an apex value of the voltage of 375 V.

(16) Test documents are listed in the test report No. 07203345770.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones