



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

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 12 ATEX 2017 X



(4) Equipment: Indicating instruments, types RIA15 and ORIA15

(5) Manufacturer: Endress + Hauser Wetzler GmbH + Co. KG

(6) Address: Obere Wank 1, 87484 Nesselwang, Germany

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

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 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 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 test report PTB Ex 12-22183.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2009 **EN 60079-11:2012**

(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 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 shall include the following:

II 2 (1) G Ex ib [ia Ga] IIC T6 Gb

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, October 17, 2012

Dr.-Ing. U. Johannsmeyer
Direktor und Professor



ZSEx10100e.dotm

(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE PTB 12 ATEX 2017 X

(15) Description of equipment

The indicating instruments of types RIA15 and ORIA15 are used for the measurement and display of currents. A HART-modem is available as an option.

The equipment is mounted into a field housing or a control board and installed inside the hazardous area.

The permissible range of the ambient temperature is $-40\text{ °C} \dots 60\text{ °C}$.

Electrical data

Supply circuit type of protection Intrinsic Safety Ex ia IIC
(terminals +/- or +/-LED) or Ex ib IIC
only for connection to a certified intrinsically safe circuit

Maximum values:

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

$$I_i = 200 \text{ mA}$$

$$P_i = 900 \text{ mW}$$

L_i negligibly low

C_i negligibly low

HART Modem circuit type of protection Intrinsic Safety Ex ia IIC
(auxiliary terminal П/-)

Maximum values:

$$U_o = 7.1 \text{ V DC}$$

$$I_o = 5.6 \text{ mA}$$

$$P_o = 10 \text{ mW}$$

linear characteristic

$$L_i = 35.1 \text{ } \mu\text{H}$$

$$C_i = 11 \text{ nF}$$

For relationship between type of protection and the permissible external reactances, reference is made to the following table. The tabulated pairs of values apply to the simultaneous occurrence of both types of reactances L_o/C_o . Effective internal reactances existing in the circuit have already been considered.

Ex ia	IIC	IIB	IIA
L_o	10 mH	20 mH	50 mH
C_o	1.3 μ F	6.1 μ F	7.9 μ F

(16) Test report PTB Ex12-22183

(17) Special conditions for safe use

The indicating instruments of types RIA15 and ORIA15 shall be installed as such, that the generation of sparks due to impact or friction between metal/steel and the enclosure is prevented even in infrequently occurring events.

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

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