

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

(2) Equipment and protective systems intended for use in potentially explosive atmospheres – Directive 2014/34/EU

(3) EU - Type Examination Certificate Number

EPS 14 ATEX 1 789 X

Revision 1

(4) Equipment: TR.Ex Transmitter and IY.Ex Sensors

(5) Manufacturer: petz industries GmbH & Co. KG

(6) Address: Mühlenweg 2
96358 Teuschnitz / Haßlach
Germany

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

(8) Bureau Veritas Consumer Products Services Germany GmbH, notified body No. 2004 in accordance with Article 21 given in the Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014, 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 of the Directive. The examination and test results are recorded in the confidential documentation under the reference number 15TH0087.

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN 60079-0:2012+A11:2013

EN 60079-7:2007

EN 60079-11:2012

EN 60079-18:2015

EN 60079-26:2007


EN 60079-31:2014

(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 annex to this certificate.

(11) This EU - Type Examination Certificate relates only to the design and examination of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture of this equipment and its placing on the market. Those requirements are not covered by this certificate.

(12) The marking of the equipment shall include the following:

 II 2(1)G Ex eb mb ib [ia Ga] IIC T4 Gb Transmitter
II 2(1)D Ex tb [ia Da] IIIC T130°C Db

 II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb Sensor
II 1/2D Ex ia IIIC T130°C Da/Db

Certification department of explosion protection

Nuremberg, 2016-06-30

D. Zitzmann



(13)

Annex

(14) **EU - Type Examination Certificate EPS 14 ATEX 1 789 X**

Revision 1

(15) Description of equipment:

The transmitter TR.Ex and the associated sensors type IY.Ex are used for acquisition and analysis of different measurements, e.g. temperature, humidity and difference pressure. The integrated terminal box protected by kind of ignition protection Ex e provides a direct electrical connection in explosive areas.

The transmitter TR.Ex shall only be installed and operated within zones 1/21 and 2/22. The sensors are protected by kind of ignition protection Ex ia and can be installed and used within the zones 0/20 and at the border of areas requiring Ga/Gb and Da/Db.

Rated data:

TR.Ex Transmitter

Maximum transmitter ambient temperature range:

T4	-40°C to +70°C
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24 Vac/dc \pm 20%, $U_m = 30$ V, $U_o = 4.6$ V, $I_o = 0.107$ A (thermal), $I_{o,short} = 0.821$ A (short circuit)
 $P_o = 0.428$ W, trapezoidal characteristic

Maximum external inductances and capacitances:

L_o [mH]	0.100	0.050	0.020	0.010	0.005	0.002	0.001
C_o [μ F]	5.30	8.10	13.00	19.00	30.00	83.00	200.00

IY.Ex Sensoren

Maximum sensor ambient temperature range:

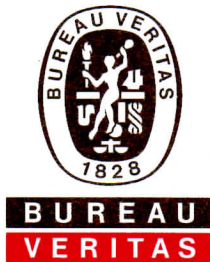
T6	-40°C to +65°C
T5	-40°C to +80°C
T4	-40°C to +115°C
T3-T1	-40°C to +125°C

$U_i = 4.6$ V, $I_i = 0.107$ A (thermal), $I_i = 0.821$ A (short circuit), $P_i = 0.428$ W

Maximum internal inductances and capacitances:

	IY.EX-R...	IY.EX-P...	IY.EX-D...
C_i	330 nF	1034 nF	1034 nF
L_i	negligible		

Beside these sensors also alternative sensors can be used providing that the intrinsic safe values of the [ia] output are met.



(16) Reference number: 15TH0087

(17) Special conditions for safe use:

The transmitter TR.Ex shall be protected from excessive UV light exposure.

The transmitter TR.Ex shall be protected from mechanical impact.

After installing the sensors in areas requiring Ga/Gb and Da/Db the operator shall verify the leak tightness of the facility to achieve a zone separation.

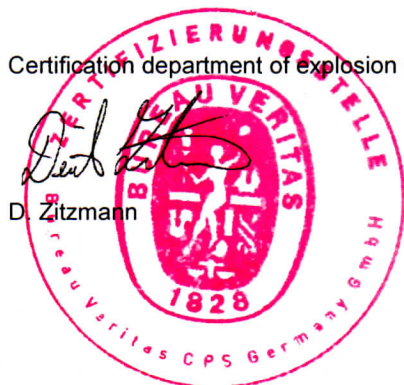
The enclosure of the transmitter TR.Ex shall never be opened while circuits are alive.

(18) Essential health and safety requirements:

Met by compliance with standards.

Certification department of explosion protection

Nuremberg, 2016-06-30



D. Zitzmann