



**BUREAU
VERITAS**



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

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

(3) **EC Type Examination Certificate Number**

EPS 15 ATEX 1 107 X

Revision 0

(4) **Equipment:** SW.Ex Relais Switch and IR.Ex Sensors

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

(6) **Address:** Mühlenweg 2, 96358 Teuschnitz / Haßlach

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

(8) Bureau Veritas Consumer Products Services Germany GmbH, Notified Body No. 2004 in accordance with Article 9 of the Council Directive 94/9/EC of March 23rd 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 of the Directive. The examination and test results are recorded in the confidential report 15TH0388.

(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 60079-31:2014

EN 60079-26:2007

(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 and the construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

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

II 2(1)G Ex eb mb ib [ia Ga] IIC T4 Gb

Relais Switch

II 2(1)D Ex tb [ia Da] IIIC T130°C Db

Sensor

II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb

II 1/2D Ex ia IIIC T130°C Da/Db

Certification department of explosion protection

Nuremberg, 01.02.2016

D. Zitzmann

Page 1 of 3

Certificates without signature are void. This certificate is allowed to be distributed only if not modified. Extracts or modifications must be authorized by Bureau Veritas Consumer Products Services Germany GmbH. EPS 15 ATEX 1 107 X, Revision 0.



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(13)

Annex

(14) **EC-Type Examination Certificate EPS 15 ATEX 1 107 X**

Revision 0

(15) Description of equipment:

The relais switch SW.Ex and the associated sensors type IR.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 relais switch SW.Ex shall only be installed and operated within zones 1/21 and 2/22. The sensors are protected by kind of ignition 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:

SW.Ex Relais Switch

Maximum relais switch ambient temperature range:

T4	-40°C bis +70°C
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Supply: 24 Vac/dc \pm 20%, $U_m = 30$ V

Relais Output: Max. 30 V / 2.0 A

IS Output: $U_o = 4,6$ V, $I_o = 0,107$ A (thermal), $I_{o,short} = 0,821$ A (spark ignition)

$P_o = 0,428$ 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

IR.Ex Sensors

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 (spark ignition), $P_i = 0,428$ W

Maximum internal inductances and capacitances:

	IR.EX-R...	IR.EX-P...	IR.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) Test report: 15TH0388

(17) Special conditions for safe use:

The relais switch SW.Ex shall be protected from excessive UV light exposure.

The relais switch SW.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 relais switch SW.Ex shall never be opened while circuits are alive.

(18) Essential health and safety requirements:

Met by standards.

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Nuremberg, 01.02.2016



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