

IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx EPS 15.0083X Issue No: 0 Certificate history:
Status: Current Page 1 of 3 Issue No. 0 (2016-02-01)
Date of Issue: 2016-02-01
Applicant: petz industries GmbH & Co. KG
Muehlenweg 2
96358 Teuschnitz / Haßlach
Germany
Electrical Apparatus: SW.Ex and IR.Ex
Optional accessory:
Type of Protection: eb mb ib [ia] tb ia
Marking:
Ex eb mb ib [ia Ga] IIC T4 (SW.Ex)
Ex tb [ia Da] IIIC T130°C (SW.Ex)
Ex ia IIC T6/T5/T4 Ga/Gb (IR.Ex)
Ex ia IIIC T130°C Da/Db (IR.Ex)

Approved for issue on behalf of the IECEx
Certification Body:

D. Zitzmann

Position:

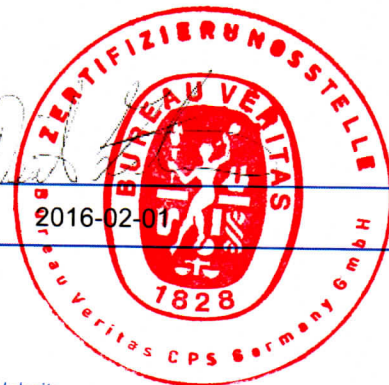
Manager Certification

Signature:

(for printed version)

Date:

2016-02-01

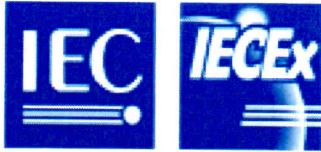


1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

Bureau Veritas Consumer Products Services Germany GmbH
Businesspark A96
86842 Türkheim
Germany





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Manufacturer: petz industries GmbH & Co. KG
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Germany

Additional Manufacturing
location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-18 : 2014 Edition:4.0	Explosive atmospheres – Part 18: Equipment protection by encapsulation "m"
IEC 60079-26 : 2006 Edition:2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

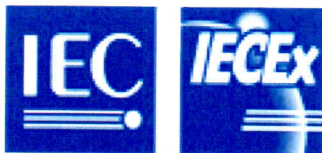
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[DE/EPS/ExTR15.0081/00](#)

Quality Assessment Report:

[DE/EPS/QAR14.0005/01](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

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 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: see certificate attachment.

CONDITIONS OF CERTIFICATION: YES as shown below:

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

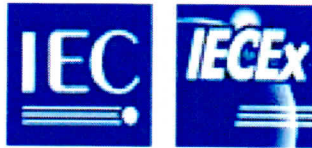
The relais switch SW.Ex shall be protected from mechanical impact.

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.

Annex:

[Petz_15TH0388_IECEX EPS 15.0083X_Attachment.pdf](#)



Applicant: petz industries GmbH & Co. KG
Mühlenweg 2
96358 Teuschnitz / Haßlach

Electrical Apparatus: SW.Ex Relais Switch and IR.Ex Sensors

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 sensors ambient temperature range:

T6	-40°C bis +65°C
T5	-40°C bis +80°C
T4	-40°C bis +115°C
T3-T1	-40°C bis +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 external 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.