

EU - Type Examination Certificate

- (1)
- (2) Equipment and protective systems intended for use in potentially explosive atmospheres – **Directive 2014/34/EU**
- (3) EU - Type Examination Certificate Number

EPS 15 ATEX 1 107 X

Revision 1

- (4) Equipment: SW.Ex Relay Switch and IR.Ex Sensors
- (5) Manufacturer: pi safety components GmbH & Co. KG
- (6) Address: Mühlenweg 2
96358 Teuschnitz
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 15TH0388.
- (9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN IEC 60079-0:2018

**EN 60079-7:2015,
EN IEC 60079-7:2015/A1:2018**


EN 60079-11:2012

**EN 60079-18:2015,
EN 60079-18:2015/A1:2017**


IEC 60079-26:2021

EN 60079-31:2014

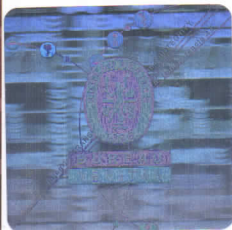
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the annex to this certificate.
- (11) This EU - Type Examination Certificate relates only to the design and construction of the specified equipment 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
II 2(1)D Ex tb [ia Da] IIIC T130°C Db

SW.Ex Relay Switch

 II 1/2G Ex ia IIC T6...T1 Ga/Gb
II 2D Ex ia IIIC T75°C...T145°C Db

IR.Ex Sensors



Certification department of explosion protection

Tuerkheim, 2023-09-12

Ulrich Feike

Certificates without signature and seal 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.





(13)

Annex

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

Revision 1

(15) Description of equipment:

The relay 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 relay switch SW.Ex shall only be installed and operated within zones 1/21 (EPL Gb and Db) and 2/22 (EPL Gc and Dc). The sensors are protected by kind of ignition Ex ia and can be installed and used at the border of areas requiring EPL Ga/Gb and in areas requiring EPL Db.

Electrical data and operating conditions SW.Ex:

Maximum ambient temperature range: $-40\text{ °C} \dots +70\text{ °C}$

Supply: $24\text{ V}_{ac/dc} \pm 20\%$, $50 \dots 60\text{ Hz}$, $U_m = 30\text{ V}$

Relay Output: Max. $30\text{ V} / 2.0\text{ A}$

Sensor interface: $U_o = 5.0\text{ V}$, $I_o = 1.055\text{ A}$, $P_o = 0.492\text{ W}$, $C_o = 3.7\text{ }\mu\text{F}$, $L_o = 0.091\text{ mH}$

Electrical data and operating conditions IR.Ex:

Intrinsic safe supply: $U_i = 5.0\text{ V}$, $I_i = 1055\text{ mA}$, $P_i = 0.492\text{ W}$, $C_i = 440\text{ nF}$, $L_i = \text{negligible}$

Maximum ambient temperature range sensors:

T6 / T75°C	$-40\text{ °C} \dots +55\text{ °C}$
T5 / T90°C	$-40\text{ °C} \dots +70\text{ °C}$
T4 / T120°C	$-40\text{ °C} \dots +100\text{ °C}$
T3-T1 / T145°C	$-40\text{ °C} \dots +125\text{ °C}$

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

(16) Reference number: 15TH0388

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(continuation annex)

(17) Special conditions for safe use:

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

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

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

The enclosure of the relay switch SW.Ex shall never be opened while circuits are alive.

(18) Essential health and safety requirements:

Met by compliance with standards.

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