



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Ex COMPONENT CERTIFICATE

Certificate No.: **IECEX IBE 14.0058U**

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Certificate history:

Status: **Current**

Issue No: 4

Issue 3 (2022-06-02)

Issue 2 (2019-02-01)

Issue 1 (2015-02-06)

Issue 0 (2014-11-12)

Date of Issue: 2024-12-12

Applicant: **EPHY-MESS GmbH**
Berta-Cramer-Ring 1
65205 Wiesbaden
Germany

Ex Component: Temperature sensor PR-SPA-EX-***

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **increased safety "e", intrinsic safety "i", protection by enclosure "t"**

Marking: Ex eb IIC Gb

Ex ia IIC Gb

Ex ia IIIC Db

Ex tb IIIC Db

Approved for issue on behalf of the IECEX
Certification Body:

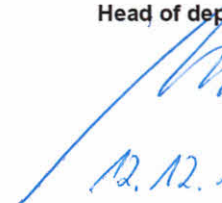
Kai Willamowski

Position:

Head of department Certification Body

Signature:
(for printed version)

Date:
(for printed version)


12.12.2024

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Certificate issued by:

IBExU Institut für Sicherheitstechnik GmbH
Fuchsmühlenweg 7
09599 Freiberg
Germany



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Date of issue: 2024-12-12

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Manufacturer: **EPHY-MESS GmbH**
Berta-Cramer-Ring 1
65205 Wiesbaden
Germany

Manufacturing
locations:

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 component 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 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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

TEST & ASSESSMENT REPORTS:

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

Test Reports:

[DE/IBE/ExTR14.0063/00](#)
[DE/IBE/ExTR14.0063/03](#)

[DE/IBE/ExTR14.0063/01](#)

[DE/IBE/ExTR14.0063/02](#)

Quality Assessment Report:

[DE/IBE/QAR15.0001/06](#)



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Ex Component(s) covered by this certificate is described below:

The temperature sensors serve for transmitting a temperature in an electrical value (voltage, resistance) at the measuring point. As component, they are intended for the installation into electrical motors (generators).

The sensors are suitable for the use in hazardous areas which require EPL Gb and Db equipment.

The temperature sensors are manufactured in different versions which are listed in the Annex.

Technical Data:

Operating temperature range: -60 °C / -55 °C to +175 °C / +180 °C

Degree of protection: at least IP64

Electrical Data:

parameters		Ex e, Ex t	Ex i
maximum voltage	class A	$U_{max} = 17 \text{ V DC}$	$U_i = 17 \text{ V DC}$
	class B	$U_{max} = 25 \text{ V DC}$	$U_i = 25 \text{ V DC}$
maximum current	class A	$I_{max} = 55 \text{ mA}$	$I_i = 55 \text{ mA}$
	class B	$I_{max} = 80 \text{ mA}$	$I_i = 80 \text{ mA}$
maximum power	class A	$P_{max} = 1 \text{ W}$	$P_i = 1 \text{ W}$
	class B	$P_{max} = 2 \text{ W}$	$P_i = 2 \text{ W}$

SCHEDULE OF LIMITATIONS:

- The mounting of the temperature sensor has to be assessed in the context of the certification of equipment. The temperature sensor has to be installed protected against mechanical load. Sharp bending as well as mechanical stress concentrated to small spots of the sensor shall be avoided.
- The cable ends shall be connected to suitable terminals as fixed installation or in the non-hazardous area.
- It has to be observed in the context of the certification of equipment that the maximum electrical values as well as the maximum permitted temperatures are met.
- The permitted service temperature range depends on the materials used and is mentioned in the instructions for the several types.
- The type PR-SPA-WKF-KG has to be installed protected from UV-light.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

The version PR-SPA-EX-WKF-MH may be manufactured with an alternative sleeve.

Annex:

[Annex_IBE14.0058U_03.pdf](#)



IECEX Certificate of Conformity - Annex



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Issue No: 3

Date of Issue: 2024-12-16

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The temperature sensors are manufactured in different versions which are listed below:

PR-SPA-EX-WKF-ESH	winding head thermometer, single heat shrinking insulated , with permanently connected cable
PR-SPA-EX-WKF-KH	winding head thermometer with permanently connected cable, where the temperature sensor is fixed in a ceramic sleeve by addition of filler resin.
PR-SPA-EX-WKF-MH	winding head thermometer with permanently connected cable and insulated temperature sensor which is installed into a stainless steel protection pipe, protected against vibrations.
PR-SPA-EX-WKF-KG	winding head thermometer with permanently connected cable and insulated temperature sensor which is installed into a housing made of plastic including casting compound.
PR-SPA-EX-NWT-ST PR-SPA-EX-NWT-SH	Slot resistance thermometer with mica insulation flexible slot resistance thermometer insulated with shrinking hose
PR-SPA-EX-NWT-AK	measuring resistance in carrier body
PR-SPA-EX-NWT-ZS	Slot resistance thermometer sealed in a HGW carrier body based on epoxy