



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

Certificate No.:	IECEX IBE 14.0048X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 3	Issue 2 (2019-01-22)
Date of Issue:	2022-04-26		Issue 1 (2015-02-06)
Applicant:	EPHY-MESS GmbH Berta-Cramer-Ring 1 65205 Wiesbaden Germany		Issue 0 (2014-12-15)
Equipment:	Temperature sensor PR-SPA-EX-LTH		
Optional accessory:			
Type of Protection:	Increased safety "e", Intrinsic safety "i", Protection by enclosure "t"		
Marking:	Ex eb IIC T6...T3 Gb		
	Ex tb IIIC T80 °C...T130 °C Db		
	Ex ia IIC T6...T3 Gb		
	Ex ia III C T80 °C...T130 °C Db		
	-60 °C / -55 °C ≤ T _a ≤ 100 °C		

Approved for issue on behalf of the IECEx
Certification Body:

Alexander Henker

Position:

Deputy Head of department Certification Body

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.



Certificate issued by:

IBExU Institut für Sicherheitstechnik GmbH
Fuchsmühlenweg 7
09599 Freiberg
Germany



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

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

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 equipment 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 equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[DE/IBE/ExTR14.0042/00](#)

[DE/IBE/ExTR14.0042/01](#)

[DE/IBE/ExTR14.0042/02](#)

Quality Assessment Report:

[DE/IBE/QAR15.0001/04](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The temperature sensors of the type PR-SPA-EX-LTH were developed especially for the installation in (blind) hole drillings at electric motors (generators), gears or other electric machines. The temperature sensor is designed on the basis of a passive resistor which is installed in a stainless steel protective tube. The temperature is converted into an electrical quantity (voltage, resistance) at a measuring point. Various connection head variants are available for the electrical connection. The intrinsically safe versions can also be equipped with a connector plug or bimetal switch.

The sensors are designed for use in hazardous areas requiring EPL Gb or Db equipment.

Technical data:

ambient temperature: -60 °C / -55 °C up to +100 °C
max. process temperature range: -60 °C up to +180 °C

Electrical data:

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

Several types are provided, which differ in form of connecting head and connection facilities. For detailed information see functional description.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The sensors shall be installed protected against mechanical load. Sharp bending as well as mechanical stress concentrated to small spots of the sensor shall be avoided.
- The permitted media temperature depends on the maximum permitted input power, the temperature class assigned and the ambient temperature range. The minimum ambient temperature is limited by the components used. Further information are mentioned in the manual.
- The cable ends shall be connected to suitable terminals as fixed installation or outside of explosive atmosphere.
- The external cables have to be suitable for the operating temperature range assigned.
- The requirements of respective type of protection must be guaranteed after the cable installation.
- The temperature sensors have to be bonded to equipotential bonding system of the plant by installation.
- The supply unit shall provide a connector which corresponds to the method of connection of the thermometer (2-, 3- or 4-wire connection). It is to be considered that the electrical values are not exceeded.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

The temperature sensor complies with the requirements of IEC 60079-0, Ed. 7 and IEC 60079-7, Ed. 5.1.