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 IBE 19.0012X

Issue No: 0

Certificate history:
Issue No. 0 (2019-06-18)

Status: **Current**

Date of Issue: **2019-06-18**

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

Equipment: **Temperature sensor PR-SPA-EX-MH**

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...T185 °C Db

Ex ia IIC T6...T3 Gb

Ex ia IIIC T80 °C...T185 °C Db
-60 °C ≤ T_a ≤ 180 °C (maximum values)

Approved for issue on behalf of the IECEx Certification Body: Dipl.-Ing. Alexander Henker

Position: Head of Certification Body

Signature:
(for printed version)

Date:

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.

Certificate issued by:

IBExU Institut für Sicherheitstechnik GmbH
Certification Body
Fuchsmühlenweg 7
09599 Freiberg
Germany

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Manufacturer: **EPHY-MESS GmbH**
Berta-Cramer-Ring 1
65205 Wiesbaden
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 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 : 2017 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
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/IBE/ExTR17.0033/00

Quality Assessment Report:

DE/IBE/QAR15.0001/02

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The temperature sensors of the type PR-SPA-EX-MH 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 or thermocouple or other which is installed in a stainless steel tube. The temperature is converted into an electrical quantity (voltage, resistance) at a measuring point. A permanently connected cable is fed out the metal tube 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 range: -60 °C ... +180 °C (maximum values, depending on the sensor used

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

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 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.