

**Product or Protective System intended for use in Potentially Explosive Atmospheres
UK SI 2016:1107 (as amended) - Schedule 3A Part 1**

Type Examination Certificate No. **IBExU23UKEX0013X | issue 00**

Product: **Temperature sensor
Type PR-SPA-EX-MH**

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

This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

IBExU UK Ltd., Approved Body number 8522, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UK SI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential test report **IB2330050-00**, dated 2023-05-30.

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN IEC 60079-0:2018
EN 60079-11:2012**


**EN IEC 60079-7:2015/A1:2018
EN 60079-31:2014**

Except in respect of those requirements listed at section 18 of the schedule to this certificate.

If the sign "X" is placed after the certificate number, it indicates that the product is subject to specific conditions of use specified in the schedule to this certificate.

This UK Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

The marking of the product shall include the following:

- II 2G Ex eb IIC T6...T3 Gb**
- II 2D Ex tb IIIC T80 °C...T185 °C Db**
-  **II 2G Ex ia IIC T6...T3 Gb**
- II 2D Ex ia IIIC T80 °C...T185 °C Db**
- 60 °C ≤ T_a ≤ +180 °C (maximum values)**

2023-11-17
Date of initial issue

2023-11-17
Date of issue

N/A
Expiry date

IBExU UK Ltd.
Bristol Road South · Regus Park House
Birmingham · B45 9AH
United Kingdom



Philip Randall | Head of Certification Body

15 **Description of Product**

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.

Intrinsically safe versions can also be equipped with a connector plug. Bimetal switches may be used in versions which comply with the requirements of intrinsic safety “ia” or protection by enclosure “t”.

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)
- maximum process temperature: +180 °C
- degree of protection: at least IP64

parameters		Ex e, Ex t	Ex i *
maximum voltage	class A	U _n = 17 V DC	U _i = 17 V DC
	class B	U _n = 25 V DC	U _i = 25 V DC
maximum current	class A	I _n = 55 mA	I _i = 55 mA
	class B	I _n = 80 mA	I _i = 80 mA
maximum power	class A	P _n = 1 W	P _i = 1 W
	class B	P _n = 2 W	P _i = 2 W
internal capacity			L _i = negligible
internal inductance			C _i = negligible

* Source with linear characteristic

16 **Test report No. (associated with this certificate issue)**

IB2330050-00, dated 2023-05-30

17 **Specific conditions of Use**

- 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 has to be considered that the electrical values are not exceeded.

18 Essential Health and Safety Requirements (Regulations Schedule 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

19 Drawings and documents

DOCUMENT TITLE	DOCUMENT NUMBER	REVISION	RELEASE DATE
Test documents over-view	TDO_IB2330050-00	00	2023-05-30