



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 CML 20.0072X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2020-12-22

Applicant: **H&B Sensors Ltd**
Odyssey House
Durban Road
Bognor Regis
West Sussex.
PO22 9RH
United Kingdom

Equipment: **HBS5600 Universal Temperature Transmitter/Indicator**

Optional accessory:

Type of Protection: **Intrinsically safe**

Marking: Ex ia IIC T4 Gb
Ex ia IIIC T135°C Db
-40°C to +85°C

Approved for issue on behalf of the IECEx
Certification Body:

H M Amos MIET

Position:

Certificate Manager

Signature:
(for printed version)

Date:

December 22, 2020

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:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom





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Manufacturer: **H&B Sensors Ltd**
Odyssey House
Durban Road
Bognor Regis
West Sussex.
PO22 9RH
United Kingdom

Additional
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 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

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 Report:

[GB/CML/ExTR20.0266/00](#)

Quality Assessment Report:

[GB/SIR/QAR09.0015/07](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The HBS5600 Universal Temperature Transmitter/Indicator is a HART 5 upwards (generic device) compatible universal temperature transmitter with display. It accepts RTD, Thermocouple, Potentiometer or millivolt input signals and converts them to the industry standard (4 to 20) mA transmission signal.

See Annex for full description and Conditions of Manufacture

SPECIFIC CONDITIONS OF USE: YES as shown below:

See Annex for Specific Conditions of Use

Annex:

[Certificate Annex IECEx CML 20_0072X Issue 0.pdf](#)

Annexe to: IECEx CML 20.0072X, Issue 0
Applicant: H&B Sensors Ltd
Apparatus: HBS5600 Universal Temperature Transmitter/Indicator



Description

The HBS5600 Universal Temperature Transmitter/Indicator is a HART 5 upwards (generic device) compatible universal temperature transmitter with display. It accepts RTD, Thermocouple, Potentiometer or millivolt input signals and converts them to the industry standard (4 to 20) mA transmission signal.

The HBS5600 Universal Temperature Transmitter/Indicator consists of polyurethane based potted main and display PCBs, housed in a polycarbonate and ABS sub-assembly. The sub-assembly will be fitted inside a separately certified aluminium or stainless-steel enclosure with or without a silicone RTV cemented glass windowed lid and nitrile O-rings.

When operating in the field, the equipment is to be powered only by an intrinsically safe supply. The equipment has the following parameters:

$U_i = 30 \text{ Vdc}$

$I_i = 100 \text{ mA}$

$P_i = 750 \text{ mW}$

$C_i = 0$

$L_i = 0$

Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification:

- i. Where the product incorporates certified parts or safety critical components, the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. The HBS5600 Temperature Transmitter shall be provided with a separately certified ATEX/IECEx enclosure. The enclosure may be approved for any Zone provided it meets the following requirements, and a copy of the installation documents for the separately certified enclosure shall be provided with the equipment.
 - Suitable for an ambient temperature range of at least -40°C to $+85^{\circ}\text{C}$, and if applicable, a service temperature of $+100^{\circ}\text{C}$.
 - Has an ingress protection rating of at least IP54.
 - Does not have any electrostatic hazard warnings.

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- iii. Where the separately certified enclosure provided with the equipment contains, by mass, more than 10% in total of aluminium, magnesium, titanium and zirconium, the installer/user shall be made aware of this and instructions shall detail the specific conditions of use regards to protecting the enclosure from impact and friction.

Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

- i. The HBS5600 Temperature Transmitter is only suitable for connection to Thermocouple(s), RTD temperature sensor(s) or slide wire resistance devices or other simple apparatus. They shall conform to the requirements for simple apparatus as defined in IEC 60079-11 clause 5.7 and shall meet the dielectric withstanding requirements of IEC 60079-11 clause 6.3.13. The insulation must be capable of withstanding an r.m.s a.c. test voltage of $2U + 1000V$, a minimum of 1500V r.m.s, where U is the sum of the voltages of the intrinsically safe and the non-intrinsically safe circuit.
- ii. Connections to the separately certified enclosure shall be suitable for the protection concepts of the enclosure and maintain the minimum ingress protection rating of IP54.
- iii. When connected to sensors measuring temperatures within a process or location, the installer shall ensure the temperature transmitter module is not exposed to temperatures outside the ambient temperature range of $-40^{\circ}C$ to $+85^{\circ}C$.
- iv. The HBS5600 Temperature Transmitter may be fitted inside an enclosure having a material composition containing by mass more than 10% in total of aluminium, magnesium, titanium and zirconium. Where this is the case, the installation shall protect the enclosure from impacts and friction.
- v. The equipment shall only be configured by means of the HBSUSB9 configurator, covered under EMT17ATEX0037X / IECEx EMT 17.0014X; connection shall be in the safe area only. Additionally, the HBS5600 Temperature Transmitter may be configured in hazardous area via HART communication.
- vi. A copy of the instructions can be downloaded at www.hbsensors.com.

Components covered by Ex Certificates issued to older editions of Standards

None