

1 EU - TYPE EXAMINATION CERTIFICATE

2 Product or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU – Annex III

3 EU - Type Examination Certificate No.: **EMT17ATEX0036X (incorporating variation V1)**

4 Product: **Temperature Transmitter - HBS4400 & HBS4600**

5 Manufacturer: **H&B Sensors Ltd.,**

6 Address: **Odyssey House, Durban Road, Bognor Regis, West Sussex, PO22 9RH,
United Kingdom.**

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

8 Element Materials Technology, Notified Body number 2812, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 Annex II to the Directive. The examination and test results are recorded in the confidential report **TRA-029625-33-03A**

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


EN 60079-0:2012/A11:2013 EN 60079-11:2012

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

10 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.

11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall include the following:

 **II 1 GD**

Ex ia IIC T4 Ga

Tamb -40 °C to +85 °C

Ex ia IIIC T135 °C Da

Tamb -40 °C to +85 °C

This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the Element Materials Technology Ex Certification Scheme.

S.P. Winsor

S P Winsor, Certification Manager

Issue date: 2021-01-04

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13 SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

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15 Description of Product

The HBS4400 and the HBS4600 are intrinsically safe field mounted temperature transmitters. The device transmits temperature data remotely over a 4 – 20 mA current loop. The equipment is completely encapsulated except for the intrinsically safe I/O terminals and the connector to an external USB configuration device. The only difference between the two models is that the HBS4600 features additional components to enable HART communications.

When operating in the field, the equipment is to be powered only by an intrinsically safe supply.

When being configured in the safe area there is a connection via the USB Configurator accessory (the subject of a separate ATEX certification - EMT17ATEX0037X).

Table of entity parameters	
Parameter	Barrier Input (4-20 mA)
Ui	30 V
Ii	100 mA
Pi	0.75W
Um	-
Uo	-
Io	-
Li	0 mH
Ci	0 nF

16 Test Report No. (as added for this issue of the certificate): TRA-029625-33-03A

17 Specific Conditions of Use

1. For gas applications, the HBS4400 & HBS4600 temperature transmitters must be mounted in an ATEX/IECEx approved enclosure rated for IP54 and located in an area where the enclosure will not be subject to impact or friction.
2. For dust applications, the HBS4400 & HBS4600 temperature transmitters must be mounted in a suitably ATEX or IECEx certified enclosure appropriate for the zone of end use.
3. The ambient temperature range of the enclosure will limit the permitted ambient range of the overall equipment. Refer to enclosure certificate.
4. Only suitable for connection to thermocouples, RTD temperature sensors or slide wire resistance devices. They shall meet the requirements for simple apparatus as per IEC 60079-11 clause 5.7 and shall meet the dielectric withstanding requirements of IEC 60079-11 clause 6.3.13



Attention is drawn to the operating and installation instructions which may contain useful information in relation to conditions of use.

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18 Essential Health and Safety Requirements (Directive Annex II)

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

The list of controlled technical documentation is given in Appendix A to this schedule.

20 Routine Tests

None.

21 Specific Conditions for Manufacture

None.

22 Photographs



23 Details of Markings



24 Certificate History

Original certificate	2017-11-21	First issue.
Variation V1	2020-02-02	This certificate was originally issued by Notified Body number 0891 under Directive 2014/34/EU. The technical file has been transferred to Element Notified Body number 2812 without further assessment or evaluation

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This certificate is a consolidated certificate and reflects the latest status of the certification, including all variations and amendments.

25 Notes to CE marking

In respect of CE Marking, Element Materials Technology accepts no responsibility for the compliance of the product against all applicable Directives in all applications.

26 Notes to this certificate

Element Materials Technology certification reference: NR-HBSQ-0002.

Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.

Notified Body number 2812 is the designation for Element Materials Technology Rotterdam BV.



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27 Conditions for the validity of this certificate

This certificate remains valid for so long as:

- (i) The equipment listed in section 4 is manufactured in accordance with the documents listed in Appendix A of this certificate.
- (ii) The standards listed in section 9 of this certificate continue to satisfy the Essential Health and Safety Requirements of Annex II of Directive 2014/34/EU and the generally acknowledged state of the art (e.g. as determined by the publishers of those standards).



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APPENDIX A - TECHNICAL DOCUMENTS

Title:	Drawing No.:	Rev. Level:	Date:
HBS4600:			
HBS4600 User Manual	-	002	2020-11
SEM310X Bill Of Materials (5 sheets)	S5049	01-05	2016-04-06
HBS4400:			
HBS4400 User Manual	-	002	2020-11
SEM210X Bill Of Materials (5 sheets)	S5048	01-05	2016-04-06
Both Models:			
SEM310 MKII SM Assembly Certification Drawing	S5095	01-04	2016-03-02
SEM310 MKII Comfig Board PCB SM Assy	S5106	01-01	2016-01-21
SEM310 MKII Config Board PCB Sub Assy	S5107	01-01	2016-01-21
CN5327 SEM310 Series Topcap Sub Assembly Certification Drawing (2 sheets)	S5100-VAR	01	2015-10-10
HBS 4440/HBS 4600 General Assembly Certification Drawing	S5103	01-01	2015-10-21
CN5327 SEM310X/210X MKII Wiring Label	S5109	01-01	2016-03-03
SEM310/210 MKII Config Board PCB Drawing	S5105	01-01	2016-01-21
SEM210X_SEM310X Config Interface Bill Of Materials	S5074	01-02	2016-05-05
SEM310/210 MKII Config Board Circuit Diagram	S5104	01-01	2016-01-21
SEM310/SEM210 MKII Certification Circuit Diagram (2 sheets)	S5110	01-01	2016-03-10
SEM310/210 MKII PCB Certification Drawing	S5079	05-01	2016-03-02
SEM310/210 MKII Sub Assembly Certification Drawing	S5096	01-02	2016-01-27
Sem210 MKII SM Assembly Certification Drawing	S5099	01-04	2016-03-02
SEM210X SEM310X Drawing List (Certification)	S5050	01-02	2016-02-16