

1

UNITED KINGDOM CONFORMITY ASSESSMENT

UK TYPE EXAMINATION CERTIFICATE

2 **Product or Protective System Intended for use in Potentially Explosive Atmospheres**
SI 2016:1107 (as amended) – Schedule 3A, Part 1

3 Type Examination Certificate No.: **EMA22UKEX0006X**

4 Product: **ID5001 Ultrasonic Pipeline signal sensing equipment,
ID5001A, ID5001P, Hi-T ULTRAlert v02 Active, Hi-T ULTRAlert v02
Passive**

5 Manufacturer: **Online Electronics Ltd.**

6 Address: **Online House, Blackburn Business Park, Woodburn Road,
Blackburn, Aberdeen, AB21 0PS, 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, Approved Body number 0891, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, 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 reports **TRA-008946-33-02A, TRA-025886-00A, TRA-042472-33-00A, TRA-051952-33-00A & TRA-055552-33-00A.**

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

EN IEC 60079-0:2018

EN IEC 60079-1:2014

EN IEC 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.

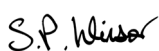
11 This TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall include the following:

 **II 1/2 G Ex ia/db [ia Ga] IIC T4...T6 Ga/Gb Model ID5001P passive sensor**

 **II 1/2 G Ex ia/db [ia Ga] IIC T4 Ga/Gb Model ID5001A active sensor**

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, Certification Manager

Issue date: 2022-04-27

Page 1 of 7

CSF341 4.0

13 SCHEDULE TO UK TYPE EXAMINATION CERTIFICATE

14 CERTIFICATE NUMBER EMA22UKEX0006X

15 Description of Product

The ID5001A Active Ultrasonic Pig Signaller uses 'Active' ultrasonic techniques to detect, log and display the passage of PIGs through oil and gas pipelines. Ultrasonic pulses are generated within the 'Active' transducer and transmitted into a pipeline. Reflections from these pulses are received by the 'Active' transducer and passed to the main electronics for amplification and processing. When a PIG passes the point of installation it can be detected by monitoring these reflections. The Hi-T ULTRAlert v02 Active Ultrasonic Pig Signaller is identical to the ID5001A, but has its own markings.

The ID5001P Passive Ultrasonic Pig Signaller uses 'Passive' ultrasonic techniques to detect, log and display the passage of PIGs through oil and gas pipelines. The 'Passive' transducer receives sounds generated within pipelines and passes them to the main electronics for amplification and processing. When a PIG passes the point of installation it can be detected by monitoring the sounds generated by the PIG itself as it travels through the pipeline. The Hi-T ULTRAlert v02 Passive Ultrasonic Pig Signaller is identical to the ID5001P, but has its own markings.

The ID5001A and ID5001P comprise a component certified flameproof enclosure (AH01) connected to an intrinsically safe transducer via a cable and suitably certified cable entries. The AH01 flameproof housing contains all display and sensing electronics, optional battery pack and optional external power and interface connections via suitably certified cable entries / glands. The AH01 flameproof enclosure is separately certified as a component under ATEX / IECEx certificate number TRAC12ATEX0035U / IECEx TRC 12.0018U respectively.

The ID5001 transducers are encapsulated inside dedicated transducer housings and are connected to the AH01 housing via a cable and gland. Any gland may be used at the transducer end. The transducer housings do not extend to cover the transducer face which relies upon the encapsulation as part of the enclosure to protect from ingress of liquids or solids. The exposed encapsulant is intended to be installed in direct contact with metallic pipelines and does not require additional protection against impact, UV light or electrostatic charging. The encapsulant is not critical for safety.

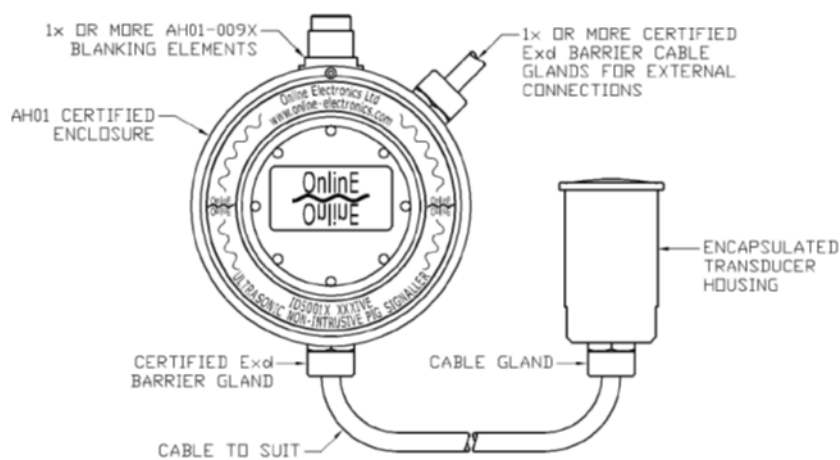
The ambient temperature range of the flameproof enclosure varies with configuration and power dissipation. The tables below show the full range permitted

ID5001P:												
Pd	External supply (no cells fitted)			DURACELL INDUSTRIAL ID1300 fitted			SAFT LS33600 fitted			ANSMANN MaxE D fitted		
	T4	T5	T6	T4	T5	T6	T4	T5	T6	T4	T5	T6
< 1W	-40 to 85°C		-40 to 75°C	-20 to 54°C			-40 to 85°C		-40 to 75°C	-20 to 65°C		
< 5W			-40 to 70°C						-40 to 70°C			
< 10W	-40 to 75°C	-40 to 70°C	-40 to 55°C				-40 to 75°C	-40 to 70°C	-40 to 55°C	-20 to 65°C	-20 to 65°C	-20 to 55°C

SCHEDULE TO UK TYPE EXAMINATION CERTIFICATE

CERTIFICATE NUMBER EMA22UKEX0006X

ID5001A:				
Pd	External supply (no cells fitted)	DURACELL INDUSTRIAL ID1300 fitted	SAFT LS33600 fitted	ANSMANN MaxE D fitted
	T4	T4	T4	T4
< 1W	-40 to 85°C	-20 to 54°C	-40 to 85°C	-20 to 65°C
< 5W			-40 to 75°C	
< 10W				



16 Test report No. (associated with this certificate issue): TRA-055552-33-00A

17 Specific Conditions of Use

1. Do not open when an explosive gas atmosphere may be present.
2. Potential electrostatic charging hazard. The equipment should not be mounted in areas where it could be subjected to highly efficient charging mechanisms, such as fast moving dust or particle filled air, and shall only be cleaned with an anti-static or damp cloth.
3. Sensor, cable and electronics shall only be used as a complete assembly.
4. Internal and external threaded holes are provided for earthing and equipotential bonding. Protective earthing conductors employed shall be greater or equal to the size of the phase conductors, equipotential conductors shall have a minimum cross sectional area of 4mm². The end user shall ensure conductors cannot be readily loosened or twisted. Light metals shall not be used unless special precautions are taken to guard against corrosion.
5. Any external power supply used with this equipment must have a rated output of 30 Vdc or less and comply with IEC 60950 series, IEC 62368 series, IEC 61010-1 or a technically equivalent standard.
6. External power and signals shall only be supplied according to manufacturers' instructions using suitable cable and suitable <M20x1.5 OR M25x1.5 OR M32x1.5 OR ½" NPT OR ¾" NPT> Ex certified cable glands.

SCHEDULE TO UK TYPE EXAMINATION CERTIFICATE

CERTIFICATE NUMBER EMA22UKEX0006X

7. External power and signals shall only be connected using suitable crimp ferrules to prevent accidental disconnection.
8. Unused cable entries shall be sealed using suitable <M20x1.5 OR M25x1.5 OR M32x1.5 OR ½" NPT OR ¾" NPT> Ex certified blanking elements.
9. The temperature at the cable entry point may exceed +70°C and is dependent on the operating ambient temperature plus the temperature rise above operating ambient temperature due to the internal power dissipation (Pd) as per the table below. Cables and glands suitable for use at this temperature must be used.

Pd	Temperature rise above operating ambient temperature
< 1 W	+2 °C
< 5 W	+6 °C
< 10 W	+16 °C

10. Use only DURACELL INDUSTRIAL ID1300 or SAFT LS33600 or ANSMANN MAXE D cells.
11. As part of the routine maintenance schedule, the condition of the window cement shall be periodically inspected for any degradation or discolouration of the cement that may compromise the explosion protection.
12. Sensor face must be positioned close to the pipeline surface and adequately protected from impacts.
13. Temperature class is reliant on the operating ambient temperature, internal power dissipation (Pd), and whether internal cells are fitted. Refer to tables in 'General Product Information' of this report



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

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 test 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.

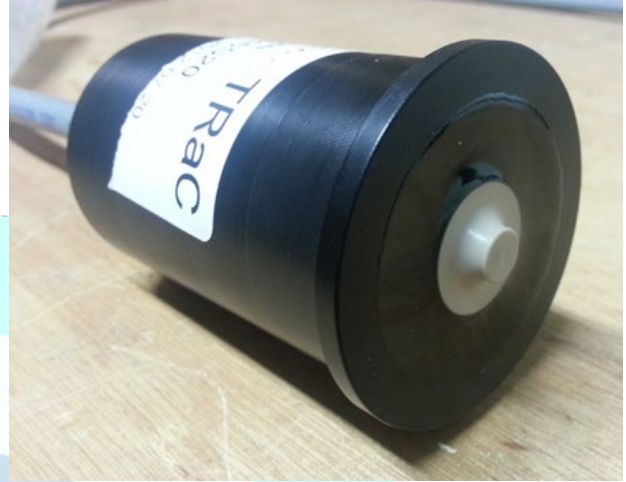
**SCHEDULE TO UK TYPE EXAMINATION CERTIFICATE
CERTIFICATE NUMBER EMA22UKEX0006X**

22 Photographs

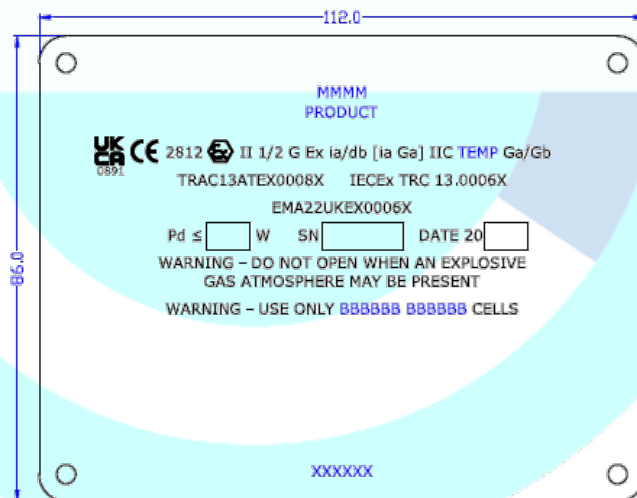
Photograph 1 – ID5001 enclosure fitted with non-penetrating push button



Photograph 2 – ID5001 Sensor



23 Details of Markings



NOTES

1. FIELD MMM WILL BE REPLACED WITH LATEST NAME AND ADDRESS OF THE MANUFACTURER AS PER CERTIFICATION. E.g. Online Electronics Ltd, AB21 0PS, UK OR Power & Energy International Ltd (GD Engineering) S80 2PY, UK (Manufactured for Power & Energy Ltd (GD Engineering) by Online Electronics Ltd, AB21 0PS, UK).
2. FIELD PRODUCT WILL BE REPLACED WITH THE RELEVANT PRODUCT NAME, ID5001A Active Ultrasonic Pig Signaller OR ID5001P Passive Ultrasonic Pig Signaller OR HI-T ULTRAlert v02 Passive Ultrasonic Pig Signaller.
3. FIELD TEMP WILL BE REPLACED WITH THE RELEVANT TEMPERATURE CLASS MARKING, T4 FOR ACTIVE VERSION OR T4..T6 FOR PASSIVE VERSION.
4. FIELD BBBBBB BBBBBB WILL BE REPLACED WITH THE RELEVANT CELL TYPE, DURACELL INDUSTRIAL ID1300 OR SAFT LS33600 OR ANSMANN MAXE D as per EN60079-0:2012 section 29.14. THIS ENTIRE STATEMENT MAY BE EXCLUDED IF BATTERIES ARE NOT AN AVAILABLE OPTION.
5. MAXIMUM POWER DISSIPATION, SERIAL NUMBER, AND DATE OF MANUFACTURE WILL BE STAMPED ON DURING MANUFACTURE.
6. FIELD XXXXX THE LABEL MAY BE ENLARGED AND/OR CONTAIN ADDITIONAL NON-ATEX DETAILS.

SCHEDULE TO UK TYPE EXAMINATION CERTIFICATE
CERTIFICATE NUMBER EMA22UKEX0006X

24 Certificate History

Original certificate 2022-04-27 First issue.

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

25 Notes to UKCA marking

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

26 Notes to this certificate

Element Materials Technology certification reference: TRA-055552-00 (GU-ONLQ-0020).

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

Approved Body 0891 is the designation for Element Materials Technology Warwick Ltd.

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 Schedule 1 of the Regulations SI 2016:1107 (as amended by SI 2019:696) and the generally acknowledged state of the art (e.g. as determined by the publishers of those standards).

**SCHEDULE TO UK TYPE EXAMINATION CERTIFICATE
CERTIFICATE NUMBER EMA22UKEX0006X**

APPENDIX A - TECHNICAL DOCUMENTS

Title:	Drawing No.:	Rev. Level:	Date:
ID5001 ATEX / IECEx Technical File (20 sheets)	ID5001_X001	I01	2022-02-07
ID5001_X002 Safety Instructions (5 sheets)	ID5001_X002	D04	2022-02-02
ID5001_X003 (schematic diagram)	ID5001_X003	E00	2019-04-08
ID5001_X004 (PCB layout)	ID5001_X004	C00	2019-02-13
ID5001 Safety Critical Markings	ID5001_X006	F02	2022-02-07