

# 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.: **TRL08ATEX21161X (incorporating variations V1 to V8)**

4 Product: **Ultrasonic Pipeline Pig Signallers, Models ID5000A, ID5000P,  
Hi-T ULTRAlert Active Ultrasonic Pig Signaller and  
Hi-T ULTRAlert Passive Ultrasonic Pig Signaller**

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, 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 **XU1656/8695, 16-0023-004988, 16-0122-006873, TES-003405-16-00, TRA-006022-33-00, TRA-006193-33-00A and TRA-037812-33-00A.**

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

**EN60079-0:2006**

**EN60079-1:2007**

**EN60079-11:2007**

**EN60079-18:2004**

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.

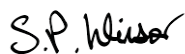
11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall include the following:

 **II 2 G Ex d mb IIC T5 / T6 (ID5000A / Hi-T ULTRAlert Active only)**

 **II 2 G Ex d ib IIC T5 / T6 (ID5000P / Hi-T ULTRAlert Passive only)**

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: 2019-11-01

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**13 SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE**

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**15 Description of Product**

The ID5000A Ultrasonic Pipeline signal sensing equipment comprises of a component certified flameproof housing and a remote transducer that is connected via a cable through suitably certified cable entries. It uses Ex d mb concepts as its basis of safety. The Hi-T ULTRAlert Active Ultrasonic Pig Signaller is identical to the ID5000A, but has its own markings and own battery pack.

The flameproof housing contains all display and sensing electronics, battery pack and external power connectivity via suitably certified cable entries/glands. The signals connected to the remote transducer are adequately rated for power, voltage and current using fuses.

The transducer is housed in a metallic housing that provides robust construction and mounting facilities. The metallic transducer housing does 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 in direct contact with metallic pipelines and does not require any additional protection against impact, UV Light, or electrostatic charging. The transducer affixed to the pipeline by means of a mounting plate secured with steel bindings.

The flameproof enclosures are separately certified as component boxes under certificate number TRAC12ATEX0008U.

The ID5000P is a variation to the previously certified ID5000 Pig Signaller. It employs a passive piezoelectric transducer and different components in the transducer and barrier circuits. It uses Ex d ib concepts as its basis of safety. The Hi-T ULTRAlert Passive Ultrasonic Pig Signaller is identical to the ID5000P, but has its own markings and own battery pack.

**Permitted Ambient Temperature Range**

Power Dissipation (Pd) Watts	External Power		Alkaline Battery		Rechargeable Battery	
	T5	T6	T5	T6	T5	T6
7W < Pd <= 10W	-40°C to +70°C	-40°C to +55°C	-20°C to +54°C	-20°C to +54°C	-20°C to +65°C	-20°C to +55°C
3W < Pd <= 7W	-40°C to +75°C	-40°C to +60°C	-20°C to +54°C	-20°C to +54°C	-20°C to +65°C	-20°C to +60°C
2W < Pd <= 3W	-20°C to +75°C	-20°C to +65°C	-20°C to +54°C	-20°C to +54°C	-20°C to +65°C	-20°C to +65°C
1W < Pd <= 2W	-20°C to +80°C	-20°C to +65°C	-20°C to +54°C	-20°C to +54°C	-20°C to +65°C	-20°C to +65°C
Pd <= 1W	-20°C to +85°C	-20°C to +70°C	-20°C to +54°C	-20°C to +54°C	-20°C to +65°C	-20°C to +65°C

**16 Test report No. (associated with this certificate issue): None**

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### 17 Specific Conditions of Use

1. Where painted or powder coated, the enclosures could present an electrostatic hazard. Clean only with a damp or anti-static cloth.
2. For equipment with temperature class T5, cables must be suitable for use at temperatures of 100°C. For equipment with temperature class T6, cables must be suitable for use at temperatures of 85°C
3. Only suitably certified cable glands and blanking elements shall be used.
4. External power and signals shall only be supplied according to manufacturer's instructions by suitable cable using a suitably certified cable gland.
5. Equipment must be adequately earth bonded via the external earth terminal. Conductor size shall be 2.5mm<sup>2</sup> or the same size as the input power cabling, whichever is the greater
6. Transducer face must be positioned close to the pipeline surface and adequately protected from impacts.
7. Transducer, cable and electronics shall only be used as a complete assembly.
8. Only ID5000 battery packs shall be used with the ID5000. Only Hi-T Ultralert battery packs may be used with the Hi-T Ultralert.
9. The battery pack must be removed if the external power supply is attached.
10. Do not open enclosure or replace battery packs when a potentially explosive atmosphere is present.
11. Temperature class is reliant on the upper ambient temperature, internal power dissipation and whether the equipment is fitted with a battery pack, or externally powered. Refer to certificate (Section 19 - Details of Markings).
12. The battery pack shall only be charged when removed from the equipment and moved to a safe area.



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 (Directive Annex II)

The standards listed in section 9 of this certificate are no longer listed within the Official Journal and are therefore not harmonised. A gap analysis has been conducted by Element Materials Technology Ltd. against the relevant, latest versions of the harmonised EN 60079 series standards and has confirmed continued compliance with the Essential Health and Safety Requirements. This analysis is detailed in report: TRA-037812-33-00A.

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.

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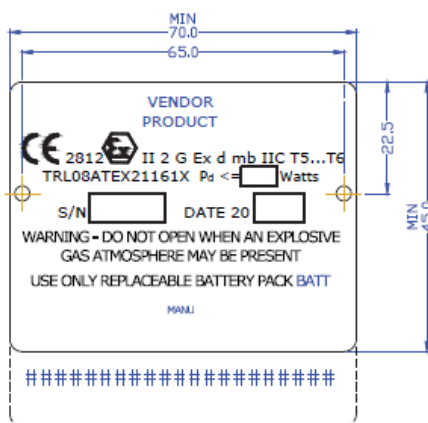
**21 Specific Conditions for Manufacture**

1. Any cable length may be used between the transducer and housing providing total cable capacitance and inductance does not exceed 12.39  $\mu$ F and 15 mH respectively.
2. ID5000P - Batch sample shall be checked to ensure encapsulant is void free as per procedure documented in ID5000\_X042\_A00.
3. ID5000P - A minimum spacing of 1.5mm to be maintained on the main PCB to and between the safety critical barrier components (D11, D12, F3 and R39). The PCB tracks shall be copper, have a minimum thickness of 33  $\mu$ m and a minimum width (within the barrier circuit) of 1 mm.
4. Where an alternative operator control to the JCE model PBJ is used, these shall be suitable for use at a reference pressure of 13.2 Bar.

**22 Photographs**



**23 Details of Markings**



TEXT REPLACEMENT		
	Online Electronics	GD Engineering
VENDOR	MMMM	GD ENGINEERING An SPX BRAND, S80 2PY, UK
PRODUCT	ID5000A Ultrasonic Pkg Signaller	HI-T ULTRALert Active Ultrasonic Pkg Signaller
BATT	ID5000	HI-T ULTRALert
MANU	-	Manufactured For GD Engineering by MMMM

MMMM replaced with latest name and address of manufacturer as per the certification. E.g. ONLINE ELECTRONICS LTD., AB21 0PS

LABEL SIZE MAY BE INCREASED TO  
INCORPORATE OTHER INFORMATION  
(###)

## SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

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#### 24 Details of Variations to this Certificate

This certificate is a consolidated certificate and reflects the latest status of the certification, including the following variations:

- Variation V1 - This Variation includes minor modifications to the label drawing and battery pack part number to allow the product to be marketed under a different brand name. The brand name covered by this variation is Hi-T ULTRAlert. The certification parameters for this variation are the same as the original certification.
- Variation V1 issue 2 – This issue was to make typographical changes requested by the manufacturer.
- Variation V2 - This variation includes introduction of new model ID5000P, addition of type GUBHS3 component enclosure and change to the T rating of the ID5000 / Hi-T ULTRAlert.
- Variation V3 - This variation covered a change of designation from ID5000 to ID5000A (and corresponding name change for the Hi-T ULTRAlert Active models), a change of permitted internal power dissipation and internal component arrangement and the addition of a re-chargeable cell option and an external power option for all models.
- Variation V4 - The variation covers a modification in the encapsulation material used.
- Variation V5 - This variation covers the extension of the lower temperature range to -40°C and additional drawings for manufacture.
- Variation V6 - Change to the approved batteries.
- Variation V7 - Update of new address to all documentation and minor text corrections. Existing drawings replaced with new documents which employ a new numbering and naming convention.
- Variation V8 - 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.

#### 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-ONLQ-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.

In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variation certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

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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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<b>APPENDIX A - TECHNICAL DOCUMENTS</b>			
<b>Title:</b>	<b>Drawing No.:</b>	<b>Rev. Level:</b>	<b>Date:</b>
General arrangement	ID5000_X003	A01	2017-12-18
Battery Holder	ID5000_X004	A00	2017-06-15
Battery Pack	ID5000_X005	A00	2017-06-15
Power Dissipation (1)	ID5000_X006	A00	2017-06-13
Power Dissipation (2)	ID5000_X007	A00	2017-06-13
Internal Assembly	ID5000_X008	A00	2017-06-15
Front Plate	ID5000_X009	A00	2017-06-13
Housing	ID5000_X010	A00	2017-06-15
Passive Sensor	ID5000_X011	A00	2017-06-15
Partition	ID5000_X012	A00	2017-06-15
Passive Transducer Weight	ID5000_X013	A00	2017-06-15
Main Schematic	ID5000_X014	A01	2017-12-18
Main PCB	ID5000_X015	A00	2017-06-14
ID5000P AMP ATEX Interface Schematic	ID5000_X016	A00	2017-06-14
ID5000P AMP Interface PCB Top	ID5000_X017	A00	2017-06-14
ID5000P AMP Interface PCB Bottom	ID5000_X018	A00	2017-06-14
D5000P Transducer Schematic	ID5000_X019	A00	2017-06-14
ID5000P Transducer Top Bottom_PCB	ID5000_X020	A00	2017-06-14
ID5000P Transducer Top PCB	ID5000_X021	A00	2017-06-14
ID5000P Transducer Bottom PCB	ID5000_X022	A00	2017-06-14
ID5000P AMP ATEX Interface BOM	ID5000_X023	A00	2017-06-14
ID5000 Main PCB BOM	ID5000_X024	A00	2017-06-14
ID5000P Transducer BOM	ID5000_X025	A00	2017-06-14
ID5000 Battery BOM	ID5000_X026	A00	2017-06-14
ID5000A AMP ATEX Interface Schematic	ID5000_X027	A00	2017-06-14
ID5000A AMP Interface PCB Top	ID5000_X028	A00	2017-06-14
ID5000A AMP PCB Bottom	ID5000_X029	A00	2017-06-14
ID5000A Transducer Schematic	ID5000_X030	A00	2017-06-14
ATEX Markings	ID5000_X031	B00	2019-10-14
Markings (Passive)	ID5000_X032	A02	2018-08-07
ID5000A AMP ATEX Interface BOM	ID5000_X033	A00	2017-06-14
Active Sensor	ID5000_X034	A00	2017-06-13
ATEX Active Appendix	ID5000_X040	B00	2019-10-16
ID5000P Hit Passive	ID5000_X041	A02	2018-08-07
ID5000P Encapsulant	ID5000_X042	A00	2017-06-20