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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 TRC 13.0006X**

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Certificate history:
Issue 3 (2021-05-21)
Issue 2 (2019-05-29)
Issue 1 (2015-04-29)
Issue 0 (2013-06-25)

Status: **Current**

Issue No: 4

Date of Issue: 2022-04-27

Applicant: **Online Electronics Ltd.**
Online House
Blackburn Business Park
Woodburn Road
Blackburn
Aberdeen AB21 0PS
United Kingdom

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

Optional accessory:

Type of Protection: **Flameproof "d", Intrinsic Safety "ia"**

Marking: Ex ia/db [ia Ga] IIC T4…T6 Ga/Gb Model ID5001P passive sensor

Ex ia/db [ia Ga] IIC T4 Ga/Gb Model ID5001A active sensor

Approved for issue on behalf of the IECEx Certification Body: **Stephen Winsor**

Position: **Certification Manager**

Signature:
(for printed version)

Date:
(for printed version)

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:

Element Materials Technology
Unit 1 Pendle Place
Skelmersdale
West Lancashire

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Date of issue: 2022-04-27 Issue No: 4

Manufacturer: **Online Electronics Ltd.**
Online House
Blackburn Business Park
Woodburn Road
Blackburn
Aberdeen AB21 0PS
United Kingdom

Manufacturing locations: **Online Electronics Ltd.**
Online House
Blackburn Business Park
Woodburn Road
Blackburn
Aberdeen AB21 0PS
United Kingdom

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 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
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 Reports:

GB/TRC/ExTR13.0006/00 GB/TRC/ExTR13.0006/01 GB/TRC/ExTR13.0006/02
GB/TRC/ExTR13.0006/03

Quality Assessment Report:

GB/TRC/QAR11.0002/09

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

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 of 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 IECEx certificate number IECEx TRC 12.0018U.

The equipment 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, see Annex to this certificate

SPECIFIC CONDITIONS OF USE: YES as shown below:
see Annex to this certficate.

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Date of issue: 2022-04-27 Issue No: 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 4:Change to marking for UKCA, UKEX regulations.

Annex:

Annex to IECEx TRC 13.0006X Issue 4..pdf

Element Materials Technology,
Unit 1, Pendle Place,
Skelmersdale,
West Lancashire, WN8 9PN,
United Kingdom

Annex to IECEx Certificate of Conformity IECEx TRC 13.0006X issue No.: 4

Temperature class and ambient temperature range

ID5001P:

	External supply (no cells fitted)			DURACELL INDUSTRIAL ID1300 fitted			SAFT LS33600 fitted			ANSMANN MaxE D fitted		
:Pd	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

ID5001A:

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

Diagrams:

Diagram of interconnected device

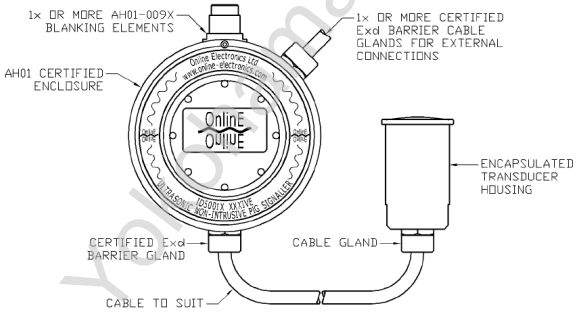
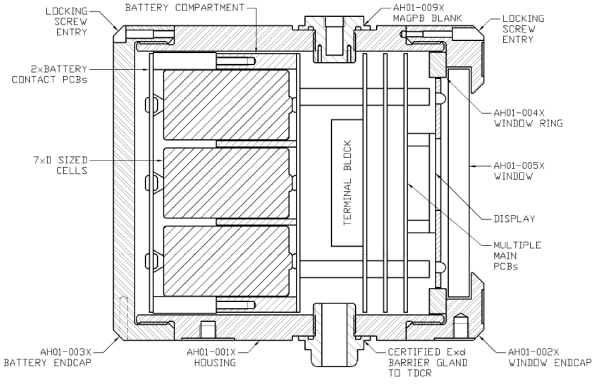


Diagram of internal layout



element

Annex to IECEx Certificate of Conformity **IECEx TRC 13.0006X issue No.: 4**

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 4mm^2. 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.
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 Temperature class and ambient temperature range tables in this annex

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Annex to IECEx Certificate of Conformity **IECEx TRC 13.0006X issue No.: 4**

Manufacturer's Documents

Title:	Drawing No.:	Rev. Level:	Date:
ID5001 ATEX / IECEx Technical File (20 sheets)	ID5001_X001	I01	2022-02-07

The technical file contains a full set of detailed drawings, as follows:

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

* Denotes information not provided by manufacturer

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