



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 EXV 23.0062X** Page 1 of 3 [Certificate history:](#)
Status: **Current** Issue No: 0
Date of Issue: 2024-12-09
Applicant: **Guided Ultrasonics Limited**
Wavemaker House
3 Brentwaters Business Park
The Ham, Brentford, TW8 8HQ
United Kingdom
Equipment: **gPIMS Ex HT Sensor (CM R2P-**in-HT-EX-**mm)**
Optional accessory: N/A
Type of Protection: **Intrinsically safe**
Marking: Ex ia IIB T* Ga, Ta = -40°C to +70°C (*please refer to description)

Approved for issue on behalf of the IECEx
Certification Body:

Sean Clarke CEng MSc FIET

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:

ExVeritas Limited
Units 16-18 Abenbury Way
Wrexham Ind. Est.
Wrexham LL 139UZ
United Kingdom





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3 Brentwaters Business Park
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Manufacturing locations: **Guided Ultrasonics Limited**
Wavemaker House
3 Brentwaters Business Park
The Ham, Brentford, TW8 8HQ
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 60079-11:2023](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:7.0

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/EXV/ExTR23.0102/00](#)

Quality Assessment Report:

[GB/BAS/QAR14.0014/07](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The gPIMS Ex HT Sensor (CM R2P-****in-HT-EX-****mm****) is intended for fixed installation in explosive gas atmospheres identified as IECEx Zone 0, and ATEX Category 1G with gas subgroup IIB, and temperature classification dependent upon the process or ambient temperature. The device uses ultrasonic reflectometry to make an acoustic inspection of pipes for the purpose of defect detection and measurement (for example corrosion monitoring). Data gathered during the measurement is sent through a cable (with a length that is within the range of 3 m to 50 m) to either a piece of suitably selected associated apparatus (see table 2), or to the approved GP-FCU-WIFI-EX-CM (See approvals ExVeritas 21 ATEX 0947 X, ExVeritas, 21 UKEX 0949 X and IECEx EXV 21.0049 X).

Each transducer assembly is a flexible collar which is wrapped around the workpiece. A single collar can completely encircle a pipe diameter in the range of 50 mm to 600 mm (2 inches to 24 inches), however for pipe diameters in range of 660 mm to 1220 mm (26 inches to 48 inches), two independent sensors can be banded together to make a single assembly. In this case the manufacturer supplies a combined ring enclosure (Part number GP-1468) to make the appropriate electronic connections.

Depending on the application the device is either manufactured for "high" or "medium" frequency applications. The sensor can be manufactured with a variable width spacing between the sensing elements. Both manufacturing aspects are reflected in the part naming convention in the appendix. The temperature class is dependent upon the temperature of the process or upper ambient which can reach as high as +200°C. Refer to appendix for tables of temperature classes and limiting parameters.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The surface of the enclosure is susceptible to electrostatic accumulation. To avoid the risk of incendiary discharges from this non-metallic part, the device shall not be installed in locations where such an accumulation may occur. Additionally, cleaning of this surface shall only be permitted with a damp cloth.
2. The Souriau-type connector includes a fastener which contains Aluminium alloy. This alloy exceeds the material limits from IEC 60079-0:2017 Cl, 8.3. and therefore is an ignition hazard. The device shall be installed so that the possibility of impact or friction on this part is not possible.

Annex:

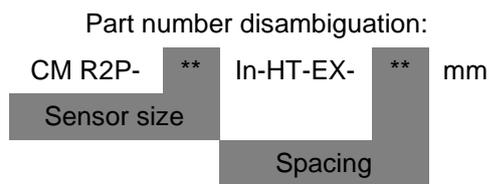
[IECEX Certificate Annex.pdf](#)

Description continued:

The gPIMS Ex HT Sensor (CM R2P-**in-HT-EX-**mm) is intended for fixed installation in explosive gas atmospheres identified as IECEx Zone 0, and ATEX Category 1G with gas subgroup IIB, and temperature classification dependent upon the process or ambient temperature. The device uses ultrasonic reflectometry to make an acoustic inspection of pipes for the purpose of defect detection and measurement (for example corrosion monitoring). Data gathered during the measurement is sent through a cable (with a length that is within the range of 3 m to 50 m) to either a piece of suitably selected associated apparatus (see table 2), or to the approved GP-FCU-WIFI-EX-CM (See approvals ExVeritas 21 ATEX 0947 X, ExVeritas, 21 UKEX 0949 X and IECEx EXV 21.0049 X).

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Spacing options (given in millimetres):
16, 21, 24, 32.

Sensor size options (given in Inches):
2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24.

The temperature class is dependent upon the temperature of the process or upper ambient which can reach as high as +200°C. Consequently the T-class is assigned based on the table below.

Temperature classification	Process temperature
T4	114 °C
T3	179 °C
T2	200 °C

Meas.	Signal pins	Logic pins
Ui	8.3 V	5.88 V
Ii	503 mA	143.4 mA
Pi	1044 mW	208 mW
Ci	50.4 nF	6.74 nF
Li	31 µH	70 µH

Technical drawings listed overleaf.

Title	Drawing	Revision	Date
GPIMS EX HT CONDUIT ASSY Two dimensional drawing.	GP-1156-00 PENDING ATEX_0.pdf	02	05/05/2023
GPIMS EX HT CONDUIT ASSY Three dimensional computer render.	GP-1156-00 PENDING ATEX_1.pdf	02	05/05/2023
GPIMS EX HT CIRCUIT ASSY PRE-MOULD Three dimensional computer render.	GP-1359-00 PENDING ATEX_0.pdf	02	23/05/2022
GPIMS EX HT CIRCUIT ASSY PRE-MOULD Computer rendered exploded view.	GP-1359-00 PENDING ATEX_1.pdf	02	23/05/2022
GPIMS EX HT CIRCUIT ASSY POST-MOULD Three dimensional computer render.	GP-1361-00 PENDING ATEX.pdf	02	23/05/2022
GPIMS EX HT GENERAL SENSOR ASSY Three dimensional wireframe render.	GP-1417-00 PENDING ATEX_0.pdf	01	12/12/2022
GPIMS EX HT GENERAL SENSOR ASSY General assembly drawing (side projection).	GP-1417-00 PENDING ATEX_1.pdf	01	12/12/2022
GPIMS EX HT GENERAL SENSOR ASSY Wireframe isometric render.	GP-1417-00 PENDING ATEX_2.pdf	01	12/12/2022
GPIMS EX HT FLEXIBLE CIRCUIT ASSY Three dimensional computer render.	GP-1424-00 PENDING ATEX_0.pdf	02	12/12/2022
GPIMS EX HT FLEXIBLE CIRCUIT ASSY Three dimensional computer render.	GP-1424-00 PENDING ATEX_1.pdf	02	12/12/2022
GPIMS EX HT FLEXIBLE CIRCUIT ASSY Flexible circuit construction options.	GP-1424-00 PENDING ATEX_2.pdf	02	12/12/2022
GPIMS EX HT COMBINED SENSOR ASSY Illustration of typical installation arrangement.	GP-1459-00 PENDING ATEX_0.pdf	01	28/07/2023
GPIMS EX HT COMBINED SENSOR ASSY Illustration of typical installation arrangement including GP-FCU-WIFI-EX.	GP-1459-00 PENDING ATEX_1.pdf	01	28/07/2023
GPIMS EX HT COMBINED SENSOR BOX Exploded assembly drawing.	GP-1468-00 PENDING ATEX_0.pdf	02	28/07/2023
GPIMS EX HT COMBINED SENSOR BOX Section view.	GP-1468-00 PENDING ATEX_1.pdf	02	28/07/2023
GPIMS EX HT COMBINED SENSOR BOX Isometric computer render.	GP-1468-00 PENDING ATEX_2.pdf	02	28/07/2023
GPIMS EX HT CONNECTOR ID PLATE Marking label.	GP-1477-00 PENDING ATEX.pdf	05	01/09/2023