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 BAS 14.0031X**

Certificate history:
Issue 0 (2014-11-07)

Status: **Current**

Issue No: 1

Date of Issue: 2018-05-11

Applicant: **Guided Ultrasonics Limited**
Wavemaker House
3 Brentwaters Business Park
The Ham, Brentford,TW8 8HQ
United Kingdom

Equipment: **gPims Sensor Types R2P-**in-EX-**mm**

Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **Ex ia IIB T4 Ga** **(-40°C ≤ Ta ≤ +90°C)**

Approved for issue on behalf of the IECEx Certification Body: **R. Sinclair**

Position: **Technical 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:

SGS Baseefa Limited
Rockhead Business Park
Staden Lane
Buxton, Derbyshire, SK17 9RZ
United Kingdom

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Manufacturer: **Guided Ultrasonics Limited**
Wavemaker House
3 Brentwaters Business Park
The Ham
Brentford
TW8 8HQ
United Kingdom

Manufacturing locations:

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 60079-0:2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

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 Report:

GB/BAS/ExTR13.0141/00

Quality Assessment Report:

GB/BAS/QAR14.0014/02

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

The gPims Sensor Types R2P-**in-EX-**mm (** represents numeric type number related to the size of the sensor) is a permanently installed monitoring system which utilises ultrasonic guide waves, sent along the length of a pipe, to non-destructively test pipes for defects or other pipe features by detecting changes in the cross section and/or stiffness of the pipe.

The gPims Sensor Types R2P-**in-EX-**mm consist of a band, that is placed around the pipe which houses the peizo electric crystals, and a perminately attached cable upto 50m long. The band uses piezoelectric crystals to induce ultrasonic waves in to the pipe and uses the same crystals to listen for any reflected waves. The sensor is connected to the monitoring equipment via an interface which is located in the safe area.

Input Parameters
Signal Pins (A, B, Y, D, F, b, H, J, K, L, h, N, R, k, T, U) each w.r.t GND (W, X, r, Z, a, t, c, d, f, g, x, l, z, m, n)
U_i = ± 18V C_i = 23nF
I_i = 127mA L_i = 31µH
P_i = 569mW

Logic Pins (BB, CC, DD, EE, GG, HH) combined w.r.t. GND (FF)
U_i = 5.88V C_i = 6.7nF
I_i = 141mA L_i = 70µH
P_i = 208mW

SPECIFIC CONDITIONS OF USE: YES as shown below:
1) Care must be taken when installing the gPims sensor to ensure that it is protected from any situations that could cause a build-up of static charge. The gPims sensor must not be installed into locations in which it could come into contact with, through normal or abnormal circumstances, fast moving dust laden air/gas or non-conductive fluids. The gPims sensor must be cleaned only with a damp cloth.

2) The locking nut on the equipment connector is manufactured from aluminium alloy, this part of the equipment must be protected from impact or abrasion if located in an area classified Zone 0 or 1.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Variation 1.1

This issue permits existing information (for example on Schedule Drawings) to be replaced by the revised certificate holders name. No other changes may be made to the certified design