



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx ITS 19.0023X

Issue No: 0

Certificate history:

[Issue No. 0 \(2019-08-02\)](#)

Status: **Current**

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Date of Issue: **2019-08-02**

Applicant: **PSM Instrumentation Ltd.**  
Unit 3 Burrell Road,  
Haywards Heath, West Sussex,  
RH16 1TW  
**United Kingdom**

Equipment: **APT1000 Series**

*Optional accessory:*

Type of Protection: **Intrinsic safety "ia"**

Marking:

Ex ia IIC T4 Ga

IECEX ITS 19.0023X

-35°C ≤ Ta ≤ +85°C

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

V K Varma

*Position:*

Certification Officer

*Signature:  
(for printed version)*

*Date:*

2019-08-02

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 the [Official IECEx Website](#).

Certificate issued by:

**Intertek Testing & Certification Limited**  
ITS House, Cleeve Road,  
Leatherhead,  
Surrey, KT22 7SA  
United Kingdom



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Manufacturer: **PSM Instrumentation Ltd.**  
Unit 3 Burrell Road,  
Haywards Heath, West Sussex,  
RH16 1TW  
**United Kingdom**

Additional Manufacturing location(s):

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 apparatus 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 : 2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

*This Certificate **does not** indicate compliance with electrical 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/ITS/ExTR19.0024/00](#)

Quality Assessment Report:

[GB/ITS/QAR15.0016/02](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The APT 1000 Series transmitters are designed for monitoring pressure or temperature based on a micro-electro-mechanical (MEMS) piezo-resistive cell or PT100 probe respectively.

The pressure measurement cell is isolated from the process by a diaphragm with an internal fluid fill transmitting the process pressure to it. Temperature compensation and zero correction are applied during manufacture by laser trimming of compensation resistors.

The output from the measurement cell or temperature probe is converted by an internal circuit to a 4-20mA signal which is scaled to the user requirements.

An RS485 serial interface is also provided for digital communications as well as the analogue 4-20mA signal.

The sensor is fully encapsulated internally and may be manufactured from a choice of construction materials for the wetted parts.

The model code is defined as follows:

APT 100n – Non-Intrinsically Safe models (not covered by this certificate)  
APT 100n/I – Intrinsically Safe, ATEX certification (not covered by this certificate)  
APT 100n/X – Intrinsically Safe, IECEx certification

n = 0 – Pressure  
n = 1 – Temperature  
n = 2 – Pressure & HART communications

The model code may be followed by other alpha-numeric characters, to define other features of the product.

Refer to certificate Annex for entity parameters.

### SPECIFIC CONDITIONS OF USE: YES as shown below:

Non-metallic parts on the exterior of the pressure transmitter may present an electrostatic charging hazard. Refer to warning marking and the manufacturer's instructions for further guidance.

Where external parts of the pressure transmitter incorporate light metal components (i.e. in excess of 10 % in total of aluminium, magnesium,



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titanium and zirconium), the sensor must be protected from impact such that impact / friction sparks cannot occur, taking into account rare malfunction.

**Annex:**

[Annex for IECEX Certificate of Conformity IECEX ITS 19.0023X Issue 0.pdf](#)



## Annex to IECEx Certificate of Conformity

|                 |                    |             |
|-----------------|--------------------|-------------|
| Certificate No: | IECEx ITS 19.0023X | Issue No. 0 |
| Annex No. 1     |                    |             |

Intrinsic Safety Entity Parameters:

Ui = 28V  
Ii = 150 mA  
Pi = 0.8W  
Ci = 0  
Li=0

| Technical Documents   |                |           |            |
|---|----------------|-----------|------------|
| Title:  | Drawing No. :  | Revision: | Date:      |
| APT 1000 ATEX & IECEx Label   | P19047-APT-DT  | A         | 11-04-19   |
| APT 1000 Temperature Sensor Build   | P19066-APT-GA  | A         | 05-06-19   |
| APT 1000 Marking & Optional Process Fitting   | P19044-APT-GA  | A         | 15-04-19   |
| APT Sensor Specification  | P19011-APT-DT  | A         | 31-06-17   |
| Artwork for iCT IECEx Labels  | P19014-APT-AW  | A         | 02-07-15   |
| APT1000 Local and Remote Terminal Options   | P19045-APT-GA  | A         | 11-04-19   |
| APT1000 Exploded Drawing / parts list   | P19046-APT-GA  | A         | 15-04-19   |
| APT1000 Board Clearance   | P19048-APT-GA  | A         | 11-04-19   |
| APT1000 Transmitter Typical Connection Head   | P19049-APT-GA  | A         | 08-04-19   |
| APT1000 Transmitter Typical Connection head   | P19052-APT-GA  | A         | 08-04-19   |
| APT1000 Exploded Drawing / parts list   | P19062-APT-GA  | A         | 15-04-19   |
| APT1000 Temperature Sensor Type   | P19063-APT-GA  | A         | 16-05-19   |
| APT1000 Connection To Suit Environment  | P19064-APT-GA  | A         | 16-05-19   |
| APT1000 Thermopocket / Thermowell Type  | P19065-APT-GA  | A         | 16-05-19   |
| APT 1000 Series Pressure Transmitter  | P19053-APT-BOM | A         | 10-06-19   |
| APT 1000 Series Temperature Transmitter   | P19055-APT-BOM | A         | 10-06-19   |
| APT 1000 Series HART Transmitter  | P19057-APT-BOM | A         | 10-06-19   |
| APT 1000 Series Pressure Transmitter Top level BOM  | P19059-APT-BOM | A         | 10-06-19   |
| APT 1000 Series Temperature Transmitter Top level BOM   | P19060-APT-BOM | A         | 10-06-19   |
| APT 1000 Series HART Transmitter Top level BOM  | P19061-APT-BOM | A         | 10-06-19   |
| Installation & Operation Instruction Manual<br>APT1000 Series Transmitters & RFM Series Barriers &<br>Termination Modules | MAN 087        | A         | May 2019   |
| Schematic   | ATP Series     | 3C        | 13-06-2019 |
| Schematic   | ATP1000/A      | 3C        | 13-06-2019 |
| Schematic   | ATP1001/A      | 3C        | 13-06-2019 |
| Schematic   | ATP1002/A      | 3C        | 13-06-2019 |

Certificate issued by:

**intertek**  
Total Quality. Assured.

**Intertek Testing & Certification Limited**  
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