

UK-TYPE EXAMINATION CERTIFICATE

Product or Protective Systems Intended for Use in Potentially Explosive Atmospheres

UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

1. **UK-Type Examination Certificate Number:** ITS23UKEX0620X **Issue 1**
2. **Product:** APT 500 and SPT 900 series Transmitters
3. **Manufacturer:** PSM Instrumentation Ltd.
4. **Address:** Unit 3 Burrell Road, Haywards Heath, West Sussex, RH16 1TW, UK
5. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
6. Intertek Testing and Certification Limited, Approved Body number 0359, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), 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 Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential report 106056613LHD-001.
7. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-0:2018 and EN 60079-11:2012 except in respect of those requirements referred to within item 14 of the Schedule.
8. If the sign “X” is placed after the certificate number, it indicates that the product is subject to the special conditions of use specified in the Schedule to this certificate.
9. This UK-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.
10. The marking of the product shall include the following:



II 1 G Ex ia IIC T4 Ga

-30°C ≤ Ta ≤ +85°C

Certification Officer: _____ **Date:** 17th September 2025
Richard J Tunnicliffe

SCHEDULE:

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11. Description of Product or Protective System

The APT 500, APT 590, SPT 900 and SPT990 Series level transmitters are designed for monitoring liquid levels and pressures, based on a micro-electro-mechanical (MEMS) piezo-resistive cell.

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 is converted by an internal circuit to a 4-20mA signal which is scaled to the user requirements.

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

The APT 500 and SPT 900 are identical in mechanical and electrical construction.

The APT 590 and SPT 990 are identical in mechanical and electrical construction and differ from APT 500 and SPT 900 in electrical construction only.

The model code is defined as follows:

APT 500/I, SPT 900/I, APT 590/I and SPT 990/I – Intrinsically Safe, ATEX certification

APT 500/X, SPT 900/X, APT 590/X or SPT 990/X – Intrinsically Safe, IECEx certification

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

Entity Parameters:

$U_i = 28V$

$I_i = 93\text{ mA}$

$P_i = 0.7W$

$C_i = 12nF$

$L_i = 0$

Entity Parameters for APT 590 and SPT 990:

$U_i = 28V$

$I_i = 93\text{ mA}$

$P_i = 0.7W$

$C_i = 27.5nF$

$L_i = 705\mu H$

This equipment is also to be marketed by PSM Instrumentation's sister company Scanjet Ariston AS, based in Norway, although the manufacturing will be carried out by PSM in the UK.

The necessary agreements are in place between PSM and Scanjet Ariston AS, and Scanjet Ariston has a suitable QAN issued by LCIE which covers the manufacture and sale of intrinsically safe equipment.

SCHEDULE:

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12. Report Number

Intertek Report Ref.: 106056613LHD-001 dated 5 September 2025.

Intertek Report Ref.: 105124836LHD-001 dated 15 May 2024.

13. Special Conditions of Certification

(a). Special Conditions of Use

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

(b). Conditions of Manufacture - Routine Tests

- None.

14. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report: 103201808LHD-002 dated May 2018.

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. This Certificate is accredited under UKAS schedule 0010

Intertek Testing & Certification Limited, Cleeve Road, Leatherhead, Surrey, KT22 7SA
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15. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Installation Operation & Maintenance Instruction Manual APT 500 Series	MAN 095	C	02/05/2018
Installation Operation & Maintenance Instruction Manual SPT 900 Series	MAN 099	A	Aug 2023
*Installation Operation & Maintenance Instruction Manual APT 590 Series	MAN 101	B	July 2025
*Installation Operation & Maintenance Instruction Manual APT 990 Series	MAN 102	B	July 2025
*APT Outline	P19000-APT-GA	B	29/07/2025
APT Parts/Exploded View	P19001-APT-GA	A	31/06/2017
*APT 500 Series Top Level BOM	P19002-APT-BOM	C	30/07/2025
APT Main Board	P19003-APT-CD	C	18/04/2018
APT 500 Series configurable 4-20mA Transmitter	P19004-APT-BOM	L	18/04/2018
APT Sensor Specification	P19011-APT-GA	A	31/06/2017
APT Board Screen Printing (5 pages)	P19012-APT-GA	B	18/04/2018
*APT500 ATEX, IECEx & UKCA Labels (page 1 of 4)	P19013-APT-DT	I	10/07/2025
*SPT900 ATEX, IECEx & UKCA Labels (page 2 of 4)	P19013-APT-DT	I	10/07/2025
*APT590/SPT990 ATEX & IECEx Labels (page 3 of 4)	P19013-APT-DT	I	10/07/2025
APT transmitter typical connection head	P19018-APT-GA	A	01/05/2018
APT transmitter typical connection head	P19019-APT-GA	A	01/05/2018
APT Board Clearance	P19020-APT-GA	A	01/03/2018
APT Local and Remote Termination Options	P19024-APT-GA	A	11/04/2018
*Externally Mounted Installation Guidance For I.S. Installations	P19081-APT-DT	B	29/07/2025
*APT590 & SPT990 Schematic	P19083-APT-CD	A	29/07/2025
*APT590 & SPT990 Screen Printing & Layout Drawing	P19085-APT-DT	A	29/07/2025
*SPT590 & APT990 Board Clearance	P19086-APT-GA	A	29/07/2025
*APT 590 & SPT990 Series Top level BOM	P19087-APT-BOM	A	30/07/2025

Note: An * is included before the title of documents that are new or revised.

16. Details of Certificate

Issue 1:

- Addition of new models APT 590 and SPT 990 with revised electrical construction.
- Addition of input parameters for APT 590 and SPT 990.
- Update to documentation.

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