APT 500 Series

Analogue Level Transmitter for Marine and Industrial applications

Fully submersible construction may be installed internal or external to tank with a variety of mounting options from PSM

Choice of construction materials depending on application

Stainless Steel - Service and Oils

Titanium - Ballast & Draught

Hastelloy/Tantalum - Ballast & Draught, Chemicals

Robust construction with high overload tolerance

Nominal measurement ranges from 0.2 to 60 bar - factory calibration allows 2 1 turndown

Vented Gauge / Absolute versions

Accuracy of /-0.2 of full range

Temperature compensated output over 0 to 70 C

IECEx and ATEX certified for use in hazardous Areas (one 0)

Marine Type Approved

PSM is a Scanjet Group Company

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Specifications		
Materials	Sensor body	316L Stainless Steel or Titanium. Hastelloy C276 option for etted parts for external (to tank) mounting.
	Diaphragm	316L or Titanium to match body material. Hastelloy C276 process ports use Tantalum diaphragm.
Standard Measurement Ranges (Bar)	0.2, 0.5, 1.0, 2.5, 4.0, 10, 25, 40. (Other ranges to special order)	
Measurement type	Vented Gauge or Absolute refer to PSM for availability of ranges	
Overload	2 x Nominal range with no effect	
Span setting accuracy	0.2 within compensated range	
ero setting accuracy	0.2 within compensated range	
Total Error Band	/- 0.2 of Nominal range at reference conditions of 25 C	
Thermal effect	Max /- 0.0075 of Nominal range for ero & Span / C from reference	
Long term stability	Error not exceeding /- 0.1 Per Annum	
Max / Min process temperature	-30 to 85 C	
IP Rating	IP68 suitable for continuous immersion	
IECEx certification	IECEx ITS180012X.0 Ex ia IIC T4 Ga -30 C Ta 85 C	
ATEX certification	ITS18ATEX203153X Issue 0 Ex ia IIC T4 Ga -30 C Ta 85 C	
Signal Output / Power supply	4-20mA / 18 to 30V DC (2 wire)	
Reverse Polarity Protection	es	
Maximum load	Supply dependant. Vs-18/0.02 Load in Ohms	
eight	0.3 g typical for body. Cable 0.1 g / metre	

The APT500 is part of a family of tank level transmitters and associated instrumentation from PSM.

It is designed to provide robust, reliable and accurate service for all Shipboard applications where its 4-20mA 2 wire signal is connected directly to the ships tank level and pressure monitoring systems.
A choice of materials ensure compatibility with all shipboard duties.

PSM s range includes alternative APT1000 transmitters providing 0.1 accuracy and full digital communication. Please contact us to discuss the optimum solution for your application.

PSM is part of the Scanjet Group. Scanjet provide a complete range of tank management instrumentation and systems for both Marine and Industrial applications supported by a global sales and service network

scanjet PSM an Alfa Laval brand

APT500 Series Level Transmitter

550S APT 550 4-20mA 2 ire Transmitter - Submersible construction with cable

Certification

S	Hazardous Area Approval NOT APPLICABLE
I	Certified Intrinsically Safe to ATEX - Hazardous Area Approved
X	Certified Intrinsically Safe to IECEx - Hazardous Area Approved
IX	Dual Certification ATEX / IECEx - Hazardous Area Approved

Measurement Type

A	Absolute
G	Gauge

Nominal Range

	Absolute TI	Absolute SS	Absolute HT		Gauge TI	Gauge SS	Gauge HT
A	N/A	N/A	N/A	**A**	N/A	0.2 Bar	N/A
B	N/A	N/A	N/A	**B**	0.5 Bar	0.5 Bar	0.5 Bar
C	N/A	N/A	N/A	**C**	1.0 Bar	1.0 Bar	1.0 Bar
D	2.5 Bar	2.5 Bar	2.5 Bar	**D**	2.5 Bar	2.5 Bar	2.5 Bar
E	4.0 Bar	4.0 Bar	4.0 Bar	**E**	4.0 Bar	4.0 Bar	4.0 Bar
F	10 Bar	10 Bar	10 Bar	**F**	10 Bar	10 Bar	10 Bar
H	25 Bar	25 Bar	25 Bar	**H**	25 Bar	25 Bar	25 Bar
I	40 Bar	40 Bar	40 Bar	**I**	40 Bar	40 Bar	40 Bar
J	60 Bar	60 Bar	60 Bar	**J**	60 Bar	60 Bar	60 Bar

Process Connections & Fitting Options (options marked ** are not available for Ti versions)

1	1/2" BSP Male (Standard connection). Material is as specified for the main body
3	G1" Male Adapter in 316 Stainless Steel
6	G1/2" to DIN EN837 in Stainless Steel (Special order, refer for delivery time)
7	Pole Adapter Threaded G 1/2" Female Adapter in 316 Stainless Steel**
8	Pole Adapter Threaded G 3/4" Female Adapter in 316 Stainless Steel**
11	St.Steel Sensor with Drain wire adapter - Specify drain wire length in Metres
14	Titanium Sensor with Drain wire adapter - Specify drain wire length in Metres
15	1 " ANSI 150 lb St. Steel Flange (Supplied loose)
17	Stilling Pipe Flexible Stainless Steel Cage pipe Installation. Suitable for Stilling Pipe I.D. of 2" to 3" (applicable for all sensor materials).
18	Pole Adapter Threaded G1/2" Female- Replacement for ICT transmitter
22	G1/2" male with Flexible Protection Compound - no Diaphragm Guard
23	Pole Adaptor Threaded G1/2" Male

Cable Length mtrs (only applicable to APT 1000 versions)

******	Heavy Duty Vented Cable - 3 Metres included as standard
Q**	As above but cable outer jacket PTFE coated (Subject to Availability)
R**	As above but cable outer jacket Flame Retardant (Subject to Availability)
S**	As above but cable outer jacket FEP Coated (Subject to Availability)
Z**	Custom cable (refer to discuss requirements)

Transmitter Body Material

TI	Titanium (Body & Diaphragm)
SS	Stainless Steel (Body & Diaphragm)
HT	Hastelloy / Tantalum wetted parts (St. Stl. Body)

Transmitter Orientation

H	Horizontal
V	Vertical - Diaphragm facing down
U	Vertical - Diaphragm facing up

Example:	550S	S	A	E	1	3	TI	H

Written as: 550S/SA/E/1/3/TI/H

Note: Transmitter will be calibrated for 4-20 mA over Nominal range as standard. Where a specific calibration range is required this must be advised separately.

Actual calibration can be a maximum of 2:1 turndown from Nominal range.

Optional Extras

APT Internal Fixing Clamp Assembly	Supplied Loose
Process Connection DN20 PN16 SS Flange with G1/2" Female Threaded Centre	Supplied Loose
Process Connection DN25 PN16 SS Flange with G1/2" Female Threaded Centre	Supplied Loose
Process Connection DN40 PN16 SS Flange with G1/2" Female Threaded Centre	Supplied Loose
Process Connection DN50 PN16 SS Flange with G1/2" Female Threaded Centre	Supplied Loose
Process Connection 1" ANSI 150lb SS Flange with G1/2" Female Threaded Centre	Supplied Loose
Process Connection 2" ANSI 150lb SS Flange with G1/2" Female Threaded Centre	Supplied Loose
APT Demountable Pole Assembly with Top Flange (SS ONLY) - Flange Size to be Confirmed by Customer	Max Length 2000mm
Assembled Length From Underside of Top Flange to End of Sensor TBC	Assembly Supplied Loose

Dimensions

Flange		PCD	Bolt Size	A	B	Material
	Holes					
DN20 PN16	4	75	M12	105	18	316SS
DN25 PN16	4	85	M12	115	18	316SS
DN40 PN16	4	110	M16	150	18	316SS
DN50 PN16	4	125	M16	165	18	316SS
1" ANSI 150lb	4	7	1/2"	108	18	316SS
2" ANSI 150lb	4	120.7	5/8"	152	18	316SS

Note
Flange Thickness (B) Must be Minimum 18mm to Provide Protection for Sensor Diaphragm. All Flanges Supplied Loose for Customer to Fit.
Refer to Instruction Drawing P1 051-APT-GA
Other Flange Sizes are Available. Refer to PSM