

ASPT 11s

Submersible Pressure Transmitter (Compact Version)

The ASPT 11s compact series are specially designed for level measurement applications in terms of their excellent quality, performance and reliability. According to current industry standard requirements, ASPT11s series are implemented by standard output of 4 to 20mA and in various accuracy, and equipped with PUR air guide cable. The protection design of IP68 helps these instruments to be thrown into the water up to 300m water column deep. The gas proof, rugged by stainless steel and completely sealing structure design makes these instruments to run for a long time in measurements



Application

- Level measurement in container and storage
- Water level measurement in rivers and lakes
- Pumping station control and water lift pump
- Monitoring of sewage and drainage systems
- Measurements in deep well and borehole
- Groundwater level monitoring
- Battery - powered level measurement system
- IoT low - power networking

Features

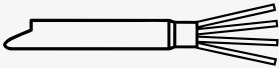
- Compact
- Strong and rugged
- Reliable
- Economic
- Low - power wireless implement

Performance Characteristics

Measuring range	Any range between 0 ... 1m ... 10m ... 200m		
Overload pressure	Twice as rated pressure		
Pressure type	Gauge pressure; Absolute pressure		
Measurement medium	Gas or liquid which is compatible with stainless steel		
Measurement accuracy	$\pm 1\%FS$; $\pm 0.5\%FS$; $\pm 0.25\%FS$; $\pm 0.15\%FS$; $\pm 0.1\%FS$		
Long-term stability	$\leq \pm 0.2\% FS/\text{year}$		
Operating temperature	$-20...+100^{\circ}\text{C}$		
Zero temperature coefficient	Typical: $\pm 0.02\% FS/^{\circ}\text{C}$; Maximum: $\pm 0.05\% FS/^{\circ}\text{C}$		
Sensitivity temperature coefficient	Typical: $\pm 0.02\% FS/^{\circ}\text{C}$; Maximum: $\pm 0.05\% FS/^{\circ}\text{C}$		
Signal and power	Optional signal	Output signal	Supply voltage
	Current (2 - wire)	4...20mA	DC8...32V
	Voltage (3 - wire)	DC 0...10V	DC12...32V
		DC 0...5V	DC8...32V
		DC 0.5...V	DC 8...32V
	Proportional voltage (3 - wire)	DC 0.5...V	DC 5V $\pm 10\%$
	Digital signal	RS485	DC 8...32V
	Low power analog signal (3 - wire)	DC 0.5...V	DC 3V $\pm 10\%$
	Low power digital signal (4 - wire)	RS485	DC 3.3V $\pm 10\%$
	Low power digital signal (4 - wire)	I ² C	DC 3.3V $\pm 10\%$
	* Other output signals can be provided		
Load Ω	Current (2 wires): $\leq [(\text{supply voltage} - 7.5\text{v}) / 0.02\text{a}]$		
	Voltage (3 wires): $\geq 10\text{k}$		
	RS485 (four - wire): $[(\text{power voltage} - 7.5\text{v}) / 0.01\text{a}]$		
	Low power RS485 (four-wire): $[(\text{power supply voltage} - 3\text{v}) / 0.002\text{a}]$		
Total current consumption	Current (2-wire system): Signal current, max. 25mA		
	Voltage (3-wire system): 5mA		
	RS485 (4-wire system): $\leq 10\text{mA}$		
	Low power RS485 (4-wire system): standby $\leq 5\mu\text{A}$, acquisition $\leq 2\text{mA}$		
Impact resistance	100g, half sine of final peak serrated ladder type, runs for 6 ms		
Anti-vibration	$\leq \pm 0.1\% FS$ (X, Y, Z axis, 200Hz/g)		
Insulation resistance	$> 100\text{M}\Omega$ 500Vdc excitation		
Response time	$\leq 2\text{ms}$		
Weight	150g without cable		
Resolution	Infinitely small (theoretical), 1/100000 (usually)		
Protection class	Waterproof (IP68)		
Electromagnetic Compatibility	EN50081-1; EN50082-2; IEC61000-4-3		

Electrical Connection

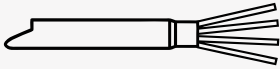
Cable straight out (Analog signal)

		2-wire System	3-wire System
	Vcc	Red	Red
	Gnd	Black	Black
	Signal+	-	Green

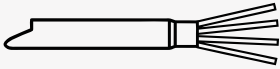
Icons

Vcc	: Positive Power
Gnd	: Negative Power
Signal+	: Signal output

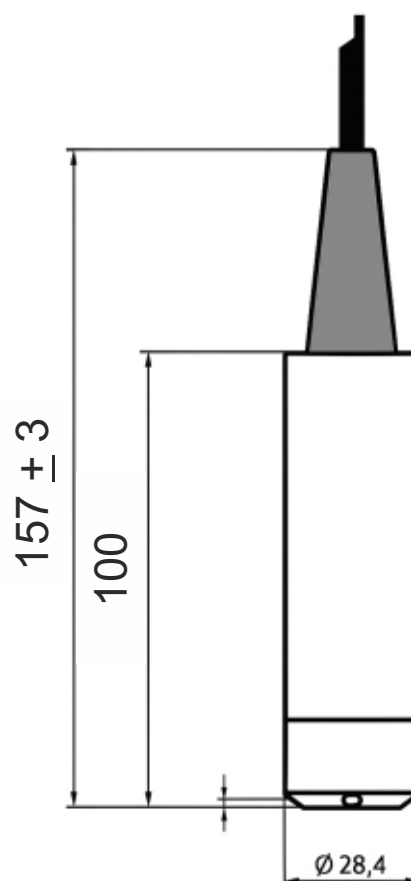
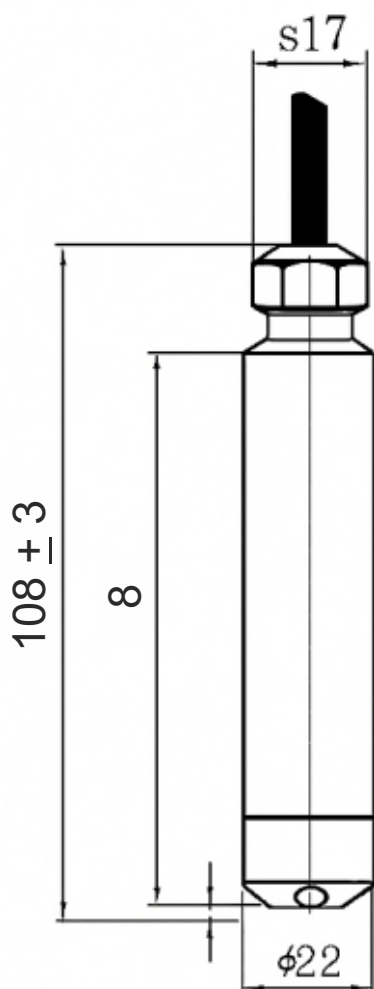
Cable straight out (RS485)

		4-wire System
	Vcc	Red
	Gnd	Black
	RS485 (A)	Green Line
	RS485 (B)	White line

Cable straight out (I²c)

		4-wire System
	Vcc	Red
	Gnd	Black
	SDA	Green Line
	SDL	White line

Dimensional Drawing (mm)



Ordering Guide

ASPT11 s - 3 - M - 2 - 1 - 2 - 2 - L05 - T1

Model Family

ASPT 11 s (Compact design)
Compact Submersible level Pressure
Transmitter for liquids

Pressure Range

- Insert pressure code

Pressure Unit

- P = PSI
- M = MH2O

Accuracy

- 1 = 1% FS
- 2 = 0.5% FS
- 3 = 0.25% FS

Output

- 1 = 4-20 mA
- 3 = 0-5 V
- 4 = 0.5 - 4.5 V
- 5 = 0-10 V
- 7 = RS485
- 8 = I2C

Temperature

- T1 = -20 ... +85°C

Special Option (Length of cable)

- L05 - 5 meters
- L10 - 10 meters
- L20 - 20 meters
- L30 - 30 meters
- LX - X meters

Connection

- 1 = Input type
(Standard configuration)
- 2 = G¹/4" (optional)
- 3 = Customised

Power supply

- 1 = 5 VDC
- 2 = 8-32 VDC
- 3 = 12-32 VDC
- 4 = 3.3 V

Selection tips:

1. The medium (except water) whose density during measurements should be indicated should be compatible with the materials in contact with the product.
2. The options in the optional functions are only suitable for split - type level transmitters and plug-in level sensors.
3. Cable length please specify how long you need when ordering.
4. Correspondence between 1m water column and pressure under standard conditions (4°C, $g = 9.80665 \text{ m/s}^2$): $1 \text{ mH}_2\text{O} = 0.1 \text{ kgf/cm}^2 = 9.8 \text{ kPa}$
5. For other special requirements, please consult us and indicate what you need in your order.

Due to continuous development of our products technical information's are subject to change.

Please ensure the compatibility between the measured medium and the contacting part of the product when placing an order.

ACT Sensors reserves the right to make any change in this datasheet without notice. The information provided is believed to be accurate and reliable as of this product sheet.

Contact factory for custom configurations not shown



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Your Engineering Partner...

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