# **PT12** SUBMERSIBLE PRESSURE/TEMPERATURE SMART SENSOR





**APPLICATIONS** 

Rugged construction can replace analog sensors

Monitor groundwater, well, tank, and tidal levels

Pump testing

Flow monitoring

#### **Features**

- Modbus<sup>®</sup> RTU (RS485) and SDI-12 v1.3 interfaces
- Small diameter 0.75" (1.9 cm)
- Pressure and temperature
- 316 stainless steel, fluoropolymer, and PTFE construction (titanium optional)
- Polyethylene, polyurethane, and ETFE cable options
- End cone interchangeable with a 1/4" NPT inlet
- Specification per OSW Technical Memo 96.05 is an option on the 15 psig (10.5 mH<sub>2</sub>O) and 30 psig (21 mH<sub>2</sub>O) units

## **Contact Your Supplier**

The **Seametrics PT12** Pressure/Temperature Sensor has been designed to provide trouble-free submersible operation in liquid environments. This sensor communicates via SDI-12 (v1.3) or Modbus<sup>®</sup> RTU (RS485)protocol.

Pressure/level is measured with an extremely rugged and stable piezo-electric, media isolated pressure element and compensated for temperature using our proprietary calibration methodology. Temperature is measured using an on-board digital chip.

Seametrics also carries a special version of the PT12 designed to measure barometric pressure in reference to absolute pressure. If you are using an absolute PT12, contact your representative for details on how our PT12-BV can facilitate obtaining barometrically compensated pressure/level.



253.872.0284



### **Dimensions**



#### **Specifications\***

Size Weight		0.8 lb. (0.4 kg)			
Length Diameter		8.44" (21.4 cm)			
		0.75" (1.9 cm)			
Wetted Materials Body Material		316 stainless or titanium, Viton, Acetal			
Cable Cable		Submersible: polyurethane, polyethylene, or ETFE; 4 lb./100 ft., 1.8 kg/30 m; 2000 ft max for Modbus®			
Desiccan	t	1-3 mm indicating silica gel			
Field Cor	nector	Available as an option			
Temperature Operating Range		Recommended: -15° to 55°C (5° to 131°F) Requires freeze protection kit if using pressure option in water below freezing.			
Storage	Range	-40° to 80°C (-40° to 176°F)			
Power Voltage		9-15Vdc, electromagnetic & transient protection IEC-61000 - 4-3, 4-4, 4-5, 4-6			
Supply Current		Active 3mA average/ 10mA peak; sleep 150 µA			
Communication Modbus	ß	RS485 Modbus® RTU, output=32bit IEEE floating point   SDI-12 (ver. 1.3) - ASCII			
SDI-12					
Output Channels		Temperature	Depth/Level		
Element		Digital IC on board	Silicon str	ain gauge transducer, 316 stainless or Hastelloy	
Accuracy	,	±0.5°C — 0° to 55°C (32° to 131°F) ±2.0°C — below 0°C (32°F)	±0.05% FSO (typical, static) ±0.1% FSO (maximum, static) (B.F.S.L. 20°C)		
Resolutio	on	0.06°C	0.0034% FS (typical)		
Range		-15° to 55°C (5° to 131°F)	Gauge Absolute <sup>2</sup>	$\begin{array}{c} \text{PSI: 1}^1, 5, 7, 15, 30, 50, 100, 300\\ \text{FtH}_2\text{O: } 2.3^1, 12, 35, 69, 115, 231, 692\\ \text{mH}_2\text{O: } 0.7^1, 3.5, 5, 10.5, 21, 35, 70, 210\\ \text{PSI: } 30, 50, 100, 300\\ \text{FtH}_2\text{O: } 35, 81, 196, 658\\ \text{mH}_2\text{O: } 10, 24, 59, 200\\ \end{array}$	
Compens	sated		0° to 40°C	(32° to 104°F)	
Max operating pressure		1.1 x full scale			
Over pressure protection		3x full scale up to 300psi			
Burst pressure		1000 psi (approx. 2000 ft or 600 m)			
Environmental		IP68, NEMA 6P			

\*Specifications subject to change. Please consult out web site for the most current data (seametrics.com). Modbus is a registered trademark of Schneider Electric. 1 ±0.25% accuracy FSO (max) at this range

2 Depth range for absolute sensors has 14.7 PSI subtracted to give actual depth allowed.

3 USGS OSW Calibration available on 15 PSIG and 30 PSIG Sensors only. No more than 0.01 ft or 0.20 percent of indicated reading, whichever is larger.

#### User is responsible for reviewing end use application with their supplier for product suitability.