

# PT12 / SDI-12

## SUBMERSIBLE PRESSURE/TEMPERATURE SMART SENSOR



### APPLICATIONS

Rugged construction can replace analog sensors

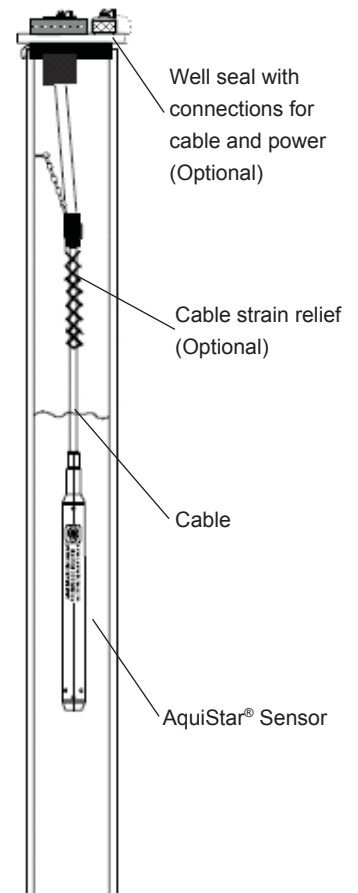
Monitor groundwater, well, tank, and tidal levels

Pump testing

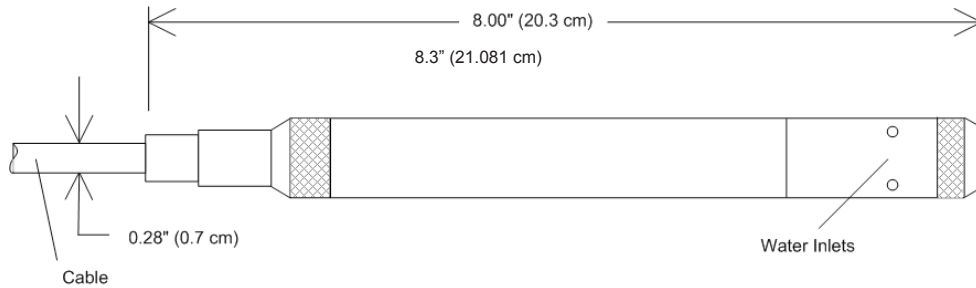
Flow monitoring

### Features

- SDI-12 v1.3 interface and Modbus® interface
- Small diameter — 0.75"
- 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



**TYPICAL INSTALLATION**



## MECHANICAL

### SENSOR

<b>Body Material</b>	316 stainless steel or titanium
<b>Wire Seal Materials</b>	Fluoropolymer and PTFE
<b>Desiccant</b>	High- and standard- capacity packs
<b>Terminating Connector</b>	Available
<b>Weight</b>	0.80 lbs. (0.4 kg)
<b>Diameter</b>	0.75" (1.9 cm)
<b>Length</b>	8.15" (20.7 cm)

### CABLE

<b>OD</b>	0.28" (0.7 cm) maximum
<b>Break Strength</b>	138 lbs. (62.7 kg)
<b>Maximum Length</b>	2000 feet (610 m) for Modbus®
<b>Weight</b>	4 lbs. per 100 feet (1.8 kg per 30 m)

### GENERAL

<b>Communication</b>	RS485 Modbus RTU SDI -12 (ver.1.3)
<b>Direct Modbus® Read Output</b>	32-bit IEEE floating point
<b>SDI-12 Output</b>	ASCII
<b>Internal Math</b>	32 bit floating point
<b>Compensated Temp. Range</b> <i>(for extended ranges, contact INW)</i>	0° C to 40° C
<b>Operating Temp. Range</b> <i>(Freeze protection kit required if water below freezing)</i>	-15° C to 55° C
<b>Storage Temp. Range</b>	-40° C to 80° C

## OPERATIONAL

### PRESSURE

<b>Pressure Ranges<sup>1</sup></b>	
Gauge	
PSI	1 <sup>3</sup> , 5, 15, 30, 50, 100, 300
FtH <sub>2</sub> O	2.3 <sup>3</sup> , 12, 35, 69, 115, 231, 692
mH <sub>2</sub> O	0.7 <sup>3</sup> , 1.75, 3.5, 10.5, 21, 35, 70, 210
Absolute <sup>2</sup>	
PSI	30, 50, 100, 300
FtH <sub>2</sub> O	35, 81, 196, 658
mH <sub>2</sub> O	10, 24, 59, 200
<b>Static Accuracy</b>	± 0.05% FSO (typical) ± 0.1% FSO (maximum) <i>(B.F.S.L. 20° C)</i>
<b>Maximum Zero Offset</b>	± 0.25% FSO @ 25° C
<b>Resolution</b>	16 bit
<b>Over Range Protection</b>	3x FS (for >300psi, contact INW) <sup>4</sup>
<b>Burst Pressure</b>	1000 psi (approx. 2000 feet or 600meters)

### TEMPERATURE

<b>Element Type</b>	Digital temperature sensor
<b>Accuracy</b>	± 0.5° C
<b>Resolution</b>	0.06° C
<b>Range</b>	-40° C to 80° C

### POWER

<b>Operating Voltage</b>	9 - 16 VDC
<b>Over Voltage Protection</b>	24 VDC
<b>Power Supply Current</b>	Active 3mA avg./10mA peak
<b>Power Supply Current</b>	Sleep 150 µA
<b>Electromagnetic &amp; Transient Protection</b>	IEC-61000 – 4-3, 4-4, 4-5, 4-6

Contact factory for extended temperature ranges.

<sup>1</sup> Higher pressure ratings available upon request.  
<sup>2</sup> Depth range for absolute sensors has 14.7 PSI subtracted to give actual depth allowed.  
<sup>3</sup> ± 0.25% accuracy FSO (max) at this range  
<sup>4</sup> Approx. 650 feet or 200 meters

©2015 Seametrics. All rights reserved. INW and AquiStar are registered trademarks of Seametrics. Modbus is a registered trademark of Schneider Electric. Information in this document is subject to change without notice. Doc# 6D0070r23 8/26/15

## INW, A division of Seametrics SALES & SERVICE

19026 72nd Avenue South  
 Kent, WA 98032 USA  
 253.872.0284  
 FAX 253.872.0285 / info@inwusa.com

1-800-PRO-WELL  
[WWW.INWUSA.COM](http://WWW.INWUSA.COM)

