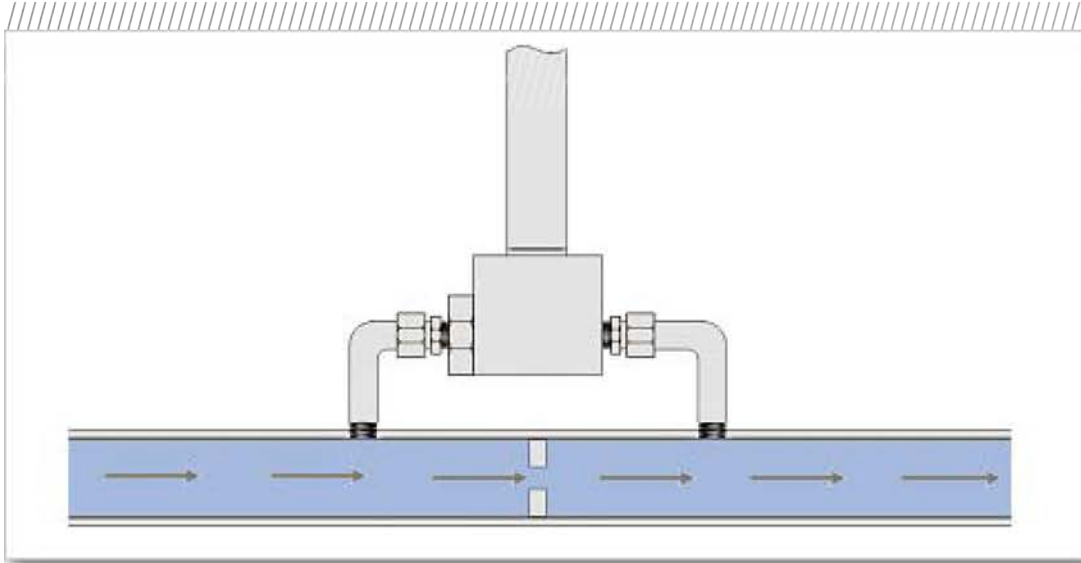


# PT2X Wet/Wet Differential Smart Sensor

WITH DATA LOGGING



## APPLICATIONS

Flow measurement

Pressure equalization applications

Replace analog sensors with separate dataloggers

## Flow measurement with all the great AquiStar® Smart Sensor features

### Features

- Measures and records differential pressure, temperature, and time
- Low power — *field replaceable AA batteries*
- Modbus® RTU (RS485) and SDI-12 interface — *great flexibility*
- Thermally compensated
- Two diaphragms — *detects difference between pressure on the high side and pressure on the low side*
- $\pm 0.05\%$  FSO typical accuracy
- Small diameter — 0.75" (1.9 cm)
- 520,000 record non-volatile memory — *no data loss in the event of a power failure*
- Wireless connectivity — *radios and/or cellular*
- Barometric compensation utility for use with absolute sensors
- Free, easy-to-use software

### MEASURING VERTICAL HYDRAULIC GRADIENT

“This approach combines the advantage of high-temporal frequency measurements obtained with instrumented piezometers with the simplicity and reduced potential for human-induced error obtained with a manometer board method.”

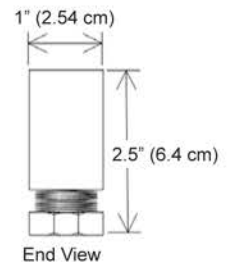
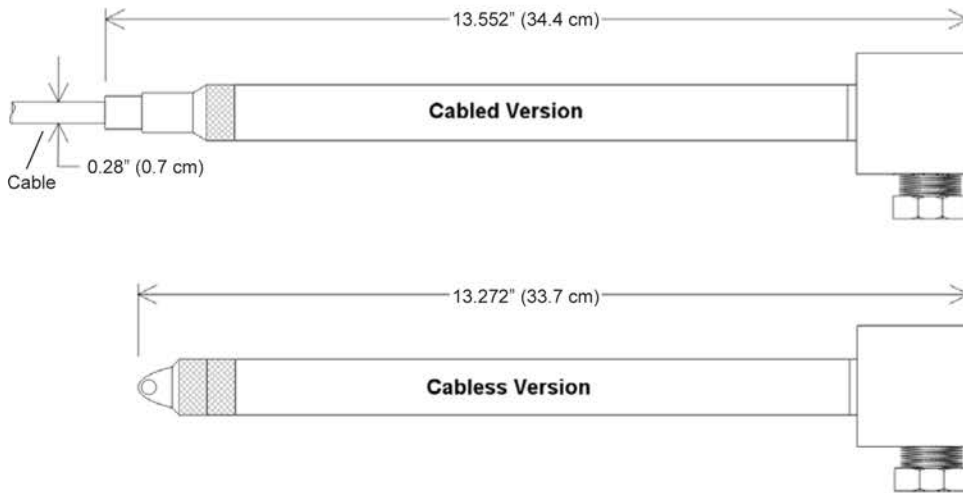
—Fritz, Brad G., Mackley, Rob D.  
“A Wet/Wet Differential Pressure Sensor for Measuring Vertical Hydraulic Gradient.” *Ground Water*. Jan-Feb 2010:117



True data, measure by measure

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

# PT2X Wet/Wet Differential Smart Sensor with Data Logging



## GENERAL

Length	13.552" (34.4 cm) cabled 13.272" (33.7 cm) cableless
Diameter	0.75" (1.9 cm)
Weight	0.8 lb. (0.4 kg)
Body Material	Delrin® & 316 stainless steel or titanium
Wire Seal Material	Viton® and PTFE /FEP
Submersible Cable	Polyurethane, polyethylene, or FEP available
Protection Rating	IP68, NEMA 6P
Desiccant	1-3 mm indicating silica gel ( <i>high or standard capacity</i> )
Terminating Connector	Available
Communication	RS485 Modbus® RTU SDI-12 (ver.1.3)
Direct Modbus Read Output	32-bit IEEE floating point
SDI-12 Output	ASCII
Internal Math	32-bit floating point
Operating Temp. Range <sup>3</sup>	-15° C to 55° C
Storage Temp. Range <sup>1</sup>	-40° C to 80° C

## LOGGING

Memory	4MB - 520,000 records
Log Types	Variable, user-defined, logarithmic, profiled
Programmable Baud Rate	9600, 19200, 38400
Logging Rate	8x/sec maximum
Software	Complimentary Aqua4Plus or Aqua-4Push
Networking	32 available addresses per junction w/ batching capabilities (up to 255)
File Formats	.xls / .csv / .a4d

## POWER

Internal Battery	2x1.5V AA alkaline <sup>2</sup>
Auxiliary Power	12 VDC - Nominal 6-15VDC - Range
Exp. Alkaline Battery Life	18 months at 15m polling interval <sup>5</sup>

## TEMPERATURE

Element Type	Digital IC on board
Accuracy	± 0.5° C
Resolution	0.1° C
Range	-40° C to 80° C
Units	Celsius, Fahrenheit, Kelvin

## PRESSURE

Transducer Type	Silicon strain gauge
Transducer Material	316 stainless steel or titanium
Pressure Ranges	PSID ( <i>differential</i> ) mH <sub>2</sub> O ( <i>differential</i> )
Common Mode Pressure	15, 30, 50, 100, 300, 500 10.5, 21, 35, 70, 210, 350
Units	10x range or 1000 PSI ( <i>whichever is lower</i> ) PSI, FtH <sub>2</sub> O, inH <sub>2</sub> O, cmH <sub>2</sub> O, mmH <sub>2</sub> O, mH <sub>2</sub> O, inHg, cmHg, mmHg, Bars, mBars, kPa
Static Accuracy	± 0.05% FSO (typical) ± 0.1% FSO (maximum) ( <i>B.F.S.L. 20° C</i> )
Resolution	0.0034% FS (typical)
Maximum Operating Pressure	1.1 x FS
Burst Pressure <sup>4</sup>	3.0 x FS
Compensated Range	0° C to 40° C

1 Storage without batteries  
2 Lithium available upon request  
3 Requires freeze protection kit if in water below freezing

4 Burst reduced at PSI>300  
5 May vary due to environmental factors

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