

INW PT2X-BV Smart Sensor

BAROMETRIC/VACUUM SENSOR WITH DATA LOGGING



APPLICATIONS

Barometrically compensate absolute sensors for level measurement

Measure vacuum pressure during vapor extraction pilot testing

Supplement aquifer test data in leaky or confined conditions

Features

- Measures & records barometric pressure/vacuum and temperature
- Low power
- Modbus® RTU (RS485) and SDI-12
- $\pm 0.05\%$ FSO typical accuracy
- Thermally compensated
- Small diameter — 0.75" (1.9 cm)
- 520,000 records in non-volatile memory
- Barometric compensation utility for use with absolute sensors
- Wireless connectivity
- Free, easy-to-use software

The **INW PT2X-BV** is a special version of the PT2X designed to measure barometric and vacuum pressure in reference to absolute pressure, along with temperature and time. It will measure pressure/vacuum from 600 to 1100 millibars.

Pressure measurement is accomplished utilizing an extremely rugged and stable 15 PSIA piezo-electric media-isolated pressure element combined with a 16-bit analog-to-digital converter. This provides extremely accurate and stable pressure input into the microprocessor on the circuit board that measures the pressure, stores the data in non-volatile memory, and communicates the information via a serial communication link (RS485) to the host computer.

Temperature measurement is accomplished utilizing a temperature sensor chip.

The PT2X-BV is available in two enclosures – either an ABS weather-proof box or a stainless steel tube. The tube version is available with either a solid end cone or an NPT end cone for connecting to piping.

The PT2X-BV can be networked with other INW Smart Sensors and controlled from one location, either directly from a single computer or via INW's Wireless Data Collection System.

While most will use the PT2X-BV with our free, easy-to-use Aqua4Plus Lite or Aqua4Plus software, it is by no means limited to that software. You can use your own Modbus® RTU or SDI-12 software or logging equipment to read measurements, thus tying into your existing systems and data bases.

Contact Your Supplier

Specifications*

Box Enclosure	Body Material	ABS - IP66/67	
	Dimensions	Box: 4.3" x 3.1" x 2.5" (10.9 x 7.9 x 6.4 cm) Box and connectors: 4.3" x 3.6" x 2.5" (10.9 x 9.1 x 6.4 cm)	
	Wire Seal Material	Fluoropolymer and Buna N	
Tube & Cable	Body Material	Acetal & 316 stainless or titanium	
	Dimensions	Cabled: 12.18" x 0.75" diameter (30.9 cm x 1.9 cm) Cableless: 11.93" x 0.75" diameter (30.3 cm x 1.9 cm)	
	Wire Seal Material	Fluoropolymer and PTFE	
	Weight	0.8 lb. (0.4 kg)	
	Cable	Submersible: polyurethane, polyethylene, or ETFE (4 lb./100 ft., 1.8 kg/30 m)	
	Environmental	IP68, NEMA 6P	
	Field Connector	Standard	
	Temperature	Operating Range	Recommended: -15° to 55°C (5° to 131°F)
Storage Range		Without batteries: -40° to 80°C (-40° to 176°F)	
Power	Internal Battery	Two lithium 'AA' batteries - Expected battery life: 18 months at 15 min. polling interval (may vary do to environmental factors)	
	Auxiliary	12 Vdc - Nominal, 6-16 Vdc - range	
Communication	Modbus®	RS485 Modbus® RTU, output=32bit IEEE floating point	
	SDI-12	SDI-12 (ver. 1.3) - ASCII	
Logging	Memory	4MB - 520,000 records	
	Logging Types	Variable, user-defined, profiled	
	Logging Rates	8x/sec maximum, no minimum	
	Baud Rates	9600, 19200, 38400	
	Software	Complimentary Aqua4Plus and Aqua4Plus Lite	
	Networking	32 available addresses per junction (Address range: 1 to 255)	
	File Formats	.a4d and .csv (also .xls in Windows 8 and earlier)	
Output Channels		Temperature	Depth/Level¹
	Element	Digital IC on board	Silicon strain 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)
	Resolution	0.1°C	0.0034% FS (typical)
	Units	Celsius, Fahrenheit, Kelvin	PSI, FtH ₂ O, inH ₂ O, mmH ₂ O, mH ₂ O, inH ₂ O, cmHg, mmHg, Bars, Bars, kPa
	Range	-40° to 80°C (-40° to 176°F)	600 to 1100 millibars
	Compensated	---	0° to 40°C (32° to 104°F)
Max operating pressure	1.1 x full scale		
Burst pressure	2.0 x full scale		

*Specifications subject to change. Please consult our web site for the most current data (inwusa.com). Modbus is a registered trademark of Schneider Electric.

Note: Intended for use in atmosphere—not to be submerged.