

Precision Pressure Transducer Ruggedized (PPTR) - Submersible

Honeywell's submersible PPTR transducer is a rugged, smart pressure transducer for use in the harsh environment of liquid measurements. It combines proven silicon sensor technology with microprocessor-based signal conditioning to provide an extremely smart pressure transducer. The PPTR submersible utilizes an integral SEA CON® electrical connector. The transducer is designed with an environmentally sealed, stainless steel construction that can operate in severe environments. The PPTR has many software features that support a wide range of applications.

APPLICATIONS:

- Ocean Depth
- Remotely operated underwater vehicle (ROV)
- Autonomously operated underwater vehicles
- Data Loggers
- Water Level



±0.07% FS Total
Error Band from
-4 to 60°C

RS-232 or
RS-485
Digital

Environmentally
Sealed

FEATURES AND BENEFITS

ISO-9001
ISO-14001

- ▶ **High Accuracy**
±0.07% FS Total Error Band from -4 to 60°C
- ▶ **Smart, Digital Sensing and Control**
- ▶ **Versatile and Configurable**
- ▶ **User Selectable Software Features**
- ▶ **Simplifies System Design** - No additional signal compensation needed to gain the benefits of a very accurate sensor.
- ▶ **Easy Interface** - Connects to PC via communication port.
- ▶ **Digital Outputs.** - RS-232 or RS-485
Isolation diaphragm handles most media - harsh gases or liquids.
Rugged Design - Operates in severe environments.
Optimizes Output - User-configurable pressure units, sampling, update rate.
Flags Problems - Internal diagnostics set flags, provide status.
- ▶ **Baud Rate, Parity Setting, Continuous Broadcast, ASCII or Binary Output, Sensor Temperature Output (°C or °F)**

PPTR Submersible

SPECIFICATIONS

Performance Specifications⁽¹⁾

Total Band Error: (from -4 to 60°C)

Digital: $\pm 0.07\%$ FS Max.⁽²⁾

Temperature: $\pm 1^\circ\text{C}$ (at sensing element)

Temperature Range:

Operating -4 to 60°C (-24 to 140°F)

Storage: -40 to 90°C (-40 to 194°F)

Sample Rate⁽⁵⁾: 8.33ms to 51.2 min

Resolution:

Digital: Up to 0.001% FS

Response Delay:

(1000/update rate) +1ms, minimum 17ms

Mechanical Specifications

Pressure Ranges and Type:

See Ordering Information

Pressure Units⁽⁵⁾: atm, bar, cmwc, ftwc, hPa, inHg, inwc, kg/cm², KPa, mBar, mmHg, MPa, mwc, psi, user, lcom, pfs

Media Compatibility: Suitable for media compatible with 316 stainless steel⁽⁶⁾

Weight: 15 oz. (424 g) with Delrin[®] protective cap

Electrical Specifications

Output:

RS-232 Digital

RS-485 Digital

Power Requirements:

Supply Voltage: 6 to 30 VDC

Operating Current: 19-27mA

Baud Rate⁽⁶⁾: 1200, 2400, 4800, 9600, 14400, 19200, 28800

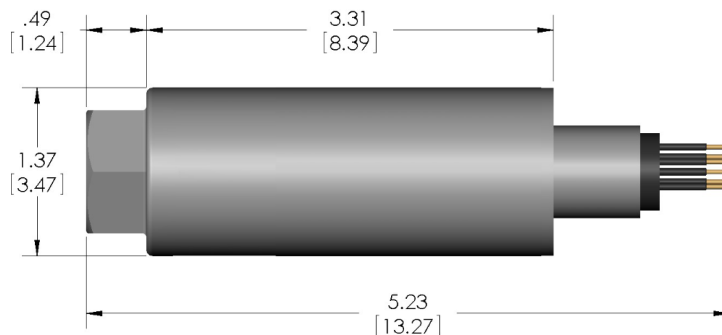
Environmental Features⁽³⁾⁽⁴⁾

Overpressure: 3x FS, maximum 6000psi

Burst Pressure: 3x FS, maximum 8500psi

(1) Total Error Band is the sum of worst case linearity, repeatability, hysteresis, thermal effects and calibration errors from -4 to 60°C. Calibration is traceable to NIST. (2) Consult factory for other pressure range or accuracy options. (3) Exposure to overpressure will not permanently affect calibration or accuracy of unit. Exceeding burst pressure may result in media escape. (4) SEA CON[®] connector MC-BH-6-M Micro WET-CON. Mates with SEA CON[®] Micro WET-CON MC-IL-6-F connector with MC-DLS-F locking sleeve. (5) User configurable. (6) For compatibility with various liquids, please note the materials used for manufacturing the connector and protective cap consist of Hypalon, SS316L and Delrin 150.

CASE OUTLINE: Dimensions: inches [cm]



ORDERING INFORMATION

PPTR Precision Pressure Transducer Ruggedized - Submersible Option

FULL SCALE PRESSURE RANGE

Absolute

0040	40 PSI
0100	100 PSI
0300	300 PSI
0500	500 PSI
1000	1000 PSI
1500	1500 PSI
3000	3000 PSI

TYPE

A Absolute 0(vacuum) to FS

P1 PRESSURE CONNECTION

P 1/4 - 18 NPT (internal)

OUTPUTS

2V RS-232 digital

5V RS-485 digital

ELECTRICAL CONFIGURATION AND CONNECTION

N Not Applicable⁽⁴⁾

OPTIONS

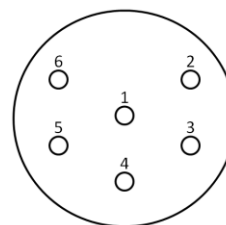
R111 Submersible Option⁽⁴⁾

R120 Submersible Option, includes black protective Delrin[®] cap over pressure fitting.

PPTR 3000 A P 2V N -R111

SUBMERSIBLE CONNECTOR PINOUT DIAGRAM

Signal Name	
1	RS-232 (TD) / RS-485 (B)
2	RS-232 (RD) / RS-485 (A)
3	Case Ground
4	Common Ground (GD)
5	DC Power In
6	Unused - Do Not Connect



Find out more

For more information on Honeywell's Precision Pressure Transducers visit us online at www.honeywell.com/pressuresensing or contact us at 800-323-8295 or 763-954-2474. Customer Service Email: ps.customer.support@honeywell.com.

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