Installation Instructions
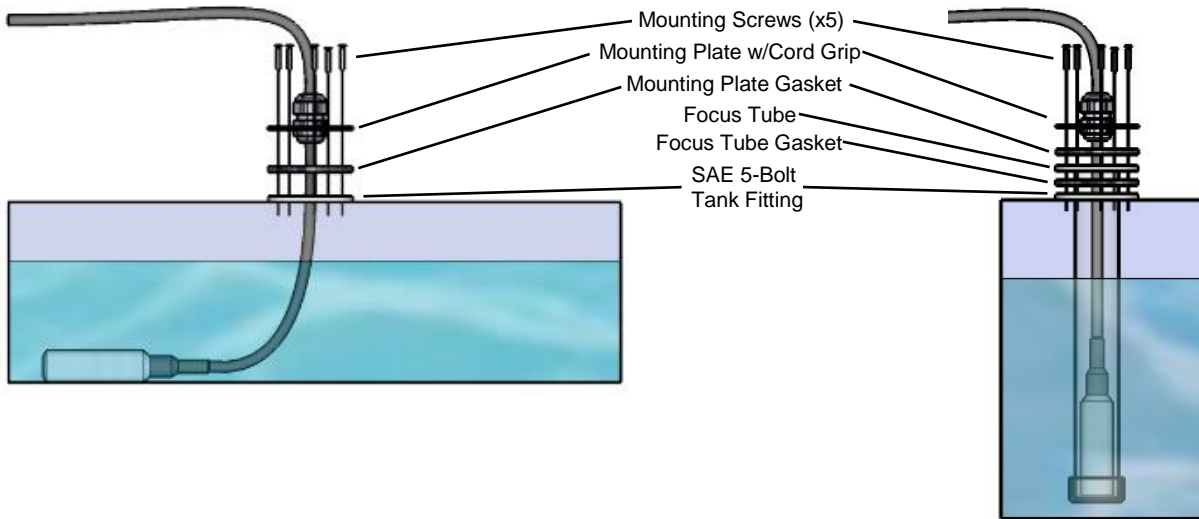## PTS-0-3PSI-01 Submersible Pressure Transducer

WARNING – Maretron submersible pressure transducers are **not** approved for use with gasoline. If you wish to use the FPM100 to monitor pressures or levels of gasoline, you must obtain a pressure transducer that is approved for use with gasoline.
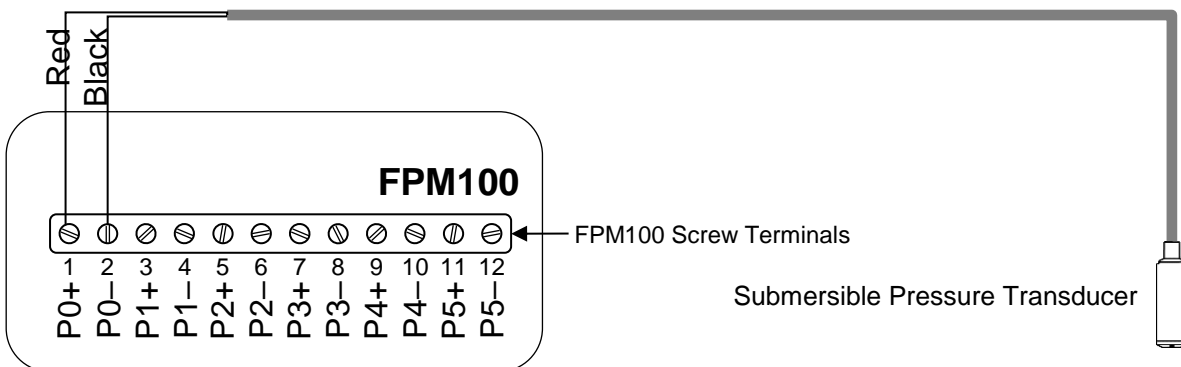
Maretron's submersible pressure transducers are used for indicating tank levels and can be installed directly in the tank. Please follow these instructions to mount and connect a submersible pressure transducer to an NMEA 2000® network via a Maretron FPM100 Fluid Pressure Monitor. Maretron recommends one of two methods for mounting a submersible pressure transducer in a tank; 1) without a restraining tube (shown on left side of Figure 1) and, 2) with a restraining tube (shown on right side of figure 1).

1. The submersible pressure transducers are designed for a tank with a 5-Hole SAE J1810 fitting at the top. Install the mounting plate with cord grip onto the transducer cable, with the rounded hex section of the cord grip facing away from the transducer.
2. Lower the pressure transducer into the tank such that the transducer lies at the lowest point of the tank, and tighten the cord grip to secure the cable. On a tank with a flat bottom, the transducer may slide from side to side with the motion of the vessel, but will not rotate due to the stiffness of the cable. It is also possible to mount the pressure transducer inside a restraining tube or focus tube (sold separately, Maretron part number TFT-5H). Please refer to Figure 1 for examples.

Mounting Screws (x5)
Mounting Plate w/Cord Grip
Mounting Plate Gasket
Focus Tube
Focus Tube Gasket
SAE 5-Bolt Tank Fitting

Figure 1 – Submersible Pressure Transducer Mounting

3. Connect the two wires of the pressure transducer to a free pressure monitoring channel as shown in Figure 2 below. The diagram shows a connection to FPM100 channel #0, but connections to other channels are similar. Connect the red wire from the pressure transducer to the positive (+) terminal of the channel, and connect the white wire from the pressure transducer to the negative (-) terminal of the channel. The example in Figure 1 shows the pressure transducer connected to switch channel 0 with the red wire connected to "P0+", and the black wire connected to "P0-". Submersible pressure transducers have a small red plastic vent tube in the connecting cable. **Care must be taken not to kink or block this tube or allow it to be exposed to moisture, or pressure readings will be inaccurate.**
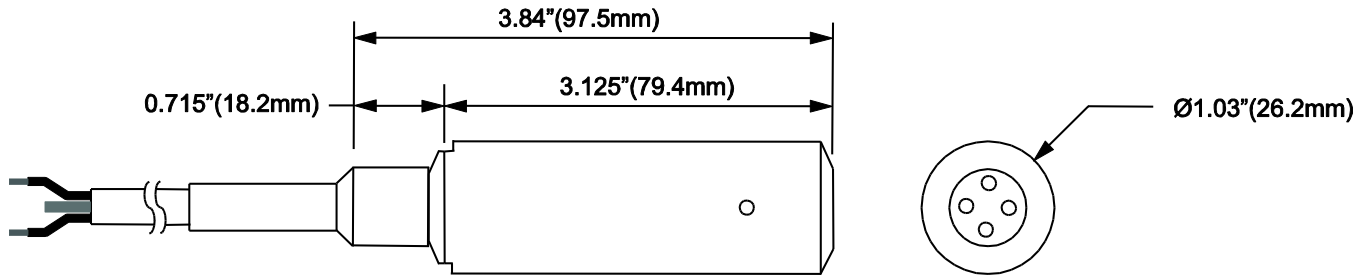

Red
Black

FPM100

FPM100 Screw Terminals

1   2   3   4   5   6   7   8   9   10 11 12
P0+ P0– P1+ P1– P2+ P2– P3+ P3– P4+ P4– P5+ P5–

Submersible Pressure Transducer

Figure 2 – Submersible Pressure Transducer Connection Diagram

4. Use a Maretron DSM150 or DSM250 display (firmware 1.4.7 or higher), or Maretron N2KAnalyzer software (version 1.4.19 or higher), to configure the connected channel on the FPM100.

	PST-0-3.0PSI-01
Value at 4mA:	**0 PSI (0 bar)**
Value at 20mA:	**3.0 PSI (0.107 bar)**

5. Supply power to the NMEA 2000 network and verify that the pressure channel indicates a valid pressure reading.

Mechanical Drawing

3.84"(97.5mm)

0.715"(18.2mm) 3.125"(79.4mm)

Ø1.03"(26.2mm)

Pressure Transducer Specifications

Part Number	Range	Depth Range	Cable Length
PTS-0-3PSI-01	0 to 3 PSI (0.21 bar)	83" (3.52m) water	17ft (5.18m)

Specification	Value
Output	4 – 20mA current loop, loop powered
Sensor Type	Gauge (Vent Tube)
Excitation Voltage	8VDC to 28VDC
Compatible Fluids / Gases	Motor Oil, Diesel, Hydraulic Fluid, Water, Waste Water
Operating Temperature	14°F to 176°F (-10°C to 80°C)
Storage Temperature	-4°F to 176°F (-20°C to 80°C)
Temperature Compensation	23°F to 122°F (0°C to 50°C)
Accuracy	±1% Full Scale
Linearity	0.5% Full Scale
Repeatability	0.05% Full Scale
Full Scale Thermal Error	0.04% Full Scale/°F (0.07% Full Scale/°C)
Long Term Stability	0.2% Full Scale/year
Response Time	150ms
Proof Pressure	2 × Full Scale
Burst Pressure	3 × Full Scale
Reverse Voltage Protection	± 30V for 3 minutes
Construction	316L stainless steel body and diaphragm, polyether polyurethane cable, chloroprene boot
EMC Compatibility	10 Volts/meter per EN 61000-4-3
Weight	24.8oz (703g)

For installation support, please contact:

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