Installation Instructions
PT-0-1.5PSI-01, PT-0-3PSI-01, PT-0-5PSI-01, and PT-0-10PSI-01
External Pressure Transducers

WARNING – Maretron pressure transducers are **not** approved for use with gasoline. If you wish to use the CLM100 or FPM100 to monitor pressures or levels of gasoline, you must obtain a pressure transducer that is approved for use with gasoline.

Instructions

Please follow these instructions to connect any of the PT-0-1.5PSI-01, PT-0-3PSI-01, PT-0-5PSI-01, or PT-0-10PSI-01 pressure transducers to the NMEA 2000® network via a Maretron CLM100 (Current Loop Monitor) or an FPM100 (Fluid Pressure Module). The wiring diagram appears in Figure 1 below. The diagram shows a connection to channel #0, but connections to other channels are similar.

1. Please refer to the CLM100/FPM100 User's Guide for detailed information on selecting a mounting location for the pressure transducer.

2. All Maretron pressure transducer assemblies are equipped with a ¼" NPT male threaded fitting. Install the pressure transducer to a ¼" NPT female fitting on the system or tank to be monitored with a maximum torque of 133 to 177 in-lbs (15 to 20 Nm). If you are monitoring a system where pressure spikes or transients will occur, or where the pressure will exceed the maximum pressure rating of the pressure transducer, install a Pressure Snubber (PT-SNUB-01) onto the system being monitored first, then install the pressure transducer to the female port on the pressure snubber.

3. Connect the two wires of the pressure transducer to a free monitoring channel. Connect the white wire from the pressure transducer to the positive (+) terminal of the channel and connect the brown 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 white wire connected to "P0+", and the brown wire connected to "P0-". Pressure transducers of "Gauge" type allow atmospheric pressure to the sensor through the connecting cable. **Take care to not allow the end of the cable with the tinned wire leads to be exposed to moisture, or the sensor may become damaged due to corrosion.** If the area where the end of the cable is located might have moisture present, the use of 1) a waterproof junction box with cable glands and a PTFE vent or 2) a desiccant cartridge is highly recommended. Running the cable through a cable gland will not affect its ability to allow atmospheric pressure through the cable into the sensor.

4. Use a Maretron DSM Series Display (firmware 1.4.7 or higher) or a PC running Maretron's N2KAnalyzer software (version 1.4.19 or higher), to configure the connected channel(s) on the CLM100/FPM100.

	PT-0-1.5PSI-01	PT-0-3PSI-01	PT-0-5PSI-01	PT-0-10PSI-01
Value at 4mA:	0 PSI (0 bar)	0 PSI (0 bar)	0 PSI (0 bar)	0 PSI (0 bar)
Value at 20mA:	1.5 PSI (0.103 bar)	3.0 PSI (0.207 bar)	5.0 PSI (0.345 bar)	10.0 PSI (0.690 bar)

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

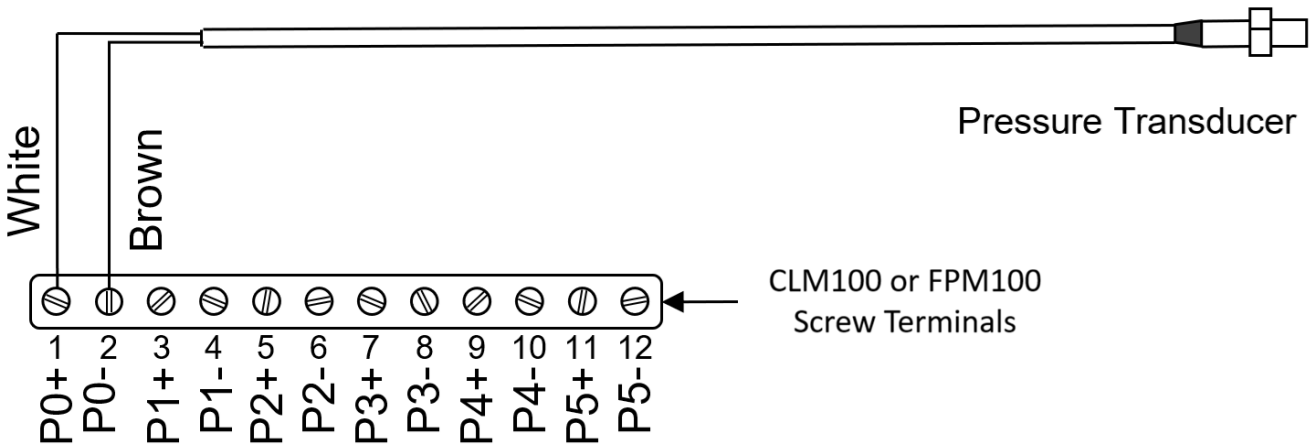

Figure 1 – Pressure Transducer Connection Diagram

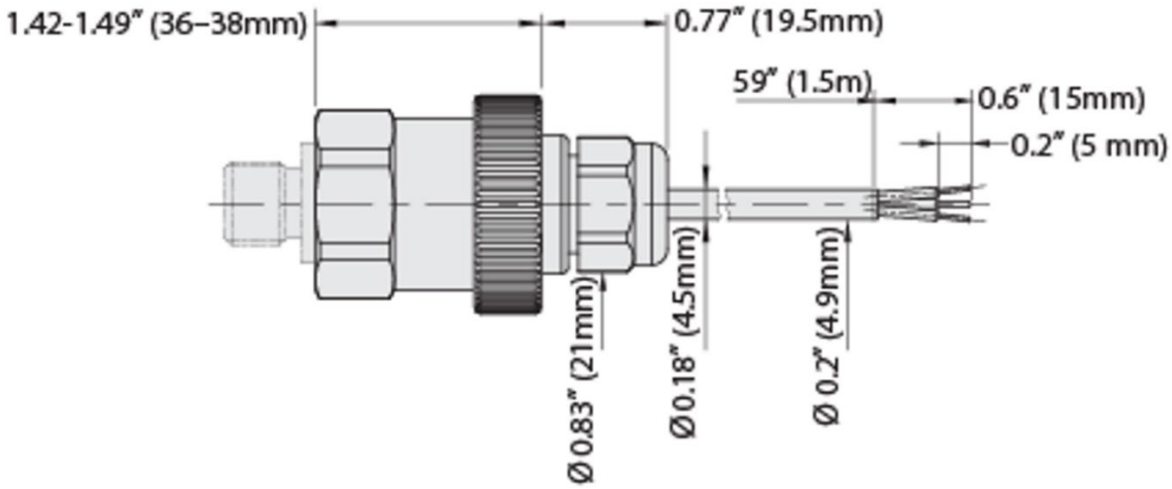

Figure 2 – Pressure Transducer Mechanical Drawing

Pressure Transducer Specifications

Part Number	Operating Range	Over Pressure Max	Accuracy Full Scale	Fluid Depth Range	
				Water (1,000 kg/m³)	Diesel (820 kg/m³)
PT-0-1.5PSI-01	0 to 1.5 PSI (0.103 bar)	15 PSI (1.03 bar)	±3%	41.5" (1.05 m)	50.7" (1.29 m)
PT-0-3PSI-01	0 to 3 PSI (0.207 bar)	15 PSI (1.03 bar)	±2%	83.1" (2.11 m)	101.3" (2.57 m)
PT-0-5PSI-01	0 to 5 PSI (0.345 bar)	15 PSI (1.03 bar)	±2%	138.4" (3.51 m)	168.9" (4.29 m)
PT-0-10PSI-01	0 to 10 PSI (0.69 bar)	20 PSI (1.38 bar)	±1%	276.7" (7.03 m)	337.4" (8.57 m)

Specification	Value
Sensor Type	Gauge
Output	4 – 20 mA current loop, loop powered
Excitation Voltage	9 VDC to 30 VDC
Compatible Fluids / Gases	Air, Brake Fluid, Diesel, Diesel Exhaust Fluid (DEF), Hydraulic Fluid, Hydrogen, Kerosene, Motor Oil, Nitrogen, Refrigerant, Fresh Water, Sea Water, and Waste Water
Operating Temperature	23°F to 140°F (-5°C to 60°C)
Media Temperature	-13°F to 257°F (-25°C to 125°C)
Over Pressure Max	29 PSI (2 bar)
Construction	1.4305 (303 Stainless Steel), Thick Film on Ceramic Al_2O_3 (96 %) Sensor, FKM 70 Sh O-Ring
Cable	IP67, PVC (cable gland PA6-3)
Cable Length	4.9 ft (1.5 m)
Vibration	4 g (10 – 2000 Hz)
Shock	50 g/8 ms
EMC Compatibility	EN 61000-6-3, EN 61000-6-2
Humidity	Max. 95% relative
Weight	110g (3.9 oz)

For installation support, please contact:

Customer Portal

Knowledge Base

Toll Free: 1-866-550-9100
Phone: 1-603-324-7900
E-mail: support@maretron.com
Customer Portal: Customer.Raymarine.com
World Wide Web: http://www.maretron.com
Mail: Raymarine-Maretron FL Service Center
120 Intracoastal Pointe Drive
Jupiter, FL 33477 USA