Maretron®

Installation Instructions
PT-0-50PSI-01, PT-0-100PSI-01, PT-0-500PSI, and PT-0-5000PSI
External Pressure Transducers

⚠️ **WARNING** – Maretron 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.

Instructions

Please follow these instructions to connect any of the PT-0-50PSI-01, PT-0-100PSI-01, PT-0-500PSI, and PT-0-5000PSI 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.
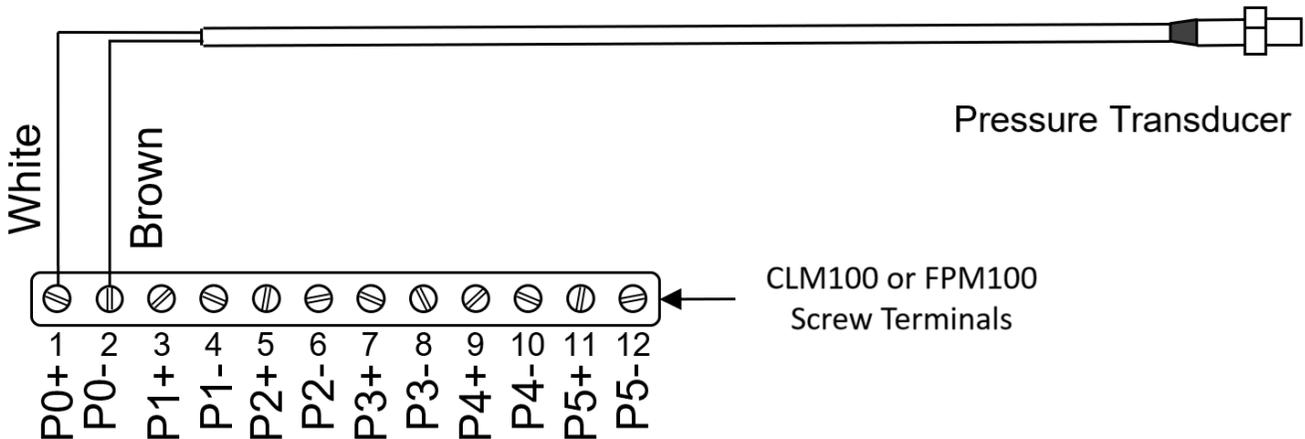
1. Please refer to the CLM100/FPM100 User's Guide for detailed information on selecting a mounting location for the pressure transducer.

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 pressure 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.
   Care must be taken not to allow end of the cable with the tinned wire leads to be exposed to moisture, or pressure readings will be inaccurate.

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-0-50PSI-01	PT-0-100PSI-01	PT-0-500PSI-01	PT-0-5000PSI-01
Value at 4mA:	0 PSI (0 bar)	0 PSI (0 bar)	0 PSI (0 bar)	0 PSI (0 bar)
Value at 20mA:	50 PSI (3.45 bar)	100 PSI (6.89 bar)	500 PSI (34.47 bar)	5000 PSI (344.74 bar)

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

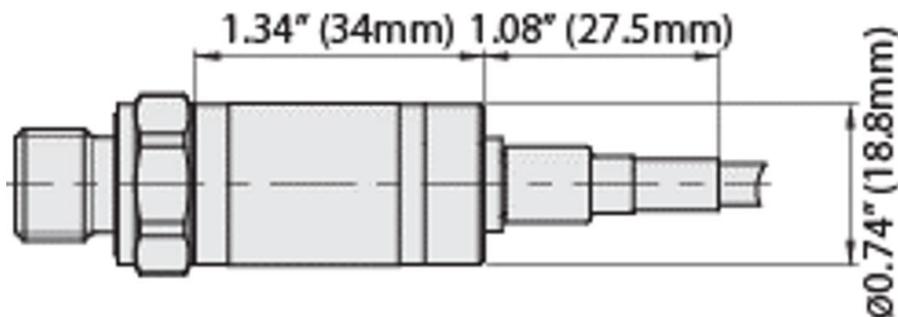*Figure 1 – Pressure Transducer Connection Diagram*

Figure 2 – Pressure Transducer Mechanical Drawing

Pressure Transducer Specifications

Part Number	Operating Range	Over Pressure Max	Accuracy Full Scale
PT-0-50PSI-01	0 to 50 PSI (3.45 bar)	150 PSI (10.3 bar)	±1.75%
PT-0-100PSI-01	0 to 100 PSI (6.89 bar)	300 PSI (20.7 bar)	±1.75%
PT-0-500PSI-01	0 to 500 PSI (34.5 bar)	1500 PSI (103 bar)	±1.75%
PT-0-5000PSI-01	0 to 5000 PSI (345 bar)	12500 PSI (862 bar)	±1.75%

Specification	Value
Sensor Type	Gauge
Output	4 – 20 mA current loop, loop powered
Excitation Voltage	9 VDC to 32 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	-40°F to 257°F (-40°C to 125°C)
Construction	1.4301 (AISI304) Housing, 1.4542 (AISI630) Pressure Connection, 1.4542 (AISI630) Sensor
Cable	IP67, PVC
Cable Length	3.28 feet (1.0m)
Vibration	15 g RMS (20 – 2000 Hz), 25 g sin (80 – 2000 Hz), 1 oct./min, (1x @ 25°C)
Shock	50 g/11 ms
EMC Compatibility	EN 61000-6-3, EN 61000-6-2
Humidity	Max. 95% relative
Weight	50g (1.8 oz)

For installation support, please contact:

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