FPM100 *Fluid Pressure Monitor*

Maretron's Fluid Pressure Monitor is used to adapt up to six pressure transducers to the NMEA 2000® network (pressure transducers sold separately). This allows you to observe fluid pressures and tank levels anywhere on the vessel where there are NMEA 2000® compatible displays. With the appropriate transducer, the FPM100 reports either pressure or vacuum for a variety of applications including water pressures, oil pressures, hydraulic pressures, or system vacuum for detecting clogged filters.

The FPM100 also has a tank level mode, so that fluid levels in a tank can be monitored via a pressure transducer mounted at the bottom of the tank and transmitted over the NMEA 2000® network. This allows you to monitor the fluid levels in tanks that are extremely deep, have internal structures, or are otherwise not suited for other tank level sensing technologies. In this mode, the FPM100 can be calibrated for irregular tank shapes so that you know the true level of the tanks.

The following accessories are available for the FPM100:

PT-0-xxxxPSI-01

PT-SNUB-01

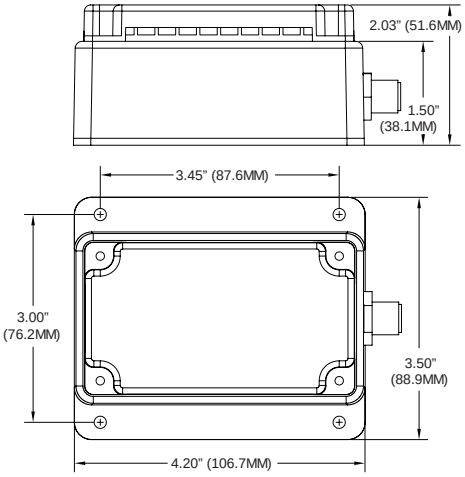
PTS-0-x.xPSI-01

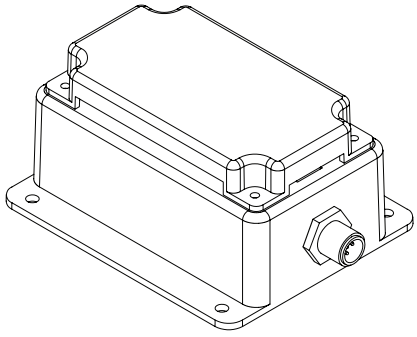
The Maretron FPM100 has the following features:

- NMEA 2000® interface
- Adapts up to six pressure transducers to the NMEA 2000® network
- Each channel independently programmable to match pressure transducer characteristics
- Each channel independently programmable in pressure/ vacuum mode or tank level mode

Products

PART NUMBER	DESCRIPTION
FPM100-01	Fluid Pressure Monitor
PT-0-3PSI-01	Pressure Transducer 0 to 3 PSI
PT-0-5PSI-01	Pressure Transducer 0 to 5 PSI
PT-0-10PSI-01	Pressure Transducer 0 to 10 PSI
PT-0-50PSI-01	Pressure Transducer 0 to 50 PSI
PT-0-100PSI-01	Pressure Transducer 0 to 100 PSI
PT-0-300PSI-01	Pressure Transducer 0 to 300 PSI
PT-0-500PSI-01	Pressure Transducer 0 to 500 PSI
PT-0-1000PSI-01	Pressure Transducer 0 to 1000 PSI
PT-0-3000PSI-01	Pressure Transducer 0 to 3000 PSI
PT-0-5000PSI-01	Pressure Transducer 0 to 5000 PSI
PT-SNUB-01	Pressure Snubber
PT-V-0-1BAR-01	Pressure Transducer Vacuum to 1 Bar
PTS-0-1.5PSI-01	Submersible Pressure Transducer 0 to 1.5 PSI
PTS-0-3.0PSI-01	Submersible Pressure Transducer 0 to 3.0 PSI





Specifications (Pressure/ Vaccuum Mode)

Parameter	Value	Comment
Accuracy	+/-1% FS	Exclusive of Pressure Transducer
Resolution	+/-0.33% FS	Over Full Pressure Transducer Range
Number of Pressure Source Types	21	Water Pressure, Atmospheric Pressure, Compressed Air Pressure, Hydraulic Pressure, Steam Pressure, 16 User Defined Sources

Specifications (Tank Level Mode)

Parameter	Value	Comment
Accuracy	+/-1% FS	Exclusive of Pressure Transducer
Resolution	+/-0.33% FS	Over Full Pressure Transducer Range
Number of Tank Types	16	Fuel, Fresh Water, Waste water, Live well, Oil, etc.
Number of Tanks per Tank Type	16	16 Tanks per Tank Type Numbered 0-15
Support for Irregularly Shaped Tanks	Yes	Can be Calibrated for any Shape Tank
Programmable Tank Capacity	Yes	Allows Displays to Calculate Amount Remaining
Support for Irregularly Shaped Tanks	Yes	Can be Calibrated for any Shape Tank
Programmable Tank Capacity	Yes	Allows Displays to Calculate Amount Remaining

Certifications

Standard	Comment
NMEA 2000	Level A
Maritime Navigation and Radiocommunication Equipment & Systems	IEC 61162-3
Maritime Navigation and Radiocommunication Equipment & Systems	Tested to IEC 60945
FCC and CE Mark	Electromagnetic Compatibility

NMEA 2000® Parameter Group Numbers (PGNs) See Appendix A for Details

Description	PGN #	PGN Name	Default Rate
Periodic Data PGNs	127505	Fluid Level	0.4 Times/Second
	130314	Actual Pressure	0.5 Times/Second
Response to Requested PGNs	126464	PGN List (Transmit and Receive)	N/A
	126996	Product Information	N/A
	126998	Configuration Information	N/A
Protocol PGNs	059392	ISO Acknowledge	N/A
	059904	ISO Request	N/A
	060928	ISO Address Claim	N/A
	065240	ISO Address Command	N/A
	126208	NMEA	N/A
Maretron Proprietary PGNs	128720	Configuration	N/A

Electrical

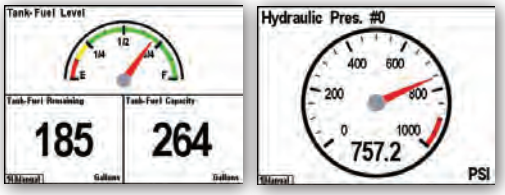
Parameter	Value	Comment
Operating Voltage	9 to 32 Volts	DC Voltage
Power Consumption	400mA	Maximum Current Drain
Load Equivalence Number (LEN)	8	NMEA 2000® Spec. (1LEN = 50mA)
Reverse Battery Protection	Yes	Indefinitely
Load Dump Protection	Yes	Energy Rated per SAE J1113

Mechanical

Parameter	Value	Comment
Size	3.50" x 4.20" x 2.03" (88.9mm x 106.7mm x 51.6mm)	Including Flanges for Mounting
Weight	13 oz. (368.5 g)	

Environmental

Parameter	Value
IEC 60945 Classification	Exposed
Degree of Protection	IP64
Operating Temperature	-25°C to 55°C
Storage Temperature	-40°C to 70°C
Relative Humidity	93%RH @40° per IEC60945-8.2
Vibration	2-13.2Hz @ ±1mm, 13.2-100Hz @ 7m/s² per IEC 60945-8.7
Solar Radiation	Ultraviolet B, A, Visible, and Infrared per IEC 60945-8.10
Corrosion (Salt Mist)	4 times 7days @ 40°C, 95%RH after 2 hour Salt Spray Per IEC 60945-8.12
Electromagnetic Emission	Conducted and Radiated Emission per IEC 60945-9
Electromagnetic Immunity	Conducted, Radiated, Supply, and ESD per IEC 60945-10
Safety Precautions	Dangerous Voltage, Electromagnetic Radio Frequency per IEC 60945-12



DSM150 & DSM250 Screen Shots