

# WATER PRESSURE SENSOR

MLPSVL, MLPSCABLE-F AND MLPSCABLE-M

## High Precision Digital Pressure Transmitter

Maid Labs Technology Sensors provide standard features that far exceed those of comparably priced transmitters by combining proven piezoresistive silicon sensor technology with state-of-the-art signal conditioning circuitry. The result is outstanding  $\pm 0.1\%$  Total Error Band (TEB) accuracy over a wide compensated temperature range.

The ability of this Sensor to provide this level of sustained performance over a wide range of operating conditions makes it ideally suited to pressure monitoring applications such as tank level measurement, pump control, and VFD control.



### FEATURES

- 16-bit internal digital error correction for cost-effective low Total Error Band (TEB).
- 316L stainless steel construction
- 2-year warranty covers defects in materials and workmanship.
- User-rangeable analog output ensures compatibility as requirements change. Converter cable required, sold separately.
- 4-20 mA analog & RS485 outputs simplify interface to controls, data collection, and telemetry systems.
- RS485 modified-MODBUS compatible interface allows up to 128 transmitters on a single bus.
- Built in the U.S.A. ARRA Section 1605 Compliant.

Output	WhiteC	Black	Blue	Yellow
2-wire (mA)	OUT / GND	+Vcc	RS484A	RS485B
Braided shield wire connected to transmitter housing				

Parameters	Value	Comments
Pressure Ranges - Relative	Infinite between 0...2 to 0...500 PSIG	PSIG = Gage; Zero-point referenced to local atmospheric pressure. PSIA = Absolute; Zero-point set at hard vacuum. PSIS = Sealed Gage; Zero-point set at 1 bar absolute (14.504 PSIA). Zero-point can be suppressed or elevated for special applications.
Pressure Ranges - Absolute	Infinite between 0...2 to 0...500 PSIA	
Pressure Ranges - Sealed	Infinite between 0...500 to 0..15,000 PSIS	
Pressure Ranges – Proof Pressure	10X for 1 PSI to 1.1X for 15k PSI	
Accuracy – Static	Standard $\pm 0.1\%$ FS , Optional $\pm 0.05\%$ FS	Static accuracy includes the combined effects of non-linearity, hysteresis, and non-repeatability at room temperature (25°C). Total Error Band (TEB) includes static accuracy, plus thermal dependencies, over the compensated temperature range.
Accuracy - Total Error Band	Standard $\pm 0.25\%$ FS , Optional $\pm 0.1\%$ FS	
Output - Current Output - Resolution	4...20mA + RS485 0.002%	Resolution applies to digital output only. Analog resolution is continuous and limited by the process meter and not the instrument.
Connection - Process	1/4"-18NPT Male	Other process connections available on request. Consult the factory.
Connection - Electrical	PE Cable Standard	Maid Labs Part No MLPSCABLE-F (per foot) MLPSCABLE-M (per meter)
Certifications	CE Shock Vibration	EN50081-1, EN50082-2 20g (11ms) 20g (5-2KHz, max. amp $\pm 3$ mm per IEC68-2-6)
Electrical - Supply (4-20mA) Electrical - Load Resistance (mA)	11...28 VDC $<(\text{Supply}-11\text{V})/0.022\text{A}$	Nominal values may be higher depending upon cable length. Cable resistance (~70 $\Omega$ / 1000ft) adds to the supply requirement. In order to insure proper system operation, calculate the minimum required supply voltage (at the source) as follows: <b>MINIMUM SUPPLY VOLTAGE =</b> $11 + 0.022 (\text{CABLE LENGTH} \times 0.07) \text{ VDC}$
Environmental	Protection Rating Operating Temp. Compensated Temp. Wetted Materials Cable Options	IP68 -10...60° C -10...80° C 316 L Stainless Steel, hydrocarbon
Dimensions (Cylindrical)	$\varnothing$ 21 mm x 110 mm $\varnothing$ 0.825 in x 4.33 in	D x H, Cable is 0.23 in. (6 mm)

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