

MODEL PL1M

- ✓ $\pm 0.25\%$ FS static accuracy ($\pm 0.1\%$ FS possible as an option)
- ✓ Compact, rugged, fully welded 316 stainless steel construction
- ✓ Excellent stability, repeatability and reliability
- ✓ Exclusive cable seal system for enhanced lifetime
- ✓ Fully tested, fully compensated, calibrated and serialized
- ✓ Ranges from 70 to 700 ft WC



Description

The model PL1M is a submersible level transmitter that can be submerged in many types of fluid for an accurate and reliable level measurement. The rugged construction assures excellent life with virtually no maintenance. The PL1M utilizes the latest leading-edge technologies to measure level. The level information is provided through continuous measurement of hydrostatic pressure. With its excellent stability the PL1M provides unequalled performance and is designed for any application that requires a low to medium level measurement.

The sensing element is a ion implanted piezoresistive silicon chip. This technology is based on a principle that results in excellent linearity, increased long-term stability and reliability and virtually no hysteresis. The silicon strain gage is fitted into a 316 stainless steel package and is completely isolated from the media. There are no internal O-rings or elastomers to contain the media and to contribute to instabilities or drifts.

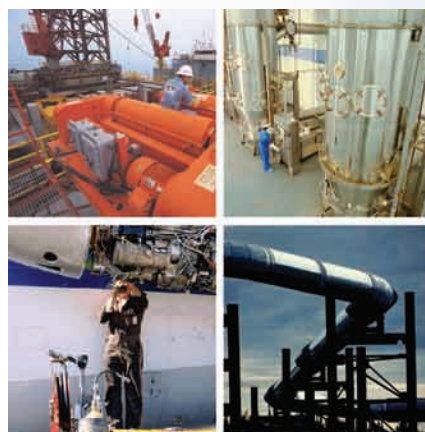
The sensor signal is amplified by a conventional analog electronics providing a high-level output from an unregulated voltage supply. The electronics enables enhanced accuracy, stability and reliability. Each unit is fully tested compensated and calibrated for pressure and temperature. And each transducer is shipped with a traceable calibration card.

The electronics is packaged in an hermetically-sealed all-welded 316 stainless steel housing enabling the PL1M to be immersed in the most corrosive and hostile liquids without internal leakage. The housing can optionally be construction in Hastelloy or Titanium for even greater corrosion resistance. And a unique cable seal system perfects this worry-free construction.



Applications

- Level Control / Pump Control
- Water Level Measurement (rivers, lakes, canals, reservoirs)
- Irrigation
- Ground Water Monitoring / Water Well Monitoring
- Oceanographic Research
- Lift Stations
- Wastewater / Sewage Level
- Slug Tests
- Tank Level Metering
- Downhole
- Dewatering
- Sea Water Tide Gauging / Wave Profiling

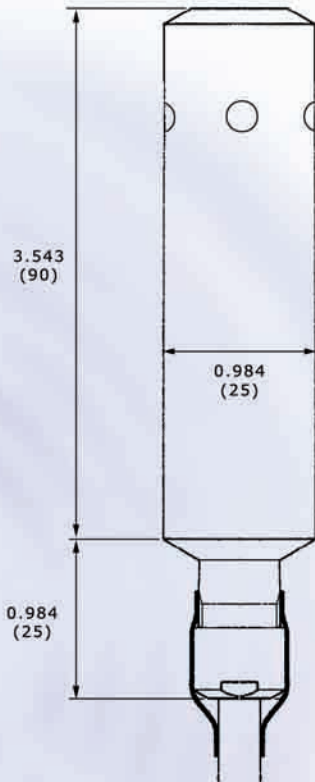


Model PL1M

Submersible Level Transducers

Dimensions

Dimensions below are in inches and (mm).
Tolerance on diameter: -0.000"/-0.0020"
(-0.00mm/-0.05mm)



Specifications

Pressure Ranges	0-70 ftWC through 0-700 ftWC
Type of pressure	Absolute, Vented, Sealed

Performances

Static Accuracy (linearity, hysteresis, repeatability and calibration)	± 0.25%FS (B.F.S.L.) ± 0.1%FS (B.F.S.L.) optional
Temperature error	± 0.01%FS/°F
Long term stability	± 0.2%FS per annum
Response time (-3dB)	< 1 ms
Resolution	infinite (0.02%FS practical minimum)
Fatigue life	> 10 million cycles

Environmental characteristics

Operating temperature (process)	-40°C to +80°C
Ambient temperature	-40°C to +80°C
Random vibration (50-2000Hz)	10G
Shock	10G, 11 ms, half-sine
Drop (any axis)	1.5 m

Electrical characteristics

Supply	5 to 28 VDC	8 to 28 VDC	13 to 28 VDC	8 to 28 VDC
Output	0 to 1 VDC	0 to 5 VDC	0 to 10 VDC	4 to 20 mA
Load	> 5 kΩ	> 5 kΩ	> 5 kΩ	< 1 kΩ
Current draw	< 3 mA	< 3 mA	< 3 mA	< 20 mA
Insulation	> 100 MΩ at 50 VDC			

Physical characteristics

Proof pressure	2x
Burst pressure (pressure containment)	750 psi for vented-type transducers 2000 psi for absolute and sealed
Wetted parts	316L Stainless Steel
Weight	Varies upon cable length

Wiring diagram

	PE ø7.3 mm cable
3-wire, voltage output	Black +Supply Red +OUT White GND
2-wire, 4-20 mA output	Black +Supply Red +OUT/GND

Ordering information

PL1M - R P50 05 - 42 3D - XX SC S X K - 0000

Pressure reference
 A Absolute C Compound
 S Sealed
 R Vented

Pressure range
 Request code to use for your pressure range

Compensated temperature range
 05 0 to +50°C
 A8 -10 to +80°C
 Request code to use for any other compensated temperature range

Output signal
 42 4 to 20 mA 01 0 to 1 VDC
 10 0 to 10 VDC 05 0 to 5 VDC
 Request code to use for any other output signal

Static accuracy
 3D 0.25%FS
 1C 0.1%FS

Nose Cone
 XX 316L Stainless Steel
 C2 Plastic
 Request code to use for any other pressure fitting

Electrical connection
 SC PE jacketed ø7.3mm submersible cable
 Request code to use for any other electrical termination

Wetted material
 S 316L Stainless Steel
 H Hastelloy C276
 T Titanium

O-ring material
 V Fluorocarbon S Silicone
 E EPDM X No O-ring
 K Kalrez®

Oil filling
 K Silicone oil
 O Olive oil

Option
 0000 Standard

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