



■
**Removable &
 Reusable
 Cage!**
 patent pending

■ *Operational Description*

APG's submersible liquid level transmitters are engineered for a wide variety of industrial and municipal liquid level measurement applications requiring watertight protection. Each transmitter undergoes extensive testing and calibration to achieve an accuracy of 0.50% of span. State-of-the-art surface mount technology provides added protection from shock and vibration. Each unit is temperature compensated to ensure accuracy and long term stability under extreme temperature variations.

The transmitters feature a vented, watertight cable. The unit meets IP68, the International Protection standard for electrical equipment, for submersion to 450 ft.



level sensing

PT-500

Submersible Liquid Level Transmitters

- Simple to install liquid level measurement
- High precision, solid state signal: 4-20 mA
- Exclusive, removable and reusable cage saves you money when replacing the sensor (patent pending)
- Optional 1-1/2" tri-clover with 3/4" diaphragm or 1-1/2" diaphragm process connection with removable cage
- 1/2" NPTM on cable end for use with conduit

■ *Applications*

These rugged submersible pressure transmitters are suitable for applications in tank liquid level measurement, water and wastewater, well depth measurement, and offshore water depth measurement (sea water).

■ Specifications

| |
|---|
| Input: 10-28 VDC |
| Accuracy |
| Linearity, Hysteresis, Repeatability (B.F.S.L.): ≤ 0.50% of span |
| 1 Year Stability: ≤ 0.25% of span |
| Temperature |
| Temperature Compensation Range: 32 to 122°F (0 to 50°C) |
| Storage: -40 to 175°F (-40 to 80°C) |
| Temperature Error: (Reference temperature 70°F (21°C)) |
| Zero: ≤ 0.025% F.S./°F |
| Span: ≤ 0.025% F.S./°F |
| Electrical Connection: Vented watertight cable with free ends |
| Tensile strength: maximum 200 lb. |
| Specify cable length |
| Enclosure Protection: Submersible up to 450 ft. |
| Material |
| Wetted Parts: 316L SS |
| Cable: Polyurethane |
| Protective Cap: Polyamide |
| Transmitting Fluid: Food grade silicone oil |
| Electrical Protection: Protected against reverse polarity, surge per IEC 61000-4-5 |

Specifications are subject to change without notice.

■ Wiring

2-Wire Current Loop

| Signal | Wire Color |
|----------|------------|
| Supply + | Red |
| Signal - | Black |
| Ground | Green |

4-20 mA 2 Wire System

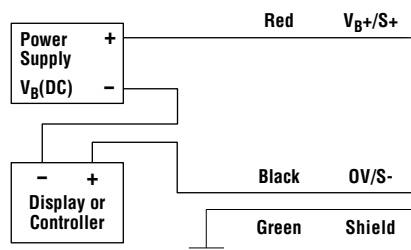
The 2 wire system connects the power supply, transmitter, and indicating/recording instruments in a series circuit. This creates a "current loop" with the transmitter functioning as a current regulating device.

Terminal Coding Notes:

- V_B⁺** : Plus power supply
- OV** : Minus power supply
- S⁺** : Plus output signal
- S⁻** : Minus output signal
- Shield** : Cable shield/transmitter body

The supply voltage must be higher than the minimum required voltage as determined by the load equation for the specific transmitter. Refer to the specifications section of the data sheets for additional information.

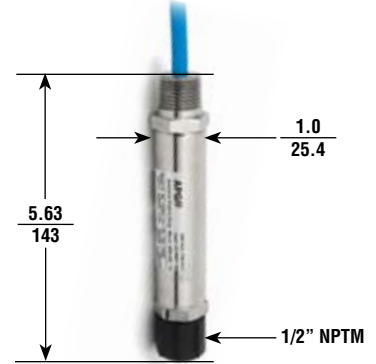
Flying Leads



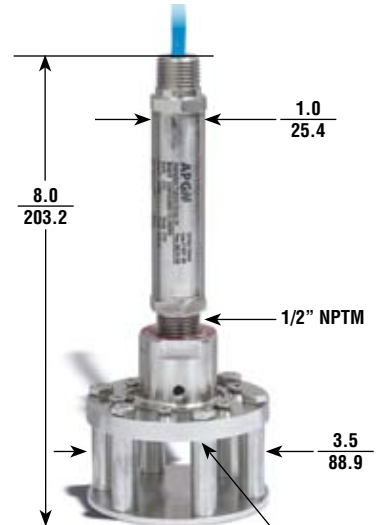
Load Limitation

$$R_{(max)} = ((V_s - 12V) / 0.02 A) - (0.042 \Omega \text{ per ft. of cable})$$

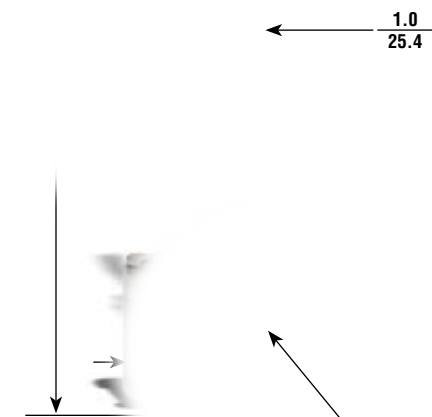
■ Dimensions — in./mm



(Shown with protective cone in place.)



(Shown with cage in place.) 1.5" DIAPHRAGM



(Shown with cage in place.) 3/4" DIAPHRAGM



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■ **Ordering Information**

| Standard Ranges | | |
|-----------------|------------|---------------------|
| | Pressure | Water Depth |
| 5 psig | 0-5 psig | 11.5 ft. (3.5 m) |
| 10 psig | 0-10 psig | 23.0 ft. (7.0 m) |
| 15 psig | 0-15 psig | 34.7 ft. (10.6 m) |
| 25 psig | 0-25 psig | 57.8 ft. (17.6 m) |
| 50 psig | 0-50 psig | 115.5 ft. (35.2 m) |
| 100 psig | 0-100 psig | 231.1 ft. (70.4 m) |
| 200 psig | 0-200 psig | 462.2 ft. (140.9 m) |

| Output | |
|--------|-----------------|
| L1 | 4-20 mA, 2-wire |

| Process Connection | |
|--------------------|--|
| P1 | 1/2" NPTM with removable plastic nose cone |
| P2 | 1-1/2" diaphragm |
| P37 | Cage (includes P2 fitting) |
| P38 | 1-1/2" tri-clover with 3/4" diaphragm |
| P39 | Cage (includes P38 fitting) |

| Cable Length | |
|---|--|
| Specify length in feet. (Standard length is 40 ft.) | |



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Accessories

Please order separately, by part number.

| Description | Part Number |
|---|-------------|
| 316L SS hex coupler, 1/2" NPTF to 1/2" NPTF | 511414 |
| Dessicant drying cartridge for breathing tube | 122774-0028 |
| Cage assembly | 548001-8888 |