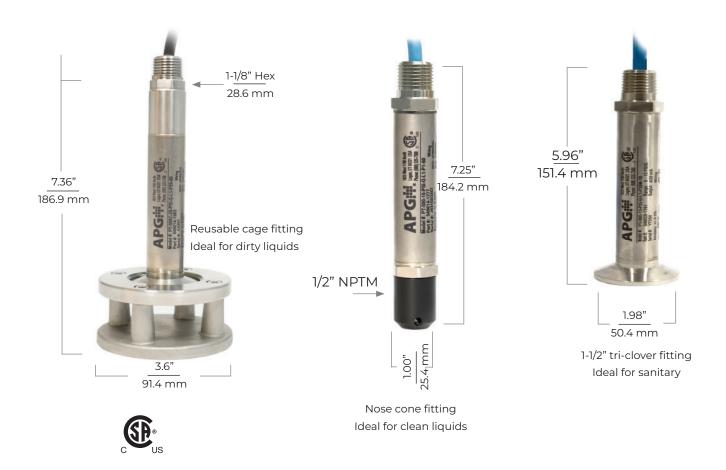
# PT-500 Series

Submersible Level Transmitters For Clean and Dirty Liquids

# **Datasheet**



The PT-500 is a rugged submersible pressure transmitter designed for tank liquid level measurement, water and wastewater applications, and well depth measurement.

### **Features**

- Simple to install
- · High precision, solid state signal: 4-20 mA
- · Exclusive, removable and reusable cage
- 1/2" NPTM option on cable end for use with conduit
- · Durable transducer face

- Intrinsically safe for Class I, Div 1/Zone 0 (4-20mA only)
- Built-in lightning transient protection on every model
- Single seal for highest safety protection factor
- Field adjustable zero (magnet included)



# PT-500 SPECIFICATIONS



#### **Performance**

- Accuracy (linearity, hysteresis, & repeatability):
   ± 0.250% of span (BFSL) (1% for ≤ 1 psi)
- · 1 Year Stability: 0-20,000 PSIS
- Temp Effects on Zero & Span:
   ≤ 0.025% FS/°F @ 70°

### Connectivity

 Output: 4-20 mA 0-5, 1-5, 1-10 VDC mV/V

### **Environmental**

· Maximum Depth:

Submersible up to 575 ft.

· Standard Compensated Temp.:

≤ 10 psi: 0° to 60°C / 32° to 140°F > 10 psi: -10° to 70°C / 14° to 158°F Storage Temp: -40° to 82°C / -40° to 180°F

• Operating Temp: -40° to 85°C / -40° to 185°F

### Certification

4-20 mA Output Only:

CSA Intrinsically Safe: Class 1, Division 1; Groups C & D Ex ia IIB T4

Class 1, Zone 0, AEx ia IIB T4

Ambient: -40 - 85°C

Single Seal

#### **Electrical**

· Supply Voltage:

4-20 mA, 0-5 VDC, 1-5 VDC: 9-28 VDC 1-10 VDC: 14-28 VDC mV/V: 10 VDC

· Current Draw:

4-20 mA: 3-30 mA 0-5 VDC, 1-5 VDC, 1-10 VDC: 3 mA

· Electrical Connection:

Vented watertight cable w/free ends Up to 200 lbs tensile strength

· Electrical Protection:

Built in Lightning Transient and Surge protection

Protected against reverse polarity, surge per IEC 61000-4-5

### **Physical**

Sensor Housing: 316L SS

• Enclosure: 316L SS

Seal Housing: 316L SS

· Seal: Viton ETP-s

· Protective Nose Cone: Delrin

· Cables: PVC, Polyurethane, Hytrel



# PT-500 COMMON MODEL CONFIGURATIONS

# **Waste Water Configurations**

Model Number	Model Description
PT-500C-5-PSI-G-L1-E0-P39-40-N0	4-20mA, <b>0-5 PSI</b> , Removable cage and 1-1/2" Tri-clover, <b>40 ft. PVC cable, 0° - 60°C</b>
PT-500C-10-PSI-G-L1-E0-P39-40-N0	4-20mA, <b>0-10 PSI</b> , Removable cage and 1-1/2" Tri-clover, <b>40 ft. PVC cable, 0° - 60°C</b>
PT-500C-15-PSI-G-L1-E0-P39-60-N0	4-20mA, <b>0-15 PSI</b> , Removable cage and 1-1/2" Tri-clover, <b>60 ft. PVC cable, ,-10° - 70°C</b>
PT-500C-20-PSI-G-L1-E0-P39-60-N0	4-20mA, <b>0-20 PSI</b> , Removable cage and 1-1/2" Tri-clover, <b>60 ft. PVC cable, -10° - 70°C</b>

# **Clean Water Configurations**

Model Number	Model Description
PT-500C-5-PSI-G-L1-E0-P1-40-N0	4-20mA, <b>0-5 PSI</b> , 1/2" NPTM and removable nose cone, <b>40 ft. PVC cable, 0° - 60°C</b>
PT-500C-10-PSI-G-L1-E0-P1-40-N0	4-20mA, <b>0-10 PSI</b> , 1/2" NPTM and removable nose cone, <b>40 ft. PVC cable, 0° - 60°C</b>
PT-500C-15-PSI-G-L1-E0-P1-60-N0	4-20mA, <b>0-15 PSI</b> , 1/2" NPTM and removable nose cone, <b>60 ft. PVC cable, -10° - 70°C</b>
PT-500C-20-PSI-G-L1-E0-P1-60-N0	4-20m, <b>0-20 PSI</b> , 1/2" NPTM and removable nose cone, <b>60 ft. PVC cable, -10° - 70°C</b>

# PT-500 ACCESSORIES

Please order separately, by part number.

Description	Part Number
Desiccant drying cartridge for breathing tube	122774-0028
Cage assembly	548001-8888
Gore filter*	511328

Note: \*This option is included with a vented sensor purchase unless a desiccant cartridge is ordered.

# **Tank Cloud Compatible**

The PT-500's low power consumption make it ideal for remote monitoring applications - especially when you're relying on solar or battery power. The Modbus version is compatible with our online remote monitoring software Tank Cloud.

View level readings online on our Tank Cloud portal - levelandflow.com. You can even add in low cost data logging and alarms. Tank Cloud means you can keep an eye on your remote tanks and wells from your office or your smartphone.



Contact us today to discuss how remote monitoring with Tank Cloud can help you save time and money! Read more on our website at <a href="https://www.apgsensors.com/product-category/remote-monitoring/">https://www.apgsensors.com/product-category/remote-monitoring/</a> and click "How It Works."



## **Model Configuration Options**

### A. Cable Type

- 🗆 🏝 Polyurethane Blue
- □ **B** Hytrel .31" Ø Black
- □ C PVC Black
- □ **D** Hytrel .25" Ø Black

### **B. Pressure Range**

□ Specify range in desired unit of measure

\_\_\_\_\_ Max Water Depth 575 ft. (175.25 m), 250 psi

### C. Standard Units of Measure

- □ PSI □ FTH2O
- □ INH2O □ MMH2O

### D. Pressure Type (venting) Range Restrictions

- □ **G** Gauge (open vent tube 0 250 psi
- □ A Absolute (sealed vent tube) 10 200 psi
- □ **S** Sealed (sealed vent tube) 4 250 psi

### E. Output

- □ **L1** 4-20 mA, 2-wire
- □ **L3** 0-5V, 4-wire\*
- □ **L9** 10 mV/V, 4-wire\*
- □ **L12** 1-5V, 4-wire\*
- □ **L21** 1-10V. 4-wire\*
- □ **L5** Modbus RTU, 4-wire RS-485\*†

  Pressure reading only
- □ **L31** Modbus RTU, 4-wire RS-485 \*†
  Level calculations, tank volume

Note: \* Indicates this option does not yet have CSA Approvals.

Note: † Indicates Field Adjustable Zero feature is not included.

#### F. NPTM

- □ **E0** <sup>▲</sup> 1/2" NPTM fitting for conduit, with pigtail
- **E5** Pigtail without conduit connection

### **G. Process Connection**

- □ P1 1/2" NPTM with removable plastic nose cone
- □ **P5** 1/4" NPTF
- □ **P37** Welded Cage (anti-snag 1 piece fitting)
- □ **P38** 1-1/2" tri-clover with 3/4" diaphragm
- □ **P39** Reusable Cage (includes P38 fitting)

### H. Cable Length

(specify length of cable needed in feet)

### I. Accuracy

Greater than 1 PSI

- □ **NO** ±0.25%
- □ **N1** ±0.25% with NIST certification
- □ **N2** ±0.1% with NIST certification

#### 1 PSI and below

- □ **N3** ±1%
- □ **N4** ±1% with NIST certification

Note: ▲Indicates this option is standard.





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