

MPX-T

Explosion Proof Titanium Magnetostrictive Level Sensor

The MPX Series Magnetostrictive Level Sensor provides highly accurate repeatable level readings in a wide variety of liquid level measurement applications. The MPX-T's 1" Ø titanium stem extends its chemical capabilities for use in rougher, tougher environments, including H₂S. The MPX-T carries Class I, Division 1 & 2 and Class I, Zone 1 & 2 approvals for use throughout North America.

FEATURES

- Titanium Stem
- Hazardous Area Certification
- Up to 25 ft. for deep tank applications
- RS485 Modbus and 4-20 mA outputs
- Supports dual-level interface measurement
- Remote Monitoring Capabilities

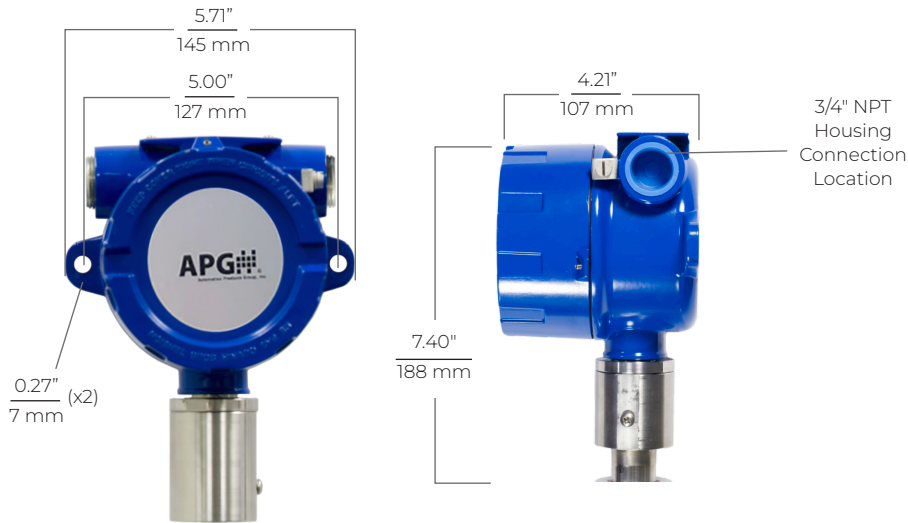
COMMON APPLICATIONS

- CI, D1 Hazardous Locations
- Storage Tanks
- Fuel Tanks
- Oil / Water Interface Measurement
- Thick, Viscous, Sludgy Fluids
- Industrial Effluent
- Power Generation
- Water & Wastewater Treatment
- Pulp & Paper
- Biotech
- Oil & Gas
- Petrochemical
- Chemical



MPX-T SPECIFICATIONS

LARGE HOUSING



FLOAT I, J



PERFORMANCE

- **Resolution:**
4-20 mA: 14 bit DAC (1mm)
Modbus: 0.04 in. (1 mm)
- **Distance Accuracy:**
4-20 mA Modbus: Greater of $\pm 0.05\%$ of FS or 1 mm
- **Temperature Accuracy:**
RTD—1k Ohm: $\pm 1^\circ\text{C}$

CONNECTIVITY

- **Output:**
Single or dual loop-powered 4-20 mA
Set points:
4 mA, probe bottom
20 mA, 10 in. below probe zero point or at customer specified point
Modbus RTU (RS-485), optional temperature output

ENVIRONMENTAL

- **Probe Operating Temperature:** $-40^\circ\text{C} - 85^\circ\text{C}$ ($-40^\circ\text{F} - 185^\circ\text{F}$)
- IP65

PHYSICAL

- **Housing:** Cast aluminum, epoxy coated, blue
- **Stem:** 1.0" \varnothing Titanium 2
- **Stem Length:** 4 – 25 ft. (1.22 – 7.62m)

ELECTRICAL

- **Electrical Connection:** Terminal Block, 12–24 VDC
- **Typical Current Draw:**
4-20 mA: (single) 4-22 mA, (dual) 8-44 mA
Modbus (RS-485): 25 mA
- **Reverse Polarity Protection**
- **Surge Protection (Output 4 only)**

PROGRAMMING

- **RS-485:**
APG Modbus Scout (SCT-1)* — Modbus to Bluetooth adapter
APG Settler & Explorer* — Online control and datalogging
- **4-20 mA:**
RST-4100 programming module*
APG Settler & Explorer* — Online datalogging

* *Optional accessory*

CERTIFICATION

- **CSA:**
Rated 12–24 VDC; 4-20 mA or 80 mA: Ta 85°C
Class I, Division 1 & 2, Groups C & D T4
Ex d IIB T4
Ex nA IIB T4
Class I, Zone 1: AEx d IIB T4
Class I, Zone 2; AEx nA IIB T4

TOUGH TITANIUM FOR DEMANDING ENVIRONMENTS

Some environments are brutal—H₂S, explosive gases, and sludge-thick fluids test every component. The MPX-T was made for this. With a rugged titanium stem, hazardous location certifications, and reliable dual-level sensing, it delivers deep performance where precision and toughness are non-negotiable.

PRECISION & CONSISTENCY

Delivers highly accurate and repeatable readings, crucial for precise tank level monitoring and interface detection between liquids.

DURABILITY & LONGEVITY

Rugged design measures up to 25 feet (7.62 m), ensuring reliable performance in diverse industrial environments with minimal maintenance.

COMPREHENSIVE MEASUREMENT

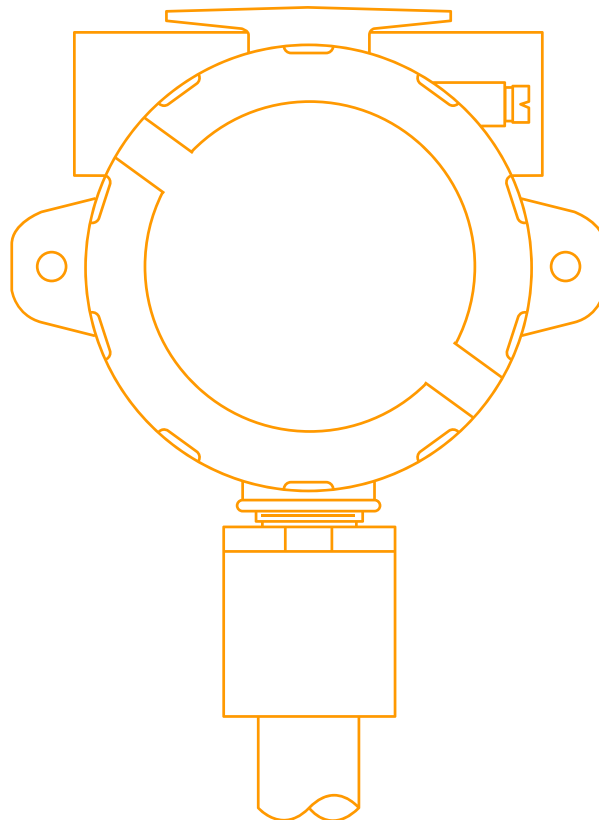
Enables dual level (interface) measurement and calculates tank volumes using strapping tables, supporting accurate inventory management and operational planning.

VERSATILE OUTPUT INTEGRATION

Offers 4-20 mA and RS-485 (Modbus RTU) outputs for seamless integration into PLCs, SCADA systems, and industrial automation platforms.

HAZARDOUS AREA CERTIFICATION

Certified for Class I Division 1 Groups C & D, Class I Zone 1, and Class I Zone 2, ensuring safe operation in hazardous environments with combustible gases or vapors.



MODEL CONFIGURATION OPTIONS

MODEL NUMBER: MPX - $\frac{T}{A}$ - $\frac{B}{C}$ - $\frac{D}{E}$ - $\frac{S}{F}$ - $\frac{T}{G}$ - $\frac{H}{I}$ - $\frac{J}{K}$

A. Stem Type

- T** 1 in. diameter Titanium

B. Output

- 2** Single float, 4-20 mA (loop powered, 2 wire)
- 3** Dual float, 4-20 mA (loop powered, 3 wire)
- 4** Modbus RTU, surge protection

C. Housing Type

All Housing Die-cast Aluminum, IP65, Blue

- *** Large Housing

D. Float 1 (Top Float)

- J** 5h x 3d in. Oval Titanium (0.60 SG Max)
- I** 5h x 3d in. Oval Titanium (0.94 SG Max)
- N** None

E. Float 2 (Optional)

- N** None
- I** 5h x 3d in. Oval Titanium (0.94 SG)

F. Mounting Type

- P*** NPT Plug 150#
- N** None

All listed Mounting Types are 316L stainless steel. Consult factory regarding additional options.

G. Mounting Size

- 2** 2 in. (slide connection)
- 3** 3 in. (slide connection only)
- N** None

H. Mounting Connection

- S** Slide with Compression Fitting (adjustable)

I. Stem/Finish Material

- T** Titanium

J. Total Stem Length in Inches

- Min. 48 in. – Max. 300 in.

K. Optional Temperature Sensor

MPX-T4

- N** None
- T*** Stem RTD, 1 K Ω , 6 in. from the bottom of the probe

*This option is standard

MPX ACCESSORIES

Please order separately, by part number.

Description	Part Number
Programming Module	
Settler, remote monitoring gateway	125422-xxxx
RST-4100 (4-20 mA: MPX-T2, MPX-T3)	125759
APG Modbus Scout (SCT-1), Modbus to Bluetooth adapter (Modbus only: MPX-T4)	125424-0001
Sold with 6 ft. USB cable	

Disclaimer: Please note that selecting certain options may limit or eliminate the availability of other options, as some floats and accessories are only compatible with a select number of configurations. For further configuration assistance, please contact our sales team at (435) 753-7300.

SETTLER

Your Gateway to Smarter Monitoring

Settler, APG's next remote monitoring gateway, makes getting real-time level data easier than ever.

Settler seamlessly connects Modbus and 4-20 mA sensors—transmitting encrypted data securely to Explorer, APG's cloud-based interface. View tank and well levels anytime, anywhere, with reliable Ethernet connectivity and robust data security powered by MQTT with AES (Advanced Encryption Standard). Plus, with over-the-air (OTA) firmware updates, your system stays up to date without hassle.

Designed for general-purpose environments, Settler is not intended for use in hazardous areas.

Explorer makes monitoring simple. Access real-time readings, enable datalogging, and set up alarms so you're always informed of critical changes—right from your smartphone, tablet, or desktop.

Save time, reduce costs, and gain peace of mind with remote monitoring powered by Settler and Explorer. Contact us today to learn more or visit apgsensors.com.

