

EXPLOSION PROOF FLEXIBLE STAINLESS STEEL AND PVDF STEM MAGNETOSTRICTIVE PROBE LEVEL SENSORS SERIES: MPXI-F



MPXI-F Series Explosion Proof Flexible Stainless Steel and PVDF Stem Magnetostrictive Probe Level Sensors provide highly accurate and repeatable level and temperature readings in a wide variety of liquid level measurement applications. The MPXI-F's flexible stem allows for installation in tanks up to 50 feet tall, without needing a crane or an extra-long truck and trailer for delivery. APG's proprietary-PVDF-formulation stem provides increased flexibility and impact resistance during cold-weather installation. The stem also comes with compatibility in a wider range of corrosive media--including H₂S--in larger tanks. The unique Class I, Zone 0/1 rating allows for an Explosion Proof connection to a Zone 1-installed housing on top of a Zone 0-installed probe stem.

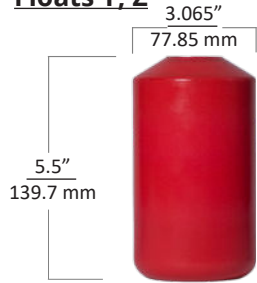
Features

- Class I, Division 1, and Class I, Zone 0/1 Hazardous Location Ratings (cCSAus, ATEX, IECEx)
- Explosion Proof housing for easy conduit connections
- Zone 0-rated stem electronics
- 4-20 mA (single or dual) or RS-485 (Modbus RTU) output
- Stainless steel probe lengths up to 32 feet (9.75 m)
- PVDF probe lengths up to 50 feet (15.2 m)
- Optional electrically-redundant high-level switch (PVDF only)
- Up to seven temperature sensors
- Highly accurate and reliable readings
- Dual level (interface) measurement
- Tank volume or level output, strapping table

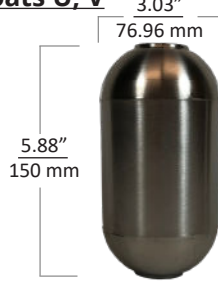
MPXI-F STAINLESS STEEL SPECIFICATIONS

MPXI-F/B Floats

Floats Y, Z



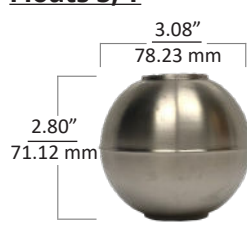
Floats U, V



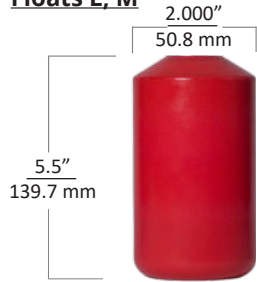
Floats W, X



Floats S, T



Floats L, M



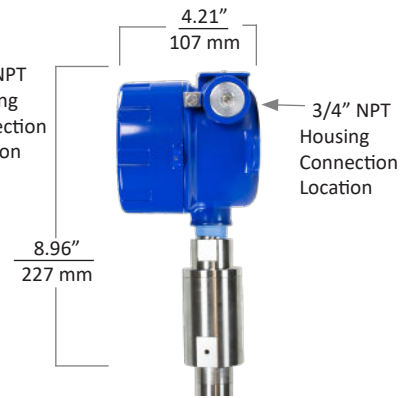
Floats I, J



Small Housing



Large Housing



Performance

- Resolution:
 - 4-20 mA: 14 bit DAC (1 mm); Modbus: 0.04 in. (1 mm)
- Distance Accuracy
 - 4-20 mA: Greater of $\pm 0.05\%$ of FS or 1 mm
 - Modbus: ± 0.04 in. (± 1 mm)
- Temperature Accuracy
 - Digital Temp Sensor: $\pm 1^\circ\text{C}$
 - API 18.2 Temp Sensors: $\pm 0.25^\circ\text{C}$ over $-40^\circ - 85^\circ\text{C}$
 $\pm 0.13^\circ\text{C}$ over $+20^\circ - 70^\circ\text{C}$

Programming

- RS-485: Optional RST-6001 USB to RS-485 converter
- 4-20 mA: Factory set or RST-4100 programming module

Electrical

- Supply Voltage: 12-24 VDC (Modbus), 24 VDC (4-20 mA)
- Current draw:
 - 4-20mA, Single / Dual float: 22 / 44 mA (max)
 - Modbus (single or dual float): 15 mA (typ.)
- Reverse polarity protection
- CE compliant to EN 61326

Environmental

- Operating Temperature: $-40^\circ - 185^\circ\text{F}$ ($-40^\circ - 85^\circ\text{C}$)
- NEMA 4X, IP66

Physical

- Housing: Cast aluminium, epoxy coated
- Stem: $7/8"$ \varnothing Flexible Tubing with Braid, 316L SS
- Stem Length: 4 - 32 ft. (1.22 - 9.75 m)

Connectivity

- Output:
 - Single or dual loop-powered 4-20 mA
 - Modbus RTU (RS-485), optional temperature sensors

Certification

- NEMA 4X, IP66
- cCSAus Certificate CSA19CA70219727:
 - Rated 12-24 VDC, Um 250 V, 4-20 mA, or 80 mA
 - Class I, Division 1, Groups C, D T4; IP66
 - Class I, Zone 0/1
 - AEx ia/db IIB T4 Ga/Gb
 - Ex ia/db IIB T4 Ga/Gb, IP66
 - Ta = -40° to 85°C
- ATEX Certificate Sira 19ATEX2072X:
 - II 1/2G
 - Ex ia/db IIB T4 Ga/Gb
 - Ta = -40° to 85°C
- IECEX Certificate IECEX SIR 19.0026X:
 - Ex ia/db IIB T4 Ga/Gb
 - Ta = -40° to 85°C

MPXI-F PVDF SPECIFICATIONS

Small Housing

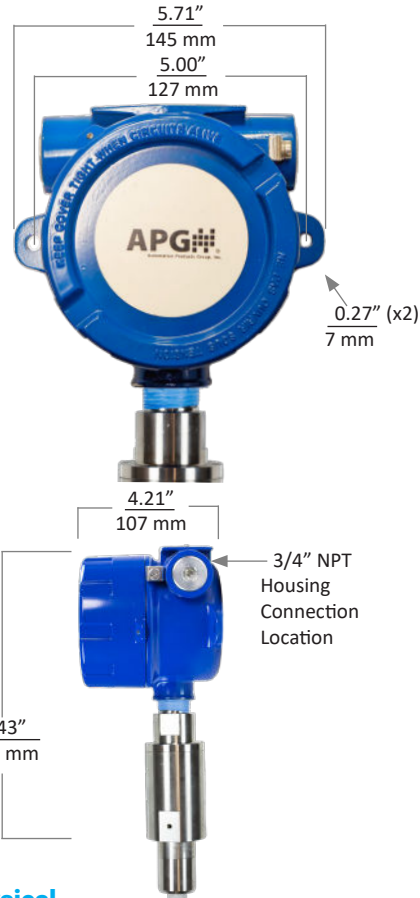
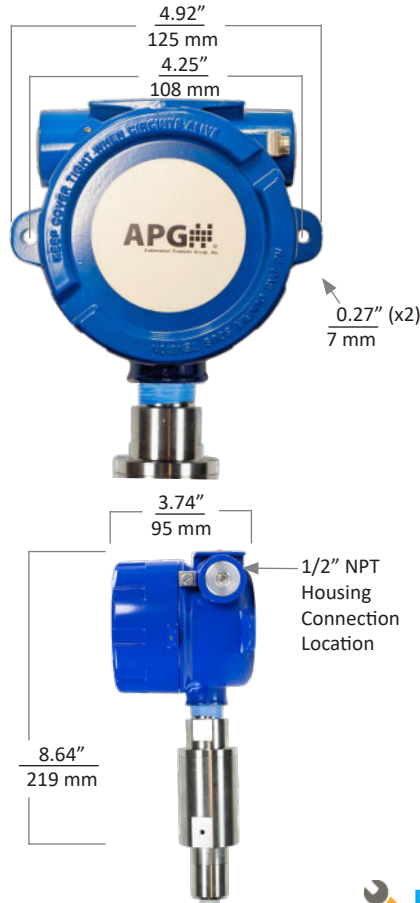
Large Housing

MPXI-F/K Floats

Floats I, J



Floats H, K



Performance

- Resolution:
 - 4-20 mA: 14 bit DAC (1 mm); Modbus: 0.04 in. (1 mm)
- Distance Accuracy
 - 4-20 mA: Greater of $\pm 0.05\%$ of FS or 1 mm
 - Modbus: ± 0.04 in. (± 1 mm)
- Temperature Accuracy
 - Digital Temp Sensor: $\pm 1^\circ\text{C}$
 - API 18.2 Temp Sensors: $\pm 0.25^\circ\text{C}$ over $-40^\circ - 85^\circ\text{C}$
 $\pm 0.13^\circ\text{C}$ over $+20^\circ - 70^\circ\text{C}$

Physical

- Housing: Cast aluminium, epoxy coated
- Stem: 5/8" \varnothing Flexible Tubing, proprietary PVDF formulation
- Stem Length: 10 - 50 ft. (3.05 - 15.2 m)

Connectivity

- Output:
 - Single or dual loop-powered 4-20 mA
 - Modbus RTU (RS-485), optional temperature sensors

Certification

- NEMA 4X, IP66
- cCSAus Certificate CSA19CA70219727:
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Programming

- RS-485: Optional RST-6001 USB to RS-485 converter
- 4-20 mA: Factory set or RST-4100 programming module

Electrical

- Supply Voltage: 12-24 VDC (Modbus), 24 VDC (4-20 mA)
- Current draw:

4-20mA, Single / Dual float	22 mA / 44 mA (max)
Modbus (single or dual float)	15 mA (typ)
High Level Switch, closed / open	7-9 mA / 0-1 mA
- Reverse polarity protection
- CE compliant to EN 61326

Environmental

- Operating Temperature: $-40^\circ - 185^\circ\text{F}$ ($-40^\circ - 85^\circ\text{C}$)
- NEMA 4X, IP66



Tank Cloud



Put Your Tanks In The Cloud

1 Remote Sensors

Connect to any 4-20mA signal or APG Modbus sensor for constant access to your data. Access up to 10 sensors on a single connection.

2 Use the Internet Backbone

Connect the APG sensor or module to the Internet via landline, radio, cellular, or satellite.

3 View Secure Data 24/7

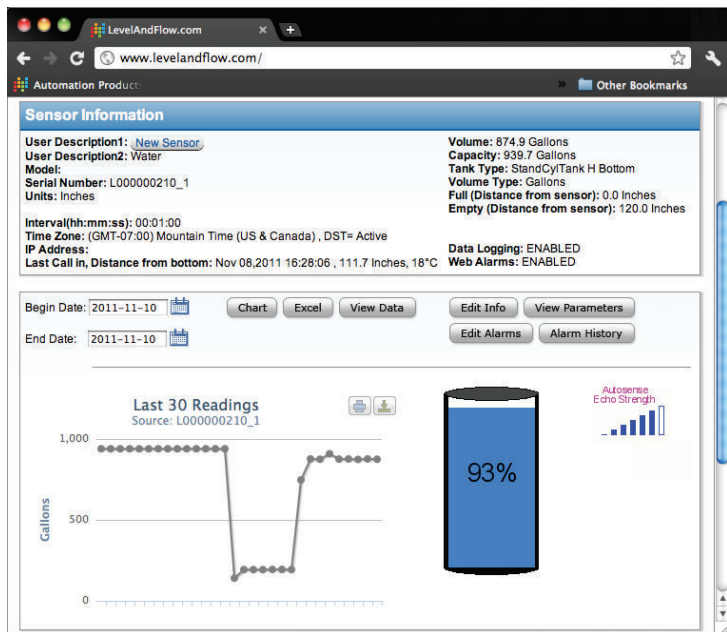
Access sensor data online through our secure portal at levelandflow.com. If the Internet is accessible, so is your information.

4 Stay Up-To-Date

Program custom alarms - receive email and text (sms) message alerts on your computer, mobile phone, or tablet.



The Line-Up:



Online Data Portal

The Tank Cloud data portal, located online at www.levelandflow.com, displays everything you need to know about your measurement.

Here you can:

- View your current and past readings,
- Manage alarms,
- Configure your sensors,
- and Setup user permissions for others in your organization.

Measurements are sorted by location and grouped into sites. Simply select the site you would like to view, and then choose the sensor. Current readings are prominent in the center of the screen.

Contact us today at 888-525-7300 to set-up a demonstration of our sensors and online software. We are excited to show you how it can impact your business.