Explosion Proof and Non-Incendive APG **Magnetostrictive Level Sensors Series: MPX**





The MPX Series Magnetostrictive Level sensor provides highly accurate and repeatable level readings in a wide variety of liquid level measurement applications. The MPX-R's large, buoyant, and robust float allows it to be used in harsh applications where fouling or buildup might otherwise be of concern. The MPX-E's lighter weight design allows it to be used in applications where space is limited. The fiberglass stem of the MPX-G expands the already impressive chemical compatibility of the MPX. And the MPX-F's flexible stainless steel stem allows for accurate measurements in environments that are not straight-forward.

Features

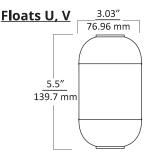
- Class 1 Division 1 Groups C & D, Class 1 Zone 1, Class 1 Zone 2
- Highly accurate and repeatable readings
- 4-20 mA, RS-485 (Modbus RTU) output
- Rugged and reliable, lengths up to 32 feet (9.75 m)
- Dual level (interface) measurement
- Tank volume/level, strapping table



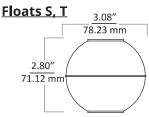
MPX-G Specifications

MPX-G Floats



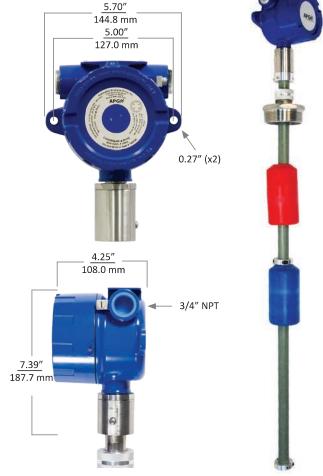














· Resolution:

4-20 mA: 14 bit DAC Modbus: 0.04 in. (1mm)

• Accuracy: ±0.05% of full scale

Sa Programming

- RS-485: optional RST-6001USB to RS-485 converter
- 4-20 mA: factory set or optional RST-4100 programming module.



- Operating Temperature: -40° 185°F (-40° 85°C)
- NEMA 4X, IP65

Physical

- Housing: Cast aluminium, epoxy coated
- Stem: 1.0" ø Isophthalic Polyester Resin Fiberglass
- Stem Length: 4 20 ft. (1.22 6.10 m)
- Float Sleeve (Floats P & R only): .035" thick Titanium 2



- Electrical Connection: Terminal Block, 12-24 VDC
- Total current draw:
 4-20 mA: (single) 22 mA, (dual) 44 mA
 Modbus (RS-485): 28 mA

Connectivity

· Output:

Single or dual loop-powered 4-20 mA
Modbus RTU (RS-485) with Temperature output



- NEMA 4X, IP65
- CSA:

Class I Division 1 Groups C & D T4 (Ta 85°C) Class I Division 2 Groups C & D T4 (Ta 85°C)

Class I, Zone 1; AEx d IIB T4 Class I, Zone 2; AEx nA IIB T4

Ex d IIB T4 Ex nA IIB T4



Model Configuration Options

Model Number: MPX - <u>G</u>

A. Stem Type

1 in. diameter Fiberglass \Box G

B. Output

- □ 1 Modbus RTU w/ stem RTD temperature sensor
- □ 2 Single float, 4-20 mA (loop powered, 2 wire)
- □ 3 Dual float, 4-20 mA (loop powered, 3 wire)
- □ 4 Modbus RTU, surge/lightning protection, stem RTD temperature sensor

Note: stem RTDs default to 6" from bottom of probe

C. Housing Type

All Housing Die-cast Aluminum, NEMA 4X, IP68, Blue

- □ __▲ Large Housing
- Large Housing with window

D. Float 1 (Top Float)

- 5.5h x 3d in. Red Polyurethane (0.65 SG)
- \square Y 5.5h x 3d in. Blue Polyurethane (0.94 SG)
- \square X 5 in. Round 316L SS (0.52 SG)
- 5 in. Round 316L SS (0.92 SG) \square W
- 6h x 3d in. Oval 316L SS (0.58 SG) \Box V
- 6h x 3d in. Oval 316L SS (0.94 SG)
- 3 in. Round 316L SS (0.60 SG)
- □ S 3 in. Round 316L SS (0.94 SG)
- \square R 5.5h x 2.8d in. Red Polyurethane (0.59 SG)
- 5.5h x 2.8d in. Blue Polyurethane (0.94 SG) □ P
- 5.5h x 2d in. Red Polyurethane (0.57 SG) \sqcap M
- 5.5h x 2d in. Blue Polyurethane (0.94 SG)
- \square N None
- Other

E. Float 2 (optional)

- \square N None
- 5.5h x 3d in. Blue Polyurethane (0.94 SG) \square Y
- 5 in. Round 316L SS (0.92 SG) \sqcap W
- 6h x 3d in. Oval 316L SS (0.94 SG)
- 5.5h x 2.8d in. Blue Polyurethane (0.94 SG) \square P
- 5.5h x 2d in. Blue Polyurethane (0.94 SG)

F. Mounting Option

- Flat Face ANSI Flange 150#
- Raised Face Flange 150# \square R
- 3A Sanitary ferrule □ S
- □ P NPT Plug 150#
- None \square N
- Other

G. Mounting Size

Available in 0.5" increments from 2" to 4", and 1" increments from 4" to 6"

H. Mounting Connection

Slide with Compression Fitting (adjustable)

I. Stem Material

Isophthalic Polyester Resin Fiberglass

J. Total Stem Length in Inches

Min. 48 in. - Max. 240 in.

L. Float Stop Options

- 1 in. Stem, 316L SS, 2 piece, 1.75 in. OD
- □ E 1 in. Stem, Aluminum 2 piece, 1.75 in. OD

N. Temperature Sensor Options

MPX-G1

□ **T**__ Specify location of stem RTD in inches from bottom of probe (6" is standard location)

MPX-G4

- Specify location of stem RTD in inches from bottom of probe (6" is standard location)
- Digital Temperature Sensor A (no RTD) and location □ 1T_ from bottom of probe in inches
- Digital Temperature Sensors A (no RTD), B and locations from bottom of probe in inches
- □ **3T**_ Digital Temperature Sensors A (no RTD), B, C and locations from bottom of probe in inches
- Digital Temperature Sensors A (no RTD), B, C, D and locations from bottom of probe in inches
- □ 5T_ Digital Temperature Sensors A (no RTD), B, C, D, E and locations from bottom of probe in inches

N. 4-20 Output Set Points

MPX-G2/G3

- ☐ **A**__ 4mA set point location, in inches from bottom of probe
- □ **B**__ 20mA set point location, in inches from top of probe



[▲] This option is standard