

Explosion Proof and Non-Incendive 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 MPX-E Chemical has a chemical resistant coating, allowing for use in corrosive, acidic, and marine environments.

The MPX-F's flexible stainless steel stem allows for installation in tall tanks without needing a crane.

Features

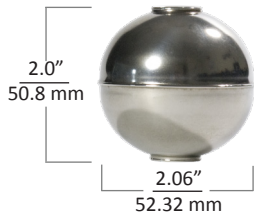
- Class 1 Division 1 Groups C & D, Class 1 Zone 1, Class 1 Zone 2
 - Highly accurate and repeatable readings
 - RS-485 (Modbus RTU), 4-20 mA output
 - Rugged and reliable, lengths up to 25 feet (7.62 m)
 - Dual level (interface) measurement
 - Tank volume/level, strapping table
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MPX-E Specifications

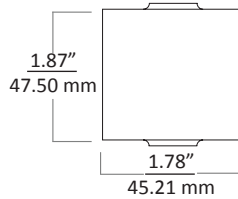
The MPX-E's lighter weight design allows it to be used in applications where space is limited.

MPX-E Floats

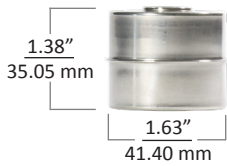
Floats A, B



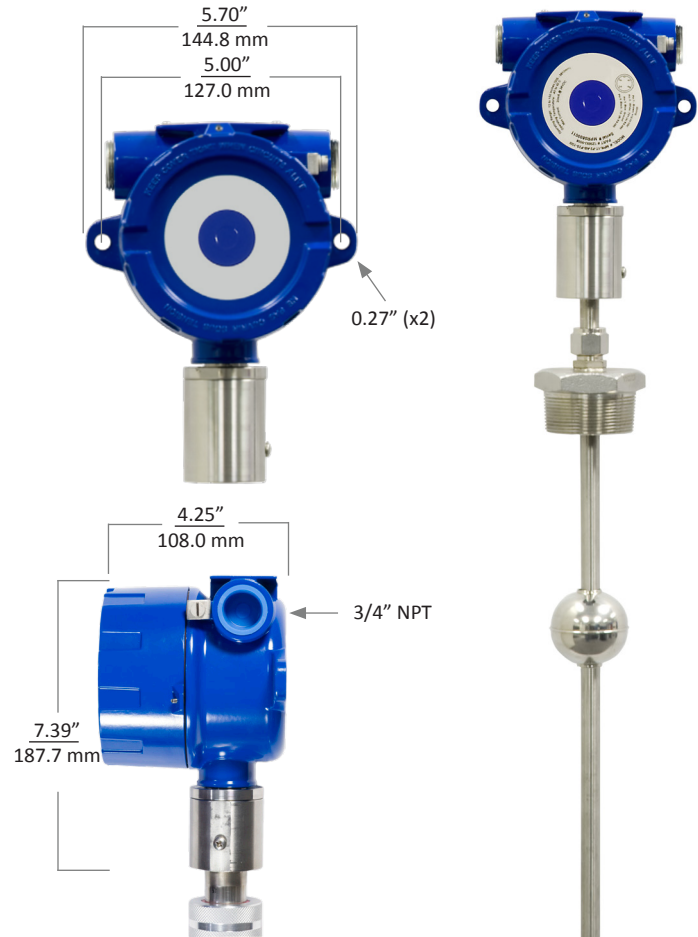
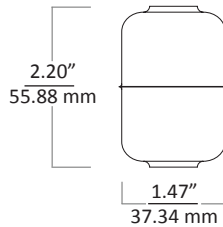
Float E



Floats C, D



Float F



Performance

- Resolution:
 - 4-20 mA: 14 bit DAC
 - Modbus: 0.04 in. (1mm)
- Accuracy: $\pm 0.05\%$ of full scale

Environmental

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

Physical

- Housing: Cast aluminium, epoxy coated
- Stem: 0.5" \varnothing 316L SS
- Stem Length: 1 - 12.75 ft. (0.3 - 3.9 m)

Electrical

- Electrical Connection: Terminal Block, 12-24 VDC
- Total current draw:
 - 4-20 mA: (single) 22 mA, (dual) 44 mA
 - Modbus (RS-485): 25 mA

Connectivity

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

Certification

- 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 - E - A B C - D E F G H I J K L - N -B81

A. Stem Type

- E** 0.5 in. diameter 316L SS

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/lightning protection

C. Housing Type

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

- [▲] Large Housing
- A** Small Housing
- B** Large Housing with window
- C** Small Housing with window

D. Float 1 (Top Float)

- A** 316L SS Round (0.65 SG)
- B** 316L SS Round (0.92 SG)
- C** 316L SS Cylindrical (0.65 SG)
- D** 316L SS Cylindrical (0.92 SG)
- E** Buna-N (0.5 SG)
- F** 316 SS 3A Cylindrical (0.5 SG)

E. Float 2 (optional)

- N** None
- B** 316L SS Round (0.92 SG)

F. Mounting Type

- F** Flat Face ANSI Flange 150#
(Sizes: 2, 2.5, 3, 4, 5, 6)
- S** Tri Clamp
(Sizes: 2, 2.5, 3)
- P** NPT Plug 150#
(Sizes: 2, 2.5, 3, 4)
- N** None
- O** Other

[▲]This option is standard

G. Mounting Size

- See Mounting Type for available sizes

H. Mounting Connection

- W** Welded (fixed)
- S** Slide with Compression Fitting (adjustable)

I. Stem Material

- B** 316L SS

J. Total Stem Length in Inches

- Min. 12 in. - Max. 153 in.

K. End Plug Options

- [▲] 0.5 in. Stem, Standard
- 1** 0.5 in. Stem, Keyhole for Cotter Pin

L. Float Stop Options

- [▲] 0.5 in. Stem, 316L SS, 1 piece, 0.75 in. OD
- A** 0.5 in. Stem, 316L SS, 1 piece, 1.5 in. OD

N. Optional Temperature Sensor

MPX-E4

- T** RTD in stem, with location in inches from bottom of probe (default is 6")

N. 4-20 Output Set Points

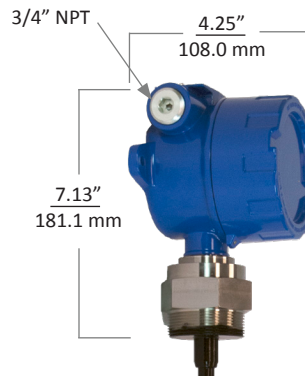
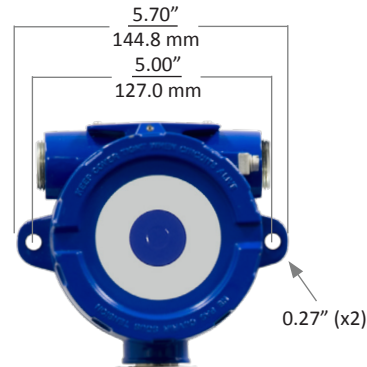
MPX-E2/E3

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

MPX-E Chemical Specifications

The MPX-E Chemical has a chemical resistant coating, allowing for use in corrosive, acidic, and marine environments.

MPX-E Chemical Float



Performance

- Resolution:
 - 4-20 mA: 14 bit DAC
 - Modbus: 0.04 in. (1mm)
- Accuracy: $\pm 0.05\%$ of full scale

Environmental

- Operating Temperature: -40° - 185° F (-40° - 85° C)
- Maximum Operating Pressure: 30 PSIA @ 70° F / 21° C
- NEMA 4X, IP65

Physical

- Housing: Cast aluminium, epoxy coated
- Stem: 0.5" \varnothing 316L SS with chemical resistant coating
- Stem Length: 1 - 12.75 ft. (0.3 - 3.9 m)
- Float: 1-7/8" \varnothing Kynar, 0.66 SG

Electrical

- Electrical Connection: Terminal Block, 12-24 VDC
- Total current draw:
 - 4-20 mA: (single) 22 mA
 - Modbus (RS-485): 25 mA

Connectivity

- Output:
 - Loop-powered 4-20 mA
 - Modbus RTU (RS-485) with optional Temperature output

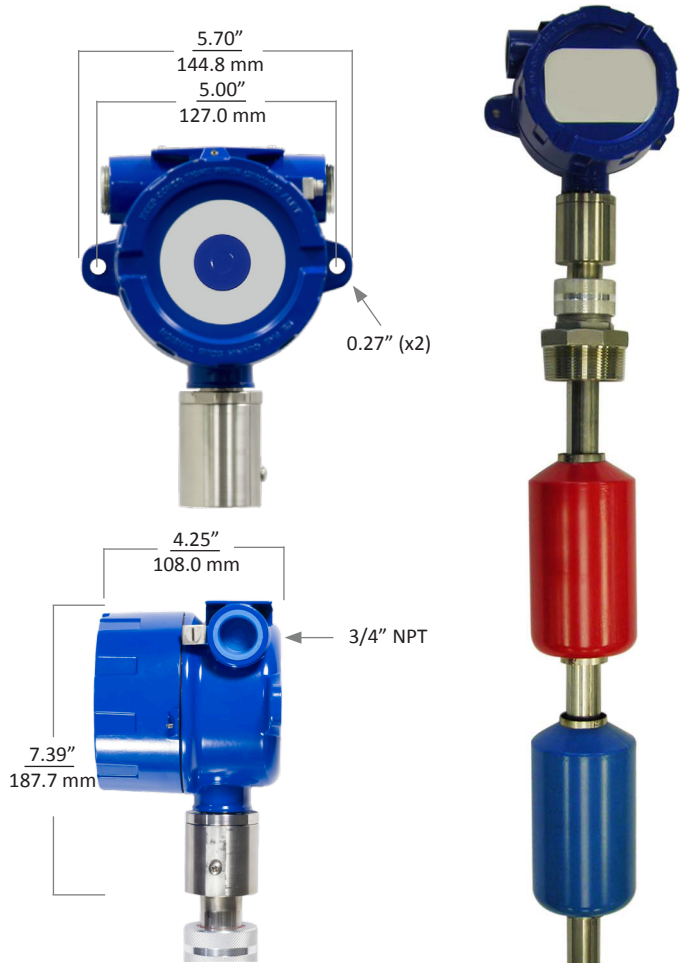
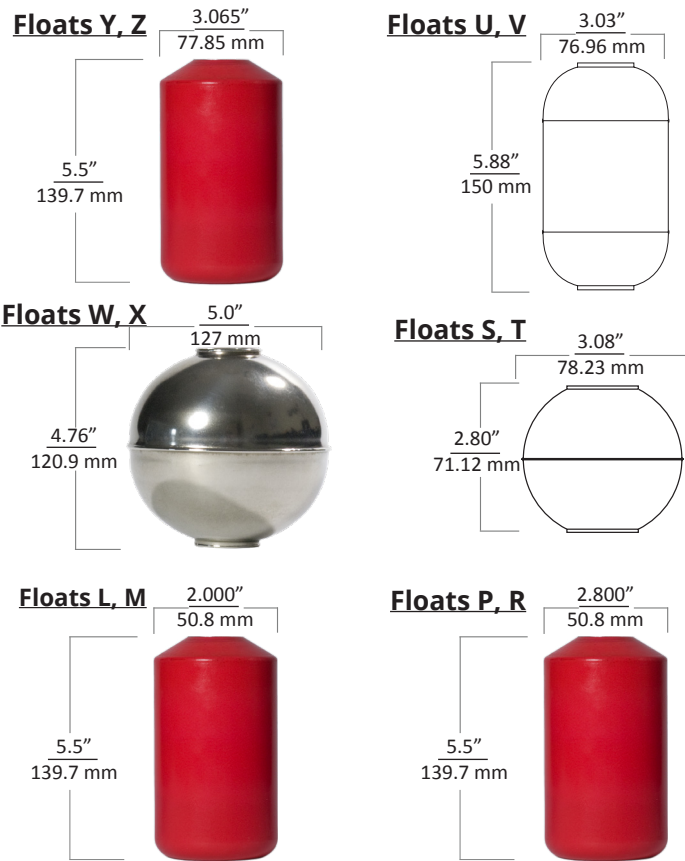
Certification

- 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

MPX-R Specifications

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.

MPX-R Floats



Performance

- Resolution:
 4-20 mA: 14 bit DAC
 Modbus: 0.04 in. (1mm)
- Accuracy: $\pm 0.05\%$ of full scale

Environmental

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

Physical

- Housing: Cast aluminium, epoxy coated
- Stem: 1.0" \varnothing 316L SS
- Stem Length: 4 - 31.5 ft. (1.22 - 9.60 m)
- Float Sleeve (Floats P & R only):
 .035" thick Titanium 2

Electrical

- 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

Certification

- NEMA 4X, IP65
- CSA:
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 Class I, Zone 1; AEx d IIB T4
 Class I, Zone 2; AEx nA IIB T4
 Ex d IIB T4
 Ex nA IIB T4

