Thank You
Thanks for purchasing a MPX series magnetostrictive level sensor from us! We appreciate your business and your trust. Please take a moment to familiarize yourself with the product and this manual before installation. If you have any questions, at any time, don’t hesitate to call us at 888-525-7300.

The MPX series magnetostrictive level sensor provides highly accurate and repeatable level readings in a wide variety of liquid level measurement applications. It is certified for installation in hazardous areas in the US and Canada by CSA for Class I, Division 1 & 2 and Class I, Zones 1 and 2 environments.

How To Read Your Label
Each label comes with a full model number, a part number, and a serial number. The model number for the MPX will look something like this:

SAMPLE: MPX-R1-ZY-F2.5WB-L120

The model number correlates with all the configurable options and tells you exactly what you have. Compare the model number to the options on the datasheet to identify your exact configuration. You can also call us with the model, part, or the serial number and we can help you.

You’ll also find all hazardous certification information on the label.

Warranty
APG warrants its products to be free from defects of material and workmanship and will, without charge, replace or repair any equipment found defective upon inspection at its factory, provided the equipment has been returned, transportation prepaid, within 24 months from date of shipment from factory.

The foregoing warranty is in lieu of and excludes all other warranties not expressly set forth herein, whether expressed or implied by operation of law or otherwise including but not limited to any implied warranties of merchantability or fitness for a particular purpose.

No representation or warranty, express or implied, made by any sales representative, distributor, or other agent or representative of APG which is not specifically set forth herein shall be binding upon APG. APG also reserves the right to inspect and test any equipment returned for warranty consideration to determine the cause of failure.

Returns and allowances must be authorized by APG in advance. APG will assign a Return Material Authorization (RMA) number which must appear on all related papers and the outside of the shipping carton. All returns are subject to the final review by APG. Returns are subject to restocking charges as determined by APG’s “Credit Return Policy”.

General Care
Your level sensor is very low maintenance and will need little care as long as it was installed correctly. However, in general, you should periodically inspect your MPX unit to ensure the stem is free of any heavy buildup that might impede the movement of the float(s). If sediment or other foreign matter becomes trapped between the stem and float(s), detection errors can occur.

If you need to remove the float(s) from the stem of your MPX, be sure to note the orientation of the float(s) prior to removal. This will help ensure proper re-installation of the float(s).

Also, ensure that the housing cover is snugly secured. If the cover becomes damaged or is misplaced, order a replacement immediately.

Repair Information
If your MPX level sensor needs repair, contact us via email, phone, or online chat on our website. We will issue you an RMA number with instructions.

Phone: 888-525-7300
Email: sales@apgsensors.com
Online chat at www.apgsensors.com

Dimensions

<table>
<thead>
<tr>
<th>MPX-E Housing Dimensions</th>
<th>MPX-R Housing Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot; NPT</td>
<td>3/4&quot; NPT</td>
</tr>
<tr>
<td>4.25&quot;</td>
<td>4.25&quot;</td>
</tr>
<tr>
<td>5.00&quot;</td>
<td>5.00&quot;</td>
</tr>
<tr>
<td>7.39&quot;</td>
<td>6.65&quot;</td>
</tr>
<tr>
<td>Ø 0.27&quot;</td>
<td>Ø 0.27&quot;</td>
</tr>
<tr>
<td>2.39&quot;</td>
<td>1.65&quot;</td>
</tr>
</tbody>
</table>

NOTE: Scan the QR code to the right to see the full user manual on your tablet or smartphone. Or visit www.apgsensors.com/support to find it on our website.
Sensor and System Wiring Diagrams

MPX-E1 / MPX-R1 Modbus System Wiring

<table>
<thead>
<tr>
<th>Power Supply (12-24 Vdc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master Device</td>
</tr>
<tr>
<td>RS-485 A</td>
</tr>
<tr>
<td>RS-485 B</td>
</tr>
<tr>
<td>+12-24 Vdc</td>
</tr>
<tr>
<td>GND</td>
</tr>
<tr>
<td>Sensor 1V+</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>GND</td>
</tr>
<tr>
<td>Sensor 2V+</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>GND</td>
</tr>
<tr>
<td>Sensor 3V+</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>GND</td>
</tr>
</tbody>
</table>

Use Shielded Cable

120 Ω terminating resistor at last sensor

120 Ω terminating resistor

12-24 Vdc

Out 1

Out 2

Input 1   Input 2      Com

Receiver

Sensor

Dual 4-20 mA Loop Wiring

(MPX-E3 and MPX-R3 Series)

Input      Com

Receiver 1

OR

Input      Com

Receiver 2

+  Power Source (12-24 Vdc)

−

12-24 Vdc

Out

Power Source (12-24 Vdc)

Sensor

To USB

Programming Module required with APG Modbus software for programming the MPX.

Load Resistor (150 Ω to 700 Ω)

NOTE: For APG Modbus programming instructions, please see MPX user manual. APG Modbus software can be downloaded from www.apgsensors.com/support.

MPX-E2,3 / MPX-R2,3 System Wiring

4-20 mA Loop Wiring

(MPX-E2 and MPX-R2 Series)

Sensor 1V+    Sensor 2V+    Sensor 3V+

A            A            A

B            B            B

GND          GND          GND

+12-24 Vdc

Use Shielded Cable

120 Ω terminating resistor at last sensor

RS-485 A

RS-485 B

120 Ω terminating resistor

12-24 Vdc

Out 1

Out 2

Input 1   Input 2      Com

Receiver

Sensor

MPX-E2,3 / MPX-R2,3 Communication Wiring

<table>
<thead>
<tr>
<th>To USB</th>
</tr>
</thead>
<tbody>
<tr>
<td>RST-4100</td>
</tr>
</tbody>
</table>

Programming Module required with APG Modbus software for programming the MPX.

Sensor 1V+    Sensor 2V+    Sensor 3V+

A            A            A

B            B            B

GND          GND          GND

+12-24 Vdc

Use Shielded Cable

120 Ω terminating resistor at last sensor

RS-485 A

RS-485 B

120 Ω terminating resistor

12-24 Vdc

Out 1

Out 2

Input 1   Input 2      Com

Receiver

Sensor

Hazardous Location Wiring

Hazardous Location Wiring

Installation in Class I, Division 1 & 2 Groups C and D. Hum. Temp. B.P.C.

Install in accordance with Section 18 of the CEC or Article 500 of the NEC.

DO NOT disconnect while circuit is alive.

WARNING: AREA IS SHOWN AS HIGH-HAZARDOUS

Tampering or replacement with non-original components may adversely affect the safe use of the system.

Automation Products Group, Inc. 888.525.7300
Logan, Utah  USA
1025 West 1700 North

www.apgsensors.com/support