

# Your Ideal Level Solution

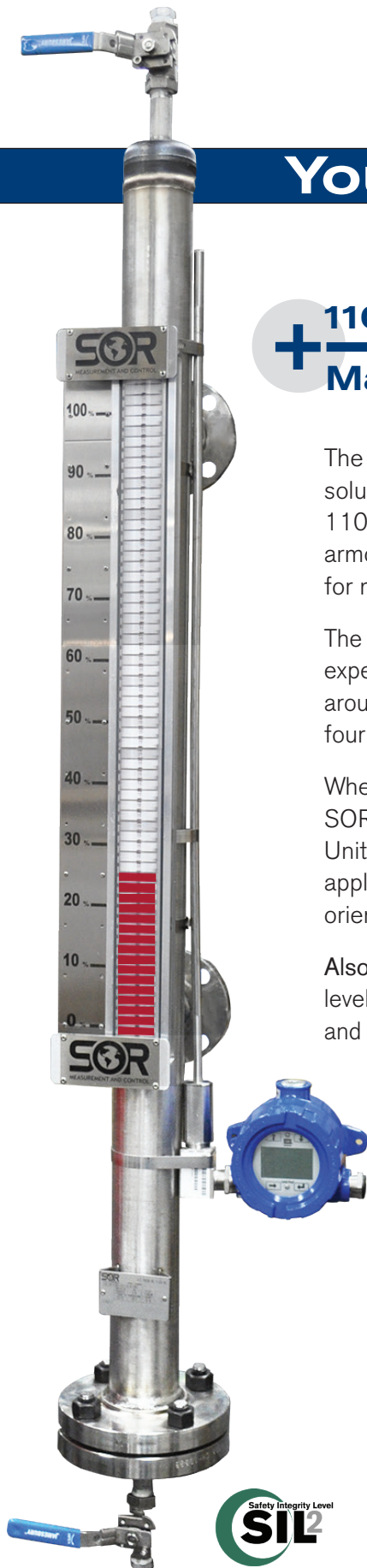
## + 1100 Series Magnetic Level Indicator Magnetostriuctive Level Transmitter

The **1100 Series Magnetic Level Indicator (MLI)** is a proven solution for streamlining the measurement of liquid levels. Not only does the 1100 Series give exceptional visual indication, it also eliminates the need for armored sight glass instruments – simplifying piping systems and allowing for multiple measurements without unnecessary complications to the piping.

The SOR® tried-and-true chamber design was developed through years of experience and innovation and is proven by the countless chambers installed around the world that have been providing reliable service for more than four decades.

When your application requires monitoring as well as visual indication, SOR can provide a magnetostriuctive level transmitter to meet your needs. Units ship out fully assembled, calibrated and ready to be installed in your application. HART® and Modbus are available along with multiple mounting orientations and agency approvals.

Also remember to order the SOR patented *vista*™ indicator for your magnetic level indicator which provides a 200° viewing angle, the widest in the industry, and a 250 feet (76 meters) viewing distance.



The 1100 Series is suitable for most industrial and commercial applications.



### Oil and Gas

- Offshore production
- Compressor packages
- Oil and water interface
- High and low pressure separators
- Gas condensate
- Glycol

### Power Generation

- Boilers
- Feed water heaters
- Sight glass replacement

### Chemical and Petrochemical

- Refined products
- Heat transfer fluids
- Solvents
- Acids and caustics

### Other

- Pulp and paper
- Food and beverage
- Pharmaceutical
- Industrial chemicals
- Waste water

## Product Specifications - Magnetostrictive Transmitter

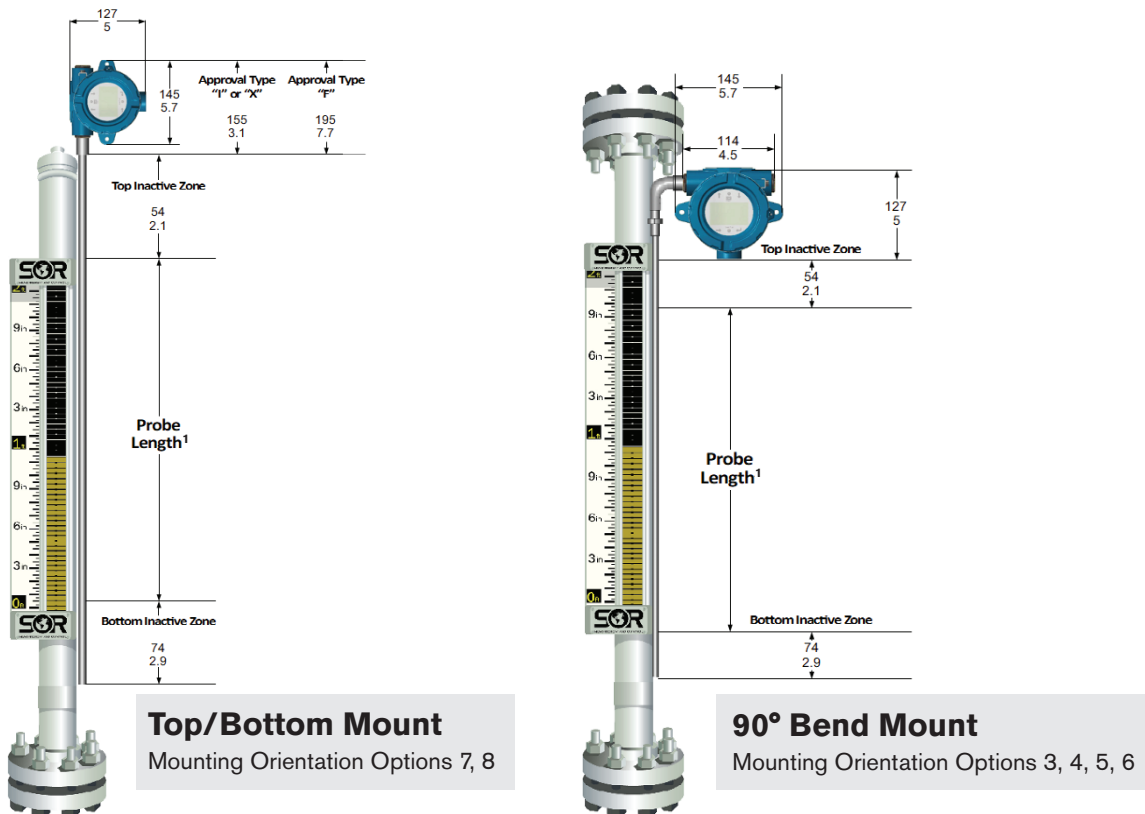
for use with SOR 1100 Series MLI

Continuous Output	Accuracy	± 1 mm (0.039")
	Repeatability	0.001% F.S. or 0.381 mm (0.015") whichever is greater
	Output	4-20 mA HART® with SIL2 Modbus RTU
Temperature Range*	Electronics	-40 to 160°F (-40 to 71°C)
	Probe	-40 to 257°F (-40 to 125°C)
	Process	-350°F up to 800°F (-212°C up to 426°C)
Fail Safe	Modbus	High: Full scale
	4-20 mA, HART®	Low: 3.5 mA (default) High: 22.8 mA
Display/Keypad	4 button keypad with 2 line LCD display	
Supply Voltage	10.5-28 VDC	
Circuit Protection	Reverse Polarity and EMC (EMI/RFI) protected	
Probe Material	316L Stainless Steel	
Conduit Connection	3/4" NPT (Standard)	
	M20 (ATEX or IEC)	
Enclosure Rating	NEMA 4X, IP65	
Warranty	2 years	
Agency Rating	Class I, Division 1, Groups A-D, IS	

\* Extreme temperature options may require additional accessories. Consult factory for more information.

## Dimensions - Magnetostrictive Transmitter

for use with SOR 1100 Series MLI



<sup>1</sup> Probe length will be desired measuring range plus 4" for mounting

# How to Order - Magnetostrictive Transmitter

for use with SOR 1100 Series MLI

Below is the SOR quick select model number tree that provides you with all of the options to configure and order a product for your application. You must select a designator for each component.

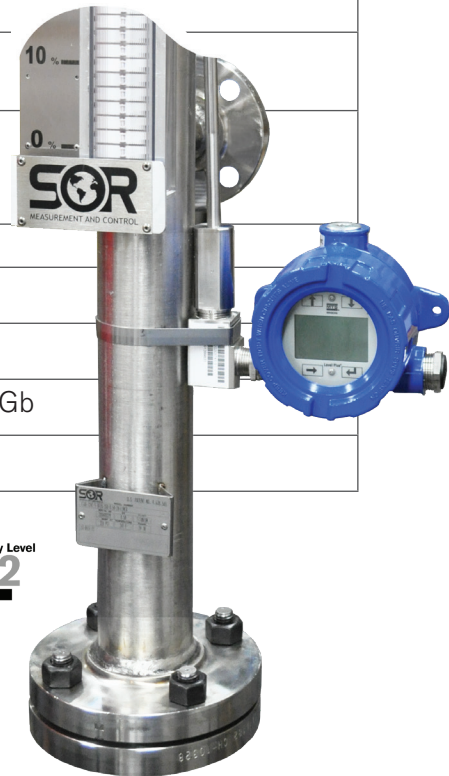
<b>Probe Size</b> <b>5</b>		<b>6</b> <b>Materials of Construction</b>	
10 mm OD Pipe		Y 1 316L SS	
<b>Mounting Orientation</b> <b>4</b>		<b>Agency</b> <b>7</b>	
90° Bend - Housing Top Left* 3 90° Bend - Housing Top Right* 4 90° Bend - Housing Bottom Left* 5 90° Bend - Housing Bottom Right* 6 <small>*Above selection required for MLI with Top and Bottom Flanged Chamber</small> Top Mount (Housing Top Right) 7 <small>Not usable on MLI with Top Flanged Chamber</small> Bottom Mount (Housing Bottom Left) 8 <small>Not usable on MLI with Bottom Flanged Chamber</small>		INMETRO B CEC (FMC) C ATEX E NEC (FM) F IEC I NEPSI N CCOE P CML/TIIS T None X	
<b>Housing</b> <b>3</b>		<b>8</b> <b>Approval Type</b>	
Epoxy Coated Aluminum Single Compartment with Display D Epoxy Coated Aluminum Dual Compartment with Display E <small>Requires 90° bend option for electronics mounting</small> Stainless Steel Single Compartment with Display L		F Explosion Proof/Flameproof I Intrinsically Safe X None	
<b>Output</b> <b>2</b>		<b>9</b> <b>Gas Group</b>	
Modbus M 4-20 mA and HART® 3 4-20 mA and HART® w/SIL2 6		A Group A (includes Group A, B, C and D) <small>Not available with Agency C - CEC (FMC) and Approval Type F - Explosion Proof/Flameproof</small> B Group B (includes Group B, C and D) C Group C (includes Group C and D) D Group D 3 Group IIC <small>Requires Approval Type I - Intrinsically Safe</small> 4 Group IIB + H2 <small>Requires Approval Type F - Explosion Proof/Flameproof.</small> X None	
<b>Model</b> <b>1</b>		<b>10</b> <b>Unit of Measure</b>	
Magnetostrictive Transmitter** LPC		M Metric - Millimeters U US Customary - Inches	
		<b>11</b> <b>Probe Length</b>	
		XXXXX 305 mm (00305) to 3658 mm (03658) <small>(Add 102 mm to desired measuring range for mounting. Leading zeroes required. No decimal spaces.)</small> XXXXX 12" (01200) to 144" (14400) <small>(Add 4" to desired measuring range for mounting. Leading zeroes required. No decimal spaces.)</small> <small>Note: Consult factory for lengths over 144".</small>	
LPC		S	
<b>LPC 3 D 3 Y 1 XX0X F F A U 07200 S</b>			
			<b>Example Model No.</b>

\*\* Magnetostrictive transmitter is manufactured by MTS. SOR is an MTS VAR partner for MLI applications.

# Agency Approvals - Magnetostrictive Transmitter

for use with SOR 1100 Series MLI

Approved	Safety Method	Approval
CEC (FMC)	Intrinsically Safe	Class I, Division 1, Groups A-D T4
		Class I, Zone 0/1, Ex ia IIC T4
		Ta = -50 to 71°C; IP65
	Explosion Proof	Class I, Division 1, Groups B-D T6...T3
Ex db IIB+H2 T6...T3 Ga/Gb Ta = -40 to 71°C; IP65		
ATEX	Intrinsically Safe	⊕ Ex II 1/2 G Ex ia IIC T4 Ta = -50 to 71°C; IP65
		⊕ Ex II 1/2 G Ex db IIB+H2 T6...T3 Ga/Gb Ta = -40 to 71°C; IP65
	Flameproof	Class I, Division 1, Groups A-D T4
		Class I, Zone 0/1, AEx ia IIC T4 Ta = -50 to 71°C; IP65
NEC (FM)	Intrinsically Safe	Class I, Division 1, Groups A-D T6...T3
		Class I, Zone 0/1, AEx db IIB+H2 T6...T3 Ga/Gb Ta = -40 to 71°C; IP65
	Explosion Proof	Class I, Division 1, Groups A-D T6...T3
		Class I, Zone 0/1, AEx db IIB+H2 T6...T3 Ga/Gb Ta = -40 to 71°C; IP65
IEC INMETRO NEPSI CCOE CML/TIIS	Intrinsically Safe	Ex ia IIC T4 Ga/Gb Ta = -50 to 71°C; IP65
		Ex db IIB+H2 T6...T3 Ga/Gb Ta = -40 to 71°C; IP65
	Flameproof	Ex ia IIC T4 Ga/Gb
		Ex db IIB+H2 T6...T3 Ga/Gb Ta = -40 to 71°C; IP65



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