

# Rosemount Magnetic Sensor Specifications

Long-lasting, reliable performance in even the most challenging applications



Flanged (8705)



Wafer (8711)



Slurry (MS)



Hygienic (8721)



Utility (8750W)

Applications	Flanged (8705)	Wafer (8711)	Slurry (MS)	Hygienic (8721)	Utility (8750W)
Process Applications	●	●	●		
Utility Water-Based Flows	●	●			●
High Consistency Slurry	●		●		
Hygienic (Sanitary)				●	
High Pressure (Up to ANSI Class 2500)	●		●		
Nominal Line Size	½ to 36-in 15-900mm	0.15 to 8-in 4-200mm	3 to 36-in 60-900mm	½ to 4-in 15-100mm	½ to 48-in <sup>(1)</sup> 15-1200mm <sup>(1)</sup>
Standard Accuracy <sup>(2)</sup>	±0.25% of rate ±1.0 mm/sec	±0.25% of rate ±2.0 mm/sec	±0.25% of rate ±1.0 mm/sec	±0.5% of rate	±0.5% of rate
Optional High Accuracy <sup>(2)</sup>	±0.15% of rate ±1.0 mm/sec	±0.15% of rate ±1.0 mm/sec	±0.15% of rate ±1.0 mm/sec	±0.25% of rate	±0.25% of rate ±1.0 mm/sec
Measurement Range <sup>(3)</sup>	-40 to +40 ft/s, -12 to +12 m/s	-40 to +40 ft/s, -12 to +12 m/s	-40 to +40 ft/s, -12 to +12 m/s	-30 to +30 ft/s, -10 to +10 m/s	-40 to +40 ft/s, -12 to +12 m/s

<sup>(1)</sup>Line sizes up to 120-in (3000mm) available on special request. <sup>(2)</sup>Consult relevant product data sheet for full accuracy specifications. <sup>(3)</sup>Consult the PDS for specific application velocity limits such as abrasive slurries.



Process  
Temp Limits



Line Size  
(8705/MS)<sup>(8)</sup>



Line Size  
(8711)



Line Size  
(8721)



Line Size  
(8750W)

Liner Selection	Process Temp Limits	Line Size (8705/MS) <sup>(8)</sup>	Line Size (8711)	Line Size (8721)	Line Size (8750W)
PFA/ PFA+ - Fluoropolymer <sup>(5)</sup> High temperature chemically aggressive applications.	-20 to 350° F (-29 to 177° C) <sup>(4)</sup>	½ to 14 inch (15 to 350 mm)	0.15 to 0.3 inch (4 to 8 mm)	½ to 4 inch (15 to 100 mm)	
PTFE - Fluoropolymer <sup>(5)</sup> Most common liner - suitable for most applications	-20 to 350° F (-29 to 177° C) <sup>(4)</sup>	½ to 36 inch (15 to 900 mm)	½ to 8 inch (15 to 200 mm)		½ to 48 inch (15 to 1,200 mm) <sup>(7)</sup>
ETFE - Fluoropolymer <sup>(5)</sup> Improved abrasion resistance liner - good chemically	-20 to 300° F (-29 to 149° C)	½ to 16 inch (15 to 400 mm)	½ to 8 inch (15 to 200 mm)		
Polyurethane Water applications with limited to no chemicals	-0 to 140° F (-18 to 60° C)	1 to 36 inch (25 to 900 mm)			½ to 48 inch (15 to 1,200 mm)
Adiprene Oil and gas applications with high pressure, high salinity	0-200° F (-18 to 93° C)	1 to 12 inch (25 to 300 mm)			
Neoprene Best for sea water / lower concentration brine solutions	-0 to 176° F (-18 to 80° C)	1 to 36 inch (25 to 900 mm)			½ to 48 inch (15 to 1,200 mm)
Linatex Standard liner for mining or fluid streams w/large debris	-0 to 158° F (-18 to 70° C)	1 to 36 inch (25 to 900 mm)			

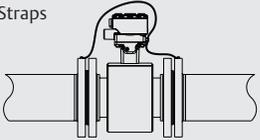
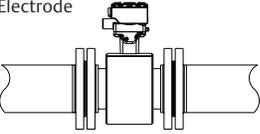
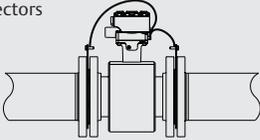
<sup>(4)</sup>Capable of temperatures up to 355°F (180°C) - Consult factory for details. <sup>(5)</sup>Fluoropolymer MWP 1000psi. <sup>(6)</sup>ETFE not available on the MS Sensor <sup>(7)</sup>Limited maximum temperature of 248°F, 120°C.

<sup>(8)</sup>MS Sensor available starting at 3-in (DN 80) line size.

# Rosemount Magnetic Sensor Specifications

Electrode Selection		Description
<b>Type</b>	Button	Standard design. Suitable for most applications including slurries.
	Bullet-Nose	Used where coating is a concern and no solids are present.
	Flat Head	Flat electrode that is flush with the liner to minimize wear and noise in highly abrasive fluids
<b>Material</b> <sup>(9)</sup>	316L Stainless Steel	Standard material. Compatible with most water-based applications.
	Nickel Alloy 276	Typically used in medium to high acid concentrations and sea water.
	Platinum <sup>(10)</sup>	Typically used in the most aggressive chemical and pulp and paper liquor applications.
	Tantalum <sup>(10)</sup>	Typically used in high concentration acids (hydrochloric, hydrofluoric).
	Titanium <sup>(10)</sup>	Typically used in high concentration caustic (sodium, potassium hydroxide).

<sup>(9)</sup>Alternate special materials available upon request. <sup>(10)</sup>Not available on 8750W.

Process Reference / Grounding			
Process Reference Type	Unlined Metallic Pipe	Lined Metallic Pipe	Plastic Pipe
Grounding Straps 	Suitable	Not Sufficient	Not Sufficient
Grounding Electrode 	Not Required	Conductivity > 100µS/cm	Not Sufficient
Grounding Rings / Lining Protectors 	Not Required	Single ring / Lining Protector: Conductivity > 20µS/cm  Dual rings / Lining Protector: Conductivity < 20µS/cm	Single ring / Lining Protector: Not Sufficient  Dual rings / Lining Protector: Always Use



Transmitter Options	8732E	8712E	8782	8750W
Mounting	Integral or Remote <sup>(11)</sup>	Wall Mount Remote	Wall Mount Remote	Integral, Remote or Wall Mount
Local Operator Interface (LOI)	4-button	Dedicated 15-button	Dedicated 15-button	4-button or 15-button
Output & Communication Protocols	4-20 mA, HART, Pulse FOUNDATION fieldbus, Profibus PA, Modbus	4-20 mA, HART, 10 kHz Pulse FOUNDATION fieldbus Modbus	4-20 mA, HART, 10 kHz Pulse	4-20 mA, HART, 10 kHz Pulse FOUNDATION fieldbus, Modbus
Power Supply	90-250VAC, 12-42VDC	90-250VAC, 12-42VDC	90-250VAC, 12-42VDC	90-250VAC, 12-42VDC
Optional Corrosion Protection	Optional special Off Shore Paint or SST Enclosure	None	None	Optional special paint for submersion protection
<b>Diagnostic &amp; Enhanced Features</b>	<b>Optional ordering codes: DA1/DA2 - HART 4/20 mA D01/DO2 - Digital Protocols (FF, PA, Modbus)</b>			
<b>Basic Diagnostics</b> - w/ functional electronics and software checks	Standard	Standard	Standard	Standard
<b>Installation Diagnostics</b> - w/ Grounding & Wiring Fault Detection	DA1 / D01	DA1	Standard	DA1 / D01
<b>Process Insight Diagnostics</b> - w/ High Process Noise & Elect. Coating Detection	DA1 / D01	DA1	DS1	DA1 / D01
<b>Smart Meter Verification</b> - w/ commanded & continuous capabilities	DA2 / D02	DA2	MV	DA2 / D02

<sup>(11)</sup>2" Pipe mount.