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					
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[1] 15-1200mm[1]
Standard Accuracy[2]	±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[2]	±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[3]	-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

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




	Process Temp Limits	Line Size (8705/MS)[8]	Line Size (8711)	Line Size (8721)	Line Size (8750W)
Liner Selection					
PFA/ PFA+ - Fluoropolymer[5] High temperature chemically aggressive applications.	-20 to 350° F (-29 to 177° C)[4]	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[5] Most common liner - suitable for most applications	-20 to 350° F (-29 to 177° C)[4]	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)[7]
ETFE - Fluoropolymer[5] 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)			

[4]Capable of temperatures up to 355°F (180°C) - Consult factory for details. [5]Fluoropolymer MWP 1000psi. [6]ETFE not available on the MS Sensor [7]Limited maximum temperature of 248°F, 120°C.
[8]MS Sensor available starting at 3-in (DN 80) line size.

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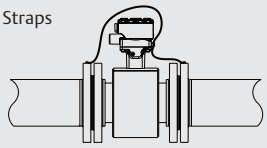
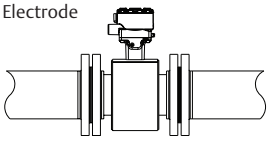
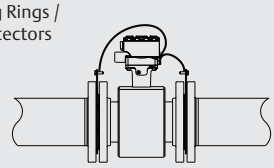
Electrode Selection		Description
Type	Button	Standard design. Suitable for most applications including slurries.
	Bullet-Nose	Used where coating is a concern and no solids are present.
	Flat Head	Flat electrode that is flush with the liner to minimize wear and noise in highly abrasive fluids
Material [9]	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 [10]	Typically used in the most aggressive chemical and pulp and paper liquor applications.
	Tantalum [10]	Typically used in high concentration acids (hydrochloric, hydroflouric).
	Titanium [10]	Typically used in high concentration caustic (sodium, potasium hydroxide).

[9] Alternate special materials available upon request. [10] Not availible 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 [11]	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 & Communciation 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
Diagnostic & Enhanced Features	*Optional ordering codes:*	*DA1/DA2 - HART 4/20 mA*	*D01/DO2 - Digital Protocols (FF, PA, Modbus)*	
Basic Diagnostics - w/ functional electronics and software checks	Standard	Standard	Standard	Standard
Installation Diagnostics - w/ Grounding & Wiring Fault Detection	DA1 / D01	DA1	Standard	DA1 / D01
Process Insight Diagnostics - w/ High Process Noise & Elect. Coating Detection	DA1 / D01	DA1	DS1	DA1 / D01
Smart Meter Verification - w/ commanded & continuous capabilities	DA2 / D02	DA2	MV	DA2 / D02

[11] 2" Pipe mount.

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Emerson Automation Solutions
7070 Winchester Circle, Boulder, CO USA 80301 T: 800 522 6277

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