

ELMAG 200 W

ZERO UPSTREAM & DOWNSTREAM ELECTROMAGNETIC FLOW METER



Features

- No inlet/outlet run requirement
- Full-bore design
- Advanced signal processing
- No tube restriction, no pressure loss
- Multiple electrodes for higher accuracy
- Stable and accurate performance
- Reliable, cost-efficient, and flexible



Description

The Electronet ELMAG 200 W is a zero upstream & downstream electromagnetic flow meter, designed for unrestricted and maintenance-free flow measurement based on Faraday's Law of Electromagnetic Induction. With no requirement for straight pipe runs and a full-bore design that ensures zero pressure loss, it delivers high accuracy, a wide turndown ratio, and long-term reliability with no moving parts. Built with robust liner and electrode options, it is ideal for demanding applications in water distribution, wastewater treatment. The flowmeter also features an integrated display for easy local operation, eliminating the need for additional software or hardware, making it one of the most efficient and user-friendly flow measurement solutions available.

Technical Specifications

Performance Characteristics	
Nominal diameters	50 NB To 600 NB (2" to 24")
Process connections	Flanges: EN(DIN), ASME, JIS, AWWA
Process temperature	-20 to +90°C (-4 to +194°F)
Degree of protection	IP 67 (Type 4X enclosure)
Max. measured error	Standard: $\pm 0.5\%$ of M.V. Option: $\pm 0.3\%$ of M.V. Directly after bend: $\pm 0.5\%$ of M.V.
Turndown	100:1
Materials (liners)	Polyurethane, hard rubber, PTFE
Electrical conductivity	$\geq 5\mu\text{S/cm}$ (liquids in general)
Inlet/outlet runs	0 x DN
Wetted materials	Liner material hard rubber: 0 to +80 °C (+32 to +176 °F) Liner material polyurethane: -20 to +50 °C (-4 to +122 °F) Liner material PTFE: -20 to +180 °C (-4 to +356 °F) Electrodes: SS-316L, Hastelloy C 22, Tantalum, Platinum
Measured variables	Volume flow, conductivity, mass flow
Max. process pressure	PN 40, Class 300, 20K
Ambient temperature range	Liner material hard rubber: 0 to +80 °C (+32 to +176 °F) Liner material polyurethane: -20 to +50 °C (-4 to +122 °F)



Technical Specifications

Velocity	0.3 m/s - 2.5m/s upto Max. 10m/s
Medium temperature range	Liner material hard rubber: 0 to +80 °C (+32 to +176 °F) Liner material polyurethane: -20 to +50 °C (-4 to +122 °F) Liner material PTFE: -20 to +180 °C (-4 to +356 °F)
Sensor housing material	MS / SS-304 / SS-316
Transmitter housing material	Aluminium Die Cast / SS-316
Degree of protection	Compact version: IP 66 / IP 67 Enclosure Sensor remote version (standard): IP 66 / IP 67 Enclosure Sensor remote version (option): IP 68 with protective varnish Transmitter remote version: IP 66 / IP 67 Enclosure
Display/Operation	2-line backlit display with touch control (operation from outside) Configuration via local display
Outputs	3 outputs: 0-20 mA/4-20 mA with Generic HART (Active) Pulse/frequency/switch output (passive) Pulse/frequency output (passive) Switch output (passive)
Digital communication	HART, MODBUS RS485
Power supply	100 - 240 V AC/ 24 V DC
Metrological approvals and certificates	Calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025)
Material certificates	3.1 material
Sensor features	Flexible connections, corrosion-protected (EN ISO 12944), IP 68
Transmitter features	Display with backlight for safe operation Durable housing Integrated data logger.

Line Size		Flange To Flange Distance	Flow Range (m³/Hr)			
Inch	NB		Velocity 0.3m/s	Velocity 2.5m/s	Velocity 6m/s	Velocity 10m/s
2"	50	200	2.12	17.67	42.4115	70.69
2½"	65	200	3.58	29.86	71.675	119.46
3"	80	200	5.43	45.24	108.573	180.96
4"	100	250	8.48	70.69	169.646	282.74
5"	125	250	13.25	110.45	265.071	441.79
6"	150	300	19.09	159.04	381.703	636.17
8"	200	350	33.93	282.74	678.584	1130.97
10"	250	450	53.01	441.79	1060.28	1767.15
12"	300	500	76.34	636.17	1526.81	2544.69
14"	350	550	103.91	865.9	2078.16	3463.61
16"	400	600	135.72	1130.97	2714.33	4523.89
18"	450	600	171.77	1431.39	3435.33	5725.55
20"	500	600	212.06	1767.15	4241.15	7068.58
24"	600	600	305.36	2544.69	6107.25	10178.76

Note : Flange to flange distance (FD) Tolerance : 1) 1/2"(50NB) to 6"(150NB) : +/-3mm 2) 8"(200NB) to 24"(600NB) : +/-5mm

- All dimensions are in 'mm'
- For dimensions of line size above 600NB, please consult factory.
- Typical mounting dimensions are for reference only.

- Wet Calibrated at IEC/ISO/EN17025 Accredited Calibration Rig.
- Flow meter should be selected with the help of Nomograph (recommended full scale velocity).

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Assembly Overview - Integral

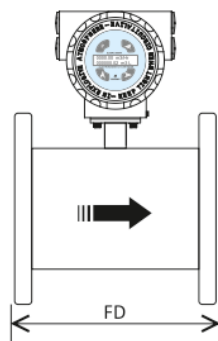


Fig. 1 Front View

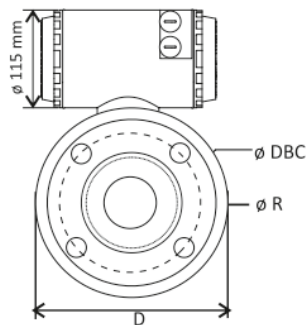


Fig. 2 Side View

Assembly Overview - Remote

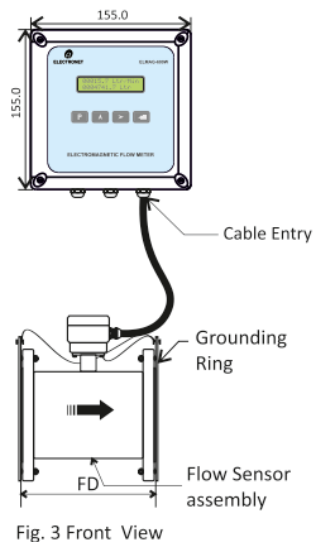


Fig. 3 Front View

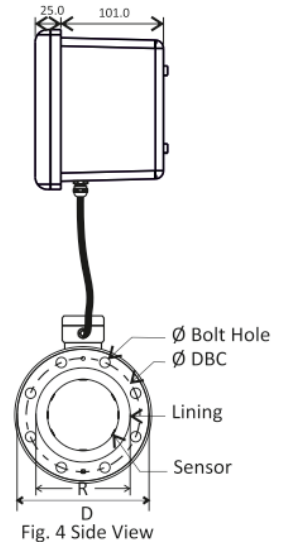


Fig. 4 Side View

Ordering Information for Flow Transmitter

Sample Order Code : ELMAG 200W-TX-A1-B1-C1-D1-E1-F1-G1-H1-I1-J1-K1-L1-M1

Parameter		Code	Description
A	Transmitter/ Electronics Mounting	A1	Integral (local)
		A2	Remote
B	Power Supply	B1	24 VDC
		B2	230 VAC
C	Enclosure MOC	C1	Aluminium Die Cast
		C2	SS-316
		CY	Other
D	Enclosure IP Rating	D1	IP 54
		D2	IP 67
		D3	IP 68
E	Hazardous Certification	E1	ATEX
		E2	FF (CMRI 2A ,2B)
		EX	NA
(Only For Electronics Enclosure)			
F	Electrical Connection	F1	M20
		F2	1/2 NPT
		FY	Other
G	Electrical Output 1 (Current)	G1	4 to 20 mA
		G2	4 to 20 mA With HART
		GX	NA

Parameter		Code	Description
H	Electrical Output 2 (Pulse)	H1	Pulse Output
		HX	NA
I	Electrical Output 3 (Alarm /Relay)	I1	One Alarm
		I2	Two Alarm
		IX	NA
J	Alarm Type	J1	Open Collector
		J2	Potential Free
		J3	PNP Output
		JX	NA
K	Communication Output 1	K1	RS485 (MODBUS RTU)
		KX	NA
L	Communication Output 2	L1	GPRS
		L2	GSM
		L3	Dual SIM GPRS
		L4	MBUS
		LX	NA
M	Pressure Sensor	M1	16 KG /Cm ²
		MX	NA

Ordering Information for Flow Tube

Sample Order Code : ELMAG 200W- FT50-N1-O1-P1-Q1-R1-S1-T1-U1

Parameter		Code	Description	Code	Description	Parameter	Code	Description			
FT	Flow Tube	FT 50	50 NB	FT 250	250 NB	R	Flange Standard and Rating	R1	ANSI 150 B16.5		
		FT 65	65 NB	FT 300	300 NB			R2	ANSI 300 B16.5		
		FT 80	80 NB	FT 350	350 NB			R3	ANSI 600 B 16.5		
		FT 100	100 NB	FT 400	400 NB			R4	DIN PN 10 EN 1092-1		
		FT 125	125 NB	FT 450	450 NB			R5	DIN PN 16 EN 1092-1		
		FT 150	150 NB	FT 500	500 NB			R6	DIN PN 25 EN 1092-1		
		FT 200	200 NB	FT 600	600 NB			R7	DIN PN 40 EN 1092-1		
		N	Electronics Location	N1	Integral (local)			S	Lining Material	R8	IS 1538
N2	Remote			RY	Other						
O	Remote Signal Cable Length	O1	5 Meter			T	Electrode Material			RX	NA
		O2	10 Meter							S1	Hard /ebonite Rubber
		O3	15 Meter							S2	Neoprene Rubber
		O4	25 Meter							S3	PFA
		OX	NA							S4	PTFE
P	Process Connection	P1	Threaded (50 NB)							S5	Ceramic
		P2	Flanged (50 To 600 NB)					S6	PEEK (Up To 50 NB)		
		P3	Triclover (50 to 100 NB)					U	Pressure Sensor	T1	SS316L
		P4	SMS Union (50 to 100 NB)			T2	Hastelloy C				
		P5	Compact Wafer (50 to 100 NB)			T3	Platinum				
Q	Flange MOC	Q1	MS			T4	Tantalum				
		Q2	CS			U1	16 Kg/Cm ²				
		Q3	SS304			UX	NA				
		Q4	SS316			 Note : • Due to our continuous product revisions, design specification & model numbers are subject to change without notice. To be used for industrial applications.					
		QX	NA								

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