

ELECTRO MAGNETIC FLOW METER



This micro-based full bore type electromagnetic flow meters specially used for various industrial applications. These flow meters accurately measure the flow rate of conductive liquid & slurries inclosed pipes. Due to simple & rigid design, the flow meter is an obstruction less & maintenance free instrument in place of conventional mechanical flow measuring device. The use of 'Pulsed DC' technology offers highest ability & better measuring accuracy in the form of electrical signal 4-20 mA DC linearly proportional to volumetric flow. The instrument is based on Faraday's law of electro-magnetic induction. A magnetic field is generated by the instrument in the flow tube. The fluid flowing through this magnetic field generates a voltage that is proportional to the flow velocity. Corresponding electrical output is provided with respect to measuring flow range.

Specifications

Media	: Liquids (Conductive)
Conductivity	: > 5 s/cm
Viscosity	: 200 cp max
Line Size	: 15 NB to 600 NB
Excitation	: Pulsed DC
Type of Output	: 1) 4 to 20 mA DC, Isolated, HART 2) Pulse
Display	: 16x2 LCD - 4 digit for Flow Rate & 8 digit for Totalised Flow
Engineering Unit	: User Programmable (m ³ /hr by default)
Calibration Range	: As per requirement (Factory Calibrated for std. 2m/s velocity)
Accuracy	: ± 0.5% of FS (for 20 to 100% flow)
Linearity	: ± 0.5% of FS
Repeatability	: ± 0.2% of FS
Temp. Coefficient	: ± 0.05% per °C
Process Temp.	: 85°C max for Rubber Lining & 120°C for PTFE Lining
Process Pressure	: 10 kg/cm ² max (higher on request)

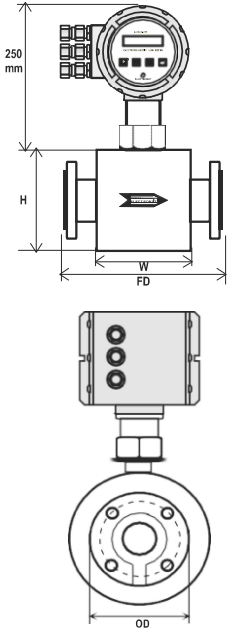
Material of Construction	: Lining - (1) Rubber (5mm ± 1mm thick) (2) PTFE (Teflon) (3mm ± 1mm thick) Flange - CS / MS / SS Electrode - SS 316L / Hastelloy C / Platinum Coil Housing - MS / SS 304
Power Supply	: Option 1 : 24V DC Option 2 : 90 - 260V AC, 50 Hz
Power Consumption	: < 10 VA
Isolation	: 1.4 KV between Input, Output & Power Supply
Response Time	: < 1 Sec
Transmitter Enclosure	: Die cast Aluminium IP 66, flow tube IP 68
Process Connections	: ASA 150 flanged, as per table B 16.5
Mounting	: In-Line Horizontal (Vertical on request)
Operating Conditions	: Temperature 0 to 55°C Humidity 5 to 95% noncondensing

Note : For process conditions other than above please consult factory.

OPTIONAL

Communication Port	: 1) RS 485 supporting MODBUS RTU Protocol 2) GSM Communication 3) 4-20 mA with HART
Electronics	: Remote Electronics

Dimensional Details



Meter Size	OD (mm)	W (mm)	H (mm)	FD (mm)	Flow Range (m ³ /hr)		
					Min.	Normal	Max
15 NB	88.9	100	180	200	0.03	1.2723	6.4
20 NB	98.4	100	180	200	0.11	2.2619	11
25 NB	107.9	100	180	200	0.18	3.5341	18
32 NB	117.5	100	210	200	0.29	5.7906	29
40 NB	127.0	100	210	200	0.45	9.05	45
50 NB	152.4	100	210	200	0.71	14.14	71
65 NB	177.8	100	220	200	1.19	23.892	119
80 NB	190.5	100	240	200	1.81	36.19	181
100 NB	228.5	150	274	250	2.83	56.55	283
125 NB	254.0	175	300	250	4.42	88.35	442
150 NB	279.4	175	330	300	6.36	127.23	636
200 NB	342.9	175	390	350	11.3	226.18	1130
250 NB	406.4	244	440	450	17.66	353.41	1766
300 NB	482.6	250	520	500	25.43	508.91	2543
350 NB	533.4	250	520	550	34.62	692.68	3462
400 NB	596.9	250	520	600	45.22	904.72	4522
450 NB	635.0	623	632	698	57.23	1145.04	5723
500 NB	698.5	623	686	768	70.65	1413.63	7065
600 NB	812.8	818	772	918	101.74	2035.63	10174

OD : Flange Diameter
H : Coil Housing Height

W : Coil Housing Width
FD : Flange to Flange Distance

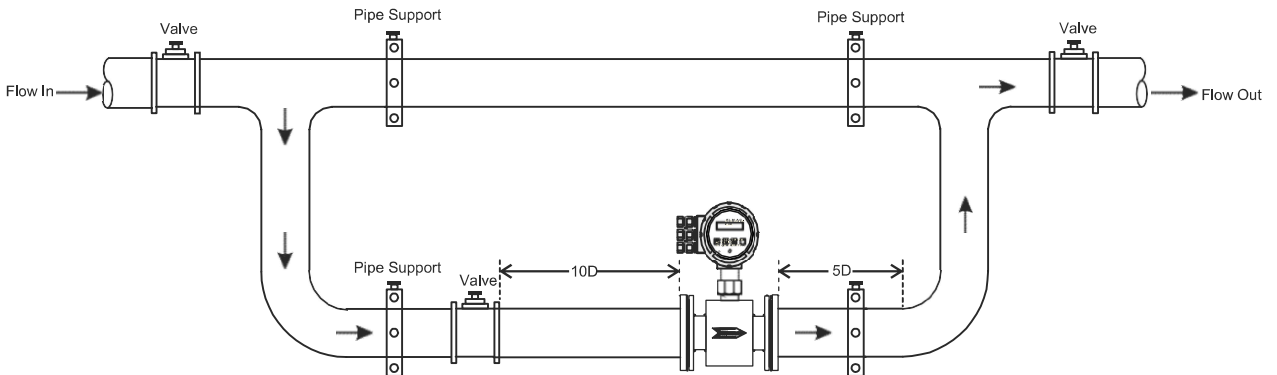
FLOW NOMOGRAPH



Note :

- Typical mounting dimensions for reference.
- Standard factory calibration for 0 to 2 m/sec velocity.
- Max. Flow range in LPH/LPM is upto 9999
- Flow meter should be selected with the help of Nomograph recommended full scale velocity.

Installation Drawing



Installation Drawing

SERIES	Line Size	Electronics	Lining Material	Flange	Coil Housing	Electrode Material	Electronics Enclosure	Output	Power Supply	Communication Port	Remote Cable Length	Data logging										
ELMAG-200	65 mm	L / R	A	02	B	01	C	01	D	01	E	01	F	01	G	02	H	01	I	02	J	02

*Due to our continuous product revisions, Design, Specifications and Model Number are subject to change without notice.

*Accuracy defined at lab conditions.

Note : GSM output is without SIM card & SCADA viewing software.

★ Consult Factory

Company Profile

Instruments & Systems was started in 1985 with view to provide automation solutions to sugar industries, where the automation was still in its nascent stage at that time.

In the year 2000, company decided to diversify in the manufacturing of control valves. Over the period time company has invested in various dies, molds and patterns of various valves and its components.

Computerized order processing and production quality control systems, latest manufacturing technique by using CAD/CAM, VMC/CNC machining and assembling systems, ensures high precision product completely interchangeable and suiting to aesthetic of modern times, yet economically produced.

The company has an engineering and technical expertise together with the facilities to address the diverse automation demands of the modern process industries standard, special and customized control valves are all available on demand for use in a wide range of applications and industries.

"As per Manufacturing and Quality Standards-CE/19408/1120 and ISO 9001:2015"



Instruments & Systems
Valve Automation & Control Technology

INSTRUMENTS & SYSTEMS

30 I & S Building
Mohabbewala Industrial Area
Dehradun (Uttarakhand) - 248 002

Email :
sales@instruments-systems.com
info@instruments-systems.com

Web:
www.instruments-systems.in

FOLLOW US ON : 