ELMAG® 2516

ELECTRONET™

ELECTROMAGNETIC FLOW METER

Features

- Full bore type
- Suitable for conductive liquids
- Power Supply 90–250V AC (50Hz), 24V DC
- Empty Pipe Indication
- Material option depending upon Process Data
- Local Indication through LCD
- Maintenance free
- Simple & Cost Effective Construction
- Protection Class : Electronics – IP66, Flow Tube – IP68

Description

Electronet series ELMAG®–2516 are micro–controller based full bore type electromagnetic flow meters specially used for various industrial applications. These flow meters accurately measure the flow rate of conductive liquids & slurries in closed pipes. Due to its simple and rigid design, the flow meter is an obstruction–less & maintenance–free instrument in place of conventional mechanical flow measuring devices. 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 electromagnetic 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.

Technical Specifications

Media	Liquids (Conductive)
Line Size	15 NB to 200 NB
Electronics	Integral / Remote (10 Meters)
Conductivity	> 5 µs/cm
Viscosity	200 cp max
Excitation	Pulsed DC Coil
Type of Output	4 to 20mA DC
Display	16 x 2 LCD Display – 6 Digit for Flow Rate & 8 Digit for Totalizer Flow
Engineering Unit	User Programmable (m^3/hr by default)
Calibration Range	Wet Calibrated on IEC/ISO/EN17025 Accredited Calibration Rig.
Accuracy	+/– 0.5% of M.V. (For Flow Velocity > 0.5 m/s)
Flow Velocity Range	–6 m/s to +6 m/s
Linearity	+/– 0.5% of M.V.
Repeatability	+/– 0.2% of M.V.
Temperature Coefficient	+/– 0.05% per °C
Certification	CE

Process Temperature	–20 to 85° C max for Rubber Lining & –20 to 220°C for PTFE Lining
Process Pressure	16 kg/cm² max (Higher on request)
Material of construction	1) Lining – Neoprene Rubber / Hard Rubber / EPDM / PFA / PTFE
	2) Flange – MS / CS / SS316
	3) Electrode – SS 316L/ Hastalloy C / Platinum / Tantalum
	4) Coil Housing – SS / MS
Power Supply	1) 90 to 250 VAC, 50 Hz 2) 24 VDC Optional
Power Consumption	Less than 10 VA
Isolation	1.4 KV between Input, Output and Power Supply
Response Time	Less than 10 Sec.
Transmitter Enclosure	Electronics : IP66, Flow Tube : IP68
Process Connections	ANSI150 flanged, as per table B 16.5 (Other On Requirement)
Mounting	In–Line Horizontal / Vertical
Operating Conditions	Temperature –20 to 75°C / Humidity 5 to 95% non condensing
Note :– For process conditions other than above please consult factory.	

Assembly Overview

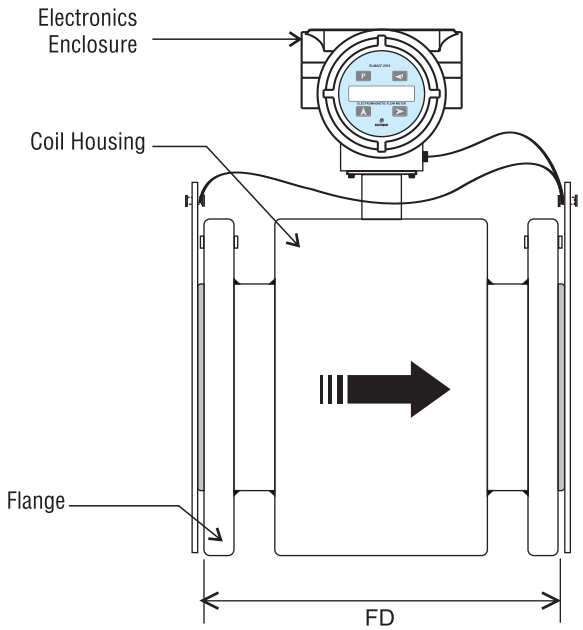


Fig. 1 Front View

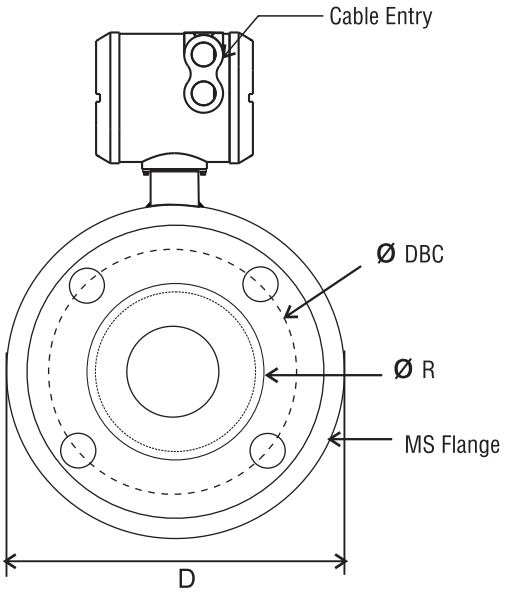


Fig. 2 Side View

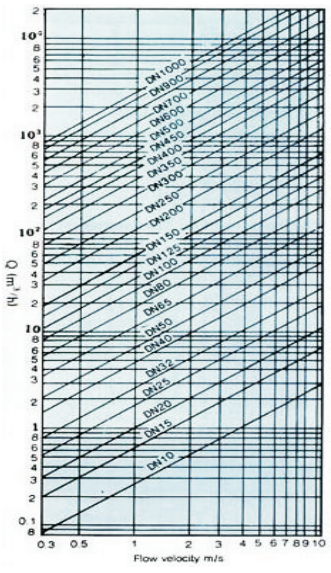
TABLE -1 : Dimensional Details Of Flange, as Per ANSI 150 # B-16.5

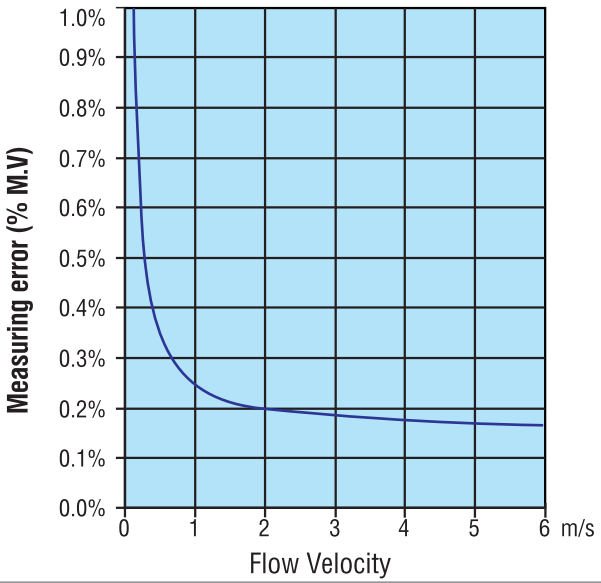
Refer Drg. Fig.1 & 2

Line Size		Flange Diameter 'D'	Diameter of Raised Face 'R'	Diameter of Bolt Hole Circle 'DBC'	Diameter of Bolt Hole	No. of Holes	Flange Distance 'FD'	Flow Range(m^3/hr) at 0.3m/s to 6m/s	
Inch	NB							Minimum	Maximum
½"	15	88.9	34.9	60.3	15.9	4	200	0.19	3.817
¾"	20	98.4	42.9	69.8	15.9	4	200	0.33	6.785
1"	25	107.9	50.8	79.4	15.9	4	200	0.53	10.602
1 ½"	40	127.0	73	98.4	15.9	4	200	1.35	27.143
2"	50	152.4	92.1	120.6	19.0	4	200	2.12	42.4115
2½"	65	177.8	104.8	139.7	19.0	4	200	3.58	71.675
3"	80	190.5	127.0	152.4	19.0	4	200	5.42	108.573
4"	100	228.5	157.2	190.5	19.0	8	250	8.48	169.646
5"	125	254.0	185.7	215.9	22.2	8	250	13.25	265.071
6"	150	279.4	215.9	241.3	22.2	8	300	19.085	381.703
8"	200	342.9	269.9	298.4	22.2	8	350	33.929	678.584

Note :
- All dimensions are in 'mm'
- Flange to flange distance (FD) Tolerance : 1) 1/2"(15NB) to 6"(150NB) : +/–3mm 2) 8"(200NB) : +/–5mm
- For dimensions of line size above 200NB, please consult factory.
- Typical mounting dimensions are for reference only.
- Wet Calibrated on IEC/ISO/EN17025 Accredited Calibration Rig.
- Flow meter should be selected with the help of Nomograph (recommended full scale velocity).
- Flow indication of 6 digit max. up to 999999.

Flow Nomograph





Applications

Food Industry	Chemical Industry	Atomic Energy	Manufacturing Industry
Automation Industry	Thermal Power Energy	Process Industry	Water Treatment Industry

Ordering Information

Sample Order Code : 01A–07B–09A–10Z–22A–23B–24B–50B–51B–53F–66B–67C–68C–69F–70A–71A–72B–73A

Parameter		Code	Value	Code	Value
01	Line Size	01A	15 NB	01G	65 NB
		01B	20 NB	01H	80 NB
		01C	25 NB	01I	100 NB
		01D	32 NB	01J	125 NB
		01E	40 NB	01K	150 NB
		01F	50 NB	01L	200 NB
07	Area Classification	07A	Weather Proof		
		07B	Flame Proof		
09	Electronics	09A	Integral		
		09B	Remote		
10	Remote Cable Length	10A	2 Meter		
		10B	5 Meter		
		10C	10 Meter		
		10Z	NA		
22	MOC Electronics Enclosure	22A	Die Cast Aluminium		
		22B	SS316		
		22C	ABS Plastic		
23	Cable Entry	23A	M20 X 1.5		
		23B	½" NPTF		
		23X	Other		
24	Power Supply	24A	90 to 250 VAC		
		24B	24 VDC		
50	Output 1	50A	4 to 20 mA		
		50Y	None		
51	Output 2	51A	Pulse		
		51B	Freq (0 to 1 kHz)		
		51Y	None		
53	Communication Output 1	53A	RS 485		
		53Y	None		
66	Process Connection	66A	Threaded		
		66B	Flanged		
		66E	* Tri Clover		
67	MOC Flange	67A	MS		
		67B	CS		
		67C	SS316		
		67D	SS304		
		67E	PVC		
		67Z	NA		

Parameter		Code	Value
68	MOC Coil Housing	68A	MS
		68B	SS304
		68C	SS316
		68D	PVC
69	Lining Material	69A	Neoprene Rubber
		69B	Hard Rubber
		69C	Ebonite Rubber
		69D	EPDM
		69E	PFA
		69F	PTFE
		69G	PU
		69X	Other
70	Flange Standard	70A	ANSI
		70B	DIN
		70C	AWWA
		70X	Other
		70Z	NA
71	Flange Rating	71A	ANSI 150
		71B	ANSI 300
		71C	ANSI 600
		71D	DIN 10
		71E	DIN 16
		71F	DIN 40
		71X	Other
		71Z	NA
72	MOC Flow Tube	72B	SS304
		72C	PVC
		72X	Other
73	MOC Electrode	73A	SS 316L
		73B	Hastelloy
		73C	Platinum
		73D	Tantalum
		73E	Titanium

Note :
- Due to our continuous product revisions, design specification and model numbers are subject to change without notice.
- Accuracy defined at Lab Conditions.
- For other requirement please consult factory.
- To be used for industrial applications.

* Process connection –Tri Clover : Upto Max. 4 inch Line Size

ELECTRONET EQUIPMENTS PVT. LTD.

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