PETROSYSTEM Srl

18-03

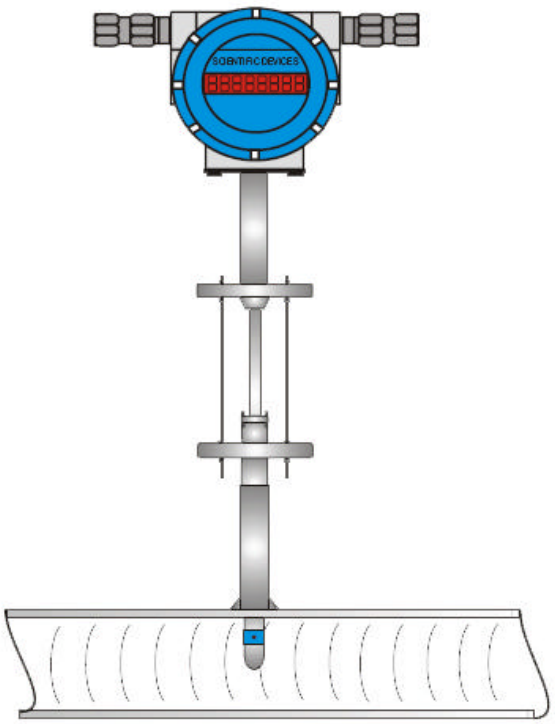
ELECTROMAGNETIC FLOW METER SMAG - 700 SERIES

SALIENT FEATURE

- Insertion Ttpe
- Microprocessor based Design
- Programmable through remote control
- Pulsed DC Coil Excitation

DESCRIPTION

The Electromagnetic flowmeter of Series SMAG - 700 is an appropriate solution for conductive flow measurement in larger pipe diameter sizes. Due to simple and rigid design the flow meter is an obstruction less and maintenance free instrument in place of conventional mechanical flow measuring devices .The use of ' Pulsed DC' technology offers highest ability & better measuring accuracy in form of 4 - 20mA DC isolated o/p linearly proportional to volumetric flow



PRINCIPLE OF OPERATION

The principle is based on Faradays law of electromagnetic induction. When a conductor moves within a magnetic field, voltage (e.m.f) Is induced in it which is proportional to the velocity of Conductor.

E =b x l x v
Where,
e = Induced Voltage (V)
l = Length of Conductor (mm)
b = Density of magnetic field (Wb)
v = Mean velocity of the media (m/s)

APPLICATION :

Most liquids or slurries are adequate electrical conductors and can be measured by electromagnetic flow meters. If the conductivity is in between 5 to 20 microsiemens/cm, these flow meters can be efficiently used More over the measurement are independent of operational parameters like temperature, pressure, viscosity and density.

AREA OF APPLICATION :

Waste Water and Effluent Treatment Plants.
Distilleries and Breweries.
Food and Drug Industries.
Chemical and Pharmaceutical Industries.
Public Services and Utilities.

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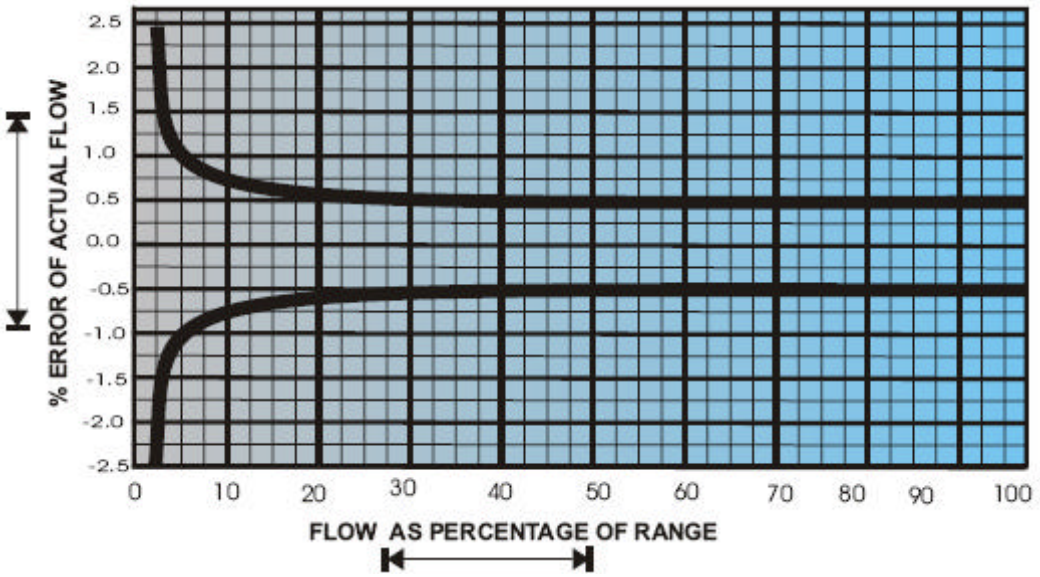
TECHNICAL SPECIFICATIONS

Line Size Available	200 to 2000 mm
Line Pressure	15 Kg/Sq.cm max
Operating Temperature	0 to 80 Deg C
Material of Construction:	
Insertion Probe	SS 316, SS 304
Electrode	SS 316
Wetted Part	SS 316, SS 304
Flange Mounting Assembly	SS 316, SS 304
Power Supply	Pulsed DC
Terminal Box	IP-65
Cable Entries	IP-65

TRANSMITTER WITH INTEGRAL DISPLAY

Media Conductivity	5 - 20 mS/cm
Signal Output	4 - 20 mADC Isolated
Display	16 x 2 LCD (Optional)
Flow Velocity	0.1m/S to 10m/S
Accuracy	+/-2% of Full Scale
Mains Power Supply	230 VAC/110V AC,50Hz

ERROR GRAPH



FLOW RATE CHART : @ V=1m/S

Dia. (mm)	M^3 /hr	MLD	Cu.Ft./Sec	Dia. (mm)	M^3 /hr	MLD	Cu.Ft./Sec
200	113.10	2714	1109	800	1809.56	43429	17751
250	176.71	4241	1734	900	2290.22	54965	22466
300	254.47	6107	2946	1000	2827.43	67858	27736
350	346.36	8313	3398	1200	4071.50	97716	39940
400	452.39	10857	4438	1400	5541.76	133002	54363
500	706.86	16965	6934	1600	7238.22	173717	71004
600	1017.88	14429	9985	1800	9160.88	219861	89865
700	1385.44	33250	13251	2000	11309.72	271433	110944

Due to continuous, product revisions, design, specifications and Model Numbers are subjected to change without notice

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