

# HARIS

Intelligent measurements

FLOW MEASUREMENT



Flow Transmitter



Flow Sensor



Computerized Data Logging



GPRS connectivity



ILW Server/ FLH232

**FOR  
CONDUCTIVE FLUIDS**

## Electromagnetic Flowmeters

# FMF Series Electromagnetic Flowmeters

## Applications

- Water Treatment
- Pump Testing
- Paper & Pulp
- Effluent Treatment Plants
- Waste Water & Sewerage
- Food & Dairy Processing
- Chemical Process Plants

## Features

- Rate Indicator/Totalizer Functions
- Batch Function
- Latest Pulsed DC Excitation
- Linear & Accurate
- Separate version
- Computerized data logging
- Easy Maintenance

HARIS Flow measurement system, takes care of all your flow measurement and monitoring needs with maximum efficiency. The system comprises of a magnetic flow tube and an electronic flow converter

Specially designed flow coils, generate a magnetic field in the flow tube. As the conductive fluid moves in this field, voltage proportional to the velocity of fluid is generated in the electrodes. This voltage is received by the flow converter, and digital signal processing is done before the flow value is displayed in the illuminated alphanumeric LCD. The flowmeter uses advanced digital technology with intelligent software systems combined with precision engineering ensuring accurate and reliable flow measurement.

Various communication options allows you to monitor, store, analyze your consumption at a central point, on the hub, computer, web, mobile devices like cell phone, PDA etc

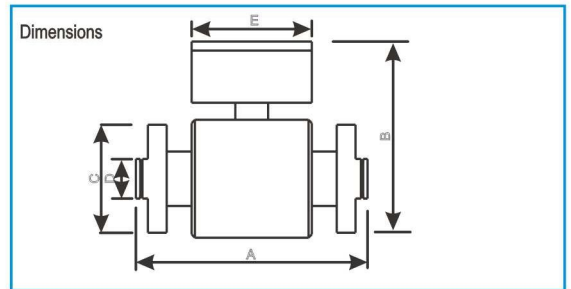
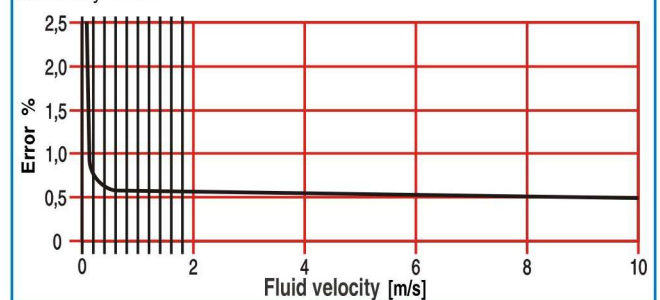
Pipe Size		Max Flow	Nominal Flow	Min Flow	Creep (Cut-off)
		10 m/s	5 m/s	0.3 m/s	0.04m/s
Inch	Mm	Lps		Lps	Lps
1	25	5.09	2.50	0.15	0.016
1 ¼	32	8.00	4.0	0.25	0.03
1 ½	40	12.00	6.0	0.41	0.05
2	50	19.80	10.0	0.58	0.08
2 ½	65	33.18	16.0	1.00	0.13
3	80	43.61	22.0	1.50	0.20
4	100	75.10	38.0	2.41	0.33
5	125	125.0	63.0	3.66	0.50
6	150	170.43	85.0	5.50	0.69
8	200	295.11	147.0	9.70	1.38
10	250	465.18	232.0	15.20	2.08
12	300	667.18	333.0	22.0	2.77
14	350	798.18	399.0	23.95	3.20
16	400	1166	583	38.0	5.55
18	450	1500	750	50.0	7.0

## Specifications

Accuracy	: 0.5%
Operating Range	: 0.3 - 10m/s
Flange Connection	: Ansi B 16.5
Lining	: PTFE
Min Conductivity	: 10 uS/cm
Flange Material	: Carbon Steel
Coil Housing	: Carbon Steel
Electrodes	: SS316L / Hastelloy-c *
Measuring Tube	: SS 304
Meter Enclosure	: Cast Aluminum
Empty Pipe Detection	: Yes
Outputs *	: Isolated 4-20mA, pulse
Communication	: RS-232
Power Supply	: 220V AC 50 Hz
	: 110V AC 60 Hz *

\*:Optional

## Accuracy Chart



Line size	Flow tube Length *	Flow tube Height	Flange Diameter	Liner Face Diameter	Bolt P.Circle Diameter	Bolt Hole Diameter	Size/ No of Bolts
Inch	mm	mm	mm	mm	mm	mm	mm
½	15	200	170	89	35	60.3	16 12 4
1	25	200	190	108	51	79.4	16 12 4
1 ½	40	200	208	127	73	98.4	16 12 4
2	50	200	233	152	92	120.6	19 16 4
2 ½	65	200	260	177	105	139.7	19 16 4
3	80	200	272	191	127	152.4	19 16 4
4	100	250	300	218	157	177.8	19 16 8
6	150	300	360	279	216	241.3	22 19 8
8	200	350	418	342	270	298.4	22 19 8
10	250	381	482	406	324	362.0	25 19 12
12	300	457	558	482	381	431.8	25 19 12
14	350	533	610	534	413	476.2	29 19 12

Thickness of Lining + Grounding Rings not included

**HARIS**

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