

## Electromagnetic Flow Measuring System Model: MDMF100

### Applications

- Acid, alkalis
- Paints
- Pastes
- Water, wastewater etc

### Special features

- Flow measurement up to 91562 m<sup>3</sup>/h
- Process pressures up to 160bar
- Fluid temperature up to 150°C
- Communication HART, PROFIBUS DP/PA, FOUNDATION Fieldbus, MODBUS RS485
- Electrode materials, 316 L, Hastelloy C, Hastelloy B, Titanium, Tantalum

### Description

- **Accuracy class** 0.5% - 1% or 2% of rate
- **Medium conductivity**  $\geq 5 \mu\text{S/cm}$
- **Flow velocity range** 0.3 - 10 m/s (1 - 40ft/s), positive or negative flow
- **Flow unite** liter, m<sup>3</sup>, metric Ton or USG per second, minute or hour (the user must specify the required flow unit while ordering)
- **Ambient Temperature** Sensor: -40 ~ 80°C, Converter: -15 ~ 50°C
- **Electrode materials** 316L, Hastelloy C, Hastelloy B, Ti, Ta, Pt/Iridium alloy, 304 Stainless steel, painting tungsten carbide
- **Nominal diameter** DN 4 to DN 3000
- **Communication** Rs485 (Modbus protocol), HART, PROFIBUS DP/PA, FOUNDATION Fieldbus, MODBUS Rs485
- **Output signal** 4 - 20 mA, Pulse, 2 alarm (option)
- **Frequency output** 1...5000 Hz, 36 VDC max. & 250 mA max.
- **Pulse Output Eq. Wt.** 0.001~1.000 m<sup>3</sup>/p, 0.001~1.000 l/p, 0.001~1.000 US gal/p, 0.001~1.000 Ton/p
- **Pulse Output** 100 p/s max., 36 VDC & 250 mA max.
- **Pulse Output Width** Can be set by the user
- **Alarm Outputs** High & Low limits, Transistor output, maximum 250 mA @ 36 VDC
- **Load resistance** 4 - 20 mA, 0 - 750Ω
- **LCD display** Instantaneous flow, Flow velocity, Percentage, Empty pipe ratio, Forward and reverse accumulation, Alarm display



### Pressure Class Selection

Code	Pressure Class	Code	Pressure Class	Code	Pressure Class
P2	0.25 MPa	P8	1.6 MPa	P14	6.3 MPa
P4	0.6 MPa	P10	2.5 MPa	P16	10 MPa
P6	1.0 MPa	P12	4.0 MPa	P18	16 MPa

## MDMF 100 Series

Designed from 1/8" to 118" in size with a flow velocity of 0.3 to 12 m/sec (1 to 40 ft/sec), these meters are factory-configured and calibrated according to the international standards to provide the user with assurance of both quality and performance of the meter. A calibration certificate is included with each flowmeter shipped to the users. An advantage of MDMF100 Series is that, in most installation, it only needs a minimum of 3 pipe diameters of run upstream and 2 diameters downstream to operate (see the instruction manual or inquire for exceptions).

## Diameter selection

Tube Diameter (mm)	Nominal Size (inch)	Rated Pressure (MPa)	Minimum / Maximum Flow (m <sup>3</sup> /h)		Tube Diameter (mm)	Nominal Size (inch)	Rated Pressure (MPa)	Minimum / Maximum Flow (m <sup>3</sup> /h)	
4	1/8"	4.0	0.013	0.54	400	16"	1.0	136	5430
6	1/4"	4.0	0.031	1.22	450	18"	1.0	172	6870
10	3/8"	4.0	0.085	3.39	500	20"	1.0	212	8480
15	1/2"	4.0	0.19	7.63	600	24"	1.0	305	12200
20	3/4"	4.0	0.34	13.6	700	28"	1.0	416	16600
25	1"	4.0	0.53	21.2	800	32"	1.0	543	21700
32	1 1/4"	4.0	0.87	34.7	900	36"	1.0	663	26500
40	1 1/2"	4.0	1.36	54.3	1000	40"	1.0	850	33900
50	2"	4.0	2.12	84.8	1200	48"	0.6	1220	48800
65	2 1/2"	1.6	3.60	143	1400	56"	0.6	1660	66500
80	3"	1.6	5.43	217	1600	64"	0.6	2170	86800
100	4"	1.6	8.50	339	1800	72"	0.6	2750	110000
125	5"	1.6	13.3	530	2000	80"	0.6	3400	135000
150	6"	1.6	19.1	763	2200	88"	0.25	4100	164000
200	8"	1.0	34.0	1360	2400	96"	0.25	4900	195000
250	10"	1.0	53.0	2120	2600	102"	0.25	5740	229000
300	12"	1.0	76.4	3050	2800	110"	0.25	6650	266000
350	14"	1.0	92.4	3700	3000	118"	0.25	7630	305000

When using PTFE or F46 lining in measuring flow of negative pressure medium, an appropriate PTFE or PFA lining suitable for negative pressure should be ordered.

## Liner Selection

Material of Liner	Max Fluid Temperature		
	Integral	Remote	Remote Option
Teflon (PTFE)	70 °C	100 °C	150 °C
FEP(F46)	70 °C	100 °C	150 °C
Hard Rubber	70 °C	80 °C	120 °C
Polyurethane	90 °C	100 °C	120 °C
FS	70 °C	80 °C	-



**MDMF100 Electromagnetic Flow Meter**

ORDERING CODE	Example:	MDMF 100	25	F	W	F	B	L	A	U	N	D	I	J	N	NOT1
Nominal Diameter please see the diameter selection table																
Please specify			25													
Process Connection																
F - Flange				F												
S - Sanitary																
W - Wafer																
O - Other																
Converter - Indicator																
L - Local indication																
W - Wall - Mounting box converter - Indicator					W											
Lining Material																
H - Hard rubber (see the liner selection table)																
P - Polyurethane (see the liner selection table)																
T - PTFE (see the liner selection table)																
F - FEP / F46 (see the liner selection table )						F										
Body Material																
B1 - Carbon steel																
B2 - 304 Stainless steel																
B3 - 316 Stainless steel							B									
Sensor Electrode																
L - 316L Stainless steel																
H - Hastelloy C																
B - Hastelloy B																
T - Titanium																
L - Tantalum								L								
M - Monel																
P - Pt / Iridium alloy																
O - Other																
Accuracy																
A - 0.5%									A							
B - 1%																
C - 2%																
Out put																
N - Not required																
U - 4 ~ 20 mA. Frequency / pulse										U						
M - Modbus RS485																
Digital Communication																
N - No Communication											N					
M - Modbus RS485																
H - Hart																
F - Foundation fieldbus																
P - Profibus DP/PA																
G - GPRS																
Power Supply																
A - 85 ~ 250 VAC																
D - 20 ~ 36 VDC												D				
B - Battery power																
Z - Dual power ( battery and 24 VDC )																
Protection Grade																
I - IP 65															I	
P - IP 68																
E - IP 68 Explosion - proof																
Earth Ring																
N - Not required																
J - General earth ring														J		
G - Grounding electrode																
Infrared Remote Control																
N - Not required																N
R - Required																
Flange or Tri - Clamp Size, Type and Pressure Class (Rating) Please see the pressure selection table																

Note1 - Please specify  
 Note1: Size 2"Class150RF





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