not for un-authorise commercial use

DIFFERENTIAL PRESSURE TYPE FLOWMETERS/CONTROLLERS

(Insertion type/inline type) **MEMF- SERIES**

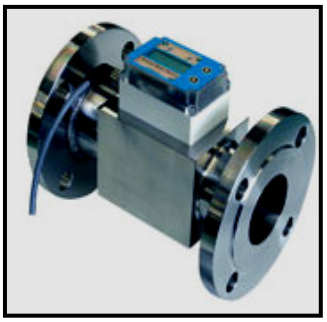
MDPFM series of flowmeter/controllers are available in more than 100 different modes, virtually offering solutions to flow measurement/control for any liquid (preferably electrically conductive/even ultra low conductive) in varied flow range i.e. 1.0 micro gram per minutes to 100 kilograms per minutes. These flow meters are offered in material like SS-316 (ceramic/Teflon coating), etc to make up with corrosion, thermodynamical and other pertinent physical parameters of fluid measurement. On account of above, these flow meters are first choice for any , agro, foods, biomedical, petrochemical, automobile, organic/inorganic chemical, milk plant, sugar, textiles, beverages, water management/treatment, academic and defense etc.

Operating Principle:

These flowmeters is operates on Bernoulli principle i.e. if an annular restriction is placed in a pipeline, the velocity of the fluid through the restriction is increased. The increase in velocity at restriction causes the static pressure to decrease at this section, and a pressure difference is created across the element. The pressure difference is related to the rate of fluid flowing through the pipe. This differential pressure measured by D.P.transducer which after mathematical manipulation gives correct flow rate. The correct selection and installation of the DP transducer plays an important part in determining the accuracy of the flow rate measurement. Over 40% of all liquid, gas, and steam measurements made in industry are still accomplished using common types of differential pressure flowmeter, that is, the orifice plate, Venturi tube, and nozzle. . In addition, this type of differential pressure flowmeter is simple, has no moving parts, and is therefore reliable. The main disadvantages of these devices are their limited ranges (typically 3:1), the permanent pressure drop they produce in the pipeline (which can results in higher pumping costs), and their sensitivity to installation effects (which can be minimized using straight length of pipe before and after the flowmeter). The combined advantages of this type of flowmeter are still quite hard to beat, and although it has limitations, these have been well investigated and can be compensated for in most circumstances. Unless very high accuracy is required, or unless the application makes a nonintrusive device essential, the differnetial pressure flowmeter should be considered. Numerically flow rate is given as under…….

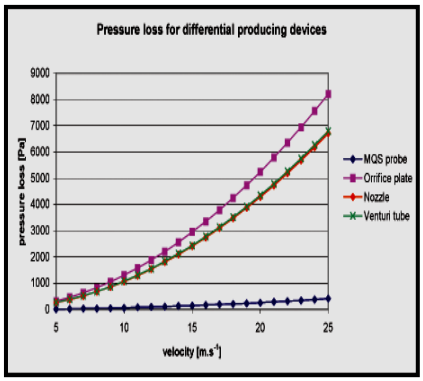
The average pipe velocity v may be written as: $v = k \cdot 2 \cdot (\Delta p/\ p)^{1/2}$

Then the volumetric flow rate is: $Q = S \cdot v = S \cdot k \cdot 2 \cdot (\Delta p/\ p)^{1/2}$



MEMF- 5001

MEMF-05002



MEMF-010

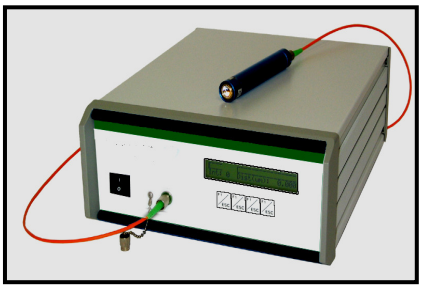
ELECTRICAL/MECHANICAL SPECIFICATIONs OF DIFFERENTIAL PRESSURE FLOW METER **FLOW RANGE <100,000.0 LPM**

model	Flow range (LPM)	Size(m.m.	Accuracy Repeatability	Flow tube-Liner	O.D.P.	leak rate	Output signal
MDPFM-0012	0 01000.0	1.0	99.5 100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0
MDPFM-0022	005000.0	1.5	99.5 100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0
MDPFM-0102	010000.0	2.0	99.5 100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0
MDPFM-0202	020000.0	3.0	99.5 100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0
MDPFM-0502	050,000.0	4.0	99.5 100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0
MDPFM-1002	100,000.0	6.0	99.5 100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0
MDPFM-2002	200.000.0	8.0	99.5 100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0
MDPFM-5002	500.000.0	10.0	99.5 100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0

First three numeral after product code indicaye flow rangex1000 L.P.M., last digit indicate inline-01/insertion type-02.

DIFFERENTIAL PRESSURE FLOWMETER SECIFICATIONs:

Operating voltage	220 volts/28 volts D.C.
Excitation frequency	2.5/7.5/15.0/25.0 Hz
Accuracy	95.5% of set point
Repeatability	100 percent
Response time	0.5 –1.1 seconds
Interface Signal	0.0-12.0 volts D.C.(proportional to flow range
Flow range	10.0 mili-LPM – 100.0 kilo LPM
Step down ratio	1:8(1:50)
Flow tube material	SS-316/Brass/DERELIN with option of flange coupling
Control option	Flow rate/totalization control against set point
	Multi flow synchronized control (interactively)
Display	4½ & 5½ digit red glow LED/LCD display
Controller size	5X5X8/8X8X12 INCHES/ Interface:RS-232



FLOW INDICATOR (MEMF- 5001)

MOTORON SEMICONDUCTORS CORPORATION

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DIFFERENTIAL PRESSURE FLOWMETERS/CONTROLLERS

(Insertion type/inline type) MEMF- SERIES

ELECTRICAL/MECHANICAL SPECIFICATIONs OF DIFFERENTIAL PRESSURE FLOW METER FLOW RANGE <100,000.0 LPM

Model	Flow range (LPM)	Size(m.m.	Accuracy Repeatability		Flow tube-Liner	O.D.P.	leak rate	Output signal
MDPFM-0012	1000.0	12.0	99.5	100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0
MDPFM-0022	0800.0	10.0	99.5	100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0
MDPFM-0102	0500.0	08.0	99.5	100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0
MDPFM-0202	0250.0	06.0	99.5	100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0
MDPFM-0502	080.0	04.0	99.5	100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0
MDPFM-1002	040.0	03.0	99.5	100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0
MDPFM-2002	020.0	02.0	99.5	100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0
MDPFM-5002	0.005	01.0	99.5	100	Ceramic/PP	2000	$<1.8x10^{-8}$	0.0-5.0/12.0

First three numeral after product code indicaye flow rangex1000 L.P.M., last digit indicate inline-01/insertion type-02.

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