

# DIGITAL TURBINE FLOWMETERS AND CONTROLLERS

MTFM-Series

## Introduction:

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

## Operating Principle:

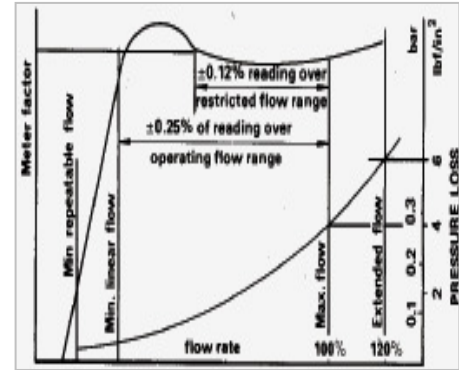
Fluid passing through the turbine- flowmeter imparts angular momentum to the vanes of turbine as a result of which turbine rotates at angular speed proportional to momentum imparted by the fluid and accordingly generates pulses in electromagnetic transducer whose pulse rate is proportional to volumetric flow rate of fluid over a certain flow range as indicated below.



MTFM- 500



MTFM-050



Performance of turbine flowmeter

### ELECTRICAL/MECHANICAL SPECIFICATIONS OF MASS FLOW METER

### MTFM SERIES FLOW RANGE <100,000.0 LPH

model	Flow range (LPH)	Size(inch)	Accuracy	Repeatability	Flow tube-Liner	O.D.P.	leak rate	Output signal
MTFM-0001	1000.0	1/2	99.5	100	Ceramic/PP	2000	<1.8x10	0.0
MTFM-0002	2000.0	3/4	99.5	100	Ceramic/PP	2000	<1.8x10	0.0
MTFM-0004	4800.0	1.0	99.5	100	Ceramic/PP	2000	<1.8x10	0.0
MTFM-0007	7000.0	1.5	99.5	100	Ceramic/PP	2000	<1.8x10	0.0
MTFM-0010	10,000.0	2.0	99.5	100	Ceramic/PP	2000	<1.8x10	0.0
MTFM-0020	20,000.0	3.0	99.5	100	Ceramic/PP	2000	<1.8x10	0.0
MTFM-0050	50,000.0	4.0	99.5	100	Ceramic/PP	2000	<1.8x10	0.0
MTFM-0100	100,000.0	6.0	99.5	100	Ceramic/PP	2000	<1.8x10	0.0
MTFM-0200	200,000.0	8.0	99.5	100	Ceramic/PP	2000	<1.8x10	0.0
MTFM-0500	500,000.0	10.0	99.5	100	Ceramic/PP	2000	<1.8x10	0.0
MTFM-0800	800,000.0	12.0	99.5	100	Ceramic/PP	2000	<1.8x10	0.0
MTFM-1000	1000,000.0	14.0	99.5	100	Ceramic/PP	2000	<1.8x10	0.0

### ELECTRICAL/MECHANICAL SPECIFICATIONS OF MASS FLOW METER

### MTFM SERIES FLOW RANGE <20,000 LPMX10<sup>-4</sup>

model	Flow range (LPM)X10 <sup>-4</sup>	Size(inch)	Accuracy	Repeatability	Flow tube-Liner	O.D.P.	leak rate	Output signal
MTFM-00013	1000.0	1/8	99.5	100	Ceramic/PP	2000	<1.8x10	0.0-12.0/5.0
MTFM-00023	2000.0	1/8	99.5	100	Ceramic/PP	2000	<1.8x10	0.0-12.0/5.0
MTFM-00043	4800.0	1/8	99.5	100	Ceramic/PP	2000	<1.8x10	0.0-12.0/5.0
MTFM-00073	7000.0	1/4	99.5	100	Ceramic/PP	2000	<1.8x10	0.0-12.0/5.0
MTFM-00103	10,000.0	1/4	99.5	100	Ceramic/PP	2000	<1.8x10	0.0-12.0/5.0
MTFM-00203	20,000.0	1/4	99.5	100	Ceramic/PP	2000	<1.8x10	0.0-12.0/5.0

### DIGITAL TURBINE FLOW CONTROLLER SPECIFICATION:

Operating voltage: 220 volt A.C. (50Hz)/ D.C.  
 Measurement range (full scale): as above in different model.  
 Pipe line size/material: as above/SS-304/MS/POLYMER  
 Input capacitance: 10 nF  
 Response time: 10,000 sample/sec  
 Burden: less than 100 count of full scale  
 Accuracy: 0.5/1.0/2.0 % reading  
 Repeatability: 100 of reading  
 Resolution: 1/10 of least significant bit  
 Linearity adjustment: upto 100 count  
 Input impedance: ultra low(<1000 nano volt burden),  
 Filtering: low pass  
 Offset: variable upto 10,000 count (manual/auto)  
 CMMR: >80 db at 50-60 Hz  
 Isolation: > 100 giga ohm  
 Connector: BNC-9 pinx2 and BNC-25 pinx2  
 Size: 5X8X8 inches/rack mounted or portable  
 Interface: RS-232  
 Option: Multi flow synchronized control (interactively)  
 Display: 3 1/2 & 4 1/2 digit red glow LED/LCD display



**MOTORON SEMICONDUCTORS CORPORATION**

11, Shri nagar colony, shakti nagar extension, DELHI-110052. Tel:011-23655454/23655455 fax:011-23554661  
 e.mail: motorons@hotmail.com