

The Need For Every  
Process Industry



# MASS FLOW CONTROLLER (MFM)

**MODEL: SC / R - 1300**

**FLOW**

# MASS FLOW CONTROLLER (MFM)

MODEL: SC / R - 1300



## FEATURES

- Dual functionality Mass flow rate indication / 8digit flow totalizing.
- Field settable flow totalizing rate.
- Optional - Retransmission output corresponding to mass flow.
- Optional - Serial communication port with MODBUS protocol.
- User configurable ranges for all three mA inputs viz. Differential Pressure, Temperature, Pressure and Mass

## APPLICATIONS

Model **MFM 393** is micro-controller based arithmetical computation unit generally used in mass flow applications. The unit accepts three 4-20mA inputs at a time. Computed output is equal to,

$$\sqrt{\frac{(\text{Input1}) \times (\text{Input2})}{(\text{Input3})}}$$

where,

Input 1 is Differential Pressure from D.P.Tx (Non Square Rooted)

Input 2 is Line pressure from Pressure Tx

Input 3 is Line Temperature from Temperature Tx

Facility to program Gain & Bias to each input and for Calculated Output.

**MFM 393** displays instantaneous Mass Flow rate on 4 digit LED Display. Flow Rate and Totaliser range can be configured as required even on site. Totaliser is a 8 digit LED Display. Totaliser can be reset manually from password protected PROG menu.

Power Supply for external transmitter (24VDC@100mA) is a standard feature. It eliminates need of separate power supply to power the transmitter.

## OPTIONAL

- **MFM 393** provides linear 4-20mA retransmission signal corresponding to Calculated Mass Flow Rate for other panel mounted instruments like recorders, controllers etc.
- Serial connectivity on RS485 port with MODBUS RTU protocol

## ENGINEERING SPECIFICATION

INPUT	:	4-20mA DC LINEAR-3
DISPLAY	:	7 SEGMENT LED, 5-DIGIT PROCESS VALUE, 8-DIGIT TOTALISER
KEYBOARD	:	4 KEY TRACK-TILE KEYBOARD
RESOLUTION	:	4 & ½ DIGIT FOR FLOW RATE
ACCURACY	:	± 0.3% OF FS, ± 1 LSD (FLOW) & ± COUNT (TOTALISER)
TOTALISER	:	8 DIGIT TOTALISER FOR CALCULATED MASS FLOW
SCALING	:	FLOW RATE & TOTALISER, SPAN SCALABLE BY FRONT KEY PAD
DATA STORAGE	:	TOTALISER VALUE & SETTINGS STORED IN BATTERY BACKED RAM
LED INDICATIONS	:	LED INDICATIONS FOR SERIAL COMMUNICATION & INPUT SELECTION
EXCITATION	:	24 VDC, 100 MA EXCITATION SUPPLY FOR EXTERNAL FLOW TRANSMITTER
RE-TRANSMISSION (OPTIONAL)	:	4-20 mA RE-TRANSMISSION OUTPUT CORRESPONDS TO MASS FLOW RATE FOR EXTERNAL INDICATORS/RECORDERS OR PLC. MAXIMUM LOAD 500 Ω
SERIAL PORT (OPTIONAL)	:	RS485 PORT WITH MODBUS RTU PROTOCOL FOR ON-LINE COMMUNICATION
SUPPLY	:	230 VAC OR 110 VAC, ±10 % SINGLE PHASE, 50Hz. FACTORY SET
CONNECTIONS	:	ON SCREW TYPE CONNECTORS
CABINET	:	ON SCREW TYPE CONNECTORS. BEZEL:96X96mm (H X W) DEPTH:150mm CUTOOUT : 92X92mm (H X W)



**Head Office**

303, SIDDHARTH TOWER, G.P. PAI ROAD, KOPRI, THANE (E) - 400603 MAHARASHTRA, INDIA  
 Phone : +91 22 2532 8223  
 +91 22 2532 8224  
 Email : info@spinkcontrolsindia.com

**Plant 1**

GALA No. F-4 A WING, UDYOG BHAVAN-2 ADDITIONAL AMBERNATH, INDUSTRIAL AREA, ANAND NAGAR MIDC AMBERNATH, THANE 421501  
 Phone : +91 9594991196  
 Email : rupa.thakkar@spinkcontrols.com

**Plant 2**

PLOT No.: MS 114/115, AMBERNATH INDUSTRIAL AREA, CHIKHLOLI MIDC, AMBERNATH (W) THANE 421501  
 Phone : +91 7400159593  
 Email : avanti.rangdal@spinkcontrols.com

**Our Channel Partner**

**CLASSIC FLOW CONTROLS PVT. LTD**  
 OFFICE NO. 302, 3RD FLOOR, A WING HIGHWAY HEIGHTS, SURVEY NO.112/1, MUMBAI-BENGALURU HIGHWAY, WARJE, PUNE - 411058  
 Phone : +91 29709906  
 Website : www.classicflowcontrols.net

**INNOVATIVE INDUSTRIAL SOLUTIONS**  
 MATOSHREE ARCADE SECOND FLOOR GUT.NO.139 RW-02, EKDANT NAGAR, NEAR SHIVDATTAPETROL PUMP GANDHELI BEED BY PASS, CHHATRAPATI SAMBHAJI NAGAR - 431007.  
 Phone : +91 08237144441  
 Email : innovativeservices444@gmail.com iisbusinessdevelopment444@gmail.com

**Our Global Channel Partner**

**STATIC ENGINEERING EQUIPMENTS PVT. LTD.**  
 258, 3 FLOOR, RASHTRAKUTA, EMPIRE INDUSTRIALCENTRUM, AMBERNATH INDUSTRIAL AREA, MIDC, CHIKHLOLI, AMBERNATH (W) - 421505, DIST - THANE, MAHARASHTRA, INDIA  
 Phone : +91 9960517361  
 Email : marketing@staticengineering.com  
 Website : www.staticengineering.com

