

SMARTFLOW®

TRACER[®] VM BASE FLOWMETERS

General Description

The Tracer_{VM} Base Flowmeter is a non-display sensor that provides a 0.5 to 3.5V output for process flow rate (0.5 to 4.1V for 1-18 LPM model) and a 0.5 to 4.1V output for process temperature.

Vortex sensor technology is highly accurate and repeatable without moving parts. Flow reading is direction specific. Refer to the arrow on the body for correct installation.

Connection to the process is made using standard pipe threads in NPT or BSP from 3/8" through 1-1/2". Flow body materials are corrosion-resistant brass, nylon, anodized aluminum and stainless steel. Options are based on thread size, see page 2 for details.

The flowmeter is designed for use in industrial water applications such as injection mold cooling or filter and pump monitoring.

Benefits

- No moving parts for reliable operation
- Flow and Temperature Sensors in one unit for compact installation
- Quick temperature response from direct media contact
- Economical and versatile construction with corrosion-resistant materials

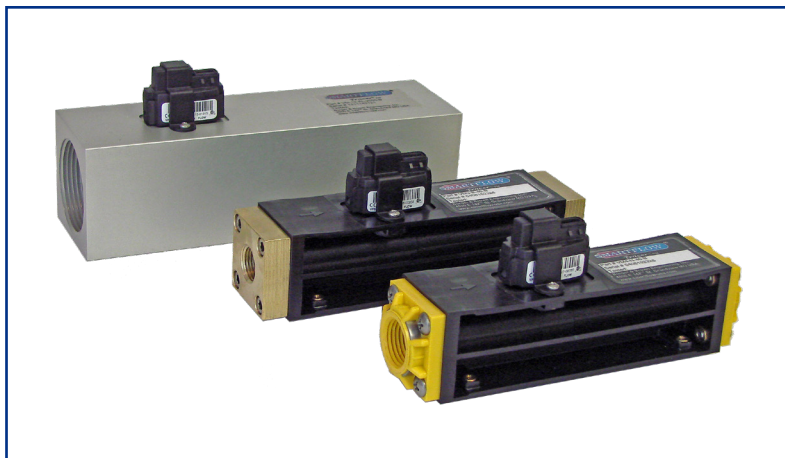
Specifications

	Flow Range	Size
	1 to 18 LPM (.3 to 4.8 GPM)	3/8" or 1/2"
	2 to 40 LPM (.5 to 10.6 GPM)	3/8" or 1/2"
	5 to 100 LPM (1.3 to 26.4 GPM)	3/4" or 1"
	10 to 200 LPM (2.6 to 52.8 GPM)	1" or 1-1/2"

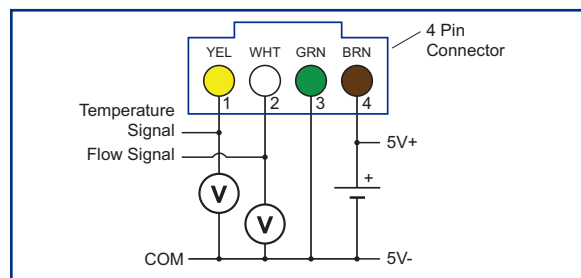
Flow Accuracy±1.5% of Full Scale
 Temperature Range..... 0°C to 120°C (32°F to 248°F)
 Temperature Accuracy±0.5°C
 Operating Pressure 10.3 bar max. (150 psi max.)

Power

Power Required.....5VDC ±5% (not included)
 Output Signals.....Ratiometric
 Flow Signal.....0.5 - 3.5V (0.5 - 4.1V for 1-18 LPM)
 0.35V output at zero flow
 Temperature Signal 0.5 - 4.1V
 Power Consumption <50mW
 Load Impedance..... >10kΩ



Electrical Connections



Pin	Description	Color
1	Temperature Signal*	Yellow
2	Flow Signal*	White
3	Common (0V)	Green
4	Power Supply (+5VDC)	Brown

*relative to Pin 3

Materials

Sensing Element.. Silicone-Based MEMS Sensor Element
 Seal (sensor to housing) EPDM
 Insert PPA 40 GF
 3/8" & 1/2" Body Size..... Glass-Filled Nylon Flow Body with Brass or Nylon End Caps
 3/4" thru 1-1/2" Body Size..... Anodized Aluminum or Stainless Steel Flow Body
 Cable..... 2.9M (9.5ft) 4-conductor for power and output, ends stripped

Power Supply Requirements

- 5VDC
- Separated from hazardous live circuitry by double or reinforced insulation
- Suggested current limit: 50-100mA

Design and specifications are subject to change without notice.



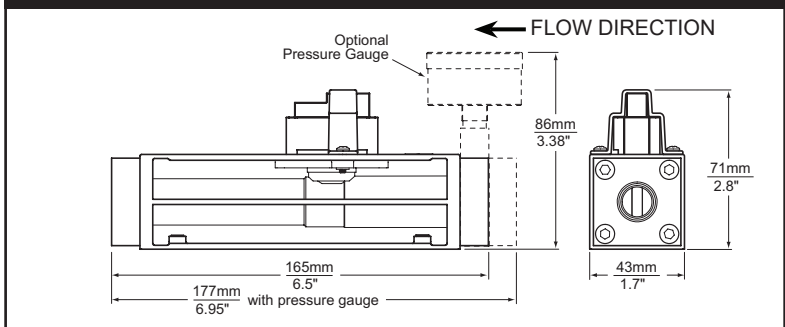
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SMARTFLOW[®] Tracer[®] VM Base Flowmeters

Model Number

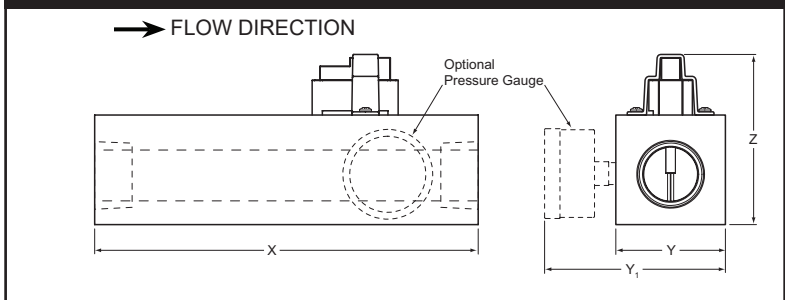
VM 3 - B - 18H - B - P1Q						
Body Size				Flow Range	Options	
3/8"NPT	3	B or N	18H	1 to 18 LPM (.3 to 4.8 GPM)	P1 30 psi Pressure Gauge P2 60 psi Pressure Gauge P3 100 psi Pressure Gauge P4 160 psi Pressure Gauge (Pressure gauges not available with AL body material) Q Delta-Q [®] Precision Flow Regulator (use with VM3 or VM4 only)	
3/8"BSPP	3B					
1/2"NPT	4					
1/2"BSPP	4B					
3/4"NPT	6	AL or SS	100H	5 to 100 LPM (1.3 to 26.4 GPM)		
3/4"BSPP	6B					
1"NPT	8	AL or SS	100H	5 to 100 LPM		
1"BSPP	8B		200H	10 to 200 LPM		
1-1/2"NPT	12	AL or SS	200H	10 to 200 LPM		
1-1/2"BSPP	12B			200H		(2.6 to 52.8 GPM)
Body Material						
Glass-Filled Nylon with Brass End Caps		B				
Nylon End Caps (3/8" and 1/2" only)		N				
Anodized Aluminum Body		AL				
Stainless Steel Body (3/4" and larger only)		SS				

3/8" or 1/2" Body Sizes (Nylon or Brass End Caps)



3/4" thru 1-1/2" Body Sizes

Aluminum or Stainless Steel
(pressure gauge not available with AL body)



Dimensions (mm/inches)

Body Size	X	Y	Y ₁	Z
3/4", 5 to 100 LPM	178/7.0	45.7/1.8	77/3.1	74/2.9
1", 5 to 100 LPM	178/7.0	45.7/1.8	77/3.1	74/2.9
1", 10 to 200 LPM	178/7.0	51/2.0	84/3.3	79/3.1
1-1/2", 10 to 200 LPM	198/7.8	58/2.3	90/3.6	86/3.4

When using with RJG eDart IA-2 module

Add line item:

Part no. CONN-LBG-4-F

Description: 4-pin Connector added to cable

Directives

Flow sensors are in conformity with these Council directives on the approximation of the laws of the EC member states:

- Low Voltage Directive (2006/95/ED)
Standards used: EN 61010-1:2001
- EMC Directive (2004/108/EC)
Standards used: EN 61326-1:2006 and 61326-2-3:2006

Smartflow flow sensors fall under Article 3, 3 of PED Directive 97/23/EEC and are not required to be CE-marked according to this directive.

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