

# SMARTFLOW® TRACER®<sub>VM</sub>



## Base Flowmeters

**This is not your standard flowmeter! The TRACER<sub>VM</sub> raises the bar by reporting Temperature and Flow rates electronically to aid in cooling and process efficiency.**

The Tracer<sub>VM</sub> Flowmeter is a non-display meter that reports flow rates and temperature via voltage signals for connection to data acquisition system or Bluetooth Interface. The TRACER<sub>VM</sub> is designed for use in industrial water applications such as injection mold cooling and pump monitoring. The flowmeter uses Vortex sensor technology that is highly accurate and repeatable without any moving parts. Connection to the process is made using standard pipe threads in NPT or BSP from 3/8" through 1-1/2". The flowmeter body materials are corrosion-resistant and can be ordered in brass, nylon, anodized aluminum or stainless steel. These options are based on inlet/thread size, see next page for the complete details.



### 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 Ranges and Connection Sizes

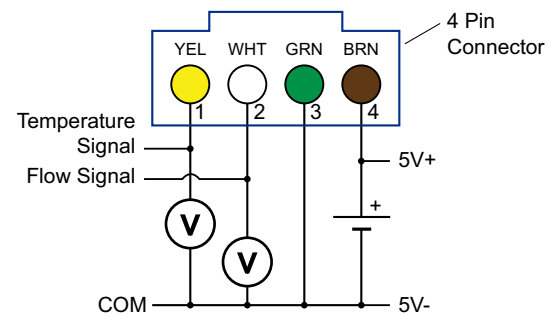
<b>1 to 15 LPM</b>	(.3 to 4 GPM)	3/8" or 1/2"
<b>2 to 40 LPM</b>	(.5 to 10.6 GPM)	3/8" or 1/2"
<b>5 to 100 LPM</b>	(1.3 to 26.4 GPM)	3/4" or 1"
<b>10 to 200 LPM</b>	(2.6 to 52.8 GPM)	1" or 1-1/2"

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 Supply..... 5 VDC +/-5% (external)  
 Output Signals ..... Ratiometric  
 Flow Signals.....0.5 to 3.5V (zero at .35V)  
 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  
 Seal (sensor to housing).....EPDM  
 Insert.....PPA 40 GF  
 3/8" & 1/2" Body Size ..... Glass Filled Nylon Flow Body  
 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

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



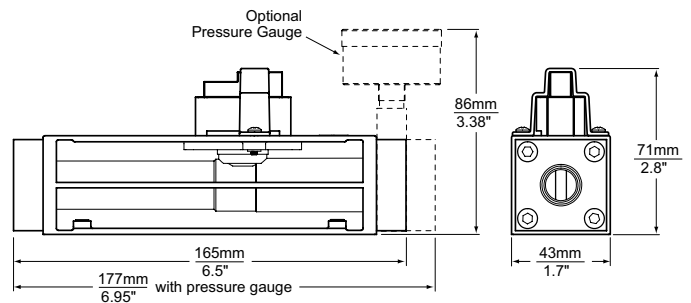
VM 3 - B - 15 - B - P1Q

Body Size			
3/8" NPT	3		
3/8" BSPP	3B	B or N	15H
1/2" NPT	4		40H
1/2" BSPP	4B		
3/4" NPT	6	AL or SS	100H
3/4" BSPP	6B		
1" NPT	8	AL or SS	100H
1" BSPP	8B		200H
1-1/2" NPT	12	AL or SS	200H
1-1/2" BSPP	12B		
<b>Body Material</b>			
Glass-Filled Nylon with Brass End Caps		B	
Nylon End Caps (3/8" and 1/2" only)		N	
Anodized Aluminum		AL	
Stainless Steel Body (3/4" and larger only)		SS	
<b>Flow Range</b>			
	1 to 15 LPM (.3 to 4 GPM)		15H
	2 to 40 LPM (.5 to 10.6 GPM)		40H
	5 to 100 LPM (1.3 to 26.4 GPM)		100H
	10 to 200 LPM (2.6 to 52.8 GPM)		200H

**Special Order Options**

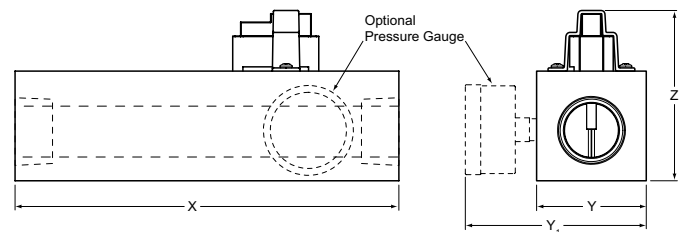
- P1 30 psi Pressure Gauge
- P2 60 psi Pressure Gauge
- P3 100 psi Pressure Gauge
- P4 160 psi Pressure Gauge  
(Pressure gauges not available with AL body material)
- Q Delta-Q® Precision Flow Regulator  
(use with VM3 or VM4 only)

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



**3/4" or 1-1/2" Body Sizes (Nylon or Brass End Caps)**

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



**Dimensions (mm/inches)**

Body Size	X	Y	Y <sub>1</sub>	Z
3/4", 5 to 100 LPM	178/7.0	45.7/1.8	77/3.1	74.2/2.9
1", 5 to 100 LPM	178/7.0	45.7/1.8	77/3.1	74.2/2.9
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

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

**When using with RJG eDart IA-2 module**

Add line item:

Part no. CONN-LBG-4-F

Description: 4-pin CConnector added to cable