

FEATURES

- Flow ranges from 0.010 – 26.40 GPM (0.038 – 100.0 LPM)
- Repeatability $\pm 0.5\%$
- Highly durable; resists most corrosive fluids
- Non-metal wetted parts
- Excellent bearing life
- Optional end fittings
- Open collector output
- Enhanced accuracy when combined with Flow Technology's linearizing electronic signal conditioners and indicators

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Optiflo™ Series

DESCRIPTION

▶ The Optiflo™ Series combines the precision of a turbine flowmeter with the economics of injection molding to produce a durable, corrosion-resistant Radel 5100 (polyphenylsulfone) design. The meter operates between 8 to 32 Vdc. Its low flow sensitivity and wide flow range, up to 26.4 GPM (100 LPM) meets the needs of leak detection and beverage dispensing while suitable for corrosive fluids such as ultra-pure water and various acidic chemicals.



OPERATION

▶ The rotor blades pass through a non-wetted infrared light source which activates the circuit to produce a frequency output proportional to the flow rate. The turbidity of the fluid must allow for infrared transmission. The low mass tangential rotor is suspended by a robust sapphire journal bearing. Because of the low friction bearing, the Optiflo™ Series has an excellent speed of response to changes in flow rates.

CALIBRATION

▶ Flow Technology offers NIST-traceable primary standard calibrations in a variety of fluids and viscosities to certify the performance of the Optiflo™ Series.

SPECIFICATIONS

	USABLE FLOWRANGE GPM (LPM)		APPROX K- FACTOR (P/Gal.)	LINEARITY % FS
#2	0.010 – 0.125	(0.038 – 0.470)	124905	1.5
#3	0.026 – 0.400	(0.10 – 1.50)	65560	1.0
#4	0.040 – 1.190	(0.15 – 4.50)	34822	1.0
#5	0.066 – 1.720	(0.25 – 6.50)	18925	1.0
#6	0.132 – 2.640	(0.50 – 10.0)	10220	1.0
#7	0.530 – 7.930	(2.0 – 30.0)	4542	1.0
#8	1.320 – 26.40	(5.0 – 100.0)	946	2.0

Black = English (US) Units Red = Metric (SI) Units

MECHANICAL SPECIFICATIONS

Repeatability	±0.5% of reading
Max Frequency	750 Hz
Pressure Drop	Less than 10 psi at maximum flow
Standard Materials of Construction	
Housing	Radel 5100 (polyphenylsulfone)
Retaining Cap	Radel 5100 (polyphenylsulfone)
Rotor	PVDF (Kynar)
Rotor Housing	Radel 5000 (polyphenylsulfone)
Shaft	Sapphire
Journal Bearing	Sapphire
O Rings	VITON
End Fittings	Acetal (Delrin®)
Maximum Pressure	10 BAR (145 psig)/Hosebarb is limited to clamp pressure

Delrin® is a registered trademark of DuPont.

ELECTRICAL SPECIFICATIONS

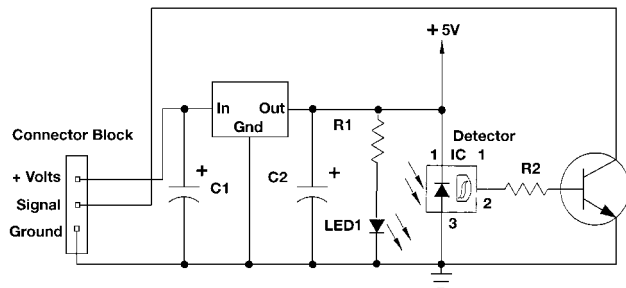
Power Supply Voltage	8 – 32 Vdc*
Output	Open Collector
Pull-Up Resistor	Nominal 33K ohms (collector current must be <1 mA)
Temperature	0° C to 70° C (32° F to 158° F)

Reverse Polarity Protected
3-Wire Terminal Board with Rubber Boot

*Power dissipation of voltage regulator must be limited to 0.3 watts. When powering the amplifier with more than 12 Vdc, use a load resistor to limit the power dissipation. The following formula can be used to select the load resistor:

$$R_L = \frac{V_{CC} - 9}{.02} \quad (V_{CC} = \text{Voltage Common Collector})$$

FLOWMETER CIRCUIT DIAGRAM



Specifications are for reference only and are subject to change without notice.

MODEL NUMBERING SYSTEM



Basic Model Number

Flow Range

- 2 = 0.010 – 0.125 GPM (0.038 – 0.470 LPM)
- 3 = 0.026 – 0.400 GPM (0.10 – 1.50 LPM)
- 4 = 0.040 – 1.190 GPM (0.15 – 4.50 LPM)
- 5 = 0.066 – 1.720 GPM (0.25 – 6.50 LPM)
- 6 = 0.132 – 2.640 GPM (0.50 – 10.0 LPM)
- 7 = 0.530 – 7.930 GPM (2.0 – 30.0 LPM)
- 8 = 1.320 – 26.40 GPM (5.0 – 100.0 LPM)

End Fittings

- A = AN
 - N = NPT
 - H = Hosebarb
- Other end fittings available upon request.

End Fitting Size

- 04 = 1/4"*
 - 08 = 1/2"
 - 12 = 3/4"
- *Not recommended for flow range 5, 6, 7 & 8.

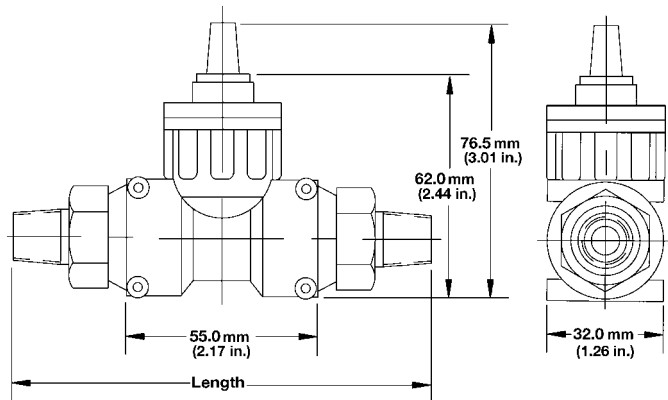
Calibration

- Note: W = water, S = solvent, B = oil blend
- 00 = None
 - KW, KS = 3PT K-CAL
 - KB = 3PT K-CAL
 - XW, XS = 10 PT
 - XB = 10PT
 - YW, YS = 20PT
 - YB = 20PT

Special Calibration

- Standard Calibration = No Designator Required
- U = Units other than GPM
- R = Range other than specified in 2 thru 8
- B = Both range & units non-standard

HOUSING DIMENSIONS



	Length		
	AN	NPT	Hosebarb
1/4"	113.67 mm (4.48")	113.67 mm (4.48")	91.82 mm (3.62")
1/2"	120.78 mm (4.76")	120.78 mm (4.76")	104.52 mm (4.12")
3/4"	129.92 mm (5.12")	126.37 mm (4.98")	117.22 mm (4.62")