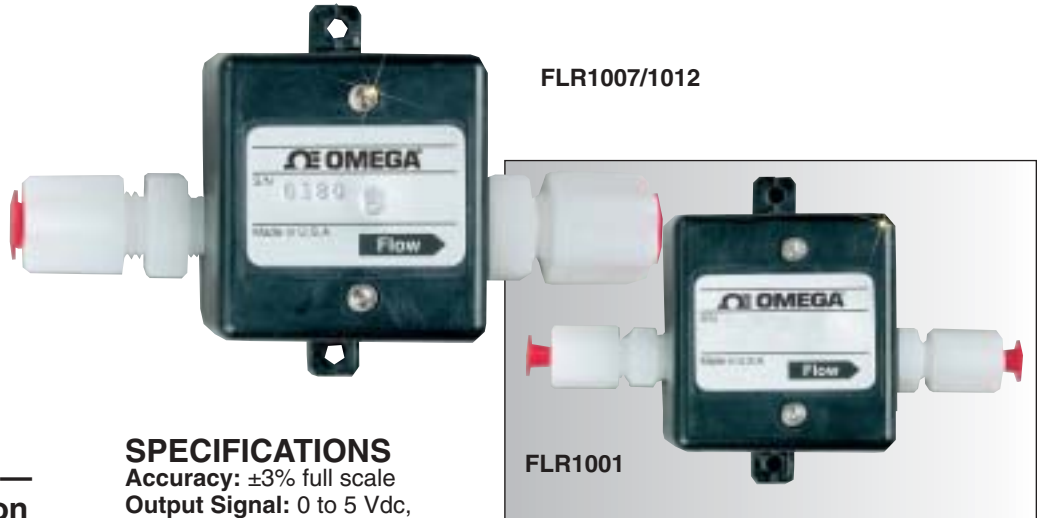


GAS/LIQUID FLOW SENSORS WITH 0 TO 5 VDC OUTPUT

FLR1000 Series

\$184

Basic Unit



- ✓ 0 to 5 Vdc Linear Output Signal
- ✓ Highly Repeatable — Excellent Resolution
- ✓ Very Stable
- ✓ No Zero Drift
- ✓ Power Input 12 Vdc
- ✓ Ranges from 20 to 100 ml/min, 1 to 5 L/min

FLR1000 Series flow sensors are capable of measuring extremely low flowrates from 20 ml/min to 5 liters/min. These sensors are suitable for a wide variety of industrial, commercial and laboratory flow applications. FLR1000 series flow sensors operate on 12 Vdc power and have been especially designed for incorporation into data acquisition systems that supply 12.5 Vdc to sensors and receive 0 to 5 Vdc linear signals from such sensors.

Because of the low cost of these flow sensors, it is anticipated that these units will replace conventional glass tube and ball flow meters in many applications where an electrical signal proportional to flowrate is considered desirable.

The FLR1000 Series uses a Pelton-type turbine wheel to determine the flowrate of the gas. Rotation rate of the turbine wheel is linear over a large dynamic range. The electro-optical system consists of a diode emitting energy in the infrared spectrum. Light energy is alternatively reflected and absorbed from "spokes" deposited upon the small turbine wheel. This reflected light energy is detected by means of a photo-diode. Thus, as the turbine wheel rotates in response to gas flowrate, electrical pulses are generated.

Processing circuitry provides a dc voltage output proportional to the flow rate. For example, output signal is 1.0 Vdc at 20% of rated flow, 2.5 Vdc at 50% of rated flow, 4.0 Vdc at 80% of rated flow and 5.0 Vdc at 100% of rated flow. Sensors can handle 20% above their rated flow without being damaged.

SPECIFICATIONS

Accuracy: $\pm 3\%$ full scale
Output Signal: 0 to 5 Vdc, adjustable $\pm 20\%$ (typical)

Power Requirement: 12.5 ± 2 Vdc regulated 30 mA (typical) for FLR1000 Series

Standard Sensor Material: 40% glass filled polyphenylene sulphide, glass window, stainless steel bearing support; sapphire shaft and bearing; Viton® rubber "O"-rings standard

Pressure Rating: 40 psi at 20°C (68°F) for gas, 100 psi for liquid, 500 psi for brass units using liquid services

Temperature Rating: 0 to 50°C (32 to 122°F)

Temperature Sensitivity: $\pm 0.2\%/^{\circ}\text{C}$

Linearity: $\pm 3\%$ full scale

Repeatability: $\pm 0.5\%$ full scale from 50 to 100% of rated max flow for gas; $\pm 0.2\%$ FS for liquid

Required Cable Assembly: 0.9 m (3') cable length

Dimensions: 59.7 x 41.9 x 38.1 mm (2.35 x 1.65 x 1.50")

Pressure Sensitivity: $\pm 0.07\%$ /mm Hg. (using air at 1 to 3 atm.)

Mounting: Holes for #4 screw provided

HIGHLIGHTED MODELS STOCKED FOR FAST DELIVERY!

To Order (Specify Model Number)

Model No.	Price	Flow Range/Gas	Max ΔP PSI	Acetal Tube Fittings
FLR1001	\$184	20 to 100 ml/min	1.5" H ₂ O	1/8"
FLR1002	184	40 to 200 ml/min	6.6" H ₂ O	1/8"
FLR1003	184	100 to 500 ml/min	1.45" H ₂ O	1/8"
FLR1004	184	200 to 1000 ml/min	0.9" H ₂ O	1/8"
FLR1005	184	0.4 to 2.0 L/min	0.4" H ₂ O	1/4"
FLR1006	184	1.0 to 5.0 L/min	0.35" H ₂ O	1/4"
Model No.	Price	Flow Range/Liquid	ΔP PSI	
FLR1007	\$184	13 to 100 ml/min	10	1/8"
FLR1008	184	20 to 200 ml/min	10	1/4"
FLR1009	184	50 to 500 ml/min	10	1/4"
FLR1010	184	60 to 1000 ml/min	6	1/4"
FLR1011	184	0.1 to 2.0 l/min	6	1/4"
FLR1012	224	0.2 to 5.0 l/min	6	3/8"

Units come with 0.9 m (3') cable and operator's manual

Note: Liquid flow sensors (Models FLR1007 through FLR1012) are available with brass instead of glass-filled polyphenylene; to order, add suffix "-BR" to model number and add \$150 to price. All units are also available with pulse output in addition to 0.5 V output; add suffix "-P" and \$40.

Ordering Example: FLR1012, liquid flow sensor, 0.2 to 5.0 l/min, \$224.

Accessories

Model No.	Price	Description
FLR1000-PW	\$60	Power supply
FLR1000-230PW	60	230 V power supply with European Connector
DPF51	145	Panel meter