

EASY-VIEW FLOWMETERS

With Optional Alarm Modules

**FL-93/96/
97/98/9900**



- ✓ 1½ to 2" Ports
- ✓ No Special Piping or Flow Straighteners Needed
- ✓ Installs in Any Position
- ✓ Direct Reading Indication
- ✓ Accuracy Within ±5% Full Scale
- ✓ Relatively Insensitive to Shock and Vibration
- ✓ Optional Flow Switch Modules



FL-9302



FL-9902

Both models shown smaller than actual size.

The FL-9000 Series flowmeter are rugged, low-cost direct reading industrial class flowmeters that are simple to install. They can be mounted (installed) in any position from vertical to horizontal without costly flow straighteners or other special plumbing. Constructed of high impact polysulfone plastic, the product line offers excellent structural integrity and chemical compatibility with a wide range of industrial chemicals.

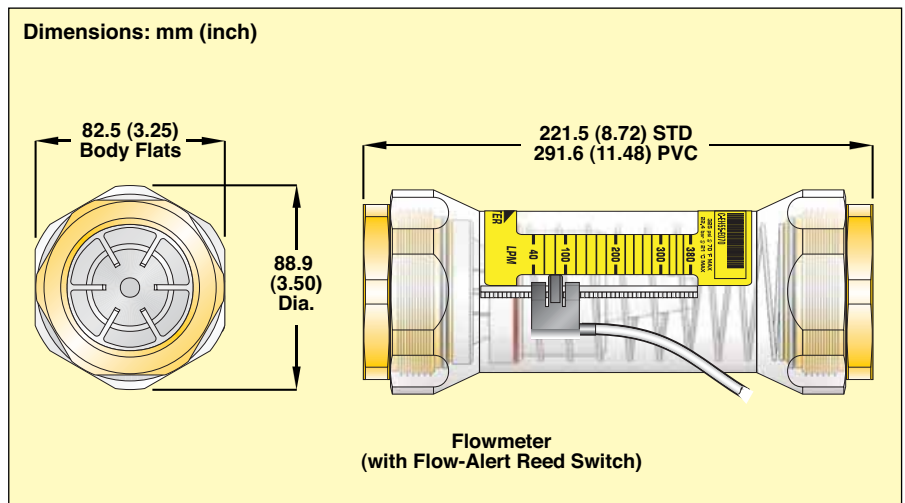
FL-9000-ACL/DCL

The AC and DC powered flow switch modules consist of a latching relay circuit housed in a sealed polypropylene enclosure. The modules have a normally open dry relay contact that can be used to directly control alarms, warning lights, relays or be used to interface to a PLC. The relay will be latched on as the magnet inside the flow meter passes by the module, and remain latched on until the magnet passes in the other direction or power is interrupted. The set-point is adjustable from 0 to 100% of full scale.

FL-9000-RA/RB/RC

The reed switch modules are housed in a sealed polypropylene enclosure. The reed switch module does not provide the latching function like the AC and DC powered units. When the magnet inside the flowmeter comes within

proximity of the module, the reed switch will change state. The set-point is adjustable from 0 to 100% full scale. Two reed switches providing low flow and high flow set points may be installed on a single flowmeter.



SPECIFICATIONS

Materials: Polysulfone plastic body, piston and cone, T300 stainless spring, buna flow indicator ring and pressure seals, C360 brass or PVC fittings, polypropylene limit indicators

Fittings/Threads:

NPT: ANSI/ASME B1.20.1

BSPP: ISO228 (-BSP)

Temperature Range: 0 to 121°C (32 to 250°F)

PVC Fittings: 0 to 60°C (32 to 140°F)

Pressure Rating: 22.4 bar (325 psi) maximum

Pressure Drop: See differential pressure chart on right

Accuracy: ±5% of full scale

Repeatability: ±1%

Standard Scaling: 0.876 specific gravity for oil, 1.0 specific gravity for water

Switch Specifications

Power:

FL-9000-ACL: 115 Vac ±10%

FL-9000-DCL: 10 to 30 Vdc

FL-9000-ACL/DCL: 25 mA maximum current

Contacts: 1A @30 Vdc, 0.5A @ 125 Vac (resistive load)

FL-9000-RA: 1 A, 200 Vdc maximum, 15 W (resistive load)

FL-9000-RB/RC: 0.25 A maximum, 175 Vdc, 5 W (resistive load)

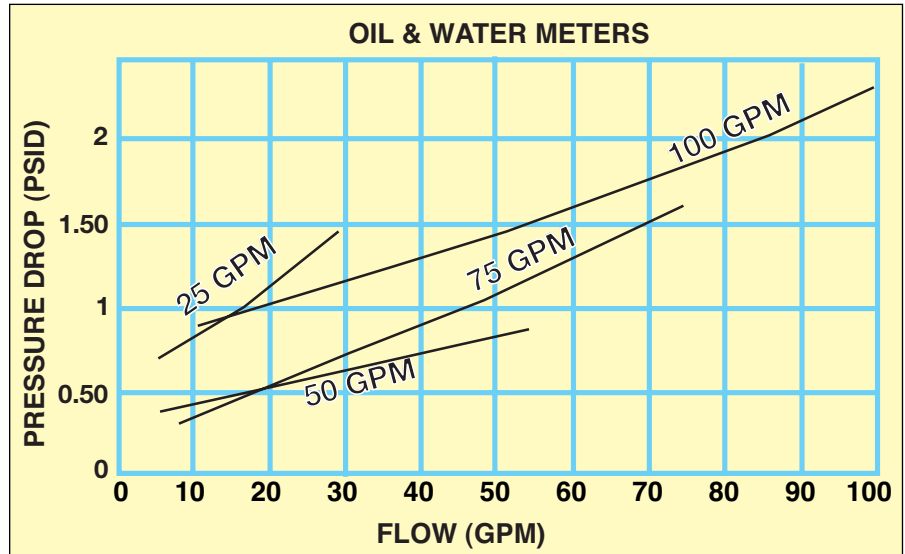
Temperature:

FL-9000-ACL/DCL: 0 to 70°C

(32 to 158°F)

FL-9000-RA/RB/RC: 0 to 121°C

(32 to 250°F)



To Order

| Model No. | Description | Range GPM (LPM) | Weight kg (lb) |
|-----------|-------------------------------|-----------------------|----------------|
| FL-9301 | Oil flowmeter 1½ FNPT brass | 2 to 25 (10 to 95) | 1.86 (4.1) |
| FL-9302 | Oil flowmeter 1½ FNPT brass | 5 to 50 (20 to 190) | 1.86 (4.1) |
| FL-9303 | Oil flowmeter 1½ FNPT brass | 7 to 75 (30 to 280) | 1.86 (4.1) |
| FL-9304 | Oil flowmeter 1½ FNPT brass | 10 to 100 (40 to 380) | 1.86 (4.1) |
| FL-9701 | Oil flowmeter 2 FNPT brass | 2 to 25 (10 to 95) | 1.4 (3.1) |
| FL-9702 | Oil flowmeter 2 FNPT brass | 5 to 50 (20 to 190) | 1.4 (3.1) |
| FL-9703 | Oil flowmeter 2 FNPT brass | 7 to 75 (30 to 280) | 1.4 (3.1) |
| FL-9704 | Oil flowmeter 2 FNPT brass | 10 to 100 (40 to 380) | 1.4 (3.1) |
| FL-9601 | Water flowmeter 1½ FNPT brass | 2 to 25 (10 to 95) | 1.86 (4.1) |
| FL-9602 | Water flowmeter 1½ FNPT brass | 5 to 50 (20 to 190) | 1.86 (4.1) |
| FL-9603 | Water flowmeter 1½ FNPT brass | 7 to 75 (30 to 280) | 1.86 (4.1) |
| FL-9604 | Water flowmeter 1½ FNPT brass | 10 to 100 (40 to 380) | 1.86 (4.1) |
| FL-9801 | Water flowmeter 2 FNPT brass | 2 to 25 (10 to 95) | 1.4 (3.1) |
| FL-9802 | Water flowmeter 2 FNPT brass | 5 to 50 (20 to 190) | 1.4 (3.1) |
| FL-9803 | Water flowmeter 2 FNPT brass | 7 to 75 (30 to 280) | 1.4 (3.1) |
| FL-9804 | Water flowmeter 2 FNPT brass | 10 to 100 (40 to 380) | 1.4 (3.1) |
| FL-9901 | Water flowmeter 2 PVC socket | 2 to 25 (10 to 95) | 0.077 (1.7) |
| FL-9902 | Water flowmeter 2 PVC socket | 5 to 50 (20 to 190) | 0.077 (1.7) |
| FL-9903 | Water flowmeter 2 PVC socket | 7 to 75 (30 to 280) | 0.077 (1.7) |
| FL-9904 | Water flowmeter 2 PVC socket | 10 to 100 (40 to 380) | 0.077 (1.7) |

Comes complete with operator's manual.

For units with BSPP threads add "-BSP" to model number, no additional cost.

Ordering Example: FL-9302, oil flowmeter 1½ FNPT brass.

FL-9901, water flowmeter 2 PVC socket.

Switches (Sold Separately)

| Model No. | Description |
|-------------|---|
| FL-9000-ACL | 115 Vac latching relay, with 4-pin connector, no CE, NEMA 12 and 13 (IP65) |
| FL-9000-DCL | 10 to 30 Vdc latching relay, with 4-pin connector, CE, NEMA 12 and 13 (IP65) |
| FL-9000-RA | Form-A reed switch NO, with 0.92 m (3') long, 2-wire cable, CE, NEMA 12 and 13 (IP65) |
| FL-9000-RB | Form-B reed switch NC, with 0.92 m (3') long, 2-wire cable, CE, NEMA 12 and 13 (IP65) |
| FL-9000-RC | Form-C reed switch, with 0.92 m (3') long, 2-wire cable, CE, NEMA 12 and 13 (IP65) |