

# FLOW METER PROCESS CONTROL INFORMATION SYSTEMS



## FLR Series



Optional

B2

### FLR Flow Sensors

- ✓ 2% FS Accuracy
- ✓ No Straight Pipe Run Required
- ✓ Mounts in Any Position
- ✓ 4 to 20 mA, 0 to 5 Vdc, and 0 to 10 Vdc Standard Outputs
- ✓ Digital Flow Rate and Total Flow Indicator
- ✓ In-Field Compensation for:
  - Specific Gravity of All Fluids
  - Viscosity of Petroleum-Based Fluids
  - Specific Gravity, Pressure, and Temperature of Pneumatic Applications



FLR7330D shown smaller than actual size.

### Rugged In-Line Flow Sensors

Available in 13 mm ( $\frac{1}{2}$ " ), 19 mm ( $\frac{3}{4}$ " ), and 32 mm ( $1\frac{1}{4}$ " ) sizes with anodized aluminum or brass. Comes with 4.5 m (15') of stripped end integral cable. In the field, integral cable can be extended up to 300 m (1000') with shielded copper cable. Units are securely

protected in a sturdy cast aluminum enclosure, and are easy to install and mount in any position, vertical or horizontal. Capable of monitoring fluids to 150 GPM or pneumatic lines to 1000 SCFM.

## SPECIFICATIONS

### Temperature Range:

-29 to 116°C (-20 to 240°F)

### Maximum Pressure: 3500 psig

(liquids); 1000 psig (gases)

### Power Requirement:

**0 to 5 Vdc Output:** 10 to 30 Vdc @ 0.75 W maximum

**0 to 10 Vdc Output:** 12 to 30 Vdc @ 0.75 W maximum

**4 to 20 mA Output:** Loop-powered, 30 Vdc maximum

### Power Consumption: 25 mA maximum

### Circuit Protection:

Reverse polarity and current limit

### Repeatability: ±0.5%

### Non-Linearity: ±0.05%

**Isolation:** Inherently isolated from the piping system

**Display:** Fixed or toggle modes of operation for rate and totalizer display. 8-digit, 0.70" high numeric display for rate and total 8-digit 0.35" high alphanumeric display for units and setup

### Response Time: 1.0 sec

### Temperature Drift:

0.05% of span per °C maximum

### Analog Outputs:

4 to 20 mA into 1KΩ maximum

0 to 5 Vdc into 10KΩ minimum

0 to 10 Vdc into 10KΩ minimum

### User Connections:

15' pig-tail (standard)

### Transmission Distance:

4 to 20 mA limited by cable resistance

0 to 5 Vdc 300 m (1000') maximum

0 to 10 Vdc 300 m (1000') maximum

### Enclosure:

**Material:** Anodized and epoxy powder-coated aluminum with polycarbonate lens

**Seals:** Silicone gasket between enclosure and lens/cover FKM O-rings between enclosure and flow meter body

**Connection:** 4-pin connection (standard)

**Fasteners:** T303 SS

**Rating:** NEMA 12 and 13 (IP52/54)

### Materials:

2024 - T351 anodized aluminum

body, piston and cone C360 brass

body, piston and cone petroleum (oil) common parts

**Spider Plate:** T316 SS

**Spring:** T302 SS

**Fasteners:** T303 SS

**Pressure Seals:** FKM

**Lens:** Polycarbonate

**Retaining Ring:** SAE 1070/1090 carbon steel

**Retaining Spring:** SAE 1070/1090 carbon steel

**Internal Magnet:** PPS/ceramic

**Enclosure Seal:** Silicone gasket water-based, water, air common parts

**Spider Plate:** T316 SS

**Spring:** T302 SS

**Fasteners:** T303 SS

**Pressure Seals:** FKM

**Lens:** Polycarbonate

**Retaining Ring:** T316 SS

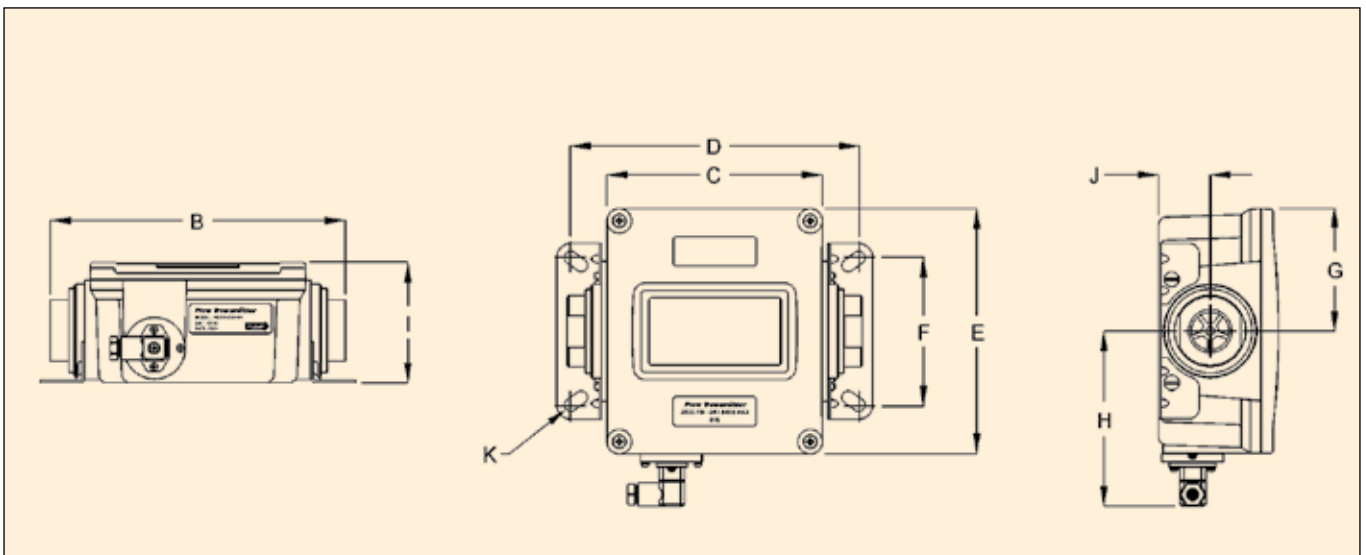
**Retaining Spring:** ST316 SS

**Internal Magnet:** PPS/ceramic

**Enclosure Seal:** Silicone gasket

## Dimensions: mm (inch)

Nominal Port Size	B	C	D	E	F	G	H	I	J	K
	Length	Length	Length	Width	Width	Width	Width	Depth	Offset	Hole Dia.
¼ (SAE 6)	168 (6.60)	134 (5.27)	163 (6.41)	152 (6.00)	82 (3.23)	76 (3.00)	107 (4.20)	75 (2.94)	38 (1.51)	8 (0.31)
½ (SAE 6)	168 (6.60)	134 (5.27)	163 (6.41)	152 (6.00)	82 (3.23)	76 (3.00)	107 (4.20)	75 (2.94)	38 (1.51)	8 (0.31)
¾ (SAE 6)	183 (7.20)	134 (5.27)	179 (7.04)	152 (6.00)	91 (3.60)	76 (3.00)	107 (4.20)	75 (2.94)	32 (1.27)	8 (0.31)
1 (SAE 6)	183 (7.20)	134 (5.27)	179 (7.04)	152 (6.00)	91 (3.60)	76 (3.00)	107 (4.20)	75 (2.94)	32 (1.27)	8 (0.31)
1¼ (SAE 6)	310 (12.20)	271 (10.68)	296 (11.65)	194 (7.63)	123 (4.84)	97 (3.82)	128 (5.02)	114 (4.50)	56 (2.20)	8 (0.31)
1½ (SAE 6)	310 (12.20)	271 (10.68)	296 (11.65)	194 (7.63)	123 (4.84)	97 (3.82)	128 (5.02)	114 (4.50)	56 (2.20)	8 (0.31)





To Order				
Model No.	Flow Range	Medium	NPT	Body
FLR6102D	0.2 to 2.0 GPM	Oil	½	Aluminum
FLR6105D	0.5 to 5.0 GPM	Oil	½	Aluminum
FLR6115D	1 to 15 GPM	Oil	½	Aluminum
FLR7120D	0.2 to 2.0 GPM	Oil	¾	Aluminum
FLR7130D	3 to 30 GPM	Oil	¾	Aluminum
FLR8140D	4 to 40 GPM	Oil	1	Aluminum
FLR8150D	5 to 50 GPM	Oil	1	Aluminum
FLR9175D	10 to 75 GPM	Oil	1¼	Aluminum
FLR9110D	10 to 100 GPM	Oil	1¼	Aluminum
FLR9115D	10 to 150 GPM	Oil	1¼	Aluminum
FLR6302D	0.2 to 2.0 GPM	Water	½	Brass
FLR6305D	0.5 to 5.0 GPM	Water	½	Brass
FLR6315D	1 to 15 GPM	Water	½	Brass
FLR7320D	2 to 20 GPM	Water	¾	Brass
FLR7330D	3 to 30 GPM	Water	¾	Brass
FLR8340D	4 to 40 GPM	Water	1	Brass
FLR8350D	5 to 50 GPM	Water	1	Brass
FLR9375D	10 to 75 GPM	Water	1¼	Brass
FLR9310D	10 to 100 GPM	Water	1¼	Brass
FLR9315D	10 to 150 GPM	Water	1¼	Brass
FLR6725D	2 to 25 SCFM	Air 100 psi	½	Aluminum
FLR6750D	5 to 50 SCFM	Air 100 psi	½	Aluminum
FLR7710D	10 to 100 SCFM	Air 100 psi	¾	Aluminum
FLR7715D	15 to 150 SCFM	Air 100 psi	¾	Aluminum
FLR8725D	25 to 250 SCFM	Air 100 psi	1	Aluminum
FLR9740D	25 to 400 SCFM	Air 100 psi	1¼	Aluminum
FLR9760D	50 to 600 SCFM	Air 100 psi	1¼	Aluminum
FLR9710D	100 to 1000 SCFM	Air 100 psi	1¼	Aluminum

Comes complete with operator's manual.

For 5-point NIST certificate add "-NIST5" to model number for additional cost.

For British standard pipe thread parallel add "-BSPP" to model number, no additional cost.

**Ordering Examples:** FLR6105D, flow transmitter, 0.5 to 5.0 GPM for oil, with analog output FLR5101D, flow transmitter, 0.1 to 1.0 GPM for oil with analog output.