

# Lake Monitors FreeFlow™ Sensor

*"Accurate & Economic Flow Sensor"*  
FOR 3/8" – 3/4" PIPE SIZES

Minimally invasive, low cost segmented wedge flow sensor. Used to monitor and control process water.

## STYLE FF

### NO MOVING PARTS

The segmented wedge element provides a simple and reliable restriction for sensing flow as related to pressure differential.

### UNRESTRICTED MOUNTING

Allows the designer to install the meter in any orientation – horizontal, vertical or inverted.

### COMPACT AND RUGGED DESIGN

Measures less than 10" long and 3-1/2" wide, with a flanged mounting base for simple installation.

### MULTIPLE FLOW RANGES AVAILABLE

The FreeFlow™ Sensor is offered with several ranges of calibration to accommodate the requirements typical to process water applications.

### MULTIPLE PORT SIZES OFFERED

Standard selection of NPT ports reduces the amount of adapters required for installation.

### LOW-COST PRECISION

Measuring accuracy of  $\pm 2\%$  of range and repeatability of  $\pm 1/2\%$ .

## ENGINEERING SPECIFICATION

THE FREEFLOW SENSOR SHALL:

- Use the segmented wedge differential producer to measure flow rate as related to pressure.
- Not require inlet or outlet straight plumbing, or require vertical pipe mounting.
- Have a measuring accuracy of  $\pm 2\%$  of full scale with  $\pm 1/2\%$  repeatability.
- Be Lake Monitors No. FF- \_\_\_\_\_



# FreeFlow Sensor

## MATERIALS OF CONSTRUCTION

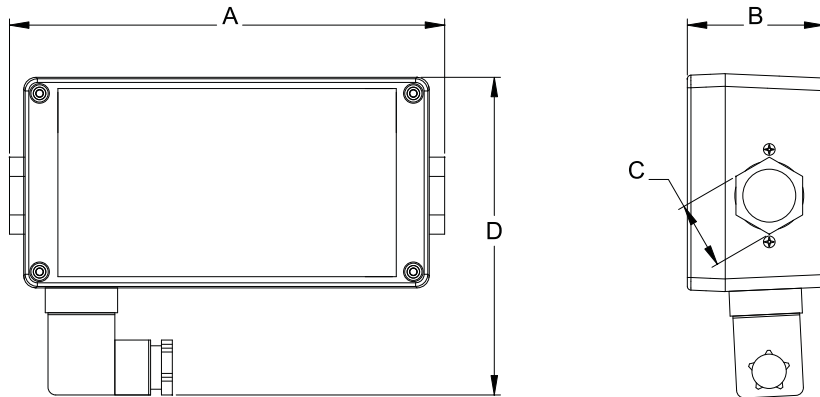
End Ports	PVC
Wedge Element	PVC
Pressure Sensor	Polyetherimide
Electrical Enclosure	Polycarbonate

## PERFORMANCE

Measuring Accuracy:	±2% of full-scale
Repeatability:	±1/2% of full-scale
Full Scale Flow Measuring Range:	5-15 GPM (19-57 LPM)
Turn Down Ratio (All Ranges)	8:1
Maximum Operating Pressure:	125 PSIG (8.6 bar)
Maximum Operating Temperature:	170°F (76°C)
Pressure Differential:	See graph on right
Standard Calibration Media:	Tap Water @ 70° F

## ELECTRONIC SPECIFICATIONS

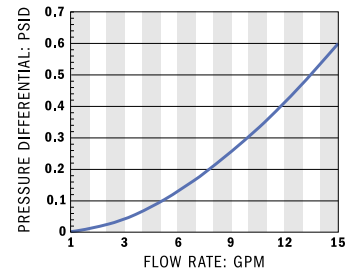
Electronic output:	0-5 VDC, 0-10 VDC, 4-20mA
Power Requirements:	12-35 VDC
Maximum Current Consumption:	<50mADC
Minimum load resistance:	1000 Ohms
Maximum transmission distance:	≤ 200 feet
Resolution:	12-bit
Response Time:	<500 mS 10%-90% change
Protection:	Short circuit, transient and reverse polarity



## MECHANICAL SIZING CODE

DIM	3/8" Female NPTF	1/2" Female NPTF	3/4" Female NPTF
A	6-7/8" (175mm)	6-7/8" (175mm)	7-1/2" (191mm)
B	2-7/32" (57mm)	2-7/32" (57mm)	2-7/32" (57mm)
C	1-3/32" (28mm)	1-3/32" (28mm)	1-5/16" (34mm)
D	5-1/4" (134mm)	5-1/4" (134mm)	5-1/4" (134mm)

## FREEFLOW FLOW METER



[www.lakemonitors.com](http://www.lakemonitors.com)

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