

DESCRIPTION

The **Flow Data Logger** is an in-line flow monitor specifically designed to record flow rates at one-minute intervals. Installation in the process line is uncomplicated and easily tailored to a variety of applications.

Flow rate data is recorded on a flash memory card which is removed for analysis. Data is transferred to your computer via an external card reader plugged into a USB port on your desktop or laptop computer. Date and time parameters may be extrapolated knowing only the start time of the data array. Processing and manipulation of data is done on your computer. Using programs such as Excel, charts and graphs may be created which are tailored to your specific needs.

The unit is powered by a single 3.6v lithium battery. The life of this battery is dependent upon the characteristics of the process being monitored. If the process has long periods of zero flow rates, the **Flow Data Logger** goes into sleep mode to conserve battery life. When operating continuously, the battery will provide power for approximately three months. With intermittent usage the battery can power the unit for up to one year. Optionally, the **Flow Data Logger** can be powered from an external source, eliminating concerns regarding battery life. Contact the factory for more information.

Choose from three body materials which accommodate a variety of fluids used in industrial processes. Available body materials are brass, polypropylene, and stainless steel.

The **Flow Data Logger** is available with port sizes ranging from 1/4" NPT to 1" NPT to accommodate various flow

BENEFITS

Simple to Use

Insert the flash memory card into its socket to record flow rate information. To transfer data and generate reports, remove the flash card from its socket and insert it into the external card reader's socket.

Versatile

Flow data is collected and logged at one-minute intervals. Customized reports may be generated from your computer using data reduction or spreadsheet programs such as Excel.

Rugged

A gasket-sealed fiberglass enclosure protects the electronics from the environment; brass, polypropylene, or stainless steel meter housing are available for trouble-free operation with a variety of fluids. The unit is designed for indoor or outdoor use.

Flexible

The **Flow Data Logger** is available in a variety of NPT port sizes, meter body materials and flow ranges.

Reliable

The unit is able to log data up to one year without user intervention.

Accurate

Flow rate data is measured to an accuracy within 1% of measured GPM.

rates. Refer to the table for available combinations of port size, body material, and flow range.

The **Flow Data Logger** may be customized to meet your special needs. Contact the factory for more information.



SPECIFICATIONS — PERFORMANCE

Memory Capacity:

1,048,576 data points in memory
(524,160 data points per year)

Recording Interval:

Data recorded at one-minute intervals.

Flow Rate Accuracy:

< 1% of measured GPM.

Power Source:

3.6v lithium inorganic battery
Option: Remote supply operation

Battery Life:

Continuous usage: Three months
Intermittent usage: Up to one year

Physical:

Dimensions: See reverse side
Weight: <3 lb (6.6 kg)
Environment: See reverse side

Model No.*	Port Size (NPT)	Flow Range (GPM)
FL105B	.50"	1.5 to 20.0
FL107B	.75"	5.0 to 30.0
FL110B	1.00"	8.0 to 60.0
FL102P	.25"	0.1 to 5.0
FL105P	.50"	1.5 to 20.0
FL105S	.50"	1.5 to 20.0
FL107S	.75"	5.0 to 30.0
FL110S	1.00"	8.0 to 60.0
FL100R FL100D	Card Reader Software Package	

*B=Brass, P=Polypropylene, S=Stainless Steel

FL 100 SERIES

Flow Data Logger

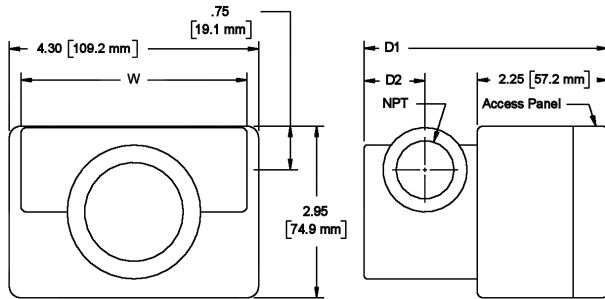
SPECIFICATIONS — MATERIALS

Wetted Materials	
Body	Brass, Polypropylene or 316 Stainless Steel (Hydrolytically stable, glass reinforced)
Rotor Pin	Ceramic
Rotor	PPS composite, black
Lens	Polysulfone
O-Ring	Viton® (alloy bodies); BunaN (polypropylene body)
Operating Pressure, maximum	
Brass or Stainless Steel Body	200 PSIG @ 70°F, 100 PSI max @ 212°F
Polypropylene Body	100 PSIG @ 70°F, 40 PSI max @ 180°F
Operating Temperature	
Brass or Stainless Steel Body	32°F to 125°F (0°C to 50°C)
Polypropylene Body	32°F to 125°F (0°C to 50°C) (Temperature rating limited by electronics)
Electronics, maximum	125°F (50°C) ambient
Viscosity, maximum	200 SSU

INSTALLATION

The **Flow Data Logger** connects to piping via NPT mating thread forms. The following guidelines are provided to assist with installation to achieve a leak-free seal, without damage to the unit:

- 1) The **Flow Data Logger** may be mounted with flow entering either port. Performance is optimized by positioning ports at the top of the unit, in a horizontal plane.
- 2) Apply pipe thread sealant to male pipe threads.
- 3) Thread **Flow Data Logger** unit onto male pipe thread until hand-tight.
- 4) Tighten pipe 1 to 1 1/2 additional turns.
- 5) If improper seal results, continue turning pipe into unit in 1/4 turn increments. Do not exceed one additional turn on plastic versions.



NPT	MTL	W	D1	D2
.25"	Poly	3.03" (77.5mm)	3.68" (95mm)	.80" (20.3mm)
.50"	Poly	3.03" (77.5mm)	3.68" (95mm)	.80" (20.3mm)
.25"	Metal	3.03" (77.5mm)	3.62" (92mm)	.80" (20.3mm)
.50"	Metal	3.03" (77.5mm)	3.62" (92mm)	.87" (22.1mm)
.75"	Metal	3.95" (100 mm)	4.25" (108mm)	1.05" (26.8mm)
1.00"	Metal	3.95" (100 mm)	4.25" (108mm)	1.05" (26.8mm)

IMPORTANT NOTES

Flow Data Logger units monitor dynamic fluid flow. The unit reacts to turbulence, pulsation, entrained air, and other flow anomalies induced in the flow stream by other process hardware. For optimal performance, install **Flow Data Logger** units where nominal flow conditions exist, with ports located at the top. Incoming flow may be connected to either port. **A minimum of 8" of straight pipe on the inlet side is recommended.**

Selection of materials for compatibility with the media is critical to the life and operation of the **Flow Data Logger**. Take care in the proper selection of materials of construction, particularly wetted materials.

Ambient temperature changes do affect accuracy, since the specific gravity of a liquid can vary with temperature.

The **Flow Data Logger** has been designed to resist shock and vibration; however, shock and vibration should be minimized.

Media must be filtered when containing particulate and/or debris to ensure the proper operation of the **Flow Data Logger**.

The pressure and temperature limitations shown in the specifications must not be exceeded. These pressures and temperatures take into consideration possible system surge pressures and temperatures and their frequencies.

For hazardous area applications involving such things as (but not limited to) ignitable mixtures, combustible dust, and flammable materials, use an appropriate explosion-proof enclosure and follow safety procedures.

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