

Model μ LF-100

Ultrasonic Micro Liquid Flow Meter

Description

The Model μ LF-100 Model Ultrasonic Flow Meter is an accurate, reliable and cost-effective ultrasonic instrument capable of measuring very low flow rates through small diameter PFA tube. Typical applications are D.I. water and chemical solutions in the semiconductor market. A molded sensor assembly is available in two different sizes for installation in 6mm and 3mm O.D. PFA tubing.

The μ LF-100 was designed with the latest solid state technology providing the major economic benefit of many years of uninterrupted service. Employing digital signal processing (DSP) techniques, the Model μ LF-100 Ultrasonic Liquid Flow Meter provides outstanding accuracy and repeatability.

Installation and setup of the Model μ LF-100 is fast and easy. Integral to the display unit, the set-up software leads the installer through a series of questions related to pipe material and size, display configuration and desired outputs. This makes the initial installation a straightforward process. The sensors are provided in a robust, molded mounting fixture designed for the specific line size for optimum performance. The meter was designed with no moving parts, thus reducing its cost of ownership and eliminating common maintenance requirements.

Features

- No moving parts
- Low cost of ownership
- Increased energy savings
- Zero maintenance requirements
- No need for meter recalibration
- Wide rangeability with a single unit
- Fast response time
- Ultra low flow rates
- 6mm O.D. x 4mm I.D. and 3mm O.D. x 2mm I.D. line sizes
- PFA line material



Model μ LF-100
Ultrasonic Micro Liquid Flow Meter

Specifications

Display/Converter

Measurement Method

Time difference calculation method of ultrasonic wave propagation

Accuracy

$\pm 2\%$ RD (operating range 1.6 to 33 ft./sec.)

Repeatability

$\pm 0.2\%$

Applicable Liquids

D.I.W. and chemical solutions

Applicable Pipes

6mm O.D. x 4mm I.D. and
3mm O.D. x 2mm I.D.

Flow Rate

-6 sensor: 277 – 5560 ml/min.
-3 sensor: 94 – 1881 ml/min.

Analog Output Range

Setting within 0–33 ft./sec.

Enclosure

Panel Mount IP50

Material

Glass fiber resin (Noril)

Installation

Temperature Range

50° to 122° F (10° to 50° C)

Power Supply

12–30 VDC

Power Consumption

3.6 watts or less

Installation

Panel mount

Analog Output

Output Information

Instantaneous forward flow

Output Signal

4–20 mA

Load Resistance

450 ohm or less



Specifications (cont'd)

Contact Output

Output Information	Selectable from accumulated pulse of forward flow and upper/lower limit flow rate
Output Signal	Open collector no voltage
Rating	30 VDC @ 0.25 A
Scaled Units	Selectable from: 1ml, 10ml, 0.1L, 1L, 0.001G, 0.01G, 0.1G and 1G
Low Cut Off	0 to 10% in 1% steps
Weight	Approximately 1 lb.

Display

LCD Display	16 characters x 2 lines
Information	Rate and Total
Available Units	LPH, LPM, ml/min., m/s, cm/s, GPH, GPM, FPM and FPS

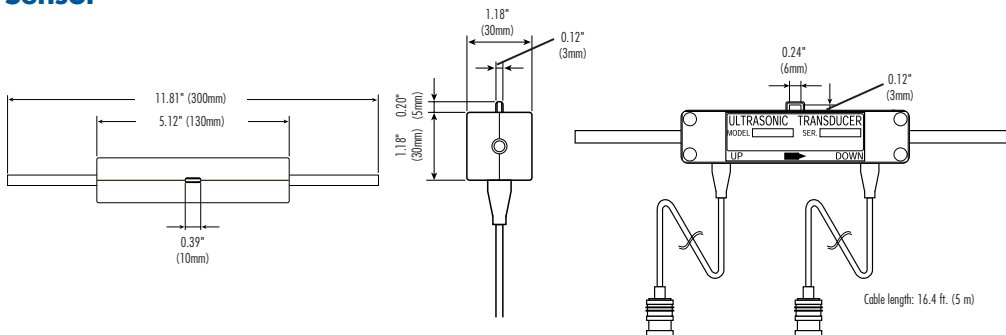
Sensor

Model	μ LT-6 and μ LT-3
Material	PFA tube
Installation	In-line wetted sensors
Operating Temperature	50° to 158° F (10° to 70° C)
Cable Length	16.4 ft. (5 m)
Weight	Approximately 0.5 lbs.
Straight Run	10D upstream and 5D downstream minimum

Model Number

μLF-100-6	Line size: 6mm O.D. x 4mm I.D.
μLF-100-3	Line size: 3mm O.D. x 2mm I.D.
Includes	Display/converter, sensors and cabling

Sensor



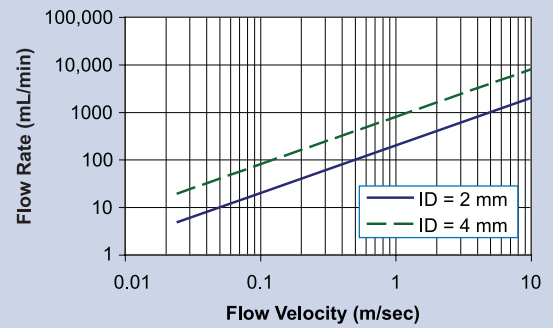
Specifications are for reference only and are subject to change without notice.

Local Representative:



8930 S. Beck Avenue, Suite 107, Tempe, Arizona 85284 USA
 Tel: (480) 240-3400 • Fax: (480) 240-3401 • Toll Free: 1-800-528-4225
 E-mail: ftimarket@ftimeters.com • Web: www.ftimeters.com

μ LF-100 Diagram of Rate-Flow Velocity



Dimensions

Converter

