

# Radnoti

IUF-1000+ Analog/Digital Flow Meter  
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Radnoti IUF-1000 Non-Invasive Inline Ultrasonic Flowmeter (no moving parts)

The Radnoti IUF-1000 Plus consists of an inline flow sensor and externally mounted controller unit. The flow sensor is a straight-through PFA tube that uses ultrasonic sensing technology to measure the flow rate. There are no moving parts or mechanical seals. The Controller Electronics receives the raw flow rate signal from the sensor and provides flow rate information in terms of analog output, pulse output, serial and LCD. The output signals are user-scalable.

This flowmeter uses a non-intrusive method to determine the flow rate of the liquid. Two piezoelectric rings (transducers) are mounted on the outer diameter of the flow tube and are excited producing a vibration. Alternately each transducer's ultrasonic disturbance transmits through the tubing wall and is propagated along with the liquid flow and back against the flow. The propagation wave velocity varies with flow rate and is proportional to flow rate. The flow rate can be determined by measuring the variation of these propagation wave velocities.

The Radnoti IUF-1000 Plus utilizes the latest digital signal processing (DSP) technology and features significant reduction of adverse influence of bubbles in measured fluids. Normally, ultrasonic flowmeters have difficulty in measuring fluid containing bubbles. This is because the bubbles interfere with ultrasonic signal passage. With our DSP technology and accumulated field experience, the measurement accuracy of fluids with bubbles capability has been remarkably improved.



## Specifications:

Analog Output

Current Isolated 4 - 20 mA (Maximum load resistance of 500  $\Omega$ ) current output

Voltage 0 to 10 VDC

Pulse Output Isolated Open Collector- (15 VDC, 15 mA) Frequency of 1 kHz at 100% of full scale

Low Flow Cut-off- User settable

Power Supply- 12 - 36 VDC

Power Consumption- 5 W continuous (1.5 A on start-up)

Ambient Temperature -32 - 115 °F (0 - 46 °C)

Fluid Temperature- 50 - 140 °F (10 - 60 °C)

Maximum Operating Pressure- 70 psig

Cable Material- PTFE jacketed cabling

Cable Length- 2 meters (standard)

Non-wetted Parts- FEP, Peek, PP, PTFE, PVDF, Viton A

Wetted Parts- High Purity PFA

Flow Range\*- 0.5 to 600 mL/min

Accuracy\*\*-  $\pm 2\%$  R.D. for flow rates over 50 mL/min  $\pm 1$  mL/min for flow rates under 50 mL/min

Repeatability  $\pm 0.5\%$

\* Please contact Radnoti for special flow ranges

\*\* Special calibration is available upon request



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