Flow Transmitters, Ultrasonic, Portable

Data Logging Version

Items are subject to Schedule B discounts.

Standard Version

<table>
<thead>
<tr>
<th>Model</th>
<th>Pipe Diameter Range</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUB-10</td>
<td>0.5 to 4.5˝ (13 to 115 mm)</td>
<td>$3367.00</td>
</tr>
<tr>
<td>PUB-20</td>
<td>2 to 78˝ (50 to 2000 mm)</td>
<td>$4240.00</td>
</tr>
</tbody>
</table>

Data Logging Version

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<thead>
<tr>
<th>Model</th>
<th>Pipe Size Range</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUF-1001</td>
<td>0.5 to 4.5˝ (13 to 115 mm)</td>
<td>$3714.00</td>
</tr>
<tr>
<td>PUF-1002</td>
<td>0.5 to 4.5˝ (13 to 115 mm)</td>
<td>$3392.00</td>
</tr>
<tr>
<td>PUF-1003</td>
<td>2 to 78˝ (50 to 2000 mm)</td>
<td>$3392.00</td>
</tr>
</tbody>
</table>

PRINCIPLES OF OPERATION

Two sensors are placed on the exterior of the pipe, and each transmits an ultrasonic pulse through the pipe and fluid to the other. The velocity of the liquid flowing through the pipes causes the pulse to accelerate or decelerate. The difference in the transit times of the two pulses is used to calculate the flow rate. The use of transit time allows the flowmeter to be unaffected by pressure or temperature changes.

APPLICATIONS

- Treated water
- River water
- Sea water
- Potable water
- Demineralized water
- Glycol/water mix
- Hydraulics system
- Diesel oil
- Hydraulic system
- Potable water
- River water
- Treated water

SPECIFICATIONS

Service: Homogeneous liquids that do not contain air bubbles capable of ultrasonic wave propagation.

Inputs: Lemo connector cable from sensors.

Range: 0.33 to 65.62 ft/s (0.1 to 20 m/s).

Display: 240 x 64 pixel graphic display, high contrast black on white with backlight; Languages: English, French, German, Swedish, Italian, Spanish, Portuguese, Russian, Norwegian, and Dutch; 5.2” W x 1.5” H.

Accuracy:
- ±0.5 to 2% of flow rate for flow rate > 0.66 ft/s (0.2 m/s) and pipe ID > 2.95 in (75 mm);
- ±3% of flow rate for flow rate > 0.66 ft/s (0.2 m/s) and pipe ID in range 0.512 to 2.95 in (13 to 75 mm);
- ±0.5 to 2% of flow rate for flow rate > 0.66 ft/s (0.2 m/s) and pipe ID > 2.95 in (75 mm);

Power Requirements: 9 to 24 VDC, (1) 5-Cell NiMH battery, internal, factory rechargeable (continuous operation time: 20 hours with back-lit and output off) (recharging time: 6.5 hours, power adapter used).

Power Consumption: 10.5 W.


Temperature Limits: -4 to 275°F (-20 to 135°C).

Outputs:
- Analog:
  - 1 opto-isolated output: 4 to 20 mA, 0 to 16 mA or 0 to 20 mA (selectable);
  - Error current: 0 to 26 mA (selectable);
  - Load resistance: 620 Ω max;
- Pulse:
  - 1 opto-isolated MOSFET relay, 150 mA max, 500 pps max, 200 Hz max.

Serial Communications: USB, RS-232 (PUF only).

Enclosure Rating: Converter: IP54; Transducers: IP67.

Materials: Flame retardant injection molded ABS plastic.

Repeatability: ±0.5 % of measured value or ±0.066 ft/s (0.02 m/s).

Electrical Connections: Multi-pin Lemo plugs.

Permissible Air Content: < 3% by volume.

Response Time: < 500 ms.

Weight:
- Unit without accessories: 2.3 lb (1.06 kg);
- Unit with accessories in carrying case: 13.23 lb (6.0 kg).

Agency Approvals: CE.

Applicable Pipe Material: Carbon steel, SS, copper, UPVC/PVDF, concrete, galvanized steel, mild steel, glass, brass.

Applicable Pipe Lining: Rubber, glass, concrete, epoxy, steel, other.

Pipe Wall Thickness: 0.04 to 3˝ (1 to 75 mm).

Pipe Lining Thickness: < 1˝ (< 25 mm).

*Selective option for special material with known propagation rate of the lining material.

OPTION

For NIST traceable calibration certificate, use order code NISTCAL-FU $300.00®

® Items are net priced and are not subject to any discount.