

The Badger® Series 220 PVCS flow sensor is an insertion style flow sensor constructed of non-metallic materials for all wetted parts. These sensors are designed for service in corrosive liquids. The metallic trim, in non-wetted areas, is 316 Stainless Steel. The sensor mounts in a 2" NPT thread and may be attached to the pipe with a saddle or other types of mounting hardware.

The Series 220 PVCS sensor features a six bladed impeller design with a proprietary, non-magnetic sensing mechanism. The impeller shape coupled with the absence of magnetic drag provides consistent accuracy and repeatability throughout the flow range of the sensor. As the liquid turns the impeller, a low impedance signal is transmitted with a frequency proportional to the flow rate. This signal can travel up to 2000 feet between the sensor and the display unit without the need for amplification. The sensor is supplied with 20 feet of shielded two wire cable.

**SPECIFICATIONS****Mechanical****Recommended Design Flow Range**

- 0.5 to 30 ft/sec
- Initial detection below 0.3 ft/sec

**Accuracy**

- $\pm 1.0\%$  of full scale over recommended design flow range
- $\pm 4.0\%$  of reading within calibration range

**Repeatability**

- $\pm 0.3\%$  of full scale over recommended design flow range

**Linearity**

- $\pm 0.2\%$  of full scale over recommended design flow range

**Max Pressure**

- 100psi @ 68°F (20°C)

**Max Temperature**

- 140°F (60°C) @ 40psi

**Electrical****Transducer Excitation**

- Quiescent current 600uA@8VDC to 35VDC max.
- Quiescent voltage ( $V_{high}$ ) Supply Voltage -(600uA\*Supply impedance)
- ON State ( $V_{Low}$ ) Max. 1.2VDC@40mA current limit (15W+0.7VDC)

**Output Frequency**

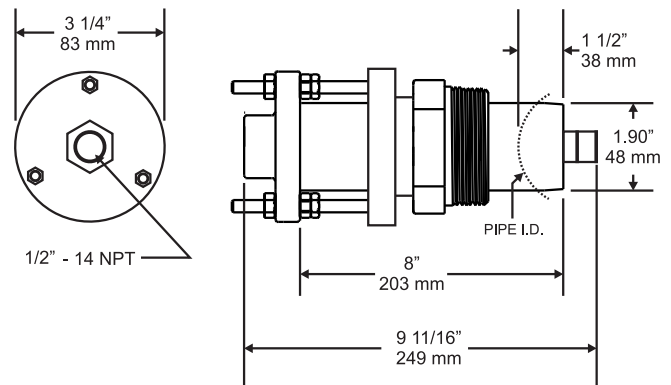
- 3.2 Hz to 200 Hz

**Output Pulse Width**

- 5 msec  $\pm 25\%$

**Cable**

- 20 feet of 2-conductor 20 AWG shielded U.L. type PTLC wire provided for connection to display or analog transmitter unit. Rated to 105°C. May be extended to a maximum of 2000 feet with similar cable and insulation appropriate for application.

**DIMENSIONS****Wetted Materials**

Impeller &amp; bearing:

Shaft:

Housing:

O-Ring:

Sleeve &amp; Mounting adapter:

Tefzel®

Zirconia Ceramic

Glass reinforced polyphenylene Sulfide (PPS)

Ethylene Propylene (EPDM)

Polyvinyl Chloride (PVC)

**Non-Wetted Materials**

Trim:

316 Stainless Steel

NOTE: Optional materials available for O-Ring, Shaft and Impeller, consult factory

**DTB-004-01**

4-09

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