**The Series IPFS Insertion Paddlewheel Flow Sensor** is available for pipe sizes ranging from 3 to 40” and available in brass, PVC or stainless steel. The Series IPFS has an available hot tap model with a bronze or stainless steel valve assembly. The bearings are made from ruby jewel to reduce the coefficient of friction and maintain high accuracy. The Series IPFS is ideal for large pipe and clean water applications. It is ideal for chemical proportioning applications or any applications with rapidly changing fluid conductivity.

**PRINCIPLE OF OPERATION**

The IPFS uses the rotation of an impeller to measure flow. Liquid flow pushes the rotor and the rotation is detected by a Hall-effect sensor. The output is a current sinking pulse signal which can be connected to the Series RTI to display flow rate and total or the Series BAT for a 4 to 20 mA signal conversion.

**APPLICATIONS**

- Clean Liquids
- Large Pipes
- Aquariums, Water Parks
- Water & Wastewater Monitoring

**ACCESSORIES**

- Series BAT, Blind Analog Transmitter, converts pulse output to 4 to 20 mA analog output. Unit is loop powered, fits on the enclosure of the meter, and is fields spannable.
- Series RTI, Rate Total Indicator, converts pulse output to 4 to 20 mA analog output with local flow rate and totalization display. Unit is loop powered, can fit on the enclosure of the meter, and provides a high/low flow alarm.
- Series PWD, Pulse Divider, for use with pacing electronic metering pumps. Unit divides the input frequency to any number from 1 to 9999 with the use of rotary switches to suit a number of metering pump inputs.

**SPECIFICATIONS**

- **Service:** Compatible clean liquids.
- **Range:** 0.3 to 30 ft/s (0.01 to 10 m/s).
- **Wetted Materials:**
  - Shaft Body/Fitting: Brass, PVC, or 316 SS;
  - Rotor: PVDF;
  - Shaft: Nickel-bound tungsten carbide;
  - Bearings: Ruby jewel.
  - Valve Assembly: IPFS-1XX: Bronze (SS optional) with bronze ball valve;
  - O-ring: EPDM.
- **Accuracy:** +1.5% FS.
- **Temperature Limits:** Brass/SS: 200°F (93°C); PVC: 130°F (55°C).
- **Pressure Limits:** Brass/SS: 200 psi (13.8 bar); PVC: 150 psi (10 bar).
- **Process Connection:** IPFS-0XX: 1-1/2˝ male NPT; IPFS-1XX: 2˝ male NPT.
- **Output:** Current sinking, square wave pulse.
- **Power Requirements:** 5 to 24 VDC @1.5 mA (3.5 to 16 VDC -LOP option).
- **Electrical Connection:** #22 AWG, 3 conductor, 18´ (5.5 m) cable length standard (max. 2000´).
- **Enclosure Material:** Housing: Die-cast powder-coated aluminum.
- **Enclosure Rating:** NEMA 4X (IP66).
- **Weight:** IPFS-1XX: 4 lb (1814 g); IPFS-2XX: 6 lb (2721 g); IPFS-3XX: 13 lb (5897 g); IPFS-4XX: 15 lb (6804 g).

### Example

<table>
<thead>
<tr>
<th>Series</th>
<th>IPFS</th>
<th>BAF</th>
<th>IPFS-0SS-BAF</th>
<th>Price</th>
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</table>

### Options

- **CNS:** Ceramic Shaft
- **BAF:** 2” Brass Adapter Fitting (IPFS-0XX only)
- **SAF:** 2” SS Adapter Fitting (IPFS-0XX only)
- **SVA:** 316 SS Valve Assembly (IPFS-1XX only)
- **NVA:** No Valve Assembly (deduct price) (IPFS-1XX only)
- **BPT:** 1-1/2” Brass BPT Adapter (2 piece) (IPFS-0XX only)
- **SPT:** 1-1/2” SS Adapter (2 piece) (IPFS-0XX only)
- **EXT:** 12” Extension (IPFS-XL only)

*SS is stem and fitting. For SS valve order SVA option.

© Items are subject to Schedule B discounts.