

# PADDLEWHEEL FLOW SENSOR

Non-Magnetic Sensing, Adjustable for 1-1/2 to 40" (38.1 to 1016 mm) Pipe, Pulse or 4-20 mA



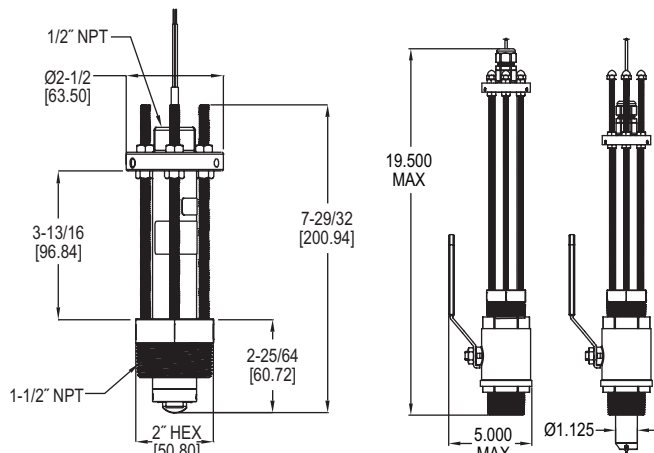
PFT-IAN-B111-S



PFT-HDN-S611-S  
shown with  
A-PFT-HKIT-SS



PFT-HDN-B611-S  
shown with  
A-PFT-HKIT



The **Series PFT Paddlewheel Flow Sensor** is used to monitor liquid flow rates in pipes from 1-1/2 to 40" (40-1016 mm). The unit has one size-adjustable sensor and is available in brass or 316 stainless steel body. The unit outputs a frequency proportional pulsed or 4-20 mA output. The pulse models are a square wave output signal with frequency proportional to the flow velocity and the 4-20 mA models have a linear output of the velocity with 4 mA equal to 0 ft/s and 20 mA equal to 25 ft/s.

## BENEFITS/FEATURES

- Long product life even in applications with particulate due to bearings and shaft that offer excellent wear protection
- Use in irrigation applications with weatherproof and submersible ratings
- Save time and inventory with one unit that is adjustable over a large pipe size range
- Application versatility with a variety of wetted material selections
- Reduce need for additional external components with integral 4-20 mA output
- Eliminate concerns regarding magnetic material in flow due to sensor technology, which uses inductive sensing and no magnets

## APPLICATIONS

- Irrigation
- Ground water remediation
- Cooling systems
- Pump protection
- Leak detection
- Filtration systems

## SPECIFICATIONS

**Service:** Water-based fluids.  
**Range:** 1.2 to 25 ft/s (0.37 to 7.62 m/s).  
**Wetted Materials:** Body and fitting: Brass or 316 SS; fitting O-ring: FKM standard, silicone or Buna-N optional; impeller: 316 SS; shaft: Tungsten carbide standard or 316 SS optional; bearing: PTFE standard.  
**Linearity:** ±1.0% of FS.  
**Repeatability:** ±0.5% of FS.  
**Temperature Limits:** -40 to 212°F (-40 to 100°C).  
**Pressure Limits:** 400 psig (27.6 bar) @ 100°F (37.8°C), 325 psig (22.4 bar) @ 212°F (100°C).  
**Process Connection:** 1-1/2" NPT male or 1-1/2" BSPT male standard, 2" NPT male or 2" BSPT male optional.  
**Output:** Pulse: NPN open collector with square wave output, rated 60 V @ 50 mA max; Frequency: 3.2 to 200 Hz. Pulse width: 2.5 msec ±25%; 4-20 mA: 4 mA is 0 ft/s, 20 mA is 25 ft/s.  
**Power Requirement:** 10-35 VDC.  
**Power Consumption:** 40 mA (max.).  
**Electrical Connection:** 22 AWG shielded UL type PTLC rated 105°C, 20' (6.1 m) long with cable gland. Can be extended up to 2000' (609 m) with similar cable. Optional UL listed burial rated cable.  
**Enclosure Rating:** NEMA 6P (IP67)\*.  
**Housing Materials:** Brass or 316 SS.  
**Weight:** 3 lb (1.36 kg).  
**Agency Approvals:** CE.

\*Brass units IP67 only.

## MODEL CHART

Example	PFT	I	D	N	-B	1	1	-S	-ST	PFT-IDN-B111-S-ST
Series	PFT									Paddlewheel flow sensor
Style		I H								Insertion Hot-tap insertion
Output			D A							600UA/40 MA 2.5 MS pulse Analog 4-20 mA transmitter
Approvals				N						None
Body Material					B S					Brass body 316 SST body
Mounting						1 2 3 4 5 6 7 8				1-1/2" NPTM mounting 2" NPTM mounting 1-1/2" male BSPT mounting 2" male BSPT mounting 1-1/2" NPTM hot tap with valve 1-1/2" NPTM hot tap without valve 1-1/2" male BSPT hot tap with valve 1-1/2" male BSPT hot tap without valve
O-Ring Material							1 2 3			FKM fluoroelastomer Silicone (FDA approved) Buna-N
Wetted Materials								1 2		Tungsten-carbide shaft, 316 SS impeller, PTFE bearing 316 SS shaft, 316 SS impeller, PTFE bearing
Electrical Connection								S B		22 GA shielded wire, 20 ft (6.1 m) 18 GA UL listed burial rated, 4 ft (1.2 m)

## MODEL CHART

Model	Description
PFT-IAN-B111-S	Standard brass 1-1/2" NPTM analog output
PFT-IAN-S111-S	Standard 316 SST 1-1/2" NPTM analog output
PFT-IDN-B111-S	Standard brass 1-1/2" NPTM pulse output
PFT-IDN-S111-S	Standard 316 SST 1-1/2" NPTM pulse output
PFT-HAN-B611-S	Hot tap without valve brass 1-1/2" NPTM analog output
PFT-HAN-S611-S	Hot tap without valve 316 SST 1-1/2" NPTM analog output
PFT-HDN-B611-S	Hot tap without valve brass 1-1/2" NPTM pulse output
PFT-HDN-S611-S	Hot tap without valve 316 SST 1-1/2" NPTM pulse output

## ACCESSORIES

Model	Description
A-PFT-HKIT	1-1/2" brass valve NPT with nipple
A-PFT-HKIT-BSPT	1-1/2" brass valve BSPT with nipple
A-PFT-HKIT-SS	1-1/2" SS valve NPT with nipple
A-PFT-HKIT-SS-BSPT	1-1/2" SS valve BSPT with nipple

USA: California Proposition 65