



FEATURES

- Wide flow range
- One moving part
- Hot tap available
- Modular electronics compatible
- Easily depth adjustable for 3-40" pipe

APPLICATIONS

- Clean water
- Large pipes
- Aquariums, water parks
- Water & wastewater monitoring

GENERAL INFORMATION

The **IP100/200-Series** are adjustable depth insertion paddlewheels that come in brass, PVC or 316 stainless models to fit 3" to 40" pipe. Installation fittings are standard 1-1/2" (101/201) or 2" (115/215 or PVC101/201) NPT. Fittings such as saddles and weldolets may be purchased either locally or from Seametrics.

Ruby bearings and a non-drag Hall-effect sensor give these meters the widest flow range of any of the paddlewheel types. A sensor detects the passage of miniature magnets in the six rotor blades. The resulting square-wave signal can be sent for hundreds of feet over unshielded cable without a transmitter and connected directly to many PLC's and other controls without any additional electronics.

If desired, a modular system of electronics can be installed directly on the flow sensor or mounted remotely. The FT415 (battery powered) or FT420 (loop powered) flow indicator provides digital rate and total display, as well as programmable pulse output; the FT420 also provides a 4-20 mA analog output. If a display is not required, the A055 provides 4-20 mA analog output, and the PD10 provides a programmable pulse for pump pacing.

The "hot-tap" models (IP115/215) can be installed or serviced without shutting down the line by means of a 2" full-port isolation valve that comes with a nipple for installation on the pipe fitting. In most circumstances, no special tool is required.

FEATURES

- Modular electronics (optional)
- rate/total/pulse/4-20 mA
 - blind 4-20 transmitter
 - pulse divider

18 Foot Cable

Rugged cast aluminum housing

Compression nut
for easy adjustment, secure locking

Adapter fitting
with 1-1/2" NPT threads

Rotor housing

Removable jewel bearings
Rotor

IP101/201

3/4" diameter tubing
for low insertion force

2" Adapter
removes to mount
hot-tap machine

Full-port 2" ball valve
for sensor removal
(2" gate valve for PVC)

Adapter fitting
with 2" NPT
threads

Locking collar

IP115/215

SPECIFICATIONS*

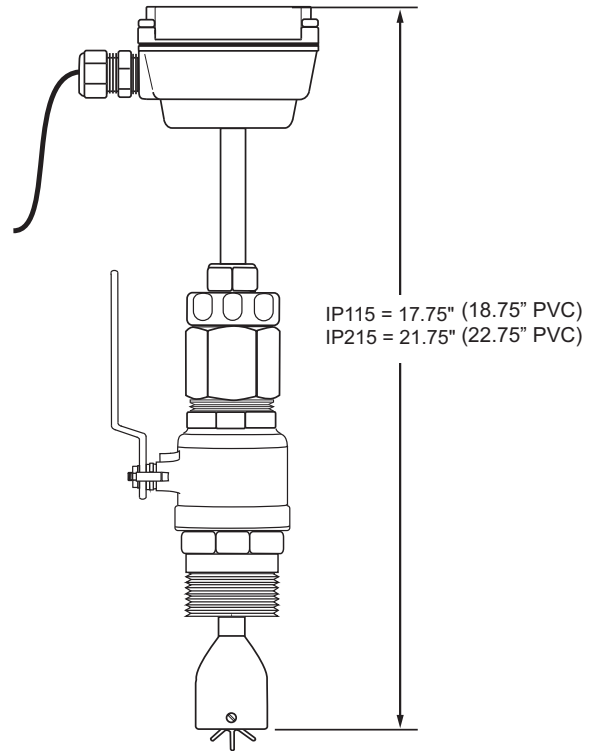
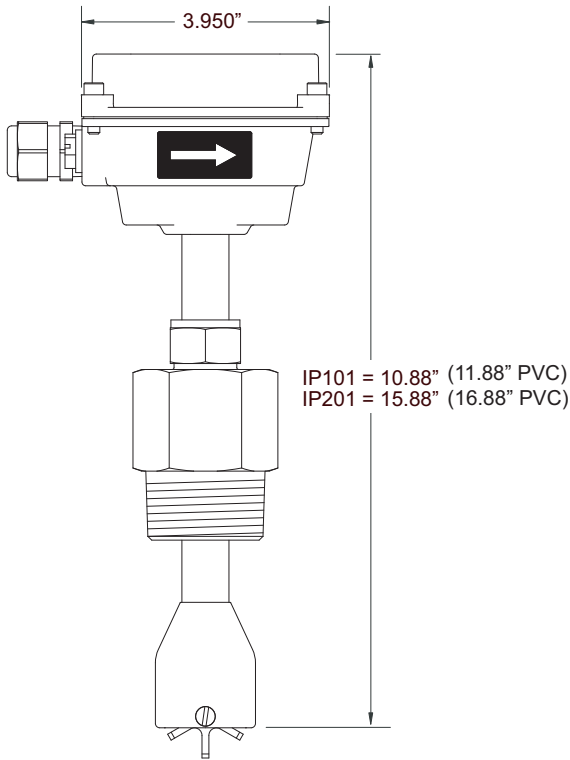
Pipe Size	IP101/115	IP201/215	
	3" to 12" (50 - 300mm)	12" to 40" (300 - 1000mm)	
Sensor	Hall Effect sensor, 12 Vdc current sinking pulse		
Materials	Housing Cast aluminum		
	Sensor Body Brass, PVC or 316 SS		
	Rotor PVDF (Kynar)		
	Shaft Nickel-bound tungsten carbide (zirconia ceramic optional)		
	Bearings Ruby jewel		
	IP101/201 (Brass/SS)	IP115/215 (Brass/SS)	PVC 101/201/115/215
Isolation Ball Valve	None	Bronze (316SS optional)	(PVC uses gate valve)
Fitting Size	1.5" NPT	2" NPT	2" NPT
Flow Range	0.3 - 30 feet/sec (0.1 - 9 meter/sec)		
Accuracy	+/- 1.5% of full scale		
Maximum Temperature			
	Brass/SS	200° F (93° C)	
	PVC	130° F (55° C)	
Maximum Pressure			
	Brass/SS	200 psi (14 bar)	
	PVC	150 psi (10 bar)	
Insertion Force	0.44 x pressure in pipe		
Power	5-24 Vdc, 1.5 mA (3.5 -N 16 Vdc with -04 option)		
Cable	#22 AWG 3-con, 18' (6m); 2,000' (650m) maximum cable run		
Regulatory	CE Mark (Standard Power Only)		

*Specifications subject to change. Please consult our website for the most current data (www.seametrics.com).



IP100/200-SERIES Insertion Paddlewheel Flow Sensor

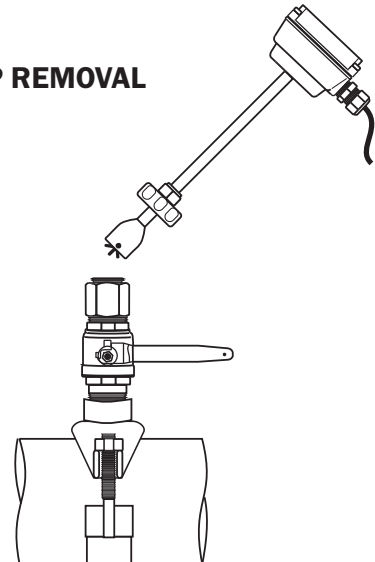
DIMENSIONS



HOT TAP INSTALLATION

Insertion and removal under pressure is possible due to the 2" full-port isolation valve, which comes with a nipple for installation on the pipe fitting. If it is necessary to do the initial installation under pressure, any standard hot tap drilling machine with 2" NPT adapter, such as a Transmate or a Mueller, can be used. Ordinarily, it is not necessary to use an installation tool, since the small-diameter tube can be controlled by hand at all but the highest pressures.

HOT TAP REMOVAL



FLOW RANGE (Gallons Per Minute)

Pipe Size	3"	4"	6"	8"	10"	12"	16"	18"	24"	30"	36"	40"
Min. (.3 ft/sec)	6.9	12	27	46.8	73	105	165	209	375	624	874	1,110
Max. (30 ft/sec)	691	1,190	2,700	4,680	7,370	10,470	16,520	20,900	37,600	62,505	87,410	111,000

Approximations based on Schedule 40 pipe.



IP100/200-SERIES Insertion Paddlewheel Flow Sensor

HOW TO ORDER

MODEL

3-12" = **IP101**
3-12" hot tap = **IP115**
12-40" = **IP201**
12-40" hot tap = **IP215**

MATERIAL

Brass = **B**
PVC = **P**
316 Stainless = **S**

OPTIONS

Ceramic Shaft = **-01**
Adapter Fitting, 2" Threads = **-02**
Micropower Pickup (FT415 & DL76 Only) = **-04**
LMI Pump Connector = **-06**
Seametrics Control Connector = **-07**
Stainless Valve Assembly (115/215 only) = **-08**
No Valve Assembly (115/215 only) = **-09**
*Immersibility = **-40**
12" Extension (200-Series Brass & SS only) = **-72**

*Consult factory for suitable applications

ACCESSORIES

Rate & Total Indicator w/4-20 mA Output = **FT420**
Battery Operated Rate/Totalizer = **FT415**
Blind 4-20 mA Transmitter = **AO55**
Power Supply = **PC3**

Data Logger = **DL76**
Pulse Divider = **PD10**
Saddle Fittings = **Consult Factory**

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