



### APPLICATIONS

- Industrial water/wastewater treatment
- Cooling water monitoring
- Industrial fluid control
- Chemical proportioning

### FEATURES

- Low-friction, long-life jewel bearings
- One moving part
- Fully field-repairable
- Choice of materials for compatibility with variety of chemicals
- Fits 1/2" to 8" pipe
- Fixed depth in fitting ensures proper placement in pipe



### GENERAL INFORMATION

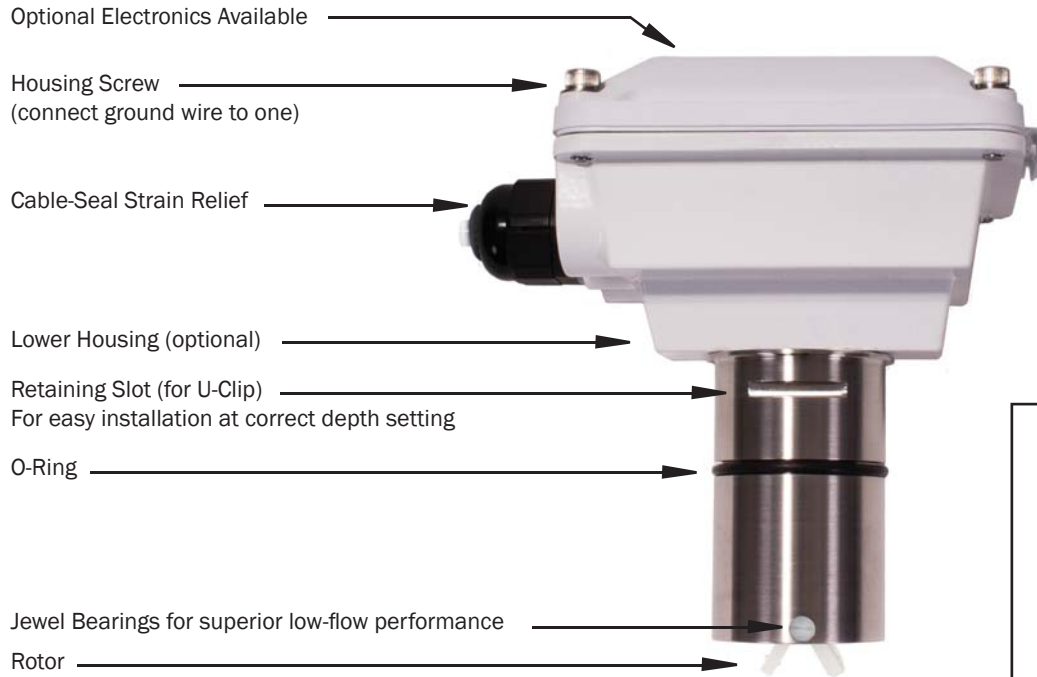
The **IP800-Series** are impeller (or "paddlewheel") insertion meters designed for use with a wide variety of liquids in pipe sizes 1/2" to 8". Sensors are available in brass, 316 stainless steel, PVC, and polypropylene. Bodies are machined from a solid rod for maximum precision. High-quality jewel bearings and nickel-bound tungsten carbide shafts are used for extreme low friction and long life. Low-flow performance is good, although other Seametrics flow meters are recommended where extremely low flows are being measured.

The rotation of the rotor is detected by a non-drag Hall-effect sensor. Output is a current-sinking pulse, which can be sent long distances (up to 2,000 feet) without a transmitter. This signal can be connected directly to PLC's, counters, and computer cards, as well as a variety of Seametrics controls and displays.

Seametrics IP meters are ideal for chemical proportioning applications. If no display is required, a simple divider such as the PD10 provides adjustable pump pacing. For rate and total display, a modular system of electronics can be installed directly on the flow sensor or mounted remotely. The FT430 (externally powered with pulse), FT440 (loop powered), and FT450 (battery powered) all provide digital rate and total displays, as well as a programmable pulse; the FT440 also provides a 4-20 mA analog output. The AO55 blind analog transmitter can be used to convert to a 4-20 mA output. IP meters are also compatible with the DL76 data logger and FT520 batch processor.

The IP800-Series require special fittings that ensure correct depth placement in the pipe. Fittings come in a variety of materials for compatibility with specific applications. Tee fittings are individually wet-calibrated at the factory and marked with the K-factor (pulses per gallon). Saddle fittings must be field-installed on the pipe and do not come wet-calibrated. K-factors for saddles are based on factory-testing.

## FEATURES



High Pressure



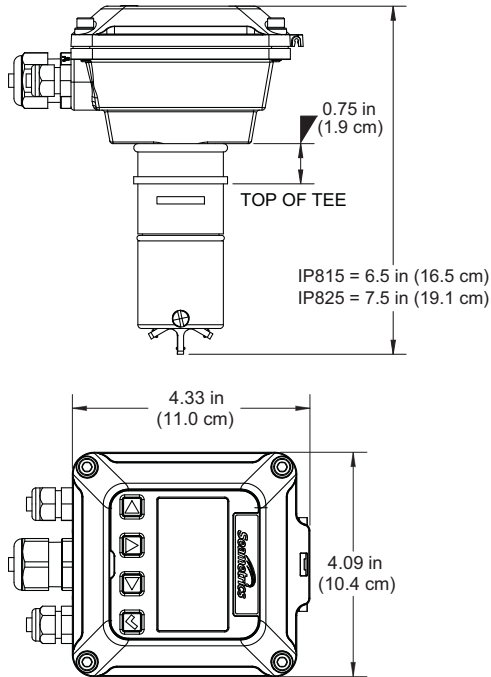
## SPECIFICATIONS\*

Power Source		Low Power	Micropowered (-04 Option)	
Supply Voltage/Current		6-40 Vdc / < 2 mA	3.1-16 Vdc / 60 µA @ 3.6 Vdc	
Sensor		Digital Magnetoresistive	Giant magnetoresistance (GMR)	
Materials	Sensor Body	Brass, 316 Stainless Steel, PVC, or Polypropylene		
	Rotor	PVDF (Kynar®)		
	Shaft	Kynar® / Tungsten Carbide (Kynar® / Ceramic or Kynar® / Silicon Carbide optional)		
	Bearings	Ruby jewel		
	O-Ring	EPDM (Viton® optional)		
Maximum		Brass	316 Stainless Steel	PVC or Polypropylene (See Pressure vs. Temp. Chart)
	Pressure	200 PSI (14 bar)	200 PSI (14 bar)	175 PSI (12 bar) @ 75 ° F (24 ° C)
	High Pressure	Not Available	400 psi (28 bar)	Not Available
	Temperature	200 ° F (93 ° C)	200 ° F (93 ° C)	130 ° F (55 ° C)
Flow Range	0.3 - 30 ft./sec			
Accuracy	+/- 1.5% of full scale			
Output Transistor Maximum Current Sinking	150mA (Low power version only)			
Cable	#22 AWG 3-con, 18' (6m); 2,000' (650m) maximum cable run			
Regulatory	C E Mark			

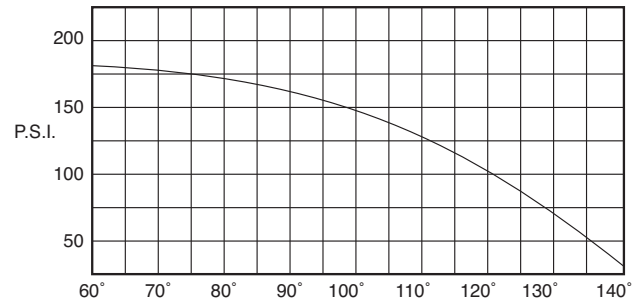
\*Specifications subject to change • Please consult our website for current data ([www.seametrics.com](http://www.seametrics.com)).  
Kynar is a registered trademark of Arkema, Inc., Viton is a registered trademark of DuPont Corporation.

## DIMENSIONS

NOTE: Housing Optional



## PRESSURE VS. TEMPERATURE (PVC/Polypro)



## FLOW RANGE (In Gallons Per Minute)

	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"
<b>Min</b>	0.28	0.5	0.8	1.9	3.1	6.9	12	27	46.8
<b>Max</b>	28	50	80	190	314	691	1190	2700	4680

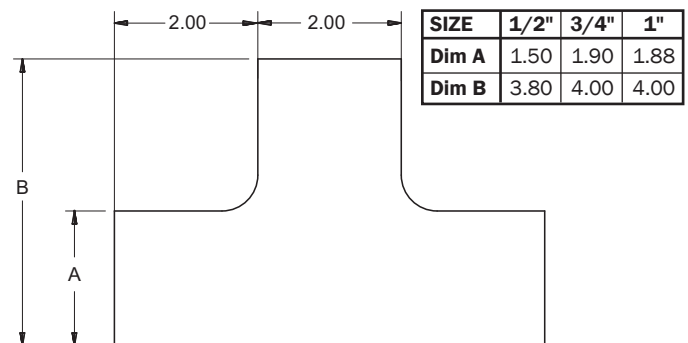
## FLOW RANGE (In Liters Per Minute)

	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"
<b>Min</b>	1.06	1.89	3.03	7.19	11.73	26.12	45.42	102.21	177.16
<b>Max</b>	106	189.27	302.83	719.23	1188.62	2615.72	4504.64	10220.61	17715.73

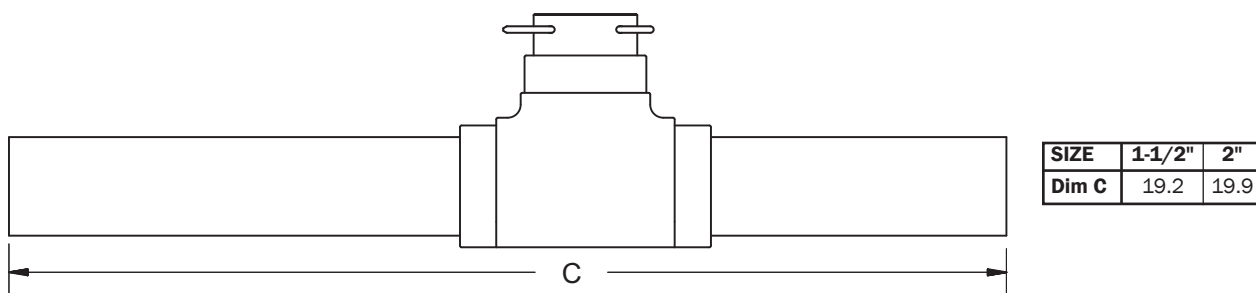
## AVAILABLE FITTINGS

	Tee	Saddle	Weld	Braze	Sweat Tee
<b>Bronze</b>	1/2-4"	3-4"	x	3-8"	1/2-4"
<b>PVC</b>	1/2-2"	3-8"	x	x	x
<b>Stainless Steel</b>	1/2-2" 304SS	x	3-8" 316SS	x	x
<b>Carbon Steel</b>	1/2-2"	x	3-8"	x	x
<b>Ductile Iron</b>	x	3-8"	x	x	x

## PVC BLOCK TEE FITTING



## PVC TEE FITTINGS



## HOW TO ORDER

	Description	Size	Sensor Material	Options
<b>Sensor Only</b>	Sensor Only.	½" - 3" = <b>IP810</b> 4" - 8" = <b>IP820</b>	Brass = <b>B</b> 316 Stainless Steel = <b>S</b> PVC = <b>P</b> Polypro = <b>Y</b>	Rotor with Ceramic Shaft, PVDF, Kynar® = <b>-01</b> Micropower Pickup = <b>-04</b> Standard Power, LMI 4-pin Connector = <b>-06</b> Standard Power, Seametrics Control Connector = <b>-07</b> *Immersible = <b>-40</b> Viton® O-Ring = <b>-60</b> Rotor with Kynar®/Silicon Carbide Shaft = <b>-68</b> Roytronic® Series A Pump 5-pin Connector = <b>-106</b> **High Pressure (Stainless Only) = <b>-HP</b>
<b>A055 Mounted on Sensor</b>	Blind 4-20 mA analog transmitter (A055) mounted on the sensor.	½" - 3" = <b>IP812</b> 4" - 8" = <b>IP822</b>	Brass = <b>B</b> 316 Stainless Steel = <b>S</b> PVC = <b>P</b> Polypro = <b>Y</b>	Rotor with Ceramic Shaft, PVDF, Kynar® = <b>-01</b> Standard Power, LMI 4-pin Connector = <b>-06</b> Viton® O-Ring = <b>-60</b> Rotor with Kynar®/Silicon Carbide Shaft = <b>-68</b> Roytronic® Series A Pump 5-pin Connector = <b>-106</b> **High Pressure (Stainless Only) = <b>-HP</b>
<b>FT430 Mounted on Sensor</b>	Rate & total indicator with pulse, externally powered (FT430) mounted on the sensor.	½" - 3" = <b>IP813</b> 4" - 8" = <b>IP823</b>	Brass = <b>B</b> 316 Stainless Steel = <b>S</b> PVC = <b>P</b> Polypro = <b>Y</b>	Rotor with Ceramic Shaft, PVDF, Kynar® = <b>-01</b> Tamper Evident Kit = <b>-32</b> Viton® O-Ring = <b>-60</b> Non-resettable Total = <b>-64</b> Rotor with Kynar®/Silicon Carbide Shaft = <b>-68</b> Hinged Display Cover = <b>-126</b>
<b>DL76 Mounted on Sensor</b>	Data logger (DL76) mounted on the sensor.	½" - 3" = <b>IP816</b> 4" - 8" = <b>IP826</b>	Brass = <b>B</b> 316 Stainless Steel = <b>S</b> PVC = <b>P</b> Polypro = <b>Y</b>	Rotor with Ceramic Shaft, PVDF, Kynar® = <b>-01</b> Micropower Pickup = <b>-04</b> Tamper Evident Kit = <b>-32</b> Viton® O-Ring = <b>-60</b> Rotor with Kynar®/Silicon Carbide Shaft = <b>-68</b> **High Pressure (Stainless Only) = <b>-HP</b>
<b>FT450 Mounted on Sensor</b>	Rate & total indicator with pulse, battery powered (FT450) mounted on the sensor.	½" - 3" = <b>IP817</b> 4" - 8" = <b>IP827</b>	Brass = <b>B</b> 316 Stainless Steel = <b>S</b> PVC = <b>P</b> Polypro = <b>Y</b>	Rotor with Ceramic Shaft, PVDF, Kynar® = <b>-01</b> Tamper Evident Kit = <b>-32</b> Viton® O-Ring = <b>-60</b> Non-resettable Total = <b>-64</b> Rotor with Kynar®/Silicon Carbide Shaft = <b>-68</b> Hinged Display Cover = <b>-126</b>
<b>PD10 Mounted on Sensor</b>	Pulse Divider (PD10) mounted on the sensor.	½" - 3" = <b>IP818</b> 4" - 8" = <b>IP828</b>	Brass = <b>B</b> 316 Stainless Steel = <b>S</b> PVC = <b>P</b> Polypro = <b>Y</b>	Rotor with Ceramic Shaft, PVDF, Kynar® = <b>-01</b> LMI Pump Connector = <b>-06</b> 10 Ft. Cable for LMI Connector = <b>-37</b> Viton® O-Ring = <b>-60</b> Rotor with Kynar®/Silicon Carbide Shaft = <b>-68</b> Roytronic® Series A Pump 5-pin Connector = <b>-106</b> **High Pressure (Stainless Only) = <b>-HP</b>
<b>FT440 Mounted on Sensor</b>	Rate & total indicator with pulse & 4-20 mA output, loop powered (FT440) mounted on the sensor.	½" - 3" = <b>IP819</b> 4" - 8" = <b>IP829</b>	Brass = <b>B</b> 316 Stainless Steel = <b>S</b> PVC = <b>P</b> Polypro = <b>Y</b>	Rotor with Ceramic Shaft, PVDF, Kynar® = <b>-01</b> Tamper Evident Kit = <b>-32</b> Viton® O-Ring = <b>-60</b> Non-resettable Total = <b>-64</b> Rotor with Kynar®/Silicon Carbide Shaft = <b>-68</b> Hinged Display Cover = <b>-126</b>

\* Immersible to maximum of 3 ft (1m), up to 2 weeks

\*\*Requires appropriate fitting.

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