

### Seametrics IP100/200-Series Insertion Flow Sensors

IP100 & IP200-Series are adjustable depth insertion mechanical flow meters suitable for installations with a wide range of temperatures and pressure in clean water conditions. IP-Series meters are available for 3 inch to 40 inch pipe installations, and feature a non-drag hall-effect sensor giving these meters the widest flow range of any paddlewheel type instrument. The IP-Series is also available with a hot-tap model that can be installed or serviced without shutting down a pressurized line. These sensors are compatible with external PLC controllers or a directly mounted FT430, FT440 or FT450 remote Seametrics display.

#### FEATURES

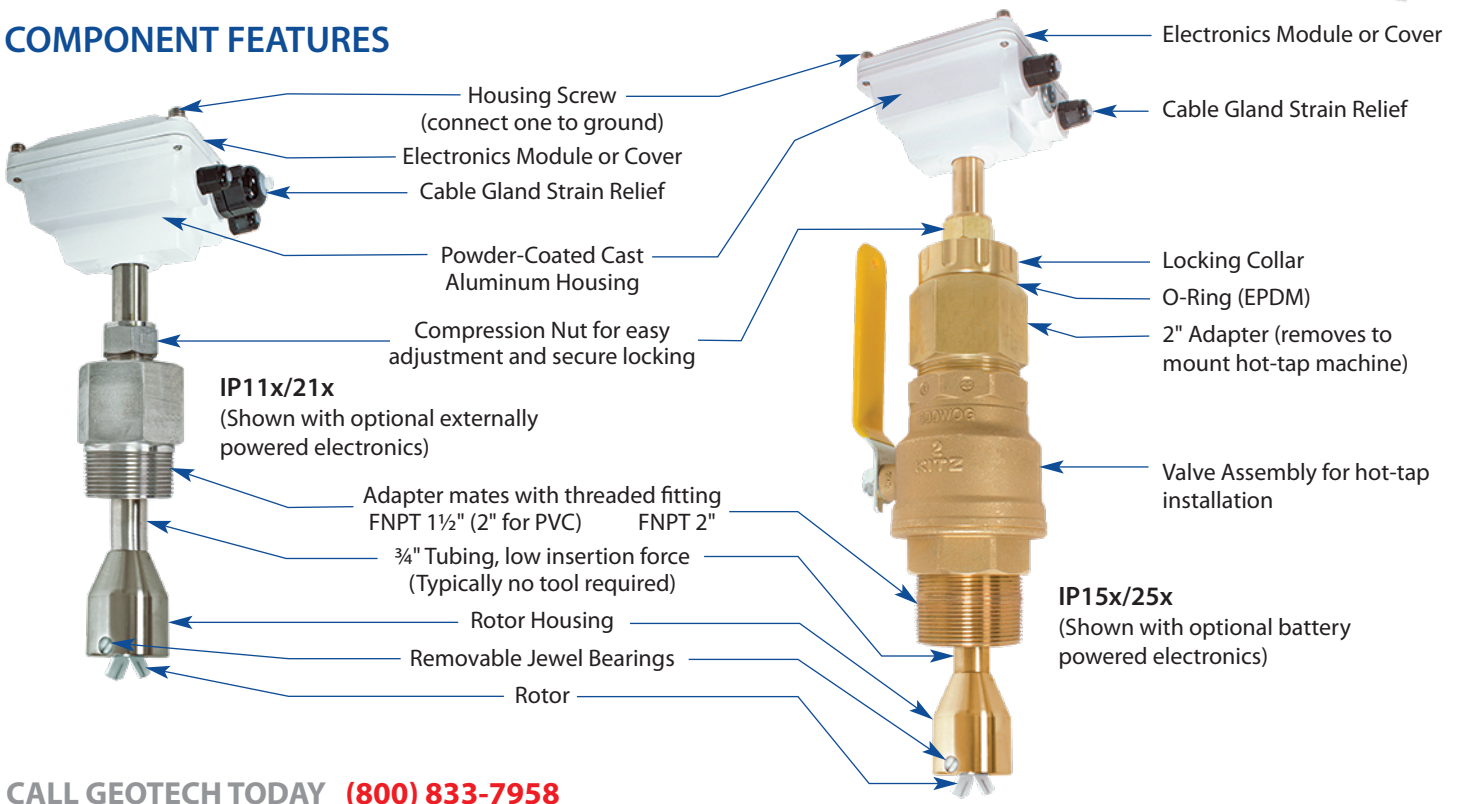
- Adjustable depth
- Hot Tap available
- Stainless or Brass
- Durable
- Available reverse flow output
- IP Rating based on mounted display

#### APPLICATIONS

- Clean water mains
- Large pipes
- Aquariums, water parks
- Water and wastewater monitoring



#### COMPONENT FEATURES



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**Geotech Environmental Equipment, Inc.**  
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## Seametrics IP100/200-Series Insertion Flow Sensors

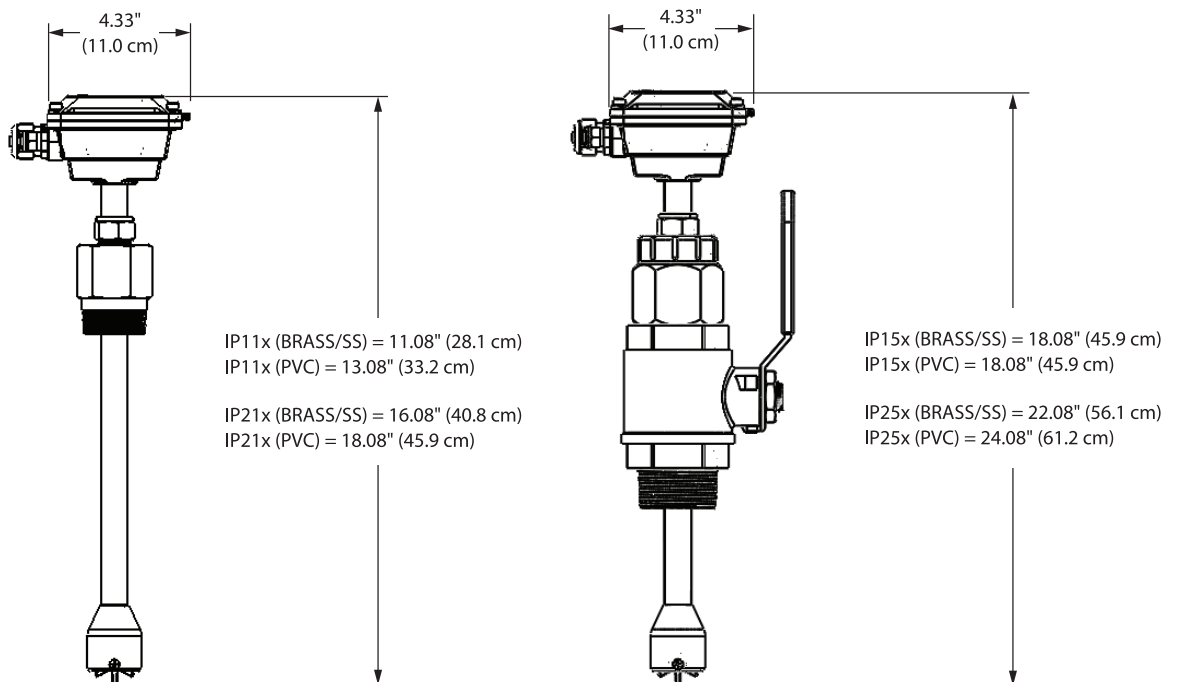
### SPECIFICATIONS\*

<b>Pipe Size</b>	3" to 40"			
<b>Power</b>	<b>Full Power:</b> 6-36V DC/< 2 mA		<b>Micropowered (-04 Option):</b> 3.1-16V DC/60 µA @ 3.6V DC	
<b>Sensor</b>	<b>Low Power:</b> Digital Magneto-resistive		<b>Micropowered (-04 Option):</b> Giant Magneto-resistance (GMR)	
<b>Materials</b>	<b>Housing</b> Powder-coated cast aluminum <b>Tubing/Fitting/Sensor Housing</b> Brass, PVC, or 316 Stainless Steel <b>Rotor</b> PVDF (Kynar®) <b>Shaft</b> Kynar®/Tungsten Carbide (Kynar®/Ceramic or Kynar®/Silicon Carbide optional) <b>Bearings</b> Ruby jewel <b>O-Ring (15x/25x only)</b> EDPM <b>Valve Assembly for: (15x/25x only)</b>			
<b>Fitting Size Required</b>	1.5" FNPT	2" FNPT	2" FNPT	2" FNPT
<b>Maximum Pressure</b>	<b>Brass/SS:</b> 200 psi (14 bar)		<b>PVC:</b> 150 psi (10 bar)	
<b>Maximum Temperature</b>	<b>Brass/SS:</b> 200°F (93°C)		<b>PVC:</b> 130°F (55°C)	
<b>Flow Velocity</b>	0.3 to 30 ft./sec. (0.09 to 9.14 m/sec)			
<b>Accuracy</b>	±1.5% of full scale			
<b>Output Transistor Maximum Current Sinking</b>	150mA (low power version only)			
<b>Cable</b>	#22 AWG 3-con, 18' (6m); 2,000' (610m) maximum cable run <b>Note:</b> 50' (15m) maximum for battery powered or micropowered versions.			
<b>Environmental</b>	See meter mounted electronic specification for rating.			
<b>Regulatory</b>	CE Mark (applies to full power sensor only configuration and full power FT 430/440/450 mounted configurations)			

\*Specifications subject to change. Please consult our website for the most current data ([www.geotechenv.com](http://www.geotechenv.com)).

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### DIMENSIONS



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### FLOW RANGE

	3"	4"	6"	8"	10"	12"	16"	18"	24"	30"	36"	40"
GPM Min (.3ft./sec)	6.6	12	27	47	73	106	188	238	422	660	951	1,174
LPM Min (.09m/sec)	24	45.4	102	178	276	401	712	901	1597	2498	3600	4444
GPM Max (30ft./sec)	660	1200	2700	4700	7370	10600	18800	23800	42200	66000	95100	117400
LPM Max (9.1m/sec)	2498	4542	10220	17791	27898	40125	71166	90093	159744	249837	359993	444407

Approximations based on Schedule 40 pipe.

### HOW TO ORDER

	Description	Size	Material	Options (110/210)	Options (150/250)
Sensor Only	Sensor Only.	3" - 12" = IP110 12" - 40" = IP210  <b>Hot Tap</b> 3" - 12" = IP150 12" - 40" = IP250	Brass = B 316 SS = S PVC = P	Rotor with Ceramic Shaft, PVDF, Kynar® = -01 Brass Adapter Fitting 2" NPT = -02 SS Adapter Fitting 2" NPT = -02 Micropower Pickup (Required for use with FT450) = -04 Standard Power, LMI 4-Pin Connector = -06 Standard Power, Seametrics Control Connector = -07 Brass Adapter 1½" BSP = -23 SS Adapter 1½" BSP = -24 Old Style Adapter 1½" NPT = -35 *Immersible = -40 Rotor (Kynar®/Silicon Carbide Shaft) = -68 12" Extension (200 Series Only) = -72 Roytronic® Series-A 5-Pin Connector = -106	Rotor with Ceramic Shaft, PVDF, Kynar® = -01 Micropower Pickup (Required for use with FT450) = -04 Standard Power, LMI 4-pin Connector = -06 Standard Power, Seametrics Control Connector = -07 316 SS Valve Assembly = -08 No Valve Assembly = -09 *Immersible = -40 Rotor (Kynar®/Silicon Carbide Shaft) = -68 12" Extension (200 Series brass and SS Only) = -72 Roytronic® Series-A 5-Pin Connector = -106
FT430 Mounted on Sensor	Rate & total indicator with pulse, externally powered (FT430) mounted on the sensor.	3" - 12" = IP113 12" - 40" = IP213  <b>Hot Tap</b> 3" - 12" = IP153 12" - 40" = IP253	Brass = B 316 SS = S PVC = P	Rotor with Ceramic Shaft, PVDF, Kynar® = -01 Brass Adapter Fitting 2" NPT = -02 SS Adapter Fitting 2" NPT = -02 Brass Adapter 1½" BSP = -23 SS Adapter 1½" BSP = -24 Tamper Evident Kit = -32 Old Style Adapter 1½" NPT = -35 Non-resettable Total = -64 Rotor (Kynar®/Silicon Carbide Shaft) = -68 12" Extension (200 Series Only) = -72 Hinged Display Cover = -126	Rotor with Ceramic Shaft, PVDF, Kynar® = -01 316 SS Valve Assembly = -08 No Valve Assembly = -09 Tamper Evident Kit = -32 Old Style Adapter = -35 Non-resettable Total = -64 Rotor (Kynar®/Silicon Carbide Shaft) = -68 12" Extension (200 Series brass and SS Only) = -72 Dual Relay Output = -98 Hinged Display Cover = -126
DL76 Mounted on Sensor	Data logger (DL76) mounted on the sensor.	3" - 12" = IP116 12" - 40" = IP216  <b>Hot Tap</b> 3" - 12" = IP156 12" - 40" = IP256	Brass = B 316 SS = S PVC = P	Rotor with Ceramic Shaft, PVDF, Kynar® = -01 Brass Adapter Fitting 2" NPT = -02 SS Adapter Fitting 2" NPT = -02 Brass Adapter 1½" BSP = -23 SS Adapter 1½" BSP = -24 Tamper Evident Kit = -32 Old Style Adapter 1½" NPT = -35 Rotor (Kynar®/Silicon Carbide Shaft) = -68 12" Extension (200 Series Only) = -72	Rotor with Ceramic Shaft, PVDF, Kynar® = -01 316 SS Valve Assembly = -08 No Valve Assembly = -09 Tamper Evident Kit = -32 Rotor (Kynar®/Silicon Carbide Shaft) = -68 12" Extension (200 Series brass and SS Only) = -72
FT450 Mounted on Sensor¹	Rate & total indicator with pulse, battery powered (FT450) mounted on the sensor.	3" - 12" = IP117 12" - 40" = IP217  <b>Hot Tap</b> 3" - 12" = IP157 12" - 40" = IP257	Brass = B 316 SS = S PVC = P	Rotor with Ceramic Shaft, PVDF, Kynar® = -01 SS Adapter Fitting 2" NPT = -02 Brass Adapter 1½" BSP = -23 SS Adapter 1½" BSP = -24 Tamper Evident Kit = -32 Old Style Adapter 1½" NPT = -35 Non-resettable Total = -64 Rotor (Kynar®/Silicon Carbide Shaft) = -68 12" Extension (200 Series Only) = -72 Hinged Display Cover = -126	Rotor with Ceramic Shaft, PVDF, Kynar® = -01 316 SS Valve Assembly = -08 No Valve Assembly = -09 Tamper Evident Kit = -32 Old Style Adapter = -35 Non-resettable Total = -64 Rotor (Kynar®/Silicon Carbide Shaft) = -68 12" Extension (200 Series brass and SS Only) = -72 Hinged Display Cover = -126
FT440 Mounted on Sensor¹	Rate & total indicator with pulse & 4-20 mA output, loop powered (FT440) mounted on the sensor.	3" - 12" = IP119 12" - 40" = IP219  <b>Hot Tap</b> 3" - 12" = IP159 12" - 40" = IP259	Brass = B 316 SS = S PVC = P	Rotor with Ceramic Shaft, PVDF, Kynar® = -01 Brass Adapter Fitting 2" NPT = -02 SS Adapter Fitting 2" NPT = -02 Brass Adapter 1½" BSP = -23 SS Adapter 1½" BSP = -24 Tamper Evident Kit = -32 Old Style Adapter 1½" NPT = -35 Non-resettable Total = -64 Rotor (Kynar®/Silicon Carbide Shaft) = -68 12" Extension (200 Series Only) = -72 Hinged Display Cover = -126	Rotor with Ceramic Shaft, PVDF, Kynar® = -01 316 SS Valve Assembly = -08 No Valve Assembly = -09 Tamper Evident Kit = -32 Old Style Adapter = -35 Non-resettable Total = -64 Rotor (Kynar®/Silicon Carbide Shaft) = -68 12" Extension (200 Series brass and SS Only) = -72 Dual Relay Output = -98 Hinged Display Cover = -126

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

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