

### FEATURES

- No moving parts
- Durable
- Adjustable depth
- Hot-tap available
- Brass or stainless steel
- Immersibility available
- Reverse flow output available

### APPLICATIONS

- 3"- 48" pipe (up to 72" optional)
- Clean or "dirty" liquids
- Conductive liquids
- Municipal
- Industrial
- Irrigation

### GENERAL INFORMATION

The complete lack of moving parts of the **EX100/200-Series** insertion flow sensor is the source of its reliability. Brass and stainless steel models withstand a variety of temperature, pressure, and chemical conditions. The EX-Series has no rotor to stop turning in dirty water and there are no bearings to wear out. Like all magmeters, when used in chemical injection applications, these meters should be installed upstream of the chemical line (or far enough downstream to allow complete mixing of fluids before the meter).

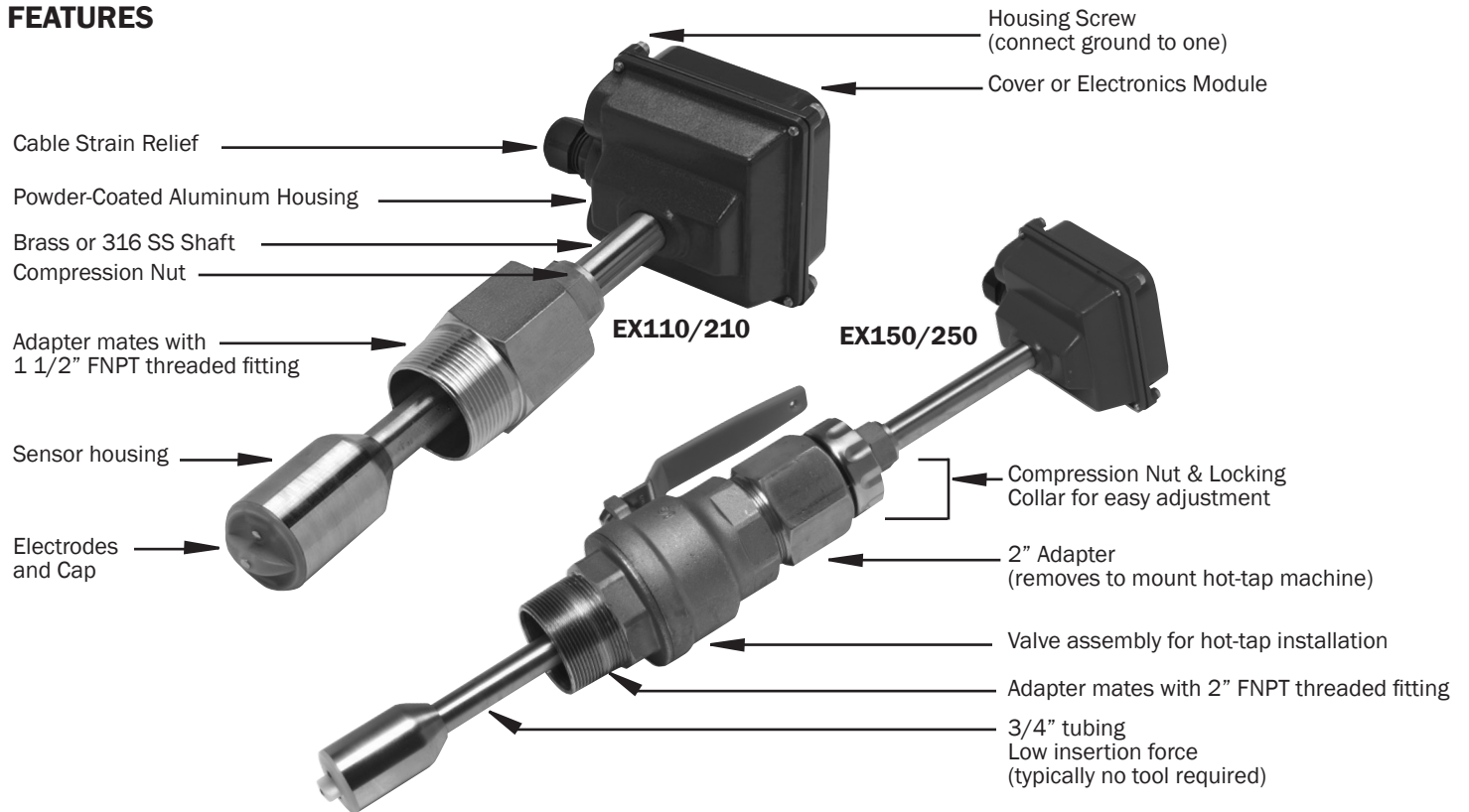
A rapidly reversing magnetic field is produced in the lower housing. As the fluid moves through this field, a voltage is generated that is measured and translated into a frequency signal proportional to flow rate. This square wave signal can be sent directly to a PLC or other control or can be converted using any of the Seametrics family of indicators and converters.

A modular system of electronics can be attached directly to the flow sensor or remotely mounted. The Seametrics FT420 provides full indication of rate and total, plus 4-20 mA output. The AO55 provides blind 4-20 mA output, and the DL76 is a battery-powered data logger.

Adapters mate with standard 1-1/2" (110/210) or 2" (150/250) FNPT threaded fittings such as saddles and weldolets which may be purchased either locally or from Seametrics. The EX150 and 250 include an isolation valve, allowing hot-tap installation, or installation and removal under pressure; a bronze ball valve is standard, with a 316 stainless steel valve option if needed.

Reverse flow output and immersibility are optional.

## FEATURES

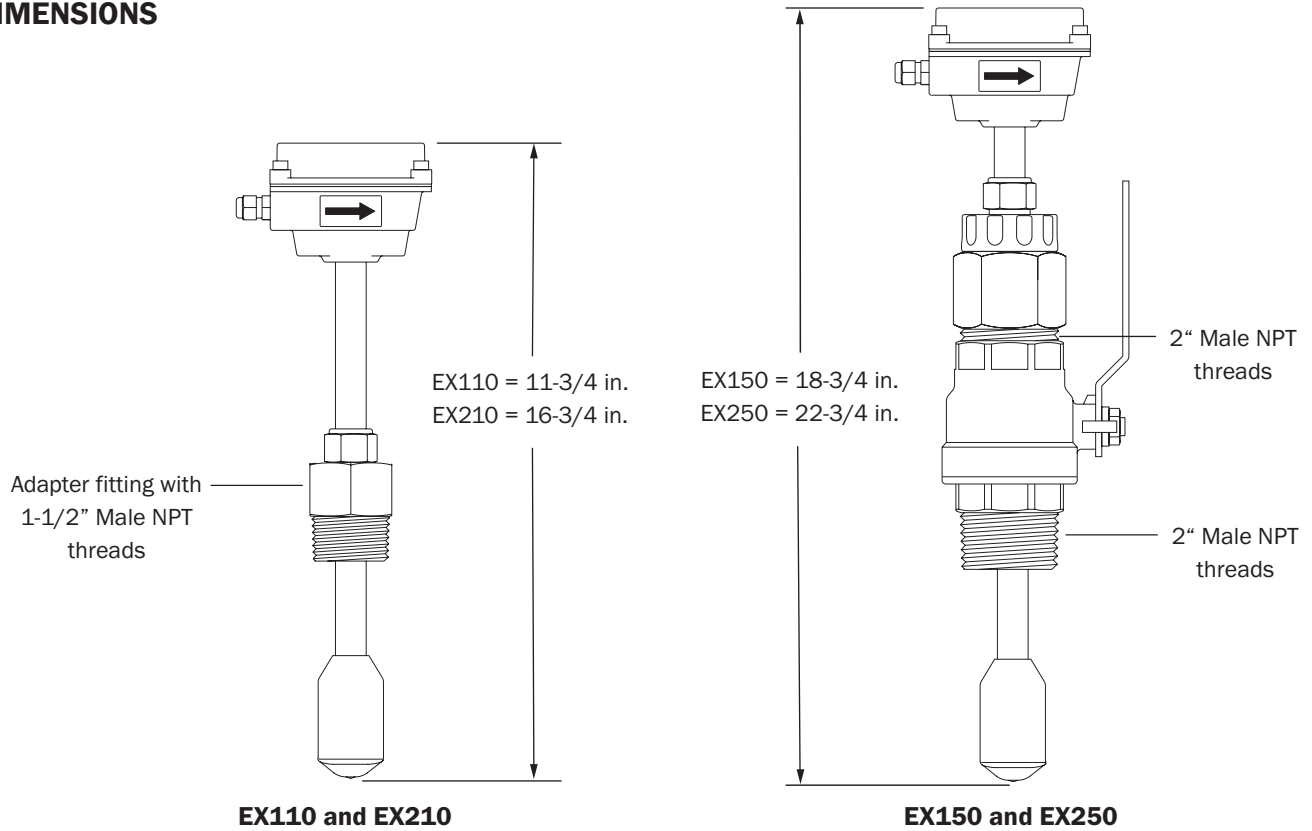


## SPECIFICATIONS\*

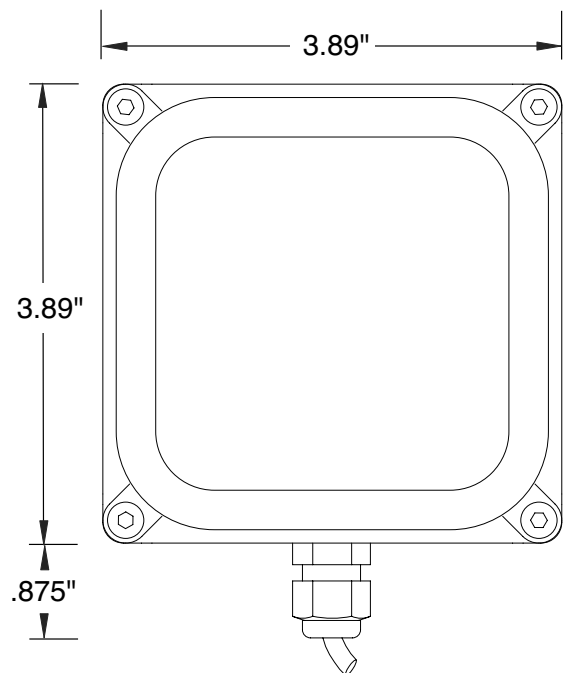
<b>Pipe Sizes</b>	3" to 48" (up to 72" optional)	
<b>Materials</b>	<b>Shaft/Fitting</b>	316 SS or Brass
	<b>Electrodes</b>	Hastelloy
	<b>Electrode Cap</b>	PVDF
	<b>Housing</b>	Cast powder-coated aluminum
	<b>Valve Assembly (115/215 Only)</b>	Bronze (stainless optional) with bronze ball valve
	<b>O-Ring (115/215 Only)</b>	EPDM
<b>Power</b>	<b>Full Power</b>	12-25 Vdc, 250 mA
	<b>Low Power</b>	12-25 Vdc, 40 mA average with 250 mA peaks
<b>Flow Range</b>	0.28 to 20 ft/sec (0.08 - 6.09 m/sec)	
<b>Fitting Size Required</b>	<b>EX110/210</b>	<b>EX150/250</b>
	1-1/2" FNPT	2" FNPT
<b>Temperature</b>	<b>Ambient</b>	0° to 160° F (-17° to 72° C)
	<b>Fluid</b>	32° to 200° F (0° to 93° C)
<b>Pressure</b>	200 psi (13.8 bar)	
<b>Minimum Conductivity</b>	20 microSiemens/cm	
<b>Calibration Accuracy</b>	+/- 1% of full scale	
<b>Output</b>	Square wave pulse, opto isolated, 550 Hz @ 20 ft/sec 6 mA max, 30 Vdc forward flow standard; reverse flow optional	
<b>Empty Pipe Detection</b>	Software, defaults to zero flow	

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

## DIMENSIONS



Flow Range (GPM)		
Nominal Pipe Size	Min. Flow	Max. Flow
3	6	440
4	11	783
6	25	1,762
8	44	3,133
10	69	4,895
12	99	7,050
14	134	9,596
16	175	12,533
18	222	15,863
20	274	19,584
24	395	28,200
30	617	44,064
36	888	63,452
48	1,580	112,804





# EX100/200-SERIES Insertion Electromagnetic Flow Sensor

## HOW TO ORDER

Sensor Only				
Description	Size	Sensor Material	Options (110/210)	Options (150/250)
Sensor Only.	3" - 10" pipe = <b>EX110</b> 10" - 48" pipe = <b>EX210</b>  Hot Tap 3" - 10" pipe = <b>EX150</b> 10" - 48" pipe = <b>EX250</b>	Brass = <b>B</b> 316 Stainless = <b>S</b>	Brass Adapter Fitting 2" NPT = <b>-02</b> SS Adapter Fitting 2" NPT = <b>-02</b> Reverse Flow Output = <b>-15</b> Brass Adapter 1 1/2" BSP = <b>-23</b> SS Adapter 1 1/2" BSP = <b>-24</b> Old Style Adapter 1 1/2" NPT = <b>-35</b> Immersible = <b>-40</b> Low Power = <b>-50</b> 12" Extension (210/250 Series Only) = <b>-72</b>	316 SS Valve Assembly = <b>-08</b> No Valve Assembly = <b>-09</b> 316 SS Valve Assembly = <b>-08</b> Reverse Flow Output = <b>-15</b> Immersible = <b>-40</b> Low Power = <b>-50</b> 12" Extension (210/250 Series Only) = <b>-72</b>
FT420 Mounted on Sensor				
Description	Size	Sensor Material	Options (111/211)	Options (151/251)
Rate & total indicator with pulse & 4-20 mA output, externally powered (FT420) mounted on the sensor.	3" - 10" pipe = <b>EX111</b> 10" - 48" pipe = <b>EX211</b>  Hot Tap 3" - 10" pipe = <b>EX151</b> 10" - 48" pipe = <b>EX251</b>	Brass = <b>B</b> 316 Stainless = <b>S</b>	Brass Adapter Fitting 2" NPT = <b>-02</b> SS Adapter Fitting 2" NPT = <b>-02</b> Reverse Flow Output = <b>-15</b> Brass Adapter 1 1/2" BSP = <b>-23</b> SS Adapter 1 1/2" BSP = <b>-24</b> Tamp Evident Kit = <b>-32</b> Old Style Adapter 1 1/2" NPT = <b>-35</b> Immersible = <b>-40</b> Low Power = <b>-50</b> Non-resettable Total = <b>-64</b> 12" Extension (210/250 Series Only) = <b>-72</b> Dual Relay Output = <b>-98</b> Hinged Display Cover = <b>-126</b>	316 SS Valve Assembly = <b>-08</b> No Valve Assembly = <b>-09</b> Reverse Flow Output = <b>-15</b> Tamp Evident Kit = <b>-32</b> Non-resettable Total = <b>-64</b> 12" Extension (210/250 Series Only) = <b>-72</b> Dual Relay Output = <b>-98</b> Hinged Display Cover = <b>-126</b>
A055 Mounted on Sensor				
Description	Size	Sensor Material	Options (112/212)	Options (152/252)
Blind 4-20 mA analog transmitter (A055) mounted on the sensor.	3" - 10" pipe = <b>EX112</b> 10" - 48" pipe = <b>EX212</b>  Hot Tap 3" - 10" pipe = <b>EX152</b> 10" - 48" pipe = <b>EX252</b>	Brass = <b>B</b> 316 Stainless = <b>S</b>	Brass Adapter Fitting 2" NPT = <b>-02</b> SS Adapter Fitting 2" NPT = <b>-02</b> Standard Power, LMI 4-pin Connector = <b>-06</b> Reverse Flow Output = <b>-15</b> Brass Adapter 1 1/2" BSP = <b>-23</b> SS Adapter 1 1/2" BSP = <b>-24</b> Old Style Adapter 1 1/2" NPT = <b>-35</b> Immersible = <b>-40</b> Low Power = <b>-50</b> 12" Extension (210/250 Series Only) = <b>-72</b> Roytronics Series-A 5-Pin Connector = <b>-106</b>	Standard Power, LMI 4-pin Connector = <b>-06</b> 316 SS Valve Assembly = <b>-08</b> No Valve Assembly = <b>-09</b> Reverse Flow Output = <b>-15</b> Low Power = <b>-50</b> 12" Extension (210/250 Series Only) = <b>-72</b> Roytronics Series-A 5-Pin Connector = <b>-106</b>
DL76 Mounted on Sensor				
Description	Size	Sensor Material	Options (116/216)	Options (156/256)
Data logger (DL76) mounted on the sensor.	3" - 10" pipe = <b>EX116</b> 10" - 48" pipe = <b>EX216</b>  Hot Tap 3" - 10" pipe = <b>EX156</b> 10" - 48" pipe = <b>EX256</b>	Brass = <b>B</b> 316 Stainless = <b>S</b>	Brass Adapter Fitting 2" NPT = <b>-02</b> SS Adapter Fitting 2" NPT = <b>-02</b> Reverse Flow Output = <b>-15</b> Brass Adapter 1 1/2" BSP = <b>-23</b> SS Adapter 1 1/2" BSP = <b>-24</b> Tamp Evident Kit = <b>-32</b> Old Style Adapter 1 1/2" NPT = <b>-35</b> Immersible = <b>-40</b> Low Power = <b>-50</b> 12" Extension (210/250 Series Only) = <b>-72</b>	316 SS Valve Assembly = <b>-08</b> No Valve Assembly = <b>-09</b> Reverse Flow Output = <b>-15</b> Tamp Evident Kit = <b>-32</b> Low Power = <b>-50</b> 12" Extension (210/250 Series Only) = <b>-72</b>
PD10 Mounted on Sensor				
Description	Size	Sensor Material	Options (118/218)	Options (158/258)
Pulse Divider (PD10) mounted on the sensor.	3" - 10" pipe = <b>EX118</b> 10" - 48" pipe = <b>EX218</b>  Hot Tap 3" - 10" pipe = <b>EX158</b> 10" - 48" pipe = <b>EX258</b>	Brass = <b>B</b> 316 Stainless = <b>S</b>	Brass Adapter Fitting 2" NPT = <b>-02</b> SS Adapter Fitting 2" NPT = <b>-02</b> LMI Pump 4-pin Connector = <b>-06</b> Reverse Flow Output = <b>-15</b> Brass Adapter 1 1/2" BSP = <b>-23</b> SS Adapter 1 1/2" BSP = <b>-24</b> Old Style Adapter 1 1/2" NPT = <b>-35</b> 10 Ft. Cable for LMI Connector = <b>-37</b> Immersible = <b>-40</b> Low Power = <b>-50</b> 12" Extension (210/250 Series Only) = <b>-72</b> Roytronics Series-A 5-Pin Connector = <b>-106</b>	LMI Pump 4-pin Connector = <b>-06</b> 316 SS Valve Assembly = <b>-08</b> No Valve Assembly = <b>-09</b> Reverse Flow Output = <b>-15</b> 10 Ft. Cable for LMI Connector = <b>-37</b> Low Power = <b>-50</b> 12" Extension (210/250 Series Only) = <b>-72</b> Roytronics Series-A 5-Pin Connector = <b>-106</b>

\*Total Units must be specified at time of order    \*\*Requires appropriate fitting.