EX800-SERIES
INSERTION ELECTROMAGNETIC FLOW SENSOR

Seametrics
Precision Flow Measurement
An ONICON Brand

APPLICATIONS

Conductive fluids

Small pipe applications (1"-12")

Industrial processes

Chemical metering pumps

Fertigation

Features

- No moving parts
- Economical
- Durable
- Easy to install
- Easy to maintain

Contact Your Supplier

EX800-Series insertion electromagnetic flowmeters are designed for use with conductive liquids in 1 to 12" pipe. A choice of materials (stainless steel, brass, and PVC) allows the meter to adapt to a range of temperature, pressure, and corrosive environments.

The EX800 is highly suitable for difficult applications with changing viscosities and pulsating flows, such as air-driven diaphragm pumps. With no moving parts, these meters can be used in "dirty water" applications where debris would foul a mechanical meter. 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).

Designed for modularity and versatility, the EX800-Series has a current-sinking pulse output that can be combined with the appropriate transmitter or indicator for the application. For basic rate/total and pulse output, the FT430 is best. For analog output and display of rate and total, the FT440 can be used. Blind analog output is provided by the AO55. The PD10 can be used to divide the pulse for pacing chemical metering pumps. Electronic modules can be wall- or meter- mounted. (Note: PD10 available only as wall-mounted unit.) If the EX800 meter is used with a programmable controller, the output signal can be fed direct, with no other conditioning required.

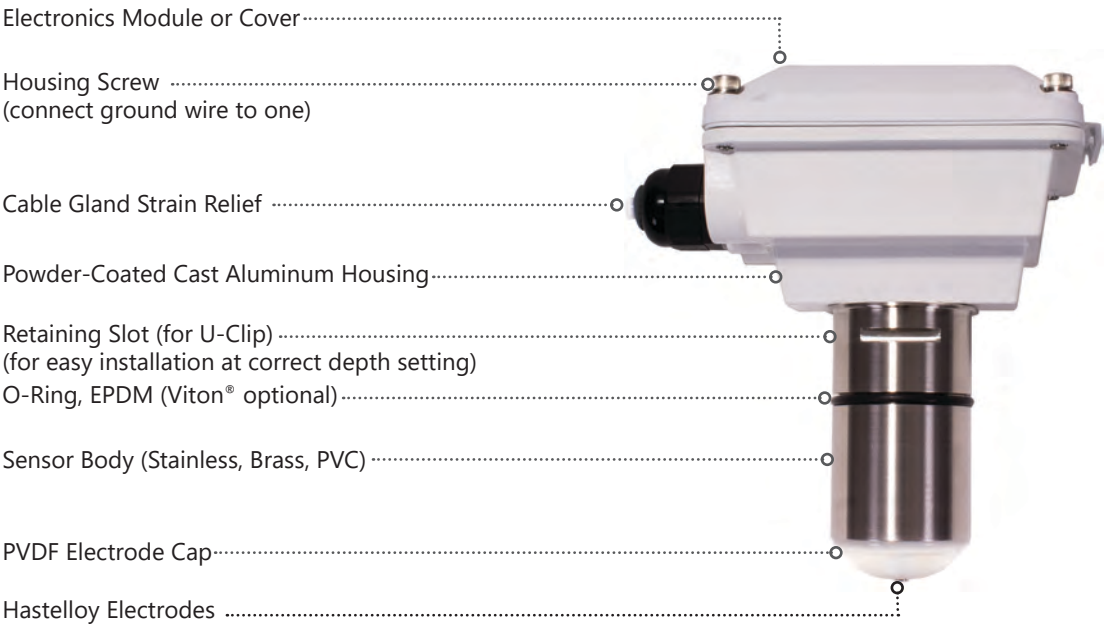
EX800-Series fixed depth insertion meters require special fittings. Factory installation in the fitting ensures correct depth placement in the pipe. The EX800-Series meter can be ordered in a full power model when a source of electricity is available, or in a low power model that can run on an external battery with solar panel.

Reverse flow output and immersibility are optional.

ISO 9001 Certified Company

Proudly Made in the USA

Features



Specifications*

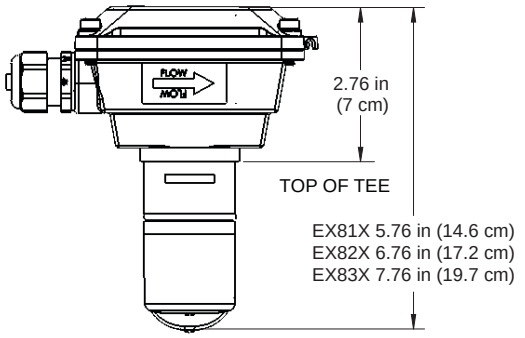
Pipe Size		1" to 12"	
Power		**Full Power:** 12 - 24 Vdc, 250mA	**Low Power:** 12 - 24 Vdc, 40mA average with 250mA peaks
Materials	**Housing**	Powder-coated cast aluminum	
	Sensor Body	316 Stainless Steel, Brass, or PVC	
	O-ring	EPDM (Viton® optional)	
	Electrodes	Hastelloy	
	Electrode Cap	PVDF (Kynar®)	
		Brass/Stainless Steel	**PVC** (See Pressure vs. Temp. Chart)
Maximum Pressure		200 psi (14 bar)	150 psi (10 bar) @ 75˚ F (24˚ C)
Temperature	**Ambient**	0˚ to 160˚ F (-17˚ to 72˚ C)	0˚ to 160˚ F (-17˚ to 72˚ C)
	Fluid	32˚ to 200˚ F (0˚ to 93˚ C)	32˚ to 130˚ F (0˚ to 55˚ C) @ 0 psi
Minimum Conductivity		20 microSiemens/cm	
Flow Velocity		0.28 to 20 ft/sec (0.08 - 6.09 m/sec)	
Accuracy		± 1% of full scale	
Output		Square wave pulse, opto-isolated, 500 Hz @ 20 ft/sec	
Empty Pipe Detection		Software, defaults to zero flow	
Cable		Standard 18' (6m), #22 shielded twisted pair, 4-conn. Max. cable run at 24 Vdc = 1000' (300m); at 12 Vdc = 500' (150m). For other circumstances, contact the factory.	
Environmental		See meter mounted electronic specification for rating.	

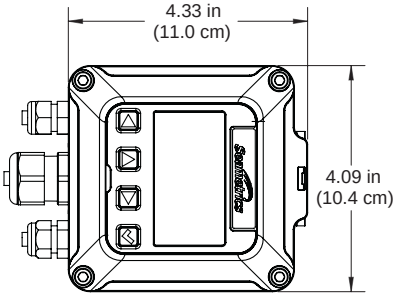
**Specifications subject to change • Please consult our website for current data (www.seametrics.com).*
Kynar is a registered trademark of Arkema, Inc., Viton is a registered trademark of DuPont Corporation.

Flow Range

Nominal Pipe Size	**1"**	**1½"**	**2"**	**3"**	**4"**	**6"**	**8"**	**10"**	**12"**
Min GPM	.69	1.5	2.7	6.2	11	25	43	68	99
Min LPM	2.6	5.6	10.2	23.4	41	94	162	257	374
Max GPM	49	110	196	440	783	1760	3130	4900	7050
Max LPM	185	416	741	1665	2963	6662	11848	18548	26687

Dimensions

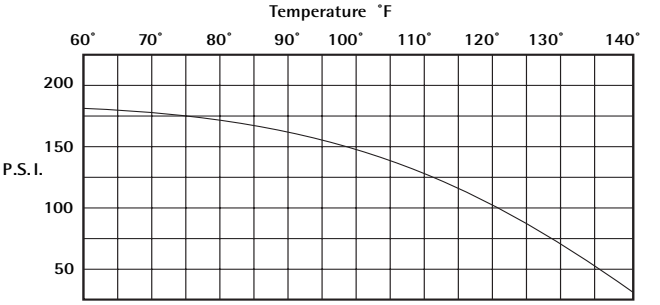




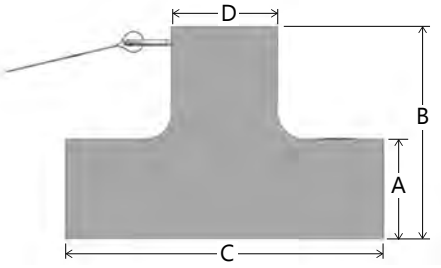
EX800-Compatible Fittings

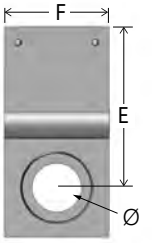
	Tee	Saddle	Weld/Braze	Sweat Tee
Bronze	1″- 4″	3″- 4″	3″- 12″	1″- 4″
PVC	1″- 2″	3″- 8″	x	x
Stainless Steel	1″- 2″	x	3″- 12″	x
Carbon Steel	1″- 2″	x	3″- 12″	x
Ductile Iron	x	3″- 12″	x	x

Pressure vs. Temperature (PVC)

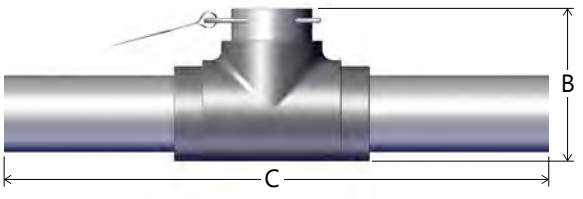


PVC Block Tee Fitting (Figure 1)





PVC Tee Fittings (Figure 2)



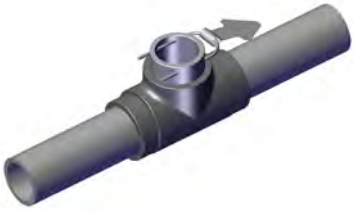


Figure	Pipe Size	A	B	C	D	E	F	Ø
1	1″	1.88″ (4.77 cm)	4.00″ (10.16 cm)	6.00″ (15.24 cm)	2.00″ (5.08 cm)	3.06″ (7.77 cm)	2.00″ (5.08 cm)	1.325″ (3.36 cm)
2	1 1/2″	—	4.50″ (11.43 cm)	19.4″ (49.28 cm) *(nominal)*	—	3.35″ (8.51 cm)	—	—
2	2″	—	4.90″ (12.45 cm)	19.9″ (50.55 cm) *(nominal)*	—	3.45″ (8.76 cm)	—	—

How to Order

	Description	Size	Sensor Material	Options
Sensor Only	Externally powered (12 - 24Vdc) sensor only.	1" - 3" = EX810 4" - 10" = EX820 12" = EX830	Brass = B 316 Stainless Steel = S PVC = P	Reverse Flow Output = -15 *Immersible = -40 Low Power Option = -50 Viton® O-Ring = -125

	Description	Size	Sensor Material	Options
AO55 Mounted on Sensor	Externally powered (12 - 24Vdc) sensor with AO55 blind 4-20mA analog transmitter mounted on the sensor.	1" - 3" = EX812 4" - 10" = EX822 12" = EX832	Brass = B 316 Stainless Steel = S PVC = P	Reverse Flow Output = -15 Low Power Option = -50 Viton® O-Ring = -125

	Description	Size	Sensor Material	Options
FT430 Mounted on Sensor	Externally powered sensor (12 - 24Vdc) with FT430 rate and total indicator (with pulse outputs) mounted on the sensor.	1" - 3" = EX813 4" - 10" = EX823 12" = EX833	Brass = B 316 Stainless Steel = S PVC = P	Reverse Flow Output = -15 Tamper Evident Kit = -32 Low Power Option = -50 Non-resettable Total = -64 Dual Relay Output = -98 Viton® O-Ring = -125 Hinged Display Cover= -126

	Description	Size	Sensor Material	Options
DL76 Mounted on Sensor	Externally powered sensor (12 - 24Vdc) with self powered DL76 data logger mounted on the sensor.	1" - 3" = EX816 4" - 10" = EX826 12" = EX836	Brass = B 316 Stainless Steel = S PVC = P	Reverse Flow Output = -15 Tamper Evident Kit = -32 Low Power Option = -50 Viton® O-Ring = -125

	Description	Size	Sensor Material	Options
FT440 Mounted on Sensor	Externally powered sensor (12 - 24Vdc) with FT440 rate and total indicator (with pulse and 4-20mA outputs) mounted on the sensor.	1" - 3" = EX819 4" - 10" = EX829 12" = EX839	Brass = B 316 Stainless Steel = S PVC = P	Reverse Flow Output = -15 Tamper Evident Kit = -32 Low Power Option = -50 Non-resettable Total = -64 Dual Relay Output = -98 Viton® O-Ring = -125 Hinged Display Cover= -126

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