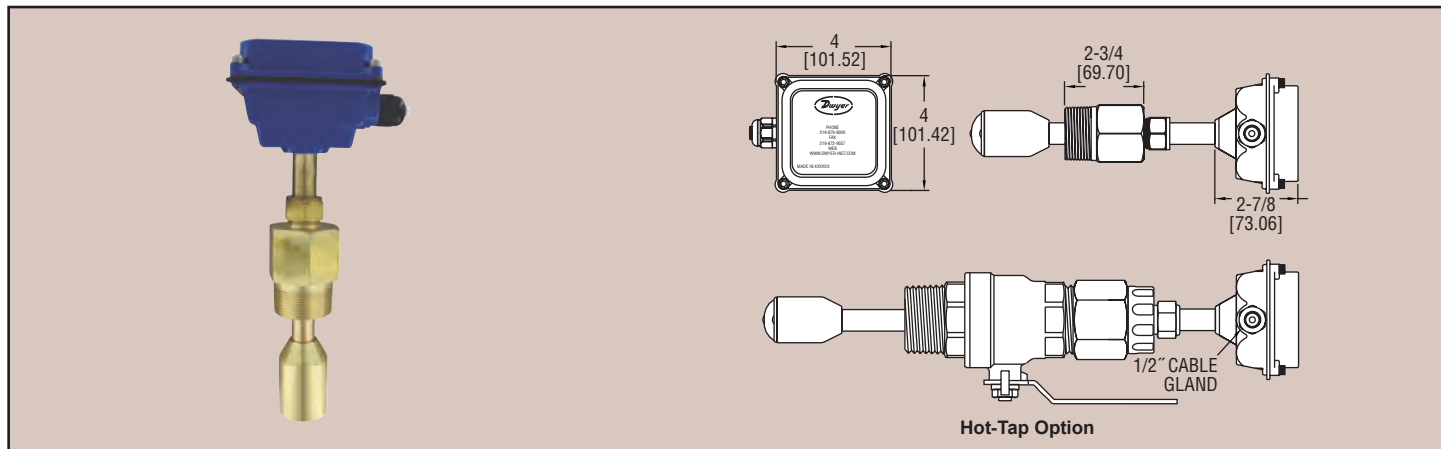




Series  
IEFS

# Insertion Electromagnetic Flow Sensor

No Moving Parts, Hot-Tap Option, 3 to 48" Field Adjustable Insertion



The Series IEFS Insertion Electromagnetic Flow Sensor comes in brass or stainless steel allowing it to handle a wide range of pressures and temperatures, as well as a variety of available saddle fittings, Series SDF, to fit pipe sizes 3 to 24". The IEFS-1XX has an isolation valve which allows hot-tap installation. Additional options for this flow meter include adapter fittings and a reverse flow output. The Series IEFS is great for "dirty" water applications or any application where moving parts may be an issue.

## PRINCIPLE OF OPERATION

The IEFS is a liquid flow meter that uses a magnetic field to measure flow. As conductive fluids flow through the magnetic field, a voltage is generated which is measured and translated into a pulse frequency output signal. This signal can then be used with the Series BAT to produce a 4 to 20 mA analog signal, or the Series RTI to display rate and total.

## APPLICATIONS

- Conductive Liquids
- Municipal
- Industrial
- Irrigation

## ACCESSORIES

- Series BAT, Blind Analog Transmitter, converts pulse output to 4 to 20 mA analog output. Unit is loop powered, fits on the enclosure of the meter, and is field spannable.
- Series RTI, Rate Total Indicator, converts pulse output to 4 to 20 mA analog output with local flow rate and totalization display. Unit is loop powered, can fit on the enclosure of the meter, and provides a high/low flow alarm.
- Series PWD, Pulse Divider, for use with pacing electronic metering pumps. Unit divides the input frequency to any number from 1 to 9999 with the use of rotary switches to suit a number of metering pump inputs.

## SPECIFICATIONS

**Service:** Compatible clean or dirty non-coating, conductive liquids.

**Range:** 0.28 to 20 ft/s (0.08 to 6.09 m/s).

### Wetted Materials:

- Body Shaft/Fitting: 316 SS or brass;
- Electrodes: Hastelloy®;
- Electrode Cap: PVDF;
- Valve Assembly: (IEFS-1XX) Bronze (SS optional) with bronze ball valve;
- O-ring: EPDM.

**Accuracy:** ±1% FS.

### Temperature Limits:

- Process: 32 to 200°F (0 to 93°C);
- Ambient: 0 to 160°F (-17 to 72°C).

### Process Connection:

- IEFS-0XX: 1-1/2" male NPT;
- IEFS-1XX: 2" male NPT.

**Pressure Limit:** 200 psi (13.8 bar).

**Output:** Current sinking, square wave pulse, opto-isolated, 550 Hz @ 20 ft/s, 30 VDC @ 6 mA max.

**Power Requirements:** 12 to 25 VDC @ 250 mA; Low Power: 12 to 25 VDC @ 40 mA.

**Electrical Connection:** Terminal block.

**Conductivity:** ≥ 20 microSiemens/cm.

**Enclosure Material:** Housing: Die-cast powder-coated aluminum.

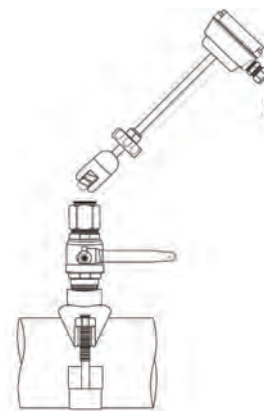
**Enclosure Rating:** NEMA 4X (IP66).

### Weight:

- IEFS-0SX: 6 lb (2721 g);
- IEFS-0LB: 12 lb (5443 g);
- IEFS-1XX: 15 lb (6804 g).

Example	IEFS	OSB	BAF	IEFS-DSB-BAT		
Series IEFS	IEFS			Insertion Electromagnetic Flow Sensor		
Size/Material				Size	Hot-Tap	Material
		OSB		3 to 10"	No Hot-Tap	Brass
		OSS		3 to 10"	No Hot-Tap	SS
		OLB		10 to 48"	Hot-Tap	Brass
		OLS		10 to 48"	Hot-Tap	SS
		1SB		3 to 10"	No Hot-Tap	Brass
		1SS		3 to 10"	No Hot-Tap	SS*
		1LB		10 to 48"	Hot-Tap	Brass
		1LS		10 to 48"	Hot-Tap	SS*
Options				2" Brass Adapter Fittings (IEFS-0XX only)		
				2" SS Adapter Fittings (IEFS-0XX only)		
				316 SSS Valve Assembly (IEFS-1XX only)		
				No Valve Assembly (deduct price) (IEFS-1XX only)		
				Reverse Flow Output		
				1-1/2" Brass BPT Adapter (2 piece) (IEFS-0XX only)		
				1-1/2" SS BPT Adapter (2 piece) (IEFS-0XX only)		
				Immersible (Urethane potted electrical components)		
				Low Power (12 to 25 VDC @ 40 mA)		
				12" Extension (IEFS-XLX only)		

\*SS is stem and fitting. For SS valve order SVA option.



Hot-Tap Option  
(Shown installed on pipe)

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