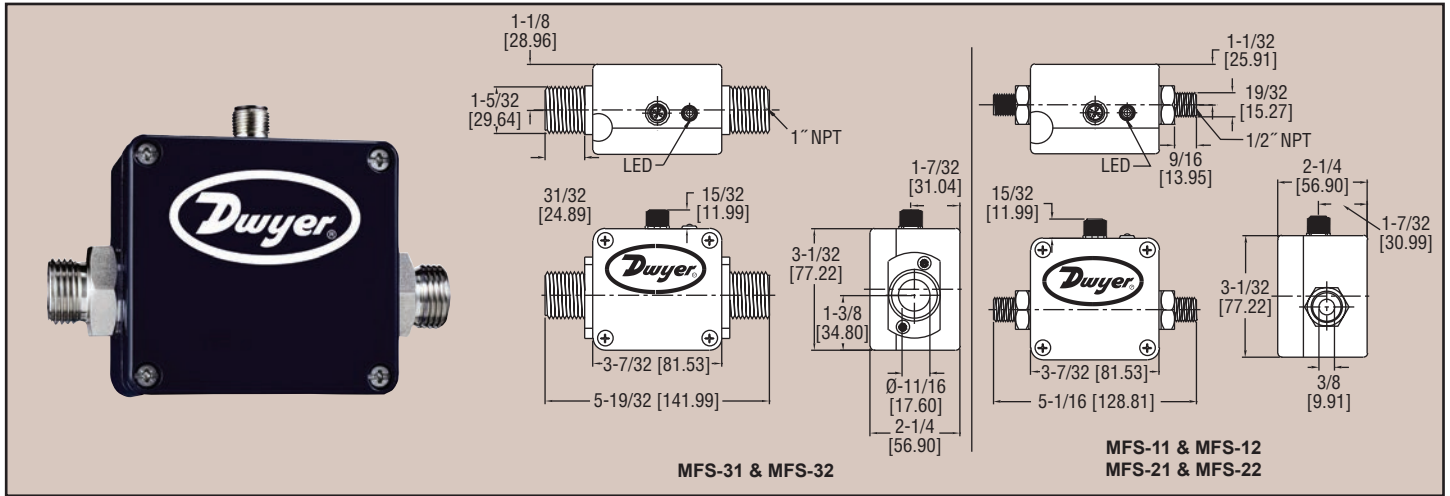




Series
MFS

Magnetic Inductive Flow Sensor

No Moving Parts, Frequency and 4 to 20 mA Output, Maintenance-Free



Series MFS Magnetic Inductive Flow Sensor is a compact, low cost alternative to paddle wheel sensors. Unlike sensors with moving parts, the MFS can be applied in applications dealing with contaminated media. This series provides a reliable measuring technique, an obstruction free pipe cross-section, as well as a quick response time, making this series ideal for interference free operation. Any change in temperature, density, viscosity, concentration or electrical conductivity of the liquid, does not affect the output signal of this Magnetic Inductive Flow Sensor. This, in addition to its long-life cycle, makes this series perfect for accurate reversible gauging of volume flow of conductive liquids in closed piping.

PRINCIPLES OF OPERATION

The measuring pipe is in a magnetic field. If an electrically conductive medium with a certain flow passes through the pipe, it passes at a right-angle to the magnetic field, creating a voltage which is proportional to the average flow velocity and picked up by two electrodes within the MFS. A frequency output signal is obtained that is proportional to the flow (analog output option available).

FEATURES

- No moving parts
- No mechanical wear
- Maintenance-free

SPECIFICATIONS

Service: Water and other conductive liquids.

Wetted Materials:

- Electrodes: 316 TI SS;
- Process Connections: 316 TI SS;
- Measuring Pipe: PEEK-GF30;
- Gasket: EPDM.

Accuracy: ±2% of reading.

Repeatability: 1%.

Temperature Limits:

- Process: 32 to 194°F (0 to 90°C);
- Ambient: 41 to 158°F (5 to 70°C).

Pressure Limits: 232 psi (16 bar).

Response Time: < 500 ms.

Power Requirements: 24 VDC ±10%.

Output: Frequency: Square-wave, NPN; Analog: 4 to 20 mA.

Loop Resistance: 250 Ω.

Current Consumption: Max 80 mA.

Minimum Conductivity of Medium: 50 µS/cm.

Flow Indication: LED green, flow proportional blinking.

Enclosure Rating: NEMA 4 (IP65).

Process Connection: See model chart.

Electrical Connection: Plug connector M12x1.

Weight:

- MFS-1X: 1.5 lb (0.68 kg);
- MFS-2X: 1.7 lb (0.77 kg);
- MFS-3X: 1.9 lb (0.87 kg).

Agency Approval: CE.

Model	Range GPM (LPM)	Minimum Output Signal GPM (LPM)	Process Connection	Output
MFS-11	0.25 to 5.3 (1 to 20)	0.13 (0.5)	1/2" NPT	Frequency
MFS-21	0.5 to 10.5 (2 to 40)	0.25 (1)	1/2" NPT	Frequency
MFS-31	2.5 to 52.8 (10 to 200)	1.3 (5)	1" NPT	Frequency
MFS-12	0.25 to 5.3 (1 to 20)	0.13 (0.5)	1/2" NPT	Frequency & Analog
MFS-22	0.5 to 10.5 (2 to 40)	0.25 (1)	1/2" NPT	Frequency & Analog
MFS-32	2.5 to 52.8 (10 to 200)	1.3 (5)	1" NPT	Frequency & Analog

ACCESSORIES

MFS-C3, 4 Pin Cable Socket M12x1 Connect, 9.8 ft (3 m)

MFS-C5, 4 Pin Cable Socket M12x1 Connect, 16.4 ft (5 m)

MFS-C10, 4 Pin Cable Socket M12x1 Connect, 32.8 ft (10 m)



FLOW

Flow Transmitters,
Electromagnetic, In-Line