

# MG Series Electromagnetic Insertion Flow Sensor

## Specifications

### General Information

The MG is an insertion electromagnetic flowmeter for use with conductive liquids in pipe sizes 1" to 8". With no moving parts, it is highly suitable for corrosive environments and for difficult applications such as those involving changing viscosities and pulsating flows. It is particularly recommended for metering the output of air-driven diaphragm pumps.

Designed for modularity and versatility, the MG has a current-sinking pulse output, which can be combined with the appropriate transmitter or indicator depending on the application. For analog output and display of rate and total, an FT420 can be used. For analog only, the AO55 can be mounted directly onto the meter.

The MG requires a special fitting. Installation in the fitting ensures correct depth placement in the pipe. Fittings and sensors are available in PVC, brass, and stainless steel.

### SPECIFICATIONS

#### POWER

- 12 - 24 Vdc, 250 mA minimum

#### FLOW RANGE

- 0.2 - 20 ft/sec (.06 - 6.09 m/sec)

#### MAXIMUM TEMPERATURE

- PVC 130° F (55° C)
- Brass, SS 200° F (93° C)

#### PRESSURE

- 200 psi (13.8 bar)

#### MINIMUM CONDUCTIVITY

- 20 microsiemens/cm

#### MATERIALS

- Mechanical 316 SS/Brass/PVC
- Electrodes Hastelloy
- Electrode plate PVDF
- Housing Cast powder-coated aluminum

#### O-RINGS

- EPDM, Viton, Buna & NBR Gaskets

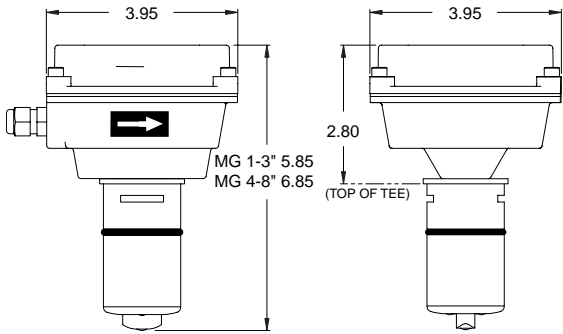
#### CALIBRATION ACCURACY

- 1% of full scale

#### OUTPUT

- Square wave pulse, opto isolated, 500 Hz @ 20 ft/sec

## DIMENSIONS



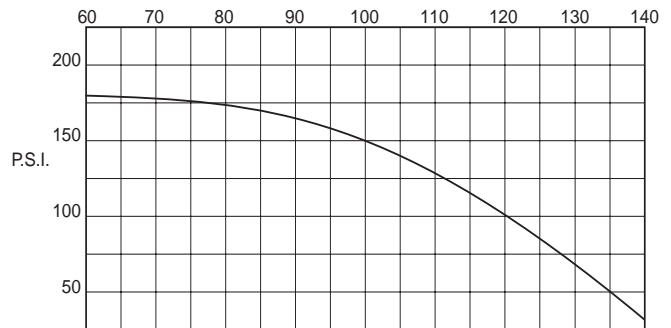
## FITTINGS AVAILABILITY

	Tee	Saddle	Sweat Tee
Bronze	1-4"	3-4"	1-4"
PVC	1-4"	3-8"	x
Polypro	x	3-8"	x
Stainless Steel	1-2"	x	x
Carbon Steel	1-2"	x	x
Ductile Iron	x	3-8"	x

## FLOW RANGE (GPM)

	1"	1-1/2"	2"	3"	4"	6"	8"
• Min	.54	1.3	2	4.5	8	18	31
• Max	54	127	209	461	794	1800	3120

## PVC WORKING PRESSURE VS. TEMPERATURE



**HOW TO ORDER** Select appropriate symbols and build a model code number, as in example shown:

**MG - B - 1 - F - E - FT420 - M**

### SERIES

Electromagnetic = **MG**

### SENSOR MATERIAL

Brass = **B**  
PVC = **P**  
316 Stainless Steel = **S**

### PIPE SIZE AND FITTING TYPE

PIPE SIZE	AND	FITTING TYPE	
1	= 1 inch	1 inch -Female Sweat Bronze	= F
		1 inch -Female threaded 304 Stainless Steel	= T
		1 inch -Female threaded Bronze	= N
		1 inch -Female threaded Carbon Steel	= C
		1 inch -Male stub end CPVC	= V
		1 inch -Male stub end PVC	= P
1.5	= 1 1/2 inch	1 1/2 inch -Female Sweat Bronze	= F
		1 1/2 inch -Female threaded 304 Stainless Steel	= T
		1 1/2 inch -Female threaded Bronze	= N
		1 1/2 inch -Female threaded Carbon Steel	= C
		1 1/2 inch -Male stub end CPVC	= V
		1 1/2 inch -Male stub end PVC	= P
2	= 2 inch	2 inch -Female Sweat Bronze	= F
		2 inch -Female threaded 304 Stainless Steel	= T
		2 inch -Female threaded Bronze	= N
		2 inch -Female threaded Carbon Steel	= C
		2 inch -Male stub end CPVC	= V
		2 inch -Male stub end PVC	= P
3	= 3 inch	3 inch -Female Sweat Bronze	= F
		3 inch -Female threaded Bronze	= N
		3 inch-Saddle Bronze	= E
		3 inch-Saddle Ductile Iron	= D
		3 inch-Saddle Polypro	= R
		3 inch-Saddle PVC	= P
4	= 4 inch	4 inch -Female Sweat Bronze	= F
		4 inch -Female threaded Bronze	= N
		4 inch-Saddle Bronze	= E
		4 inch-Saddle Ductile Iron	= D
		4 inch-Saddle Polypro	= R
		4 inch-Saddle PVC	= P
6	= 6 inch	6 inch-Saddle Ductile Iron	= D
		6 inch-Saddle Polypro	= R
		6 inch-Saddle PVC	= P
8	= 8 inch	8 inch-Saddle Ductile Iron	= D
		8 inch-Saddle Polypro	= R
		8 inch-Saddle PVC	= P

### O-RING

EPDM = **E**  
Viton = **F**

### CONTROL BOX

FT420  
AO55

### MOUNTING

On Meter = **M**  
Wall Mount = **W**



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