



# INSERTION MAGNETIC FLOWMETER

FMG3000 Series  
Starts at

£489



- ✓ For 0.5 to 8" Pipes
- ✓ No Moving Parts
- ✓ Flow-Rate Range: 0.05 to 5 m/s (0.15 to 16.4 ft/s)
- ✓ Accurate Measurement Even in Dirty Liquids
- ✓ Multi-language Menu Display
- ✓ Blind 4 to 20 mA or Frequency Output Also Available
- ✓ No Pressure Drop
- ✓ Corrosion-Resistant Materials: PP or PVDF

The FMG3000 Series magmeters are insertion-style magnetic flow sensors with no moving parts. All models are constructed of corrosion-resistant materials to provide long-term reliability with minimal maintenance costs. When these magmeters are used with OMEGA's comprehensive line of installation fittings, sensor alignment and insertion depth are automatic. Fittings are required for installation. Please refer to pages H-15 and H-16.

These versatile, simple-to-install flowmeters deliver accurate flow measurement over a wide dynamic range in pipe sizes ranging from DN15 to DN200 (0.5 to 8"), satisfying the requirements of many diverse applications. FMG3000 Series magmeters offer a variety of output options for use with OMEGA flow instrumentation that has a frequency or 4 to 20 mA output. Flow velocity measurement is compensated for temperature via an integrated temperature sensor.

## SPECIFICATIONS

### Performance

**Linearity:**  $\pm 1\%$  rdg  $\pm 0.01$  m/s (0.033 ft/s)

**Repeatability:**  $\pm 0.5\%$  of rdg @ 25°C (77°F)

FMG3002-PP-D, £929,  
shown approximately  
actual size.



FMG3002, £490, shown smaller than actual size, with FP-5310 fitting, £110, see page H-15.

**Minimum Conductivity:** 20  $\mu$ S/cm  
**Pipe size range:** DN15 to DN 200 (0.5 to 8")

**Flow Range:** 0.05 m/s (0.15 ft/s) to 5 m/s (16.4 ft/s)

**Wetted Materials**  
**Sensor Body/Electrodes and Grounding Ring:**

**PP:** Polypropylene/316L SS

**PVDF:** PVDF/316L SS (Hastelloy)

**O-Rings:** FPM (Viton®) standard

**Other Materials:**

**Case:** PBT

**Protection Rating:** NEMA 4X (IP65)

### Power Requirements

**4 to 20 mA:** 21.6 to 26.4 Vdc, 22.1 mA max

**Frequency:** 4.5 to 26.4 Vdc, 15 mA max.  
Reverse polarity and short circuit protected

### Output Specifications

**Current Output (4 to 20 mA):**

**Loop Accuracy:** 32  $\mu$ A max error (25°C @ 24 Vdc)



**Isolation:** Low voltage <48 Vac/Vdc from electrodes and auxiliary power

### Display (Optional):

**Characters:** 2 x 16

**Window:** Polyamide

**SPDT Relay:** 5 A @ 30 Vdc max, 5 A @ 250 AC max

**Solid State Relay:** 50 mA @ 30 Vdc, 50 mA @ 42 Vac

**Maximum Cable:** 300 m (1000')

**Error Condition:** 22.1 mA

**Max Loop Resistance:** 300  $\Omega$

### Frequency Output:

**Max Pull-Up Voltage:** 30 Vdc

**Max Current Sink:** 50 mA, current limited

**Maximum Cable:** 300 m (1000')

### Environmental Requirements

**Storage Temperature:** -20 to 70°C (-4 to 158°F)

**Relative Humidity:** 0 to 95% (non-condensing)

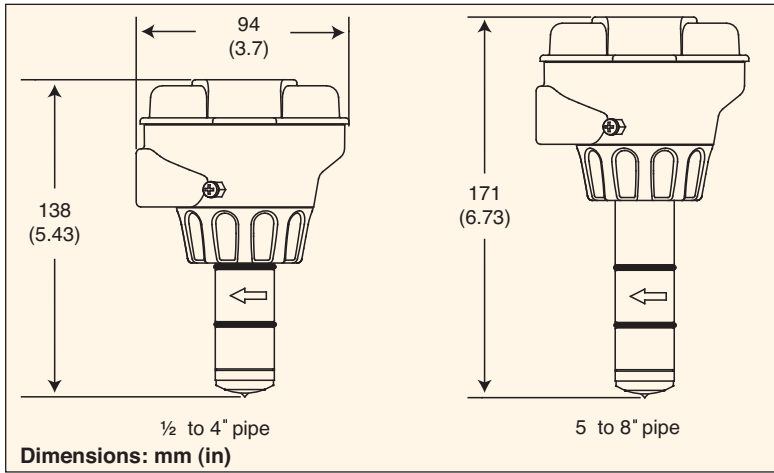
### Operating Temperature:

**Ambient:** -10 to 70°C (14 to 158°F)

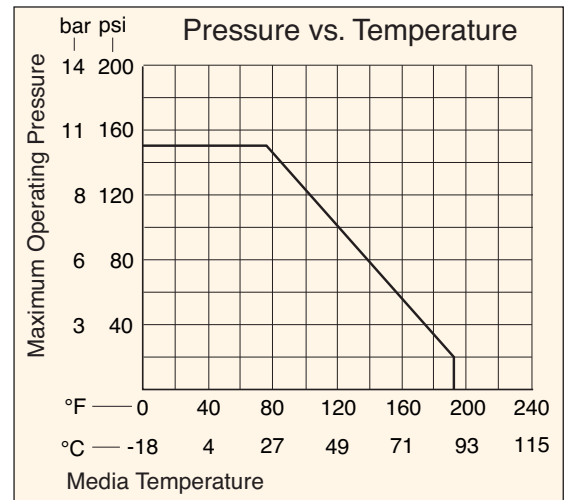
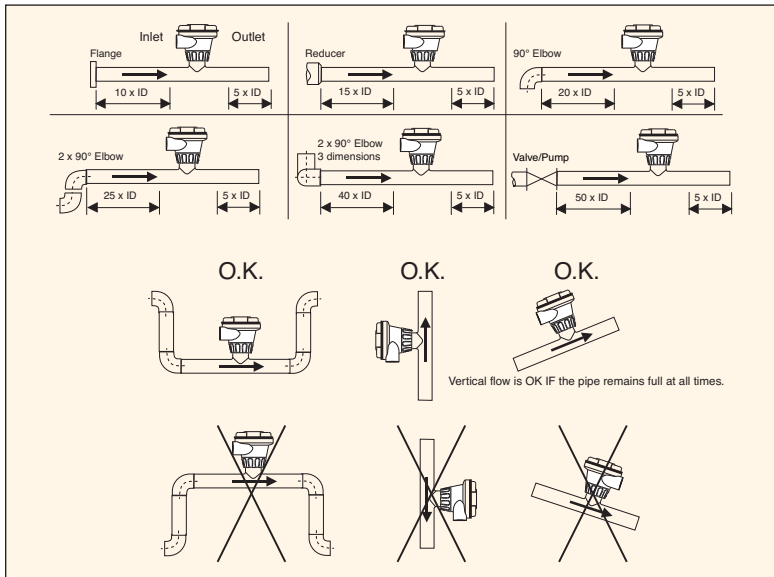
**Media:** 0 to 85°C (32 to 185°F)

**Max Operating Pressure:** 10.3 bar @ 25°C (150 psi @ 77°F), 1.4 bar @ 85°C (20 psi @ 185°F)

**Standards and Approvals:** CE, IP65 (NEMA 4X)



FMG3002, £490, shown smaller than actual size.



**MOST POPULAR MODELS HIGHLIGHTED!**

### To Order (Specify Model Number)

Model No. (no display)	Price	Model No. (display)	Price	Wetted Materials	Pipe Size (in)	Output**
FMG3001-PP	£490	FMG3001-PP-D	£876	Polypropylene/316L SS	0.5 to 4	Frequency
FMG3002-PP	490	FMG3002-PP-D	929	Polypropylene/316L SS	0.5 to 4	4 to 20 mA
FMG3001-PVDF	510	FMG3001-PVDF-D	898	PVDF/316L SS	0.5 to 4	Frequency
FMG3002-PVDF	510	FMG3002-PVDF-D	951	PVDF/316L SS	0.5 to 4	4 to 20 mA
FMG3101-PP	504	FMG3101-PP-D	890	Polypropylene/316L SS	5 to 8	Frequency
FMG3102-PP	504	FMG3102-PP-D	943	Polypropylene/316L SS	5 to 8	4 to 20 mA
FMG3101-PVDF	524	FMG3101-PVDF-D	912	PVDF/316L SS	5 to 8	Frequency
FMG3102-PVDF	524	FMG3102-PVDF-D	965	PVDF/316L SS	5 to 8	4 to 20 mA

\*\* Display units also include 3 relays: 2 SPDT and 1 solid state.

Comes with complete operator's manual.

For Hastelloy electrodes add "-HA" to any 'PVDF' model and £155 to the price.

\*For larger sizes consult engineering.

**Ordering Examples:** FMG3102-PP, polypropylene/316L SS magmeter with 4 to 20 mA output, FP-5360S, 6" PVC saddle fitting (page H-15), £504 + 142 = £646. FMG3002-PVDF, PVDF/316L SS magmeter with 4 to 20 mA output, FMG-5310, 1" 316 SS fitting (page H-15), CNi833, controller (page M-43), £510 + 224 + 208 = £944.

### Accessories

Model No.	Price	Description
FMG3000-VO	£2	FPM (Viton®) O-ring
FMG3000-EO	4	EPR (EPDM) O-ring
FMG3000-KO	88	FFPM (Kalrez®) O-ring
CNi833	208	½ DIN controller with relay outputs, accepts 4 to 20 mA inputs
DPF702	175	½ DIN frequency input meter for rate or total. 230Vac Powered
FW-202	250	Reference Book: The Consumer Guide to Magnetic Flowmeters





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