INSERTION MAGMETER

FMG2552

$3100

Basic Unit

MADE IN USA · 1 YEAR WARRANTY · NIST

- **Up to 2% of Reading Accuracy**
- **Software-Based Noise Rejection Routines**
- **NEMA-4/IP65 Enclosure**
- **100% Keypad Calibration**
- **Standard Isolated Current Output, Fully Programmable and Open Collector Frequency Output**
- **High Input Impedance Reduces Coating Problems**
- **LCD Display for Local Readout and Control**
- **One Size Fits Pipes From 2 to 12"**

The latest in bipolar pulsed dc technology and the best features of an insertion sensor are packed into the FMG2552 insertion magmeter. Simple installation, easy maintenance, and state-of-the-art microprocessor technology make the FMG2552 the best alternative to traditional full-line magmeters.

The FMG2552 is based on the Faraday principle, and provides output signals proportional to flowrate. With automatic temperature compensation, the result is linear within ±2% of actual flowrate and repeatable within ±0.5% of the full range.

The bipolar electronic design and the 10000 MΩ input impedance reduce galvanic formation on the electrodes and minimize coating problems.

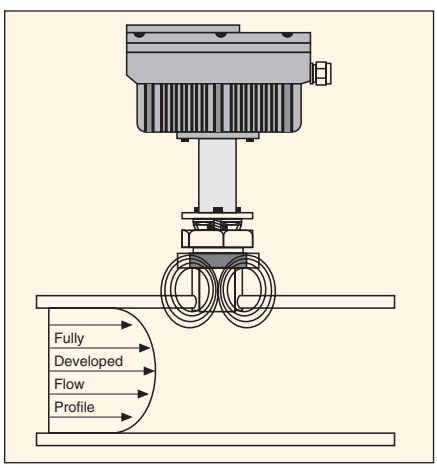
The FMG2552 generates an isolated current output and an isolated frequency output.

The current output provides a universal signal to recorders, valves, and a host of process control and data acquisition devices.

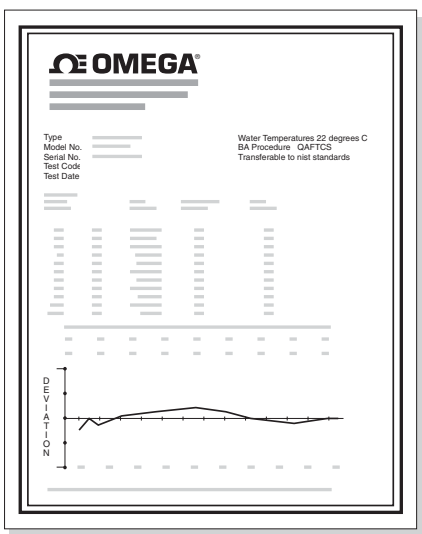
FMG2552 magmeter,$3100. DPF701, $260, sold separately, see page H-9.

Shown smaller than actual size.

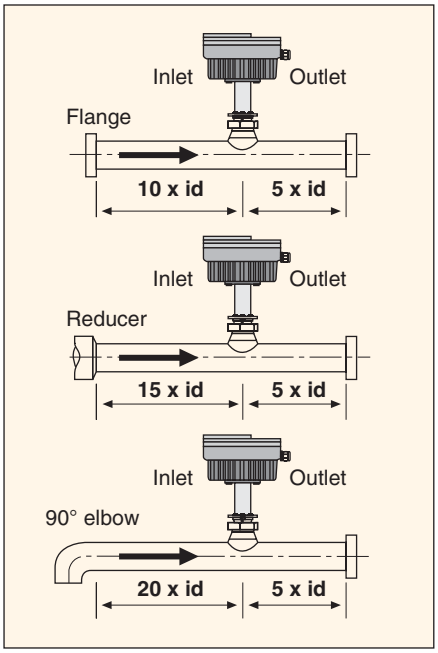
The open collector frequency output is compatible with OMEGA® DPF700, panel meters, see page H-9.



Faraday's Principle: Movement of a conductive fluid through a magnetic field generates a perpendicular electromotive force proportional to its velocity.



Every FMG2552 magmeter is thoroughly tested and certified in an automated NIST traceable flow loop. A detailed calibration certificate is supplied with each instrument, including linearity and repeatability test data.



SPECIFICATIONS

Materials

Enclosure: Die-cast aluminum
Sensor Body: 316 stainless steel
Sensor Tip: PFA Teflon®
Electrodes: 316 stainless steel
Threaded Nut: 316 stainless steel
Retaining Ring: 316 stainless steel
O-ring: FPM Viton®

Electrical Data

Power Requirements:
24 Vdc ±10%, ≤600 mA
Magnetic Field: Bipolar dc
Input Signal Impedance: >10000 MΩ

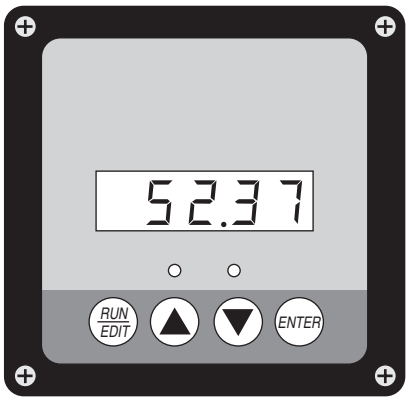
Ambient Conditions

Relative Humidity:
100%, non-condensing
Fluid Temperature:
0 to 100°C (32 to 212°F)
Minimum Fluid Conductivity: 5 µS/cm
Ambient Temperature:
-20 to 80°C (-4 to 176°F)
Maximum Operating Pressure:
250 psi/17 bar

General Data

Flow Velocity Range:
0.3 to 20 ft/sec or 0.1 to 6 m/sec
Pipe Range: 51 to 305 mm (2 to 12"), metal or plastic
Accuracy: ±2% of reading or ±0.05 ft/sec, whichever is greater
Temperature Coefficient:
≤0.008% per °F/≤0.015% per °C
Display: LCD, 4-digit, 8.9 mm (0.35") with adjustable decimal point
Current Output: Isolated, 4 to 20 mA or 0 to 20 mA, into 600Ω maximum load, using internal power
Frequency Output:
Isolated, open collector 50% duty cycle, 500 Hz = 20 ft/s
Weight: 5 kg (11 lb)

Some piping systems may require a straight run of more than 20 x id to establish a fully developed turbulent flow profile



Operation

Four steel-domed tactile keys and an LCD display provide fingertip control of all calibration, operation and display functions.

- Six engineering unit display options:

GPM	LPM
l/sec	m^3/h
ft/sec	m/sec

- Pipe id entry yields accurate performance even in non-standard pipe sizes
- Alternate calibration method for volumetric or comparison calibration
- Both calibration values are always available through menu options
- Pre-set security code prevents unauthorized tampering with settings
- Two LED indicators give instant visual operating status: green for normal operation, flashing red for system error
- Fluid diagnostic features that indicate excessive turbulence and noise in the fluid

Simple Installation

The FMG2550 installs into standard fittings with 2 in. NPT or ISO 7/1-R2 threads. Select a location where the flow profile is fully developed and not affected by any disturbances.

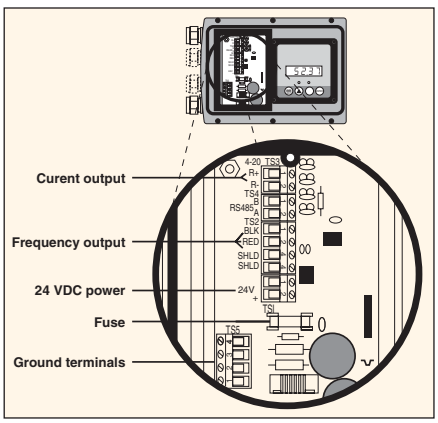
Mount the FMG2550 at any convenient angle, taking care to avoid any air pockets at the top of the pipe. A special installation tool insures that the FMG2550 is properly mounted. The display panel can be rotated 360° for the best viewing angle.

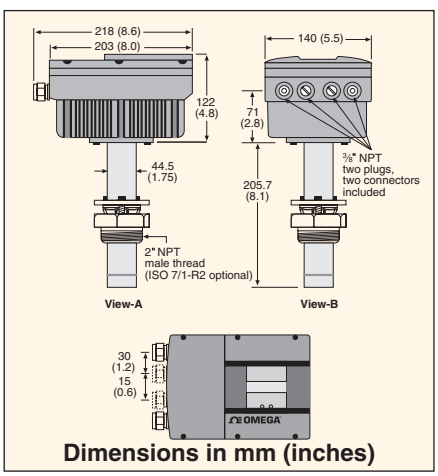
Wiring

All wiring to the FMG2550 is made through four cable ports. The unit is supplied with two liquid-tight connectors which accommodate cables from 3.18 to 4.75 mm (0.125 to 0.187") in diameter.

Power and signal cables should be separated for best performance.

The FMG2550 provides a separate terminal dedicated to grounding requirements. TS5, with four terminals, is chassis and fluid ground.





Dimensions in mm (inches)

AVAILABLE FOR FAST DELIVERY!

To Order
(Specify Model Number)

Model No.	Price	Description
FMG2552	$3100	Magmeter with NPT fitting

Comes with complete operator's manual and NIST certificate.

Ordering Example: FMG2552, *magmeter with NPT fitting, plus* ***FMG255-F,*** *liquid-tight cable port, $3100 + 18 =* ***$3118.***

Accessories and Spare Parts

Model No.	Price	Description
FMG255-T	$95	Installation tool
FMG255-F	18	Liquid-tight cable port
FW-202	250	Reference Book: The Consumer Guid to Magnetic Flowmeters

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