AVI-Mag™
Full Pipe Electromagnetic Flow Meter

Technical Specifications

The AVI-Mag™ is a hot tap full profile electromagnetic insertion flow meter. Multiple electrodes placed across the entire sensor body at **equal area**, measure and report the average flow rate over the full diameter of pipe. The specific design of the multi-electrode sensor compensates for variable flow profiles, including swirl and turbulent condition.

The AVI-Mag™ can be installed without shutting down, emptying or cutting the pipe (hot tap installation). It does not require welding flanges and installation can be done in pressurized pipelines up to 16 bar.

Cost of installation is largely reduced by eliminating the need for heavy equipment (cranes, etc.) or extensive manpower. The AVI-Mag™ is the most economical flow metering solution for medium and large pipe sensor sizes, reducing drastically installation costs.

The AVI-Mag™ fits in confined spaces, can be submerged and offers complete accessibility. It can be removed in pipes under pressure for easy inspection, cleaning, calibrating or verification. It is particularly cost-effective for retrofit application.

The AVI-Mag™ comes in 2 different sizes in order to be used with 1 inch or 2 inch ball valves. The 1 inch AVI-Mag™ is available for pipe sizes ranging from DN100 up to DN1500. The 2 inch AVI-Mag™ is available for pipe sizes ranging from DN500 up to DN2500. For larger pipe sizes, please contact FLOW-TRONIC.

Velocity Measurement

Method	Electromagnetic
Range	0 to +6 m/s (depending from pipe size and maximum velocity)
Accuracy	±0,5% of reading ± zero stability
Zero Stability	±0,009 m/s (for range: 0,1 m/s to 6 m/s)
Linearity	0,3%
Repeatability	0,2% of range

Has reverse flow sensing capability

Application

AVI-Mag™ 1"	From DN100 to DN1500
AVI-Mag™ 2"	From DN500 to DN2500

Conductivity
Minimum conductivity of 5 µmho/cm

Power requirements

AC	90 to 265 VAC at 45/65 Hz (20W/25VA) or
DC	10 to 13 VDC or
DC	18 to 63 VDC

AC or DC must be specified at time ordering

Materials

Sensor body	Coated metallic material (approved for food industry)
Insertion hardware	316 stainless steel
Compression seal	silicone rubber
Sensor electrodes	graphite

Outputs

Analog	Galvanically insolated and fully programmable for zero and full scale (4-20mA)
Output capability	≤ 20V (1000 ohm, 4-20mA)
Display	2 programmable displays Real-time display: indicates flow & velocity Totalizer display: user selectable units
Pulse/Frequency	One frequency/pulse output for flow rate or for external totalizer. Capable of sinking < 250 mA at < 35 V2 mm of reading

Environmental

Fluid temperature	-10°C to +60°C at 16 bar
Protection rate	IP68 (sensor is submersible)

www.flow-tronic.com