



EMV-1000™ SIZE A



EMV-1000™ SIZE B

Electromagnetic Velocity Open Channel Flowmeter Sensor

The EMV-1000™ is an ATEX certified water/wastewater electromagnetic velocity open channel flowmeter sensor which is available in two sizes:

- SIZE A is suited for pipes or channels from 150 mm to 500 mm diameter
- SIZE B is suited for pipes or channels from 500 mm to 2.000 mm diameter

The sensor is encapsulated in an IP68 submersible ultra high molecular polyethylene body to be mounted with a special sensor mounting band in the pipe.

When combined with the appropriate level sensor, the EMV-1000™ constitutes an efficient electromagnetic area/velocity flowmeter measuring both velocity and level in the same cross-section (or slice of pipe). This is a requirement necessary for accurate flow rate measurement using the continuity equation: $Q = v \times A$

In addition, electromagnetic sensors are totally unaffected by the concentration of debris or dilution of wastewater by rain.

TECHNICAL SPECIFICATIONS EMV-1000™

Velocity Measurement

Method	Electromagnetic (Faraday's Law)
Range	0 to +6 m/s
Accuracy	± 1% of measured value or ±0,03 m/s (whatever value is bigger)

Min. conductivity of the medium needed 10µS/cm

Velocity Measurement Method

The principle of magnetic-inductive flow measurements utilizes the Faraday's law, where a conductor moving in a magnetic field induces a voltage of amplitude proportional to the velocity of the conductor. The conductor is the media being measured.

Material & Dimensions

Material	Ultra High Molecular Polyethylene (PE-UHM) Stainless steel 316 electrodes
Protection rate	IP68
Dimensions	Size A: 165 mm L, 40 mm W, 25 mm H Size B: 190 mm L, 60 mm W, 45 mm H
Weight	Size A: 0,300 Kg (without cable) Size B : 0,750 Kg (without cable)

Operating Temperature Range and Pressure

0° to 80°C (depending on pressure)
Max. pressure 4 bar (depending on temperature)

Certification

For ATEX Zone 1: II2G EEx ib m IIC T6 following ATEX 100a

Sensor Cable

Material	Polyurethane jacketed
Length	10 m (standard) 20 m, 30 m or length up to 50 m (optional)

Converter for EMV-500™ (included)

Operating temp.	-10° to +50°C
Protection rate	IP66
Power supply	18...36 VDC
Output	One 4...20 mA analog output for velocity (m/s) to be connected to a PLC or the UNI-TRANS™ for flow conversion
Max. impedance	500 Ohm

Specifications are subject to change without notice
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