

EuroMag 2200/2500 Electromagnetic Flow Meter

MAINS OR BATTERY POWERED DN25...2000mm / PN 16... PN40

Description

The **EuroMag 2200/2500 series** of electromagnetic sensors represent new technology for the accurate measurement for water reticulation and process applications.

This **new generation** sensor incorporates improvements to the signal protection as well as the magnetic distribution elements to create a unique electromagnetic field profile that ensures accuracy in turbulent, transitional, and laminar flow regimes. These new extended linearity EuroMag meters are capable of measurement in a range of more than **1000:1** without the aid of linearization software.

Electronic Design

The meters are fitted with EuroMag's latest low power consumption electronic multiple output MC608 model transmitter with either mains or battery powered options.

The transmitter is IP67 rated when mounted on the meter or in an application with flooding potential the transmitter can be remote mounted with an IP68 rating for continuous underwater use to a depth of 10 meters. The transmitters large LCD backlit display provides full data interface via the 4 push buttons located below the display including Volume, Totalizers, Flow rates, Battery condition, flow direction, alarms, data logging, Serial output for device control, remote reading or output to telemetry is standard, as is the in-built 4 megabyte 200,000 lines 5 parameters per line data logger function.

Refer EuroMag MC608 A/B leaflet.

Special Features

- No moving parts
- Hastelloy C 22 electrodes standard
- Grounding electrode eliminates ground rings
- Sealed electrode and coil assembly provides immunity to humidity variation and IP68 protection
- Unique field generation structure providing 1000:1 turndown
- Wide rangeability with a single unit
- No pressure drop
- Bidirectional capability
- Battery or mains powered
- Large full function display
- Low power consumption
- Integrated data logging
- Easy read + windows programming
- ISO / OIML conformity



Application

The EuroMag 2200 and 2500 series meters are suitable for any application of on-line full pipe fluid measurement. These meters are typically used in the measurement of :

- ⇒ Potable water transfer
- ⇒ Network reticulation monitoring
- ⇒ Leak detection monitoring
- ⇒ Reuse water measurement
- ⇒ Municipal effluent
- ⇒ Agricultural irrigation
- ⇒ Industrial process liquids
- ⇒ Food Process
- ⇒ Slurry and concretes

Reference standards

The EuroMag magnetic meters are marked CE and are manufactured according to the following standards :

- * CEI EN 61010-1
- * EN50081-1
- * UNI EN ISO 6817
- * EN50082-1
- * EN 1434
- * ISO 4064-1-2006
- * OIML-R49-2005

Meter specification

Accuracy	±0.2% of reading with velocity greater than 0.2 m/s	Meter Sizes	25mm up to 2000mm
Repeatability	±0.1%	Max Operating Pressure	16 bar standard. Up to 150 bar on request
Max Fluid Velocity	10 m/s	Max Temp Range	Dependent on liner material when electronics remotely mounted Ebonite: -40° to 80°C (food grade) PTFE: -40° to 180°C
Tube Material	304 Stainless steel	Max Cable Length	100 meters (remote mounted converter)
Flange Material	Steel drilled to carbon steel to AS4087 PN16 Fig B5 Coating Fusion Bond Epoxy	Min Conductivity	5 µS/cm, 20 µS/cm for DI water
Electrode Material	Hastelloy C 22 (standard)	IP Rating	Sensor IP68, with remote mounted Converter. Converter is IP67
Liner Material	PTFE: 25mm to 200mm Ebonite (Food grade): 250mm to 2000mm Other materials on request	CE Declaration	EN 61326:1997 to EN1326/A3:2003
		Straight Run	5D upstream and 3D downstream minimum

Flow range meter size selection guide

Figures in **blue** are suggested ideal system flow for meter size selection.

	DN	Flow meter length (mm)	VELOCITY [m/s]			
			0.05	0.5	5	10
EuroMag 2200	25	200.0	0.088 m³/h	0.883 m³/h	8.835 m³/h	17.671 m³/h
	32	200.0	0.14 m³/h	1.45 m³/h	14.48 m³/h	28.95 m³/h
	40	200.0	0.23 m³/h	2.26 m³/h	22.62 m³/h	45.24 m³/h
	50	200.0	0.353 m³/h	3.53 m³/h	35.34 m³/h	70.68 m³/h
	80	200.0	0.904 m³/h	9.05 m³/h	90.48 m³/h	180.96 m³/h
	100	250.0	1.41 m³/h	14.13 m³/h	141.37 m³/h	282.74 m³/h
	150	300.0	3.18 m³/h	31.81 m³/h	318.09 m³/h	636.18 m³/h
	200	350.0	5.65 m³/h	56.55 m³/h	565.49 m³/h	1130.98 m³/h
	250	450.0	8.84 m³/h	88.35 m³/h	883.57 m³/h	1767.14 m³/h
	300	500.0	12.72 m³/h	127.23 m³/h	1272.30 m³/h	2544.60 m³/h
	350	550.0	17.32 m³/h	173.18 m³/h	1731.8 m³/h	3463.61 m³/h
	400	600.0	22.62 m³/h	226.19 m³/h	2261.95 m³/h	4523.89 m³/h
EuroMag 2500	450	450.0	28.63 m³/h	286.28 m³/h	2862.78 m³/h	5725.55 m³/h
	500	500.0	35.34 m³/h	353.43 m³/h	3534.29 m³/h	7068.58 m³/h
	550	550.0	42.76 m³/h	427.65 m³/h	4276.49 m³/h	8552.99 m³/h
	600	600.0	50.89 m³/h	508.94 m³/h	5089.38 m³/h	10178.76 m³/h
	650	650.0	59.73 m³/h	597.3 m³/h	5972.95 m³/h	11945.91 m³/h
	700	700.0	69.27 m³/h	692.72 m³/h	6927.21 m³/h	13854.42 m³/h
	750	750.0	79.52 m³/h	795.22 m³/h	7952.16 m³/h	15904.31 m³/h
	800	800.0	90.48 m³/h	904.78 m³/h	9047.79 m³/h	18095.57 m³/h
	900	900.0	114.51 m³/h	1145.11 m³/h	11451.11 m³/h	22902.21 m³/h
	1000	1000.0	141.37 m³/h	1413.72 m³/h	14137.17 m³/h	28274.33 m³/h
	1200	1200.0	203.58 m³/h	2035.75 m³/h	20357.52 m³/h	40715.04 m³/h
	1300	1300.0	238.92 m³/h	2389.18 m³/h	23891.81 m³/h	47783.62 m³/h
	1400	1400.0	277.09 m³/h	2770.88 m³/h	27708.85 m³/h	55417.69 m³/h
	1500	1500.0	318.09 m³/h	3180.86 m³/h	31808.63 m³/h	63617.25 m³/h
	1600	1600.0	361.91 m³/h	3619.11 m³/h	36191.15 m³/h	72382.29 m³/h
	1700	1700.0	408.56 m³/h	4085.64 m³/h	40856.41 m³/h	81712.82 m³/h
1800	1800.0	458.04 m³/h	4580.44 m³/h	45804.42 m³/h	91608.84 m³/h	
2000	2000.0	565.49 m³/h	5654.87 m³/h	56548.67 m³/h	113097.34 m³/h	