

EuroMag 1100/2200 Electromagnetic Flow Meter

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

Description

EuroMag electromagnetic Flow Meters have been designed for compliance with the Ministry of Environment and Regional Council water consent and data acquisition transfer requirements.

Through working with the industry EuroMag are able to offer a compact lightweight and economical irrigation meter design providing ease of installation, operation and data collection. EuroMag meters can be easily coupled with our automated GSM telemetry data station CommCell 4, or metered data collected on site through multiple communication channels.

Application

The EuroMag 1100 and 2200 meters are suitable for all on-line full pipe water or farm effluent installations. They are not affected by sand, stones, algae, silt or other solids.

These meters are typically used in agriculture or environmental monitoring of :

- ⇒ Farm and Irrigation Water supply (1100/2200)
- ⇒ Irrigation and Pump Control (1100/2200)
- ⇒ Municipal and Farm Effluent Irrigation (2200)
- ⇒ Dairy Factory Milk Effluent Disposal (2200)

Meter Design

The meter sensor includes new technology creating a unique electromagnetic field profile that ensures accuracy in turbulent, transitional, and laminar flow regimes.

The resulting extended linearity of these EuroMag meters makes them more accurate under various true field conditions with a 1000:1 measurement range possible without linearization software.

Their 64kB integrated Diagnostic Data logging with low power consumption and latest design in field replaceable lithium batteries, ensures a long trouble free service life.

EuroMag meters are of the highest European design quality and manufacture.

When combined with EuroMag's pre-grounding system via their third electrode, installation costs are reduced as expensive additional grounding rings can be avoided.

Data Transfer

Should the application site not already include a data transfer solution to the Regional Council, EuroMag meters can be specified complete with the successful low cost CommCell 4 data telemetry station for automatic data delivery via GSM mobile network to relevant Regional Council data portal.



EuroMag 1100



EuroMag 2200

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 (irrigation, pumps, fertigation, filter flushing etc...), 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.

Meter specification

Accuracy	±0.2% of reading with velocity greater than 0.2 m/s	Straight Pipe	5D upstream and 3D down stream minimum
Repeatability	±0.1%	Max Temp Range	<i>EuroMag 1100</i> : 0° to 110° C <i>EuroMag 2200</i> : -40° to 180° C
Max Fluid Velocity	10 m/s	Electrode	<i>EuroMag 1100</i> : AISI 316L <i>EuroMag 2200</i> : Hastelloy C22
Max Operating Pressure	16 bar standard (25 bar and 40 bar options)	Max Cable Length	100 meters - Mains Powered 30 meters - Battery powered
Min Conductivity	5 µS/cm, 20 µS/cm for DI water		
Rating	IP 67 Unit mounted transmitter IP68 remote mounted		
Pipe Connections	<i>EuroMag 1100</i> : Wafer Style O-ring seal for installation between two flanges surrounded by tie rods <i>EuroMag 2200</i> : Flanges in stainless or Carbon Steel to AS 4087-2004 PN16 Fig B5		

Reference standards

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

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

* NZ Ministry of Environment 2011 Compliant

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 1100 Wafer	25	68.0	0.008 m ³ /h	0.88 m³/h	8.84 m³/h	17.67 m ³ /h
	40	96.0	0.02 m ³ /h	2.15 m³/h	21.50 m³/h	43.01 m ³ /h
	50	86.0	0.03 m ³ /h	2.99 m³/h	29.91 m³/h	59.83 m ³ /h
	80	112.0	0.09 m ³ /h	9.05 m³/h	90.48 m³/h	180.96 m ³ /h
	100	130.0	0.15 m ³ /h	14.71 m³/h	147.08 m³/h	294.17 m ³ /h
	150	196.0	0.32 m ³ /h	31.81 m³/h	318.09 m³/h	696.17 m ³ /h
EuroMag 2200 Flanged	25	200.0	0.008 m ³ /h	0.88 m³/h	8.84 m³/h	17.67 m ³ /h
	32	200.0	0.02 m ³ /h	2.15 m³/h	21.50 m³/h	43.01 m ³ /h
	40	200.0	0.23 m ³ /h	2.26 m³/h	22.62 m³/h	45.24 m ³ /h
	50	200.0	0.35 m ³ /h	3.53 m³/h	35.34 m³/h	70.69 m ³ /h
	80	200.0	0.9 m ³ /h	9.05 m³/h	90.48 m³/h	180.96 m ³ /h
	100	250.0	1.41 m ³ /h	14.14 m³/h	141.37 m³/h	282.74 m ³ /h
	150	300.0	3.18 m ³ /h	31.81 m³/h	318.08 m³/h	636.17 m ³ /h
	200	350.0	5.65 m ³ /h	56.55 m³/h	565.49 m³/h	1130.97 m ³ /h
	250	450.0	8.84 m ³ /h	88.36 m³/h	883.57 m³/h	1767.15 m ³ /h
	300	500.0	12.72 m ³ /h	127.23 m³/h	1272.35 m³/h	2544.69 m ³ /h
	350	550.0	17.32 m ³ /h	173.18 m³/h	1731.8 m³/h	3463.61 m ³ /h
	400	600.0	22.62 m ³ /h	226.19 m³/h	2261.95 m³/h	4523.89 m ³ /h

The data shown in this catalogue are subject to modification without prior notice

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