

evoQ₄ Electromagnetic Meter

Size 2" to 12"

Operation

The evoQ₄ is a battery powered electromagnetic water meter that is suitable for a wide range of metering applications. Using Faraday's law of electromagnetic induction, two magnets provide a magnetic field within the pipe; two electrodes measure the induced voltage that is proportional to the flow of conductive water through the field in the pipe. Every 0.5 seconds the measurement is taken and the totalized volume is calculated and updated on the LCD display.

The meter is designed for 10 years of continuous operation with no battery changes necessary.

Application

The meter is for general use with potable cold water up to 120°F. The meter will typically register at $\pm 0.75\%$ accuracy at normal and high flows and better than 95% accuracy at extended low flows. The evoQ₄ product line is suited for metering utility customer services for potable water. With the addition of outputs described below, the meter can fulfill a number of distribution management roles as well.

Pulse or encoder output

The meter can be fitted with a pulse output device that can be attached to a radio transceiver module or a data logger. The pulse output can be programmed in the factory to meet the needs of the utility. For utilities preferring encoded output technologies, an encoder module is available for interface with AMR or AML systems.

Remote display

The meter can be fitted with a remote display. A two channeled output can provide both forward and reverse pulses.

Connections

The evoQ₄ comes in AWWA C701 Class II Turbine meter lay lengths. The flanges are epoxy coated cast iron to reduce weight and prevent corrosion. The 2" comes with an oval flange and the 3"- 12" come with a round flange. All flanges conform to ANSI B16.1 Class 125 standards. Allow for 5 pipe diameters of straight pipe upstream and 3 pipe diameters of straight pipe downstream for optimum performance.



The evoQ₄ is a single meter that meets the needs of traditional turbine, compound, single jet and magnetic meters.

FEATURES AND BENEFITS

10 year continuous life: No need for costly and time-consuming replacement.

No moving parts: Maintenance free.

0.5 second sampling rate: Highest accuracy.

Wide measuring range: Suitable for all commercial applications.

Simple installation: No additional training required.

Pulse or encoder connectivity: Pre-equipped or retrofitted for your AMR and telemetry needs.

AWWA lay lengths: Simple changeout.

IP68 sealed: Provides long, trouble-free life.

NSF61 Annex G listed: Zero lead contaminants.

LCD

Bright, large and easy-to-read LCD incorporating totalized volume and a reference flow-rate indicator. Alarm functions provide in-situ status ensuring no loss in measuring continuity. An IP68 seal ensures the meter electronics are safely protected providing long term reliability.

Materials

Body: Stainless steel grade 304

Flow tube: Stainless steel grade 316

Liner: Polyethylene epoxy

Electrodes: Stainless steel grade 316

Flanges: Epoxy coated cast iron

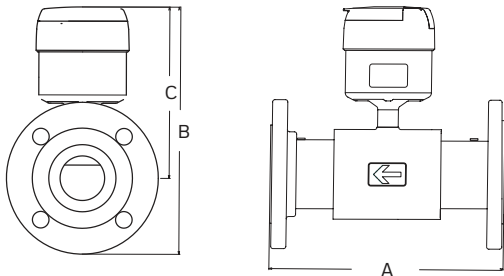
Register: Stainless steel with glass lens

Register housing/lid: UV-resistant plastic

Environmental class: IP68 hermetically sealed unit waterproof to 30 ft depth

Dimensions and net weight

Meter Size	A		B		C		Weight	
	in	(mm)	in	(mm)	in	(mm)	lbs	(kg)
2"	10	(254.0)	11.24	(285.5)	8.12	(206.2)	11.0	(5)
3"	12	(304.8)	12.27	(311.7)	8.52	(216.3)	22.5	(10)
4"	14	(355.6)	13.22	(335.8)	8.72	(221.5)	35.5	(16)
6"	18	(457.2)	15.32	(389.1)	9.82	(249.4)	55.5	(25)
8"	20	(508.0)	17.16	(435.9)	10.71	(272.0)	81.5	(37)
10"	17.75	(450)	19.50	(495.3)	11.50	(292.1)	120.0	(55)
12"	19.7	(500)	21.00	(533.4)	11.50	(292.1)	159.0	(72)



Find Out More

WaterMeters@honeywell.com
www.elsteramcowater.com

Honeywell Smart Energy

10 SW 49th Avenue, Bldg. 100
Ocala, FL 34474
T +1 800 874 0890
F +1 352 368 1950

1100 Walker's Line, Suite 302
Burlington, Ontario L7N 2G3
T 866 703 7582
F 905 634 6705
www.HoneywellSmartEnergy.com

Performance	Inches	2	3	4	6	8	10	12
	mm	50	80	100	150	200	250	300
> 95% Accuracy	GPM	0.25	0.6	1.7	4	8	32	32
	m³/h	0.06	0.14	0.4	0.9	1.8	7.3	7.3
98.5% - 101.5% Accuracy	GPM	1-220	2-550	4-880	8-1400	16-3500	50-5500	65-5500
	m³/h	0.23-50	0.5-125	0.9-200	1.8-318	3.6-795	11.4-1249	14.8-1249
Maximum flow	GPM	220	550	880	1400	3500	5500	5500
	m³/h	50	125	200	318	795	1249	1249
Max. operating pressure	psi	230	230	230	230	230	150	150
	Bar	16	16	16	16	16	10	10

Low-Battery
The indicator blinks when the meter has approximately 3 months working life remaining.

End of Life Battery
Measurement stopped. The indicator appears permanently when the meter life expires. Data is displayed for up to 9 months.

No-Water
The indicator blinks when there is an empty pipe condition.

Flow Rate
If water is flowing in the reverse direction a minus sign is displayed to the left of the value.

Net Volume
Any reverse flow is subtracted from the volume display. The top line displays billable units with the multiplier shown in upper right corner. Measurement resolution is provided in the lower right for testing.

2" - 4" USG
6" - 12" USG

2" - 4" CuFt
6" - 12" CuFt

2" - 4" M³
6" - 12" M³



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