

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 +/-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 AMI 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

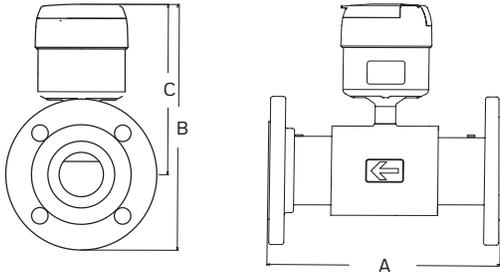
Bright, large and easy-to-read LCD incorporating totalized volume and a reference flow-rate indicator. Alarm functions provide in-situ status ensuring no loss in measuring continuity. An IP68 seal ensures the meter electronics are safely protected providing long term reliability.

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

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| 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 |
| | m ³ /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 |
| | m ³ /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 |
| | m ³ /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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