

evoQ₄ Electromagnetic Meter - LF Low Flow

Sizes 1 1/2" and 2"



EvoQ₄ Low Flow brings stable, accurate measurement to mid-size meter applications.

Specification

| Performance | | 1 1/2" | (DN40) | 2" | (DN50) |
|-------------------------|-------------------------|---------|------------|---------|------------|
| > 95% accuracy | GPM (m ³ /h) | 0.25 | (0.057) | 0.25 | (0.057) |
| 98.5% - 101.5% accuracy | GPM (m ³ /h) | 1.0-130 | (0.227-30) | 1.0-170 | (0.227-39) |
| Maximum flow* | GPM (m ³ /h) | 130 | (30) | 170 | (39) |
| Max. operating pressure | psi (bar) | 175 | (12) | 175 | (12) |

* Flow in excess of maximum does not affect performance at flows within limits

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 |

Features

| | |
|-------------------------------|------------------------------|
| Improved low flow performance | Detect smaller leaks |
| No moving parts | No accuracy degradation |
| 0.5 second sample rate | Suitable for billing apps |
| Floating flanges | Easy to install |
| Pulse, Encoder, or Remote | Integrate with AMR / AMI |
| AWWA lay lengths | No spool pieces or pipe work |
| IP68 sealed | Submersible and reliable |
| NSF61 listed | Approved for potable water |
| 10 year continuous life | Eliminate maintenance visits |

Benefits

Operation

The evoQ₄ Low Flow 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 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. The meter is particularly suited to replacing AWWA C700 and C712 mechanical meters for utility billing.

Outputs

The evoQ₄ LF can be fitted with one of the output modules available for the meter product line. These modules are common among all sizes and variants of evoQ₄. Current modules include pulse (with two pulse channels), Elster protocol encoder, Sensus protocol encoder, the combined pulse + Sensus encoder module, and the remote display interface module. Please see individual specification sheets for these modules.



Connections

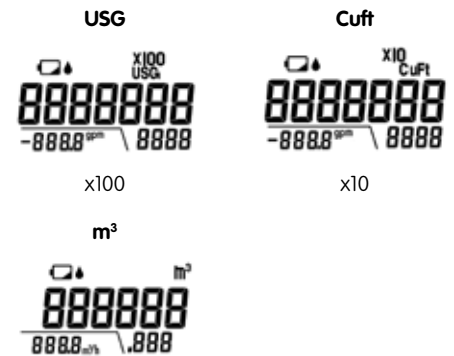
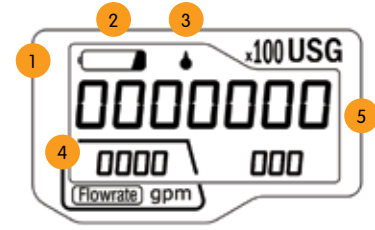
The evoQ₄ LF comes in AWWA C700 / C712 meter lay lengths. The oval flanges are epoxy coated cast iron to reduce weight and prevent corrosion and conform to ANSI B16.1 Class 125 standards. Full face gaskets are provided with each meter. Allow for 5 pipe diameters of straight pipe upstream and 3 pipe diameters of straight pipe downstream for optimum performance.

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.

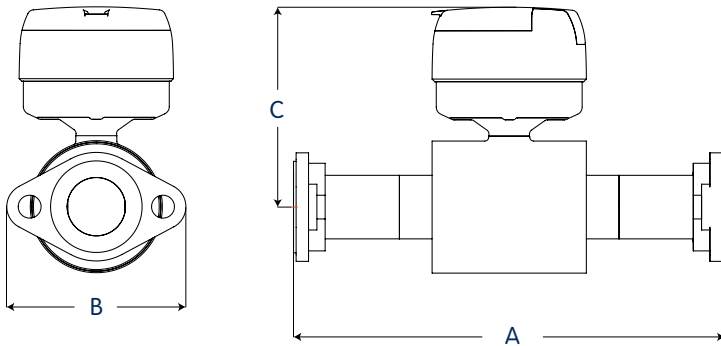
Display functions

- 1 **Low-Battery** – The indicator blinks when the meter has approximately 3 months working life remaining.
- 2 **End of Life Battery** – Measurement stopped. The indicator appears permanently when the meter life expires. Data is displayed for up to 9 months.
- 3 **No-Water** – The indicator blinks when there is an empty pipe condition.
- 4 **Flow Rate** – If water is flowing in the reverse direction a minus sign is displayed to the left of the value.
- 5 **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.



Dimensions and net weight

| Meter size | A in (mm) | B in (mm) | C in (mm) | Weight lbs (kg) |
|------------|--------------|--------------|--------------|--------------------|
| 1 ½" | 13 (330) | 5 ½ (140) | 6 (152) | 9.0 (4.1) |
| 2" x 17" | 17 (432) | 6 ¼ (159) | 6 (152) | 11.5 (5.2) |



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