

Specification

Electromagnetic Flow Meter High Accuracy (Remote Display)



General

All magmeters furnished shall be manufactured by a registered ISO 9001 quality standard facility. All meters are to be manufactured in the USA. Meters supplied shall be from a US based company that has manufactured water meters for at least twenty five (25) years and who distributes all types and size magnetic flowmeters as indicated in these specifications.

Type

Meters shall be of the magnetic flow meter type, all of which have NSF compliance.

Capacity

The capacity of the meters in terms of normal operating range, maximum continuous flow, maximum loss of head, and maximum intermittent flow shall be as shown below:

Size	Normal Operating Range (gpm)	Maximum Continuous Flow (gpm)	Maximum Loss of Head at Max Cont. Flow (psi)
4"	6.43 – 1285	1285	<1
6"	14.46 – 2891	2891	<1
8"	25.70 – 5140	5140	<1
10"	40.15 – 8031	8031	<1
12"	57.82 – 11565	11565	<1

Size

The size of the meters shall be determined by the nominal size (in inches) of the opening in the inlet and outlet flanges. Overall lengths of the meters shall be as follows:

Meter Size	Lay Length
4"	10.24"
6"	12.27"
8"	14.24"
10"	18.18"
12"	19.68"

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Function/Performance

Operating Temperature: 10° to 130° F (-12° to 54° C)

Storage Temperature: -40° to 158° F (-40° to 70° C)

EMI/RFI protection: Per EN 61326-1:2013

Pressure rating: Suitable for use in water systems with up to 150 psi normal operating pressure.

Diagnostics: Self diagnostics with on screen display of faults.

Rate Display: Field configurable digital indicator displaying flow in liters, cubic meters, cubic feet, and gallons.

Flow Totalizer: A fully configurable totalizer integral to the transmitter. Totalized flow shall be displayed. Flow shall be capable of being displayed in forward total, reverse total, and net total.

Empty Pipe Performance: Meter shall be capable of running empty indefinitely without damage to any component.

Empty Tube Zero: The transmitter shall lock the output at zero when no flow is detected. The empty tube zero feature shall be enabled automatically when the transmitter detects no flow.

Low Flow Cutoff: The transmitter shall automatically drop the flow rate displayed and outputs to zero when the flow rate is below the minimum rated flow range for that meter size.

Data Logger: The meter shall have the ability to add a data logger to collect data up to two years and with data intervals as low as 15 seconds and the data storage option to stop the collection of data when memory is full or automatically wrap around.

Low Battery Warning: The meter shall display a low battery warning when the batteries are running low.

All meters shall meet or exceed AWWA C701 performance standards.

Physical

Metering Spool: Epoxy-coated welded steel

Flanges: 150 lb. ANSI pattern.

Liner: Santoprene flange/Polypropylene liner body.

Electrodes: 316 stainless steel standard.

Housing: Meters shall be constructed of powder coated die-cast aluminum and designed to meet NEMA 6P (IP68) environmental conditions.

Finish: All external surfaces shall have a chemical and corrosion resistant finish.

Grounding: Equalization lugs will be provided as standard.

Transmitter shall be integral to meter.

Power Requirements

Must have battery backup for power outage.

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Accessories/Documentation

Factory calibration: All meters shall be factory calibrated. A copy of the report for each meter shall be furnished with the meter.

Flow Converter/Transmitter

Type: Microprocessor-based, intelligent transmitter shall be mounted integral to, and on top of, the flow tube.

The flow converter / transmitter housing shall be powder-coated die-cast aluminum.

Connections

Meter body shall be flanged. 4" through 12" sizes shall be round flanged 150# ANSI pattern.

Remote Flow Converter Display

Display shall be sealed, indicating flow rate and totaling any combination of cubic feet, gallons, liters, or cubic meters.

Display shall be remote from the converter/transmitter.

Flow Converter/Transmitter Box Sealing

The flow converter/transmitter cover shall have a tamper-proof seal that must be destroyed in order to remove the cover.

Meter Serial Number

The meter serial number shall be imprinted on the flow converter.

Registration Accuracy

Registration accuracy over the normal operating range shall be 99.25% to 100.75%

Registration accuracy at low flow shall not be less than 98%.

Output Capability

All meters shall be equipped with an isolated current sinking and user scalable pulse output. All meters shall meet or exceed AWWA C701 performance standards.

Acceptable meters shall be Seametrics iMAG 4700r or approved equal.

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