M54120 Battery Powered Water Meter

Overview

The H2O Degree M54120 wireless water meter monitors and records water consumption for tenant billing and leak detection principally in the multi-family housing industry.

The meter not only monitors usage in gallons, it also records the number of events (such as every time a toilet flushes), duration of events in gallons and time along with temperature. This provides highly accurate leak detection for the entire apartment down to individual appliances such as toilets and showers. H2O Degree can provide a daily automated leak detection report to its clients.

Point-Of-Entry (POE) - Water enters each apartment at one location, typically before the hot water heater in the utility closet. One meter per apartment.

Point-Of-Use (POU) - Riser pipe configuration, multiple points entering the apartment, feeding each toilet, sink, shower, etc. Multiple meters per apartment.

Applications:
- Main feed hot or cold water
- Toilets
- Clothes washer
- Shower
- Sink with or without dishwasher

Features

• The H2O Degree M54120 water meter is a battery powered device that communicates wirelessly on a 2.4 GHz mesh network.

• The device provides a radio interface to remotely monitor and collect water consumption data from a flow sensor.

• The device collects and records six registers:
- Gallons
- Time water was flowing in minutes
- Water temperature
- Heat units (calculated as Therms)
- Number of events (event is defined as each time water starts and then stops flowing)
- Battery Voltage

All of the registers except temperature are cumulative or ever increasing registers. Even if the radio cannot transmit data, the water meter continues to record data.

• Radio is compatible with the H2O Degree secure wireless 2.4 GHz mesh network.

• By using a magnet, the installer can force a radio transmission and receive a LED sequence feedback on radio connectivity in real-time for ease/validation of commissioning.

• Type of packet data reported: Data Packet Consumption (60 minute interval default).

• Non-volatile memory maintains last reading in the event of a power failure.

• The battery has a five year warranty and can be replaced by the property's maintenance staff.

• Accuracy +/- 1.5 percent. (Meets AWWA C708 Standards).

• Operating Temperature 0 to 150 Degrees F.

• Flow 0.26-7.9 gpm.

• Approvals:
- NSF-61-G Certified
- Meets AWWA C708 Standards
- MA Board of Plumbers Approved Cert. # P1-0918-94
- US Complies with FCC CFR Part 15
- European RADIO EN 300 328:v1.7.1
- European EMC EN 301 489-17:V2.1.1
- European SAFETY EN 60950-1:2005 (Ed. 2.0)
- WRAS Approved
- NSF 372-2011
- Certification standard ASME A112.4.7-2002

• Five year warranty.

Ordering Information

Model	Description
M54120	Battery Powered Water Meter - Point-of-Entry or Point-of-Use (8 gpm) (requires a hose & flow sensor)
PL1000-SB-06	Point-Of-Entry braided hose assembly (3/4") & flow sensor
PL1002	Toilet supply hose & flow sensor (12")
PL1003	Sink supply hose & flow sensor
PL1004	Shower hose assembly & flow sensor
PL1006	Washing machine hose assembly & flow sensor
PL1007	Tub & shower braided supply line hose (1/2") & flow sensor

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Technical Specifications

Electrical
- DC lithium battery, minimum 5 year life (19,000 milli-amp hours)

Regulatory approvals
- MA Board of Plumbing Approved
- US Complies with FCC CFR Part 15
- European RADIO EN 300 328:v1.7.1
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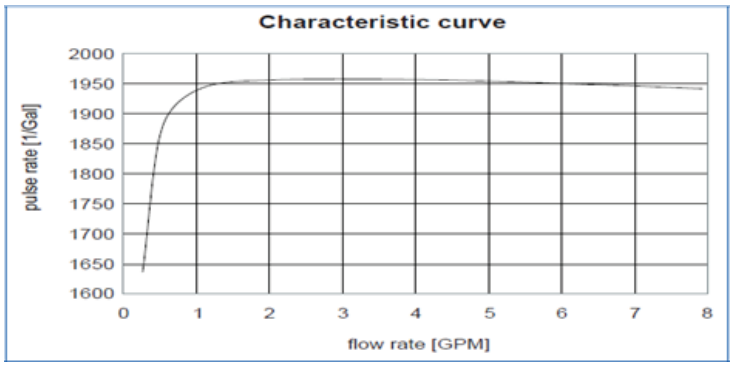
Radio
- 20 dBm output power
- High sensitivity -106 dBm
- 16 channels (802.15.4 Channel 11 to 26)
- Data rate 250 kilo bytes per second
- 2.4 GHz ISM band

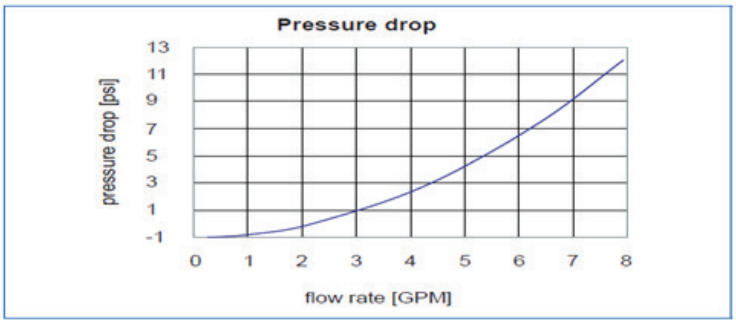
Environmental
- Operating temperature 0 to 70 degree C
- Storage temperature -25 to 80 degrees C

Measurement
- WRAS approved
- NSF/ANSI-61G/NSF 372-2011
- Flow 0.26 – 7.9 gpm
- Accuracy +/- 1.5 percent

Physical
- (H x W x D) 3.375x 3.500 x 1.563 inch
- Color natural
- Weight / shipping weight < 10 oz. / 1 lbs. Shipping restrictions

Warranty
- Five Years





M54120 Battery Powered Water Meter	
Flow Range	0.26 - 7.9 gpm
Accuracy	+/- 1%
Nominal Pressure	145 psi
Max Temperature	158 Degrees F Temporary 203 degrees F
Plumbing Connection	Inlet 3/4” NPSM National Pipe Straight Mechanical Outlet 1/2” NPT National Pipe Thread Taper
Pick Off	Hall Effect Sensor
Output Signal	Square Wave Frequency Signal
Duty Cycle	1:1
K-Factor	1950 Pulses Per Gallon