Product Owner's Manual

Model WM-1000 Above Ground 1" Wireless Flow Meter **EveryDropMeters**

Flow Interface -900 MHz



Meter 24VAC

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FLOW DIRECTION

Product Owner's Manual



Wireless Flow Sensor

Flow Sensor – 900 MHz Specifications

Frequency	900MHz
Size	1" Ø x 6 ³ / ₈ " L
Flow Range	0.5 to 30.0 GPM
Accuracy	Not including wireless latency
-Range: 1.0 to 20.0 GPM -Range: 20.1 to 30.0 GPM -Range: 0.5 to 0.9 GPM	+/- 2% of reading Usable over-range, accuracy not guaranteed (~2%) Leak detect range
Burst Pressure	350 PSI minimum (Meter body)
Operating Temperature	32 F to 140 F
Construction Materials -Vortex Generator -Vortex Sensor -Meter Body	Stainless Steel EPDM Rubber (wetted surface) ABS

Installation Specifications	Flow Sensor 1000
Connections	PVC 1" Union Adapters Included
Meter Orientation	All orientations acceptable *pipe must be full, with >10psi back pressure
Special Requirements	Pipe must be full for operation. Flows over 30 GPM may shorten life of meter. See warranty. Must be installed above ground to avoid connection issues
Cable Specifications	
Included Cable	18 AWG solid copper, red for positive, black for negative
Attached Lead Length	12 inches
Maximum Lead Extension	20 ft from flow sensor to flow transmitter
Connection	Leak tight wire nuts preferred; Shielded wire recommended

Installing Your Flow Sensor

Installation Guidelines

Installation Guidelines

See 1" irrigation flowmeter installation guide for detailed instructions

A vortex flowmeter requires the pipe be **FULL AND FREE OF AIR BUBBLES AT ALL TIMES** for the meter to function properly. See Diagram A:



The preferred installation method ensures a full pipe at potentially lower than optimal system pressure.

The secondary installation method requires system pressure that ALWAYS maintains a full pipe without cavitation.

Product Owner's Manual



Wireless Universal Flow Interface

Flow Interface – 900 MHz Specifications

Frequency	900MHz
Power Source	24VAC or 5Vdc wall adapter (sold separately)
Size	5" x 2.75" x 0.88"H
Enclosure	ABS, indoor rated (NEMA enclosure sold separately)
Mounting Type	2 Screws (Not included)
Operating Temperature	32 F to 140 F
Construction Materials	ABS



WIRING DIAGRAM



Flow Interface Decision Tree



Final Row Contains Selectable Options

Connecting the Flow Sensor to your Flow Interface



Critical: Make sure your Flow Interface is powered on before inserting the batteries into your Flow Sensor. Failure to keep the Flow Interface powered at all times will result in extremely shortened battery life of the Flow Sensor.

Upon bootup, the Flow Sensor will send 3 messages to the Flow Interface. The Flow Interface will show how many messages were received and the corresponding signal strength. Use this to help you pick an install location that has a connection at or above 25.



Connecting the Flow Sensor to your Flow Interface



Critical: During the boot-up, for five minutes, the flow meter will report flow through the LED shown below.

The flow meter will also send 10 additional packets, one every 30 seconds for 5 minutes. After the 5 minutes are over, the Flow Interface will display a SS Summary, which is shown in the image below.

To qualify as a good install location, the following crite**ria** MUST be met:

- TOTAL RCVD *must* equal 13.
- LAH, which refers to your lowest, average and highest signal strength received, *must all* be at or above 25.



Checking Packets Received

Select the MENU Button from the Main Screen

Check the QTY of packets received. This may be useful for troubleshooting your device.



Selecting the Correct Output

Select the MENU Button from the Main Screen

Setting your output format is required to ensure the Flow Interface is communicating to your controller correctly. This is the first step after wiring your Flow Interface to your controller.



Manually Select K Factor & Offset

Select the MENU Button from the Main Screen

Manually select your K and Offset values if your controller requires a unique input that we do not offer in our list of outputs.



Selecting the Correct Output

Select the MENU Button from the Main Screen



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Flow Interface -900 MHz



Common Output Types for Controllers: Rachio: K=.322 Hunter: 1 GAL/PULSE or 0.1 GAL/PULSE Rainbird: 1 GAL/PULSE Rainmachine: 1 GAL/PULSE

Set Up A Test Output

Select the MENU Button from the Main Screen

Running a test output will allow you to ensure that your Everydrop Flow Meter and your smart controller are communicating effectively. After selecting the corresponding output that your controller understands, run a test output to make sure the numbers match.

EveryDropMeters EveryDropMeters EveryDropMeters Flow Interface Flow Interface Flow Interface -900 MHz -900 MHz -900 MHz := := **Output Setup** Set Units 12.0 GPM **Options Setup** Packet Notice Set Test Output Wireless **Enter to Select** Ð C-C -Meter 24VAC Meter 24VAC Meter 24VAC **EveryDropMeters**

Run A Test Output

Select the MENU Button from the Main Screen

Cross-reference your Flow Interface with your smart controller to make sure the numbers match!



Set a Packet Notice; Optional

Select the MENU Button from the Main Screen

Assign an audio or visual notification to signify when a "packet" has been received, indicating the Flow Interface received a transmission. This is an optional activity.



Checking Signal Strength

Select the MENU Button from the Main Screen

Check the signal strength of your Flow Interface to your Flow Transmitter to make sure there is a solid connection. Strength out of 100.



Checking Bridge Status

Select the MENU Button from the Main Screen

Check the battery status of your Flow Transmitter or Flow Meter. Get insight into when batteries might need to be replaced.



Troubleshooting Your Flow Sensor

Flow Mode: During the first 5 minutes of boot-up, the LED on the front of the flow meter will flash in correspondence with the measured flow rate.

Use this if you aren't sure the Flow Meter is relaying the correct information to the Flow Interface

LED Flashing and Corresponding Approximate Flow Rate		
No Flow (0 GPM)	40 ms ON/3 s OFF	
Low Flow (~0.5 GPM)	2.4 s ON/2.4 s OFF	
High Flow (30 GPM)	40 ms ON/40 ms OFF	

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FLOW DIRECTION

Rule of Thumb:

- No flow: LED ON TIME ≠ LED OFF TIME
- Flow: LED ON TIME = LED OFF TIME

Troubleshooting Your Flow Transmitter

Connecting the Flow Transmitter to your Flow Interface



Devices are shipped pre-paired. If for some reason, you are trouble getting a connection, you can check with the Wireless ADDR menu.

If the wireless address shown in your Flow Interface shows any number combination other than 255.255.255.255, then the Flow Interface and Flow Transmitter have connected correctly.

Warranty and Legal

- Ensure that you follow the install procedure for confirming a suitable installation location. Installing prior to confirming a consistent connection will lead to a 40% restocking fee if a return is requested.
- Do not expose Flow Interface to water. This device is not intended to be wetted or exposed to outdoor conditions of any kind. Doing so will void the warranty.
- Follow wiring instructions exactly. If unsure, please contact us and we can help. If wired incorrectly, this will prematurely void the warranty.
- Make sure the accompanying Flow Interface device is powered on prior to inserting the batteries. Powering on the Flow Transmitter prematurely can cause the batteries to drain faster than normal.
- Exposure to flows over 30gpm will invalidate performance specifications AND warranty.
- This meter has NOT been certified for potable water. (Wetted materials are ABS, PVC, stainless steel, and EPDM rubber)

FCC / IC NOTICES

This product contains FCC ID: OJM-HUMA-900 / IC: 5840A-HUMA900.

This device complies with Part 15 of the FCC rules and Industry Canada license-exempt RSS standards. Operation of this device is subject to the following two conditions:

- 1. This device may not cause harmful interference, and
- 2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

•Reorient or relocate the receiving antenna.

- •Increase the separation between the equipment and receiver.
- •Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- •Consult the dealer or an experienced radio/TV technician for help.

Any modifications could void the user's authority to operate the equipment.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. l'appareil ne doit pas produire de brouillage, et