EveryDropMeters

Product Description:

Everydrop’s Model 1004-EX is a 1” vortex flowmeter that provides highly accurate, real time flow monitoring with totalization. It provides an always-on digital display with flowrate in gallons/minute, totalization in gallons, leak detect, and over range. Model 1004-EX is a 2 wire meter that provides power and pulse signal over the 2 wires. (Compatible with other meters on the market)

General Specifications:

Size	1”
Flow Range (Indicated)	0.5 to 30.0 GPM (0.1 GPM resolution)
Accuracy	
- 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
Update Rate	
-RANGE 1.0 to 30.0 GPM -RANGE 0.5 to 0.9 GPM	1.5 seconds < 1 minute (typically 7 seconds)
Pressure Loss at 20GPM	Less than 1.5 psid
Burst Pressure	350 psi minimum (Meter body)
Operating Temperature	32 F to 140 F
Construction Materials	
-Vortex Generator	Stainless Steel
-Vortex Sensor	EPDM Rubber (wetted surface)
-Meter Body	ABS (and PVC pipe 6” extension)
LCD Display	
-Flowrate (GPM)	3 digit, 0.1 GPM resolution
-Flow Total (Gallons)	8 digit, 0.1 Gallon resolution
-Alerts	Out of flow range, Leak Detect
-Auto Reset	10 Million gallons or power cycle

See www.everydropmeters.com for Warranty Information

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Installation Specifications:

Connections	PVC 1” Union adapter included
Meter Orientation	All orientations acceptable *pipe must be full with >10psi back pressure
Special Requirements	Pipe must be full for operation. **Flows over 30gpm may shorten life of meter. See Warranty Note**

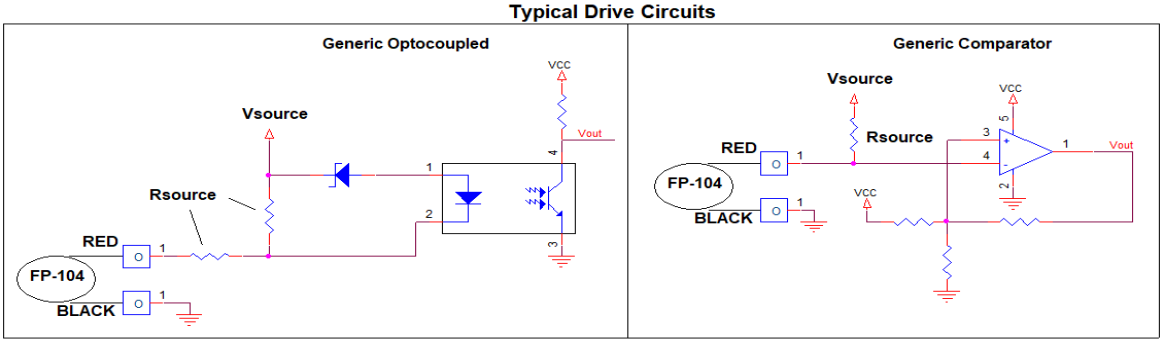
Electrical Interface Specifications:

Frequency	1.35Hz to 93Hz
Pulse Width	1ms
Current	900uA @ 0.5Vdc to 36Vdc (MAX)
Vhigh	Supply voltage – (900uA * Supply/Source Impedance)
Vlow (ON state)	0.2Vdc @ up to 30mA
Vsource (min)	9V @ Max Source Impedance 1000 ohms (*See Note 1)

NOTE 1: Maximum impedance at any source voltage can be determined by the following equation:

Rsource-max = Vsource/(0.08/Vsource)

Typical Drive Circuits



Cable Specifications:

Included cable	18awg solid copper, Red for positive, Black for negative
Attached Lead Length	12”
Maximum Lead Extension	1000 feet with twisted pair shielded
Connection	Leak tight wire nuts preferred; Shielded wire recommended
BLACK Wire	Sensor Common (not necessarily same as valve common)
RED Wire	+Signal (DC voltage source through impedance)

Conversion Equations:

Frequency = (GPM/0.322) – 0.2 **GPM = (Frequency + 0.2) * 0.322**

K = 0.322; Offset = 0.2

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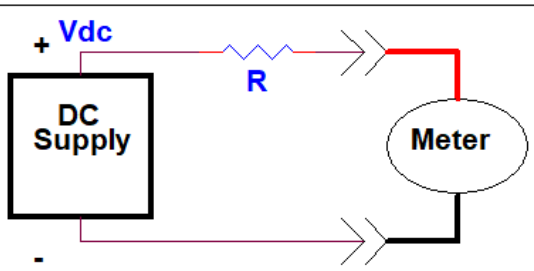
Display Only Power*



Suggested Values

Vdc	R
+9V	1K ohms
+12V	1.8K ohms
+24V	6.8K ohms

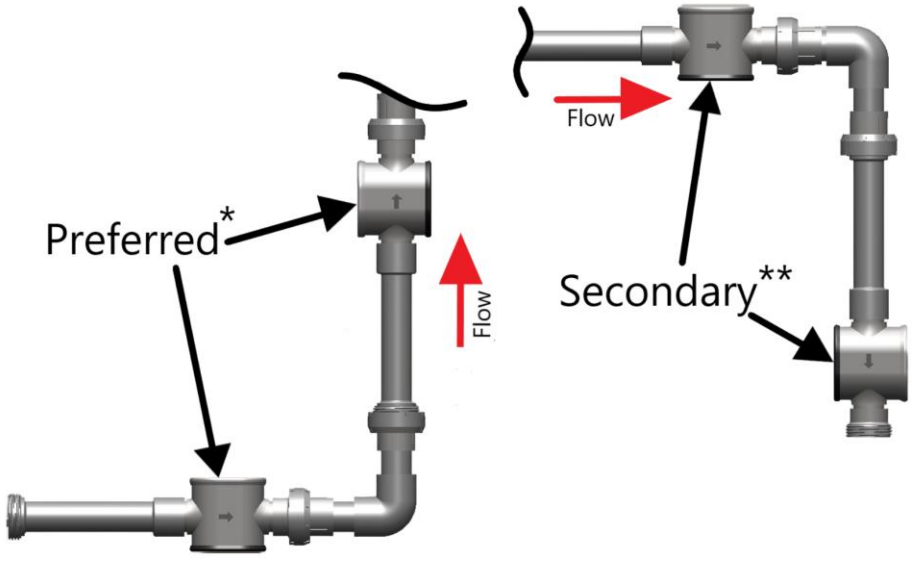
*To power meter only and ignore pulses

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.

Diagram A: General installation guidelines to ensure a full flow meter



*Guaranteed operation with stable flows
**Will function with full pipe with >10 psi back pressure (over 95% of sprinkler zones will meet these criteria. Zones with high flows or long runs are more susceptible to requiring the preferred location.)

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Warranty and Legal

-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)