INFORMATION SHEET

- Excellent Chemical Resistance

- Rugged Construction

- Viscosity Ranges up to 1000 cSt

- 1/8 inch FNPT Connection

- +/- 2.0% Precision (Calibrated)
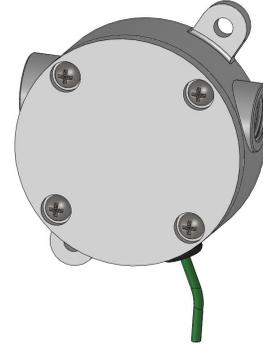
The Pulsafeeder SPO Oval Gear Low Flow Meter is a precision flow meter that provides metering to PULSAtron models with flow ranges from 0.25 to 1.85 GPH.

It is comprised of non-metallic wetted components. The meter body and gears are molded in PVDF. The magnet is ceramic to ensure chemical resistance. The gear cover to meter body is sealed with a Viton O-ring.

The standard inlet and outlet are 1/8" FNPT. Included with the MTRGEAR-LF-KIT are two PVDF 1/8" MNPT x 3/8" tubing compression adapters to allow for easy connection to PULSAtron discharge tubing.

The Pulsafeeder SPO flow meter comes standard with a bipolar latching hall effect sensor to detect gear rotation.

OVERALL DIMENSIONS
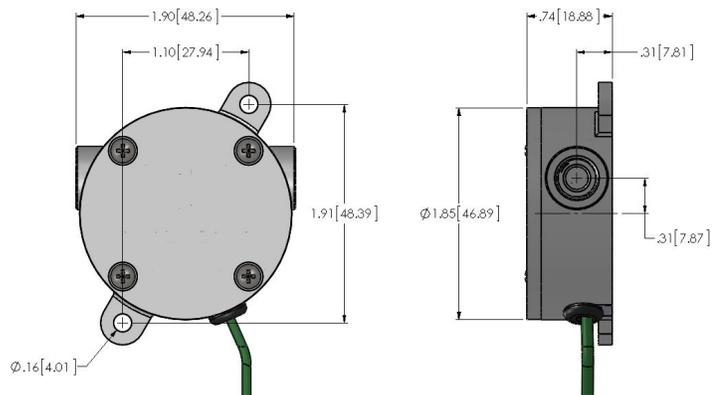
SPECIFICATIONS

Port ID	1/8"
Precision of Reading (Calibrated)	+/- 2%
Maximum Viscosity	1000 cSt
Flow Rate Range (GPH)	0.25 - 1.85
Max. Operating Pressure	90 psi
Max. Operating Temperature	140 °F
Pulse Type	Hall Effect Sensor
Sensor Cable Length	3 feet
Wetted Materials:	
Body and spindle	PVDF
Gears	PVDF
Magnet	Ceramic
Seal	Viton
Gear Cover	PVDF
Approximate Pulses/Liter (water)	572
Flow Orientation	Bi-directional
Recommended filter	30-90 mesh upstream

INSTALLATION

Figure: 1 – Installation Instructions

PULSAtron pump injection valve

Pulsafeeder SPO Gear Low Flow Meter w/ tubing adaptors

PULSAtron pump discharge Valve
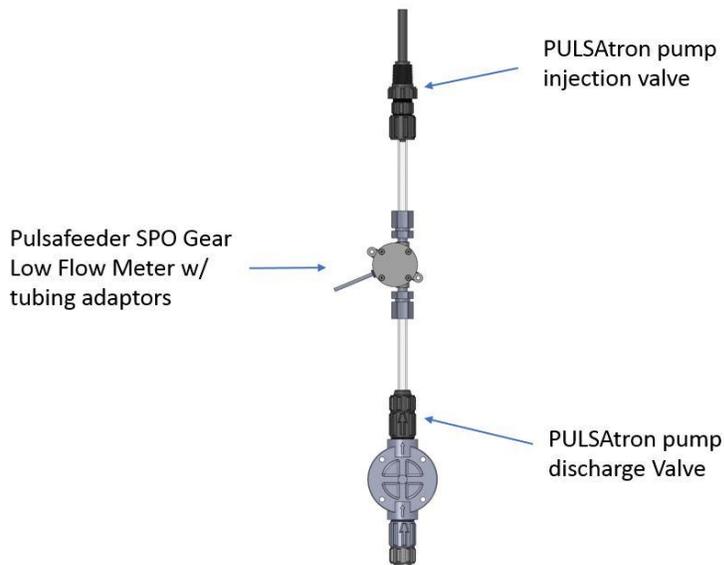
1) Connect the two tubing adaptors provided in the kit to the flow meter at the inlet and outlet
2) Connect the tubing from the output of the pump discharge valve to the one end of the tubing adapter
3) Connect tubing between the other end of the flow meter and the injection valve
4) Mount the flow meter as desired using the two mounting holes in the body of the flow meter.
   i. Note: Do not overtighten mounting hardware as it could deflect the body of the meter and cause inaccuracies in your readings

Use Recommendations:

For optimal performance ensure you are operating within the stated specifications. Additional considerations to take into account to accurately meter fluid displacement are as follows: If you are using a chemical prone to crystallization ensure no air can reach the material and the fluid is always kept in liquid form. Ensure you have minimal suspended particles in the process solution particles can clog or wear out the gears inside the meter prematurely.

ELECTRICAL INTERFACE

Electrical Connections - MicroVision EX

The MicroVision EX supports 6 water meter inputs. Input P5, P8, P9, and P10 can be used to interface with a hall-effect water meter. These inputs correlate to water meter 1, 4, 5, and 6 respectively. Use one of the provided liquid tight connections on the outside of the MicroVision EX enclosure to feed the wire for the water meter through, connect to one of the compatible digital inputs and wire as pictured in figure 1.

SENSOR DETAILS

HALL EFFECT WIRING COLOR CODE

RED - SUPPLY
BLACK - GROUND
BROWN - OUTPUT SIGNAL
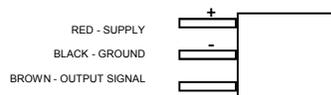
Latching Hall Effect Sensor Specifications:

- 5V to 24V supply voltage
- Current—8 mA
- Operational Type - Bipolar
- Output - 50 mA open collector NPN with integrated pull-up resistor

Figure: 2 – Wiring to Microvision EX

Digital Inputs: (i.e. P5)

+5VDC

Red   Black   Brown
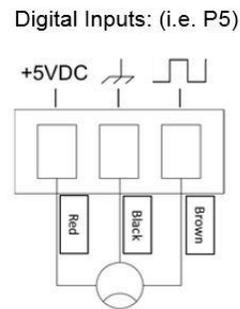
Software Configurations - MicroVision EX

In order to configure a controller to track accurately you would need to configure the appropriate K-Factor:

Menu->Configure->Digital Inputs->Water Meter #

Water meter # will be 1, 4, 5, and 6 if you are wiring the water meters as pictured in figure 1. Enter the appropriate k-factor based on your calibration sequence.

Calibration Instructions:

For measurement reading in **LITERS**:
1.) Enter a K factor of 1 into the controller
2.) Displace 200 mL of fluid using a calibration column or similar instrument
3.) Record the value coooresponding to how much fluid displaced on the controller during the fluid 200mL draw
4.) Multiply the number recorded by 5
5.) The resultant value will your calibrated k factor

For measurement reading in **GALLONS**:
1.) Enter a K factor of 1 into the controller
2.) Displace 0.05 gallons of fluid using a calibration column or similar instrument
3.) Record the value coooresponding to how much fluid displaced on the controller during the fluid 0.05 gallon draw
4.) Multiply the number recorded by 20
5.) The resultant value will your calibrated k factor
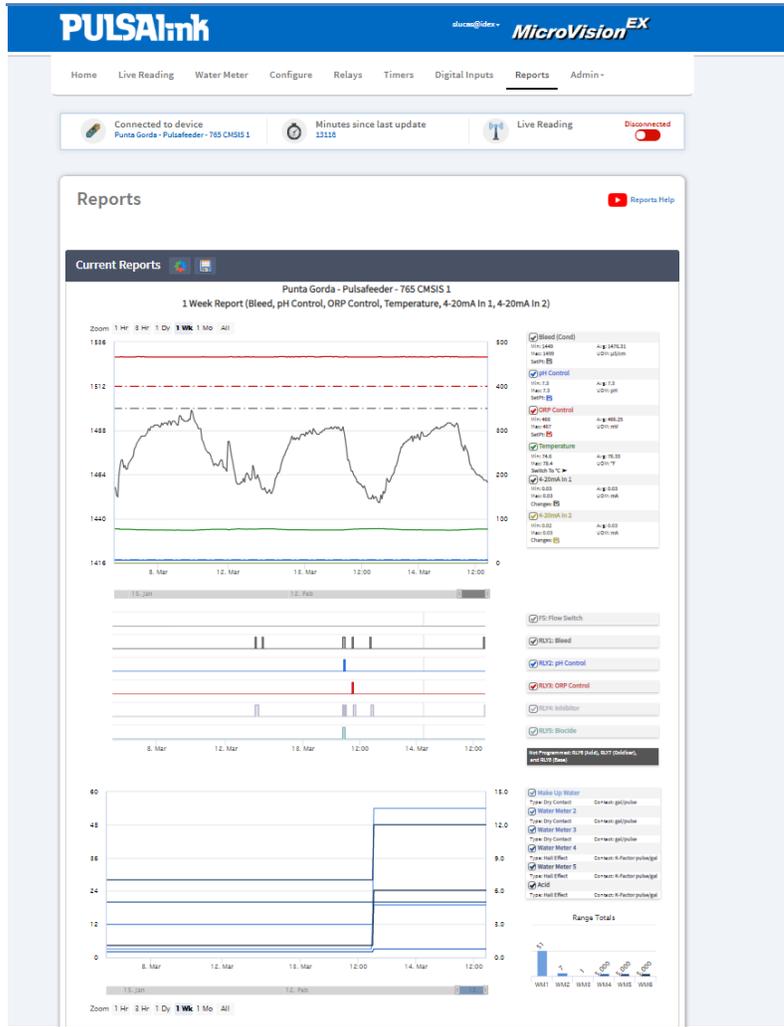
Water meters historic data is now available on PULSALink Reports.

The meters chart is a line graph below the relay chart. The zoom/range control is synced across all time sensitive charts.
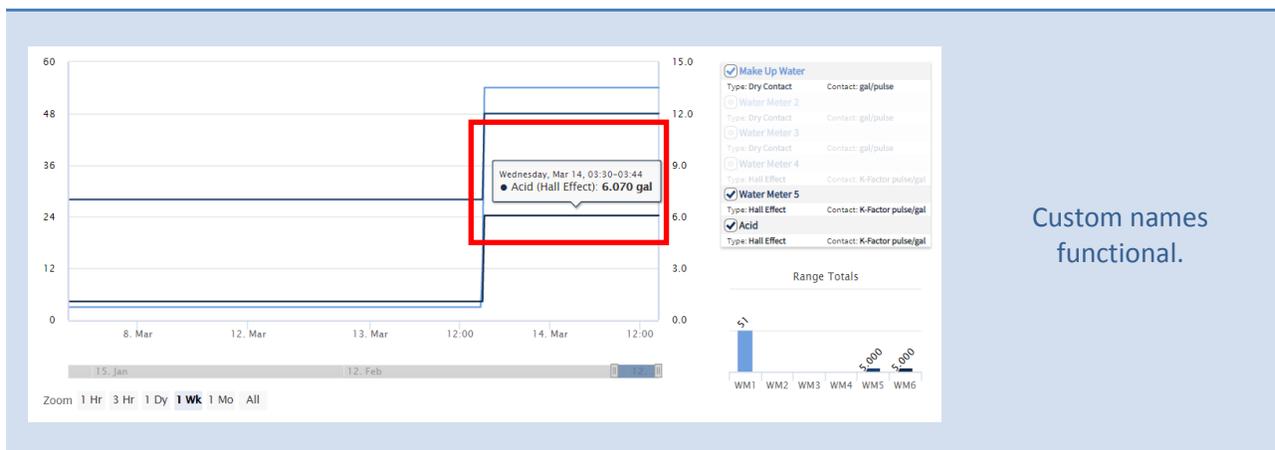
Custom names functional.

Column graph shows the current total in the range.

Example: 13 gal max – 3 gal = 10 gal total.

Custom colors ready.

Water meters can be added to scheduled reports.

Options for water meters will be included in the report wizard.

MVEX - Pulsafeeder - 1 Week Report

Report Dates: 02/21/2019 17:39 - 02/28/2019 17:38
Filter: Bleed

FS

Bleed
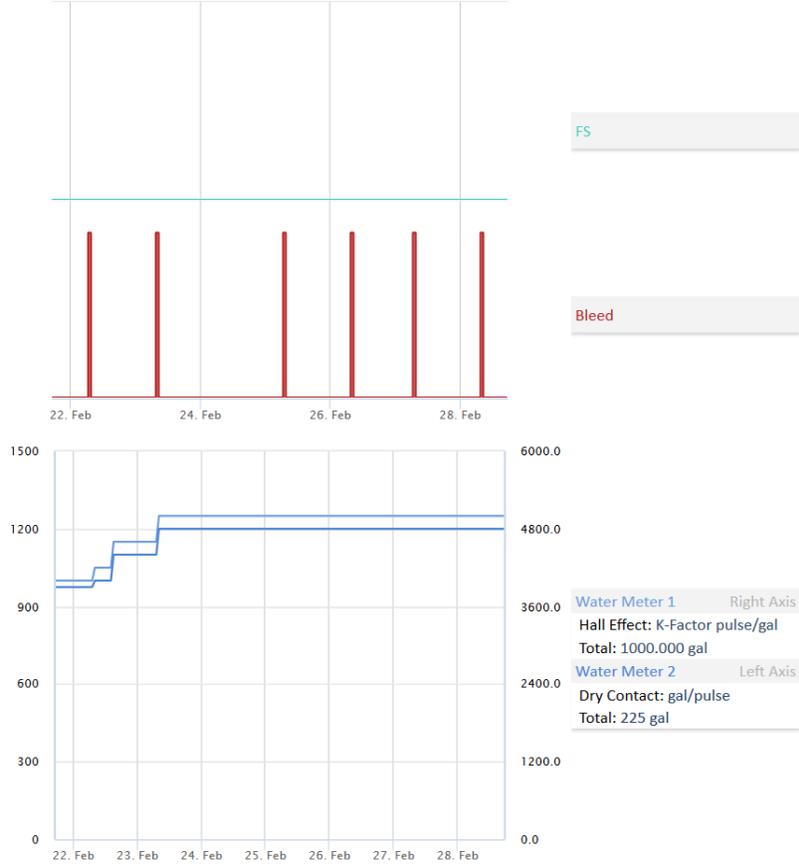
Scheduled report .PDF with water meters. Totals value included in the legend.

Water Meter 1   Right Axis
Hall Effect: K-Factor pulse/gal
Total: 1000.000 gal
Water Meter 2   Left Axis
Dry Contact: gal/pulse
Total: 225 gal