3/8” High Precision Flow Meter

Features
- High accuracy Flow Meter (+/- 2%)
- Each pulse is equal to 367 μL
- Minimum flow rate 760 mL / min (0.2 GPM)
- Maximum flow rate 7.6 L / min (2 GPM)
- Max operating pressure 1,379 KPA (200 PSI)
- Weighs 37.6g
- Operating temperature
  - -20º C to 80º C (-4º F to 176º F)
- Max viscosity 81 SSU
- 3 lead cable 71.1cm (28”) long
- Food safe
- Diesel safe
- Kerosene safe
- Gasoline safe

Materials
Body: Noryl
Turbine: Nylon
Axle: Stainless Steel
Bearing: Delrin
Description

The 3/8” Turbine Flow Meter is an extremely accurate flow meter of low complexity. This flow meter requires specific timing and calculations to provide meaningful data. All of which is described in this datasheet.

The 3/8” Flow Meter provides the user with extremely reliable readings for flow rates from 760 mL/min (0.2GPM) up to 7.6 L/min (4 GPM).

Wiring

The 3/8” Flow Meter has an 71.1 (28”) cable, that terminates with three tinned leads.

Current consumption no load 8 mA
Max current consumption 25 mA

REVERSING THE POLARITY WILL DESTROY THE FLOW METER
Pre-filter requirements

If water with particulate matter will be passing through the flow meter a pre-filter of at least 80 microns must be used. Not using a pre-filter can cause the turbine blades to become jammed. Jammed turbine blades will not damage the flow meter however, it will not be possible to get accurate flow readings until the blockage has been cleared.

Laminar flow

Laminar flow can be thought of as the opposite of turbulent flow. In order for the flow meter to work properly liquid entering the flow meter should have a streamlined laminar flow. Achieving laminar flow is not hard to do. Simply allow for 20cm (8”) of straight pipe just before the liquid enters the flow meter.

Turbulent liquid entering the flow meter can cause inaccuracies in flow rate monitoring.
Liquid exiting the flow meter

Liquid should not be permitted to simply fall out of the flow meter. This would let air enter the device and lead to inaccurate readings.

INCORRECT

CORRECT
K-factor

Each pulse is equal to 367 μL

3 pulses are equal to 1.1 mL

2,724 pulses are equal to 1L

10,313 pulses are equal to 1 Gallon

FOR ACCURATE READINGS YOU CANNOT HAVE AIR IN THE LINE