

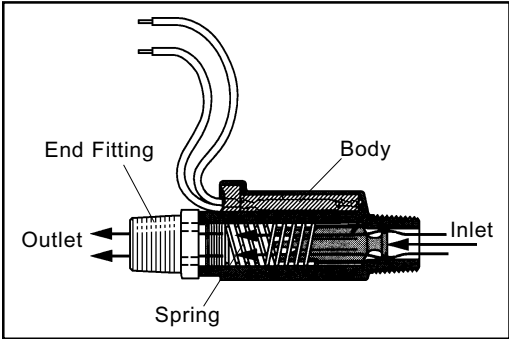


# In-Line Flow Switches FS-380 Series

**Installation**

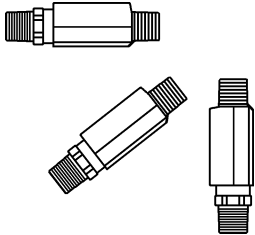
All NPT threads should be installed using a suitable thread sealant (Teflon tape or Permatex "No more Leaks"). Sealant must be kept out of unit during installation. Ten diameters of straight run piping are recommended upstream and downstream of the flow sensor.

The FS-380 end fitting is threaded to the body at assembly and torqued to 25 Ft. Lbs. If disassembly from a system is required, it is advisable to hold the end fitting hex with a wrench to prevent sensor disassembly. If the sensor should become disassembled as a result of uninstalling, retorque the end fitting to 25 Ft. Lbs.



**FS-380 Flow Switches Can be Mounted In Various Positions**

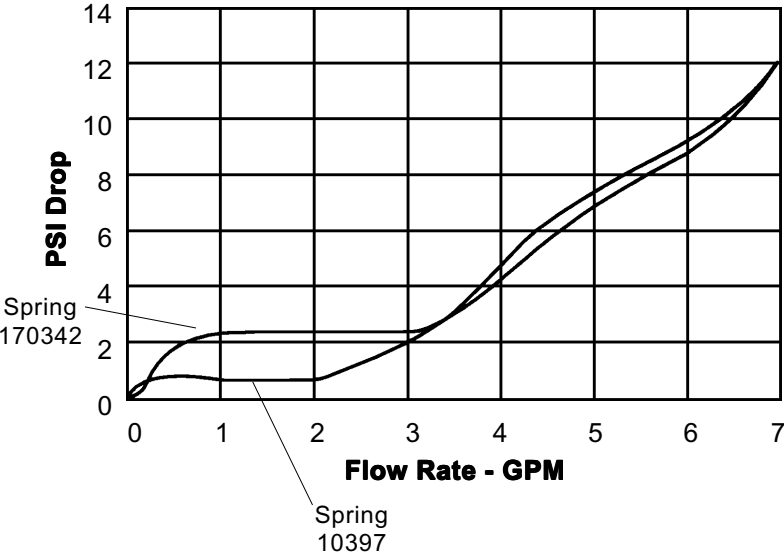
Flow settings are based on a vertical position (inlet port down), using water at +70°F on increasing flow. Some variation in set point actuation will occur in other mounting orientations.



**Specifications**

<b>Wetted Materials</b>	
Housing	Brass or Stainless Steel
Piston	PPS Composite
Spring	316 Stainless Steel
<b>O-Ring</b>	Fluorocarbon
<b>Oper. Pressure, Max.</b>	1500 PSI
<b>Operating Temperature</b>	-20°F to +275°F (120°C), (-28.8°C to +135°C)
<b>Required Filtration</b>	100 Micron or Better
<b>Set Point Accuracy</b>	±20%, Maximum
<b>Set Point Differential</b>	20% Maximum
<b>Switch, See "Switch Ratings"</b>	SPST, 20 VA
<b>Inlet / Outlet</b>	3/8" NPT Male
<b>Electrical Termination</b>	No. 22 AWG, 24" to 26" Polymeric Leads

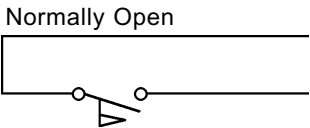
**Pressure Drop - Typical**



**Switch Ratings  
Max. Resistive Load**

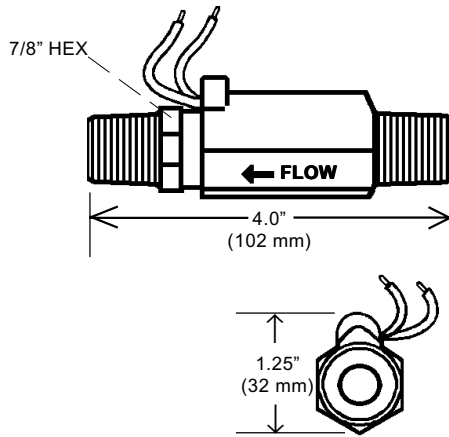
VA	Volts	Amps AC	Amps DC
20	0-30	.4	.3
	120	.17	.13
	240	.08	.06

**Wiring Diagram**

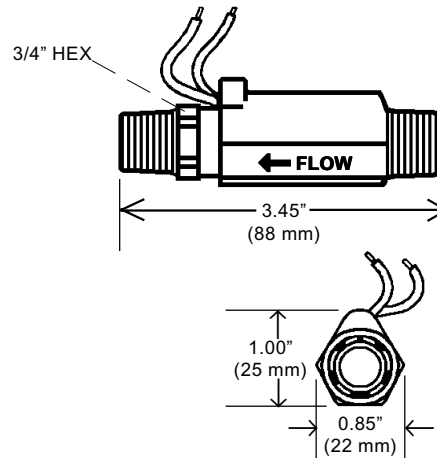


## Dimensions

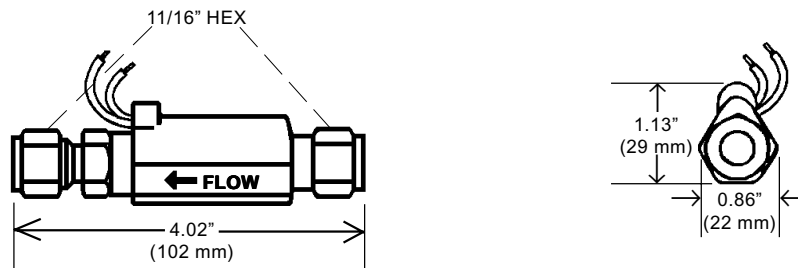
### 1/2" NPT Ports



### 3/8" NPT Ports



### 3/8" Tube End Compression Fitting



## Important Points:

- Gems products must be maintained and installed in strict accordance with the National Electrical Code and the applicable Gems product instruction Bulletin that covers installation, operation and proper maintenance. Failure to observe this information may result in serious injury or damages.
- For hazardous area applications involving such things as, but not limited to, ignitable mixtures, combustible dust and flammable materials, use an appropriate explosionproof enclosure or intrinsically safe interface device.
- Please adhere to the pressure and temperature limitations shown throughout this catalog for our level and flow sensors. These limitations must not be exceeded. These pressures and temperatures take into consideration possible system surge pressures/temperatures and their frequencies.
- Selection of materials for compatibility with the media is critical to the life and operation of Gems products. Take care in the proper selection of materials of construction, testing is required.
- NSF-approved sensors are made of materials approved for potable water applications according to Standard 61.
- Stainless steel is generally regarded as safe by NSF and FDA.
- Life expectancy of switch contacts varies with application. Contact Gems if life cycle testing is required.
- Ambient temperature changes do affect switch set points, since the gravity of a liquid can vary with temperature.
- Our sensors have been designed to resist shock and vibration. However, shock and vibration should be minimized.
- Filter liquid media containing particulate and/or debris to ensure the proper operation of our products.
- Electrical entries and mounting points in an enclosed tank may require liquid/vapor sealing.
- Our sensors must not be field-repaired.
- Physical damage sustained by product may render it unserviceable.

**CE** This product is suitable for Class I and Class II applications only, per the requirements of standard EN60730 and any additional specific requirements for a particular application or medium being sensed. Class I compliance of metal bodied units requires a ground connection between the metal body and the earthing system of the installation. Class I compliance of plastic bodied units in contact with a conductive medium requires that the medium be effectively earthed so as to provide an earthed barrier between the unit and accessible areas. For Class III compliance, a supply at safety extra-low voltage (SELV) must be provided. Please consult the Factory for compliance information on specific part numbers.

### Return Policy

Returns are accepted on stock items up to 30 days from date of order. You must contact our Returns Department for a Return Authorization (RA) number. Return the goods - freight prepaid - in the original container and include original packing slip. C. O. D. returns are not accepted. Gems reserves the right to apply restocking charges.

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