

# Technical Specifications

## SLFSI-SXX FLOW SENSOR

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### FEATURES

- Molded Mounting Tee for improved control of dimensions for more consistent measurement and improved performance at low flow.
- Threaded Retaining Nut instead of retaining pin makes it easier to service in a valve box, more moisture resistance for electronics resulting in longer life.
- Unique 4 bladed lightweight impeller measures lower flow rates. Detects flow as low as 20% of published minimum rate of other impeller sensors
- Smart electronics detection system contains a micro-processor for better signal filtering and conditioning. Detection circuit also contains superior over-voltage and overcurrent protection.

### Professional Materials

- Impeller – HDPE (High Density Polyethylene)
- Shaft – Tungsten Carbide
- O-ring — Buna-N
- Saddle, Sensor Housing, Retaining Nut — Type 1 PVC

### Pressure Rating

- 150 PSI @ 90 degrees F

### Temperature Range

- 32 degrees F to 140 degrees F (0 degrees to 60 degrees C)

### Output Signal

- Frequency Range: 0.3 Hz to 200 Hz
- Output Pulse: 5 ms +/-25%

### Transducer Performance

- Quiescent current: 600 uA@8 VDC to 35 VDC max.
- Quiescent voltage: (VHigh) = Supply Voltage - (600uA X Supply Impedance)
- On State: (VLow) = Max. 1.2 VDC@50mA current limit, (10Ω +0.7VDC)

### Flow Range

- 0.25 to 12 FPS
- 3-inch saddle: 6 to 300 GPM
- 4-inch saddle: 10 to 480 GPM
- 6-inch saddle: 45 to 1100 GPM

### Electrical Cable

- 2 single conductor solid copper U.L. listed #18 AWG leads with direct burial insulation
- Lead length: 48 inches
- Wiring may be extended up to 2,000 feet with direct burial, twisted pair shielded cable

Flow Sensor Specification	
Model	Description
SLFSI-S30	3-inch saddle mount 2 wire standard output sensor - includes saddle
SLFSI-S40	4-inch saddle mount 2 wire standard output sensor - includes saddle
SLFSI-S60	6-inch saddle mount 2 wire standard output sensor - includes saddle

## ***Technical Specifications***

### **SLFSI-SXX FLOW SENSOR**

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FLOW SENSOR(S) shall be model SLFSL-T or SLFSL-S manufactured by Creative Sensor Technology, Incorporated of Rochester, Massachusetts for Weathermatic Sprinkler Division of Telsco Industries. The Model number shall include the Series designation followed by a three character group beginning with T (Tee Mounted) or S (Saddle Mounted) and followed by a two digit code referencing line size followed by a three digit electronic version designator. Therefore, the model number for a one inch size flow sensor with standard electronics would be written as: FSI-T10. Flow sensors must be compatible for use with SmartLine irrigation controls.

**CONSTRUCTION:** The flow sensor shall consist of a custom molded tee or saddle configured shaped body with socket ends conforming to PVC pipe dimensions, a flow sensor housing containing the electronic circuitry and carrying the spinning impeller and a retaining nut.

The meter body shall be an in line type available in 1", 1 1/2", 2", 3", 4" and 6" pipe sizes, molded from Rigid Polyvinyl Chloride material – color white (Tee Mounted) or color grey (Saddle Mounted) - conforming to ASTM D-1784, Cell Class 12454. The 4 blade impeller (paddle wheel) shall be the only moving part.

The impeller shall be molded of HDPE (High Density Polyethylene) incorporating an integral bearing. The shaft material shall be tungsten carbide. These two items are considered wear items and shall be replaceable in the field without special tools.

The electronics housing, molded from the same material as the body shall be held in place with a single ACME threaded PVC retaining nut held captive by the wire leads. The housing will be sealed with one BUNA N O-Ring and shall be easily removed from the meter body. The electronics housing and tee body shall feature direction of flow arrows to assist in assembly.

The sensor electronics will be epoxy-sealed and fitted with 2 single conductors solid copper U.L. listed #18 AWG leads with direct burial insulation 48 inch in length extending from the top of the sensor. The positive (+) lead shall have red insulation and the negative (-) lead shall have black insulation. The housing and mounting tee are custom molded to form an integrated measurement chamber resulting in highly accurate, repeatable flow measurements through a wide range of velocities. The flow sensor shall be designed to schedule 40 specifications and have a tested working pressure of 240 psi @ 73°F (23°C).

Maximum working temperature is 140°F (60°C). The sensor flow range shall be 0.25 to 15 FPS.

The Product Serial Number shall be printed on shrink tubing and attached to the wire leads as they exit the top of the electronics housing.

The Product Model Number shall be printed on shrink tubing and attached to the wire leads above the Product Serial Number.

**ELECTRICAL SPECIFICATIONS:** The flow sensor shall have an output Frequency Range of 0.3 Hz to 200 Hz.

The flow sensor shall output a minimum of a 5-millisecond low pulse at low frequencies and reverts to approximately a square wave above 100 Hz.

Quiescent current 600 uA@8 VDC to 35 VDC max.

On State (VLow) = Max. 1.2 VDC@50mA max.

**WARRANTY:** Flow sensors shall have a manufacturer's limited warranty of five (5) years.