



SF

## Paddle Flow Switch



flow sensing

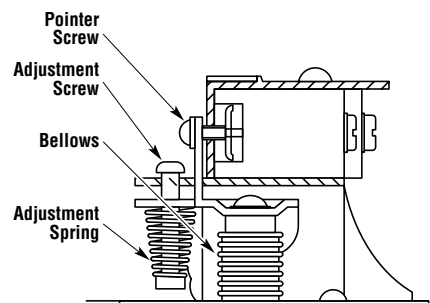
- Small size of instrument makes it easy to install in the field
- On/Off action of the switch is very definite, inherent with the paddle style flow sensor design
- Extremely long life expectancy since the movement of the paddle is transmitted to the switch through a flexible bellow
- Unitized construction and reduced parts count make it simple to assemble
- ABS case for an attractive design and high corrosion resistance

### ■ Operational Description

A reactive force is induced in the paddle in proportion to the rate of flow in the pipe, and the reaction in turn generates a proportional resistance in the control spring.

Thus a variable force balance is maintained between the flow and the control spring until the flow exceeds a set flow rate.

When the flow reaches the set point, the reaction plate activates the microswitch to make or break the contacts.



### ■ Hazardous Locations, Intrinsic Safety

SF series switches do not carry hazardous area ratings. SF flow switches can be used with an appropriate intrinsic safety barrier for hazardous locations utilizing the "Simple Apparatus" rules governed by directive NEC504. STI does have in stock intrinsic safety barriers for simple devices.

Customers requiring additional information on electrical requirements for hazardous locations should contact their local electrical fire and building authorities or STI.

### ■ Specifications

<b>Performance</b>
<b>Operation Characteristics</b>
<b>Sensitivity Adjustment:</b> By offset and gain trim potentiometers
<b>Operation Indication:</b> (4) LEDs (Red - detection of noise. Four red - relay will trip)
<b>Alarm Output:</b> Relay contact rating: 240 V 2 A AC; 30 V 2 A DC (resistive)
<b>Electrical</b>
<b>Power Supply:</b> 22 VDC to 264 VAC inclusive (50/60 Hz AC) Withstand Voltage 1500 VAC for 1 min. (between line and output) Insulation Resistance 500 VDC, 100 M Ohm (between line and output)
<b>Power Consumption:</b> Approx. 2.5 VA (at 100 VAC)
<b>Physical</b>
<b>Material:</b> ABS, Polycarbonate PC
<b>Mounting:</b> (2) straps or screws
<b>Wiring:</b> PF1/2 cable gland
<b>Rating:</b> IP54/NEMA 12
<b>Environmental</b>
<b>Operating Temperature Range:</b> 14 to 158°F (-10 to 70°C)
<b>Operational Humidity:</b> 5 to 85% RH
<b>Shock Resistance:</b> 60 to 2000 Hz, 10 g

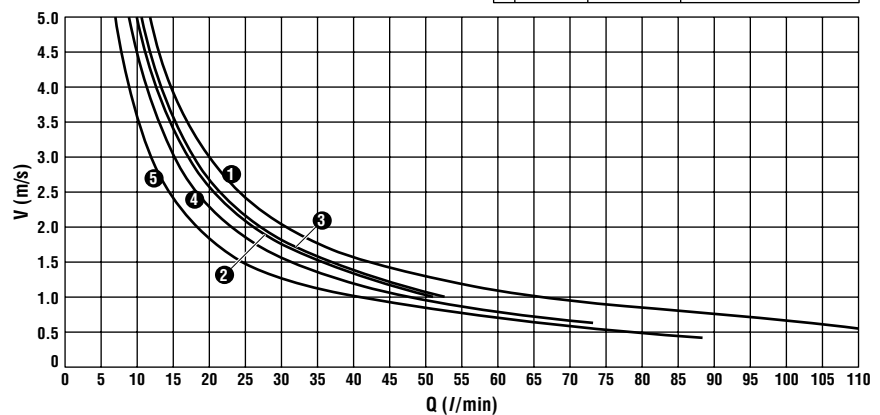
Specifications are subject to change without notice.

### ■ Additional Specifications

<b>Material</b>	<b>SF-3</b>	<b>SF-4</b>
<b>Cover</b>	ABS	ADC12
<b>Bracket</b>	Zinc plated SS400	304 SS
<b>Bellows</b>	PBs 3	PBs 3
<b>Socket</b>	MBs BE2	MBs BE2
<b>Paddle</b>	304 SS	304 SS
<b>Physical Data</b>	<b>SF-3</b>	<b>SF-4</b>
<b>Temp Limits</b>	+80°C	+80°C
<b>Operating</b>	10	10
<b>Pressure</b>	Kgf/cm <sup>2</sup>	Kgf/cm <sup>2</sup>
<b>Electrical</b>	120/240	120/240
<b>Rating</b>	VAC 5 A	VAC 5 A
<b>Weight, approx.</b>	500 g	1.5 Kg
<b>Construction</b>	Dust Proof	Weather Proof

### ■ Relation of Flow Rate and Flow Speed

	Mounting	Paddle Size	Max. Velocity in Pipe (V)
1	PT 3/4"	3/4"	0.5 m/s
2	PT 3/4"	1"	1.0 m/s
3	PT 1"	1"	1.0 m/s
4	PT 1"	2"	0.7 m/s
5	PT 1"	3"	0.5 m/s



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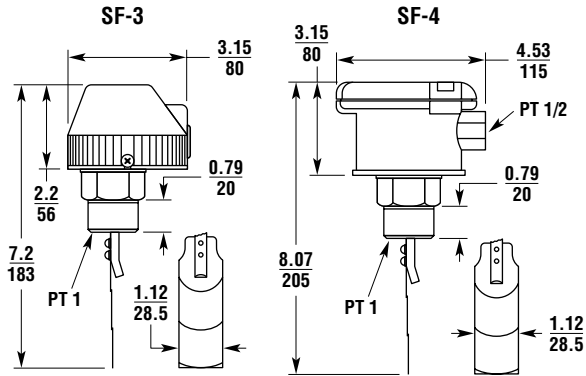
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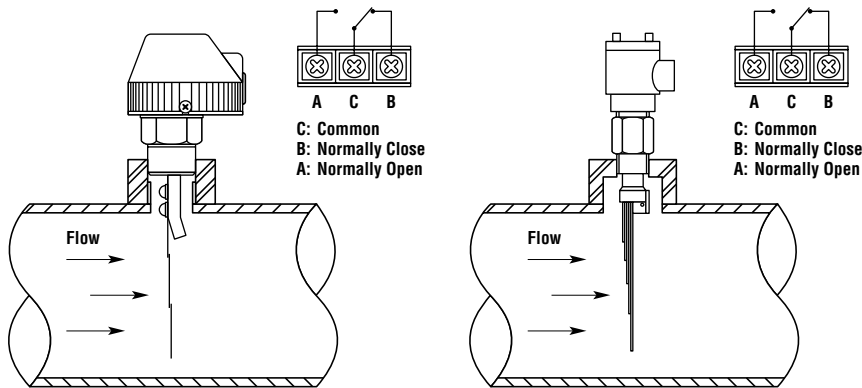


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■ **Dimensions — in./mm**



■ **Wiring**



■ **Ordering Information**

SF - [ ] - [ ] - [ ] - [ ]	
<b>Enclosure</b>	
3	Standard type
4	Weather proof
<b>Wet Part Material</b>	
A	MBsBE2 & SUS 304 (Std.)
B	304 SS
C	316L SS
<b>Mounting Size</b>	
1	PT 3/4 in. (std.)
2	PT 1 in. (std.)
3	PT 1 1/2 in.
OP	etc.
<b>Type of Paddle</b>	
A	3/4 – 1 in. (PT 3/4 in. std.)
B	1 – 3 in. (PT 1 in. std.)
C	4 - 6 in.
OP	etc.



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