

UniProbe

Flow-No-Flow Switch

Description

The UniProbe Flow-No-Flow Switches, Models UP01 and SP01, are sensitive to the heat dissipation of a fluid. The stainless steel probe houses temperature sensors and a heater element. This combination monitors changes in heat transfer to the fluid. The rate of heat transfer is proportional to the flow rate; therefore, a change from flow to no-flow is detected by the amplifier and causes a relay to switch.

The relay contacts may be connected to operate a warning, shut down equipment, or control a process parameter. Applications include pump shutdown, fan or blower alarms, leak detection and liquid level sensing.

The UniProbe Flow-No-Flow Switch is user-selectable for liquid or gas operation, and comes factory-adjusted for water or air over a fluid temperature range of -40° F to 185° F (-40° C to 85° C). Other fluids may require minor adjustments which are readily accomplished onsite, and once set, the UniProbe provides totally maintenance-free operation.

Features

- Maintenance-free operation; no moving parts
- Operates in corrosive or abrasive liquids and gases
- Constructed of 316 Stainless Steel
- Other probe materials optional
- NEMA 4X or explosion-proof enclosure available
- Omni-directional flow sensing
- Clean-in-place



UniProbe

Flow-No-Flow Switch

Specifications

Flow Threshold Switch Point (See Note 1 below)	0.05–0.5 ft./sec. (Liquid) (1.5–15.3 cm/sec.) 0.5–5.0 ft./sec. (Gas) (15.3–153 cm/sec.)
Maximum No-Damage Flow Velocity	50 ft./sec. (15.3 m/sec.) (Liquid) 500 ft./sec. (153 m/sec.) (Gas)
Response Time (See Note 1 below)	3–10 seconds (Liquid) 10–60 seconds (Gas)
Switch Capacity	7.5 Amperes, non-inductive load 28 VDC or 115 VAC DPDT relay contacts
Switch Configuration	
Operating Temperature Range	-40° F to 185° F (-40° C to 85° C)
Maximum Operating Pressure (See Note 2 below)	
UP01	4000 psig (282 kg/sq. cm) with NPT fitting
SP01	250 psig (18 kg/sq. cm) with sanitary clamp
Power Required	115 VAC @ 125 mA 220 VAC @ 60 mA 24 VDC @ 200 mA 12 VDC, ±1 VDC @ 200 mA

Specifications (cont'd)

Enclosures

Probe

Class I, Div. 1, Group D, NEMA 4X
Stainless 316, 1/4" (6.35mm)
diameter, 2.5" (63.5mm) long

Note 1: Precise switching velocity and response time depend upon the characteristics of the fluid, viscosity, density and specific heat. Data given should apply to 95% of applications.

Note 2: Extended pressure ratings available upon special request at extra cost.

Specifications are for reference only and are subject to change without notice.

Model Numbering System

□ P 0 1 - □ - □ - □ □ □ □ □ □

Basic

Model No.

U = Industrial 0.5" NPT
S = 1.5" Sanitary-style
Clamp

Input Power

1 = 115 VAC
2 = 220 VAC
3 = 24 VDC
4 = 12 VDC

Probe Length

0 = Standard (2.5")
4 = 4"

End Fittings

00 = Standard 0.5" NPT
or 1.5" Sanitary Clamp
C1 = 1" 150# RFF

Probe Construction

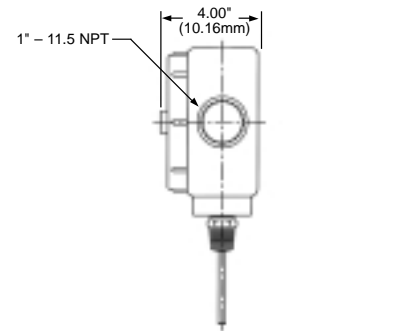
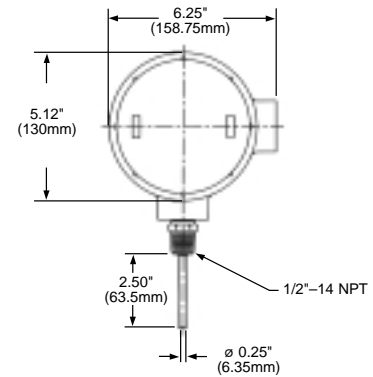
00 = Standard 316 SS

Enclosure Options

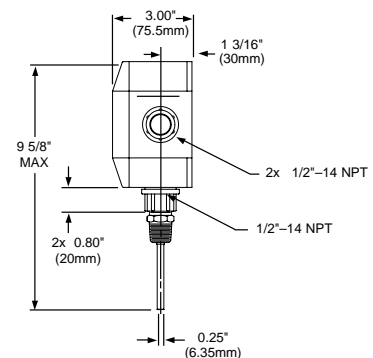
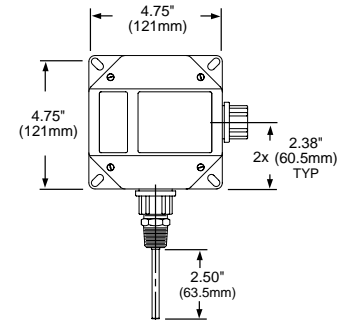
B 6 = NEMA 4X
- 8 = Group D

Enclosure Options

- 8 = CLASS I, DIV. 1, GROUP D



B6 = NEMA 4X



Drawings not to scale.

Local Representative:



4250 E. Broadway Road, Phoenix, Arizona 85040 USA
Tel: (602) 437-1315 • Fax: (602) 437-4459 • Toll Free: 1-800-528-4225
E-mail: ftimarket@ftimeters.com • Web: www.ftimeters.com

DB 62050 Rev G © 2004 FTI Flow Technology, Inc. Printed in USA