Thermal Instrument COMPANY

Thermal Mass Flow Switch

Insertion Probe Model # 62-9 / FS16

(Line Size 2” and Greater)

In-line Model # 600-9 / FS16

(Line Size 1/4” OD and Greater)

- ◊ Mass Flow Switch for Gases & Liquids
- ◊ (2) Each 10 Amp SPDT Relays (Std.), (1) Each DPDT Available
- ◊ Adjustable Hysteresis
- ◊ 10 Bar LED Flow Indication
- ◊ Optional 4-20 mA Output
- ◊ Sturdy 316 Stainless Steel Material Standard
- ◊ Sanitary & Ultra High Pure Finishes Available
- ◊ Corrosion Resistant Materials Available such as Hastelloy, Monel, Inconel, and others
- ◊ Redundant Non-Wetted Sensors
- ◊ No Moving Parts
- ◊ Negligible Pressure Drop
- ◊ Numerous Process Connections
- ◊ Designed & Manufactured in the USA

Our Flow Switch Model # FS16 provides visibility into your process temperature and approximate flow rate, while providing a relay alarm when a low or high flow rate has been met in order to protect your critical process equipment. A 4-20mA output is an option that expands possibilities of this instrument at additional cost.

Thermal Instrument Flow Switches are versatile enough to work across numerous flow applications and piping sizes. The insertion probe style offers great flexibility in order to accommodate the larger line sizes and flow rates. While our in-line model provides a unobstructed flow path for your process fluid, and can be married to line sizes as small as 1/4” OD.

Our Flow Switches come standard as 316SS for flow wetted materials. Also available in a wide variety of exotic metals, numerous process connections, and sanitary and ultra high pure finishes to meet your application needs.

Simplifying

MASS FLOW MEASUREMENT

Thermal Instrument Mass Flow Switches

Specifications for Flow Switch Model # FS16

Design Features:

- 10 Bar LED Flow Indicator Display
- (2) Ea. SPDT Alarm Relays
- 4-20mA Output (Optional)
- Non-wetted sensors protected from fluid
- 316SS construction material standard. Hastelloy, Monel, Titanium, and others are available by request
- Protective and high release coatings available
- Temperature Compensated
- Redundant Flow & Temperature Sensors

Design Specifications:

Alarms	Flow/No Flow, High & Low
Wetted Materials	316SS (Std.) Consult Factory for others
Process Connections	Tube, MNPT, Flange, VCR, VCO, Tri-Clamp, Compression. Others available upon request

Standard Installation:

10 pipe diameters before meter and 5 pipe diameters after meter without any piping changes (Note: We can calibrate to installation conditions if above cannot be met)

Fluids:

Gases:

All inert, clean, UHP, and non-condensing

Flammable, Hydrogen, Hydrocarbons, and corrosive

Liquids:

Water, Oil, Hydrocarbons, and solvents

Contact factory for others

Engineering Specifications:

Accuracy:	± 1% of Full Scale
	Process Fluid Temperature Span ±50°F
Repeatability:	± .20% of Rate
Response Time:	Gases—1 to 8 Seconds
	Liquids— < 500ms.
Mass Flowrates	Gas 40—50,000 SFPM
	Liquid .02—20 FPS

Temperature Capabilities:

-40—350°F (Std) , -40—175°C (Std.)

Optional High Temps to 500°F (260°C)

Switch Specifications:

Mount	Integral
Display	10 Bar Led Flow Indication (± 5% of Flow Rate)
	Alarm 1 LED, Alarm 2 LED
Power	100—240 VAC, 50/60 Hz
	24 VDC, 1 Amp
Output	(2) Ea. SPDT 10 Amp Relay or
	(1) Ea. DPDT Relay (Option)
	4-20 MADC (Optional)
Set Points	(2) Ea. Adjustable Potentiometers
Hysteresis	1% - 5% Adjustable
PC Interface	Via USB Micro Cable

Enclosure Specifications:

Cast Aluminum, Epoxy painted with window

Connection	¾" FNPT Power & Signal
Ratings	FM, CSA, Atex, Nema 4x, Explosion Proof, Class I, Div 1 Groups A, B, C, D. Class II , Group E, F, G
Temperature	Ambient –40 to 185°F (-50 to 85°C)

Approvals & Certifications:

Directives: 2014/30/EU, 2011/65/EU + EU 2015/863

CE

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