Fixed Set Point Flow Switch

M-62

All-PFA molded fixed setting flow switch
with in-line flow and integral flare fittings

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- For corrosive and non-corrosive liquids and gases
- Senses increasing or decreasing flow set points
- Custom flow settings
- Ideally suited for high purity applications
- Low maintenance

Description

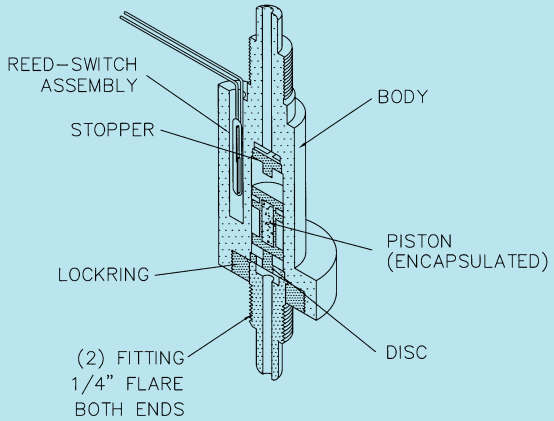
The M-62 inline flow switch monitors increasing or decreasing fluid flow. The M-62 flow switch's construction comprises of an all-PFA molded body with a PTFE encapsulated magnetic piston. The all PFA and PTFE design makes the M-62 flow switch compatible for caustic fluids. The magnetized piston actuates a hermetically sealed reed switch in response to fluid flows. The M-62 switch is suitable for a wide range of applications in industrial, biomedical and semiconductor industries, especially where highly corrosive fluids are used.

Operating Principle

The magnetic piston moves in response to fluids within the flow path and actuates an external hermatically sealed magnetic reed switch. This switch contact can be used to actuate external devices such as audible/visual alarms, relays, and other controls.

Applications

- Semiconductor process equipments
- Welding systems
- Vacuum systems
- Laser cooling systems
- Water treatment
- Chillers



Illustrated is the M-62 model
with 1/4" ports.

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Fixed Set Point Flow Switch

Material Specifications

Body	PFA
Wetted Parts	PTFE / PFA

Port Sizes

1/4" flare
3/8" flare

Calibration range

Air	300 - 55,000 sccm
Water	20 -1600 ccm

Cv at typical flow

Water ccm	Air sccm	Cv
850	30,000	0.43
1,595	55,000	0.54

Operating Specifications

Set Point Accuracy	± 10% *
Hysteresis	30% *
Repeatability	± 2% *
Maximum Operating Pressure	60 psig
Maximum Operating temperature	40°C

*** May not apply to the lower set point ranges.**

Electrical Specifications

Reed Switch Data	Electical Ratings	10 Watts SPST or 3 Watts SPDT (Hermetically Sealed) UL Recognized. File E47258 Operating temperature -40°C to 125°C
	Switch Voltage	200 VDC (170 VDC for SPDT)
	Breakdown Voltage	250 VDC (200 VDC for SPDT)
	DC Resistive	10 VA (3 VA for SPDT)
	AC Resistive	10 Watts (3 Watts for SPDT)
	Switching Current	0.5 A (0.25 A for SPDT)
	Carrying Current	1.2 A (0.5 A for SPDT)
Lead Wires		No 24 to 18 AWG. 18" length, Polymeric UL Recognized (Belden cable or special shielded cable is available)
Lead Wires Color		SPST: 2 blue wires
		SPDT: 3 wires Green - Common Yellow - Normally Closed Orange - Normally Open

NOTE: Consult the factory for any special requirements such as fluid connections, calibration range, temperature and pressure limits.

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Reed Switch Ratings as Recognized by UL

SPST	120 V AC 24 V DC 50 V DC	0.1 A general purpose 0.25 A resistive 0.25 A resistive
SPDT	120 V AC 10 V DC 24 V DC	0.1 A general purpose 0.25 A resistive 0.1 A resistive

Certifications

UL and Canadian UL

UL and Canadian UL recognized for ordinary locations. File E 138467.

CE Compliance

Meets the intent of Directive 89/336/EEC for Electromagnetic Compability and low voltage Directive 73/23/EEC for Product Safety. Compliance was demonstrated to the following specifications as listed in the Official Journal of the European Communities: EMC Directive 89/336/EEC: EN 55011, Class B Radianted Emissions, EN 500821-1 (Immunity): IEC 801-2, Electrostatic Discharge Immunity, IEC 801-3, RF Electromagnetic Field Immunity; Low voltage Directive 73/23/EEC: EN61010-1, Safety Requirements for electrical equipment for measurement, control, and laboratory use.

Installation

The standard switch has to be mounted vertically, in the position as shown on page 1, and the fluid flow is from the bottom to the top.
A ten micron or better filter is recommended.

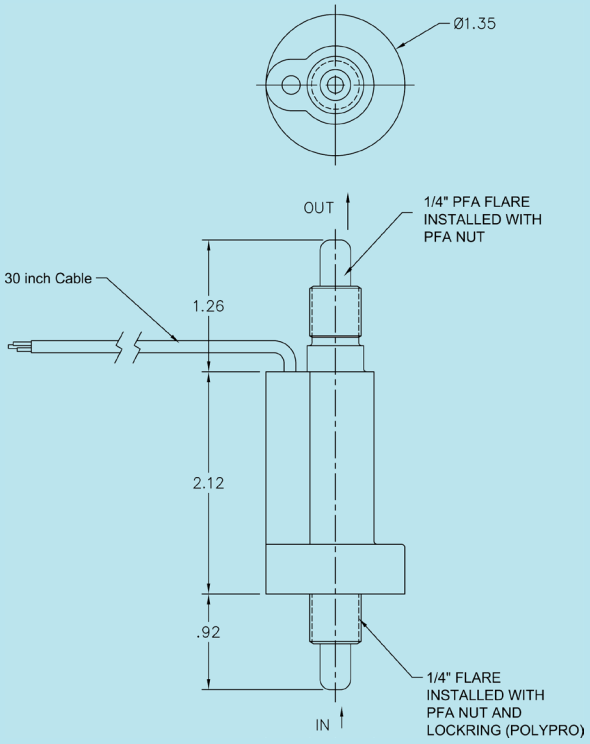
Important Ordering Information

This model is a FIXED flow switch. The flow set point is fixed at the factory and is NOT field adjustable. Proper calibration of the set point requires the following information. When purchasing a flow switch, use the "Set Point Calibration" form or provide the following information on the purchase order:

- Calibration set point
- Increasing or decreasing flow
- Fluid type
- Density or specific gravity
- Viscosity
- System pressure and temperature
- Flow direction

Dimensional Drawing

Illustrated is the M-62 model with 1/4" ports.



Ordering Information

Model Code													Option
M-62													
	-												
Material		F											PFA
Fluid Connection			2										1/4" flare
			3										3/8" flare
Switch				1									SPST N.O.
				2									SPST N.C.
				3									SPDT
					-								
Mounting						0							Standard (Vertical)
Piston							1						PTFE Encapsulated
								-					
									XXX				Unique PN Identifier

NOTE: Specifications are subject to change without notice.

Custom Version Available

Malema welcomes the opportunity to apply its flow sensor experience to work for its customers. Please contact the factory for any special requirements; such as ports, extreme temperature and pressure capabilities, and others.

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