



Features

- Available in a wide range of fixed flow settings
- High reliability
- Extremely sensitive
- Low hysteresis
- Low pressure drop
- Large port sizes

Applications

- · Process flow monitoring
- Chemical delivery systems
- Cooling water flows
- High volume gas flows
- Heat exchangers
- Transformers
- Brewery process applications

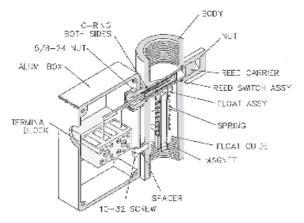
M-80 Series All stainless, fixed setting flow switch with in-line flow

Description

The M-80 Series flow switches are engineered and field tested for sensing increasing and decreasing flow rates of gases or liquids. Pressure variation effects are minimal. This series features such versatility, economy, and accuracy that they can be used in virtually any application requiring fool-proof inexpensive flow detection. (The M-80 Series is manufactured under license from CT Platon Ltd., United Kingdom.)

Operation

The M-80 is a flow operated switch for fitting directly in the pipe work. The variable area flow sensing element, mounted on the pipe axis, moves at a preset flow rate from its rest position to an open position where it causes minimum impedance to the flow. The moving member embodies a permanent magnet, which operates a reed switch, which is mounted transversely in the pipe body in a sealed pocket.



Illustrated is the M-80 Model with 1" bspp ports.

Measurement Specifications

Calibration Range *	Air : 2.3 to 70.6 scfm Water: 2.5 to 80 l/min * These calibration ranges are over different valve sizes. Please see "Standard Flow Set Point Table."		
Set Point Accuracy	± 10% maximum		
Repeatability	± 5%		
Hysteresis	10% to 30%		
Material Versions	• 316 Stainless Steel		
Port Sizes	• 1" BSPP or 1" MNPT available		

Standard Specifications by Materials

Port Size	1" BSP Female	2" Flanged		
Body	316SS			
Flow Sensor	Stainless Steel with permanent magnet in axially mounted moving member			
O-Rings	Nitrile			
Pressure & Temperature Maximum Operating (psig) Burst (psig) Maximum Operating Temperature	1000 3000 70 C/158°F	Note 1 Note 1 70 C/158°F		
Reed Switch Data (Electrical Ratings) Reed Switch Switching Voltage Breakdown Voltage DC Resistive AC Resistive Switching Current	10 Watts SPST or 3 Watts SPDT (Hermetically Sealed) UL Recognized. File E47258. Operating Temperature -40°C to 125°C 200 VDC (170 VDC for SPDT) 250 VDC (200 VDC for SPDT) 10 Watts (3 Watts for SPDT) 10 VA (3VA for SPDT) 0.5 A (0.25 A for SPDT) 1.2 A (0.5A for SPDT)			
Lead Wires	No 24 to 18 AWG. 18" Length, Polymeric UL Recognized			
Lead Wires Color	Green - Common, Yellow - Normally Closed, Orange - Normally Open			
Flow Calibration Set Point Accuracy Set Point Differential (Deadband) Repeatability	(Higher accuracy units available) 10% maximum ± 15% - 30% ± 5% maximum			

Note 1: Maximum pressure 1000 psi (70 bar) or maximum pressure of rated flange.

Installation & Maintenance

The screwed models for 1" pipe are best installed vertically to eliminate friction; but the 2" flanged models can be installed at any orientation, unless required for extremely low gas applications.

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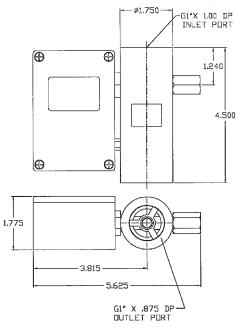
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Reed Switch Ratings as Recognized by UL

SPST	120 V ac 24 V dc 50V 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		

Dimensional Drawings

Illustrated is the M-80 Model with 1" bspp ports.



Standard Flow Set Point Table

Port	Flow Setting (I/min) Water @ 20 C					Flow Setting (scfm) Air @ ATP (20 C and 14.7 psi)				
Size	1	2	3	4	5	1	2	3	4	5
1"	-	2.5	5	10	20	-	2.3	4.4	8.8	17.7
2"	-	10	20	40	80	-	8.8	17.7	35.3	70.6

Ordering Information

	Standard Part Numbering							
M	-	Model	-	Material	Port	Switch	Flow Set Point	
M	-	80	-	S	1	3		
		80		S - 316 Stainless	1 - 1" BSPP * 2 - 2" Flanged	3 - SPDT	(Please see "Flow Set Point Table")	

^{* 1&}quot; MNPT made available with adapter fittings from factory. NOTE: Specifications are subject to change without notice.

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