

SERIES AP 74

VERTICAL FLOW SWITCH

Ultraclean safety device for gases



- Selection and sizing application program, flow trip point calculator, online at www.aptech-online.com
- Flow thru design free of deadlegs or unswept zones
- SS 316L VAR secondary remelt material
- Vacuum to 3,500 psig (241 bar)
- Particle free operation
- Six flow reference trip points: 2, 5, 10, 25, 50 & 100 slpm at 100 psig of N2
- Reed switch is hermetically sealed
- Installation and operating instructions available at www.aptech-online.com in the Tech Briefs section

Operating Parameters

Source pressure	vacuum to 3,500 psig (241 bar)
Flow trip reference points	2, 5, 10, 25, 50 & 100 slpm N2 at 100 psig
Accuracy	± 10% of trip point or 1/2 slpm, whichever is greater
Installation orientation	Vertical within 8° and inlet port at the bottom
Pressure drop at trip point	1/2 psi (0.034 bar) differential
Proof pressure	150% of operating pressure
Burst pressure	300% of operating pressure

Other Parameters

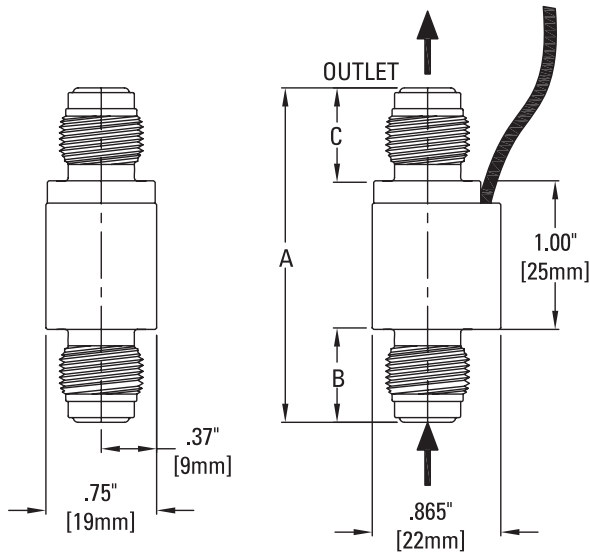
Inlet and outlet connectors	1/4 in. face seal or tube weld
Internal volume	0.12 in ³ (1.9 cm ³)
Operating temperature*	-10° to +175° F (-23° to +80°C)
Surface finish	15 µin. (0.4µm) Ra max standard; 10 µin. (0.25µm) Ra max optional
Inboard leakage	2 x 10 ⁻¹⁰ sccs
Outboard leakage	2 x 10 ⁻¹⁰ sccs at 500 psig

* Trip point varies slightly with temperature change, ±2% over the specified operating range.

Materials

Wetted Parts	
Body	316L SS secondary remelt
Float	316L SS
Finish	electropolished and passivated
Reed Switch	
Type	SPDT, 3 wire / 2 position
Power	30 VDC / 3 W max
Switching current	0.2 A max
Carrying current	0.5 A max
Initial contact resistance	0.1 Ohm max
Cable	
Wire gauge	Stranded #24 awg, PVC jacket
Cable length	10 ft (3 meters)
Lead color	Blue: common Brown: normally closed Black: normally open

All specifications subject to change without notice.



DIMENSION CHART						
Connectors (inlet x outlet)	A		B		C	
	in[±.03]	mm	in[±.01]	mm	in[±.01]	mm
MV4 x MV4	2.25"	57	.625	16	.625	16
FV4 x FV4	3.99"	101	1.495	38	1.495	38
TW4 x TW4	2.25"	57	.625	16	.625	16
MV4 x FV4	3.12"	79	.625	16	1.495	38
MV4 x TW4	2.25"	57	.625	16	.625	16
FV4 x MV4	3.12"	79	1.495	38	.625	16
FV4 x TW4	3.12"	79	1.495	38	.625	16
TW4 x MV4	2.25"	57	.625	16	.625	16
TW4 x FV4	3.12"	79	.625	16	1.495	38

All dimensions in inches (mm).
Metric dimensions are for reference only.

- The actual trip point varies as the pressure changes, decreasing pressure lowers the trip point. It is recommended to select an actual trip point for the lowest system pressure of switch operation.
- The switch contains a strong magnet which may affect the function of other devices sensitive to such if they are located too closely.
- Do not locate ferrous metals or other magnets within 1 inch of the switch.
- Switch performance is attitude sensitive. It must be mounted within 8 degrees of vertical with the inlet at the bottom.
- The flow switch is strictly intended for gas applications.
- Switch must be properly installed and connected for proper function.

All dimensions in inches (mm). Metric dimensions are for reference only.

CAUTION: Product selection is the sole responsibility of the user, regardless of any recommendations or suggestions made by the factory. The user shall make selections based upon their own analysis and testing with regard to function, material compatibility and product ratings. Proper installation, operation and maintenance are also required to assure safe, trouble free performance.

Sample Order Number		AP 74100SM MV4 FV4	
AP 74 Series	AP 74		
100 Switch Size	002 = 2 slpm 005 = 5 slpm 010 = 10 slpm 025 = 25 slpm 050 = 50 slpm 100 = 100 slpm Switch size equals trip point in slpm of nitrogen at 100 psig		
S Material	S = 316L SS VAR		
M Surface Finish Option	M = 10 µin. Ra max		
MV4 FV4 Connections Inlet / Outlet	FV4 = 1/4 inch face seal female MV4 = 1/4 inch face seal male TW4 = 1/4 inch tube stub weld SC = Short bonnet Optional connections available		

AP Tech has product options and variations which are not documented in data sheets. If you have a model number that is not defined by the ordering information, please consult the factory or your local representative.