

Product Feature

- Flow switch for high flow
- Available with horizontal or vertical main line
- Minimal pressure drop through device
- SS 316L material

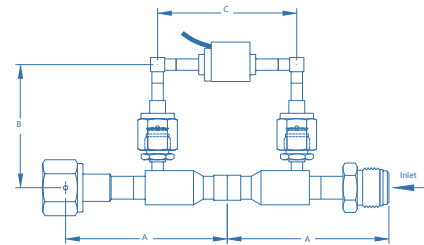
Technical Data

Source pressure:	vacuum to 3500 psig (241 bar) 1/2" vacuum to 3000 psig (207 bar) 3/4" vacuum to 2200 psig (152 bar) 1"
Flow trip reference points:	see ordering info
Accuracy:	±20%
Operating temperature:	-10~175°F (-23~80°C)
Body:	SS 316L
Inlet / Outlet:	1/2" 3/4" tube weld / VFS fitting, 1" tube weld
Leakage (Outboard) :	<1x10 ⁻⁹ mbar l/s He
Reed Switch	——
Type:	SPDT, 3 wire / 2 position
Power:	30VDC / 3W max
Switching current:	0.2A max
Carrying current:	0.5A max
Initial contact resistance:	0.1 Ohm max
Cable length:	3m
Wire gauge:	24AWG



Cable	——
Blue	: common
Brown	: normally closed
Black	: normally open

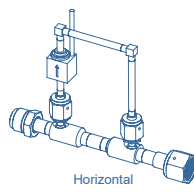
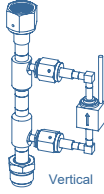
Dimensions (mm)



Connections (Inlet-Outlet)	Dimensions (mm)			C
	A	B		
		Horizontal	Vertical	
FV8-MV8	90.2	115.6	68.9	77.8
TW8-TW8	65.8	115.6	68.9	77.8
FV12-MV12	140	138.2	91.2	77.8
TW12	89.6	138.2	91.2	77.8
TW16	99.1	141.5	94.5	77.8

Ordering Information

VEFS2 - S - H - FV8 - MV8 - 225 - P

<p>Material S: 316L SS</p> <p>Position H: Horizontal V: Vertical</p> <p>Inlet / Outlet FV8: 1/2"VFS(F) MV8: 1/2"VFS(M) TW8: 1/2"tube weld FV12: 3/4"VFS(F) MV12: 3/4"VFS(M) TW12: 3/4"tube weld TW16: 1"tube weld</p>	<p>Flow N2 at 100 psig 1/2" —— 225: 225 slpm 350: 350 slpm 500: 500 slpm 950: 950 slpm 3/4" —— 1100: 1100 slpm 1650: 1650 slpm 2600: 2600 slpm 1" —— 3000: 3000 slpm 4000: 4000 slpm</p>	<p>Process Specification P: VS001A * For details, please refer to the appendix.</p> <div style="display: flex; justify-content: space-around;">   </div> <p>Horizontal Vertical</p>
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! The flow rate specified in the standard is measured with nitrogen at an inlet pressure of 100 psig and a temperature of 20°C. If operating conditions deviate from the standard, conversion to the actual operating flow rate is required. Please refer to Page 117 for the conversion!



Conversion Formula

The test flow rate under standard specifications is the value of nitrogen at an inlet pressure of 100 psig and 20°C. If deviating from standard operating conditions, conversion to the actual working flow rate is required.

1. Pressure Conversion Factor: $F_p = \sqrt{(OP/114.7)}$ OP: Operating Pressure (Absolute Pressure) psia
2. Gas Conversion Factor: $F_g = \sqrt{(28/MW)}$ MW: Molar Mass of the Gas Used, g/mol
3. Temperature Conversion Factor: $F_t = \sqrt{(293/OT)}$ OT: Operating Temperature, °C+273

Conversion Example

If hydrogen (molecular weight 2) is used at a pressure of 72.5 psig (gauge pressure) and a temperature of 25 °C, and a flow switch with a standard flow rate of 500 SLPM (VEFS2-S---500) is selected, the conversion is as follows:

1. Pressure Conversion Factor: $F_p = \sqrt{((72.5+14.5)/114.7)} = 0.871$
2. Gas Conversion Factor: $F_g = \sqrt{(28/2)} = 3.742$
3. Temperature Conversion Factor: $F_t = \sqrt{(293/298)} = 0.992$

The actual working flow rate is: 500 (L/min) × 0.871 × 3.742 × 0.992 = 1616.6 (L/min)

