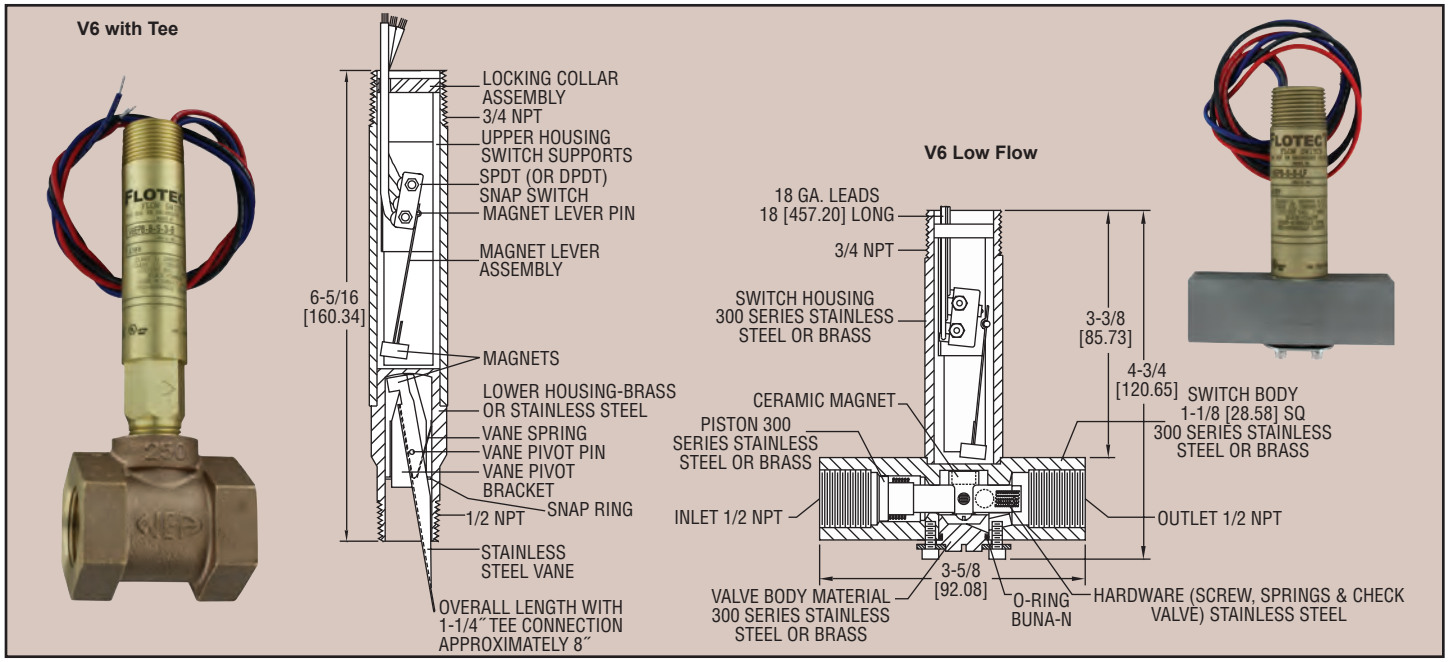
Series V6

FLOTECT® Mini-Size Flow Switches

Monitor flow in 1/2″ to 2″ pipe, Explosion-proof



Surprisingly compact, the Series V6 Flotect® Flow Switch is engineered to specifically monitor liquid, gas, or airflows. Operation is simple and dependable with no mechanical linkage as the flow switch is magnetically actuated. The lower body holds the flow vane and one magnet, which controls the switch actuating magnet in the separate upper housing. In most applications the switch is normally off with the pipeline flow forcing the vane against the vane spring. As the flow decreases the vane spring pushes back the vane, actuating the switch to signal an alarm or shutdown. Tees are available for installation in pipelines from 1/2″ to 2″, with bushings added the unit is easily adapted to 1/4″ and 3/8″ piping.

FEATURES

- Leak proof lower body machined from bar stock
- Choice of models in a tee with calibrated vane or field adjustable trimmable vane
- Weatherproof
- Explosion-proof (listing included in specifications)
- Electrical assembly can be easily replaced without removing the unit from the installation so that the process does not have to be shut down
- High pressure rating of 1000 psig (69 bar) with brass body and 2000 psig (138 bar) on the 316 SS body (see specifications)
- Low flow model offers field adjustable set point
- Easy installation, simply insert the tee in the pipeline and complete electrical connections

APPLICATIONS

- Protects pumps, motors and other equipment against low or no flow
- Controls sequential operation of pumps
- Automatically starts auxillary pumps and engines
- Shuts down burner when air flow through heating coil fails
- Controls dampers according to flow

SPECIFICATIONS

Service: Gases or liquids compatible with wetted materials.
Wetted Materials: Standard V6 Models: Vane: 301 SS; Lower Body: brass or 303 SS; Magnet: ceramic; Other: 301, 302 SS; Tee: brass, iron, forged steel, or 304 SS.
V6 Low Flow Models: Lower Body: brass or 303 SS; Tee: brass or 304 SS; Magnet: ceramic; O-ring: Buna-N standard, Fluoroelastomer optional; Other: 301, 302 SS.
Temperature Limits: -4 to 220°F (-20 to 105°C) Standard, MT high temperature option 400°F (205°C) (MT not UL, CSA, ATEX, IECEx or KC) ATEX Compliant AT, IECEx IEC Option and KC (KC Option), Ambient Temperature -4 to 167°F (-20 to 75°C) Process Temperature: -4 to 220°F (-20 to 105°C).
Pressure Limit: Brass lower body with no tee models 1000 psig (69 bar), 303 SS lower body with no tee models 2000 psig (138 bar). Brass tee models 250 psi (17.2 bar), iron tee models 1000 psi (69 bar), forged and stainless steel tee models 2000 psi (138 bar), low flow models 1450 psi (100 bar).
Enclosure Rating: Weatherproof and Explosion-proof. Listed with UL and CSA for Class I, Groups A, B, C and D; Class II, Groups E, F, and G. (Group A on stainless steel body models only).
ATEX CE 0344 II 2 G Ex d IIC T6 Gb Process Temp≤75°C Alternate Temperature Class T5 Process Temp≤90°C, 115°C (T4) Process Temp ≤105°C consult factory. EC-type Certificate No.: KEMA 04ATEX2128.
ATEX Standards: EN 60079-0: 2009; EN 60079-1: 2007.
IECEx Certified: For Ex d IIC T6 Gb Process Temp≤75°C Alternate Temperature Class T5 Process Temp≤90°C, 115°C (T4) Process Temp≤105°C consult factory.
IECEx Certificate of Conformity: IECEx DEK 11.0039;
IECEx Standards: IEC 60079-0: 2007; IEC 60079-1: 2007;
Korean Certified (KC) for: Ex d IIC T6 Gb Process Temp≤75°C;
KTL Certificate Number: 2012-2454-75.
Switch Type: SPDT snap switch standard, DPDT snap switch optional.
Electrical Rating: UL models: 5A @125/250 VAC. CSA, ATEX and IECEx models: 5A @ 125/250 VAC (V~); 5A res., 3A ind. @ 30 VDC (V⎓). MV option: .1A @ 125 VAC (V~). MT option: 5A @125/250 VAC (V~). [MT option not UL, CSA, ATEX or IECEx].
Electrical Connections: UL models: 18 AWG, 18″ (460 mm) long. ATEX/CSA /IECEx models: terminal block.
Upper Body: Brass or 303 stainless steel.
Conduit Connections: 3/4″ male NPT standard, 3/4″ female NPT on junction box models.
Process Connection: 1/2″ male NPT on models without a tee.
Mounting Orientation: Switch can be installed in any position but the actuation/deactuation flow rates in the charts are based on horizontal pipe runs and are nominal values.
Set Point Adjustment: Standard V6 models none. Without tee models vane is trimmable. Low flow models are field adjustable in the range shown. See set point charts on opposite page.
Weight: 2 to 6 lb (.9 to 2.7 kg) depending on construction.
Options not Shown: Custom calibration, bushings, PVC tee, reinforced vane, DPDT relays.
Agency Approvals: ATEX, CE, CSA, IECEx, UL.

Example	V6	EP	B-B	S	2	B	MT	V6EPB-B-S-2-B-MT flow switch; brass body, brass tee with 3/4″ NPT connections, SPDT snap switch, and high temperature option
Series	V6							Series V6 flow switch
Construction		EP						Explosion proof
Body			B-B S-S					Brass SS
Circuit (Switch)				S D				SPDT DPDT
Tee Connection Size					1 2 3 4 5 6 LF			1/2″ NPT 3/4″ NPT 1″ NPT 1-1/4″ NPT 1-1/2″ NPT 2″ NPT Low Flow Model (1/2″ NPT connections)
Tee Material						MI FS B S 0		Iron Forged Steel Brass SS No tee, field trimmable vane** (For LF Model no tee material chosen, tee material matches body choice)
Options							CSA AT IEC MV MT VIT	CSA approved construction with junction box* ATEX compliant construction with junction box IECEx certified construction with junction box Gold contacts on snap switch for dry circuits (see specifications for ratings) High temperature option rated 400°F (205°C) (see specifications for ratings)* Fluoroelastomer O-rings in place of Buna-N on low flow models

*Options that do not have ATEX.

**Vane will be trimmed to the connection size. If full field trimmable vane is desired, must select with tee connection size 6.

V6 Set Point Charts - Factory Installed Tee

Approximate Actuation-Deacuation Flow Rates for Air. Upper figures are SCFM, Lower figures in LPM		
Pipe Size	**Actuate**	**Deactuate**
1/2″	6.50 180	5.00 120
3/4″	10.0 300	8.00 240
1″	14.0 420	12.0 360
1-1/4″	21.0 600	18.0 540
1-1/2″	33.0 960	30.0 840
2″	43.0 1200	36.0 1020

Approximate Actuation-Deactuation Flow Rates for Cold Water. Upper figures are GPM, Lower figures in LPM		
Pipe Size	**Actuate**	**Deactuate**
1/2″	1.50 5.667	1.00 3.83
3/4″	2.00 7.5	1.25 4.67
1″	3.00 11.33	1.75 6.67
1-1/4″	4.00 15.17	3.00 11.3
1-1/2″	6.00 22.67	5.00 18.9
2″	10.00 37.83	8.50 32.2

V6 Low Flow Set Point Chart

Min-Max Flow Rates in 1/2″ Pipe		
Media	**Actuate**	**Deactuate**
GPM-Water	.04-0.75	.03-0.60
LPM-Water	.15-2.84	.11-2.27
SCFM-Air	.18-2.70	.15-2.0
LPS-Air	.09-1.3	.07-.95

Pressure drop (head loss) is a function of both set point and flow rate. Typically, pressure drop at actuation flow rate listed will be 5-10 psid (.34-.69 bar). Pressure drops at other flow rates will vary in proportion to the (change in flow).

Model	Size	Body	Tee
V6EPB-B-S-1-B	1/2″	Brass	Brass
V6EPB-B-S-2-B	3/4″	Brass	Brass
V6EPB-B-S-3-B	1″	Brass	Brass
V6EPB-B-S-4-B	1-1/4″	Brass	Brass
V6EPB-B-S-5-B	1-1/2″	Brass	Brass
V6EPB-B-S-6-B	2″	Brass	Brass
V6EPB-B-S-1-MI	1/2″	Brass	Iron
V6EPB-B-S-2-MI	3/4″	Brass	Iron
V6EPB-B-S-3-MI	1″	Brass	Iron
V6EPB-B-S-4-MI	1-1/4″	Brass	Iron
V6EPB-B-S-5-MI	1-1/2″	Brass	Iron
V6EPB-B-S-6-MI	2″	Brass	Iron
V6EPS-S-S-1-FS	1/2″	SS	FS
V6EPS-S-S-2-FS	3/4″	SS	FS
V6EPS-S-S-3-FS	1″	SS	FS
V6EPS-S-S-4-FS	1-1/4″	SS	FS
V6EPS-S-S-5-FS	1-1/2″	SS	FS
V6EPS-S-S-6-FS	2″	SS	FS
V6EPS-S-S-1-S	1/2″	SS	SS
V6EPS-S-S-2-S	3/4″	SS	SS
V6EPS-S-S-3-S	1″	SS	SS
V6EPS-S-S-4-S	1-1/4″	SS	SS
V6EPS-S-S-5-S	1-1/2″	SS	SS
V6EPS-S-S-6-S	2″	SS	SS
V6EPB-B-S-6-0	No Tee	Brass	None
V6EPS-S-S-6-0	No Tee	SS	None
V6EPB-B-S-LF	1/2″	Brass	LF, Brass
V6EPS-S-S-LF	1/2″	SS	LF, SS