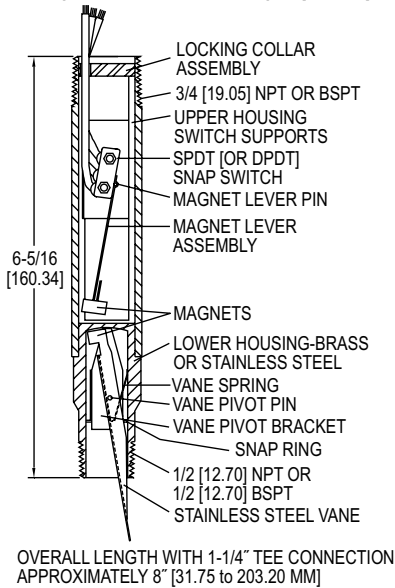


# FLOTECT® MINI-SIZE FLOW SWITCHES

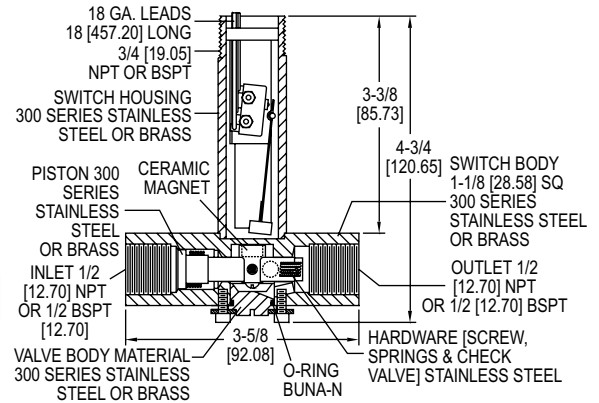
Monitor Flow in 1/2" to 2" (12.70 to 50.80 mm) Pipe, Explosion-Proof, Compact



V6 with Tee



V6 Low Flow



The **SERIES V6** Flotect® Flow Switches is surprisingly compact, and specifically engineered to monitor liquid, gas, or air flows. Time tested in thousands of pipeline installations and processing plants around the world, this Series is Weatherproof, designed to meet NEMA 4 and Explosion-proof (listing included in specifications). Tees are available for installation in pipelines from 1/2" to 2" (12.70 to 50.80 mm). With bushings added the unit is easily adapted to 1/4" and 3/8" (6.35 and 9.53 mm) piping.

## FEATURES/BENEFITS

- Unique magnetically actuated switching design gives superior performance
- Features a free-swinging vane which attracts a magnet within the solid metal switch body, actuating a snap switch by means of a simple lever arm with no bellows, springs, or seals to fail
- Leak proof body machined from bar stock
- Electrical assembly can be easily replaced without removing the unit from installation so that the process does not have to be shut down
- Choice of models in a tee with calibrated vane or field adjustable trimmable vane
- Easy installation with simple pipe insert via tee and simple electrical switch connections
- High pressure rating of 1000 psig (69 bar) with the brass body and 2000 psig (138 bar) with the 316 SS body
- Low flow model offers field adjustable set point

## APPLICATIONS

- Protects pumps, motors and other equipment against low or no flow
- Controls sequential operation of pumps
- Automatically starts auxiliary pumps and engines
- Stops liquid cooled engines, machines and processing when coolant flow is interrupted
- Shuts down burner when air flow through heating coil fails
- Controls dampers according to flow
- Signals alarm when emergency shower or eyewash station in use

## 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 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: 5 A @ 125/250 VAC. CSA, ATEX and IECEx models: 5 A @ 125/250 VAC (V~); 5 A res., 3 A ind. @ 30 VDC (V ). MV option: .1 A @ 125 VAC (V~). MT option: 5 A @ 125/250 VAC (V~). [MT option not UL, CSA, ATEX or IECEx].

**Electrical Connections:** UL models: 18 AWG, 18" (457.20 mm) long. ATEX/CSA / IECEx models: terminal block.

**Upper Body:** Brass or 303 stainless steel.

**Conduit Connections:** 3/4" (19.05 mm) male NPT standard, 3/4" (19.05 mm) female NPT or M25 with BSPT option on junction box models.

**Process Connection:** 1/2" (12.70 mm) male NPT or 1/2" (12.70 mm) male BSPT 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.

**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, KTL, UL.

USA: California Proposition 65

⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

●Set Point Charts: See page 289 (Series V6)

# FLOTECT® MINI-SIZE FLOW SWITCHES

Monitor Flow in 1/2" to 2" (12.70 to 50.80 mm) Pipe, Explosion-Proof, Compact

MODEL CHART									
Example	V6	EP	B-B	-S	-2	-B	-MT	V6EPB-B-S-2-B-MT	
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 LF			1/2" (12.70 mm) 3/4" (19.50 mm) 1" (25.40 mm) 1-1/4" (31.75 mm) 1-1/2" (38.10 mm) 2" (50.80 mm) Low flow model (1/2" connection-brass) Low flow model (1/2" connection-SS)	
Process Connection						- E		NPT BSPT	
Tee Material+						MI FS B S O		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	

+Additional adders dependent on tee connection size and tee material consult factory for these adders.  
\*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.

MODEL CHART			
Model	Size/Connection	Body	Tee
V6EPB-B-S-1-B	1/2" (12.70 mm) NPT	Brass	Brass
V6EPB-B-S-2-B	3/4" (19.50 mm) NPT	Brass	Brass
V6EPB-B-S-3-B	1" (25.40 mm) NPT	Brass	Brass
V6EPB-B-S-4-B	1-1/4" (31.75 mm) NPT	Brass	Brass
V6EPB-B-S-5-B	1-1/2" (38.10 mm) NPT	Brass	Brass
V6EPB-B-S-6-B	2" (50.80 mm) NPT	Brass	Brass
V6EPB-B-S-1-MI	1/2" (12.70 mm) NPT	Brass	Iron
V6EPB-B-S-2-MI	3/4" (19.50 mm) NPT	Brass	Iron
V6EPB-B-S-3-MI	1" (25.40 mm) NPT	Brass	Iron
V6EPB-B-S-4-MI	1-1/4" (31.75 mm) NPT	Brass	Iron
V6EPB-B-S-5-MI	1-1/2" (38.10 mm) NPT	Brass	Iron
V6EPB-B-S-6-MI	2" (50.80 mm) NPT	Brass	Iron
V6EPS-S-S-1-FS	1/2" (12.70 mm) NPT	SS	FS
V6EPS-S-S-2-FS	3/4" (19.50 mm) NPT	SS	FS
V6EPS-S-S-3-FS	1" (25.40 mm) NPT	SS	FS
V6EPS-S-S-4-FS	1-1/4" (31.75 mm) NPT	SS	FS
V6EPS-S-S-5-FS	1-1/2" (38.10 mm) NPT	SS	FS
V6EPS-S-S-6-FS	2" (50.80 mm) NPT	SS	FS
V6EPS-S-S-1-S	1/2" (12.70 mm) NPT	SS	SS
V6EPS-S-S-2-S	3/4" (19.50 mm) NPT	SS	SS
V6EPS-S-S-3-S	1" (25.40 mm) NPT	SS	SS
V6EPS-S-S-4-S	1-1/4" (31.75 mm) NPT	SS	SS
V6EPS-S-S-5-S	1-1/2" (38.10 mm) NPT	SS	SS
V6EPS-S-S-6-S	2" (50.80 mm) NPT	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" (12.70 mm) NPT	Brass	LF, brass
V6EPS-S-S-LF	1/2" (12.70 mm) NPT	SS	LF, SS
V6EPB-B-S-LFE	1/2" (12.70 mm) BSPT	Brass	Brass
V6EPB-B-S-1E-B	1/2" (12.70 mm) BSPT	Brass	Brass
V6EPB-B-S-2E-B	3/4" (19.50 mm) BSPT	Brass	Brass
V6EPB-B-S-3E-B	1" (25.40 mm) BSPT	Brass	Brass
V6EPB-B-S-4E-B	1-1/4" (31.75 mm) BSPT	Brass	Brass
V6EPB-B-S-5E-B	1-1/2" (38.10 mm) BSPT	Brass	Brass
V6EPB-B-S-6E-B	2" (50.80 mm) BSPT	Brass	Brass
V6EPB-B-S-6E-0	No tee	Brass	Brass
V6EPS-S-S-LFE	1/2" (12.70 mm) BSPT	SS	SS
V6EPS-S-S-1E-S	1/2" (12.70 mm) BSPT	SS	SS
V6EPS-S-S-2E-S	3/4" (19.50 mm) BSPT	SS	SS
V6EPS-S-S-3E-S	1" (25.40 mm) BSPT	SS	SS
V6EPS-S-S-4E-S	1-1/4" (31.75 mm) BSPT	SS	SS
V6EPS-S-S-5E-S	1-1/2" (38.10 mm) BSPT	SS	SS
V6EPS-S-S-6E-S	2" (50.80 mm) BSPT	SS	SS
V6EPS-S-S-6E-0	No tee	SS	SS

### V6 SET POINT CHARTS - FACTORY INSTALLED TEE

APPROXIMATE ACTUATION/DEACTUATION FLOW RATES FOR AIR; SCFM (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; GPM (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).

USA: California Proposition 65  
 ⚠️ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov