ISO 9001/14001

Vibrating Fork Type Level Switch

Model : SVF

SeoJin Instech Co., Ltd.

www.seojin.biz

SVF

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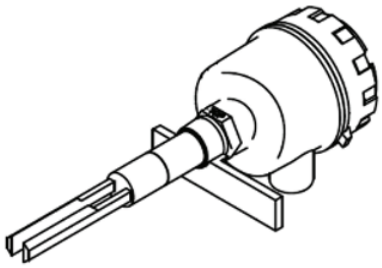


Introduction

SVF series tuning fork level sensor is applicable for fixed point alarm or control in all kinds of storage level and liquid level in tank.

- Liquid material: Water, Oil, Milk, chemical fluid, Sludge, Pulp, Mud... etc.
- Solid material: Plastic powders & pellet, Grains, Cement, Sugars, Sands... etc.

And it can detect sediment in liquid. The instrument has not a movable parts and presents merits of anti-corrosion, high sensitivity and easy mounting etc.

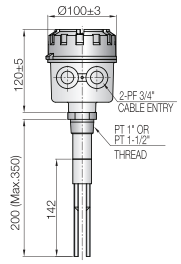
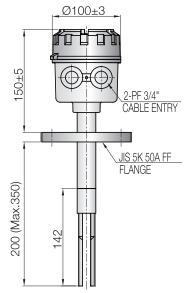
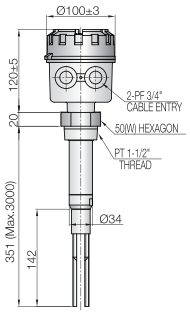
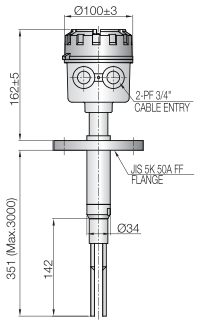
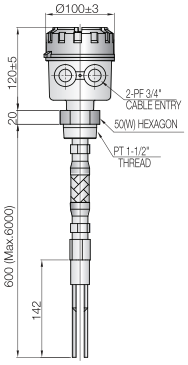
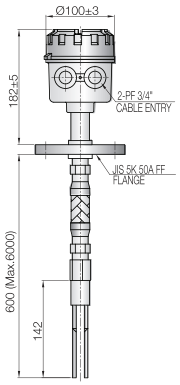
Features

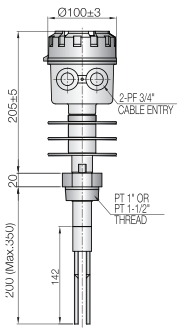
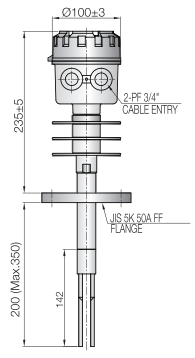
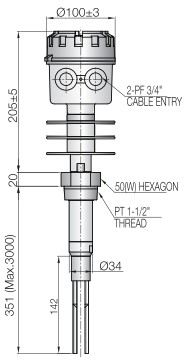
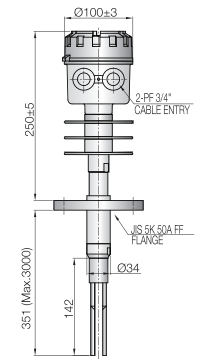
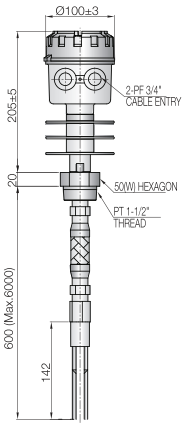
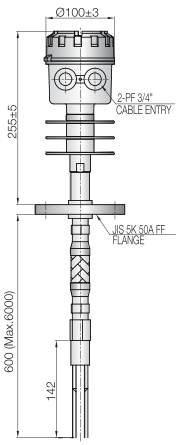
- Very high sensitivity tuning fork sensing probe (Sensitivity adjustment)
- Applicable to all kinds of liquid or ultra-light powders and solids material.
- Withstand up to 150ºC (option)
- 2 colors LED illumination (Red:Normal, Green:Abnormal Status)

Principle

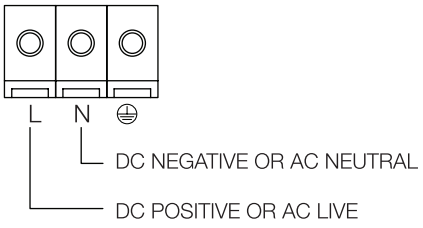
The tuning fork type vibration probe of new SVF series is using the driven piezoelectric crystal cell and the response piezoelectric crystal cell at tip end of tuning fork. When the driven piezoelectric crystal cell is energized, the driven piezoelectric crystal cell and response piezoelectric crystal cell are attacked and repulsed. This movement makes vibration. The construction of tuning fork type vibration probe is similar to the motor. When the motor is energized by the battery, the back electromotive current is generated by the influence of response piezoelectric crystal cell and coil. When the tuning fork type vibration probe is covered with all kinds of liquid, solids or powdered material, the current flowing to the lead wire is increased by damping of the back electromotive current. The amplifier detects the shifting of current level, and converts to output signal.

Overall Dimension

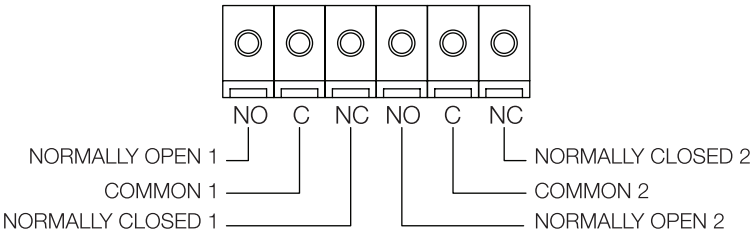
SVF-200 NIPPLE	SVF-200 FLANGE	SVF-300 NIPPLE	SVF-300 FLANGE	SVF-400NIPPLE	SVF-400 FLANGE
					

HIGH TEMP. SVF-200 NIPPLE	HIGH TEMP. SVF-200 FLANGE	HIGH TEMP. SVF-300 NIPPLE	HIGH TEMP. SVF-300 FLANGE	HIGH TEMP. SVF-400 NIPPLE	HIGH TEMP. SVF-400 FLANGE
					

Wiring



Power



DPDT Relay

Specifications

DESCRIPTION		SVF-200 Standard Type	SVF-300 Extension Type	SVF-400 Flexible Tube Type
Power	Supply	85 ~264 VAC 50/60 Hz.		
	Consumption	5W		
Relay Output		1 DPDT Relay (Resistive Load) 5A @ 250 Vac, 30 Vdc		
Detection Time Delay		0.5 ~ 6 sec		
Operating Temperature	Electronics Housing	-20 ~+60℃		
	Sensing Probe	-25 ~ +60℃ Std. / -25 ~150℃ (Option)		
Operating Pressure		20 Bar		5 Bar
Operating Humidity		Max. 95%RH		
Application	Measures Sensitivity	Liquid density : Min 0.8 g/cm^3 Bulk Weight : Min. 100 g/l (0.1 g/cm^3)		
	Particle Size Limit	Max. 10mm		
	Probe End Static Load	1.25kN. Std	N.A (Top Mount)	
Sensitivity Adjustment		Variable Volume		
Vibration Frequency & Width		Approx. 200~250Hz / Approx. 0.5mm		
Material	Housing	ADC9		
	Vibration Probe	316LSS		
	Extension	304SS / 316LSS		304SS
Cable Entry		1 or 2 Way Cable Entry / PF 3/4" & PF 1/2" or Option		
Enclosure		Weather Proof IP65, NEMA4X, Dust Ignition Proof (Ex tD A21, T85℃, T100℃ , T135℃)		
Approval		KC Mark Certificated		
Indication		Green LED for Sensing status & Red LED for Relay status		
Mounting	Nipple Type	PT 1", 1-1/2"	PT 1-1/2" or Option	
	Flange Type	JIS 5K 50A FF or Option		
	Protection Guard Type	Min. JIS 5K 65A FF(Std.) or Option (Flange Type Only)		
Measuring Length	Side Mount	Std.200mm Max 350mm	N.A	
	Top Mount		351 ~ 3,000mm	600~6,000mm

Precaution

- Feed inlet can not directly aim at tuning fork, if while it can not be avoid, for prevent massive material compacted falling on tuning fork, it should be mounted protection guard so that avoids tuning fork body damage.
- At strong vibrating occasion, it can be used flexible metal tube to suspending tuning fork head.
- It can not be placed instrument in the sun directly, if in the sun directly, it can be mounted an thermal isolation plate.
- Ground line should be a good connection with vessel or earth, grounding resistor <2Ω.

Ordering Information

■ Vibrating Fork Type Level Swich

SVF	200	T	1	A	1	A	1	A	1

Conduit Connection(2 Way Cable Gland Type)
1 = PF3/4" (Std.)
2 = PT3/4"
3 = PF1/2"
4 = PT1/2"
5 = NPT1/2"
6 = NPT3/4"
OP = etc.

Enclosure
A = Weather Proof (Std.)
B = Dust Ignition Proof
(Ex tD A21, T85ºC, T100ºC , T135ºC)

Length Extension
1 = 200 mm (SVF-200 Std.)
2 = Less than 350mm (SVF-200)
3 = Less than 1,000mm (SVF-300)
4 = Less than 2,000mm (SVF-300)
5 = Less than 3,000mm (SVF-300)
6 = Less than 1,000mm (SVF-400)
7 = Less than 2,500mm (SVF-400)
8 = Less than 4,000mm (SVF-400)
9 = Less than 6,000mm (SVF-400)
OP = etc.

Mounting Size
A = PT 1″(SVF-200, Std.)
B = PT 1-1/2″(SVF-300, 400 Std.)
C = PT 2″
D = JIS 5K 50A FF Flanqe
E = JIS 10K 50A FF
F = ANSI 150# 1" RF
G = ANSI 150# 1-1/2" RF
H = ANSI 150# 2" RF
I = ANSI 150# 3" RF
OP = etc.

Operating Temperature
1 = -25 ~ +60ºC (Std.)
2 = -25 ~ +150ºC (High Temp′)

Power Supply
A = 85 ~ 264VAC 50/60Hz (Std.)

Detection Parts Material
1 = 304 SS (Std)
2 = 316LSS

Type Selection
S = Standard Type
T = High Temperature Type
G = Protection Guard Type (SVF-200 Flange Type Only / Min. JIS 5K 80A)

Probe Type
200 = Standard Type (200 ~ 350mm)
300 = Pipe Extension Type (351 ~ 3,000mm)
400 = Flexible Metal Tube Extension Type (600 ~ 6,000mm)

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