

VIBRATING FORK LEVEL SWITCH FOR SOLIDS- **VFSS**

It is a single point level switch based on piezo driven vibrating fork technology, suitable for detection of free flowing, non-hygroscopic powders/ granules in silos.

SALIENT FEATURES

- Rugged design with no moving parts, minimum maintenance
- Universal power supply 20 to 265 VAC/ DC
- Self-clean probe, no build-up due to vibration technology
- Unaffected by dusty environment
- Fail safe high/ low mode settable at site
- Adjustable switching delay
- Ex-proof /ATEX enclosure for hazardous area applications
- Choice of Integral or Two Part System



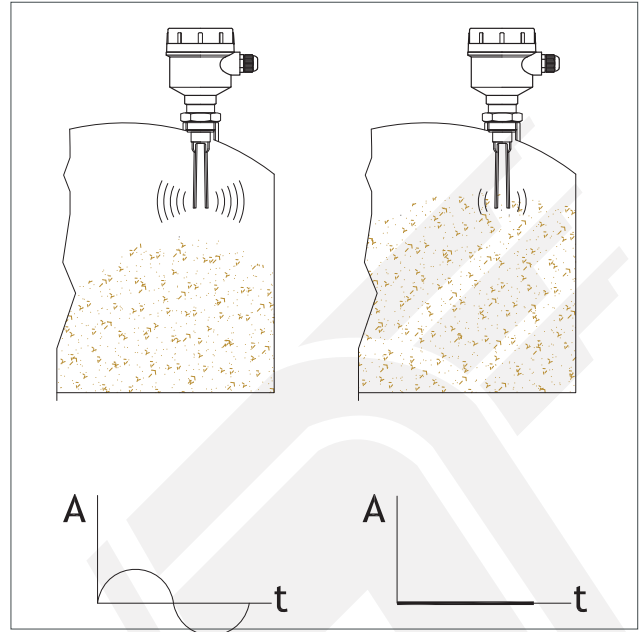
Integral System



CONSTRUCTION & OPERATION

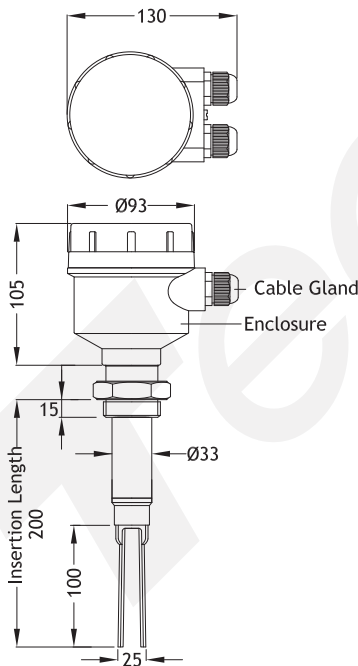
Available as Integral (I) or Two Part system (T). In the integral system, the controller is integral with the probe. In two-part system, the controller is separate from the probe.

An enclosure housing electronics is fitted at top of the vibrating fork. The fork vibrates in air at its resonance frequency through piezo electric crystal, which gets damped when it is covered with solid material. This is sensed by the electronics causing changeover of relay contacts which is further used to operate auxiliary devices.

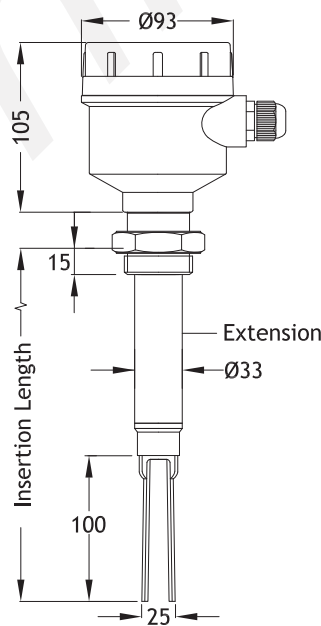


SCHEMATIC DIAGRAMS

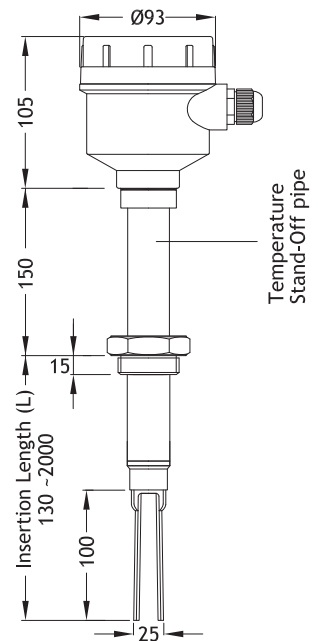
Integral System (I)



Standard Probe x WP Enclosure

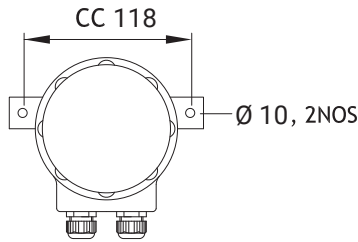
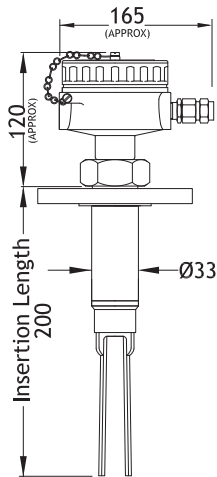


Probe with Extension x WP Enclosure

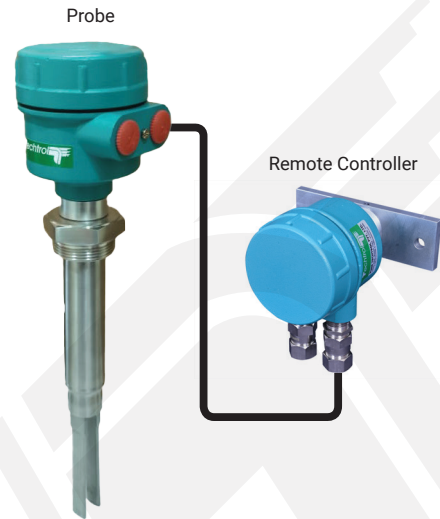


Probe with Temperature Standoff

Two Part System (T)



Remote Controller
x WP Enclosure

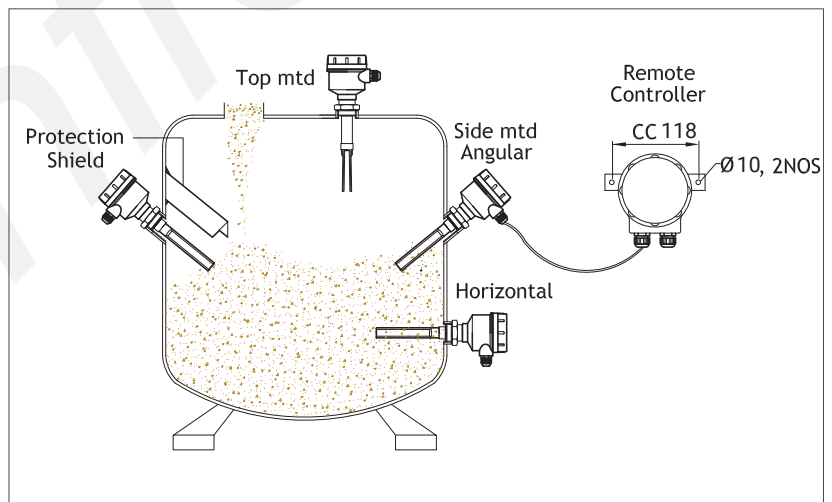


Probe std. or extended x
Enclosure WP or Ex-Proof

TERMINATION



INSTALLATION



SERVICES AND APPLICATIONS

Level detection of material like Grains, Spices, Coffee Beans, Soya Granules, Rice Bran, Iron Ore Powder, Sugar, Animal Feed, Flour, Detergent, Gypsum, Foundry Sand, Cement, Pesticide Powder, PVC Powder, Dye Powder, Ash Powder, Plastic Granules, Cement, Coal, Clinker.

SPECIFICATIONS

PROBE	System	Integral System (I) (Probe with Integral Controller)	Two-Part System (T) (Probe with Remote Controller)
	Enclosure	a. Cast Al. IP66 b. Cast Al. Exd Gr. IIB / IIC T6, IP66	Cast Al. IP66 Cast Al. Exd Gr. IIB / IIC T6, IP66 Cast Al. ATEX Exd Gr. IIC, T6, IP66
	Conduit Connection	a. M20 (Weather proof) b. ½" NPT (Ex-Proof)	
	Cable Gland	a. M20 x 1.5 Cable Gland, PVC (Weather proof) b. ½" NPT DC Cable Gland, Brass (Ex-proof)	
	Fork MOC	a. SS316 (standard) b. SS316L (option on demand)	
	Std. Insertion Length	200 mm	
	Max. Insertion Length	upto 3000 mm with extension	
	Extension MOC	a. SS304 or SS316 (standard) b. SS316L (option on demand)	
	Process Conn. MOC	a. SS304 or SS316 (standard) b. SS316L (option on demand)	
	Process Connection	1½" BSP or NPT(M) or 1½" NB Flange 150#	
	Measuring Frequency	350 to 390 Hz	
	Min. Bulk Density	200 gram/ liter, Particle size ≤ 10 mm	
	Temperature Range	-10 to 80 °C, 150 °C with temperature standoff	
Max. Pressure	Vacuum to 10 kg/cm ²		

CONTROLLER	Enclosure (Remote)	NA	Cast Al. IP66
	Conduit Conn. (Remote)	NA	M20
	Cable Gland (Remote)	NA	M20 x 1.5 Cable Gland, PVC
	Supply	20 to 265 VAC/ DC (Reverse protection for DC supply)	
	Output	Relay x 2 SPDT, potential free contacts, 5A, 250 VAC (resistive load)	
	Indication LED	Blue – Normal, Red – Alarm	
	Adjustable Switching Delay	Covered - 5 to 20 sec Uncovered - 5 to 20 sec	
	Fail Safe Operation	High or low selectable through DIP switch	
	Power Consumption	<100 mA	
	Amb. Temperature	-10 to 60°C	
	Humidity	95% Rh Non- condensing	
	Interconnecting Cable	NA	3 core x 1.5 mm ² PVC insulation (Buyer's Scope)

* MS Process Connection with GI Extension available optionally

MODEL IDENTIFICATION

VFSS-	I	J	S	N	S	S	W	x Insertion Length
1. System								
Integral (Probe with Integral Controller)	I							
Two Part (Probe with Remote Controller)	T							
2. Enclosure x Cable Gland of Probe								
Cast Al. IP66 x M20 x 1.5 Cable Gland, PVC		J						
Cast Al. Exd. Gr. IIB x ½" NPT DC Cable Gland, Brass		E						
Cast Al. Exd. Gr. IIC x ½" NPT DC Cable Gland, Brass		F						
Cast Al. ATEX Exd. Gr. IIC x ½" NPT DC Cable Gland, Brass (Sys-T)		G						
Others		O						
3. Fork MOC								
SS316			S					
Others			O					
4. Process Connection/ Extension MOC								
SS304				N				
SS316				S				
MS (with GI Extn)				M				
Others				O				
5. Process Connection								
1 ½" BSP (M) Screwed					S			
1 ½" NB ASME 150 # Flange					F			
Others					O			
6. Maximum Temperature								
80 °C						S		
150 °C with temperature stand off						H		
7. Enclosure x Cable Gland of Remote Controller								
Without							W	
Cast Al. IP66 x M20 x 1.5 Cable Gland, PVC							J	
Others							O	

ORDERING INFORMATION

Model Number x Probe Insertion Length (mm) x Service Material (Powder/Granule, Particle Size) x Operating Temperature & Pressure.

PUNE TECHTROL PRIVATE LIMITED

CIN: U31909PN1991PTC063403



Regd. & Sales: S-18, MIDC Bhosari, Pune - 411026, India
+91-20-66342900 | ho@punetechtrol.com

Works: J-52/7, MIDC Bhosari, Pune - 411026, India
+91-20-67313600 | www.punetechtrol.com