

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.



Integral System
Probe x WP Enclosure



Integral System
Probe x Ex-Proof Enclosure



Two Part System
Probe x Remote Controller (WP Enclosure)

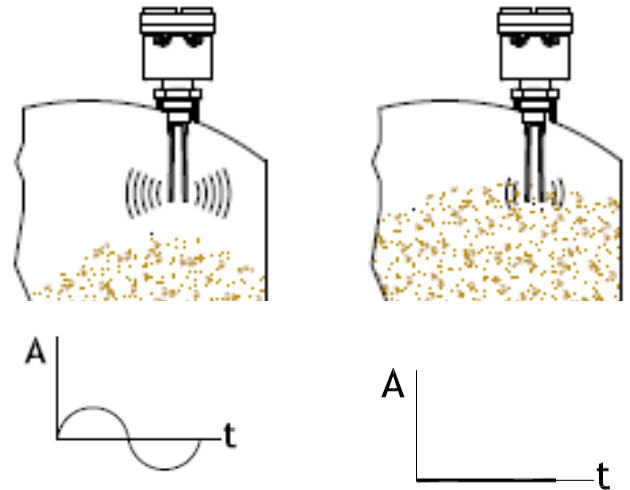
SALIENT FEATURES

- 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

CONSTRUCTION & OPERATION

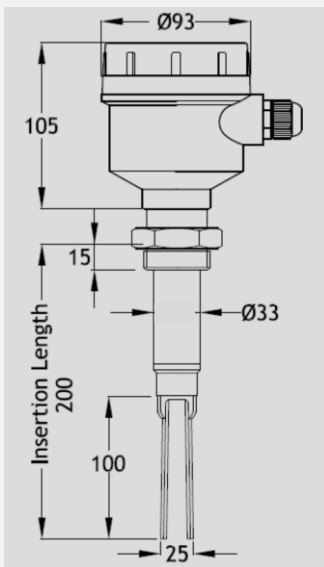
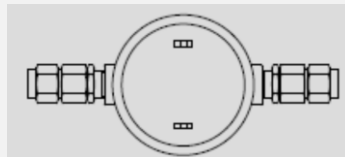
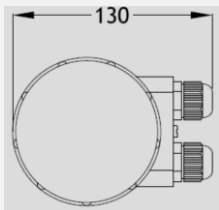
Available as Integral (I) or Two Part system (T). In the integral system, the controller is integral with the probe. In two-part system, the controller is separate from the probe.

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.

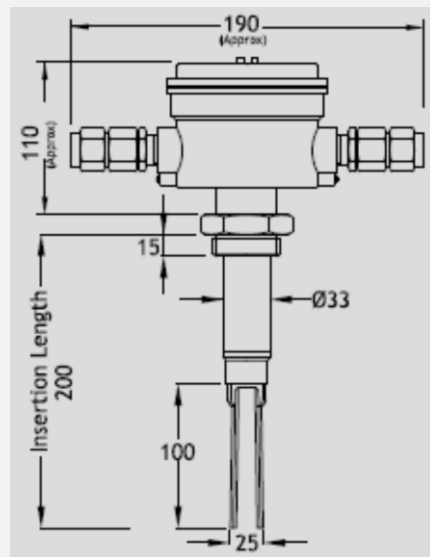


SCHEMATIC DIAGRAMS

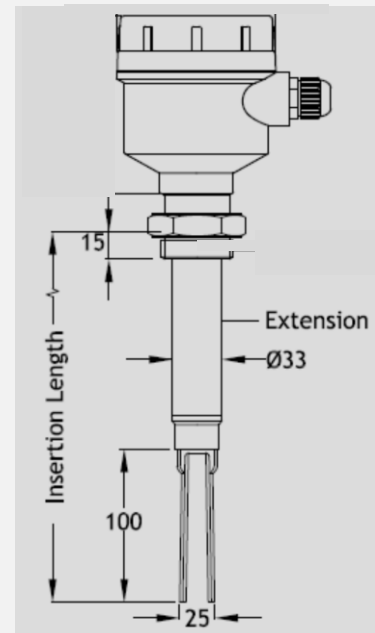
Integral System (I)



Standard Probe x WP Enclosure

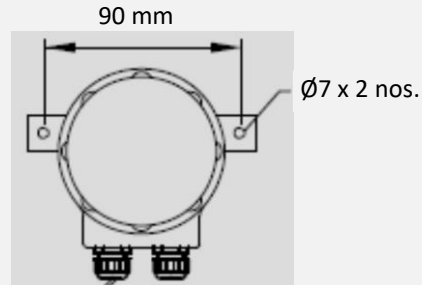
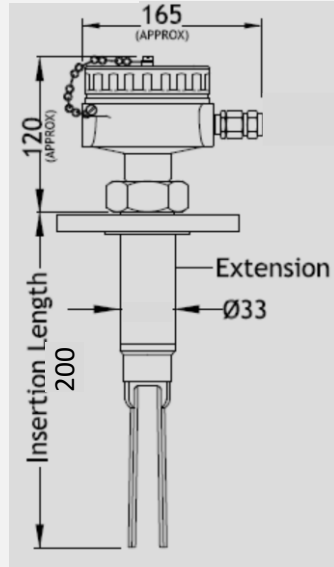


Standard Probe x Ex-Proof Enclosure



Probe with Extension x WP Enclosure

Two Part System (T)



Remote Controller x WP Enclosure

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

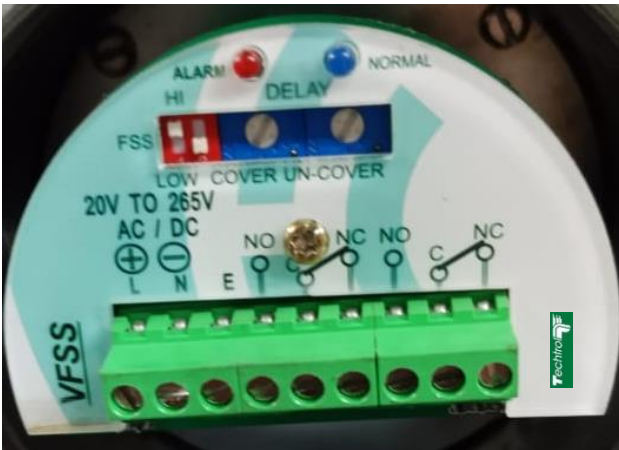
SPECIFICATIONS

System	Integral System (I) (Probe with Integral Controller)		Two-Part System (T) (Probe with Remote Controller)	
PROBE	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 (WP) b. ½" NPT (Ex-Proof)		
	Cable Gland	a. M20 Cable Gland, PVC (WP) b. ½" NPT DC Cable Gland, Brass (Ex-Proof)		
	Vibrating Fork MOC	a. SS316 as standard b. SS316L available optionally		
	Std. Insertion Length	200 mm		
	Max. Insertion Length	upto 3000 mm with extension		
	Extension MOC	a. SS304 or SS316 (as standard) b. SS316L (option on request)		
	Process Conn MOC	a. SS304 or SS316 (as standard) b. SS316L (option on request)		
	Process Connection	1-1/2" BSP or NPT(M) or 1-1/2" NB Flange 150#		
	Measuring Frequency	350 to 390 Hz		

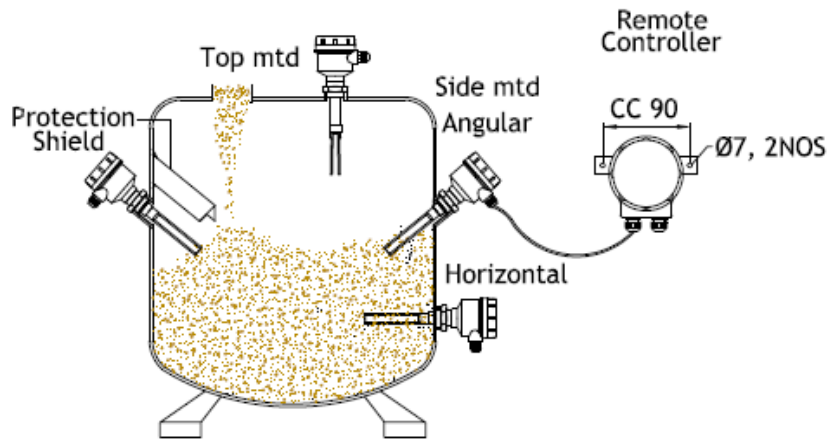
CONTROLLER	Min. Bulk Density	200 gm/ liter, Particle size \leq 10 mm	
	Temperature	-10 to 150 °C	
	Max Pressure	Vacuum to 10 kg/cm ²	
	Enclosure (Remote)	NA	Cast Al. IP66
	Conduit Conn. (Remote)	NA	M20
	Cable Gland (Remote)	NA	M20 x 1.5 Cable Gland, PVC
	Supply	20 to 260 VAC/ DC (Reverse protection for DC supply)	
	Output	Relay x 2 SPDT, potential free contacts, 5A, 250 VAC (resistive load)	
	Indication LED	Blue – Normal, Red – Alarm	
	Switching Delay	Covered - 5 to 20 sec	
	Adjustable	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

TERMINATION



INSTALLTION



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.

MODEL IDENTIFICATION

	VFSS									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 1/2" NPT DC Cable Gland. Brass	E									
Cast Al. Exd. Gr. IIC x 1/2" NPT DC Cable Gland, Brass	F									
Cast Al. ATEX Exd Gr. IIC x1/2" 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										
1-1/2" BSP (M) Screwed								S		
1-1/2" NB ASME 150 # Flange								F		
Others								O		
6. 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 Length (mm) x Service Material (Powder/Granule) x Operating Temperature & Pressure.

All dimensions in mm except specified

Pune Techtrol Pvt Ltd [CIN : U31909PN1991PTC063403]

S-18, MIDC, Bhosari, Pune - 411026. India. Ph: +91-20-66342900, ho@punetechtrol.com, www.punetechtrol.com

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

