Vibrating Fork Point Switch for Liquids - VFSL

Techtrol TMVFSL
Innovating Level Controls Since 1984

VFSL is a point level switch based on piezo driven vibrating fork technology. It is suitable for detection of liquids in tanks.

Salient Features :

- ☑ No moving parts. Minimum maintenance.
- ☑ Fail safe design.
- ☑ Unaffected by environmental changes e.g. temperature, pressure & humidity.
- ☑ Ex - proof version Gr IIB for hazardous applications.
- ☑ The vibration has a self cleaning effect.

Integral

Construction & Operation :

The system is available in two versions - Integral (Standalone) & Two Part. In the integral system, the controller is integral with the sensing probe. In two part system, the controller is separate from the probe and can be mounted remotely. The sensing probe is of rugged construction. The sensing probe is fitted with an enclosure at its top end, which holds the control electronics and its lower end holds a SS tuning fork, which vibrates at its mechanical resonance frequency of 400 Hz, created through a piezo crystal when in air. However, when the tuning fork is covered with liquid / slurry, its vibrations get damped. This is sensed by the control electronics, which changes the status of output relay contacts.

Specifications :

System : Integral (I) or Two Part (T)

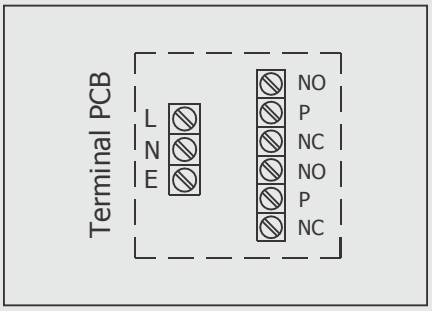
Sensing probe

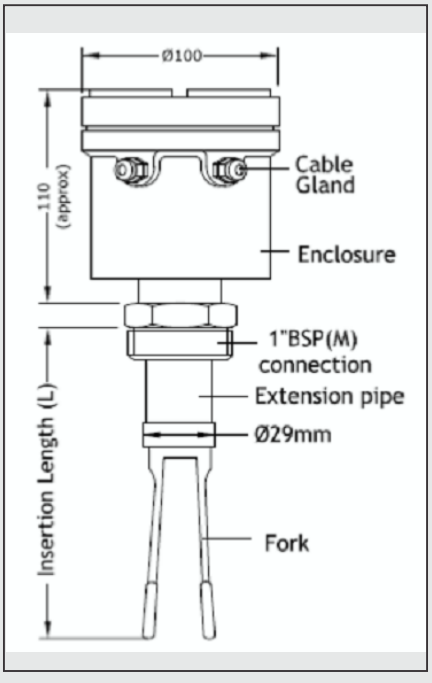
Enclosure x Conduit Conn : Cast Al. IP66 x PG 13.5 Cable Gland (Sys-I & Sys-T)
: Cast Al. Exd Gr.IIB x 1/2" NPT DC Cable Gland (Sys-T)
Mounting : SS304 x 1"BSP (M) Screwed
Fork MOC : SS316, SS316L
Extension pipe MOC : SS304 or SS316 or SS316L
Std Insertion Length (L) : 125 mm
Max Insertion Length (L) : 150 to 2500 mm
Resonance Frequency : 400 Hz
Max Optg Temperature : 150 ºC
Max Pressure : 10 kg/cm2
Viscosity : 1000 cst

Controller

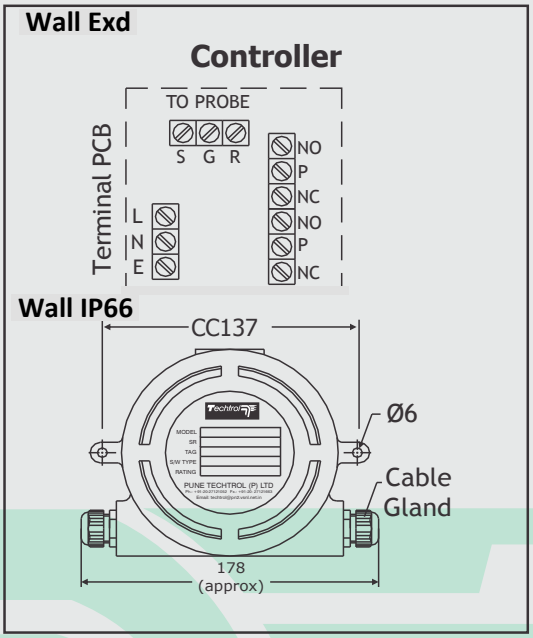
Enclosure x Conduit Conn : Cast Al. IP66 x PG 13.5 Cable Gland (Sys-I & T)
Cast Al. Exd Gr. IIB x 1/2" NPT DC Cable Gland (Sys-T)
Supply : 85 to 265 VAC (50-60 Hz) or 24 VDC ± 10 %
Relay Contacts : DPDT x 5A, 230 VAC (resistive load)
Signal Delay : Fork covered to free 2-3 secs. Fork free to covered 2 secs
Switching Delay : Adjustable from 1 to 255 secs for fork free or covered
Safety Operation : Field selectable fail safe high & low
LED Status Display : Power ON-Yellow; Normal-Green; Alarm-RED
Power Consumption : 2VA
Amb Temperature : 60ºC
Amb Humidity : 95% Rh non-condensing
Interconnecting Cable: 3 core x 1.5mm2 PVC Insulated (Buyer's Scope)
(for two part system)
Encl. Dimensions (Two Part):Ø122 x 150 height, Wall Mtd. (IP66, Sys T)
150 Sq x 122 H mm, Wall Mtd. (Exd, Sys T)

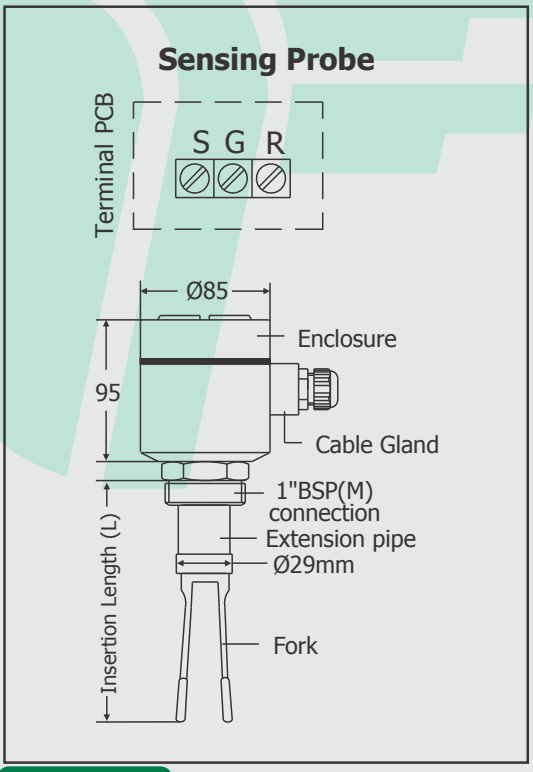
Integral System :





Two Part System :





Services :

Oil, Milk, Water / Effluent Water.

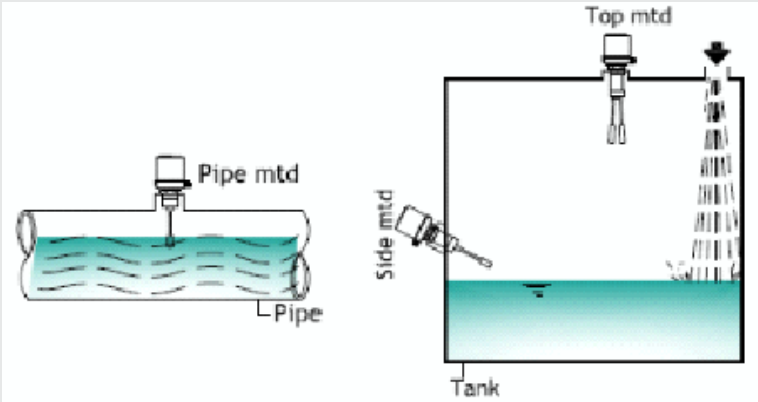
Ordering Information :

Specify Model No x Insertion Length (mm) x Liquid x Viscosity x Operating Temperature & Pressure

Two Part System (Weatherproof)

Installation :

The sensing probe can be top or side mtd. on the vessel or pipe to suit your application.



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Model Identification

VFSL-					
1. System					
Integral (Probe with Inbuilt Controller)	I				
Two Part (Fork Probe + Remote Controller)	T				
Probe Enclosure x Conduit Connection					
Cast Al. IP66 (Sys-I or Sys-T) x PG13.5 Cable Gland		J			
Cast Al. IP66 (Sys-I or Sys-T) x ½" NPT DC Cable Gland		K			
Cast Al. Exd Gr. IIB (Sys-T) x ½" NPT DC Cable Gland		E			
Others		O			
Process Connection					
SS304 x 1" BSP (M) Screwed			S		
SS304 x 1-1/2" ANSI 150# Flanged			F		
Others			O		
Remote Controller Enclosure x Conduit Connection					
Without (Sys-I)				W	
Cast Al. IP66 (Sys-T) x PG 13.5 Cable Gland				J	
Cast Al. IP66 (Sys-T) x ½" NPT DC Cable Gland				K	
Cast Al. Exd Gr. IIB (Sys-T) x ½" NPT DC Cable Gland				E	
Others				O	
Supply					
85 to 265 VAC					1
24 VDC					2