

Vibrating Fork Point Switch "VFSL" for Liquids



SINCE 1984

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

Features:

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

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:

Sensing probe

Enclosure	: Cast Al, WP -IP 66
	: Cast Al, Ex-Proof Gr. IIA & IIB
Conduit connection	: Polyamide PG 16x W-Proof Const.
	: Brass 3/4" ET x Ex-Proof
Mounting	: SS304 x 1" BSP (M) screwed
Fork MOC	: SS316
Extension pipe MOC	: SS304 or SS316
Std Insertion Length (L)	: 125mm
Max Insertion Length (L)	: 2500mm
Resonance Frequency	: 400 Hz
Max Optg Temperature	: 150°C
Max Pressure	: 10Kg/cm ²
Viscosity	: 1000 cSt

Controller (Integral)

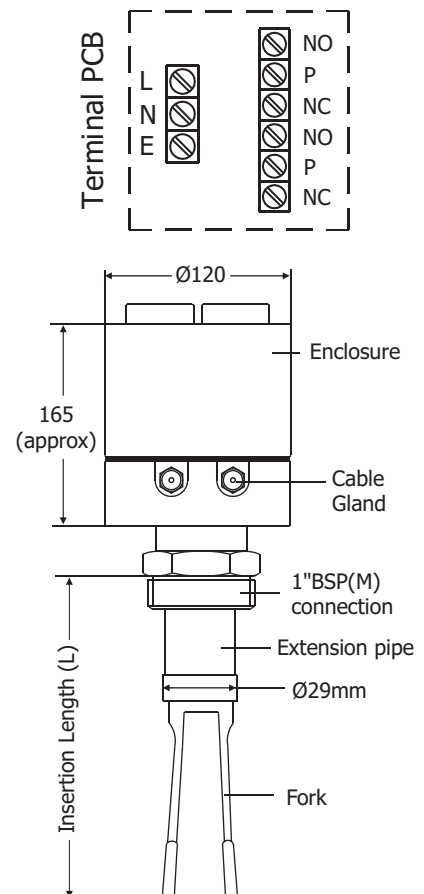
Enclosure Dimensions	: Ø120 x 165 height
Conduit connection	: Polyamide PG 16 x 2 Nos
Supply	: 110 or 230 VAC 50-60 Hz or 24VDC
Relay Contacts	: DPDT x 5A, 230 VAC resistive load
Signal Delay	: Fork covered to free about 2-3 secs. Fork free to covered 2 secs.
Switching Delay	: Continuously adjustable from 2 to 20 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	: 60°C
Amb Humidity	: 95% Rh non condensing

Controller (Two part)

All specs as in Integral except	
Enclosure Dimensions	: Ø122 x 150 height
Interconnecting Cable	: 3 core x 1.5mm ² PVC Insulated (Buyer's Scope)



Integral system



Model Identification No. VFSL : x L (mm)

System

Integral (standalone) ————— **I**
 Two part ————— **T**

Probe Encl. x Control Unit Encl.

Cast Al WP IP-66 (Syst-I) ————— **J**
 Cast Al,WP IP-66 x Cast Al ,WP IP-66 (Syst-T) ————— **K**
 Cast Al,Ex-proof Gr IIA & IIB x Cast Al,WP IP-66(Syst-T) ————— **E**
 Others ————— **O**

Sensing Probe

Standard (150°C) ————— **S**
 Others ————— **O**

Process Conn

SS304 screwed 1" BSP (M) ————— **S**
 SS304 flanged 1½"NB ASA 150# ————— **F**
 Others ————— **O**

Supply

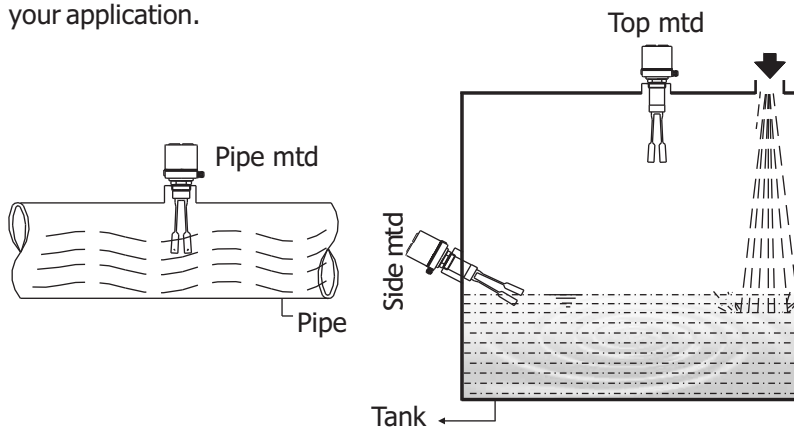
110 VAC ————— **1**
 230 VAC ————— **2**
 24 VDC ————— **3**

Ordering information :

Specify Model No x L (mm) x Liq x Viscosity x Optg Temp & Press

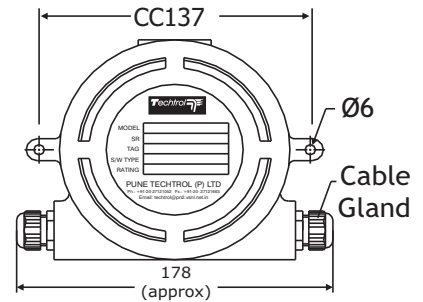
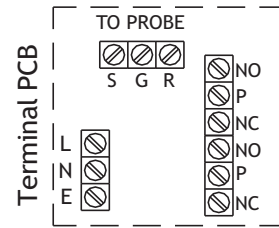
Installation :

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

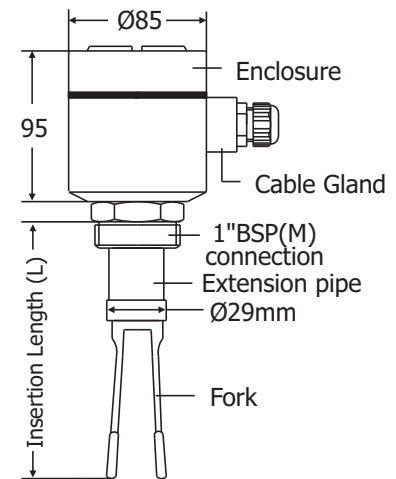
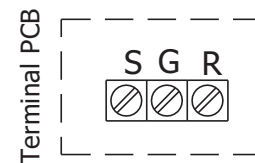


Two part system

Controller



Sensing Probe



Services :

Liquids (VFSL) : Oil, Milk, Water / Effluent Water.

All dimensions in mm, except specified.

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