

35 Vibrating Fork Level Switch



SMARTsaa make Vibrating Fork Level Switches find application in food , packaging , Cement, steel & power generation industries for monitoring level of free flowing products like fertilizer, food grains, coal, sand, chips, granules etc. Switch is Ideal for products that do not have heavy build-up on fork. Can sense dense materials like cement. It also senses extremely light products like styrene. Not recommended for mud, slurry, sticky material or water with high turbidity.

OPERATING PRINCIPLE:

Vibrating Fork Level switch contain Piezo-electric crystal in the probe, which causes the fork to vibrate at a frequency of 125 Hz. It detects the presence or absence of material and actuates a relay. It gives point output, indicating high & low level alarm. It is having compact and robust design, suitable for side & top mounting. The constant vibration of the fork provides self-cleaning characteristics. The change in vibration is detected by circuit which causes the relay to change state after few seconds delay (about 2-3 seconds). When fork is free from material relay reverts to its normal condition

FEATURES:

No calibration required, simple to install.

Performance independent of material characteristics i.e. change in conductivity, di-electric constant.

No moving parts, hence no wears and tears.

Weatherproof enclosure, SS 316 for food industry.

Field selectable operation logic: configurable high or low point switching.

Two types of designs are offered:

VIBRATING FORK TYPE LEVEL SWITCH FOR LIQUIDS: SMARTsaaVFLSL

It is specially designed for liquid level sensing. Have miniature size of fork and can get fitted in small size tank.

Application: All types of liquids, viscosity up to 10000 cSt and free flowing powders

VIBRATING FORK TYPE LEVEL SWITCH FOR POWDER, GRANULES AND SOLIDS: SMARTsaaVFLSS

It is a heavy duty level switch specially designed for powders and solids.

SPECIFICATIONS :

Material Size	:	All liquids and solids having particle size up to 10 mm.
Material bulk density	:	0.05 Kg/dm ³ minimum.
Fork Length	:	Min 200, Max up to 2500 mm,
Control supply	:	24 V DC, 110 V AC, 230 V AC (standard)
Output	:	Solid state PNP, 2 C/O relay contact, rated for 5 Amp. Res. at 230 V AC.
Ambient Temp	:	60 degree cent max.
Temp in vessel	:	150 degree cent max.
Enclosure	:	Cast Al, IP 65, integral with probe
Max pressure in vessel	:	10 Kg/cm ² max
Mounting	:	Screwed: 1, 1 ½ inch BSP, Flanged



VFLS for Solids



VFLS for Liquid



Compact VF Level Switch



Vibrating Rod type

VSAN ELECTRICALS AND SENSORS

ORDERING PROFORMA

Vibrating Fork-Vibrating Rod Level Switch

Gr.I	Gr.II	Gr. III	Gr. IV	Gr. V		
VFLS HD	250	B	1	S		Typical Ordering Code

Group: I: Basic Model

Compact Vibrating Fork Level Switch with miniature head, 24 V DC for Liquid	VFLS IL
Compact Vibrating Fork Level Switch with miniature head, 24 V DC for Powder and Granules	VFLS IP
Vibrating Fork type for powder, granules and solids, Universal Power Supply, Heavy Duty	VFLS HD
Vibrating Rod type miniature head, miniature head, 24 V DC for Powder and Granules	VRLS RI
Vibrating Rod type miniature head, Universal Power Supply, Heavy Duty	VRLS RH

Group: II: Probe Length

Specify Probe Length in mm below the Hex Nut	XXX
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Group III: Mounting

Screwed 1 inch BSP (Gr. I should be Miniature)	A
Screwed 1 ½ inch BSP	B
Flanged, Specify flange size	F
Specific : Please specify	C

Group: IV: Supply Voltage

230 V AC, 50 Hz (Gr I should not be miniature)	1
110 V AC, 50 Hz (Gr I should not be miniature)	2
24 V DC	3

Group V: Output

2 C/O relay contact rated for 5 Amp resistive (Gr. I should not be miniature)	S
1 Solid state PNP, NO Output , load current : 200 mA , (Gr.I should be miniature)	E

Note: Material should freely flow without moisture and should not stick to the vibrating fork
 Vibrating Fork should be protected from direct impact of bulk material during fill.
 Particle size should not be more than 10 mm for VFLS models



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