

SOLITUNE

COMPACT TUNING FORK POINT LEVEL SWITCH FOR SOLIDS



SOLITUNE is specially designed for detecting maximum and minimum level in vessels filled with free flowing fine-grained or powdery material. **SOLITUNE** can be used for detecting the level of service material having grain size less than 10mm. Variation of electrical parameters of the service material such as conductivity and dielectric constant do not affect its operation. It can be used successfully for level detection of powders and granules of plastic, silica, sand, cement, chalk, pulverized coal, PET, Food grains, minerals, animal feed, Sugar & wood chips etc.

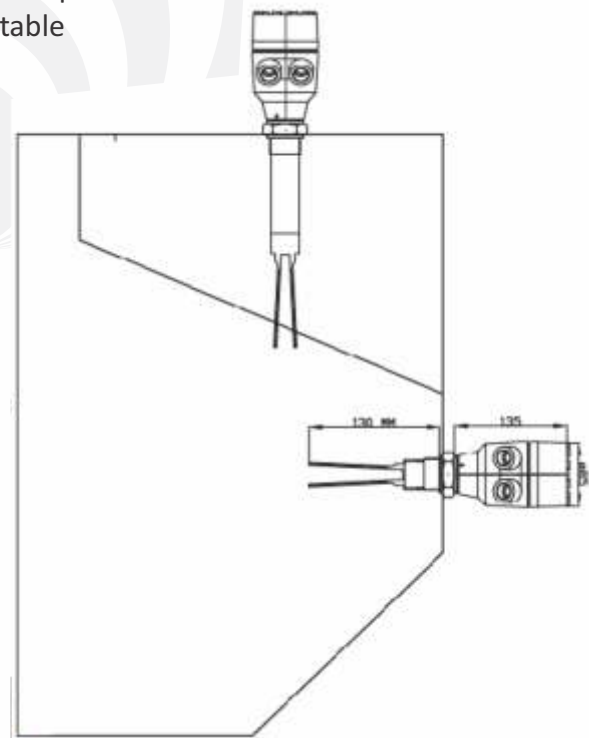
OPERATING PRINCIPLE

The Tuning Fork is kept vibrating at its mechanical resonant frequency by Piezo elements. When the service material covers the tines it resists its movement and so the vibrations are damped. The stoppage of vibrations is sensed electrically and the signal is processed to signal an alarm and or control a relay. The relay contacts in turn can be used to control the feed motor or evacuation valve of the vessel.

SALIENT FEATURES

- Compact size with integral electronics
- No calibration required so plug and play
- No moving parts so no wear and tear
- Universal Power supply for AC / DC operation
- Relay or open collector PNP outputs available
- Short fork design (100mm) for minimum insertion in small vessels
- Available in 1 inch and above screwed mounting standards
- IP 68 ingress protection
- Selectable fail safe mode
- LED indicators for status, alarm and normal operation
- Density setting and switching delay selectable

System Diagramme



TECHNICAL SPECIFICATIONS

Mechanical:

Housing: Cast Aluminium Ip68

TYPE: Electronics integral with probe

Cable Entry: ½" BSP / NPT

Cable Gland: Single compression PG13.5

Mounting arrangement: 1" / 1 ¼" / 1 ½" BSP / NPT

Flanged as per requirement

Mounting / Pipe extension M.O.C.: MS / GI / SS304 / SS316 as per requirement

Tuning Fork: Ss316

Electronics:

Power supply: 90 to 265 V AC 50 to 60 Hz and 12 to 55 V DC

Power consumption: 3 VA Max.

Output: SPDT / DPDT relay / open collector PNP / NPN

Relay output: Potential free change over contacts rated at 6A 230 V AC 50 Hz

Open collector transistor: PNP output as standard, NPN on request, current limited to 100ma

Resonant frequency of fork: 350 Hz approx. for 100 mm fork

Switching delay: Adjustable up to 25 sec. for fork covered or uncovered condition

Failsafe condition: High / Low field selectable.

Sensitivity: Field selectable for Low and High density material

Indication: By LEDs, Yellow for status, Blue for Normal, and Red for Alarm

Model Selection :

SOLITUNE

TEMPERATURE

S Suitable up to 80 Deg C

H1 Suitable up to 150 Deg C

H2 Suitable up to 200 Deg C

OUTPUT

A SPDT Relay Output

B DPDT Relay Output

C Open Collector PNP / NPN

ENCLOSURE

W Weather Proof IP-68

FLP Flame Proof For Gas group IIA,IIB &IIC

PROCESS CONNECTION

T Threaded BSP / NPT

F Flange ASA/ANSI/JIS/DIN

WETTED PARTS

S6 SS 316 PT PTFE Lined

SL SS 316L PA PFA Lined

HC Hastelloy C HL Halar Lined

PROBE LENGTH

S Standard 130 MM

E Extension up to 3000 MM

S S A W T S6 S

Continuous efforts for product development may necessitate changes in these details without notice



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