

COMPACT SOLID FORK

COMPACT VIBRATING FORK POINT LEVEL SWITCH FOR SOLID APPLICATIONS



SOLID FORK is specially designed for detecting maximum and minimum level in silo's filled with free flowing solids, food grains, granules, powders etc .

SOLID FORK can be used for detecting the level of material having overall size less than 15 mm. 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 stopped vibrations is sensed electrically and the signal is processed to signal an alarm and or control a relay. The relay contacts can be used to control the feed motor or evacuation valve of the vessel

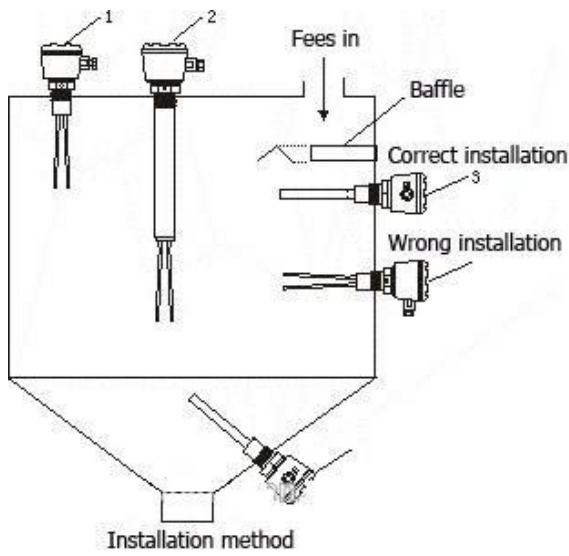
Salient Features:

- 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 @100 mm for minimum insertion in small vessels
- Available in 1 inch and above screwed mounting standards
- IP 68 ingress protection
- Field Selectable fail safe mode
- LED indicators for status, alarm and normal operation
- Selectable Density setting and switching delay

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Installation Drawing:



Electrical Installation:



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Technical Specifications:

Mechanical :

Housing : Cast Aluminium IP 68

TYPE : Integral with probe with Electronics

CableEntry : PG 13.5/PG 16

Cable Gland : Single compression PG13.5/PG 16

Mounting: 1" OR 1 X 1/2" BSP / NPT / Flanged Optional.

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

Tuning Fork: **S316**/SS304 Electronics:

Power supply: 20 to 270 V AC 50 Hz and 18 to 55 V DC

Power consumption: 3 VA Max.

Out Put: 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 200mA

Resonant frequency of fork: 400 Hz approx. for 100 mm fork

Switching delay: Adjustable up to 20 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

Manufactured By: M/S. Major Instruments

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