

▶ Smart Vibrating Tuning Fork Level Switch

Explosion proof : EXD IIC T6 Gb, Certificate no : CCRI 17, 1037,
Safety Certificate : Class : SIL-3, Certificate No: 2J190125-SKS0Q97
Protection : IP 66



SIL Ip66

Brotek Smart Vibrating fork switch available with inbuilt programming display to set switching point against Piezoelectric crystal frequency, fork body is excited by a piezoelectric crystal, so that the fork body is in a resonance state. When the fork contacts the material, the resonance frequency will change significantly. The internal electronic unit detects the frequency of the fork body and after processing, converts it into a relay or a PNP switch output.



Technical detail

Power supply voltage	: 12 ~ 30VDC / 110 ~ 220VAC (only for relay output type)
Output	: Relay DPDT 8A 250VAC / PNP output: 50mA, 24V / Frequency output: 0 ~ 2000Hz (24V)
Working temperature of medium	: Short fork body: -30 ~ 150 °C, Long fork body: -30 ~ 250 °C
Density range	: Liquid ≥ 600 kg / m ³ , solid powder: ≥ 100 kg / m ³
Liquid viscosity	: 0.2 ~ 10000cp
Switching delay	: adjustable from 0 to 30 seconds
Switch mode	: upper or lower limit alarm (user set)
Hysteresis (water)	: ± 1 mm
Maximum operating pressure	: ≤ 1 Mpa
Connection method	: Thread: 3/4 "NPT /Thread: G1 / 2/Flange (user specified)/ Sanitary fittings: Accessories: 2 " (51mm) Tri-Clamp connector/ 1 " BSPP (G) O-ring seal material
Enclosure Material	: die-cast aluminum alloy (IP 66) (EX d II CT6)
Fork body material	: 316 stainless steel / 316 stainless steel, Teflon surface
Fork body vibration frequency	: Short fork body: 1400 ± 50 HZ / Long fork body: 330 ± 50 HZ
Environmental vibration level	: acceleration is not greater than 1g

Future and Option

- Real-time display of fork frequency value, easy to find faults such as fork wear early
- Supports both long and short tuning fork shapes for a wide range of applications.
- Not affected by flow, foam, turbulence, floating foam, vibration, solid content, hanging materials, liquid characteristics and media changes.
- No need for on-site calibration, convenient installation.
- Self-diagnostic function : check and display other diagnostic information such as frequency, temperature, voltage and current.
- Easy to set: Sensitivity and alarm delay can be easily set by pressing the button
- The "quick dripping" tuning fork shape design of the short fork body makes the system respond faster and is suitable for viscous liquids.

Application

Smart tuning fork switch is equipped with a variety of durable stainless steel tuning fork forks, which can detect the level of the storage tank or pipeline. It is suitable for various liquids, powders, granular solids, and can be installed in pipelines or storage tanks through threads and flanges. It can be installed on the food industry facility through sanitary connections.