

Vibrating Fork Level Switch Sparklife

The vibrating fork type level switch working principle is simple and effective. This makes vibrating fork type level switches (a.k.a. tuning fork type level switches) reliable, cost effective and very popular for use in detecting the presence or absence of liquids and bulk solid materials. The vibrating fork type level switch working principle is based upon detecting the change in harmonic vibration frequency of the sensing element as a result of the presence of the target media.

The vibrating fork type level switch working principle uses a tuning fork shaped sensing element with two tines inserted into the bin or tank where the target media will be present. The tuning fork sensing element is placed into vibration at its natural resonant frequency by establishing motion in the sensing element or fork. In most the most common embodiment of the vibrating fork type level switch working principle the harmonic vibration of tuning fork sensing element is established using Piezoelectricity.



Features

- 20-250VAC/VDC universal power supply
- Solid-state or relay output
- Compact or standard units
- No calibration required
- Explosion proof units available
- Mini, standard and extended probe versions

USE

- High, low and intermediate level indication in tanks
- Tank fill/empty control
- PLC/DCS level sensing input
- Level detection in plastic or metallic tanks
- Compact and small tanks and surroundings

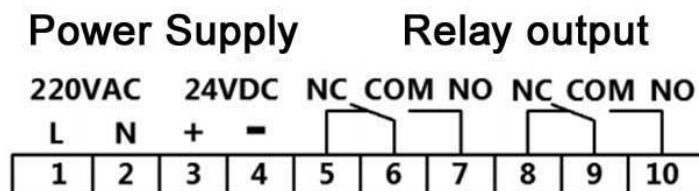
INDUSTRY

- Water
- Solvents
- Chemical
- Food & beverage
- Many others

Model selection guide

QFLS	-XXX	-X	-XX	-XX	-XXX
	100: fork L=100 045: fork L=45 010: mini type	Output A: 18-30VDC Relay B: 85-240VAC Relay For mini tyoe C: 24VDC NPN D: 24VDC PNP	G1: G1/2" G2: G3/4" G3: G1" P1: 1/2"PT P2: 3/4"PT P3: 1"PT N1: 1/2"NPT N2: 3/4"NPT N3: 1"NPT C1: Clamp 50.5 F1: 1"25A Flange F2: 1-1/2"40A Flange F3: 2"50A Flange	Temperature NT: 0-100°C HT: 100-180°C	Extension tube Length
Exd II BT4					

Terminal





Setting

1. Zero setting:

Set the liquid level to the desired zero position (such as the state of an empty tank), wait for the liquid level/material level to stabilize for 10-20 seconds, press the zero button (ZERO) for more than 3 seconds, the green light-emitting tube will flash, release the button, the zero position is set.

2. Full scale setting (alarm point setting):

When the liquid level/material level reaches the alarm point that needs to be set, wait for 10-20 seconds to stabilize, press the range button (FULL) for more than 3 seconds, wait for the green light-emitting tube to flash, release the button, and the full alarm point is set.

Note: Zero point and span setting are not in sequence and do not affect each other. If the settings are wrong and the instrument does not work normally, you can reset it by restoring the factory settings. Method: After power off, keep pressing the FULL button and power on again. After the green indicator light (StateLED) goes out, release the button, and the factory settings are restored.

Delay time setting

The setting value of the delay time is 0~60 seconds. In the measurement state, press the ZERO button and the FULL button at the same time. After the green indicator light (StateLED) **is off**, short press the ZERO button, the green indicator light (StateLED) flashes, press the button. The number of times to determine the length of the delay, short press the ZERO key can be set sequentially.

Press the ZERO key and FULL key at the same time, the system will save the data and exit the setting.

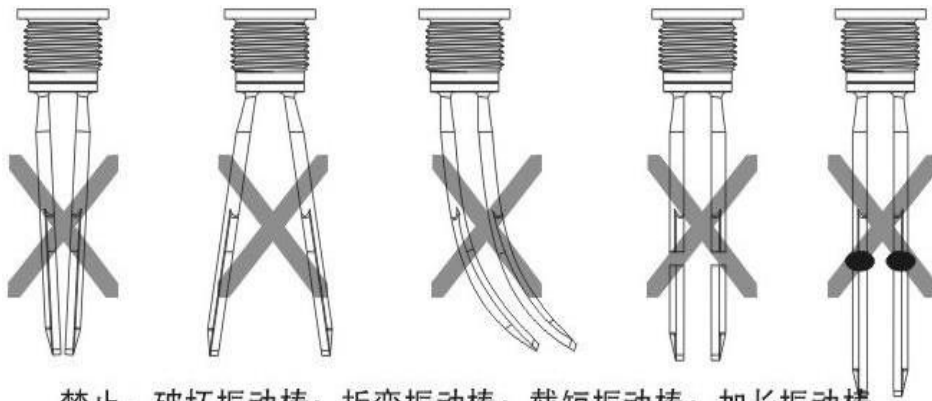
Short press the ZERO key times	Times the green indicator light (StateLED) flashes	Delay time
1	1 flash	0 sec
2	2 flashes	5 secs
3	3 flashes	15 secs
4	4 flashes	30 secs
5	5 flashes	60 secs
End	Back to normal state	

1. Technical data:

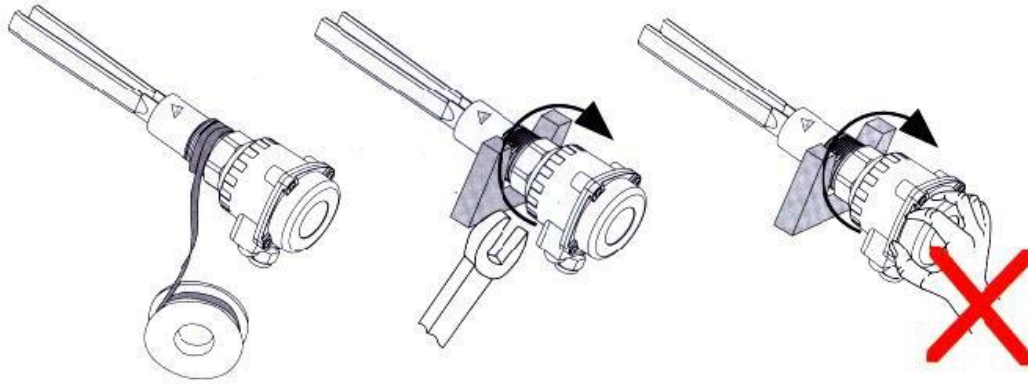
Power supply	19...60VDC 19...250VAC 50/60Hz
Switching time	In the medium 2 seconds, Empty: 3 seconds
Environment Temp.	-40...+70°C
Shelf Temp.	-40...+85°C
Medium Temp.	-40...+150°C
Working Temp.	-1...+40bar
Medium type	Powder and particle =10mm, density>0.1g/cm ³
	Liquid, Viscosity =10000mm ² /s, density>0.7g/cm ³
Process connect	G1-1/2"
Electric connect	M12×P1.0 Connector
Shell Material	SS304
Fork material	SS304/SS316
Output	Relay, AC250V/4A, DC60V/4A
	NPN, 400mA
	PNP, 400mA
Power consumption	DC<3W, AC <15W

Notice:

- Default density is set for water: 1g/cm³; If the target medium density ≥ 1g/cm³, Self-Checking is not necessary. Self-Checking is necessary when the target medium density < 1g/cm³.
- Default Sensitivity is the highest, for material that have irregular surface and fluctuate, please set lower Sensitivity.
- Avoid to install in the position that vibrate drastically.



禁止：破坏振动棒；折弯振动棒；截短振动棒；加长振动棒。



Installation

