

Tuning Fork Level Switch-WPX502 (User Manual)

External dimensions:



General information:

The vibration level switch is caused by the resonance of the piezoelectric crystal, when the material damping, the amplitude is sharply reduced and the frequency and phase change significantly, these changes will be detected by the internal electronic circuit, after processing, converted to the switch signal output. The product can detect, control and alarm the high and low positions of the tank for various liquid, powder and granular solids. It is simple and practical, reliable operation, strong applicability is basically maintenance-free, sound fork and output are working state, are indicated by light emitting diode, and with a variety of output methods (DC output, relay contact output, DC voltage output).

Technical parameters:

Medium temperature range: -40 °C ~ 150 °C

Ambient temperature: -40 °C ~ 70 °C

Ambient humidity: ≤ 95%RH

Media tested: liquid, powder, or granular solid

Solid particle size as measured: ≤ 10mm

Maximum liquid viscosity: < 1,000 m m²/s

Pressure range: ≤ 4MPa

Shell material: Die-cast aluminum alloy

Fork body material: stainless steel S304/ stainless steel S316

Shell protection level: IP65

Shell explosion-proof grade: Exd II C T4 Gb

Connection mode: thread, flange (user selected)

density of medium measured: Solid ≥ 0.1g/cm³ Liquid ≥ 0.7g/cm³

Electrical parameters:

1, power supply voltage: 20... 60VDC 20...250VAC 50/60Hz electrical interface M20*1.5

2, output signal: relay output; load: AC250V / 4A, DC60V / 4A

3, power consumption: 3W Max AC at DC

Environmental vibration level: V.L.4 acceleration is not more than 1g

Switch signal operation time: about 2 seconds when covered by medium, about 3 seconds when no medium

Installation dimensions, examples, and precautions:

During installation, the switch can be installed horizontally at a 15-20 degree angle to reduce the impact of materials and hanging

phenomenon.

Install away from the tank inlet

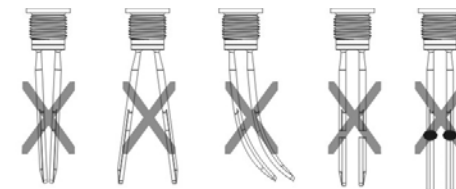
as far as possible to avoid material impact and false alarm. If unavoidable, the partition plate shall be protected between the material inlet and the material level. .

The junction box inlet must be facing down and the retaining nuts of the power cord inlet must be locked.

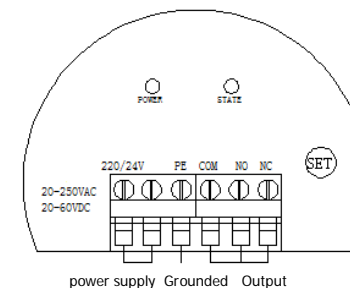
It is forbidden to climb or hang any rope or objects when working in the bucket tank.

Electrical connection:

The wiring of the instrument is shown in the figure. Terminal 1 and 2 are power supply, 3 are earth, and relay output of 4,5 and 6.



Prohibited: Destroy the vibrator; bend the vibrator; shorten the vibrator; lengthen the vibrator.



Green light-Power supply indication

Red light-Fork status indication

Operating instructions:

Insert the fork into the material about 10mm, then press the SET, then the traffic light will switch back and forth until the red light switches for more than 2 times, immediately release the red light will flash continuously, then press SET, the traffic light will flash alternately, the two lights; remove the fork, the green light off (NO and COM, NC and COM), and then put the fork in the material (NO and COM on, NC and COM off); then adjusted. (Note that the factory is set and the customer does not need to set it again unless faulty)

Special description:

1, The self-inspection function of this intelligent sound fork, on the one hand, is to overcome the vibration absorption phenomenon of the fork installed in the barrel wall, and on the other hand, it is to prevent miscellaneous interference and avoid misaction.

The factory set value of the 2, product is the density of water (1g/cm³) as the benchmark for state switching, when the density of the object to be tested is less than 1g/cm³.

3, sensitivity is set at the highest factory and is suitable for stable materials to be tested. If the fluctuation on the surface of the material is large, the sensitivity needs to be lowered to prevent a false alarm.

4, fork is installed, please try to avoid the position with obvious vibration to avoid the fork. If unavoidable, please self-test at the installation position, or restore the factory settings.