YWKG04 Single rod vibrating level switch User manual



SIBO.X INDUSTRIAL CO.,LTD.

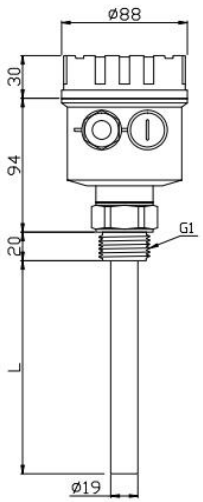
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1. Overview



The single-bar vibration level switch, a type of fork level switch, is designed to withstand material accumulation and impacts without jamming, while offering higher sensitivity. Its cylindrical single-bar structure ensures broad adaptability to industrial environments. Operating on the "resonance" principle of tuning forks, this switch generates vibrations through piezoelectric elements. The switch activates when the probe rod is completely surrounded by material, causing a sharp reduction in vibration amplitude that triggers the switching mechanism.

2. Product Features

(1) The round smooth single rod probe can effectively prevent clamping and sticking of material, and can still work stably with a large number of hanging materials without changing the sensitivity
(2) It is not affected by the properties of the measured object, and can be used stably without adjustment after installation
(3) The probe features built-in piezoelectric elements within the rod and thick-walled stainless steel structure, with the vibration-damping tube measuring just 9mm in length (the shortest in the category).
(4) Adjust the measurement sensitivity (weak 1, medium 2, strong 3) according to the object being measured, and select the appropriate division for different specific gravity readings. Liquid level or powder level
(5) The 15A high-capacity contact relay switch enables direct motor control
(6) Compared with the rotary resistance: there is no moving parts, the probe is durable to wear and material impact, and the sensitivity can be adjusted
(7) Compared with capacitive: not affected by dielectric constant, surface self-cleaning
(8) Easy to use, durable and installation does not require calibration

3. Usage Instructions

（1）. Power-on detection and debugging
A. After connecting the power supply, the green light will turn on and the probe will vibrate. Touch the front of the probe with your hand. The relay will act and the red light will turn on. Leave. The red light will turn off in 1~2 seconds;
B. The sensitivity setting can be adjusted according to the material before installation. For general materials, it can be set to 'Strong 3' without adjustment. (Please specify when ordering the liquid level switch)
C. When the operating temperature is high, the lower "weak 1" sensitivity should be selected as far as possible under the premise of ensuring accurate measurement.
（2）.determine
A. When the probe contacts the material, it stops vibrating, the red light illuminates, and the relay closes; (the opposite occurs when "NO" is activated)
B. When the material leaves the probe, the probe vibrates again within 1-2 seconds, the red light turns off, and the relay opens. (The opposite occurs when "NC" is selected.)
*Note: When connecting wires, ensure safety by avoiding live connections to prevent short circuits that could damage the substrate or probes. When working in dusty environments, keep the device fully sealed.

4. Technical Parameters

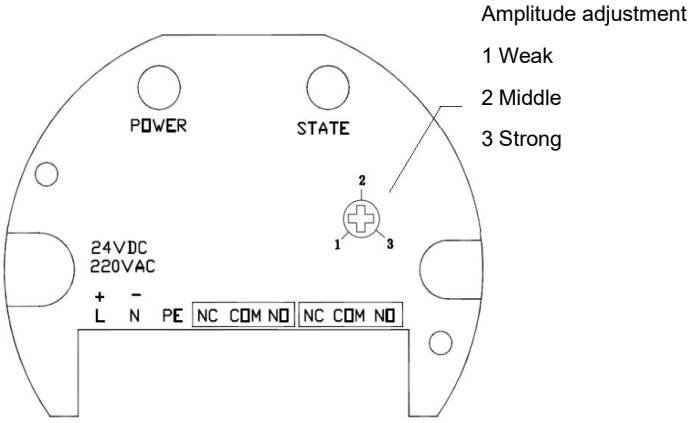
Power supply: 220VAC / 24VDC
Power consumption: 3.5W
Vibration frequency: 280Hz
Relay contacts: 250VAC / 30VDC 4A
Electrical connection: M20×1.5 (with 8-10mm² cables)
Delay time: Measured (vibration stopped) 0.5 seconds
Restore (stop vibration) 1~2 seconds

Working temperature: probe head-30° C to +200 °C.
Substrate section: -30°C to +70°C.
Switching functions: normally open (NO) and normally closed (NC), sharing common terminal (COM).
Vibration frequency: 280HZ
Contact capacity: 250VAC/30VDC 5A SPDT

5. Applications

* Material flow detection for conveying equipment
* Solid-liquid interface detection
* Powder, granular material, and lump solid material level detection

6.terminal connection diagram



7. Installation Notes

（1）. Pay attention to the installation position. The cable outlet of the junction box must be facing down, and the cable fixing head must be locked to prevent rainwater from seeping into the junction box and damaging the internal structure and circuit.

（2）. When multiple induction rods are installed at the same time, the distance between each switch should be more than 300mm.

（3）. Avoid installing near the feed opening to minimize impact damage to the sensing rod during feeding. If the switch must be installed close to the feed opening, install a protective plate 200mm above the switch.

（4）. Recommended tilt installation. The optimal configuration is a downward-sloping sensor rod at a 20-degree angle to the horizontal. This configuration enhances sensitivity and reduces switch damage caused by material impact.

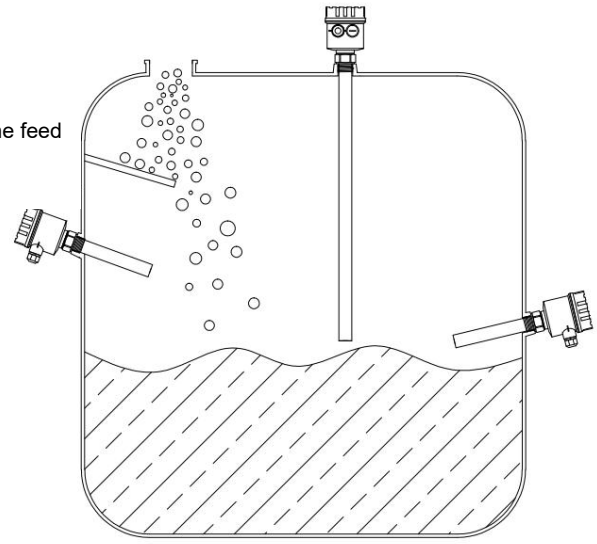
（5）. The sensing rod in the material bin should not be used as a ladder or bent.

（6）. When cleaning, you can rinse with water and brush lightly, but do not knock.

（7）. When the viscosity of the medium is high, it should be installed vertically from the top of the container or inclined 20 degrees from the side wall.

8. Installation Diagram

A protective plate needs to be added to the feed inlet，200mm above the probe



9.Unbox and inspect

（1）. The package should be intact.
（2）. If you find any damage or loose parts upon opening the box, please notify us immediately.
（3）. Contents: 1) One product 2) One instruction manual 3) One product certificate.