YWKG03 CAPACITIVE LIQUID LEVEL SWITCH OPERATING INSTRUCTION

Technical Parameter



1. Power supply: 220VAC 50Hz or 24VDC (24VDC is recommended);
2. Relay contact: 1 set of SPDT, 5A 220VAC;
3. Material: Induction rod: SUS304/316, insulation sheath: PP or Teflon;
4. Sensitivity: 0.5pf~750pf;
5. Working temperature: -10~80℃ or-10~230℃;
6. Connecting thread: 1 "NPT or 1" PF;
7. Delay time: 0~30s adjustable;

Operational principle

The capacitive material level switch operates on radio frequency capacitor technology. By applying radio frequencies to the probe, it continuously analyzes the surrounding environment. Since all media differ from air in dielectric constant and conductivity, the probe detects minute capacitance changes when contacting the medium. These changes are detected by the circuit and converted into switch signals for output. Its unique anti-adhesion circuit specifically responds to capacitance variations caused by material level changes, effectively eliminating false signals generated by accumulated materials.

Method of erection

1. When the probe is installed horizontally, it should be inclined at 20o to the horizontal plane to reduce the impact of falling material and increase the sensitivity of induction;
2. When the probe is installed through the container wall, the protective cover (insulated part) should be 2" longer than the thickness of the accumulated material on the container wall;
3. In order to avoid rainwater infiltration into the junction box in outdoor environment, the cable inlet must be vertical downward when installed horizontally;
4. The installation should fully consider the inclination angle formed by the accumulation of the measured medium when it does not feed from the center of the silo;
5. Confirm that the power supply voltage is the same as the voltage of the selected product, and connect each cable according to the wiring diagram based on the label on the terminal platform. After connection, lock the cover of the junction box;
6. Do not overload the control line load (use less than the relay capacity).

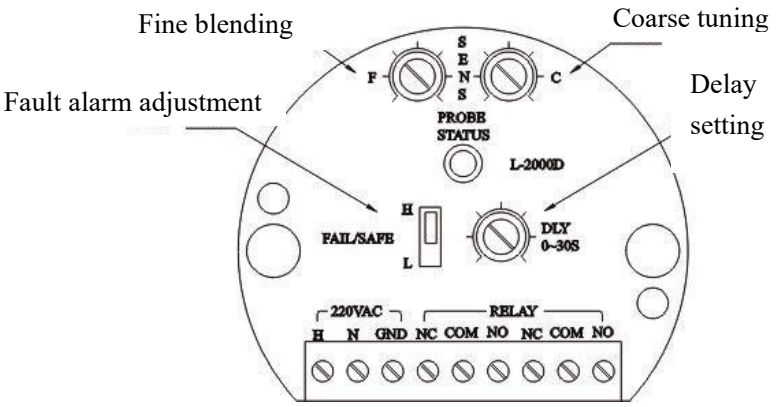
Note: Do not use any lubricant at the threaded connection between the probe and the container wall. If necessary, seal with Teflon tape. In this case, the installer should check the circuit with a multimeter and ensure that the resistance between the container wall and the probe is less than 1 ohm!

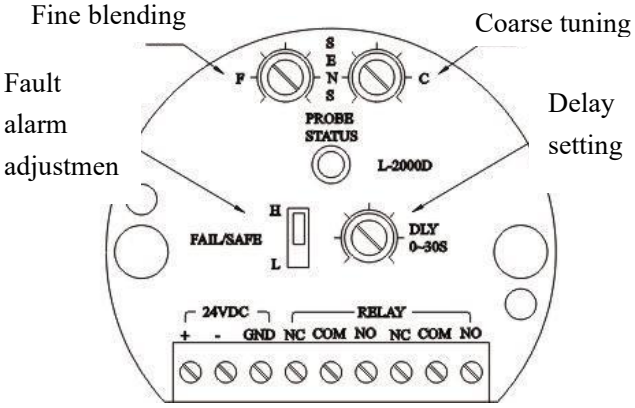
Debugging operation

Adjust when the probe does not touch the material. Pay attention to safety.

1. Turn the fine adjustment and coarse adjustment clockwise to the bottom.

2. For coarse adjustment, turn clockwise to make the light "red", and turn counterclockwise to make the light just "change from red to green".
3. Keep the coarse adjustment of C unchanged, and adjust the fine adjustment of F clockwise until the lamp just "changes from red to green".
   ! Do not adjust the knob on the panel vigorously, so as not to damage the instrument;
4. High (H) and low (L) fault alarm:
   High (H) fault alarm: When the probe detects that there is no material in the silo, the high level alarm will occur, COM/NO closed, COM/NC open;
   L (low) position fault alarm: when the probe detects that there is no material in the silo, a low position alarm will occur, COM/NO is open and COM/NC is closed;
   Its high and low alarm can be set by the jumper in the panel;
5. Delay Settings:The use of delay setting can avoid the "tremor" of relay caused by the mixing of materials in the silo. The maximum delay time of ZPL2000 is 30 seconds (use a smaller delay as far as possible);





Matters need attention

1. Ensure the sealing of the junction box;
2. Check whether the connection of each part is firm;
3. If the rod is longer than 500mm, it is best to use the top installation method to prevent bending failure;
4. GND is the grounding wire.

