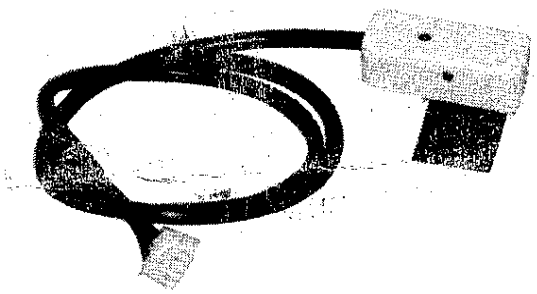
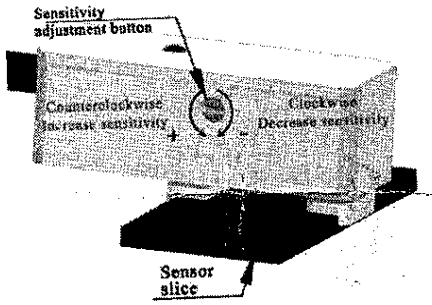
Taidacent Non Contact Liquid Level Sensor Capacitive Sensor Level Transmitter Float Switch Water Level Switch high and Low Level Output





Working Principle

The intelligent non-contact liquid level sensor uses the sensing capacitance of water to detect the presence of liquid. When there is no liquid close to the sensor, the sensor has a certain static capacitance to the ground due to the presence of distributed capacitance. When the liquid level slowly rises close to the sensor, the parasitic capacitance of the liquid will be coupled to this static capacitance, making the capacitance value of the sensor larger. The changed capacitance signal is then input to the control IC for signal conversion. The capacitance is converted into a certain amount of electrical signal change, and then a certain algorithm is used to detect and judge the degree of this change. When this change exceeds a certain threshold, it is considered that the liquid level reaches the sensing point.

Installation Method

1. The Insulating material container

The container made of a non-metallic material with a flat surface, a uniform thickness and a good insulating property; such as glass, plastic, non-absorbent ceramic, acrylic, rubber, etc. or composite materials thereof.

Installation method:

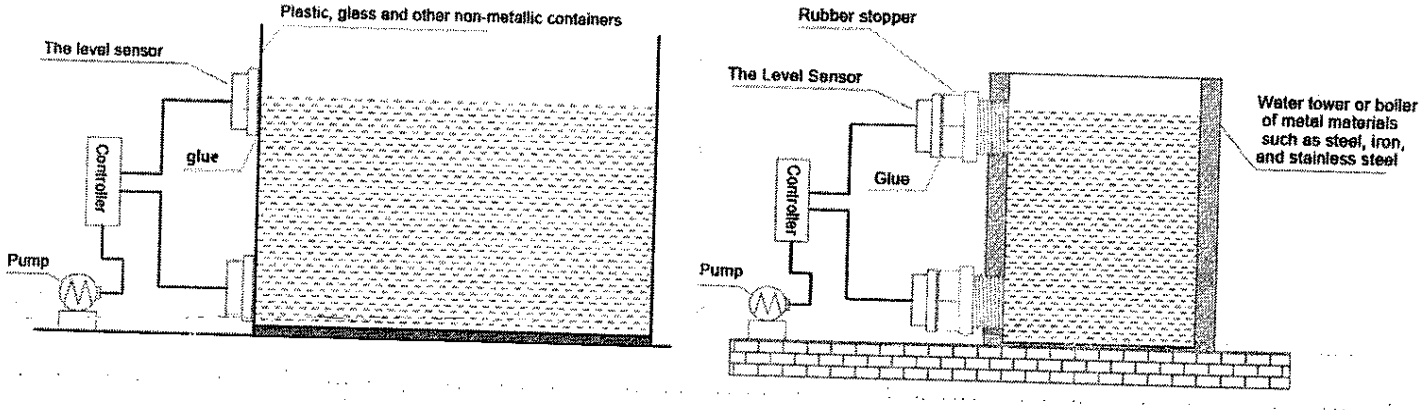
(1). If the wall of the container where the measuring probe is installed is a multi-layer material, the layers should be in close contact with no air bubbles or gas interlayer. The inner and outer surfaces of the container wall should be flat.

(2). Wall thickness: 0-20mm

(3). Tank type: spherical tanks, horizontal tanks, vertical tanks, etc.

(4).The installation of such material containers is shown in Figure 1.a;

- The probe can be glued or fixed to the outer wall of the container with a bracket.
- Install the probe as much as possible to avoid parts such as metal, so as not to affect the detection.
- The location where the probe is installed should avoid the path of the inlet and the flow of the incoming fluid.
- There should be no mud or other debris inside the container where the low probe is facing, so as not to affect the detection.



a. Non-Metallic Container

b. Metallic Contanier

Figure.1 Installation Method

2. Metal conductive material container

The container made of metal or other conductive material; such as stainless steel iron, copper, aluminum alloy or a material that is plated with a metal layer. Since the capacitive sensor is sensitive to all conductive objects, such containers cannot be directly attached to the outer wall of the container; therefore, for containers of such materials, it is necessary to open holes in the side of the container, and the installation method is as follows.

(1). Prepare two rubber plugs and the necessary tools to open the threaded holes;

(2). Two threaded holes are opened in the high position and the low position respectively, and the aperture is matched with the rubber plug size;

(3). Put a good rubber plug on the threaded hole and tighten it to check if it leaks water. If necessary, add some glue to seal it;

(4). Stick the sensor on the rubber plug with glue and fix it with the bracket. After the glue is solidified, remove the bracket. The installation of the metal container is shown in Figure 1.b.

Wiring Method

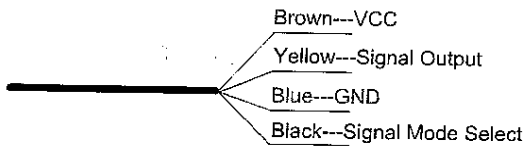


Figure.2 Wiring port definition

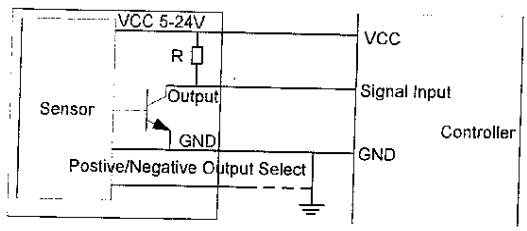


Figure.3 With Controller or MCU

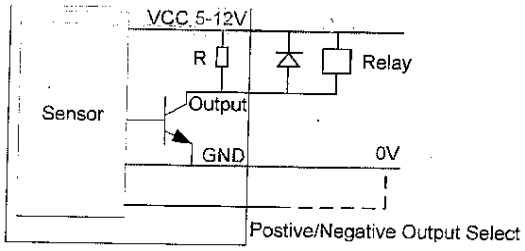


Figure.4 With Relay

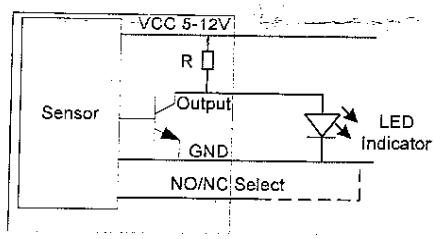


Figure.5 With Indicator

Any problems, please feel free to contact our engineer Bill Yuan, and his email is billyuan12@gmail.com