

Water Level Float Switch

User Manual



• **Product Overview**

The cable float switch is a key component widely used in liquid-level control across industrial and residential applications. It can be found in factory storage tanks, household water tanks, and wastewater treatment systems. This float switch integrates advanced technology and precise manufacturing to ensure high reliability, easy installation, and strong adaptability, providing an accurate and stable solution for all types of liquid-level control needs.

• **Operating Principle**

This float switch operates based on the basic principles of buoyancy and gravity. A high-sensitivity microswitch is built inside the float and connected to an external control circuit through a signal cable. As the liquid level rises or falls, the float moves accordingly. An internal rolling ball triggers the microswitch to open or close, ensuring precise and stable liquid-level control.

• **Product Features**

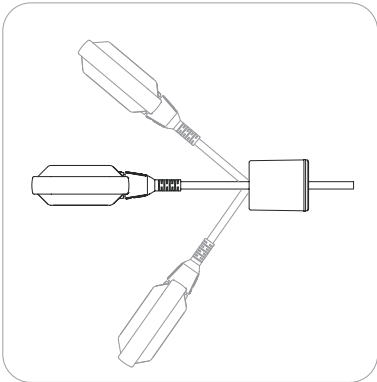
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Precision Construction
Double-sealed with secondary edge encapsulation for reliable airtight performance
- 2

Accurate Switching
Simple internal structure with short actuation stroke and long mechanical lifespan for stable and precise switching
- 3

Durable Materials
High-quality polypropylene housing and premium cable for extended service life
- 4

Flexible Installation
Pass the cable through the counterweight, secure it, and place the float into the liquid.



• **Technical Specifications**

Note: Product design and specifications are subject to change without prior notice.

Rated Voltage	250V / 400V
Rated Current	4A / 8A / 12A (see product label)
Switching Angle	Drainage: 40°; Filling: 55° (±5°)
Operating Temperature	0 – 70°C
Density	692.88 kg/m ³
Working Pressure	≤ 0.3 MPa
Protection Rating	IP68
Housing Material	Non-toxic polypropylene
Cable	Composite PVC / rubber / silicone with copper conductors

• Installation Instructions

Please disconnect power before installation. Ensure the float switch model, rating, and operating voltage match your application.

5.1 Counterweight Installation

Feed the cable through the recessed hole on the counterweight. The length of cable between the float and counterweight should be approximately $0.7 \times$ the difference between high and low liquid-level control points.

5.2 Wiring

After securing the cable, select the wiring method according to the required control mode:

- Filling mode (Water Supply): Black / Yellow-Green + Blue
- Drainage mode: Black / Yellow-Green + Brown

Unused wires must be fully insulated with electrical tape. Ensure all cable joints are well protected against moisture and water ingress to prevent malfunction caused by condensation backflow.

• Operating Instructions

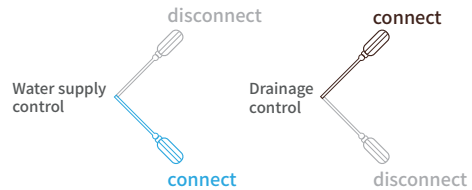
① Water Supply Type Wiring:

- ① When the liquid level rises, the float rises and the switch opens;
- ② When the liquid level drops, the float falls and the switch closes.



② Drainage Type Wiring:

- ① When the liquid level rises, the float rises and the switch closes;
- ② When the liquid level drops, the float falls and the switch opens.



• Safety Precautions

- ① For safety, it is strongly recommended to operate this float switch using a safe (low) voltage.
- ② Inspect periodically. Do not use if the housing or cable is damaged. Disconnect power before installation or maintenance.
- ③ Avoid piercing or cutting the cable with sharp objects to prevent insulation damage and electric leakage.
- ④ Do not apply force to the housing seams to avoid compromising the seal.
- ⑤ This product is intended for use in clean water or mildly corrosive liquids only. Strong acids, strong alkalis, or organic solvents may cause damage.
- ⑥ If the load exceeds the rated capacity, use this float switch together with an AC contactor or relay.
- ⑦ Installation should not be performed by persons with disabilities or those lacking proper knowledge (including children).
- ⑧ Keep the product and packaging out of reach of children.