



Tianjin ZINACA Intelligent Equipment Co., Ltd

ZNC Side-Mounted Float Level Switch - Technical Specifications

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The ZNC side-mounted float level switch is a liquid level control device based on the principle of buoyancy. It is widely used in industrial equipment, household appliances, and other fields for level detection, alarm, and control. Below are the detailed features and specifications of the product:

1. Structure and Working Principle

The ZNC side-mounted float switch operates by utilizing the buoyant force acting on the float, which moves up and down with the liquid level. This movement drives the connecting rod and magnetic component to actuate a micro switch. The principle is based on Archimedes' law: when the liquid level rises, the float is lifted by the increasing buoyant force, pushing the magnet into the switch's action range and triggering the switch. When the level falls, the float descends, and the switch resets.

2. Main Features

- **Simple Structure:** No external power supply is needed. Easy to install and maintain.
- **Variety of Materials:** The float and wetted parts are typically made of SUS316 stainless steel, offering excellent corrosion resistance, suitable for high temperature and high pressure environments.
- **Wide Applicability:** Suitable for water, oil, and other non-corrosive liquids, as well as corrosive media such as acids and alkalis.
- **Flexible Installation Options:** Can be installed horizontally on the side wall of a tank or vertically from the top.

3. Technical Specifications

- **Operating Temperature:** Standard models: -40°C to 150°C; High-temperature models: up to 350°C.
- **Operating Pressure:** Typically from -0.1MPa to 11.0MPa, depending on flange pressure rating.
- **Medium Density:** $\geq 0.40\text{g/cm}^3$, adaptable to liquids with varying specific gravities.
- **Contact Rating:** Generally 10A/250VAC, compatible with various electrical loads.
- **Explosion-Proof Rating:** Available in flameproof type (Ex dIICT1T6)

4. Applications

The ZNC side-mounted float switch is widely used in the following areas:

- **Industrial Equipment:** Liquid level monitoring and control in industries such as petroleum, chemical, metallurgy, and power generation.
- **Household Appliances:** Such as water heaters, water dispensers, dishwashers, etc.
- **Environmental and Food Industries:** Suitable for hygienic environments such as



food processing and water treatment.

5. Model Selection and Installation Notes

- **Model Selection:** Choose the appropriate material and model according to medium temperature, pressure, density, and corrosiveness.
- **Installation:** Avoid installing near inlet/outlet pipes to prevent false triggering due to liquid turbulence; ensure the cable entry on the junction box faces downward to maintain waterproofing.
- **Maintenance:** Regularly inspect the float and switch function to ensure stable long-term operation.

6. Advantages and Limitations

- **Advantages:** Simple structure, stable performance, easy installation, suitable for harsh environments.
- **Limitations:** Not suitable for liquids containing iron filings or magnetic impurities, as these may interfere with switch operation.