

# Float level gauge manual

## 1. Product overview

The plug-in float level gauge is a product designed and developed by our company in accordance with the chemical standard (HG/T2742-95). It is a level instrument with dual functions of remote control, local indication and on-site monitoring. It is widely used in chemical industry, electric power, papermaking, food environmental protection, urban construction and so on.

The plug-in float level gauge can effectively overcome the false liquid level phenomenon caused by suspended solids, foam, etc. It is especially ideal for liquid level measurement in closed containers, underground tanks or high-level water tanks.

## 2. Working principle

The reed switch and the precision resistor are evenly fixed in a closed non-magnetically conductive conduit. When the float ball with the inner hollow and fixed ring magnetic steel floats up and down along the conduit under the action of the liquid buoyancy, the reed switch is in the magnetic force. The resistance value of the circuit is changed under the action, and the analysis and processing element in the circuit detects the change of the resistance value and converts it into a standard signal output of 4-20mA to realize the continuous control of the liquid level.

## 3. Product features

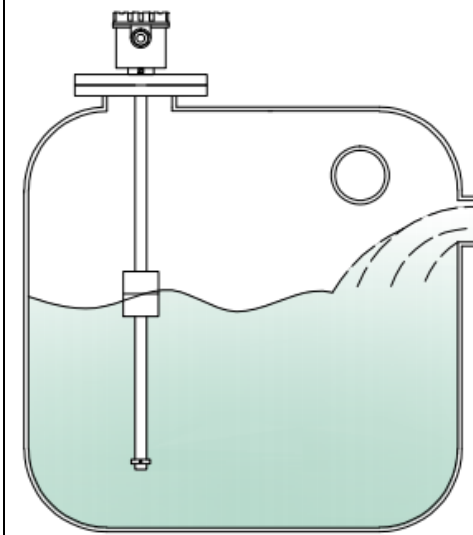
1. Continuous monitoring of liquid level with high repeatability;
2. It has nothing to do with foam and electrical conductivity, and is not affected by liquid specific gravity and pressure;
- 3, a variety of different materials, can adapt to the needs of different sites;
4. Remote control can be easily realized, and the connection with the control unit or digital display instrument is simple;
5. The indicating mechanism is completely isolated from the measured medium, so it has good sealing performance and is safe to use;
6. Easy maintenance, clear reading, accurate and reliable, and brighter display screen;
7. The measurement range can be made according to the actual requirements of users.

## 4. Technical parameters

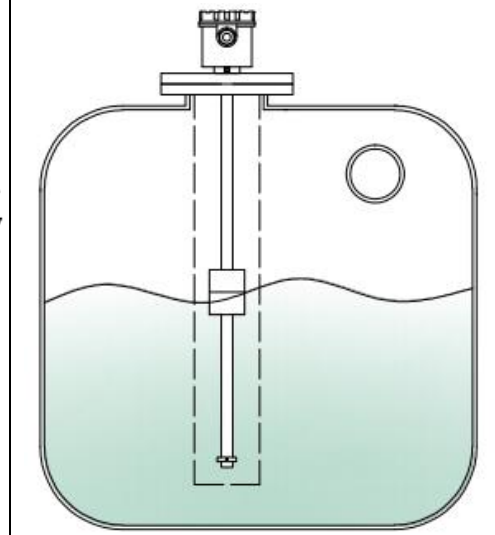
1. Measuring range: 300~6000mm Basic error:  $\pm 1\%FS$
2. Power supply: 24VDC
3. Output: 4-20mA two-wire system, 4-20mAHART two-wire system
4. Accuracy: standard  $\pm 5mm$
5. Pressure level:  $\leq 10Mpa$
6. Protection class: IP65
7. Explosion-proof grade: Ex(ia) II BT4
8. Wetted material: SUS304, SUS316L, PP, PTFE and other materials
9. Connection method: flange, thread, clamp and other connections

## 5. Installation instructions

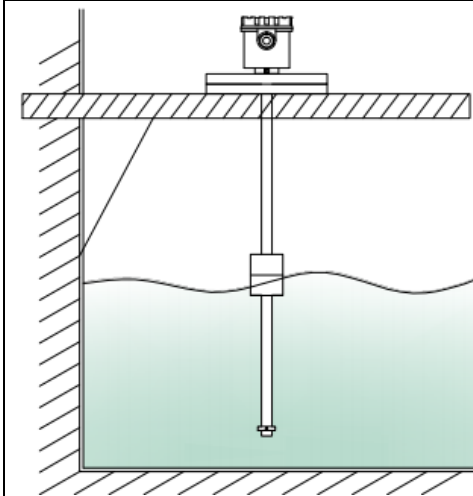
1. The installation location should be far away from the medium inlet and outlet to reduce the influence of medium fluctuations.



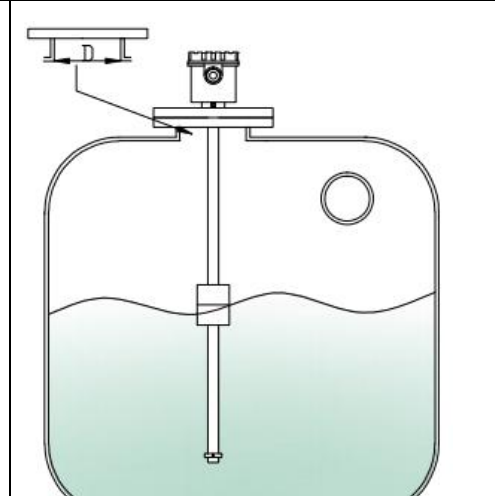
2. If the switch is installed in the stirring area, a wave-proof pipe or a wave-proof baffle can be installed.



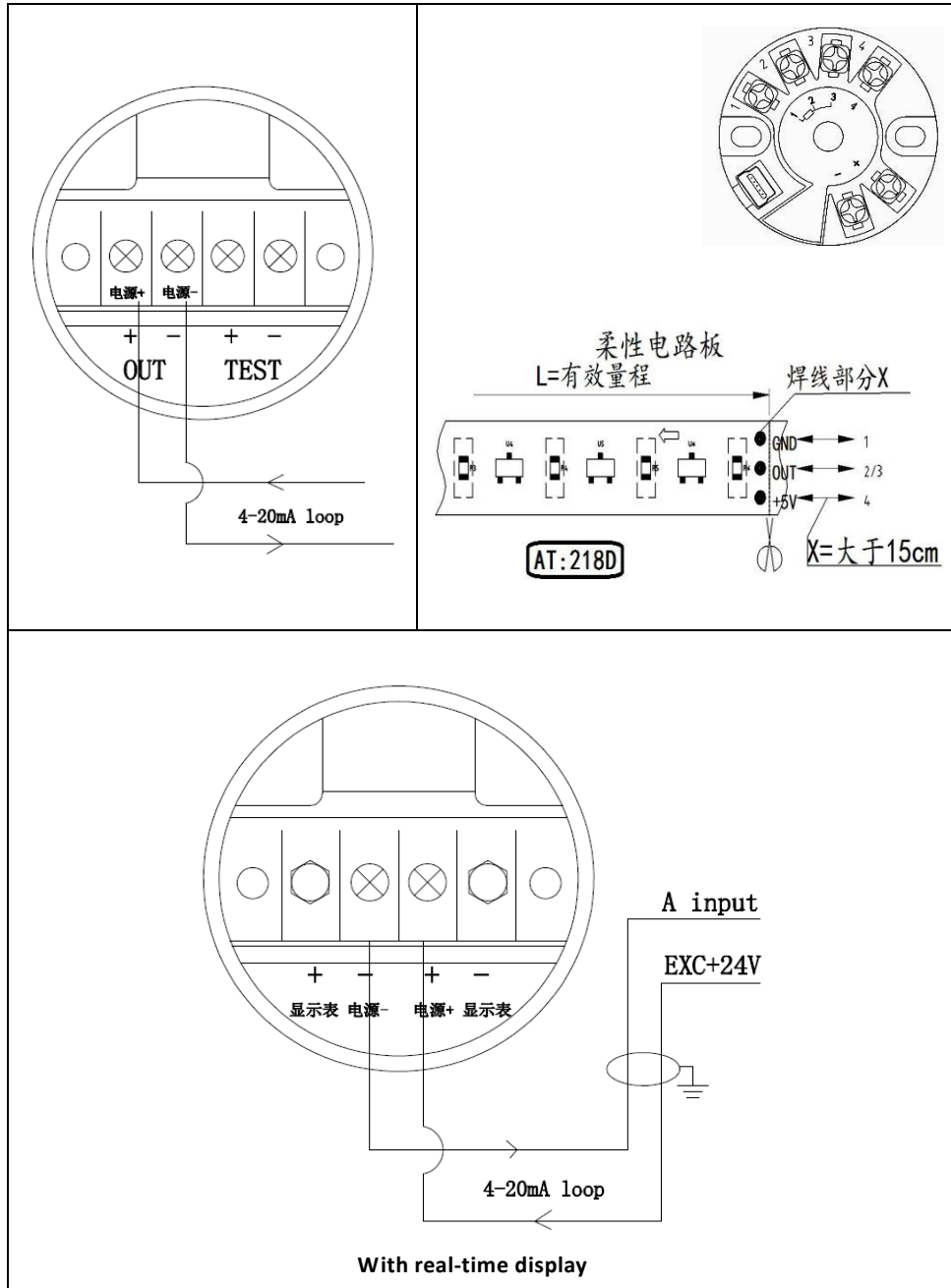
3. The switch is installed on the concrete pool wall, and an L-shaped angle iron bracket can be installed.



4. Choose a flanged pipe with a pipe diameter larger than the float diameter.



## 6. Wiring terminal diagram



## 7. Use and maintenance

1. For liquid level gauges with a length of more than 3 meters, the bottom of the conduit should be positioned to increase its strength and stability;
2. The medium in the tank (especially around the conduit) is not allowed to have magnets and magnetic impurities, so as not to block the float and affect the normal operation of the level gauge;
3. Do not adjust ZERO (zero point) and SPAN (full scale) at will (it has been adjusted at the factory);
4. Avoid strong collision with the level gauge, so as not to damage the level gauge.

## 8. Unpacking and inspection

1. The packaging should be intact
2. If you find that the product is damaged or the parts fall off and loose when unpacking, please notify our company in time
3. Packing contents: 1) One product 2) One manual 3) One product certificate