ATO QDY30A-B Submersible Water Level Sensor



1. Imported silicon wafer diffusion silicon core
2. Cable connection, directly put into the field, easy installation
3. Inclined suction hole, impact resistant
4.IP68 protection, long-term immersion in water
5. Laser marking, products can be traced
6. Accuracy :0.2%FS(other accuracy can be customized)
7. Measuring medium: acid-free alkaline liquid
8. Range :0-500 meters

Product Overview

The liquid level transmitter uses the high-performance diffused silicon piezoresistive pressure sensor as the measuring element, accurately measures the hydrostatic pressure proportional to the liquid level depth, and converts it into the standard (current or voltage) signal output through the signal conditioning circuit, establishes the linear correspondence between the output signal and the liquid depth, and realizes the measurement of the liquid depth. The internal ASIC converts the sensor millivolt signal into a standard long-distance transmission current signal, which can be directly connected with the computer interface card control instrument intelligent instrument or PLC. High precision, small size, directly into the liquid, you can measure the end of the transmitter to the liquid surface of the liquid height, easy to use. It is suitable for liquid level measurement and control in petroleum, chemical industry, power plant, urban water supply and hydrologic exploration.

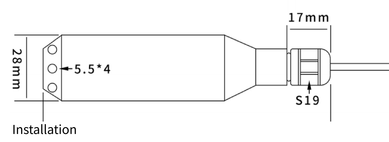
Product Parameter

Measuring medium: liquid (compatible with contact material)
Overall material :316L stainless steel diaphragm, 304 stainless steel shell, Ding Qing rubber seal ring, polyurethane cable)
Measuring range :0-500 meters
Overall accuracy :0.2%F.S
Overload capacity :200%
Response time :8ms(up to 90%FS)
Medium temperature: -20~60 °C (can be customized -40°C)
Ambient temperature :-20~60°C
Supply voltage :DC12-32V(default 24V)
Output signal :4-20mA, 0-5V, 1-5V, 0-10V, RS485
Stability: 0.2%F.S/ year
Seal grade :IP68
Process connection: Put in (put into the liquid under test)
Electrical interface: the tight wire waterproof nut is connected with the five-core air conduction cable
Storage temperature :-40~125°C
Zero temperature drift: 0.2%F.S
Sensitivity Temperature drift: 0.2%F.S
Mechanical vibration :20g(20~5000Hz)
Impact :100g(11ms)
Insulation :100m2/DC250V
Media compatibility: Various media compatible with stainless steel

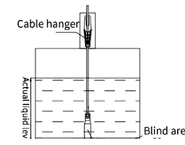
Working Principle

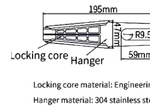
Working principle
The pressure received by the sensor at the liquid surface is as follows :P=pgh+Po
P: Pressure strength of the sensor against the liquid surface (for convenience of understanding, hereinafter referred to as pressure)
p: Density of the measured liquid
g: Acceleration of gravity (9.8015 when debugging)
po: atmospheric pressure at the liquid surface
h: The depth of the sensor into the liquid
When the sensor is put into a certain depth of the measured liquid, the pressure of the measured medium is introduced into the positive pressure chamber of the sensor, and the atmospheric pressure P0 on the liquid surface is connected to the negative pressure chamber of the sensor through the cable airway to offset the P0 on the front side of the sensor, so that the sensor is measured
The pressure is :p gh, obviously, by measuring the pressure P, the liquid level depth can be obtained.

Size



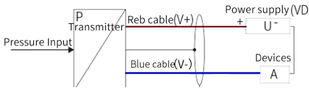
Installation

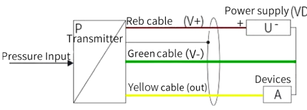


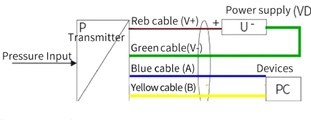


Locking core material: Engineering plastic
Hanger material: 304 stainless steel

Wire

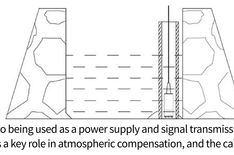






Installation Considerations

Warn!
1. The pores of the polymer sieve effectively isolate the water molecules in the humid environment from entering the air duct to form condensation, which flows into the probe
Damage to the circuit. (This end should not be directly immersed in water)
2. The installation of equipment must be carried out without pressurization and without power supply.
3. It is forbidden to measure media that is not compatible with the material of the transmitter.
4. When receiving the product, please check whether the packaging is intact, and check whether the transmitter model and specifications match the product you purchased.
5. No modifications or alterations can be made on the device.
6. Do not use brute force when installing the transmitter.
7. If the transmitter is installed in a bad site and encounters dangerous damage such as lightning strike or overvoltage, we recommend that the user in the distribution box; or lightning protection and overvoltage protection between the power supply and the transmitter.
8. The transmitter can be installed vertically, obliquely or horizontally in the tank and tank, which should ensure that impurities such as sediment are buried or blocked by the transmission
Probe section.
9. When the medium fluctuates greatly, measures should be taken to fix the probe part of the transmitter, such as adding counterweight to the transmitter or fixing the sleeve.



10. In addition to being used as a power supply and signal transmission, the gas conduction cable also plays a key role in atmospheric compensation, and the cable should be avoided during installation
The lock is too tight or bent at an acute angle to prevent the air tube from becoming blocked or broken.
11. When you need to add an extension cord for on-site installation, please ensure that the wiring part is kept dry and ventilated, and it is strictly forbidden to soak and avoid moisture and dirt
Blocking the atmospheric connection pipe in the cable will cause damage to the transmitter or inaccurate measurement.
12. Please avoid the cable of the level transmitter being scratched by a knife or other sharp metal body, causing water damage to the transmitter.
13. This product belongs to weak current equipment, wiring must be separated from the strong cable, should comply with the relevant national wiring standards (GB/T 50312-2016) for wiring.
14. Ensure that the power supply voltage meets the transmitter power supply requirements.
15. Please do not disassemble by yourself when using, let alone touch the diaphragm, so as not to cause damage.