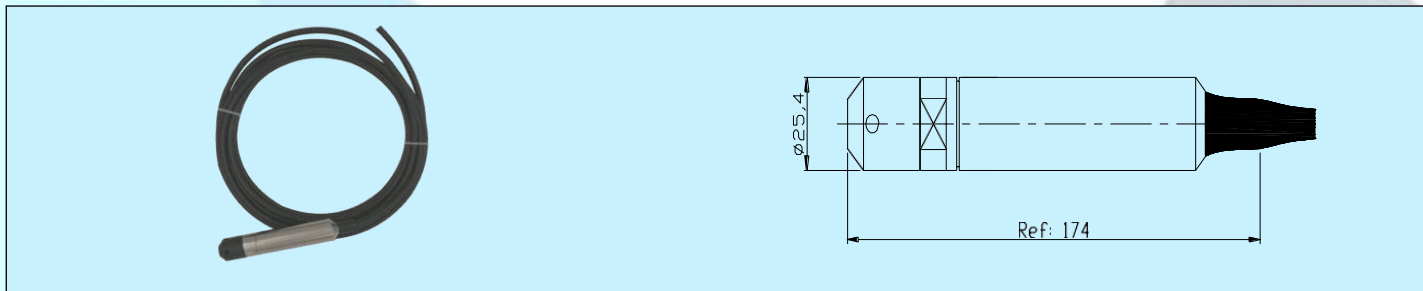


RSA-TN Submersible Level Transmitter



Applications & Features

- Measuring liquid level, based on the proportion principle of liquid static pressure with height
- Applied to water supply, industrial process control, water conservancy, environmental protection, chemical industry and other liquid level measurement and control
- All stainless steel integrated structure, anti-blocking, anti-shock, multiple waterproof design, easy to install
- Built-in circuit with high precision, stability and reliability
- Ventilation waterproof wire, internal condensation prevention design

Specifications

Power: 9~36VDC

Range: see models

Output: 4~20mA (2 wires)

Accuracy: $\leq \pm 0.5\%FS$ (BFSL)

Load: $< (U-9)/0.02 \Omega$, U for power

Overload pressure: 200%FS

Response time: $\leq 50ms$

Working temperature: $-20 \sim 60^{\circ}C$

Medium temperature: $-40 \sim 85^{\circ}C$, $\leq 95\%RH$

Stability: $\pm 0.1\%FS/Year$

Thermal effect: $\pm 0.05\%FS/^{\circ}C$

Materials: Body, 304 stainless steel;
Diaphragm, 316 stainless steel

Protection: IP68

Approval: CE

Models

Model	RSA-TN			Level Transmitter
Range		xx		1~50m H ₂ O
Cable			Cxx	Cable length, m

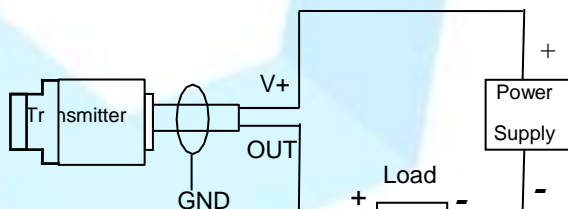
Frequently used ranges: 1,2,3,4,5,6,8,10,12,15m H₂O

Frequently used cables: 3,4,5,6,7,8,10,12,14,16m

Frequently used models: RSA-TN03C05, RSA-TN05C06, RSA-TN10C12

Connection

Wires could be connected based on terminal definitions on production nameplate. Refer following methods.



PWR(V+)	Red
Output(OUT+)	Black
GND	Green

Installation

1. Check before Installation

The static pressure produced by the liquid should be less than the transmitter's full range.

The measuring liquid should be compatible with the transmitter construction material.

The holes on the protection cap should NOT be clogged.

Do NOT screw the locked cap during installation. It may destroy the sealing of product.

2. Installation Methods

The transmitter should be installed vertically with the measuring cap downwards.

In the flowing water, the measuring surface on the cap should be parallel with the water flowing direction.

(1) Installation in the Static Water

The installation method in the static water is as Fig1.

To prevent shaking or destroying the transmitter when pumping, the transmitter should be installed far away from the liquid inlet. Otherwise it should be installed as Fig 2, protected by steel pipe.

The installation method in the deep well is as Fig 2.

Steel pipe insert method is usually used. The steel pipe cannot be bent; the diameter of the pipe must be more than 30mm. Many holes should be made at different heights on the pipe so as to easily raising water flow smoothly. If necessary, wrap steel wire around the transmitter body. When lifting the transmitter, you can lift the steel wire instead of the cable, to prevent breaking the cable.

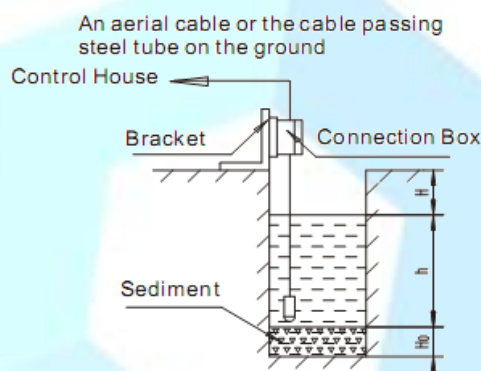


Fig 1

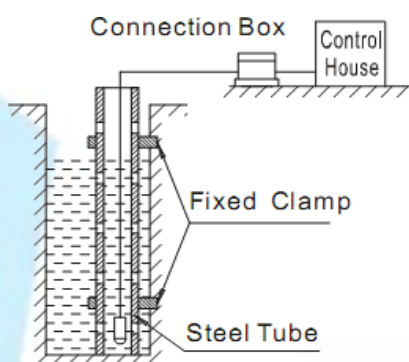


Fig 2

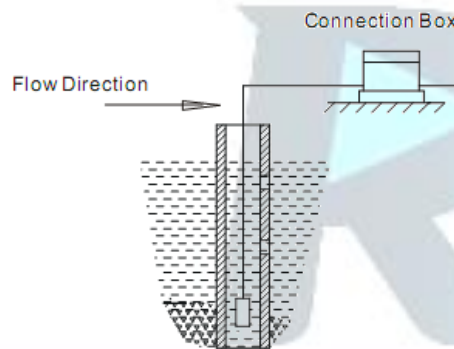


Fig 3

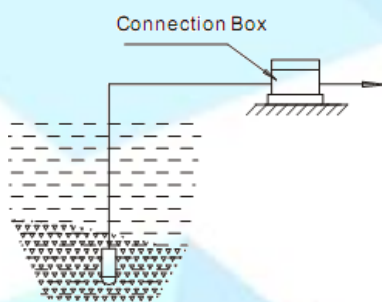


Fig 4

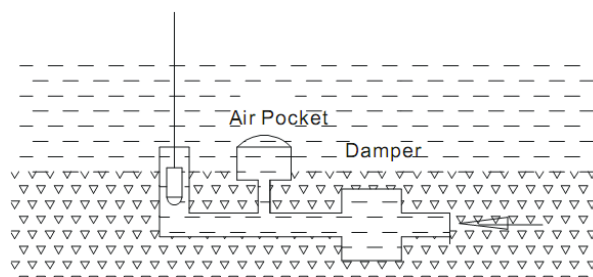


Fig 5

(2) Installation in Flowing Water (e.g. river channel, reservoir area, etc.), The water-calming equipments are required.

Method one: Insert a steel pipe in the water channel (see Fig 3). The steel pipe should be thick enough, and many holes should be made at different heights on the pipe to damp waves and eliminate the water pressure influence.

Method two: Superficial burying is better in the sand and stone channel (see Fig 4).

Method three: This method can not only eliminate water flowing pressure and wave influence, but also filter the sand and mud (see Fig 5).

3. The Reference Tube Installation

There is a plastic tube in the transmitter cable. It is specially designed for connecting the background pressure of the sensor to the atmosphere. In the process of installation and operation, be sure to keep the reference tube being well connected with the atmosphere. Mud or sand should NOT be jammed into the reference tube. Prevent water or other liquid going through the reference tube to destroy the transmitter.

Attention

1. The transmitter could be installed without any extra adjustment. Be sure the installation and electrical connection are correct. The transmitter could work once being power on, but the output signal could be more reliable after 30 minutes.
2. The transmitter itself does not need to be maintained regularly. But the following subjects may need regular maintenance. (1) Check if the wire connection is good or not, and if the cable is broken and/or old or not; (2) Clean the protection cap and diaphragm cavity periodically (take care!); (3) Don't violently pull cables or poke the diaphragm with metal or similar hard objects.
3. The transmitter body is integrative full-sealed construction without movable parts inside, with good long-term stability and reliability. If any failure occurs, such as no output, output too big, too small or inaccurate, please turn off the power firstly, then check the installation and wire connection status, if the power is correct, if the reference tube is in good condition, etc.

Warranty

- It has limited warranty for eighteen (18) months after the production date.