

# HR8833 Integrated Three-Parameter Transmitter

## 1. Overview

HR8833 is a three-parameter (water level, water temperature, conductivity) integrated pressure water level gauge, working with a digital barometer, which can be either external powered or internal battery self-powered, it is used for the long-term recording of the depth (pressure) and the temperature. It is all stainless steel structure, which contains water level sensor, temperature sensor and conductivity sensor, built-in large-capacity non-volatile memory and high-capacity long-life lithium battery, it is suitable for three-parameter hydrological parameter measurement of surface water, groundwater and marine environment.

## 2. Features

- High stability sensor for liquid level measuring, nice stability on long-term service
- High accuracy, up to 0.05% F.S;
- Temperature measurement, resolution 0.05 C
- Conductivity measurement, better than 1.5% F•S;
- F.S temperature compensation and digital calibration;
- Absolute pressure level measurement, no air duct, which greatly improved reliability
- High overload capacity;
- Wide power supply, 5 ~ 30VDC;
- RS485 standard MODBUS-RTU protocol;
- Internal recyclable record over 30000
- Low power consumption, sleep current operating current <5 $\mu$ A
- The product also has reverse power protection and surge protection
- All stainless steel housing sealing structure, IP68 protection

## 3. Conductivity sensor measurement performance indicators:

Adopt international top four-electrode technology, RS485 digital interface, support MODBUS protocol, environmentally friendly design. Compared with the traditional two-electrode

conductivity sensor, it has higher accuracy, wider measurement range and excellent stability. The four-electrode conductivity sensor also has a unique advantage in quantity: one is to completely solve the polarization problem in high conductivity test; the other is to solve the problem of inaccurate reading caused by electrode contamination.

- 1uS/cm~200 mS/cm, accuracy 1.5% F.S
- RS485 output, support Modbus, communication protocol can open
- 0~50°C, protection level IP68, max. pressure 6bar
- Can not be polarized, can be used online continuous
- Wide range and application
- Very resistant to pollution and strong anti-interference ability
- Stable in measurement and the accuracy is higher
- Strong structure and long service life

#### 4 Cable connection

The power supply and communication of the instrument share a four-core cable, the wires are red, yellow, blue and green. The wiring relationship is as follows:

When using atmospheric pressure, the color of the cable conductor is the same as the color of the transmitter.

Color	Red	Yellow	Blue	Green
Definition	V+	V-	RS485-A	RS485-B

#### 5 Construction outline

