Turbidity Water Quality Sensor Module

(Model：ZW-TUR102)

Manual

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ZW-TUR102 Turbidity Water Quality Sensor Module

Profile

ZW-TUR102 turbidity detection module is a universal module with high precision and low range, which reflects the turbidity of the water by detecting the content of suspended solids in the water.

The module adopts analog voltage signal output, which is convenient for users to use and has good selectivity, stability, can meet the user's detection requirements for a variety of solutions.

Fig1. Sensor module image

Features

Low power consumption, high cost performance, wide linear range, convenient calibration and good stability

Main application

It is widely used in the laboratory scientific research, household water purification, washing machine, dishwasher and other fields.

Technical indicators

Working voltage	5V DC	Operating current	40mA(MAX)
Consumption	≤50mW	Measuring range	0-1000NTU
Size	38.6x22.1mm	Detection temperature range	5-90℃
Sensor interface	XH2.54	Output	Analog voltage
linearity	Linear	Response time	≤500ms
Stability time	≤90s	Service life	3 years

Pins definition

SN	Pins definition	Functional description
1	VCC	Supply voltage positive electrode (5V)
2	AO	Analog signal output
3	DO	Digital signal output

4	GND	Power supply voltage negative electrode

Figure 2   Circuit board image

The Turbidity and voltage curve
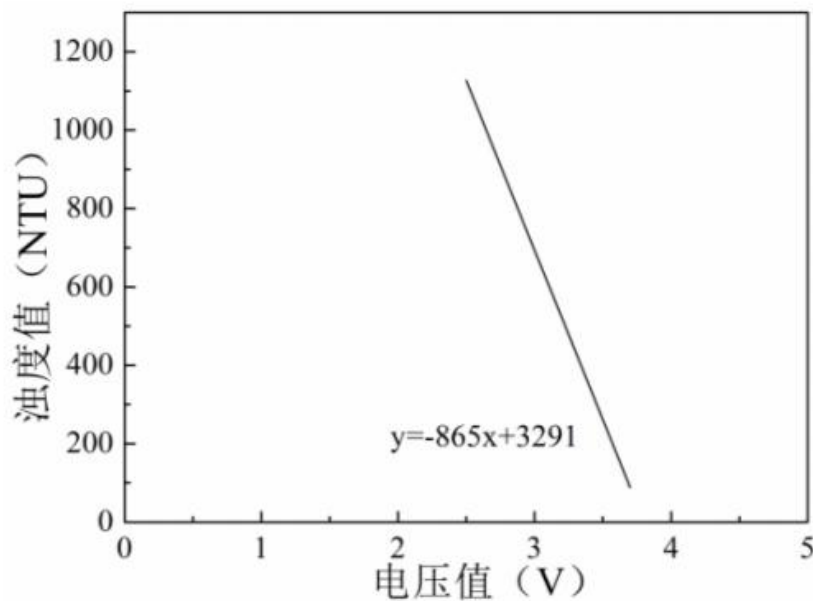

$$y=-865x+3291$$

Figure 3   Linearity curve

Testing method

The ZW-TUR102 turbidity testing module shall be calibrated before use. The calibration and testing process are as follows:

1. Install the turbidity sensor to supply 5V to the sensor module.

2. Calibrate with a standard solution of 0 NTU (or pure water or distilled water close to 0 NTU).

3. Soak the calibrated sensor end in the solution to be tested. After the voltage value is stable for about 3

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minutes, record the voltage value to be calculated Measure the turbidity value of the solution.

Precautions

1. The top of the turbidity sensor is not waterproof. It is forbidden to throw the turbidity sensor completely into the water when using. The water surface should not pass through the connection between the roof cover and the shell Water coming into the sensor will cause the sensor to burn out.

2. The wavelength range of light that the sensor photosensitive diode receives is (500~1050nm). The wavelength of daylight or fluorescent light will affect the sensor photosensitive electricity Resistance reception, affect the measurement output, the sensor should avoid direct sunlight or light.

3. The sensor head shell should be kept clean to avoid inaccurate measurement caused by pollutants.