

# 4-Electrode Conductivity Sensor

User Manual ( Version V1.1 )



# Y520-A 4-Electrode Conductivity Sensor



- Digital RS-485 output, support MODBUS
- 0~50 °C ; IP68 rating
- Range: 1 uS/cm to 200 mS/cm, precision: 1%
- No polarization effect, low maintenance
- Automatic temperature compensation
- Wide range and excellent interference rejection
- PEEK sensor body and Nickel electrodes

Ordering :

Model Description	Model #
4-Electrode Conductivity Sensor	Y520-A

Accessory :

Model Description	Model #

# Y520-A Sensor Dimensions

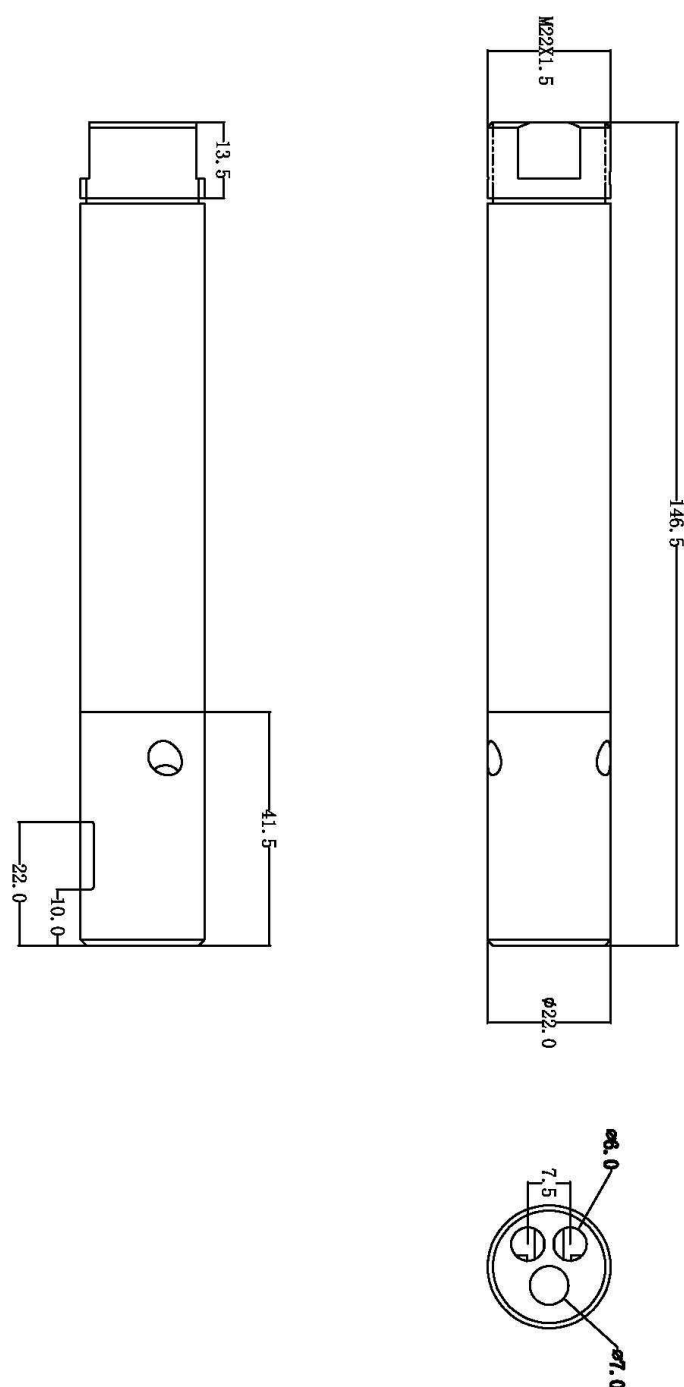


Figure 2: Sensor dimensions

# Y520-A Technical Specifications

Range	1uS/cm~200 mS/cm
Response Time	10 sec
Housing IP Rating	IP68
Accuracy	1%
Working Temperature Range	0 ~ 50℃
Interface	Support RS-485, MODBUS protocols
Construction	M22x1.5
Power Requirements	DC 5~12V +/-5%, current <50mA
Temperature Sensor Type	NTC
Sensor OD	22mm
Sensor Length	146.5 mm
Cable Length	10m standard; 5m, 15m, and 30m optional
Calibrations	Support one point and two-points calibrations
Body materials	POM and PEEK

# Y520-A Maintenance

## 1.Maintenance Schedule

Unlike traditional 2-electrode conductivity sensors, 4-electrode conductivity sensors require low maintenance.

Maintenance task	Frequency
Sensor cleaning	Every 30 days
Calibration (if required of agency)	Calibration based on required schedule

Note: above schedule is only for reference, customers should make on their own judgment based on their applications.

## 2.Routine Maintenance

### 4-electrode conductivity sensor:

- Inspect all sensor connectors for corrosion and replace sensors if necessary.
- Inlet and outlet hole of sensor  
use a cotton swab or a soft cloth to wipe, for some stubborn dirt, can be added to the water in the washing liquid to wash;

### Cable:

Cable's minimum bending radius is 15mm. The wires inside the cable may break if it is under long term stressed condition.

# Y20-A Cable

## 1、 Sensor Dimensions

22x146.5 mm( $\Phi$  xL)

## 2、 Power Supply Requirements

Power Supply DC 5~12V  $\pm$ 5%, Current <50mA

## 3、 Sensor Cable

4 wire AWG-24 or AWG-26 shielding wire. OD=5mm



1: Red—Power (VCC)

2: White—485 Date\_B ( 485\_B)

3: Green ---485 Date\_A (485\_A)

4: Black --- Ground (GND)

5: Bare wire ---- shield

# Warranty

Yosemite Technologies online dissolved oxygen sensor and controller are warranted for one (1) year from date of purchase against any material and manufacturing workmanship. Within the warranty period, Yosemite Technologies Environmental Technologies will repair or replace, free of charge, any product that Yosemite Technologies determines to be covered by warranty.

## **Limitation of Warranty**

This limited warranty does not cover any damage, deterioration or malfunction resulting from any alternation, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to fire, improper packing and shipping, lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Yosemite Technologies.

This limited warranty does not cover cost of shipping the product back to Yosemite Technologies, or any travel cost related the repair work.

Only the original purchaser of this product is covered under this limited warranty. This limited warranty is not transferable to subsequent purchasers or owners of this product.