



Recorder



Flow



Pressure



Temp



Analyzer



Level

# Datasheet

## Dissolved Oxygen Sensor

### SUP-DO-7013

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## Datasheet

### Dissolved Oxygen Sensor SUP-DO-7013

DO digital sensor is designed for aquaculture industry. Equipped with RS485 digital serial ports, it can be used for measuring the variation of DO value of water-dissolvent fluid system within the measuring range. It has standard RS485 Modbus RTU protocol function and allows remote communicate with upper computer.

#### Applications

- Aquaculture
- Wastewater
- Fish hatcheries
- Water quality testing
- IoT water quality testing

#### Features

- Isolated power supply design, data stability, strong anti-interference ability
- Mature sensor manufacturing process, high reliability, good long-term work stability
- Extended maintenance intervals with durable dissolved oxygen electrolyte formulations
- Communication rate: 4800/9600 (default)/14400/19200
- Support automatic temperature, manual atmospheric pressure, seawater salinity compensation
- RS485 communication



**Dissolved Oxygen Sensor**

Parameters	
Measurement	DO value in water
Measure range	0~40.00mg/l
Resolution	0.01mg/l
Temperature range	-20~60°C
Type of sensor	Galvanic Cell sensor
Measuring accuracy	<0.5mg/l
Output mode	RS485 port*1
Communication protocol	Standard MODBUS-RTU
Communication mode	RS485 9600,8,1,N (by default)
ID	1~255 Default ID 01 (0x01)
Fixing method	RS485 remote setting calibration and parameters
Power supply mode	12VDC
Power consumption	30mA @12VDC

## Wiring

### Wiring definition

Color	Red	Black	Green	White
Notes	12V+	GND	485A	485B

## Electrode storage and maintenance

### (1) Electrode storage:

When the electrode is not used for a long time, please pour out the liquid medicine in the membrane head and keep the cavity dry. The electrode membrane cover + rubber cover is used to protect the breathable membrane on the top of the membrane head, please do not discard it

### (2) Parts replacement cycle

Electrode film cover: It is recommended to replace it every 6 months

Electrolyte: It is recommended to replace it every 3-6 months

### (3) Maintenance - check the old electrode membrane sleeve

Unscrew the electrode film cover, observe the head of the electrode film cover - the breathable film, and check whether its appearance is complete and flawless. If it is damaged, it needs to be replaced with a new film cover. Pour out the old electrolyte, wash the membrane sleeve and electrode rod body with clean water and dry it for use

### (4) Maintenance - clean the metal reaction electrode of the sensor

Observe the metal part of the rod body of the electrode head. If it turns black or has a lot of oxidation product spots, please fill the membrane head with new electrolyte, screw it tightly and place it vertically. After waiting for more than a minute, unscrew the film cover and try to wipe it with a paper towel until it is bright. If there are still residues, please repeat the above actions

### (5) Maintenance - adding electrolyte

Add new electrolyte about 3/4 of the electrode membrane sleeve. In order to avoid air bubbles affecting the measured value, please screw in slowly and tap lightly to release the air bubbles.

Ordering code

SUP-DO7013-2-A-B-05-GA														Description
SUP-DO7013		-	-	-	-	-	-	-	-	-	-	-	-	
Type	DO7013													Measurement Range: (0-40) mg/L Temperature Range: (0-60) °C
Temperature Compensation Type		2												NTC 22K
Output		A												RS485
Power Supply		B												12VDC
Cable Length					05									5m
					10									10m
					15									15m
					20									20m
					30									30m
					XX									Other
Housing Material and Thread Type						GA								Engineering Plastic, G3/4
						GF								Engineering Plastic, G1/2
						RE								Engineering Plastic, None