



Datasheet

Dissolved Oxygen Sensor

AI-DO713



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Dissolved Oxygen Sensor AI-DO713

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
- Waste water
- 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

AI-DO713-2-A-B-05-GA												Description	
AI-DO713	-	-	-	-	-	-	-	-	-	-	-	-	
Type	DO713												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									
Housing Material and Thread Type													Engineering Plastic, G3/4
													Engineering Plastic, G1/2
													Engineering Plastic, None



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