



# CDT-12A DO Sensor

## For weather automation applications



### Features

- On-line & real-time monitoring
- With temperature compensation
- High accuracy
- Simple operation and high reliability
- External module is converted into a standard signal output
- Multiple output signal is optional
- Probe can be used under water
- Submerged mounting bracket is optional

CDT-12A Dissolved Oxygen(DO) Sensor design based on the principle of fluorescence and high performance through oxygen membrane, with short response time, measurement accuracy, stable performance, etc.It can be widely used in chemical fertilizer, metallurgy, environmental protection water treatment engineering, pharmaceutical, biochemical, food, aquaculture and water such as continuous monitoring of dissolved oxygen in the solution.

### Typical installation locations

- Environmental protection
- Agriculture
- Water conservancy
- Industrial wastewater treatment

### Design structure

Based on fluorescence quenching principle. Blue light shines on the fluorescent substance to excite the fluorescent substance and emit red light, because oxygen molecules can carry away energy (quenching effect), so the time and intensity of the excited red light is inversely proportional to the concentration of oxygen molecules. By measuring the phase difference between the excitation red light and the reference light, and comparing with the internal calibration value, the concentration of oxygen molecules can be calculated, and then the final value is automatically compensated by temperature and air pressure.

### Easy installation

The sensor is installed in a position where the water flow is relatively rapid and the temperature changes are minimal to ensure the accuracy of the measurement data. For example, when installing in the pipeline, you can choose a straight pipe section and away from the elbow, valve and other parts; When installing in a pool or sink, avoid installing in a corner or dead water corner. At the same time, consideration should be given to facilitate future maintenance and calibration operations.

Avoid direct sunlight and dusty environments, and there can be no strong vibration and electromagnetic interference around, in order to prevent affecting the performance and measurement accuracy of the sensor.

### Reliable operation

The correct installation position and method are critical to the reliability of the sensor. Choose a location that accurately reflects the PH value of the solution to be tested for installation, and avoid installation in places where there are bubbles, sediments or other disturbing factors. At the same time, when installing, ensure that the contact between the sensor and the tested solution is good to avoid leakage or loosening.

# Dimensions

## CDT-12A connector dimension



## Product structure



# Technical data

## Measurement performance, models CDT - 12 A

Item	Technical Specification	
	DO	Temperature
Range	0-20mg/L(ppm)	0-60℃
Accuracy	±0.5%FS	±0.5℃
Resolution	0.01mg/L	0.1℃
Supply	12VDC,24VDC	
Temperature compensation	0-60℃	
Output	RS485 4-20mA	
Measuring principle	Fluorescence	
Maintenance	Every 1year to replace fluorescent cap	
Response time	<60s	
Pressure Resistance	0.3MPa	
Power consumption	<0.4W	
Operating Temperature	0-+45℃	
Cable length	5m default, other length customizable	
Ingress Protection	IP68	
Weight(probe)	0.7kg	

Model number	Type	Output	Special features
CDT-11A	PH sensor	0-2V 0-5V 4-20mA RS485	Probe: Φ28*160mm
CDT-12A	DO sensor	RS485 4-20mA	Range 0-20mg/L(ppm)
CDT-12B	DO sensor(calibrable)	RS485 4-20mA	Range 0-20mg/L(ppm)
CDT-14A	ORP sensor	RS485 4-20mA	Range -1500mV-+1500mV
CDT-15A	Suspended Matter	RS485	Range 0-200mg/L,0-1000mg/L,0-5000mg/L
CDT-17B	Soil PH sensor	RS485 4-20mA	Probe material:304SS
CDT-19B	Turbidity (SS) sensor	RS485 4-20mA	Wavelength of falling radiation: 860nm
CDT-21B	Soil EC_salinity	RS485 4-20mA	Probe material:316L
CDT-22B	Soil Moisture & Temperature	4-20mA ,0-5V,0-2V,RS485 optional	Probe material:316L
CDT-30B	Soil Moisture, Temperature & EC	RS485,0-2V	316L stainless steel
CDT-70B	Soil 7 in 1 Sensor	RS485	Soil Moisture, Temperature & EC & PH & NPK
CDT-1T2B	Seismic Detection Wave	0-20mV RS485	Natural Frequency(Hz):10±2.5%
CDT-1T3B	Soil layers temperature&moisture	RS485	Range 0-100℃ 0-70%
CDT-1T4B	TDS Sensor	RS485 4-20mA	Range 0-2000ppm
CDT-1T5B	Dissolved CO2 Sensor	RS485	Range 0-2000ppm
CDT-1T6B	Residual Chlorine	RS485	Range 2mg/L,8mg/L,20mg/L
CDT-N0C	Multi-parameter water quality Sensor	RS485	Multi-parameter integration

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