



CDT-11A PH Sensor

For weather automation applications



Features

- On-line & real-time monitoring
- Solid dielectric and PTFE liquid junction, not easy jam, maintenance free
- 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

The soil contains many substances such as organic acid, inorganic acid, alkali and salt, due to the different content of various substances, so the soil shows different PH value. Usually the PH in the range of 6.5-7.5 soil is called the neutral soil. CDT-11A PH sensors measure the pH value should be a good solution without professional calibration instruments, complex operation, expensive and difficult to carry, can be for continuous measurement of soil, waste water pH value, suitable for agriculture, sewage treatment plant, chemical industry, printing and dyeing, paper making, pharmacy, electroplating and environmental protection and other fields.

Typical installation locations

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

Design structure

Glass electrode: This is a key part of PH sensors and is usually made of glass film. The glass film is selectively responsive to hydrogen ions and is charged both internally and externally. When the glass electrode is immersed in the solution to be tested, the hydrogen ions in the solution will react with the charged groups on the surface of the glass film, causing a change in charge, and then generate an electric potential difference between the glass electrode and the reference electrode.

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.

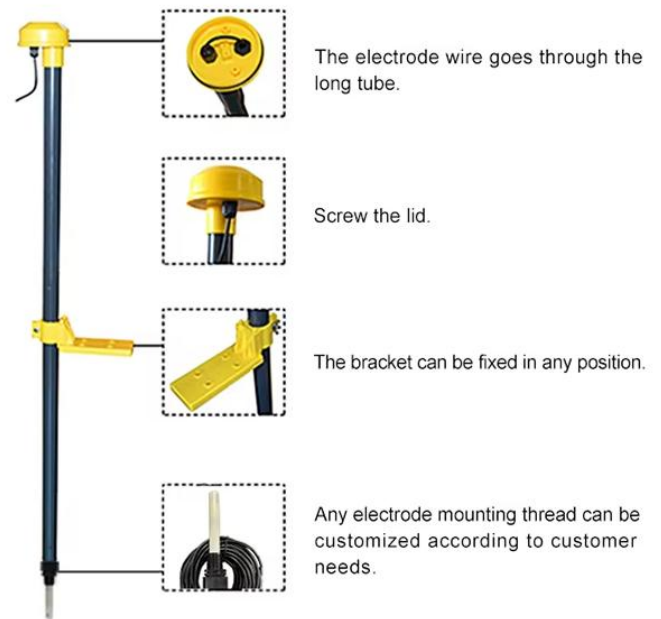
Avoid direct sunlight and dusty environments, and there can be no strong vibration and electromagnetic interference around, in order to prevent affecting the performance and measurement accuracy of the sensor.

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-11A connector dimension



Multiple probe



Pure Water Glass Electrode
 Suitable for pure water
 Temperature range of water medium: 0-100'



Teflon Electrode
 Suitable for Corrosion resistance,
 industrial wastewater



High Temperature Glass Electrode
 Suitable for boiler water, hot liquid
 Temperature range of water medium: 0-130'



Desulfurization Electrode
 Limewater, desulfurization, viscous liquid,
 slurry and other environments



Antimony Electrode
 Suitable for containing hydrofluoric acid
 and oilfield sewage

PH scale

PH value	Description	PH value	Description
<4.5	Strongly acidity	7.5-8.5	Faintly alkalinity
4.5-5.5	Acidity	8.5-9.5	Alkalinity
5.5-6.5	Faintly acidity	>9.5	Strongly alkalinity
6.5-7.5	Neutral		

Technical data

Measurement performance, models CDT - 11 A

Item	Technical Specification
Range	0-14PH
Supply	5VDC, 12-24VDC
Accuracy	±0.3PH
Resolution	0.01PH
Response time	<10s(in water)
Stability	≤0.02PH/24h
Output Signal	4-20mA, 0-5V, 0-2V, RS485
Operating Temperature	0-+80℃
Ingress Protection(Probe)	IP68
Storage	10-60℃@20%-90%RH
Dimension	Probe: Φ28*160mm Transmitting Module: Φ29*100mm

Model number	Type	Output	Special features
CDF-10A	Wind speed	Pulses(PNP) RS485 4-20MA 0-5V	Three cup plastic wind speed
CDF-11A	Wind direction	RS485 4-20MA 0-5V	Plastic wind direction sensor
CDW-33A	Atmospheric Temperature, Humidity & Pressure	RS485	Shelter installation
CDY-12A	Economical Tipping Bucket Rainfall	Pulses(@10kΩ&0.01uF), RS485	Diameter :φ200mm, height: 271mm
CDG-10B	Solar Radiation	0-5V, 4-20mA, RS485	Spectral range: 300~1100nm
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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