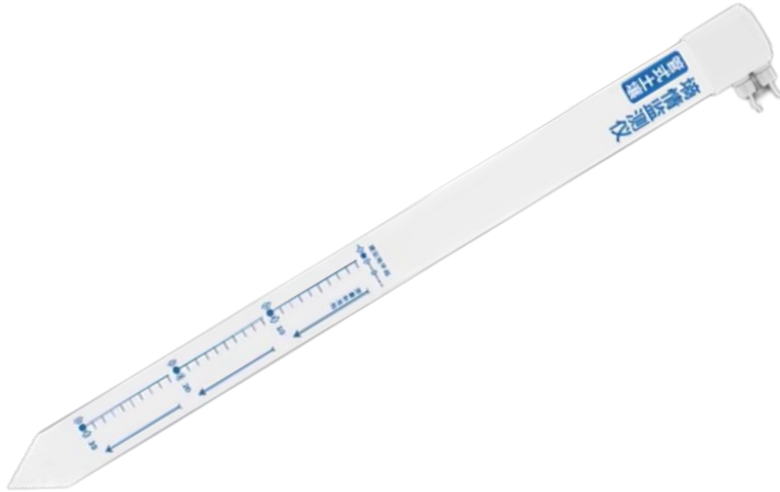




CDT-1T3B Soil layers temperature&moisture

For weather automation applications



Features

- It is simple in structure, easy to install and maintain
- Good stability, can adapt to a variety of harsh environmental conditions
- The change of Soil moisture and temperature concentration can be quickly sensed and the measurement result can be given in time
- Low energy consumption
- The general structure is relatively simple
- IP68 Waterproof Standard

CDT-1T3B You can customize three or four or five layers of soil sensors, each layer of soil has a real sensor, and the data is more realistic and accurate than other tubular sensors on the market. Each layer of sensors are filled with epoxy resin glue, all devices are fixed, so that the measured data will not jump, more accurate; At the same time, it can protect the sensor during transportation.

Typical installation locations

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

Design structure

Using advanced sensing technology and accurate calibration method, the measurement accuracy of soil temperature and humidity is high. For example, the temperature measurement accuracy can reach $\pm 0.2^{\circ}\text{C}$ - $\pm 0.5^{\circ}\text{C}$, and the humidity measurement accuracy can reach $\pm 2\%$ - $\pm 3\%$ within a specific range, which can accurately capture the subtle changes in soil temperature and humidity, provide reliable data support for agricultural production, soil research, etc., and ensure that the decisions made based on these data are accurate and effective.

Easy installation

Select a representative installation location according to monitoring purposes and needs. Avoid selecting areas with rocks, overly dense roots, or other foreign objects that could damage the sensor. If it is in the field, you can choose the area with more uniform distribution of crop roots; If it is used for environmental monitoring, factors such as soil differences in different regions and possible sources of pollution should be taken into account.

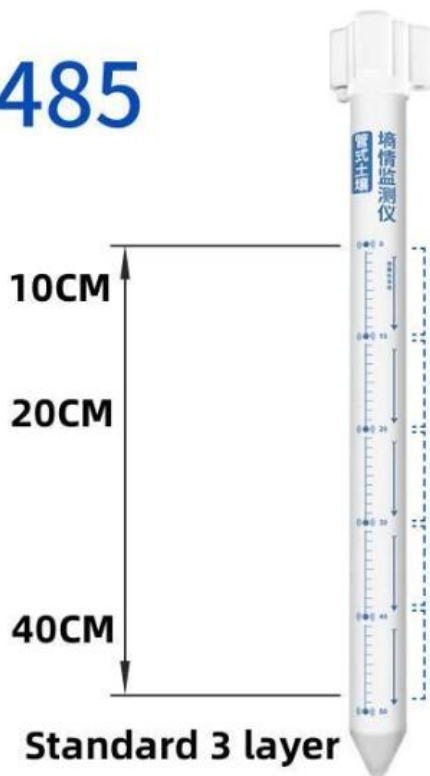
Reliable operation

Stable performance and reliable measurement in a variety of complex soil environments and climates. For example, temperature and humidity can be accurately measured in different soil qualities (such as sand, clay, loam), or under different environmental conditions such as high temperature, low temperature, and humidity, and the measurement results are not affected by agricultural activities such as fertilizers, pesticides, and irrigation in the soil

Dimensions

CDT-1T3B connector dimension

RS485



Installing

If a plug-in installation is used, you can use a drilling tool to drill holes in the selected position, the diameter of the hole should be slightly larger than the diameter of the sensor probe, so that the sensor can be inserted smoothly. The depth of the hole should be determined according to the design requirements and monitoring requirements of the sensor, and it is generally necessary to ensure that the probe of each measurement layer can be completely buried in the soil and is at the appropriate measurement depth. For example, for a three-layer soil temperature and humidity sensor, it may be necessary to drill the holes to a depth of 30 -50 cm in order to install the sensor probe at a depth of 10 cm, 20 cm and 30 cm, respectively.

If a pit installation is used, you can use a shovel or hoe to dig an appropriately sized pit that is deep and wide enough to accommodate the sensor and is easy to operate. When digging a pit, care should be taken to keep the bottom of the pit flat so that the sensor can be stably installed in the pit

Plug-in installation: Insert the sensor probe into the hole according to the designed depth, slowly and smoothly, to avoid excessive force to damage the sensor probe. The insertion depth should meet the design requirements, generally so that the probe part of the sensor is completely buried in the soil, while ensuring that the connection part of the sensor (such as cable) is above the ground in order to connect with the data acquisition device. After insertion, the soil around the sensor can be gently compacted by hand so that the sensor is in full contact with the soil.

Pit installation: Place the sensor into the dug pit and adjust the position of the sensor so that it is horizontal and the probe part is in close contact with the soil. You can fill some fine soil around the sensor, and then gently compact it with your hand or a tool to ensure that the sensor is stable and fixed in the pit. For multi-layer sensors, make sure that the probe for each measurement layer is installed at the correct depth

Technical data

Measurement performance, models CDT - 1 T 3 B

Item	Technical Specification
Range	0-100°C 0-70%
Supply	7-30VDC (power consumption<0.2W)
Accuracy	±0.5°C ±3%
Resolution	0.1°C 0.1%
Response time	<10s (soil moisture>30%)
Output Signal	RS485
Operating Environment	0-+80°C(<0.6MPa)
Cable length	5m(default), customizable
Probe material	ABS
Ingress Protection	IP68
Storage	10-60°C@20%-90%RH
Test layer number	3 layer 4 layer 5 layer

Model number	Type	Output	Special features
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°C 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

Published by CODA | © CODA 2024



All rights reserved. Any logos and/or product names are trademarks of CODA or its individual partners. Any reproduction, transfer, distribution or storage of information contained in this document is prohibited. All specifications — technical included — are subject to change without notice.

Hunan Coda Electronic Tech Co.,Ltd

T:+86-0731-85117089 W:www.codasensor.com E:Molly@codasensor.com