兆泰盛
ZHAOTAISHENG

Soil parameter rapid tester

ZTS-*-SC-35DC

Product Manual

1 Overview

The soil rapid tester is a rapid tester developed by our company for rapid detection of soil temperature, moisture content, EC conductivity, PH and other parameters. The rapid tester adopts a hand-held design, which is convenient for users to carry. The probe adopts a needle-shaped probe design and is made of stainless steel with good corrosion resistance and toughness.

The rapid tester adopts FDR technology to measure soil moisture and AC detection technology to measure EC conductivity. The product has high measurement accuracy and fast response speed.By measuring the electrical conductivity content in the soil, the soil fertility is indirectly reflected, and the trend of nitrogen, phosphorus and potassium content is inferred.The low-power LCD screen is used to display the measured values, which is concise and clear. The product is powered by three ordinary No. 5 batteries, which are easy to replace. The overall product adopts a low-power design. Three No. 5 batteries can be used continuously for up to two years..

2 Features

1）It adopts hand-held design, small size, light weight, and convenient for users to carry.

2) Real-time monitoring of soil composition, capable of detecting a variety of organic components in the soil.

3) Low threshold, few steps, fast measurement, no reagents required, and no limit on the number of tests.

4) It is battery powered and has a LCD digital display. The interface parameters and functions are clearly displayed and the battery is replaceable.

5) The probe insertion design ensures accurate measurement and reliable performance.

3 Scope of application

The rapid tester is widely used in farmland production, soil research, greenhouse planting, orchard nursery, gardening planting, tree planting, potted planting and other fields.

4 Product Information

4.1 Technologyparameter

Measurement parameter: Soil conductivity(EC value), temperature, moisture

Measuring range:0 ～ 10000 μ S/cm, -40~80 ℃ , 0-100%, 1-1999 mg/kg(mg/L)

Measurement accuracy：±3%FS, @(Brown soil, 60%, 25℃)、±0.5℃、0-50% ±2%, @(brown soil, 30%, 25℃) 50-100% ±3%, @(brown soil, 60%, 25℃);

point Identify Rate:1μS/cm, 0.1℃, 0.1%, 1 mg/kg (mg/L)

Power supply voltage: DC3.7V lithium battery

Scope of work:-20℃~60℃

Stabilization time: after power on1Second

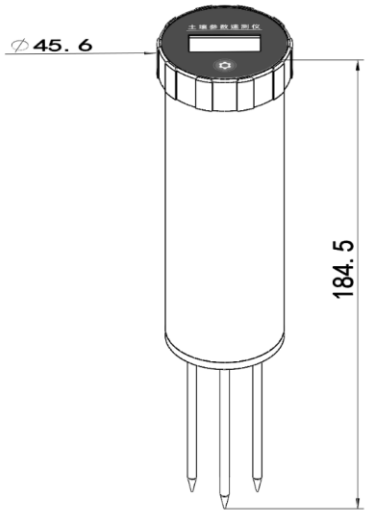
Response time: <1Second

4.2 Product Selection

ZTS-				Company Code
	ECTH-			Soil conductivity, temperature and moisture three-in-one rapid tester
	SD-			Soil moisture rapid tester
	WS-			Soil temperature and moisture rapid tester
	ECH-			Conductivity and moisture two-in-one rapid tester
	ECT-			Conductivity and temperature two-in-one rapid tester
	EC-			Single conductivity rapid tester
		SC-		Speed measurement tape display

			35DC	AA battery version

5 Form Factor



6 Hardware Hookup

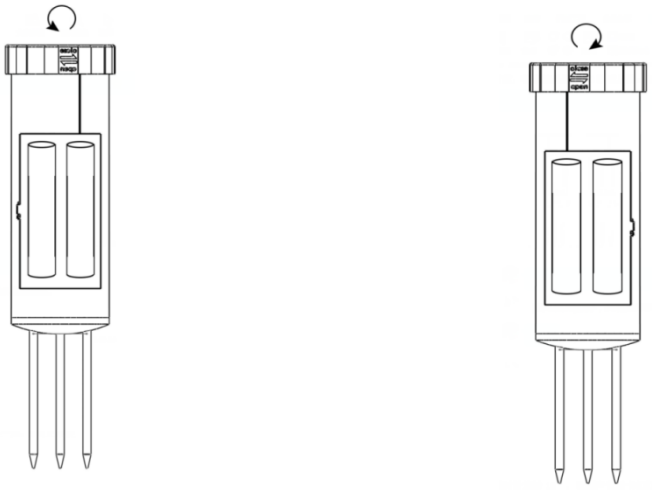
6.1 Equipment pre-installation inspection

■1 speed tester
■Certificate of Compliance

6.2 Usage

At the place where measurement is required, insert the alloy probe of the rapid tester vertically into the soil and press a button to start measurement. As shown in the figure:

After pressing the button, the device will start up in 1 second, then test for 2 seconds. For multi-element models, each element of the test result will be displayed for 3 seconds, and the screen will be turned off after 3 cycles. For single-element models, the test result will be displayed for 10 seconds before the screen is turned off. If the button is pressed again during the display process, the test will be repeated for 2 seconds and the display will be cycled again.



Open top cover Close top cover

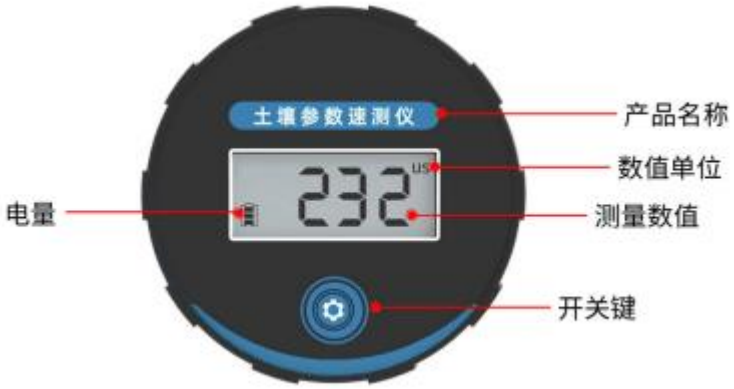
When replacing the battery, rotate the upper cover counterclockwise

15°, and the buckle will open when you hear a sound. Lift the upper cover to expose the battery holder inside, unplug the wiring terminals connecting the circuit board and the battery holder, take out the battery holder as a whole, and put the device into the device after replacing the battery. After connecting the terminals, rotate the upper cover clockwise to screw the upper cover and the device body together, and then it can be used normally.

6.3 Precautions

1. The probe must be in full contact with the soil and compacted to ensure data accuracy.
2. The soil rapid tester only tests mud and soil, and is not suitable for dry flour, pebbles, organic sawdust, liquid particles, etc.
3. To improve the accuracy of the test results, please use the method of multi-point testing and taking the average value during testing.
4. When using, be careful not to let the test point touch the stone, and do not use too much force, otherwise it will easily damage the electrode. It is not suitable to be inserted in the soil for a long time, as it is easy to oxidize.
5. After measurement, clean the soil particles on the probe surface with gauze in time to keep the probe dry.
6. Before each measurement of nitrogen, phosphorus and potassium, please calibrate according to the measured elements before measuring.

7 Screen Display



Long press the "on key" and the device will work normally.

Note: When measuring different soil parameters, the screen will display the corresponding measurement parameter units.

8 Precautions for use

police tell

⦸ Failure to follow the wiring sequence may cause damage to the device and the instruments connected to it..

⦸ When the input power exceeds the maximum power of the device, the device will be damaged..

Note meaning

Please read this instruction manual completely before use.

Do not attempt to insert the probe into stones or hard soil to avoid damaging the probe..

⚠ When removing the sensor from the soil, do not pull the cable directly..

⚠ The sensor probe is inserted into the soil/The matrix should be sufficient to reduce operating errors and improve measurement accuracy..

9 Product Warranty

The warranty period of this product is one year. Within twelve months from the date of delivery, if the fault is caused by sensor quality problems (not man-made damage), our company will be responsible for free repair or replacement. After the warranty period, only the cost will be charged..