

NPKPHCTH-HMI043 7 in 1 Rapid Soil tester



Features

1. Plug and play testing, Rapid measure soil Temperature, humidity (Moisture), conductivity (EC), PH, Nitrogen (N), Phosphorus (P), Potassium (K).
2. 4.3" LCD touch screen easy to operate, display real-time value, curve, logs, can set calibration on screen
3. Inside 5000mA rechargeable lithium battery, can continuously operate for 48 hours, come with AC110/220V to DC12.6V charger
4. Support 1900 logs, settable interval of logging, can export logs to SD card, come with 1GB SD card
5. Sensor cable length is 2m, can extend

Soil parameters measuring

Temperature	<ul style="list-style-type: none"> • Measuring range: -40°C-80°C • Accuracy: $\pm 0.5^{\circ}\text{C}$ (25°C) • Long-term stability: $\leq 0.1\%^{\circ}\text{C}/\text{y}$ • Response time: $\leq 15\text{s}$
Humidity	<ul style="list-style-type: none"> • Measuring range: 0-100%RH • Accuracy: 3% within 0-50%, 5% within 50-100% • Long-term stability: $\leq 1\% \text{RH}/\text{y}$ • Response time: $\leq 4\text{s}$
Conductivity (EC)	<ul style="list-style-type: none"> • Measuring range: 0-20000us/cm • Accuracy: 0-10000 us/cm range is $\pm 3\%$; 10000-20000 us/cm range is $\pm 5\%$ • Long-term stability: $\leq 1\% \text{uS}/\text{cm}$ • Response time: $\leq 1\text{s}$
PH	<ul style="list-style-type: none"> • Measuring range: 3-9 PH • Accuracy: $\pm 0.3\text{PH}$ • Long-term stability: $\leq 5\%/\text{year}$ • Response time: $\leq 10\text{S}$
Nitrogen Phosphorus Potassium	<ul style="list-style-type: none"> • Measuring range: 1-2999 mg/kg(mg/L) • Resolution: 1 mg/kg(mg/L) • Response time: $< 1\text{S}$

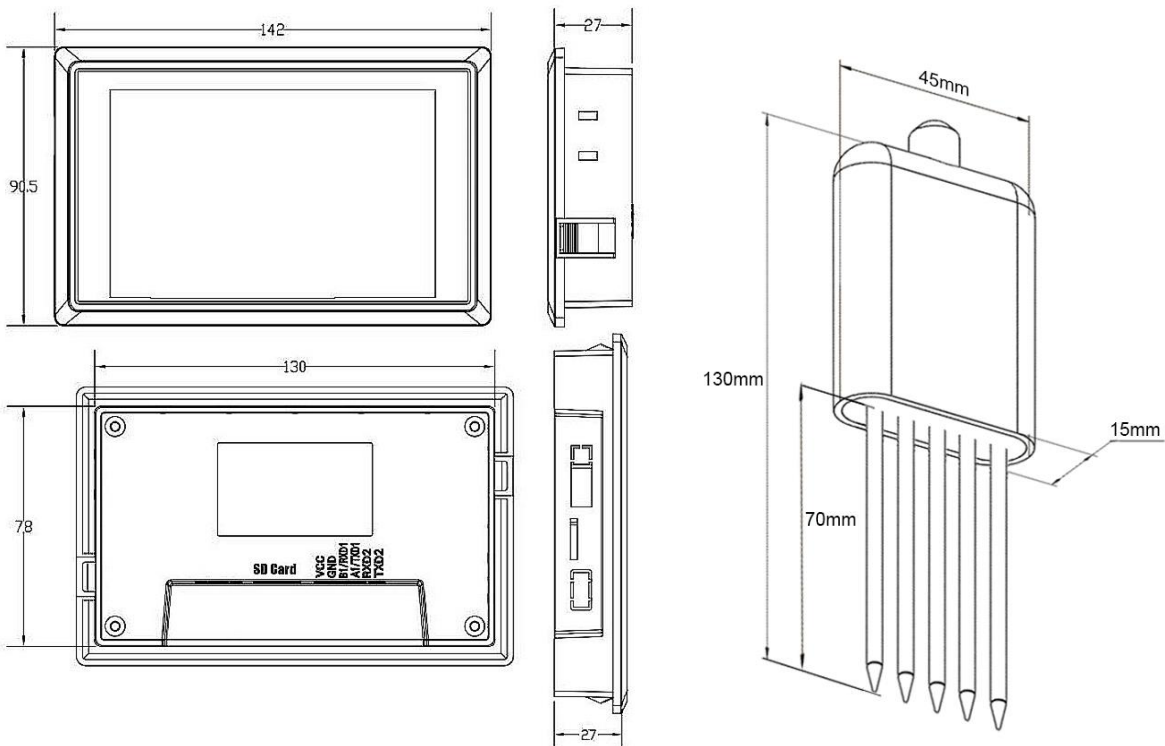
Reminder of measuring

1. NPK is measured using general rapid detection methods, which have certain errors and should be used with caution for planting reference. Existing electronic measurement methods cannot accurately measure NPK, it only displays the trend of NPK, just for reference.
2. Probes are inserted in the soil for more than 2 minutes to measure the accurate value (PH need 5 minutes)

Specification

Power supply	DC12.6V
Max Power consumption	2W
Screen	4.3" TFT LCD
Resolution (PX)	480X272
Operating environment	-10°C-50°C / 10~90%RH
Screen dimensions	142*70.5*27mm
Inside battery	5000mA rechargeable lithium battery
SD card	1GB
Weight	1KG

Size

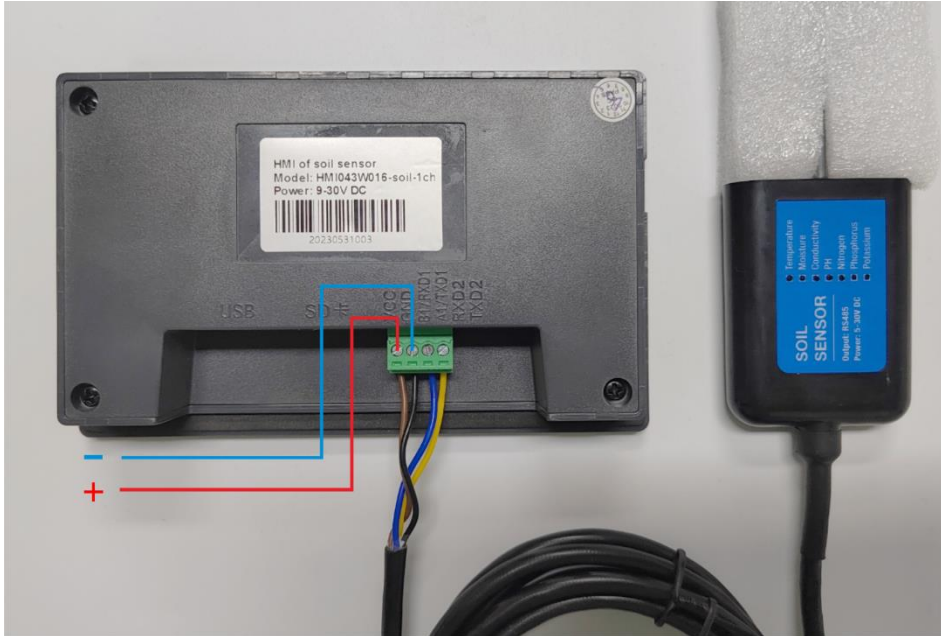


Touch screen

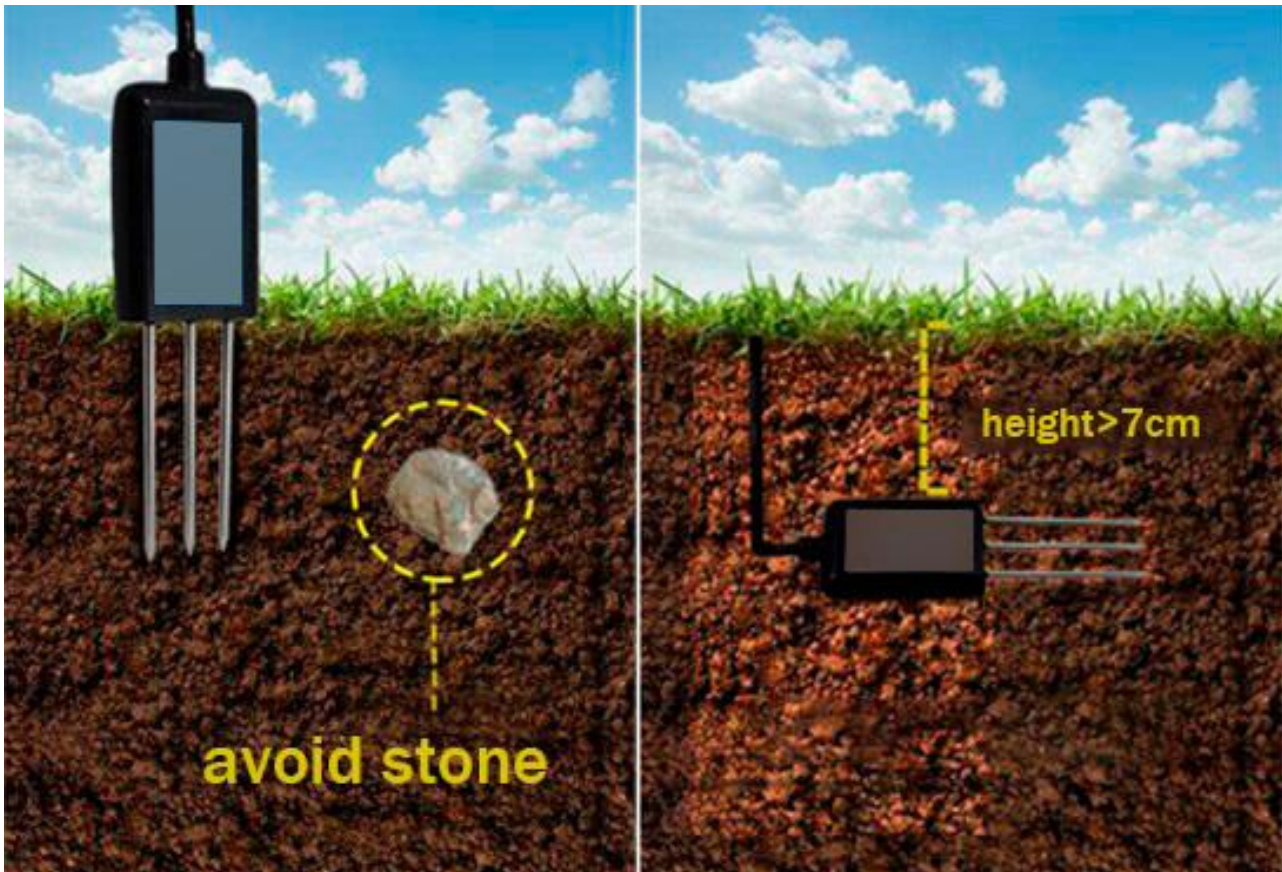
sensor

Equipment operating

1. Connect sensor



2. Insert the sensor into the soil



3. Operating on screen



Curve graph page



Click button to switch the curve graph of each parameter (TH, PH, EC and NPK)

View data log in this page

The screenshot shows a 'Data Log' interface with a table of sensor data. The table has columns for Time, Date, Humi, Temp, EC, PH, N, P, and K. Below the table are buttons for navigation (up and down arrows), 'Export to SD card', and 'Delete logs'. There is also a text input for 'Interval of logging (second)' set to 5, and a display for 'Max number of log: 1900' and 'Current number of log: 460'. A circular back button is on the right.

Time	Date	Humi	Temp	EC	PH	N	P	K
16:25:16	2023/10/20	0.0	26.5	0	3.0	0	0	0
16:25:21	2023/10/20	0.0	26.6	0	3.0	0	0	0
16:25:26	2023/10/20	0.0	26.6	0	3.0	0	0	0
16:25:31	2023/10/20	0.0	26.5	0	3.0	0	0	0
16:25:36	2023/10/20	0.0	26.5	0	3.0	0	0	0

Interval of logging means how often the device logs data
Max number logs is 1900, logs can be deleted or export to SD card by pressing button.

Setting page

The screenshot shows the 'Settings' page with a sidebar menu containing 'Settings', 'System', 'Calibration', and 'Reset'. The 'Calibration' section is active, showing input fields for 'N factor', 'P factor', 'K factor', 'Temp_offset', 'Humi offset', 'EC_offset', and 'PH offset', all set to 0.00 or 0.0. It also shows 'N offset', 'P offset', and 'K_offset' set to 0. A 'formula:' section explains the equation $Y=AX+B$ where Y is the reading value, X is the original value, A is the factor, and B is the offset. A note states: 'N P K Factor default is 1, Whatever value is written, it reads 0 Offset default is 0'. A circular back button is on the right.

In calibration page, can set factor and offset for each measuring parameters.