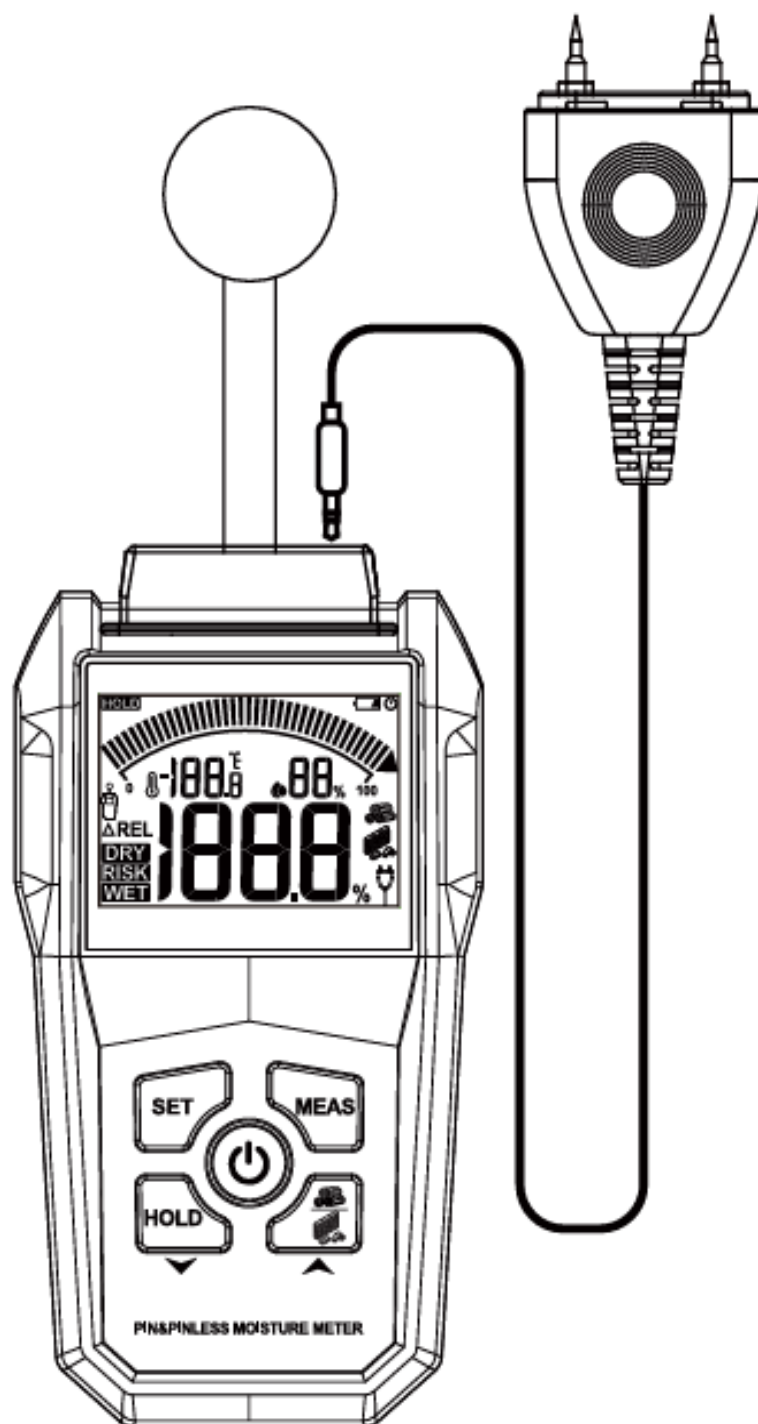


USER MANUAL



PIN&PINLESS MOISTURE METER



Please read this manual carefully before using this product and keep it properly for future use

I. Introduction

This unit is a combined moisture meter with remote and spherical probe, which has two modes: absolute value by probe measurement and relative value by pinless measurement. It's suitable for measuring the moisture content of construction, home decoration, wood, floor, walls and other materials, as well as detecting the temperature and humidity of the environment.

The purpose of measurement data is to provide basis for whether it is necessary to continue drying.

Please pay attention! ! !

Different from the traditional pin moisture meter, the spherical moisture meter applies non-contact measurement, so the measurement result is a relative value, and the reading has no unit and cannot be converted into a percentage value. The results of the same measuring point may be different each time, which does not mean that there is something wrong with the equipment, because there is some uncertainty during the relative measurement. Although the readings of the spherical sensor are not accurate, they are useful for quick measurement, such as to compare the moisture contents of different materials or of the same material in different areas.

Relative measurement can be used in the following situations:

1. Determine whether the water content of the two pieces of wood to be connected is approximately the same (meaning that they will dry at the same speed without warping).
2. Determine the water leakage point on the ceiling and the floor or behind the wall by comparing the relative humidity readings at different points. If the measured object is horizontal, the highest relative humidity point is below the leakage source.
3. Check whether there is moisture on or under the surface of carpet and secondary floor.
4. By comparing the differences of measurement results, measure the water content of wood or drywall before painting, wallpaper pasting, sealing or processing.

Step 5 choose dry wood

In addition, during calibration, the metal sensor should be prevented from touching any object as much as possible, and the bottom of the unit should be held as much as possible, and the position of the hand should not be changed during measurement, so as to reduce the influence of hand moisture on the measurement results. Do not measure objects containing any metal, otherwise the measurement results will be inaccurate.

Which sensor should you use?

1. Spherical sensor:

It means that through the spherical sensor, the moisture content of materials can be tested without damage, and large-area objects or materials can be quickly screened, which is widely used in finished products, wood, paint, wallpaper and other materials that cannot be damaged by probes.

The humidity value detected by the spherical sensor represents the average moisture content in an area, and its detection depth (> 0.4 inch) is the best choice for evaluating the moisture content on the surface and inside of materials.

2. Probe sensor:

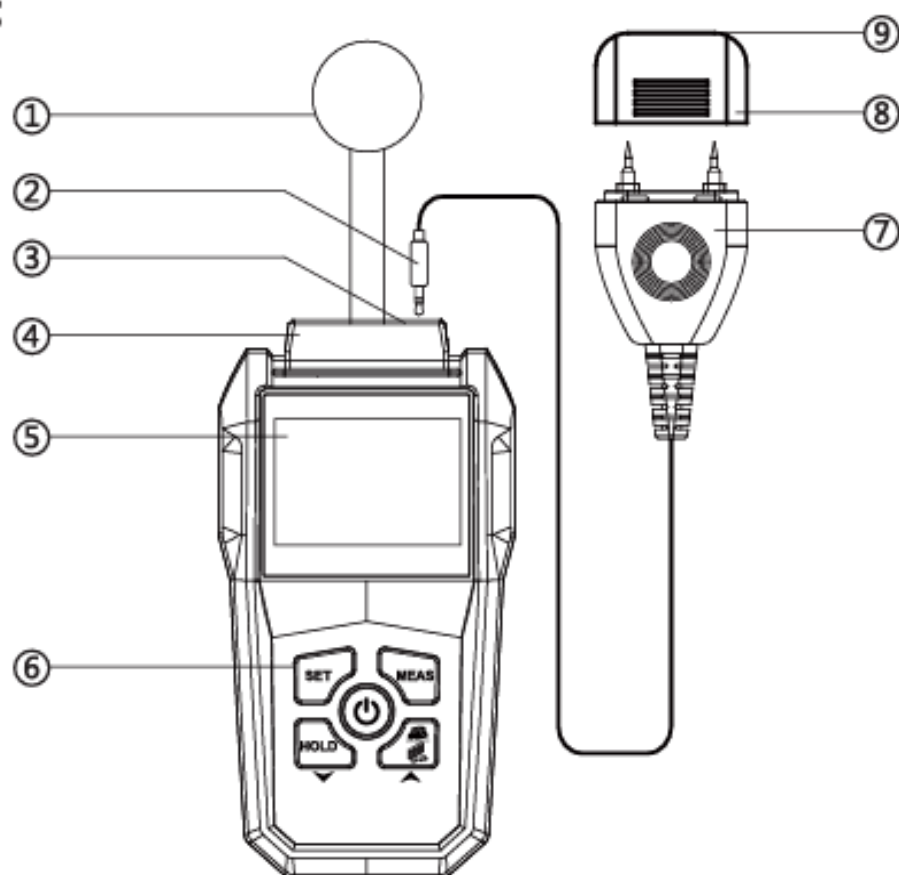
It means that the unit automatically recognizes the probe mode by externally connecting a 3.5mm conversion plug and inserting it into conversion socket on the right of the top; If you need accurate test results, please select the probe sensor.

But for hard materials like wood, the results measured by probe sensor mainly represent the water content on the surface. For soft materials such as soil, paper or powder, the measurement result is more likely to reflect the average water content between the surface of the material and the penetration depth of the probe, usually below 0.4 inch.

II. Safety information

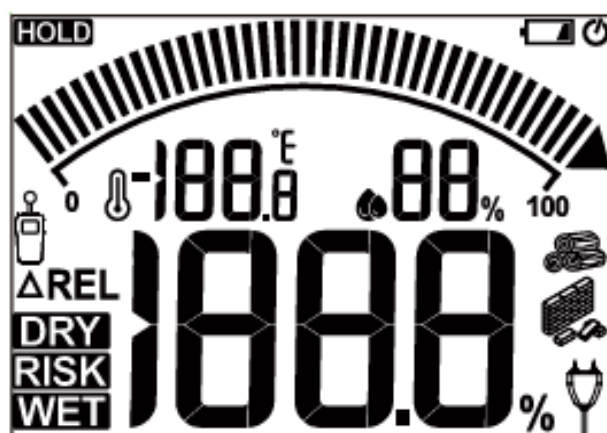
- * This unit is not a toy, so please keep it properly to avoid danger or injury caused by children's contact.
 - * After using the probe sensor, please close the protective cover in time to prevent the probe from hurting people.
 - * The unit should be stored far away from high temperature, direct sunlight, strong vibration, humidity, corrosive gases or objects.
 - * If the unit is obviously damaged and works abnormally, please stop using it to avoid errors in measurement data, which may lead to unexpected situations.
 - * Please take out the battery for long-term storage to prevent the battery from leaking and corroding the instrument.
 - * The user is responsible for the measurement results of this instrument.
- In any case, we are not responsible for the damage caused by the application of the measurement results.

III. Structure:

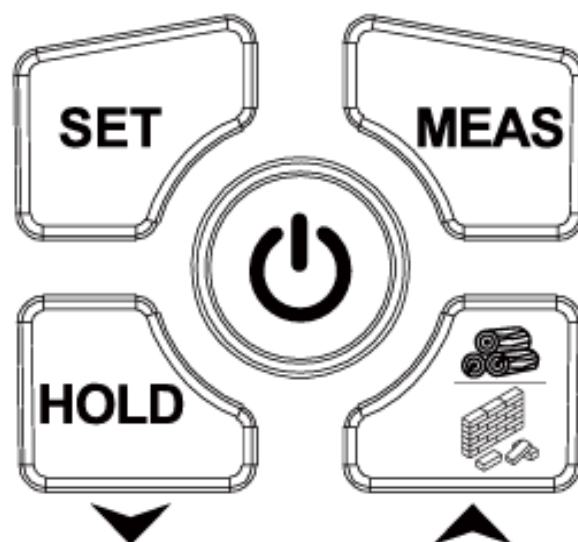


No.	Description
1	Spherical sensor
2	Probe plug
3	The conversion socket f probe sensor
4	Environmental temperature and humidity sensor
5	Display
6	Function key
7	Remote probe sensor
8	Probe protection cover
9	Test hole of spot check

IV.Display:



Symbols	Description
	Automatic shutdown indication
	Battery under-voltage indication
	Analog display
	Temperature
	Humidity
	Spherical sensor
	Probe sensor
	Brick wall
	Wood
ΔREL	Relative measurement
HOLD	Data locking
DRY	Dry
RISK	Risk
WET	Wet
°C	Degree Celsius
°F	Fahrenheit
%	Percentage

V.Keys:

Symbols	Description
	Power switch
SET	Set up
MEAS	Measure
HOLD	Data hold
	Wood
	Brick wall
	Digital subtraction
	Digital addition

VI. Technical parameters

Product	Pinless moisture meter	
Display	VA reverse display color screen	
Spherical sensor	Texture of wood	aluminium (Al)
	Measurement depth	About 4 inches
Remote probe	Remote cable length	40 inches
	Conversion plug	3.5mm
	Electrode length	10mm
Measuring range	Probe sensor	Wood: 6% ~ 60% Brick wall: 1.5% ~ 33%
	Spherical sensor	0~100/REL
	Ambient temperature	-10~60°C(14~140°F)
	Ambient humidity	0~100%RH
Precision	Pin sensor	Wood/brick wall: 3.0%
	Spherical sensor	±5%
	Ambient temperature	±2.0°C/4°F
	Ambient humidity	±5%RH
	Spot check test hole	±5%
Resolution ratio	Sphere: 0.1/ probe: 0.1%/ temperature 0.1°C,0.2°F/ humidity: 1%RH.	
Measurement rate	0.5 seconds	
Operation current	About 40mA	
Automatic shut-down	About 30 minutes	
Working environment	0~50°C/0~70%RH	
Storage environment	-20~60°C/humidity ≤80%RH	
Power Supply	1.5V x 3 AAA	
Size:	200 x 74 x 33mm	
Weight:	About 192g (bare machine without battery)	

VII. Instructions for spherical sensor :

7.1 Power on/off : Press the “  ” key for about 1 second to start the unit, and turn it off after pressing again.

7.2 Automatic shutdown function: the unit will automatically shut down in about 30 minutes without operation.

7.3 Cancel the automatic shutdown function: in the power-off state, press and hold the “SET” key, and then press the “  ” key to start the unit until the screen displays “APO” and the unit makes a beep sound. When you release the two keys, the “  ” symbol disappears in the upper left corner of the screen, the function of canceling the automatic shutdown will be started and the automatic shutdown function will be resumed after manual power-off.

7.4 Unit conversion of temperature: Long press the "SET" key to convert $^{\circ}\text{C}/^{\circ}\text{F}$ when the unit is turned on.

7.5 HOLD function: in the measurement state, short press the "hold" key to hold the measurement data, and repeat the operation to unlock it.

7.6 Calibration of spherical sensor:

The “LCD” display of the unit will be locked every time it is turned on, and can be resumed only after manual calibration. Press the MEAS key, “LCD” show “CAL”, the unit emits three long and two short “beep” sounds, and the calibration is completed. At this time, “LCD” shows that the current humidity content is “0”. If the “LCD” value is not “0”, please turn off the power supply and repeat the above steps until the calibration shows “0”.

Calibration is divided into the following three methods:

- ① Put the unit in the air for calibration, so that the spherical sensor does not touch any object, and take the current air humidity as “0” point.
- ② Press the spherical sensor on the known completely dry material, with the current contact material as the “0” point.
- ③ When it is necessary to detect large-sized materials, press the spherical sensor in the area that you think is relatively dry, and take it as the “0” point.



7.7 Measurement:

- ① After the unit is calibrated, do not change the hand position in the subsequent measurement. The hand position for calibration and measurement cannot be changed, because the change of hand position relative to the spherical sensor will lead to measurement errors.
- ②. Press the spherical sensor on several points of the surface of the measured object or material, and compare the values of the measured points to judge whether the moisture content of the measured material is normal.
- ③ When the unit measures, it will display different test states according to the humidity of the measured material, as shown in the table below.

Analog display	Green	Yellow	Red
Alarm display	DRY	RISK	WET
Alarm sound (beep)	No	Slow	Hurried
Alarm value	0.0~29.9	30.0~59.9	60.0~100.0

Attention!

- 1.The accuracy of the spherical sensor is not affected by the relative angle of the target surface, and it contacts the measured object or material at the angle that is most convenient for reading "LCD" data.
- 2.The measurement of wood will be affected by two variables: environmental humidity and the density of wood species.

3.If the measured object contains metal (such as nails, wires, metal pipes, etc.) and is located in the measurement area of the sensor, it will lead to measurement errors.

4.For example, when the spherical sensor detects at the tile joint or corner, the measured value will be higher than the measurement plane. Because the probe does not measure a single surface, the corner measurement must be controlled at a certain distance.

7.8 Alarm value setting:

① Press the "HOLD" key to lock the display when the "LCD" display of the unit is locked or tested. When "HOLD" displays in the upper left corner of "LCD", short press the "SET" key, and "LCD" shows "RISK" flashes to enter the low alarm setting. Short press the "SET" key again and "WET" flashes to enter the high alarm setting.

②. When the "RISK" or "SET" flashes, short press the ▲ key or ▼ key, and the alarm value will be increased or decreased by 1 and long press the same keys will quickly increase or decrease the value. Press the "MEAS" key to confirm the storage and enter the normal measurement state.

③. Alarm value setting range: risk: 2 ~ 50/wet: 51 ~ 100, factory default setting: RISK:30/WET:60.

VIII. Instructions for probe sensor:

1. When the unit is turned on or off, insert the probe conversion plug into the conversion socket on the right of the top, and the unit will automatically recognize the probe mode;
2. According to the measured object, press the " " " key to select " " (wood) or " " (wall) mode;
3. Take off the probe protection cap, insert the probe into the surface of the measured material, and "LCD" displays the humidity value of the measured material.
4. In order to ensure the accuracy of measurement readings, please select multiple points for repeated measurement.
5. Spot check: A test hole of spot check is arranged on the protection cover of the probe to judge the accuracy of the instrument. (Wood: 18.5%/ brick wall: 17% $\pm 5\%$).

IX. Replace the battery

- ①. Turn off the unit power supply.
- ②. Use a screwdriver to remove the battery cover screw on the back of the unit.
- ③. Remove the battery cover.
- ④. Dismantle the old battery.
- ⑤. Replace with new 1.5Vx3 AAA batteries.
- ⑥. Install the battery cover and tighten the fixing screws.



X. Packing List

Pinless moisture meter	1 set
Remote pin sensor	1
Instruction manual	1
Cloth bag	1
1.5Vx3 AAA battery	3 pieces
Phillips screwdriver	1

USER MANUAL

MADE IN CHINA

CE RoHS    **M101050479**



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