



# **Pin less Moisture Meter + IR Thermometer Operation Manual**



**Please read this manual before switching the unit on.  
Important safety information inside.**



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## 1.Introduction

This meter is a series of moisture/humidity meters with built-in infrared (IR) temperature sensing. It is a powerful and versatile instrument for measuring and diagnosing dampness in buildings and building materials.

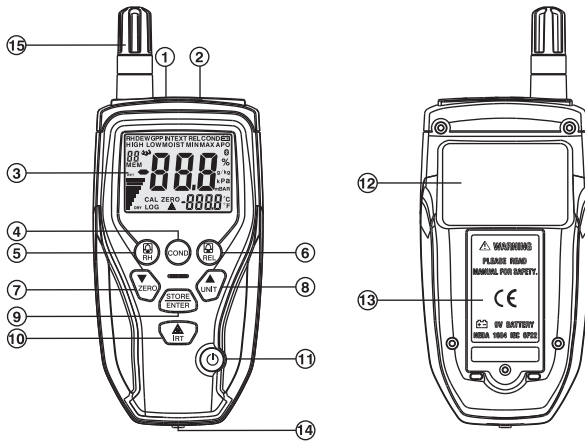
This product enables building surveyors and other practitioners to measure moisture levels of building elements such as walls, floors and building environments simply by between the two different modes of operation .In this ways, a detailed understanding of the moisture condition of property can be obtained. Despite having only seven buttons, it has a straightforward user interface.

## 2.Features

- Quickly indicates the moisture content of materials with Pin less technology without damaging the surface; Optional remote Pin-type probe allows for moisture readings at different Penetration levels (3ft/0.9m cable length)
- Easy to read, large dual display with backlit feature
- Simultaneously displays moisture of wood or material being tested and Air Temperature, IR Temperature, or Humidity
- Designed with patented IR design to measure non-contact surface temperature; 8:1 distance to spot ratio with 0.95 fixed emissivity.
- Built-in Humidity/Temperature probe measures Relative Humidity, Air Temperature plus grains per pound (GPP) and dew point (DP)
- Automatic calculation of differential Temperature (IR - DP)
- Min/Max and Data Hold
- Auto power off and low battery indication
- Memory function

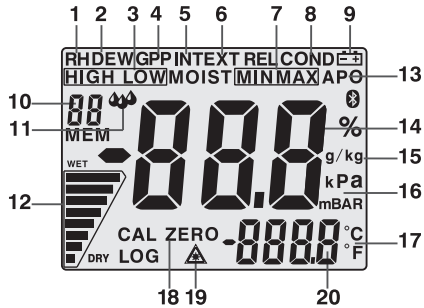
### 3.Front Panel Description

- ①.Laser pointer
- ②.IR sensor
- ③.LCD Display
- ④.COND button
- ⑤.RH button
- ⑥.MOIST REL button
- ⑦.DOWN /ZERO button
- ⑧.UP/Unit button
- ⑨.Memory Store/Enter/ALARM SET button
- ⑩.IRT button
- ⑪.ON/OFF button
- ⑫.Pin less moisture sensor
- ⑬.Battery Cover
- ⑭.Pin-type probe connect
- ⑮.Humidity sensor








## 4.Indicator


1. RH indication
2. DEW indication
3. HIGH/LOW alarm indication
4. GPP unit indication
5. Pin less moisture measure indication
6. Pin-type probe moisture measure indication
7. MAX/MIN indication
8. Condensation mode symbol
9. Low battery indication
- 10.Memory Location indication
- 11.Dew point temperature indication
- 12.Humidity bar display
- 13.Auto power off indication
- 14.LCD primary display
- 15.GPP unit indication
- 16.VPP unit indication
- 17.°C/°F symbol
- 18.Pin less moisture zero adjustment symbol
- 19.Laser point indication
- 20.LCD secondary display



## 5. Humidity Meter Mode

Turn the Meter ON by pressing the button  , Select the humidity meter mode by pressing RH button. The relative humidity is displayed in the primary displayed, and ambient temperature is displayed in secondary displayed. Then press RH button to select display the dew point temperature, or Grains per Pound (GPP)/ Grams per Kilogram.


Humidity Alarm Set: Press the button until the buzzer rings and Release button, the meter shall enter Humidity Alarm Set mode, the "HIGH" icon appears on the LCD, You can use the  and  button to adjust the threshold. Pressing the STORE/ENTER button shall save the alarm Settings. Then "LOW" icon appears on the LCD, you can use the  and  button to adjust the threshold. Pressing the STORE/ENTER button shall save the alarm Settings, and the meter back to the Humidity measure Mode .If the humidity measurement is lower than the low alarm Settings or higher than the high alarm Settings, The meter shall beep once every 1sec.

The ambient Temperature or dew point temperature shall be displayed in a choice of °F or °C by pressing  /UNIT button for 3 seconds , and it can choice of GPP or g/kg.

### • Humidity Meter Specifications

Function	Range	Accuracy (of reading)
RH Measurement 10-50°C(50-122°F)	0-99.9%	±2%
Air Temperature	-4 to 158°F(-20 to 70°C)	±0.5°C/0.9°F

## 6. Moisture Meter Mode

The meter can be used to select measure moisture in Pin less moisture or Pin-type Probe. Turn the Meter ON by pressing the button . Select the Moisture meter mode by pressing REL MOIST button, The LCD display “MOIST” and “INT”, Hold the meter up so that the rear sensor is not covered by your hand or any surface or object. The reading in displayed is 0.0, if not, please pressing and hold the ▼/ZERO button for 2sec until the “ZERO” icon appears, the reading is to clear. Put meter over the object to measuring moisture. Pressing REL button again to select Pin-type Probe, Connect the Pin-type Probe, the meter can now used to take reading in wood or building. The Pin-type probe images are as follows.






Moisture Alarm Set: pressing the REL button until the buzzer rings and Release button, the meter shall enter Moisture Alarm Set mode, the “HIGH” icon appears on the LCD, you can use the ▲ and ▼ button to adjust the threshold. Pressing the REL button shall save the alarm Settings. Then “LOW” icon appears on the LCD, you can use the ▲ and ▼ button to adjust the threshold. Pressing the REL button shall save the alarm Settings, and then the meter back to the Moisture Meter Mode, if the moisture measurement is higher than the low alarm Settings. It shall beep once every 1sec. if the Moisture measurement exceeded the high alarm Settings, it shall beep continue.

### Moisture Meter Specifications

Function	Range	Repeatability
Pinless Moisture	0-99.9%	±5%
Ext.Pin Moisture	0-99.9%	±5%



## 7.IR Temperature Meter Mode

Turn the Meter ON by pressing the button  , Select the IR Temperature by pressing IRT button, pressing and holding the IRT button, the IRT measurement shall appear on the secondary displayed, along with the flash IR/LASER icon. When the IRT button is released, the IRT measurement shall latch on the Display for 9 sec, and this time you can press  /ZERO button, the "MIN" icon appears on the LCD, pressing and holding the IRT button, the meter in the MIN mode. The LCD display minimal reading. Release button and pressing  /ZERO again, the "MAX" icon appears on the LCD, pressing and holding the IRT button, the meter in the MAX mode. The LCD display maximal reading.

The IR Temperature shall be displayed in a choice of °F or °C by pressing  /UNIT button.



### IR Temperature Specifications

IR TEMP. Range	-20 to 200°C (-4 to 392°F)
Response time	less than 500 ms
Emissivity	fixed for 0.95
Optical Resolution	D/S = 8:1 (D= distance, S= spot)
Accuracy (of reading)	-20 to -1°C(-4 to -31°F)    ±5°C(9°F)
	0°C(32°F)    ±1°C(1.8°F)
	1 to 200°C(33 to 392°F)    ±2%±2°C(3.6°F)
Over range Indication	LCD will show "----"
Resolution	0.1°C/ 0.1°F
Laser power	Output < 1mw

## 8. Condensation Mode

Condensation Mode is entered by pressing the COND buttons simultaneously. It is disabled by pressing the REL button or the RH button.

The meter shall use the RH sensor with built-in ambient temperature sensing, plus the IRT, to determine whether a surface is at risk to promote condensation. The meter shall display measurements in the following manner:

- If the temperature of the IRT is more than 14°C (25°F) above the Dew Point, the temperature difference shall be displayed, with no other warning.
- If the IRT temperature is between 3-14°C (5-25°F) above the dew point, the temperature difference shall be displayed, with the indicator icon  appears. The instrument beeps once, to prompt the reading is in the risk area.
- If the temperature of the IRT is less than 3°C (5°F) above the Dew Point, the temperature difference shall be displayed, with the indicator icon  appears. The meter shall beep twice to prompt that the reading is in the high-risk area.

The difference between the IR Temperature and the Dew Point shall be displayed in a choice of °F or °C by pressing UP or DOWN button.

When the IRT button is released, the Display shall remain at the last measured IRT reading until the IRT button is pressed again, or the mode is changed.

## 9. Vapor Pressure Mode

You shall be entered the Vapor Pressure Mode by pressing the COND button once when the meter is already in Condensation Mode. It is disabled by pressing the REL MOIST button or the RH button. When the meter is in Vapor Pressure Mode, it shall display the calculated Vapor Pressure in place of the Condensation Temperature.

Vapor Pressure shall be displayed in a choice of Million bars (mBar) or kilopascals (kPa) by pressing the ▲/Unit button for a few seconds until the buzzer rings and then release button.

## 10. Auto-Power-Off (APO)

The meter shall enter a sleep mode after 30 minutes of inactivity,

The meter shall emit a warning beep 15 sec. before entering APO Mode.

Press the REL button while turning the meter from OFF to ON, will cancel the automatic shutdown function, APO icon will disappear.

## 11. Memory Mode

Store data : Press and hold the “STORE” button for 2 second until the meter beep, the data will stored in the meter. And the memory index shall be advanced to the next location.

View data: Press both the ▲ and ▼ buttons shall cause the meter to enter View Mode. While in View Mode, the current memory location shall always flash. Press ▲ or ▼ button to view the different location data. Press different function button will view the different mode data.

Clear data: pressing both ▼/ZERO and STORE/ENTER buttons until the buzzer rings and the main screen shows “CLR”. It cause the meter to clear all store data, the current memory location shall display “01”, This operation cannot be performed if a set of data is not stored.

## 12.WARNING:

- 1- As battery power is not sufficient, LCD will display '🔋' the battery should be replaced at this time.
- 2- Do not let the beam enter your eye, another person's eye or the eye of an animal.
- 3- Do not let the beam on a reflective surface strike your eye.

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