

Pinless Moisture Meter

Model MO57



Introduction

Thank you for selecting the Extech MO57 Pinless Moisture Meter. The MO57 employs a non-destructive spherical sensor that safely glides over surfaces to measure the relative moisture in wood and other building materials (wallboard, sheet rock, cardboard, plaster, concrete, and mortar) at any angle to a depth of 10.2cm (4”).

To indicate moisture level the MO57 provides a digital reading, audible tones, and ‘moisture droplet’ icons. Audible tones (eight levels of intensity) and droplet icons (1, 2, or 3) increase in proportion to increased moisture. Additional features include Auto Power OFF and Display Lock (hold).

This meter ships fully tested and calibrated and, with proper use, will provide years of reliable service. Please visit our website (www.extech.com) to check for the latest version of this User Guide, Product Updates, and Customer Support.

Measurement Considerations

To measure moisture, the sensor emits and senses low-power electro-magnetic signals. The displayed reading in percent is an average of the moisture content measured over the measurement surface area and the maximum depth of penetration (10.2cm [4.0”]). Moisture that is closer to the surface has a greater effect on the displayed average than the moisture nearer to the maximum depth of penetration.

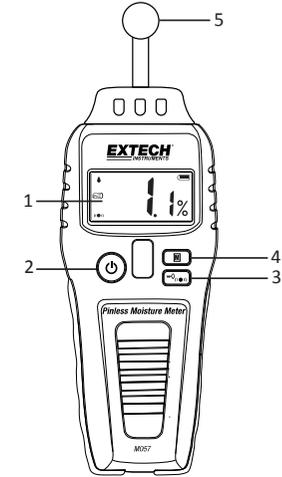
Placing the sensor on a surface whose thickness is less than the maximum depth of penetration may result in unreliable moisture readings; in these cases, you can stack material on top of the measured surface to increase the thickness.

The MO57 also produces audible tones and ‘moisture droplet’ display icons to indicate moisture level. The audible tone rate and number of droplets increase as the moisture level increases. When measuring, keep hand stationary on the meter while holding and moving the meter, as hand movement can affect the readings.

Meter Description

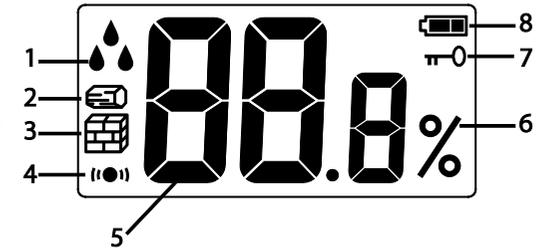
1. LCD Display
2. Power button
3. Display Lock/Beeper button
4. Material Select button
5. Sensor

Note: Battery compartment on rear of meter



Display Description

1. Droplet icons (1 for low moisture, 2 for medium, and 3 for high)
2. Wood mode
3. Building Material mode
4. Beeper active icon
5. Moisture reading
6. Percent moisture unit (relative)
7. Display Lock mode
8. Battery status icon



Button Descriptions

Symbol	Button name	Description
	Power ON-OFF	Long press to switch the meter ON or OFF
	Material Select (wood/building materials)	Short press to toggle material groups
	Display Lock / Beeper control	Short press locks/unlocks reading on the display Long press toggles the Beeper ON/OFF

Operation

Powering the Meter

1. Long press the power button to turn the meter ON/OFF.
2. The meter emits audible tones and performs a self-calibration upon start-up. Keep the measurement sensor at least 8 to 10 cm (3 to 4”) from hands and objects during calibration. The calibration reading must not exceed 0.5. If so, re-calibrate ensuring that hands or other objects are clear of the sensor. Note: Calibrate the meter whenever moving from one measurement area to another.
3. If the battery symbol appears or if the meter does not switch ON, replace the battery.

Auto Power OFF

The meter will automatically power OFF if the reading stays 0% for 3 minutes. If the meter detects readings, other than 0%, it will not automatically power OFF.

Display (Hold) Lock

Short press the Display Lock button  to freeze the displayed reading. The  icon is visible on the display when Display Lock is active. Press  again to return to the normal operating mode.

Beeper ON/OFF

The beeper defaults to ON. To switch the beeper OFF, long press the Display Lock/Audible Beeper button . When the beeper is active, the audio display icon  will be visible.

Pinless Moisture Measurements

1. Short press the Material Select button  to toggle the Wood  and Building Material  modes of operation. The displayed icon indicates the selected mode.

2. To take a measurement, hold the meter and position the sensor so that it is directly touching the surface under test (at any angle). The meter can sense moisture to a depth of 10.2cm (4").

NOTE: The position of your hand can affect the reading. Do not move or reposition the hand that holds the meter while taking measurements or when powering the unit.

3. Observe the displayed relative readings, view the displayed moisture droplet icon(s)  (more drops indicate higher moisture levels), and listen for the audible beeping (faster beeping indicates higher moisture; there are eight intensity levels). As discussed in the *Measurement Considerations* section, the displayed reading is an average of the moisture measured over the tested surface area to the maximum penetration depth.

4. Long press the power button to power OFF the meter.

Relative Moisture Reading Reference Table

		WOOD (%)	BUILDING MATERIAL (%)
TOTAL RANGE >		0.1~99.9	0.1~99.9
	LOW	0.1~9.9	0.1~9.9
		10.0~16.9	10.0~16.9
	MEDIUM	17.0~23.9	17.0~23.9
		24.0~29.9	24.0~29.9
		30.0~39.9	30.0~39.9
	HIGH	40.0~59.9	40.0~59.9
		60.0~69.9	60.0~69.9
		70.0~99.9	70.0~99.9

Maintenance

Battery Replacement

When the battery status icon  appears empty or flashing, replace the battery.

1. Remove the battery cover by pushing the compartment latch (bottom, back of meter).
2. Replace the 9V battery observing correct polarity.
3. Replace the battery cover securely.
4. Dispose of battery responsibly and within applicable legal regulations.



Never dispose of used batteries or rechargeable batteries in household waste. As consumers, users are legally required to take used batteries to appropriate collection sites, the retail store where the batteries were purchased, or wherever batteries are sold.

Disposal: Do not dispose of this instrument in household waste. The user is obligated to take end-of-life devices to a designated collection point for the disposal of electrical and electronic equipment.

Care and Cleaning

- Store the meter in an environmentally stable, dust-free environment, out of direct sunlight.
- Remove the battery from the instrument if the meter is to be stored for long periods or if the battery power symbol appears empty (or flashing) on the display.
- To clean the meter case, wipe with a damp cloth, do not use solvents or abrasives.

Specifications

Display	LCD with multi-function indicators
Sensor Type	Pinless spherical sensor
Measurement Type	Non-destructive, electro-magnetic sensing
Measurement Indication	Digital, Moisture Droplet icons (1, 2, or 3 droplets) and audible tone with eight levels of intensity indicating low to high moisture readings
Measurement Ranges:	
Wood:	Low: 0.1% to 16.9%; Medium: 17.0% to 39.9%; High: 40.0 to 99.9%
Building Materials:	Low: 0.1% to 16.9%; Medium: 17.0% to 39.9%; High: 40.0 to 99.9%
Measurement depth	Sensor detects to a depth of 10.2cm (4")
Resolution	0.1%
Accuracy	Relative readings only
Auto Power OFF	After approx. three (3) minutes with 0% display reading.
Power supply	One (1) 9V Battery; Consumption: < 40mA
Low Battery indication	< 7.5VDC, approximately
Low Battery APO	< 5.5VDC; APO will occur in 20 seconds, approximately
Operating conditions	5 ~ 45°C (41 ~ 113°F); 80%RH max.
Storage conditions	0 ~ 50°C (32 ~ 122°F); 85%RH max.
Dimensions	210 x 70 x 33mm (8.3 x 2.8 x 1.3")
Weight	155g (5.5 oz.) without battery

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