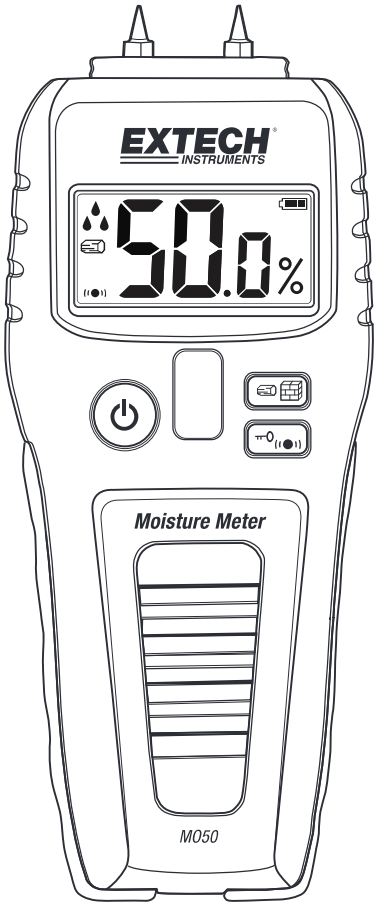
EXTECH INSTRUMENTS

USER GUIDE

Compact Moisture Meter

Model MO50



Introduction

Thank you for selecting the Extech MO50 Moisture Meter. The compact MO50 takes quick Moisture level reference measurements (in percent %) on wood and building materials. The MO50 is simple to operate and offers measurement digits, audible tones and 'moisture drop' icons to indicate moisture level content.

The MO50 is ideal for building restoration projects and applications where moisture detection on floors and under carpets is critical. The MO50 is a great tool for analyzing the after-effects of water leakage behind walls and in ceilings.

This meter is shipped 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, Product Registration, and Customer Support.

Features

- Displays the moisture level in wood
- Displays the moisture level in building materials (wall board, sheet rock, cardboard, plaster, concrete, and mortar)
- Audible tone rate beeps faster as the moisture level increases (8 tone variations)
- 'Moisture drop' Icons display low, medium and high levels of moisture content
- Easy-to-use, compact design
- Display Lock freezes reading on display
- Auto Power Off conserves battery power
- Complete with pins (4), protective cap, and 9V battery

Description

Meter Description

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

Notes:

Battery compartment on rear of meter

Protective pin cover not shown

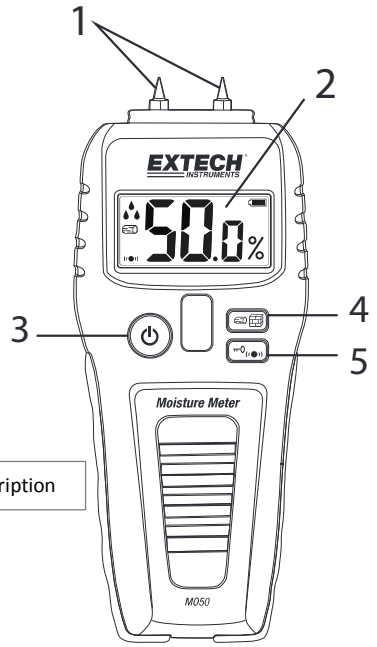


Fig. 1 Meter Description

Display Description

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

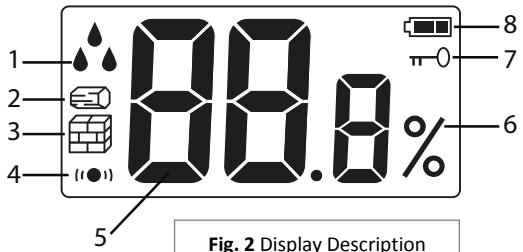


Fig. 2 Display Description

Button Description

Button	Button name	Description
⏻	Power ON-OFF	Press and hold to switch the meter ON or OFF
/	Material Select	Select Material Group (Wood, Building Materials)
/	Display Lock / Beeper control	Short press locks reading on the display Long press toggles the Beeper ON/OFF

Operation

> ⚠ **CAUTION**: The electrode measurement pins are extremely sharp. Use care when handling this instrument. Cover the pins with the protective cap when the instrument is not in use.

Operating Steps

1. Carefully remove the protective/test cap to expose the electrode pins.
2. Switch the meter ON by pressing and holding the ⏻ button. The meter emits audible tones and the display switches on when the meter powers up. If the meter does not switch on please check the battery in the rear compartment.
3. Momentary presses of the Material Select button toggles the Wood and Building Material modes of operation. The displayed icons indicate the selected mode.
4. Push the electrode pins into the material under test.
5. Observe the displayed reading in percent (%), view the displayed moisture droplet icon and listen for the audible tones.

   1 moisture droplet for low readings; 2 for medium readings; 3 for high readings; refer to the chart on the back of the meter and the reproduction in the Appendix later in this guide.

   Listen, also, to the audible measurement tone (fast beeping for higher readings and slow beeping for lower readings). There are eight (8) tone variations.
6. Press and hold the power button to switch the meter off.

Auto Power OFF (APO)

To conserve battery energy the meter automatically switches off after a three (3) minute period of inactivity.

Display Lock

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, press and hold the Display Lock/Audible Beeper button (•). When the beeper is active the audio display icon (•) will be visible.

Self Test cap

Turn on the MO50 meter and set the meter to Wood or Building and press the electrode pins to the contacts on the top of the Protective/Test cap.
Expected results:

Wood:	17.0 to 19.0%
Building:	15.5 to 17.5%

If the meter reads outside of these measurements replace the batteries. If it still reads outside of these measurements, the meter is defective and you should contact Extech.

Maintenance

Battery Replacement

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

1. Remove the rear battery compartment cover by pushing the compartment latch.
2. Replace the 9V battery observing correct polarity.
3. Replace the compartment door 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

- When the instrument is not in use please keep the protective cap in place. The electrode pins are extremely sharp.
- 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.
- To clean the pins, wipe carefully with a damp cloth to remove residue; allow to dry well before use.

Specifications

Display	LCD with multi-function indicators
Measurement type	Relative Moisture Content (%)
Measurement principle	Electrical resistance
Measurement indication	Digital, Moisture Droplet icons (1, 2, or 3 droplets) and audible tone with 8 levels of intensity indicating low to high moisture readings
Measurement ranges	**Wood** Low: 5% to 11.9%; Medium: 12% to 15.9%; High: 16 to 50% **Building Materials** Low: 1.5% to 16.9%; Medium: 17% to 19.9%; High: 20 to 33%
Resolution	0.1%
Accuracy	±3.0% for ambient conditions 22 °C to 25 °C (72 °F to 77 °F)
Electrode pin length	0.3” (8mm)
Electrode pin type	Stainless steel. Integrated, replaceable
Auto Power OFF	After approx. three (3) minutes
Power supply	One (1) 9V Battery (rear compartment)
Consumption	< 15mA
Low Battery indication	When battery voltage is < 7.0VDC, approximately
Operating conditions	5~45°C (41~113°F); 80%RH max.
Storage conditions	0~50°C (32~122°F); 85%RH max.
Dimensions	170 x 65 x 30mm (6.7 x 2.6 x 1.2")
Weight	120g (4.2 oz.) without battery

Appendix

Measurement Interpretation Table

		WOOD (%)	BUILDING MATERIAL (%)
TOTAL RANGE >		**5~50**	**1.5~33**
	LOW	5~9.9	1.5~9.9
		10~11.9	10~16.9
	MEDIUM	12~13.9	17~17.9
		14~15.9	18~19.9
	HIGH	16~19.9	20~23.9
		20~29.9	24~27.9
		30~39.9	28~29.9
		40~50	30~33

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