EXTECH®

User Manual

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.

The MO50 is ideal for building restoration projects and applications where moisture detection on floors and under carpets is critical. It is also 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 manual, product updates & registration, and customer support.
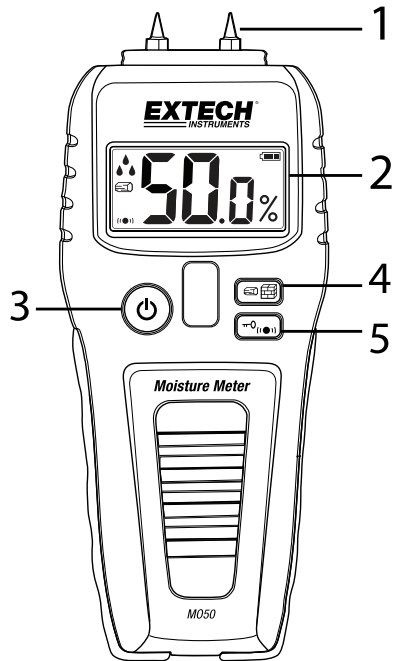
Features

- Displays the moisture level in wood
- Displays the moisture level in building materials (wall board, sheet rock, cardboard, plaster, concrete, and mortar)
- Beeper rate increases as moisture content increases (8 beeper variations)
- 'Moisture drop' icons indicate low, medium, and high levels of moisture
- Easy-to-use, compact design
- Display Lock freezes reading on display
- Auto Power Off (APO) conserves battery power
- Complete with pins (2), protective cap, and 9 V battery

Description

Meter Description

1. Measurement pins

2. Display (LCD)

3. Power button

4. Material select button

5. Display lock and beeper button

Battery compartment on rear of meter; Protective cap not shown.

Display Description

1. Moisture drop icons (one drop for low moisture, two for medium, three for high)

2. Wood mode

3. Building material mode

4. Beeper active

5. Moisture reading digits

6. Percent moisture unit (relative)

7. Display lock mode

8. Battery status

Button Descriptions

| Button icon	Button Name	Description
⏻	Power ON-OFF	Long press to switch ON-OFF
⊜ ▦	Material Select	Short press to select material group (wood, building materials)
⊓─0 ((●))	Display Lock and Beeper Control	Short press to lock reading Long press to enable/disable beeper

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.

1. Carefully remove the protective/test cap to expose the electrode pins.
2. Long press the power button ⏻ to switch ON the meter. 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. Short press the Material Select button to toggle Wood ⊜ and Building Material ▦ modes.
4. Push the electrode pins into the material under test.
5. Observe the displayed reading in percent (%), the number of moisture droplet icons ⬤, and listen for the beeper.

   • One moisture droplet icon indicates low moisture, two drops indicate medium moisture, and three drops indicate high moisture. Refer to the chart on the back of the meter and in the Appendix section, below.
   • The audible beeper has eight variations, faster beeping for high moisture and slower beeping for low moisture.

6. Long press the power button to switch OFF the meter.

Automatic 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 ⊓─0 to freeze the displayed reading. The lock icon is visible on the display when Display Lock is active. Press the button again to return to the normal operating mode.

Beeper Control

The beeper is enabled by default. To disable the beeper, long press the Beeper button (⊙). When the beeper is enabled, its display icon will be visible.

Self-Test Cap

Switch ON the meter, set it to the Wood or Building material mode, and press the electrode pins to the contacts at the top of the cap.

The expected results are shown in the table below.

Wood	17.0 to 19.0 %
Building Materials	15.5 to 17.5 %

If the meter reading is beyond the expected results, replace the batteries. If the readings continue to be out of tolerance, return the meter for service.

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 9 V battery observing correct polarity.
3. Replace the compartment door securely.
4. Dispose of battery responsibly, complying with all applicable legal regulations.

🗑 Do not dispose of used batteries or rechargeable batteries in household waste.

Care and Cleaning

- When the instrument is not in use, 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 if the meter is to be stored for long periods or if the battery power icon appears empty or flashing.
- To clean the meter, wipe with a damp cloth. Do not use solvents or abrasives.
- To clean the pins, wipe carefully with a damp cloth; 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 drop icons, and beeper
Measurement ranges (wood)	Low: 5 to 11.9 % Medium: 12 to 15.9 % High: 16 to 50 %
Measurement ranges (building materials)	Low: 1.5 to 16.9 % Medium: 17 to 19.9 % High: 20 to 33%
Measurement resolution	0.1 %
Measurement accuracy	±3.0 % at 72 to 77℉ (22 to 25℃)
Electrode pin length	0.3 in. (8 mm)
Electrode pin type	Stainless steel, integrated, replaceable
Automatic power off (APO)	After ~ three (3) minutes of inactivity
Power supply	1 x 9 V battery (rear compartment)
Power consumption	< 15 mA
Low battery indication	Battery icon indicates when battery voltage is < 7 V DC (approximately)
Operating conditions	41 to 113℉ (5 to 45℃); < 80 % RH
Storage conditions	32 to 122℉ (0 to 50℃); < 85 % RH
Dimensions	6.7 x 2.6 x 1.2 in. (170 x 65 x 30 mm)
Weight	4.2 oz. (120 g) with battery removed

Appendix

Measurement Interpretation Table

		Wood (%)	Building Materials (%)
	Total Range >	5 to 50	1.5 to 33
	LOW	5 to 9.9	1.5 to 9.9
		10 to 11.9	10 to 16.9
	MEDIUM	12 to 13.9	17 to 17.9
		14 to 15.9	18 to 19.9

	HIGH	16 to 19.9	20 to 23.9
		20 to 29.9	24 to 27.9
		30 to 39.9	28 to 29.9
		40 to 50	30 to 33

Customer Support

Local Telephone Support List	https://support.flir.com/contact
Return Material Authorization (RMA)	https://customer.flir.com/Home
Customer Support	https://support.flir.com/ContactService
Technical Support	https://support.flir.com

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Limited 2–Year Warranty

FLIR Systems, Inc. warrants this Extech brand instrument to be free of defects in parts and workmanship for two (2) years from date of purchase. To view the full warranty, please visit the site below.

https://www.extech.com/support/warranties

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