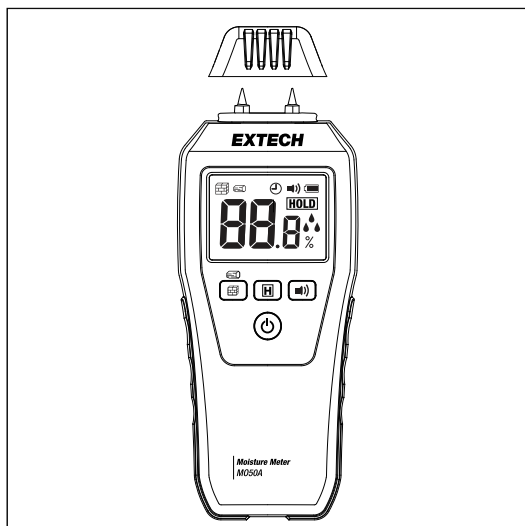


EXTECH

USER MANUAL

Moisture Meter MO50A



Introduction

Thank you for selecting the Extech MO50A Moisture Meter. The compact MO50A measures relative moisture (%) for wood and building materials. The MO50A is simple to operate and displays moisture digitally (with 'moisture droplet' icons) and audibly, using its high volume beeper.

The MO50A 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 and customer support.

Features

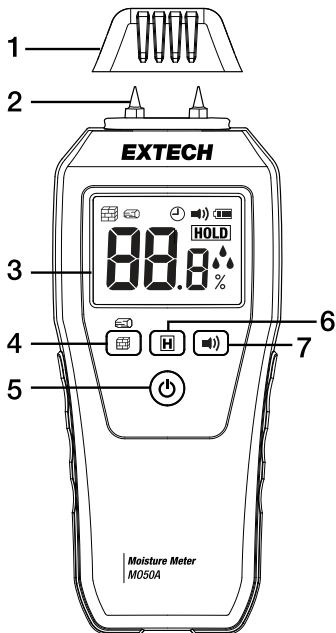
- Displays the moisture level in wood
- Displays the moisture level in building materials (wall board, sheet rock, cardboard, plaster, concrete, and mortar)
- Beeper rate increases as moisture content increases (3 variations)
- 'Moisture drop' icons indicate low, medium, and high levels of moisture
- Display 'hold' feature freezes reading on the display
- Auto Power Off (APO) conserves battery power
- Includes pins (2), protective cap, and batteries

Description

Meter Description

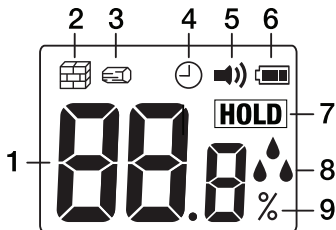
1. Protective cap
2. Measurement pins
3. Display (LCD)
4. Material select button
5. Power button (long press)
6. Display 'hold' button
7. Beeper control button

Battery compartment on rear of meter.







Display Description

1. Moisture reading
2. Building material mode
3. Wood mode
4. Auto Power OFF (APO) active
5. Beeper enabled
6. Battery power status
7. Display hold mode
8. Moisture drop icons (one drop for low moisture, two for medium, three for high)
9. Percent moisture unit (relative)



Button Descriptions




Button icon	Button Name	Description
	Power	Long press to switch ON-OFF.
	Material select	Short press to toggle Wood and Building Material modes.
	Display Hold	Short press to freeze reading on the display (HOLD will appear). Press again to exit.
	Beeper control	Short press to enable/disable beeper. When enabled, the beeper icon will be displayed.


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 batteries 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 three 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 Hold

Press the **H** (Hold) button to freeze the displayed reading. The **HOLD** icon is shown when the display hold feature is enabled. Press the button again to return to the normal operating mode.

Beeper Control

The beeper is enabled by default. To disable the beeper, short press the beeper button. When the beeper is enabled, its display icon will be shown.

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 batteries.

1. Remove the rear battery compartment cover by pushing the compartment latch.
2. Replace the three (3) AAA batteries, observing correct polarity.
3. Replace the compartment door securely.
4. Dispose of batteries 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 batteries 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

General Specifications

Display	Color LCD with multi-function indicators
Automatic power off (APO)	After three (3) minutes of inactivity
Power supply	3 x 1.5 V 'AAA' batteries (rear compartment)
Power consumption	< 15 mA (average)
Low battery indication	Battery icon appears empty or flashing
Dimensions	6.8 x 2.7 x 1.3 in. (172 x 68 x 32.5 mm)
Weight	5.3 oz. (151 g) without batteries

Measurement Specifications

Measurement type	Relative moisture content (%)
Measurement principle	Electrical resistance
Measurement indication	Digital, moisture drop icons, and beeper
Measurement ranges (wood)	Low: 5.0 to 11.9 % Medium: 12.0 to 15.9 % High: 16.0 to 50.0 %
Measurement ranges (building materials)	Low: 1.5 to 16.9 % Medium: 17.0 to 19.9 % High: 20.0 to 33.0%
Measurement resolution	0.1 %
Measurement accuracy	$\pm(3.0\% + 5 \text{ digits})$ in the range of 72 to 77°F (22 to 25°C) Temperature coefficient: 0.1 x (specified accuracy) / °C from 72 to 75°F (22 to 25°C)
Electrode pin length	0.3 in. (8 mm)
Electrode pin type	Stainless steel, integrated, replaceable

Environmental Specifications




Operating conditions	41 to 113°F (5 to 45°C); < 80 % RH
Storage conditions	32 to 122°F (0 to 50°C); < 85 % RH
Operating altitude	6562 ft. (2000 m)

Compliance and Safety

EMC	CE, FCC Part 15B
Drop test (shock)	1.2 m (4 ft.) per EN 61010-1
Vibration	Random vibration per MIL-PRF-28800F Class 2

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

Customer Support Local Telephone List:

<https://support.flir.com/contact>

Returns (RMA):

<https://customer.flir.com/Home>

Warranty

Teledyne Flir warrants this Extech brand instrument to be free of defects in parts and workmanship for two years from date of shipment. To view the full warranty text, please visit the support site, link below.

<https://www.flir.com/support-center/warranty/>

Website

<http://www.flir.com>

Customer support

<http://support.flir.com>

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