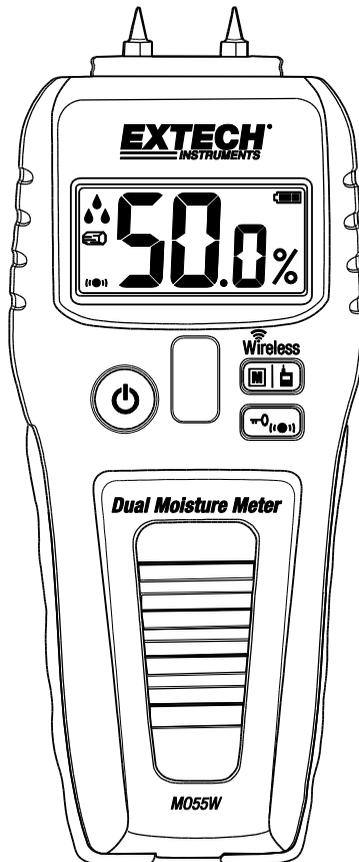


Model MO55W

Wireless Datalogging Dual Moisture Meter

Pin and Pinless Moisture Measurements



Introduction

Thank you for choosing the MO55W Wireless Datalogging Dual Moisture Meter. Use the MO55W to take pin-based and pinless moisture measurements on wood and other building materials.

The MO55W is compact, easy to operate, and indicates moisture levels in a variety of ways: digitally, audibly, and with 'moisture droplet' icon displays (1 drop for low levels, 2 for moderate levels, and 3 drops for high moisture levels).

Pin-based measurements are the most accurate; however, they are invasive. Pinless measurements are also accurate, but for best results use them for dry/wet comparison testing.

The MO55W is perfect for building restoration projects and other applications where it is critical to detect moisture in and around flooring, tiles, and carpeting.

Transmit real-time readings, data-logged readings, and alarm data to your iOS® or Android™ devices thanks to the supplied Bluetooth® Wireless Datalogging Module (DAT12) and the ExView® W-Series application.

The free 'app' is available from the Apple App store and Google Play™ store.

We ship this meter fully tested and calibrated and, with proper use, it will provide years of reliable service. Please visit our website (www.extech.com) to check for the latest version of the User Manual and for Customer Support.

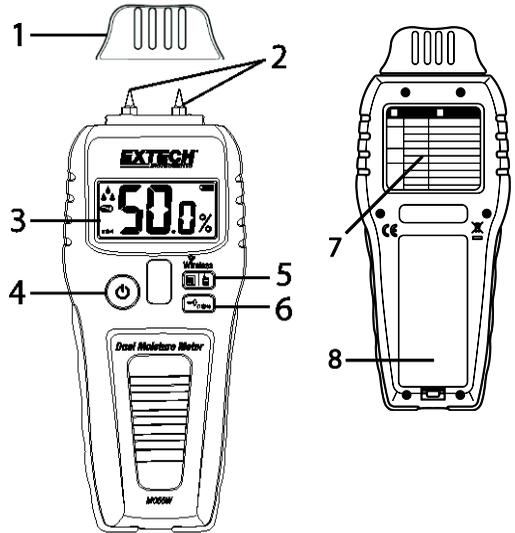
Features

- Detects moisture in wood and other building materials (wall board, sheet rock, cardboard, plaster, concrete, and mortar)
- Pinless measurements (internal moisture sensor) provide reference readings for dry/wet comparison testing
- Pin-based moisture measurements for highest accuracy
- Easy ZERO/OFFSET calibration for pinless mode
- Beeper rate increases as moisture level increases (8 tone variations)
- 'Moisture droplet' icons indicate low, medium and high levels of moisture
- Easy-to-use, battery operated, and compact design
- 'Display Hold' freezes reading on display
- Supplied Bluetooth® Wireless Datalogging Module (DAT12) transmits real-time moisture readings, logged readings, and alarm data using the free iOS® or Android™ ExView® W-Series application. The DAT12 stores over 15k readings.
- Auto Power OFF (APO) after 3 minutes to conserve battery power. There is no APO when connected to the wireless application.

Description

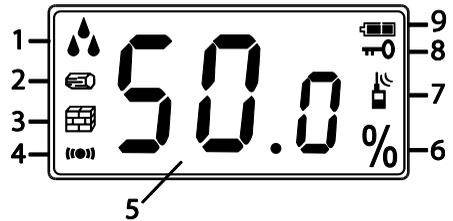
Meter Description

1. Protective cap and pin-mode test circuit
2. Measurement pins
3. LCD Display
4. Power ON/OFF button (long press)
5. Mode button: Short press to select pin, pinless, wood, or building materials.
Long press to enable wireless transmission (radio icon appears)
6. Display Hold (short press)/Beeper button (long press)
7. Internal pinless moisture sensor
8. Battery/wireless module compartment



Display Description

1. Moisture droplet icons (1 drop for low moisture, 2 for moderate, and 3 for high)
2. Wood mode
3. Building material mode
4. Beeper active icon
5. Moisture reading digits
6. Unit of measure
7. Wireless transmission icon
8. Display Hold mode
9. Battery status icon



Button Description

Button	Button name	Description
	Power ON-OFF button	Long press to switch the meter ON or OFF
	Mode/Wireless button	Short press to select wood, building materials, pin or pinless (flashing icon) modes Long press for wireless transmission
	Display Hold / Beeper button	Short press locks reading on the display Long press disables/enables the beeper

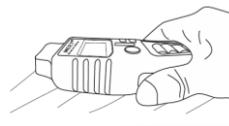
Operation



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

Operating Steps

- For pin mode, carefully remove the protective cap to expose the electrode pins.
- Switch the meter ON by long pressing the  button. While powering, the meter emits audible tones and the display switches on. If the meter does not switch on, please check the battery (9V) in the rear compartment.
- Short press the  |  button to step through these operating modes:
 - Wood (pin mode) 
 - Building Material (pin mode) 
 - Wood (pinless mode) icon blinking 
 - Building Material (pinless mode) icon blinking 
- For pin mode, push the electrode pins into the material under test.
- For pinless mode, zero the display by holding the meter in air. Then press the sensor firmly against a surface to begin testing.
- Pin-based measurements are the most accurate as they make direct contact with the test material. Pinless measurements are also very accurate; for best results use the pinless mode to compare dry area readings to areas of unknown moisture levels.
- View the displayed reading and the number of moisture droplet icons . One droplet indicates low moisture; two droplets indicates moderate moisture; three droplets indicates high moisture. Refer to the chart on the meter and the one reproduced below.
- In addition, listen for the audible tones, the higher the moisture the higher the beep rate; note that there are eight tone variations indicating moisture levels.
- Long press the power button to switch OFF the meter.



Measurement Interpretation Table

LCD	PIN MODE (%)		PINLESS MODE (RELATIVE)	
	WOOD	BUILDING MATERIAL	WOOD	BUILDING MATERIAL
TOTAL RANGE >	5.0 ~ 50.0	1.5 ~ 33.0	0.1 ~ 99.9	0.1 ~ 99.9
 LOW	5.0 ~ 11.9	1.5 ~ 16.9	0.1 ~ 16.9	0.1 ~ 16.9
 MEDIUM	12.0 ~ 15.9	17.0 ~ 19.9	17.0 ~ 29.9	17.0 ~ 29.9
 HIGH	16.0 ~ 50.0	20.0 ~ 33.0	30.0 ~ 99.9	30.0 ~ 99.9

Auto Power OFF (APO)

To conserve battery energy the meter automatically switches off after a three-minute period of inactivity. Several seconds before switching OFF, the meter beeps to alert the user. APO is disabled while the meter is connected wirelessly to the smart device application.

Display Hold

Press the Display Hold button  to freeze the displayed reading. The  icon is visible on the display when Display Hold 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 Beeper button () until the icon disappears. Press and hold again to switch the Beeper ON. When the beeper is ON, the audio display icon () will be visible.

Pin-Mode Accuracy Test

Set the meter to Pin mode (Wood or Building materials) and then touch the electrode pins to the contacts through the holes at the top of the cap. Expected result: **Wood** 17.0 to 19.0%; **Building** 15.5 to 17.5%. If the reading exceeds these ranges, replace the battery and retry. If the meter continues to read inaccurately, return the meter for service.

High and Low Alarm Limits (for use with ExView® W-Series wireless application)

The MO55W high/low alarm alerts are sent to paired iOS® and Android™ devices using the free ExView® W-Series application. Set the high/low alarm limits per the steps below.

1. To set the High Alarm limit, long press the  and  buttons until the symbol **H%** appears
2. Use the  button to adjust the left flashing digit, then press  to confirm
3. Use the  button to adjust the right flashing digit, then press  to confirm
4. To disable the Alarm, long press the  button until dashes appear
5. Repeat the above steps to program the Low Alarm limit (**L%**)

Alarm limit adjustment ranges:

- Pin (Wood): 6.0 to 50.0%
- Pin (Building materials): 2.0 to 33.0%
- Pinless (Wood and Building materials): 1.0 to 99.0%

Note that an error message appears (**Err**) when the High Limit is set \leq Low Limit value

Wireless Communication

Overview

We ship the MO55W with a Bluetooth® Wireless Datalogging Module (DAT12) installed. The DAT12 transmits real-time readings, logged readings, and high/low alarm data to paired iOS® or Android™ devices using the free ExView® W-Series application. The DAT12 stores >15k readings.

Installing/Replacing a Wireless Module

The wireless modules install in the rear battery compartment. To install a module:

1. Ensure that the meter is OFF before installing/replacing a wireless module
2. Remove the battery compartment cover and remove the battery
3. Insert the module in the slot at the top of the compartment with the arrow correctly oriented at the top of the module
4. Attach the module to the 8-pin connector inside the compartment
5. Replace the battery and the battery compartment cover before use

Obtaining the Free Application

For iOS devices, download the ExView® W-Series application from the Apple App store.

For Android devices, download the ExView® W-Series application from the Google Play™ store.

Using the Application

1. Turn the meter power ON and select a measurement function on the meter.
2. Long press the  |  button to start (or stop) wireless transmission (the  display icon will appear when the meter is transmitting).
3. On your smart device, tap the **ExView® W** application icon to start the App. (Bluetooth® must be enabled on your smart device)
4. Tap the search icon located next to 'Devices'. The App will search for available devices. Look for the meter icon on the remote device. When the meter appears in the device list, tap it to connect the meter to the App.
5. For more information, please refer to the ExView® W-Series Help Guide by tapping on the Extech icon and then tapping the Help Guide link, or locate the document on the extech.com/exvieww web page.
6. Please note that some Android™ devices require that you switch ON the device's location setting before the ExView® W app can establish a connection with the wireless meters.

FCC Compliance

A wireless module must be installed in the meter before the module can communicate with iOS®/Android™ phones and tablets via Bluetooth® using the **ExView® W** application.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

IC: 1590A-MO55W

FCC ID: IWK-MO55W

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.
- Store the meter in a 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.

Pin Replacement

A ten-pack of replacement pins, part number MO50-PINS, is available from an Extech sales agent. To replace the pins using a small wrench, carefully loosen and remove the existing pins by turning the nuts (at the base of the pins) counter-clockwise; install the new pins in the same manner. Use care when replacing the pins, as they are sharp - especially when new.

Specifications

Display	LCD with multi-function indicators
Measurement Type	Relative Moisture Content (%)
Measurement Principle	Electrical resistance (pins) Electrical capacitance internal sensor (pinless)
Measurement Depth	Pinless mode: 25mm (1 in.) maximum
Auto-Zero Calibration	Perform a pinless measurement in open air to zero/offset the LCD
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	PIN MODE: 5.0 ~ 50.0% (wood), 1.5 ~ 33.0% (building materials); PINLESS MODE: 0.1 ~ 99.9% (for wood and building materials)
Resolution	0.1%
Accuracy (Pin mode)	± (3%rdg + 5 digits)
Electrode Pin Length	10mm (0.4")
Electrode Pin Type	Stainless steel; Integrated, replaceable
Auto Power OFF	After approx. three (3) minutes
Power Supply	One (1) 9V Battery (rear compartment)
Low Battery Indication	Battery status icon  appears empty or flashing
Operating Conditions	0 ~ 50°C (32 ~ 122°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

Contact Customer Support

Customer Support Telephone: U.S. (866) 477-3687; International +1 (603) 324-7800

Calibration, Repair, and Returns email: repair@extech.com

Technical Support: <https://support.flir.com>

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