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› LASELION MS03 2-in-1 Pin & Pinless Moisture Meter User Manual

LASELION MS03

LASELION MS03 2-in-1 Pin & Pinless Moisture Meter User Manual

Model: MS03

1. OVERVIEW

The LASELION MS03 is a versatile 2-in-1 moisture meter designed for accurate and reliable moisture content detection in various materials. It features both pin and pinless measurement modes, making it suitable for a wide range of applications from woodworking to home inspection. The device includes an LCD display, a data hold function, a built-in flashlight, and an automatic power-off feature for convenience and efficiency.

2-in-1 Pin & Pinless Moisture Meters

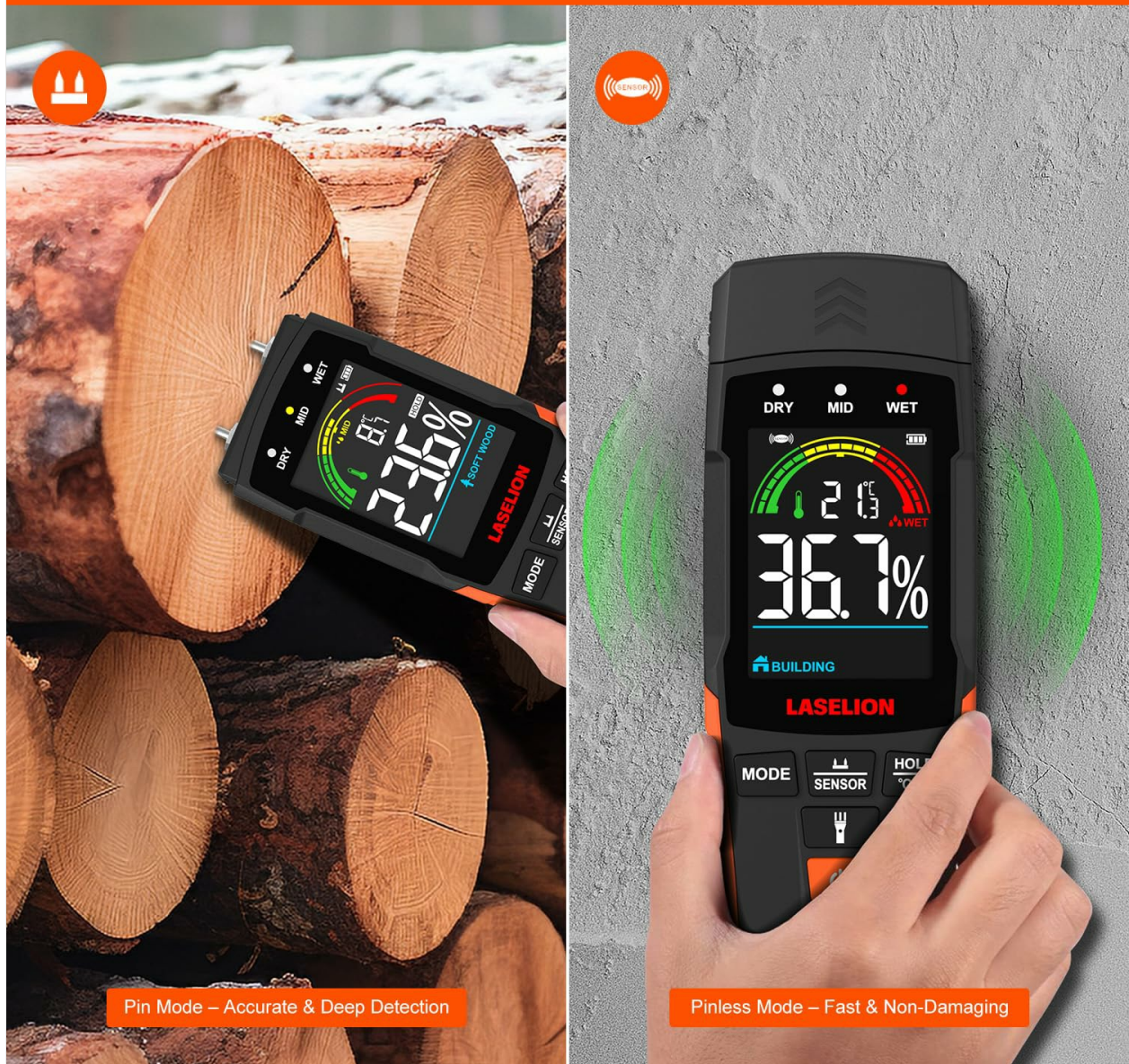


Image: The LASELION MS03 Moisture Meter demonstrating its dual functionality on wood (pin mode) and concrete (pinless mode).

Key Features:

- **Dual Measurement Modes:** Offers both pin and pinless options for versatile moisture detection.
- **Wide Application:** Suitable for wood, drywall, plaster, concrete, cardboard, and other building materials.
- **Pinless Mode:** Provides non-destructive measurement for delicate surfaces.
- **Pin Mode:** Delivers precise readings for thicker materials.
- **Accuracy & Reliability:** Measures moisture content from 0-75% in wood and 0-25% in building materials, with an accuracy of $\pm 4\%$ RH.
- **Built-in Flashlight:** Enhances visibility in low-light conditions.
- **Temperature & Calibration:** Displays ambient temperature and supports manual calibration for Pinless Mode.
- **Automatic Power Off:** Extends battery life by shutting off after 2 minutes of inactivity.

2. PRODUCT COMPONENTS

The LASELION MS03 Moisture Meter package includes the following items:

- 1 x LASELION MS03 Moisture Meter
- 1 x Carrying Pouch
- 1 x Battery (AAA)
- 1 x Wrench
- 1 x User Manual



Image: Contents of the LASELION MS03 package, including the moisture meter, carrying pouch, battery, wrench, and user manual.

3. DEVICE LAYOUT

Familiarize yourself with the different parts and controls of your LASELION MS03 Moisture Meter:



Image: Diagram illustrating the various components and controls of the LASELION MS03 Moisture Meter, including measurement pins, LCD display, mode buttons, and pinless sensor area.

1. Measurement Pins
2. Moisture Content Level Icon (DRY, MID, WET)
3. Pinless Measurement Mode Icon
4. Flashlight Status Icon
5. Reading Analog Display
6. Measurement Value Display
7. Measurement Mode Display
8. Pin or Pinless Mode Switch Button
9. Material Mode Selection Button
10. Flashlight On/Off Button
11. Power On/Off Button
12. Pin Measurement Mode Icon
13. Battery Status Icon
14. Temperature Display / Calibration Icon
15. Reading Hold Icon

16. Hold °C / °F Button
17. Pinless Sensor Area
18. Battery Compartment
19. Moisture Content Table

4. SETUP

4.1 Battery Installation

The LASELION MS03 requires one AAA battery. To install the battery:

1. Locate the battery compartment on the back of the device.
2. Open the battery compartment cover.
3. Insert the AAA battery, ensuring correct polarity (+/-).
4. Close the battery compartment cover securely.

4.2 Initial Power On

Press the Power On/Off button to turn on the device. The LCD display will illuminate, and the meter will be ready for use.

4.3 Pinless Mode Calibration

The device supports manual calibration for Pinless Mode to ensure accuracy. Refer to the on-screen prompts or the detailed instructions in the included user manual for the specific calibration procedure.

5. OPERATING INSTRUCTIONS

5.1 Power On/Off

- To turn on: Press the **Power On/Off** button.
- To turn off: Press and hold the **Power On/Off** button for a few seconds, or allow the device to automatically power off after 2 minutes of inactivity.

5.2 Mode Selection

The MS03 offers both Pin and Pinless measurement modes, along with four material-specific modes.

Switching Between Pin and Pinless Modes:

Press the **Pin or Pinless Mode Switch Button** (labeled 'SENSOR') to toggle between the two measurement methods. The display will indicate the active mode.

Selecting Material Modes:

Press the **Material Mode Selection Button** (labeled 'MODE') to cycle through the four available material types:

- **Soft Wood:** For materials like Lauan, Fir, Pine, Cork, Beech.

- **Hard Wood:** For materials like Teak, Walnut, Afromosia, Rubber Tree, Imbuia, Kokrodua, Niov Biliga, Keruing, White Poplar, Tola, Ash, Elm, Maple, Padauk, Oak, Cherry, Birch, Larch.
- **Building Mode:** For materials such as Lime wall, soil wall, cement wall, roof, brick wall, stone wall, floor, Gypsum Board, Drywall, Putty Walls.
- **Packing Mode:** For materials like Cardboard, Carton Paper, Coated Paperboard, Corrugated Cardboard.

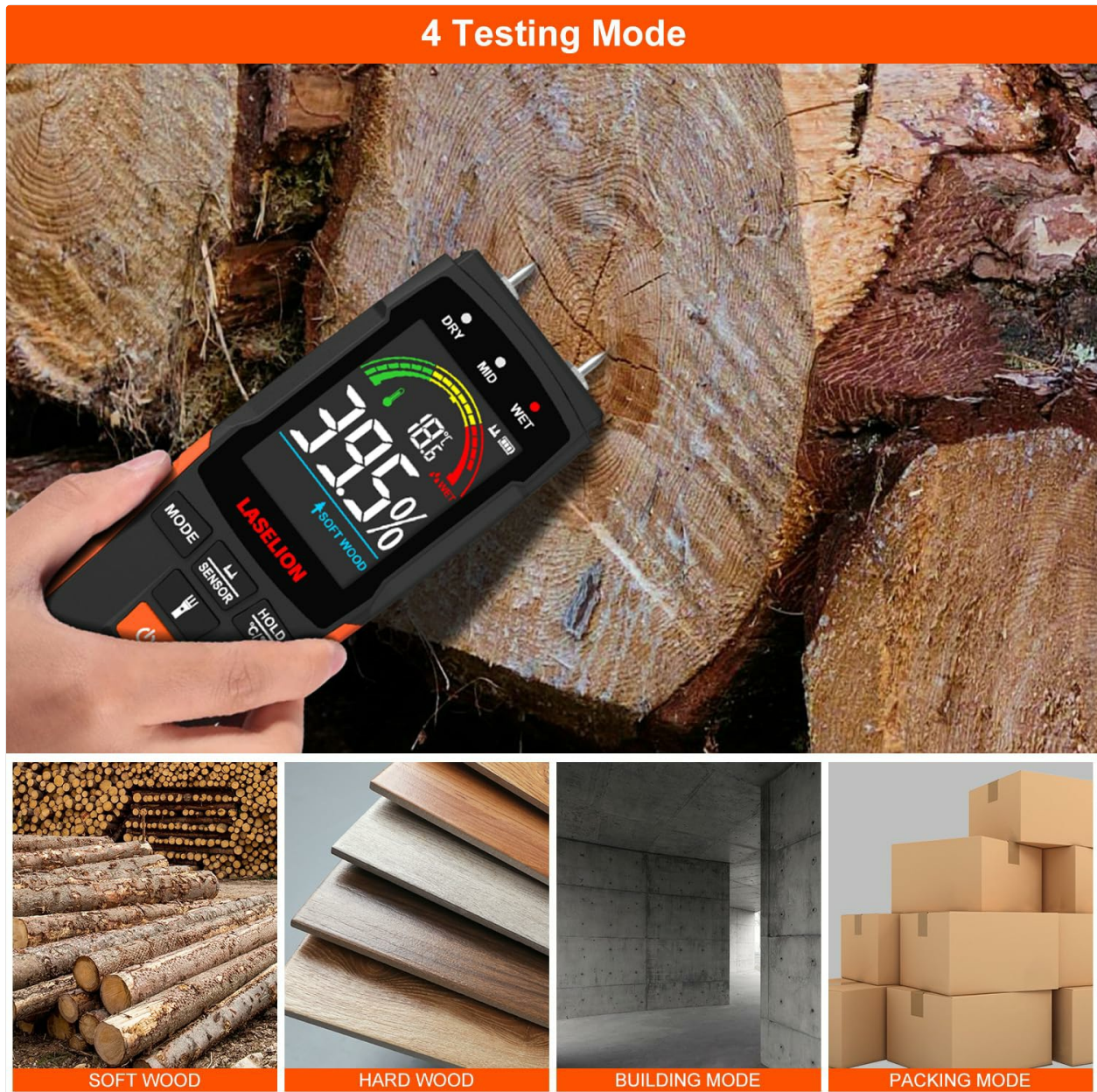


Image: The LASELION MS03 Moisture Meter displaying its four testing modes: Soft Wood, Hard Wood, Building, and Packing, with examples of materials for each.

5.3 Taking Measurements

Pin Mode:

For precise, deep detection, gently push the two measurement pins into the material. Ensure the pins are fully inserted for accurate readings. The moisture content will be displayed on the LCD.

Pinless Mode:

For non-destructive measurement, place the pinless sensor area flat against the surface of the material. The meter will detect moisture within a broader area without damaging the surface. Ensure full contact between the sensor and the material.

5.4 Hold Function

To freeze the current measurement on the display for easier recording or analysis, press the **Hold °C / °F Button** briefly. Press it again to release the hold function and resume live readings.



Image: The LASELION MS03 Moisture Meter demonstrating the Hold function, freezing the measurement on the screen for easy recording.

5.5 Temperature Unit Switch

The meter displays ambient temperature. To switch between Celsius (°C) and Fahrenheit (°F), press and hold the **Hold °C / °F Button** for a few seconds.



Image: Illustration of switching between Celsius and Fahrenheit temperature units on the LASELION MS03 Moisture Meter's display.

5.6 Built-in Flashlight

To activate the built-in flashlight for improved visibility in dim environments, press the **Flashlight On/Off Button**. Press it again to turn off the flashlight.

Professional Fast Accurate Moisture Meter



Image: The LASELION MS03 Moisture Meter's built-in flashlight illuminating a wood surface, useful for measurements in low-light conditions.

5.7 Automatic Power Off

The LASELION MS03 is equipped with an automatic power-off feature. If the device remains inactive for approximately 2 minutes, it will automatically shut down to conserve battery life.

Q:Why does my MS03 moisture meter show a 0 reading when I insert the probes into the material under pin mode?

A:If you're seeing a "0" reading when using the pin mode, it's likely because the sharpest part of the probe is not fully inserted into the material.
For accurate readings,make sure the sharpest part of the probe is completely inserted.Shallow insertion may not allow the probe to make proper contact with the material,resulting in an inaccurate or "0" reading.Ensure that the probe is inserted deeply enough so the sharp tip penetrates fully into the material for an accurate moisture measurement.



Image: A clock indicating 2 minutes, next to the LASELION MS03 Moisture Meter, illustrating its automatic shutdown feature after 2 minutes of inactivity to conserve battery.

6. MAINTENANCE

6.1 Cleaning the Device

Regularly clean the meter with a soft, dry cloth. Do not use abrasive cleaners or solvents, as these can damage the casing or display. Keep the measurement pins and pinless sensor area free from dust and debris.

6.2 Replacing Measurement Pins

The measurement pins are replaceable. If the pins become dull or damaged, use the provided wrench to carefully unscrew and remove them. Install new pins by screwing them firmly into place.

Built-in Flashlight

Provides illumination for low-light conditions and daily tasks



Image: Replacement pins and a mini wrench included with the LASELION MS03 Moisture Meter, demonstrating how to change the pins.

6.3 Battery Replacement

When the battery indicator on the display shows low power, replace the AAA battery as described in the 'Battery Installation' section (4.1). Remove the battery if the device will not be used for an extended period to prevent leakage.

6.4 Storage

Store the moisture meter in its carrying pouch in a cool, dry place, away from direct sunlight and extreme temperatures. Keep it out of reach of children.

7. TROUBLESHOOTING

Q: Why do readings differ between Pin Mode and Pinless Mode on the same material?

A: The difference arises from the distinct measurement methods:

- **Pin Mode:** Measures moisture content directly at the depth where the pins are inserted, providing a localized reading.
- **Pinless Mode:** Uses a sensor to detect moisture within a broader area, including surface and subsurface levels.

Factors influencing the difference include:

- **Material Thickness:** Pinless Mode requires a minimum thickness of 20mm for accurate readings.
- **Surface Moisture:** Pin Mode may bypass surface water, while Pinless Mode includes it in the measurement.
- **Non-uniform Moisture Distribution:** Pin Mode reflects localized moisture, whereas Pinless Mode provides an averaged result. For precise measurements, choose the mode that best suits your testing needs based on material type and moisture distribution.

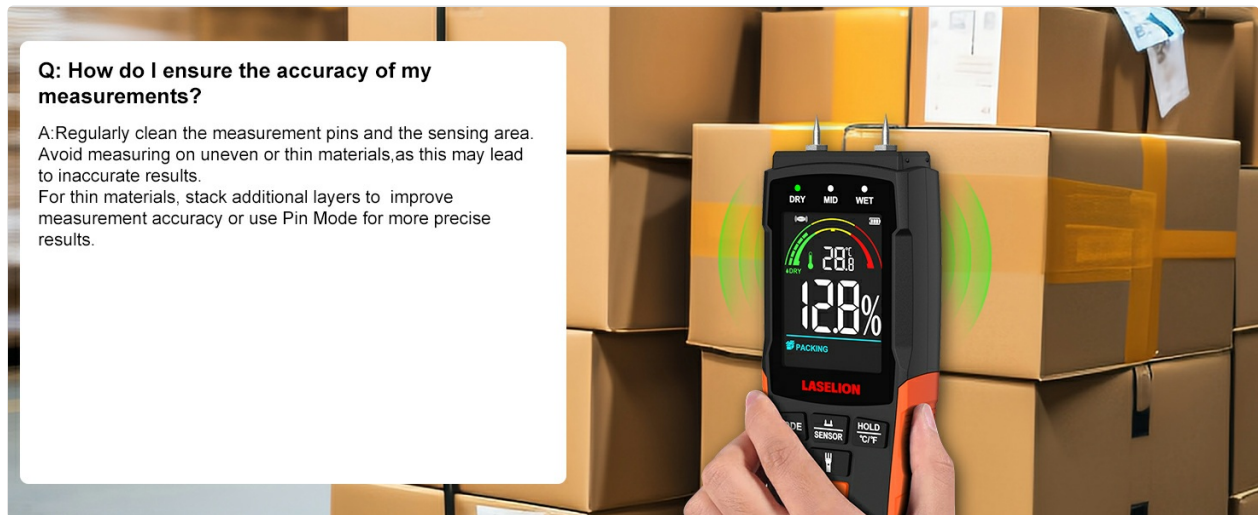


Image: The LASELION MS03 Moisture Meter on a wooden surface, illustrating the difference in measurement methods between pin and pinless modes.

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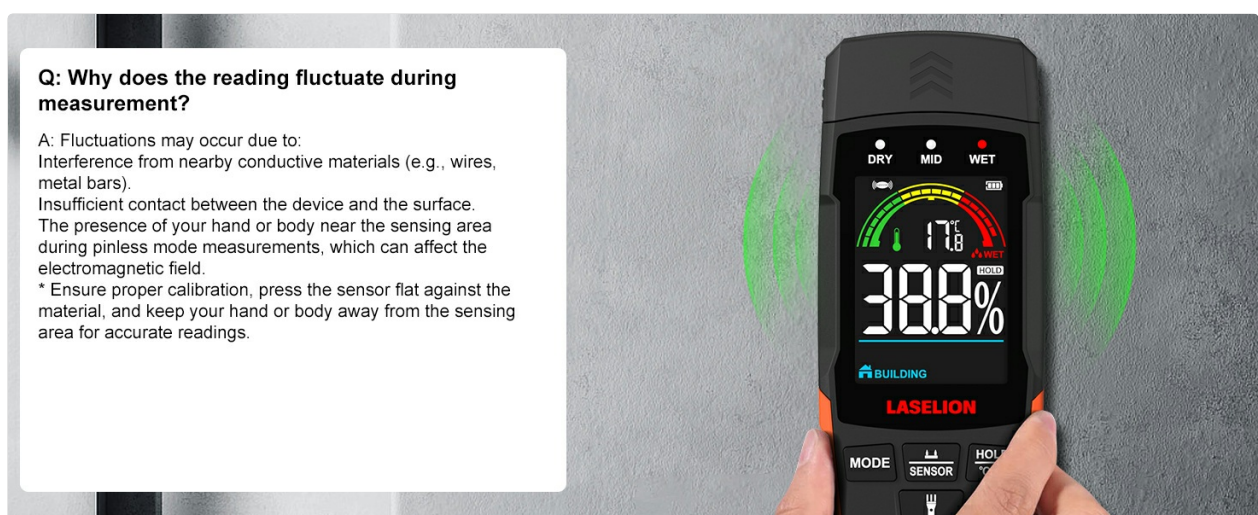
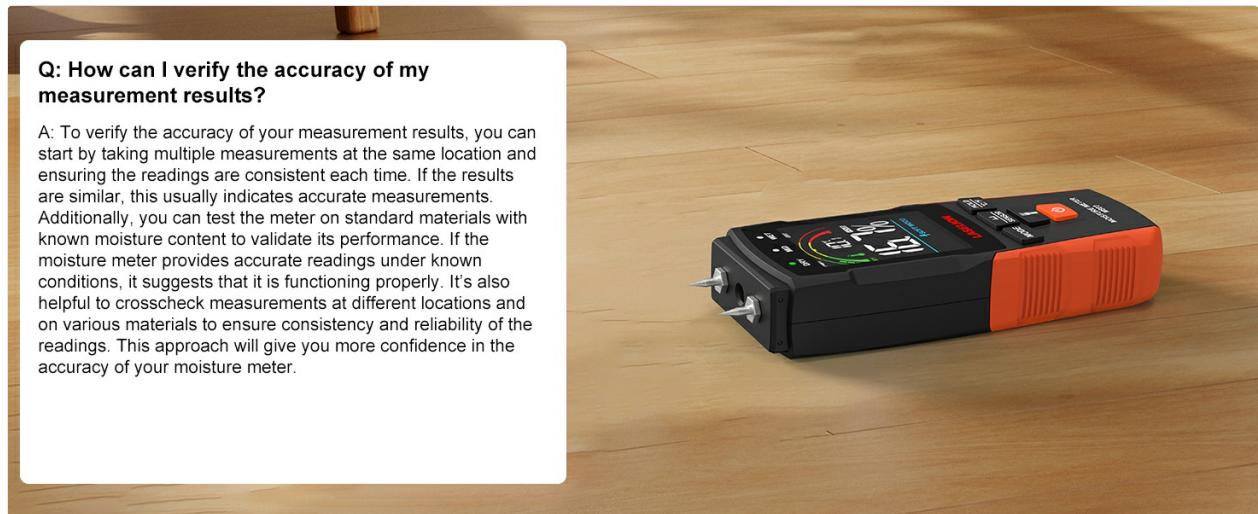


Image: The LASELION MS03 Moisture Meter with pins inserted into wood, addressing why a '0' reading might occur if probes are not fully inserted.

Q: How do I ensure the accuracy of my measurements?

A: Regularly clean the measurement pins and the sensing area. Avoid measuring on uneven or thin materials, as this may lead to inaccurate results. For thin materials, stack additional layers to improve measurement accuracy or use Pin Mode for more precise results.



Q: How can I verify the accuracy of my measurement results?

A: To verify the accuracy of your measurement results, you can start by taking multiple measurements at the same location and ensuring the readings are consistent each time. If the results are similar, this usually indicates accurate measurements. Additionally, you can test the meter on standard materials with known moisture content to validate its performance. If the moisture meter provides accurate readings under known conditions, it suggests that it is functioning properly. It's also helpful to crosscheck measurements at different locations and on various materials to ensure consistency and reliability of the readings. This approach will give you more confidence in the accuracy of your moisture meter.

Image: The LASELION MS03 Moisture Meter measuring moisture in cardboard boxes, providing context for ensuring measurement accuracy.

Q: Why does the reading fluctuate during measurement?

A: Fluctuations may occur due to:

- Interference from nearby conductive materials (e.g., wires, metal bars).
- Insufficient contact between the device and the surface.
- The presence of your hand or body near the sensing area during pinless mode measurements, which can affect the electromagnetic field.

To ensure proper calibration, press the sensor flat against the material, and keep your hand or body away from the sensing area for accurate readings.



Q: What is the difference between relative readings and absolute readings?

A: **Relative Readings:** Relative readings indicate the moisture level in relation to the surrounding environment or material. They are typically expressed in terms of a scale or index, which doesn't directly translate to a percentage of moisture content. The unit for relative readings can vary depending on the device, but they are often shown as a number or percentage of the material's moisture compared to the surrounding area. This type of reading is useful for detecting moisture presence but doesn't provide exact moisture content.

Absolute Readings: Absolute readings provide the precise moisture content of a material, typically expressed as a percentage (%) of moisture in the material. This measurement is used for detailed analysis and is necessary for assessing material conditions, such as determining whether it is too wet or dry for specific purposes. The unit for absolute readings is typically percentage moisture content (%).

Our MS03 moisture meter uses absolute readings for most modes, providing accurate moisture content measurements in percentage form for reliable analysis, except in the building mode, where it uses relative readings to assess moisture presence.

Image: The LASELION MS03 Moisture Meter held against a wall, illustrating potential reasons for fluctuating readings during measurement.

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Image: The LASELION MS03 Moisture Meter on a wooden floor, suggesting methods to verify measurement accuracy.

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The LASELION logo is displayed in a bold, red, sans-serif font. The letters are thick and closely spaced, with a slight shadow effect behind the text.

Image: The LASELION MS03 Moisture Meter on a blueprint, explaining the concepts of relative and absolute moisture readings.

8. SPECIFICATIONS

Feature	Specification
Product Dimensions	1.97 x 1.18 x 3.94 inches
Item Weight	7.4 ounces
Manufacturer	LASELION
Model Number	MS03
Wood Moisture Range	0-75%
Building Material Moisture Range	0-25%
Accuracy	±4%RH
Power Source	AAA Battery
Auto Power Off	After 2 minutes of inactivity

9. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the contact details provided in the packaging or visit the official LASELION website. Keep your purchase receipt as proof of purchase for any warranty claims.