

Elitech MOT-270W

Elitech MOT-270W Digital Wood and Material Moisture Meter User Manual

Model: MOT-270W

1. INTRODUCTION

Thank you for choosing the Elitech MOT-270W Digital Wood and Material Moisture Meter. This device is designed for precise and reliable measurement of moisture content in various materials, including wood, paper, bamboo, and construction materials. Its high accuracy of $\pm 2\%$ helps prevent issues like warping, cracking, or mold caused by incorrect moisture levels. This manual provides essential information for the safe and effective use of your moisture meter.



Image: The Elitech MOT-270W Moisture Meter in use, measuring the moisture content of a tree trunk. The display shows a reading of 65.8%. Operating temperature range is 0°C to 40°C, and operating humidity range is 20%RH to 90%RH.

2. SAFETY INFORMATION

Please read all safety instructions before using the device. Failure to follow these instructions may result in electric shock, fire, or personal injury.

- **Sharp Probes:** The measurement probes are sharp. Handle the device with care to avoid injury. Keep the protective cap on when not in use.

- **Battery Safety:** Ensure correct battery polarity when installing. Do not mix old and new batteries, or different types of batteries. Remove batteries if the device will not be used for an extended period. Dispose of batteries according to local regulations.
- **Environmental Conditions:** Do not expose the device to extreme temperatures, high humidity, or direct sunlight. Avoid using the device in environments with flammable gases or vapors.
- **Cleaning:** Use a soft, dry cloth to clean the device. Do not use abrasive cleaners or solvents.

3. PRODUCT OVERVIEW

The Elitech MOT-270W is a compact and lightweight digital moisture meter featuring a clear LCD display and intuitive controls.

3.1 Components

- **Measurement Probes:** Two sharp, 9.8 mm pins for penetrating materials.
- **LCD Display:** Shows moisture readings, material mode, battery indicator, and other functions.
- **ON/OFF/HOLD Button:** Powers the device on/off and activates the data hold function.
- **SET Button:** Selects the material type (wood grades 1-4, construction materials A-D).
- **M Button (Max/Min):** Displays maximum and minimum recorded moisture values.
- **Protective Cap:** Covers the probes when not in use.
- **Battery Compartment:** Located at the rear, requires 2 AAA batteries.



Image: Front view of the Elitech MOT-270W Digital Moisture Meter, highlighting its ergonomic design, clear LCD screen, and control buttons. The sharp measurement probes are visible at the top.



Image: The Elitech MOT-270W Moisture Meter showing the 'HOLD MAX' function activated, with a reading of 65.8% on the display. The device is positioned against a cross-section of wood, illustrating the data retention feature.

4. SETUP

4.1 Battery Installation

1. Locate the battery compartment cover on the back of the device.
2. Use a small screwdriver to open the battery compartment.
3. Insert two AAA batteries, ensuring correct polarity (+/-) as indicated inside the compartment.
4. Replace the battery compartment cover and secure it with the screw.

The device comes with two AAA batteries for immediate use.

4.2 Initial Power-On and Automatic Calibration

Upon first power-on, the device performs an automatic calibration. Ensure the probes are not touching any material during this process. This ensures reliable and consistent measurements.

5. OPERATING INSTRUCTIONS

5.1 Powering On/Off

- To power on, press the **ON/OFF/HOLD** button.
- To power off, press and hold the **ON/OFF/HOLD** button for approximately 3 seconds. The device also features an automatic shut-off after 10 minutes of inactivity to conserve battery life.

5.2 Material Selection

The MOT-270W offers 8 measurement ranges, including 4 for different wood types and 4 for various construction materials. Press the **SET** button to cycle through the material modes (Grade 1, 2, 3, 4 for wood; A, B, C, D for construction materials). Refer to the table below to select the appropriate mode for your material.

Mesureur d'humidité des matériaux 8-en-1 –
Déterminez le bois, les cloisons sèches, le béton et plus avec précision

Plage 1 :	Teck du Rhodesia, Robinier faux-acacia, Noyer brésilien
Plage 2 :	Noyer, clone, peuplier, teck
Plage 3 :	Sapin, sapin de Douglas, meranti, frêne, épicéa blanc, érable, frêne blanc, balsa, bois de santal, orme, Catalpa fargesii, Keteleeria,
Plage 4 :	Pin sylvestre, pin chilien, pin blanc, mélèze, sapin blanc (Abies alba), bouleau, tilleul
Plage A :	Nivellement de plâtre dur
Plage B :	Mortier de ciment
Plage C :	Mortier de chaux / mortier de plâtre
Plage D :	Brique

Remarque : En cas de doute sur le matériau testé, nous recommandons d'utiliser la plage 3.

Image: A detailed table illustrating the 8 measurement ranges (Grades 1-4 for wood, A-D for construction materials) and their corresponding material types for the Elitech MOT-270W. This helps users select the correct setting for accurate readings.

Material Measurement Ranges

Range	Material Type	Measurement Range (%)
Grade 1	Rhodesian Teak, Black Locust, Brazilian Walnut	6.0% to 39%
Grade 2	Walnut, Clone, Poplar, Teak	7.0% to 48%

Range	Material Type	Measurement Range (%)
Grade 3	Fir, Douglas Fir, Meranti, Ash, White Spruce, Maple, White Ash, Balsa, Sandalwood, Elm, Catalpa Fargesii, Keteleeria	8.5% to 55%
Grade 4	Scots Pine, Chilean Pine, White Pine, Larch, White Fir (Abies alba), Birch, Linden	9.5% to 65%
Range A	Hard Plaster Leveling	0% to 10.9%
Range B	Cement Mortar	0% to 8.9%
Range C	Lime Mortar / Plaster Mortar	0% to 9.9%
Range D	Brick	0% to 15.9%

Note: If you are unsure about the material being tested, it is recommended to use Grade 3 for wood or consult a material specific guide.

5.3 Taking a Measurement

1. Remove the protective cap from the probes.
2. Select the appropriate material mode using the **SET** button.
3. Carefully push the measurement probes into the material to be tested. Ensure both probes penetrate the surface to a sufficient depth (approximately 5mm) for an accurate reading.
4. The moisture content percentage will be displayed on the LCD screen.
5. After measurement, gently pull the probes out of the material and replace the protective cap.

5.4 Data Hold Function

To freeze the current reading on the display, press the **ON/OFF/HOLD** button briefly during measurement. The "HOLD" icon will appear on the screen. Press the button again to release the hold and resume live measurement.

5.5 Maximum/Minimum Value Display

After taking several measurements, you can view the highest and lowest recorded values:

- Press the **M** button once to display the maximum moisture value recorded (MAX icon will appear).
- Press the **M** button again to display the minimum moisture value recorded (MIN icon will appear).
- Press the **M** button a third time to return to live measurement mode.



Image: The Elitech MOT-270W Moisture Meter displaying the maximum and minimum humidity analysis. The screen shows 'HOLD MAX' and a reading of 65.8%, with explanatory text for maximum and minimum value modes.

6. MAINTENANCE

- **Cleaning:** Wipe the device body with a soft, dry cloth. Ensure the probes are clean and free of debris after each use. Do not immerse the device in water or use liquid cleaners.
- **Battery Replacement:** When the low battery indicator appears on the display, replace the batteries promptly to ensure accurate readings. Follow the battery installation steps in Section 4.1.
- **Storage:** Store the device in a cool, dry place with the protective cap on the probes. If storing for an extended period, remove the batteries to prevent leakage.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly installed batteries.	Check battery polarity. Replace batteries if necessary.
Inaccurate or inconsistent readings.	Incorrect material mode selected. Probes not fully inserted. Probes dirty or damaged.	Ensure correct material mode (refer to Section 5.2). Push probes deeper into the material. Clean probes. If probes are damaged, contact support.
Display is blank or dim.	Low battery.	Replace batteries.
"HOLD" icon is stuck on.	Data hold function is active.	Press the ON/OFF/HOLD button again to release.

8. SPECIFICATIONS

- **Model:** MOT-270W (EU-MOT-270W-1)
- **Measurement Principle:** Electrical Resistance
- **Measurement Ranges:** 8 modes (4 wood, 4 construction materials)

- **Wood Moisture Range:** 6.0% to 65% (depending on wood grade)
- **Construction Material Moisture Range:** 0% to 15.9% (depending on material type)
- **Accuracy:** $\pm 2\%$
- **Resolution:** 0.1%
- **Probe Length:** 9.8 mm
- **Operating Temperature:** 0°C to 40°C (32°F to 104°F)
- **Operating Humidity:** 20%RH to 90%RH
- **Power Supply:** 2 x AAA 1.5V Alkaline Batteries (included)
- **Automatic Shut-off:** After 10 minutes of inactivity
- **Dimensions:** Approximately 20.1 x 13.5 x 3.6 cm
- **Weight:** Approximately 108 grams (excluding batteries)

9. WARRANTY AND SUPPORT

Elitech provides a warranty for this product against defects in materials and workmanship under normal use.

Please refer to the warranty card included with your product for specific terms and conditions.

For technical support, troubleshooting assistance, or to obtain a digital version of this manual in French, please contact Elitech customer service via email. We aim to respond within 24 hours.

Contact Information: Please refer to the contact details provided on the product packaging or Elitech's official website.