

# HARE & FORBES MACHINERYHOUSE

## Moisture Meter

Model: MM-50

User's Manual



# Moisture Meter

**Model: MM-50**

## **Introduction**

MM-50 moisture meter measures the moisture content by detecting the electrical resistivity of the target material using two pins. The unit has adopted low consumption single chip smart design, the moisture content is displayed by LCD. MM-50 has advantages of portable size, easy to operate and rapidly measuring, a suitable tool to carry at working field.

## **Safety Instructions**

Failure to follow the instructions listed below may cause personal injury.

- Please read this manual thoroughly before operation.
- Please do not remove any labels from the unit.
- Do not operate the tool with in the presence of flammable/explosive gases.
- Be careful about the pins.
- Don't allow children to operate the unit.
- Put on the cover while not in use to avoid pins damage.
- The pins are very sharp, be sure to put on the protector after use, otherwise will hurt your body.

## Battery Safety Instructions

- Please remove the battery when clean the product.
- Remove the battery when not in use for an extended period of time.
- Please install the batteries properly as the instructions of the positive and negative charges
- Please dispose the batteries properly. High temperature will cause explosions and do not burn the batteries. Strap insulated tape around the battery charges to avoid unsafe contacts with other objects. Please follow the local regulations of battery disposing.

## TOOLS COMPONENTS



- A. Protection cover
- B. Pins
- C. LCD screen
- D. Mild moist indication LED
- E. Dry indication LED
- F. Measuring mode button
- G. Power button
- H. Excessive moist indication LED
- I. Data hold button, keep pressing this button to close the buzzer sound
- J. At the back, it is battery compartment
- K. Protection cap for pins

## LCD Screen Illustration



- A: Low battery indication
- B: Measuring result
- C: Wood mode indication
- D: Data hold indication
- E: Building material mode indication

## Operation Notes

### ● Install battery

Remove the battery lid on the back of the unit, place one 9V block battery (6F22 or 6LR61) according to the correct sign marked in the compartment, then put back the lid.

### ● Measure moisture

- 1、 Pull out the protection cover A, remove the protection K from the pins;
- 2、 Press the power button G to power on the unit, LOW LED turns on, LCD display " \_ \_ \_ "; The default measuring mode is for wood, use the button F to select the measuring mode.
- 3、 Insert the two detection pins into target material;
- 4、 Under wood mode, reading of the target wood is displayed on LCD screen, available range is 5%~50%. When it is lower than 5%, the screen shows " \_ \_ \_ \_ ", when it is higher than 50%, the screen shows " \_ \_ \_ \_ ".
- 5、 Under building material mode, reading of the target material is displayed on LCD screen, available range is 1.5%~33%. When it is lower than 1.5%, the screen shows " \_ \_ \_ \_ ", when it is higher than 33%, the screen shows " \_ \_ \_ \_ ".
- 6、 Press the Hold button I during measuring, the symbol

"HOLD" will display and hold the data, press again to make "HOLD" disappear and exit data hold.

- 7、 Keeping pressing the Hold button I to turn off the buzzer sound during measuring.
- 8、 Keeping pressing the power button for 2s to turn off the product.

### ● LED indicators

- Blue LED——>5%-11.9%, Dry;
- Green LED——>12%-15.9%, mild moist;
- Red LED——>16%-50%, excessive moist.

### ● Accuracy checking instructions

The product has external accuracy checking function; Remove the protection cap, power on the unit, place the 2 pins into the 2 holes at the back of the cover, just now the LCD shows a value within  $18.2\% \pm 0.3$ ; If beyond this range, the accuracy has problem, advise to be repaired.

### ● Operation notes

- Please replace the battery when the unit cannot be powered on or low battery indicator is on.
- Wood moisture values are related to ambient temperature humidity and wood material density. The best way to recognize the right wood moisture content is to measure continuously day after day to obtain the corresponding values and compare to judge.

### C a u t i o n s

- Don't drop the product or use by force.
- Don't disassemble the product to avoid failure.
- Keep the tool dry and clean.
- Don't place the product with corrosive any gas or objects.
- Do not operate the tool in the water and dust, avoid to damage the tool.
- Check the battery regularity, avoid deterioration.
- Remove the battery when not in use for an extended period of time.

### Technical Specifications

Product name		Moisture Meter
Model		MM-50
Measuring range	Wood	5~50%
	Building Material	1.5——33%
Measuring accuracy		±2%
Backlight shut off		About 15 seconds
Auto power off		3 minutes inactive
Low battery indicator		<7V
Power supply		One 9V block battery(6F22 or 6LR6) not included
Working consumption		<25mA
Working temperature		0°C~50°C
Working humidity		<90%RH non-condensing
Storage		-20°C~60°C, ≤85% (w/o battery)
Dimension		145mm×62mm×27 mm
Weight		About 86g (w/o battery)

## **WARRANTY**

The product is warranted to be free from defects in materials and workmanship for a period of one year from the date of purchase.

**Notice:** The warranty does not apply to the following conditions:

- Unauthorized disassembling the device will void the warranty.
- We are not responsible for any damage resulting from abrasion, water, dropping or disassembling.

**Tips:** Most parts of the product could be recycled, please refer to your local regulations for disposing of them instead of throwing into the dustbin.