



Grain Moisture Meter

FM-GMM-A100

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1. Safety Measures

- 1) As a meter with high resistance, each section of this Tester has good insulating features. When using and storing, keep the Tester away from humidity or dust and keep it dry and clean, to avoid reducing the accuracy of the Tester.
- 2) When measuring moisture using the probe, the pressure of the grain can greatly influence the result of the measurement. The result can be exact when the grains are not placed in layers. But when being placed in layers, the grain in underlayers can have bigger pressure that may cause the result to be higher than the actual. In such a case, the result should be corrected by counteracting the influence of the pressure according to the accumulated experiences. The more moisture the grain contains, the greater the influence of the pressure will be. When the moisture is lower than 13%, the pressure may have a slight influence on the result of the measurement.
- 3) When measuring the grains that are placed in layers using the probe, though the moisture the grains contain may be high, the result of the measurement can be exact ($\pm 5\%$) if you counteract the influence of the pressure according to your accumulated experience. However, if you consider the accuracy of the measurement as critical, you can place the grains without layering and insert the probe from the top down. Users can also compare the results from measuring grains placed in layers and not in layers to summarize the experience.

2. Introduction

Grain Moisture Meter FM-GMM-A100 measures the moisture content of materials as a percentage of their weight. It has a sample capacity of about 90 mL and operates using alternating current resistance (capacitance). Our meter can measure and average the moisture content of 40 different types of grains and seeds. For convenience, the meter turns off automatically after 30 seconds of inactivity. This function ensures efficient battery usage and longevity.

3. Features

- ✓ Emits a prompt sound when the upper cap is screwed tightly
- ✓ Powered by 4 AA 1.5V batteries
- ✓ Displays the name of the currently selected grain
- ✓ Automatically calculates and stores moisture content
- ✓ Allows adjustment of measurements to align with grain dealer equipment
- ✓ Automatically switches off after 30 seconds of inactivity

4. Specifications

Model No	FM-GMM-A100
Sample Capacity	90 mL
Measuring Range	3 to 80 %
Resolution	0.001
Accuracy	± 0.5 % for normalized grain ± 1 % in the range of up to 10 % of humidity ±1.5 % in the range over 10 % of humidity
Chamber Filling Method	Manual
Power Supply	4 batteries 1.5V type AAA + 1 battery 3V type CR-2032
Dimensions (W × D × H)	165 × 71 × 74 mm
Packaging Dimension (W × D × H)	240 × 170 × 140 mm
Net Weight	1 Kg
Gross Weight	1.5 Kg

5. Applications

Grain Moisture Meter is used in agriculture, food processing, grain traders, etc.

6. Instrument Introduction

6.1 Display

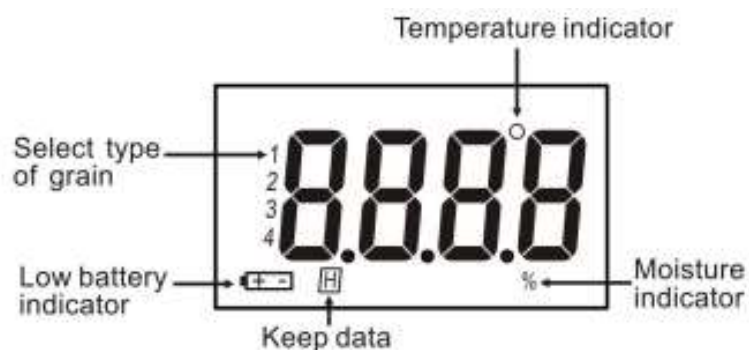


Figure-1

6.2 Faceplate

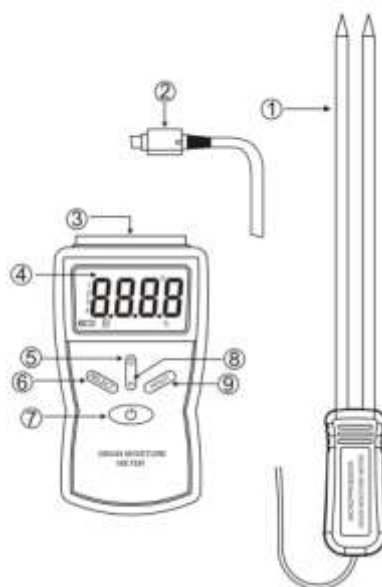


Figure-2

- 1) Probe
- 2) Plug of probe
- 3) Plughole of probe
- 4) Display
- 5) Backlight switch
- 6) Grain Type Switch button - switches type of grain when displaying moisture; switches between °C and °F when displaying temperature.
- 7) Power button
- 8) Deselect Hold button
- 9) Moisture/Temperature Display Switch Button.

7. Operations

Note: In a more than 70% humidity environment, the instrument display is not zero but does not influence use.

- 1) Install the battery and press the **"POWER"** button to turn the Tester on.
- 2) Press the **"H (%) T"** button to select what to measure: the moisture of the grain being measured or the temperature where the probe is. When measuring moisture, the Tester displays **"s XXX°C"** . By default, the Tester is ready for measuring the moisture upon being turned on.
- 3) Measuring the moisture of grain: make sure the Tester is ready for testing the moisture, press the **"SELECT"** button to select the type of the grain (in the display, 1 standard for wheat, 2 standards for paddy, 3 standards for rice and 4 standards for corn) you want to test and insert the probe into the grain to measure its moisture. The reading displayed by the Tester is the moisture of the grain. In the process, the **"HOLD"** button is the Hold button of data. Press it for the first time to select the data hold function (icon **"H"** displays) and press it again to disable the function (icon **"H"** disappears).
- 4) Measuring temperature: The tester can display the approximate temperature of the environment where the probe is. Press the **"SELECT"** button to switch between °C and °F (°C by default).
- 5) When complete, press the **"POWER"** button to turn the Tester off. It goes in the Sleep state.
- 6) Turn on/off the backlight of the screen.

8. Replacement

8.1 Change Battery

- 1) When the voltage of the battery is lower than a specified value, the Low Battery icon “ ” displays, indicating that the battery should be changed.
- 2) Open the battery cover and remove the battery.
- 3) Install a new battery according to the signs on the battery box.
- 4) Remove the battery if the Tester is left unused for a long time to avoid leakage of the battery that may damage the Tester.



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