

MOISTURE METER

(Pin type)

AM-128P

This Moisture Meter is small in size, light in weight, easy to carry. Although complex and advanced, it is convenient to use and operate. Its ruggedness will allow many years of use if proper operating techniques are followed. Please read the following instructions carefully and always keep this manual within easy reach.

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1. FEATURES

* Be a powerful and versatile instrument for measuring and diagnosing dampness in buildings and building materials. This product enables building surveyors and other practitioners to measure moisture levels of building elements such as walls, floors and other building materials simply by switching between the two different modes of operation. In this way, a detailed understanding of the moisture condition of the property can be obtained.

* Digital display gives exact reading with no guessing or errors while a colour coded light (LED) indicates the moisture condition of the material. This combined presentation of moisture measurement helps the user to map the extent of problems and monitor changes in condition precisely and reliably.

* Used the exclusive Micro-computer LSI circuit and crystal time base to offer high accuracy measurement.

* Wide measuring range and high resolution.

* Automatic power off to conserve power.

* Can communicate with PC computer for statistics and printing by the optional cable and software for USB interface.

* Can store 240 groups of measurement results with statistical functions.

2. SPECIFICATIONS

Display 4 digits, 10 mm LCD

With colour coded LED indication

Green LED represents a safe, air-dry state.

Yellow LED represents a borderline State.

Red LED represents a damp state.

Measuring range:

0~80%(when code=cd01 in Pin mode)

Measuring code:

10 codes for up to 150 species of materials

Accuracy: $\pm(0.5\%n+1)$

PC interface: USB interface

Power supply: 4x1.5 AAA size (UM-4) battery

Power off: 2 modes

Manual off at any time

Auto power off after 5 minutes from last key operation

Operating conditions:

Temperature: 0~50°C (32~122°F)

Humidity: < 90% RH

Dimensions:

Main unit: 140x70x31mm 5.5x2.8x1.2inch

Sensor: 192x44x44mm

Length of pin: 25mm

Diameter of pin: 2.3mm

Distance between 2 pins: 18mm

Weight: 175g (not including batteries) 6.17oz

Standard accessories included:

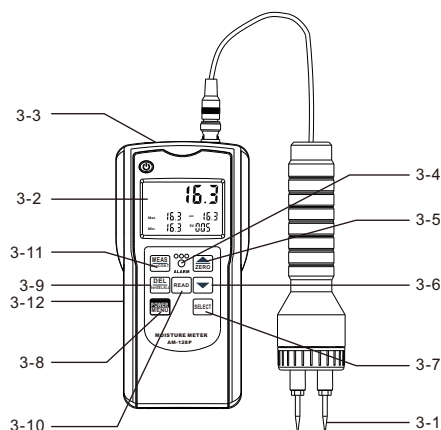
Carrying case 1 pc.

Operation manual 1 pc.

Optional accessory

Cable and software for USB

3. FRONT PANEL DESCRIPTIONS



- | | |
|--------------------------|--------------------------------|
| 3-1 Pin probe | 3-7 Select key |
| 3-2 Display | 3-8 Power/Menu key |
| 3-3 Data cable interface | 3-9 Delete key |
| 3-4 Color coded LED | 3-10 Read key |
| 3-5 Plus/Zero key | 3-11 Measure key |
| 3-6 Minus key | 3-12 Battery compartment/Cover |

4. MEASURING PROCEDURE

4.1 Depress the 'power key' and release to power on the meter.

4.2 To check if the material code is right by pressing and releasing the 'Select key'. Such code can be changed by the 'Plus/Zero key' or 'Minus key' when the 'cdxx' is on the display. Here 'cd' is the abbreviation for 'code' and 'xx' is the material no. If keep depressing the 'Plus/Zero' or 'Minus key', the material code will step into next code about every second and releasing it till the material code is right.

4.2.1 Code selection

The material code for the Pin-type mode is listed in the table on page 8. Please select the standard code 'cd00' if the material to be measured is not listed in the table or to ascertain its material code by the standard oven-drying method.

4.2.2 Factors affecting the choice of material code

There are many factors to affect the material code, for instance, different places, different soil even if in a same place will lead to different code for a same material. The better way to ascertain the material code is based on standard tests by oven-drying of commercial samples of the material to be measured. The code by which the measuring results are closest to those of oven-drying method is the right code. Write down the code for such material for later uses.

4.3 Moisture measurement

4.3.1 Push pins firmly into the surface of the

material about 6mm deep at the required point.

4.3.2 Read the moisture level value from the display and note the moisture condition of the material from the colour coded LED.

4.4 Zero calibration

The zero feature enable the user to compensate for the effect of changes in both temperature and humidity. Zero calibration should be carried out independently in different modes.

5. STATISTICS

The gauge calculates and displays a statistical analysis of readings as they are taken. The statistics available are:

* Last value

* Mean value marked by Ave

* Highest Reading marked by Max.

* Lowest Reading marked by Min.

* Number of Readings taken

When stored data exceed 99 groups, the latest value will be memorized, while the earliest one will be deleted, and so on.

6. STORING AND RECALLING READINGS

6.1 Readings taken are automatically saved to the memory of the gauge. The memorized data can be browsed by pressing and releasing the 'Read key' to enter into the browsing state marked by "RD" on the display.

6.2 In the browsing state, all the readings memorized can be recalled on the display by depressing the 'Plus/Zero key' or the 'Minus key'.

6.3 To delete singly a memorized value in the memory, just locate the reading to be deleted by

the key 'Plus/Zero key' or 'Minus key', then press and release the 'Delete key'. If there is an 'Err0' on the display, it indicates there is no reading to delete any more.

6.4 To quit to the measurement state, just depress the 'Zero key'.

7. DELETING READINGS

7.1 To delete a reading on the display, just press the 'Delete key' no matter in the measurement state marked 'SV' or in the browsing state marked by 'RD'. Go into the browsing state by 'RD'. Go into the browsing state by pressing the 'Read key'.

7.2 To delete all the readings in the memory, just depress the 'Delete key' in the measurement state marked by "SV" on the display for about 5 seconds till the number of readings memorized becomes 0.

8. ALARM LIMITS

8.1 There is a coded coloured LED indicating the status of moisture. It is controlled by 2 alarm limits. The factory settings are as follow.

AL1=13 and AL2=18

If the reading < AL1, the green LED is on.

If the reading > AL2, the red LED is on.

If the reading lies between AL1 and AL2, the yellow LED is on.

Users can change the alarm limits when as per their intention.

8.2 How to set the alarm limits

8.2.1 Depress 'Select key' and not release it till

'AL1' 'AL2' appears on the Display. It is about 3 seconds from starting depressing the 'Select' key'.
8.2.2 Such value can be changed to your intended Value by depressing the 'Plus key' or 'Minus key'. Depress the Select key to return to the state of measurement. If the second limit AL2 is less than the first limit AL1, the setting is invalid and the factory settings for AL1 and AL2 are restored to AL1=13 and AL2=18 automatically.

9. CONSIDERATIONS

9.1 This instrument is of very high input resistance. Every parts have good insulation. Please keep it in a dry, dustproof place.

9.2 The measurement result may be different if taking the measurement from different directions of the surface. That is because water in the material is not distributed evenly.

10. BATTERY REPLACEMENT

10.1 When it is necessary to replace the battery, the battery symbol '  ' will appear on the display.

10.2 Slide the Battery Cover (3-4) away from the instrument and remove the batteries.

10.3 Install the batteries (4x1.5vAAA/UM-4) correctly into the case.

10.4 If the instrument is not used for a extended period, remove batteries.

11. TRANSFERRING READINGS TO A COMPUTER

11.1 Install the software on your PC, please always click 'the continue' button in the installing process.

11.2 Connect your gauge to your PC using the

optional cable.
11.3 Switch on your gauge and ensure the Reading Screen is displayed.
11.4 Start the software and follow the instructions included with the software Demo.EXE.

12. APPENDIX: CODE TABLE FOR A PIN MODE

Code	Materials
Cd00	Abies grandis, Acer macrophyllum, Maple, Acer saccharum, Pine(scots), yellow Pine, Dalbergia latifolia, Dipterocarpus zeylanicus, Eucalyptus microcorys, Fraxinus excelsior, Cupressus spp, Pinus contorta, Pterygota bequaertii, Quercus robur, Pinus sylvestris, Balsa, Boxwood (maracaibo), red Gum(American), Gum spotted, Gurjun, Birch, Cypress (African) Karri, Oak(European), Oak(Japanese), black Poplar, Redwood(Baltic European), Rosewood (Indian), Pine (lodgepole), Tallowwood, Walnut (American), Kapur
	Araucaria bidwilli, Eucalyptus crebra, Eucalyptus saligna, Flindersia brayleyana, Fraxinus Americana, Intsia bijuga, Podocarpus dactyloides, Sequoia sempervirens, Pinus pinaster, Gum(southern), Mahogany (west Indian), Douglas fir, Maple (queensland), red (light or dark) Meranti, white Meranti, Redwood(Californian), Walnut (new guinea), white Pine (new Zealand), Araucaria angustifolia
Cd02	Distemonanthus benthamianus, Jarrah, Endiandra palmerstonii, Erythrophileum spp, Abies alba, Fagus sylvatica, Grevillea robusta, Juglans regia, Larix deciduas, Larix occidentalis, Podocarpus spicatus, Picea abies, Pinus caribaea, Pinus nigra, Pinus palustris, Pinus ponderosa, Pinus radiata, Taxus baccata, Thuja plicata, Tsuga heterophylla, red Cedar (western), Chestnut, Greenheart, Hemlock (western), Larch (European), Larch (Japanese), Queensland walnut, red Seraya, Spruce, Silky oak(African), Silky oak(Australia-n),Pine(Corsican),Pine,radiata, Walnut (European), Walnut (queensland), Whitewood, Yew, Pine (ponderosa), Stringybark, Oak (tasmanese)
	Khaya senegalensis, Podocarpus totara, Quercus cerris, Ulmus American, Ulmus procera, Ulmus thomasii, Afzelia, Kauri(new Zealand), Lime, Elm(English), white Elm, Matai, Oak(Turkey), Pyinkado

Code	Materials
Cd04	Acer pseudoplatanus, Carya glabra, Sycamore, Cassipourea elliptii, Dipterocarpus (keruing), Teak, Cordia alliodore, Larix occidentalis, Pterocarpus soyauxii, Hickory, Padauk (African)
Cd05	Afrormosia elata, Diospyros virginiana, Gonystylus macrophyllum, Pterocarpus indicus, Afrormosia, Amboyna, Basswood, Coachwood, Persimmon
Cd06	Calophyllum brasiliense, Guarea cedrata, white Guarea
Cd07	Abies procera, Agathis robusta, Betula pendula, Croton megalocarpus, Prunus avium, Agba, Birch(European), Cedar (west Indian), black Guarea, Kauri (queensland), Walnut (African), Cherry (european), Utile
Cd08	Chipboard, Paper
Cd09	Building, Wall, Concrete

Specifications to change without notice
NOTICE: WE ARE NOT RESPONSIBLE FOR
TYPOGRAPHICAL ERRORS