Thanks for choosing our moisture meters! For your easy to master this instrument as soon as possible, please read following instructions carefully and always keep this meter within easy reach.

# PIN & INDUCTIVE MOISTURE METER

MS360

VER.1401360

Pin type and Inductive moisture meter MS360(2 in 1) is used for measuring moisture content of wood, Timber, paper, Bamboo, Carton, Concrete, Textile, Medicine, Chemical and other materials. It applicable of woodwork, paper making, flakeboard, furniture, Chemical traders, construction industry and other relevant industry.

## 1.Features

- 1.1 It is portable, compact, easy to use and the moisture measurement readings are instant.
- 1.2 Digital display with back light gives exact and clearly reading although you stay at the somber conditions.
- 1.3 It will save time and expense by monitoring dryness and helps to prevent deterioration & decay caused by moisture whilst in storage, therefore processing will be more convenient and efficient.
- 1.4Manual off at any time .Auto power off after 5 minutes from last operation.
- 1.5 Data hold function. Low battery alert.
- 1.6 With 2 Testing Modes. Pin type and Inductive type changeable.

## 2.Specification

Display: 4 digital LCD with high lighted backlit.

Measuring range:

Pin type: 0-80%
Inductive Type: 0-90%
Operating conditions:
Temperature: <60°C
Humidity: 5%-90%RH

Resolution: 0.1

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

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

Dimensions:

Main Unit: 140mm×60mm×22mm
Sensor: 175mm×40mm×20mm
Weight: 182g (not including batteries)

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Guarantee: 1 year

## Codes Table(Inductive type)

Codes Table(Inductive type)		
Density kg /m³	Code	Referencematerial
220	00	Foam
250	01	Soft wood
280	02	Felt
320	03	Peat
400	04	Charcoal Coke
440	05	Coke
480	06	White Lime
520	07	
560	80	Veneer
600	09	Timber ,Chipboard
800	10	Coal ash(dry),Alcohol
1000	11	Polyethylene ,paraffin Bamboo ,ABS
1200	12	Cement ,Clunch
1400	13	Bakelite ,Fibre pasteboard
1600	14	Rubber、Sand(dry)
1800	15	Stone、Grit(dry)
2000	16	Vitriol(87%) Sand(wet)、Bricklaying
2200	17	Quartz Glass, Diatomite
2500	18	Concrete、Asbestos China
3000	19	Marble, Granite

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<sup>\*</sup>The tables only for reference.

## Codes Table(pin type)

CODE	Referencematerial
Cd01	Chestnut, Greenheart, Hemlock (western), Larch (European), Larch (Japanese), Queensland walnut, red Seraya, Spruce, Silky oak(African), Silky oak(Australian), Pine (Corsican), Pine, radiata, Walnut(European), Walnut (queensland), Whitewood, Yew, Pine(ponderosa), Stringybark, Oak (tasmanese)
Cd02	Araucaria bidwilli, Eucalyptus crebra, Eucalyptus saligna, Flindersia brayleyana, Fraxinus Americana, Intsia bijuga, Podocarpus dacrydioides, 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
Cd03	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
Cd04	Acer pseudoplatanus, Carya glabra, Sycamore, Cassipourea elliotii, Dipterocarpus(keruing), Teak, Cordia alliodore, Larix occidentalis, Pterocarpus soyauxii, Hickory, Padauk(African)
Cd05	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
Cd06	Afrormosia elata, Diospyros virginiana, Gonystylus macrophyllum, Pterocarpus indicus, Afrormosia, Amboyna, Basswood, Coachwood, Persimmon
Cd07	Calophyllum brasiliense, Guarea cedrata, white Guarea

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don't touch the back sensor), the value showed on display will be the moisture content of your sample material. The Sensor and materials are touched more tighter, and moisture content of samples are more accurate. If the testing value is different from the true moisture content, please adjust the testing code till it closer to the true value. Depress Fun Key, the display will showed the recent code. If the testing value is higher than the true value, then press "\wedge" key (If the testing value is lower than the true value, then Press "▼" key)to adjust the code to getting the true value and keep this code in your mind for future testing the same materials.

## 6. Maximum Hold Function

Depress the Hold key, the symbol "max" will be showed on display, then the max value must be stored on display when measuring process. Depress the Hold key again, this function will be canceled.

## 7. Backlight Setting

Please Depress 1-10 to open the light when you stay at the somber conditions; you can Depress again, the light of meter

## 8. Power Off

Depress Power Key or it will power off automatically if the meter no operation after 5 minutes.

## 9. Replace Batteries

When battery symbol showed on display, it must replace the batteries cover ,put the batteries into the hole correctly.

## 10.Warning Setting

10.1 Depressing Fun Key and don't release until "AL2" showed on display(it will takes 5 seconds to complete operation), then press "▲" key or "▼" to choose your suitable value according to your needs, press FUN key again back to the operation state.

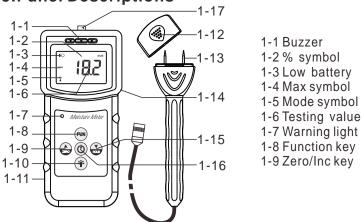
10.2 Setting the "AL1" just the same ways as "Al2".

10.3 Usually ,"AL2"must larger than "AL1", if the "AL2" less than "AL1" during setting process, then the instrument will be returned back the factory setting, just to say, AL1=13, AL2=18.

## The meaning of the light:

Testing value < AL1, Green Led Light showed means a safe state; AL1 < Testing Value < AL2, the yellow light showed means a borderline state: Testing value > AL2, the Red light showed means a damp state.

#### 3. Panel Descriptions



1-1 Buzzer 1-2 % symbol 1-3 Low battery 1-4 Max symbol 1-5 Mode symbol

1-11 Battery cover 1-12 Probe cover 1-13 Pin probes 1-14 Inductive probe

1-10 Backlight key

1-15 Hold/Dec key 1-16 Power key 1-17 Socket

## 4. Operation Procedure

4.1 Turn on the power key, the symbol "0" will be showed on display, and the testing symbol will showed lower left of Display." 

¬ means the Inductive Mode, "▲" Means the Pin Type Mode.

## 4.2 How to Change the Testing Mode?

Depress the FUN key and not release until the "CHA" showed on display, you can change the mode by "\vec{\vec{n}}" "\vec{\vec{n}}" symbol.

- 4.3 It will need zeroing if the display showed other value, please depress ZERO key while the Pin probe and Inductive sensor without touch anything, or zeroing is not efficient. Zeroing can decrease the effect from the temperature and humidity in the air.
- 4.4 For accurate testing, Please choose the reference codes when you testing your materials. (please refer to the codes table below). There are 8 groups codes in Pin mode CD00-CD07 and 20 groups codes in Inductive mode CD00~CD19. Depress Fun Key and not release until the "CDXX" showed on Display, you can choose the code by Press " ▲ "and " ▼ " keys, then repress the Fun Key for confirmation.

#### **5.Moisture Measurement**

- 5.1 Pin Type: Hold the instrument with your hand, then take off the cover of the probe and insert the needles into the materials straightly(not less than 5mm depth), the value showed on display will be the moisture content of your sample material.
- 5.2 Inductive Mode: Hold the instruments with your hand, put the back inductive sensor on your testing material, (Note: your hand

## Notes:

- 1. The moisture content in the material are not the same, the same material in different part will get the different moisture value, so the results of moisture are not the same.
- 2. The Plug and socket of pin probe have direction, please fix it accurately according the concave and convex symbol.
- 3. The depth of pin mode will effect the testing result. Usually, the needle insert are more deeper, the testing value are more higher, so please keep the same depth when testing the same material.
- 4. When Inductive Mode Testing, if the tested material with smooth and clean, you can measure the moisture content with lightly touching; but if the surface of the tested material with uneven or soft, please touch it tightly.
- 5. Please clean up the surface of tested materials before testing.
- 6. Please take out the batteries if the instruments without use for a long time.

## Codes Table(nin type)

Codes Table(pin type)		
CODE	Referencematerial	
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(Iodgepole), Tallowwood, Walnut (American), Kapur	
Cd01	Distemonanthus benthamianus, Jarrah, Endiandra palmerstonii, Erythrophleum 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),	