

## **Technical Data Sheet**

Pressure / Temperature / Humidity / Air Velocity / Airflow / Sound level



# **HM 100** Pin moisture meter







## **Functions**

- Indication of humidity percentage for 4 types of different material :
  - > Hardwood
  - Softwood
  - ▶ Plaster
  - > Bricks and concrete
- Minimum and maximum values for each type of material
- Protection cap and auto-test

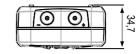
### Technical features

Display	4 lines, LCD technology. Sizes 50 x 34.9 mm. 2 line of 5 digits of 7 segments (value) 2 line of 5 digits of 16 segments (unit)		
Housing	Shock-proof made of ABS, IP54 protection		
Keypad	Metal-coated with 5 keys		
Conformity	electromagnetical compatibility ( NF EN 61326-1 guideline)		
Power supply	1 alcaline battery 9V 6LR61		
Environment	neutral gas		
Operating temperature	erature from 0 to 50°C		
Storage temperature	from -20 to +80°C		
Auto shut-off	adjustable from 0 to 120 min		
Weight	200 g		
Languages	French, English		



### **Dimensions**

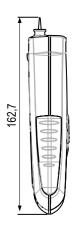
• Top view



• Front view

Side view





## Specifications

Number	Material	Detail	Measuring range <sup>1</sup>	Accuracy*
1	Softwood	Birch, Beech, Spruce, Larch, Cherry tree, Walnut	From 10 to 50 %	± 1 %
2	Hardwood	Oak, Pine, Maple, Ash, Pin Douglas	From 9 to 50 %	±1%
3	Concrete and plaster		From 0 to 15 %	± 1 %
4	Bricks		From 0 to 15 %	± 1 %

<sup>&</sup>lt;sup>1</sup>If the measurement is lower than the low limit, the instrument will display « Lo ».

## Working principle

#### Measurement of the electrical resistance

The way how to determinate material moisture used today is the measurement of the wood electrical resistance.

A withered material is highly resistant to electrical current. Indeed, water presence in material modifies the reaction of this material when it is submitted to an electrical current: the more there is water in material, the lower is its resistance and current circulation is easier. If we consider this variation of resistance according to material moisture, we can observe a precise regularity which, apart from a few exceptions, follows a similar curve with almost all wood species, concrete plaster and bricks. So, a measurement instrument able to indicate material resistance can provide a direct measurement of present moisture with the help of a given scale.

#### Working principle

The principle consists on **making pass** an electrical current between two pins that are pushed in the wood as the figure below. Water is conductive, so, the more the wood will be wet, the more the current will pass.

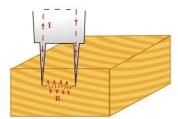


Figure 1: Measurement principle of electrical resistance

## Warranty period

Instruments have 1-year guarantee for any manufacturing defect (return to our After-Sales Service required for appraisal).

## Supplied with ...



#### Supplied withOption

DESCRIPTION	HM 100 S
Protection cap	•
Two sets of pins	•
Fitting certificate	•
Transport case	•
Calibration certificate	Ö.

#### Accessories (See related datasheet)

PH100	CE 100
One set of two additional pins	Protective cover with magnet and holding system

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EXPORT DEPARTMENT

Tel: +33. 1. 60. 06. 69. 25 - Fax: +33. 1. 60. 06. 69. 29

e-mail: export@kimo.fr

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<sup>\*</sup>All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with required compensation.