

## Technical Moisture Meter FMC

### **FMC Moisture detector for building materials to measure absolute humidity**

The FMC Moisture detector can accurately measure absolute humidity in diverse building materials. To detect humidity, the FMC moisture detector has a connection for external sensors which can either be inserted into the building material or placed on it. This detector corrects the measured humidity value in real percentages in relation to the selected material and the temperature (according to dry / absolute humidity). The humidity detector can be used both in input controls and to measure on site: concrete, asbestos, cement, plaster, lime-stone, pavement, bricks, etc. The FMC moisture detector has some characteristic curves stored to measure different materials. These curves can be displayed by accessing them through the keyboard. It is important to choose a humidity probe that best suits the material which is going to be measured. There are different models for different applications and materials. The FMC [humidity detector](#) can be used for all kind of jobs.

- High accuracy
- High robustness
- Characteristic curves AS / NZS 1080.1
- Adjustable characteristic values of wood
- Adjustable characteristic values of any material
- Adjustable characteristic paper values
- Temperature correction (manually)
- Detector of resistance humidity
- Adjustable auto shut-off
- Diverse humidity probes can be adapted to the detector
- Additional calibration block

### **Characteristic material curves / Temperature compensation**

With the FMC humidity detector for building materials it is possible to determine with high accuracy the real moisture content by introducing the corresponding characteristic value of every material (for the characteristic curve of the stored material) in the detector. Some charts with more than 500 characteristic values for wood, building materials and paper will be included in the delivery.

Temperature must be taken into consideration. As the temperature of the material influences its electric power capacity (and also its humidity), a temperature compensation has to be carried out. It can be adjusted in the detector with 1°C intervals (manual compensation). Below you will see an extract of the characteristic curves in alphabetical order of all the most important wood types (they are stored in the humidity detector). We can also send another list with more wood types.

- |                             |                |
|-----------------------------|----------------|
| Softwood                    | Deciduous wood |
| - Fir                       | - Abachi       |
| - Canadian Fir (east, west) | - Abarco       |

- Agathis (heavy, light)	- Birch (European)
- Alcere	- Abura
- Alerce (European, Japanese, Russian)	- Afrormosia
- Alerce (American, East, West)	- Poplar
- Red Cedar	- Alone
- Douglasie (heavy, light)	- Amburana
- Mañio	- Avodire
- Pine (European, Nordic)	- Baboen
- Pine (light, heavy, Caribbean, American)	- Balsa
- Pine (European, Nordic, Kern, Spint)	- Bilinga
- Pine (French)	- Bodo
- Pine Parana	- Bomanga
- Pine Radiata	- Bonkonko
- Pine Sitka	- Bosse
- Pine Sugar	- Mahogany (Bassam, Honduras, sapeli, sipo, tiama)
- Pine Weymouth	- Chestnut (noble)
- Yellowwood	- Cherry-tree (European, American)
- Redwood (Californian, heavy, light)	- Cedar
- Sugi	- Poplar
	- Keruing (light, heavy)
	- Dabema
	- Danta
	- Dibetou
	- Durian
Building materials	- Essessang
- Papier-mâché	- Framire
- Concrete (200 kg/m³)	- Freijo
- Concrete (350 kg/m³)	- Ash (European)
- Concrete (500 kg/m³)	- Fuma
- Gas concrete	- Beech (European, vapourised, non-vapourised)
- Bricks	- Igaganga
- Lime mortar	- Ilomba
- MDF	- Iroko
- Floor (anhydrite)	- Jelutong
- Floor of cement (Arduparid)	- Kapur
- Floor of cement mortar (1 : 3)	- Kosipo
- Floor (Elastizell)	- Krappa
- Floor gypsum	- Kwarie
- Lime-stone	- Lauan (red)
- Asbestos - cement	- Limba
- Asphalt fiber	- Makore
- Gypsum	- Mansonia
- Gypsum (synthetic)	- Matakki
	- Matoa
	- Mengkulang
Paper / cardboard / carton	- Meranti (dark red, light red)
- Assi	- Movingui
- Bilerud	- Muninga
- Paper (in general)	- Niangon
- Kraft paper (150 g/m²)	- Walnut (European, American)
- Kraft paper (440 g/m²)	- Satin walnut
- SC paper (150 g/m²)	- Oega
- PWA ...	- Elm
	- Okoume
	- Padouk (African)
To take into account:	- Pear tree

Measuring values will be higher in chips or knots. On the contrary, if measurements are taken on breaks, the humidity value will be lower in relation to the real humidity value (absolute humidity).

In both cases, you should measure near the area that is going to be measured and use the mean value.

Measurement accuracy:

Due to the inhomogeneous composition of wood, oscillations in gross density can appear while measuring the same wood type so you will have to take diverse humidity measurements. The overall result will be the mean value calculated by the detector.

Humidity probes / measurement sensors:

Here you will see a wide range of probes which can be adapted to different measuring instruments. You will be able to choose the probe that best suits your needs.

We would be pleased to advise you on the information you need. Call us at: +44 ( 0 ) 2380 98703 0.

- Peroba
- Peroba (pink)
- Banana tree
- Possentrie
- Ramin
- Oak (European, light, heavy, American, white, red, Japanese)
- Tasmanian Oak
- Willow
- Sapupira
- Sen
- Sepetir
- Seraya (red, white)
- Soemaroepa
- Tabaca
- Tchitola
- Teca
- Lime tree
- White Tola
- Wane
- Yang

### Technical specifications

Measurement ranges	5 ... 99 % H <sub>2</sub> O for wood 0 ... 99 % H <sub>2</sub> O for building materials
Resolution	0.1 %
Accuracy	0.3 %
Measurement depth	depends on the selected sensor
Measuring principle	measurement of resistance humidity
Temperature range	0 ... 50 °C
Power	1 x 9 V battery selectable Auto Power Off to protect the battery
Dimensions	160 x 80 x 30 mm
Weight	260 g with the battery included

### Delivery contents

- 1 x FMC moisture detector for building materials
- 1 x battery
- 1 x protective housing
- 1 x user's manual and some information about measuring humidity (**corresponding electrodes must be required separately**)