



## moisture meters

for measuring the dampness in buildings



ETI manufactures a range of portable, pin-type (resistance) moisture meters for both the professional and the craftsman. Pin-type moisture meters are acknowledged as a reliable way to obtain percentage moisture readings in a wide range of building materials. The relationship between moisture content and electrical resistance provides consistent and accurate results over the range of 4% to the fibre saturation point, which is approximately 30%, dependant on the material.

### WME - wood moisture equivalent

ETI moisture meters are calibrated for wood but are also suitable for measuring other building materials. When testing wood, the instruments measure the actual percentage moisture content. However, when testing other building materials, the instrument measures the WME value of the material. The WME is the moisture level that would be attained by a piece of wood in equilibrium with the material being tested. As the critical moisture levels for wood are known, the WME measurements enable the moisture meter user to establish if materials are in a dry, borderline or damp condition.

### building materials

Some moisture is unavoidable and may even be necessary in certain building materials, but too much can cause mould, decay and other problems. ETI moisture meters are cost-effective instruments that can easily determine moisture levels - allowing the user to diagnose problems and make informed decisions with regard to remedial actions.

### problems in measuring moisture

The main problems arise from the 'structure' of the material being tested, in particular, the presence of other conductive material that can effect the reading. Therefore when measuring the moisture content of a material it is important to appreciate a number of factors:

- surrounding environment
- density of the material
- grain size or direction
- ability of a material to absorb moisture

### why measure moisture in floors & walls?

Many flooring materials use water-based adhesives, which are more likely to fail today than the older, traditional, solvent-based adhesives. Moisture can cause laminates to fail, tiles to lift and hardwood floors to warp or split. A newly poured concrete floor slab is usually the slowest-drying element of a building. Therefore it is important to measure the moisture content accurately to ensure a successful floor.

Measuring the moisture content of walls is a traditional method for locating damp and other related problems, i.e. damaged pipework, breached damp-proof courses etc. It is important to ascertain the cause of the dampness, i.e. rising damp, penetrating damp or condensation before any remedial action is undertaken.





## 7000 moisture meter timber & general building

- ✓ durable & rugged instrument for the professional
- ✓ five scales - concrete, plaster, two timber & reference
- ✓ colour-coded scales for ease of reading
- ✓ supplied in a polypropylene case

The 7000 is a compact, simple to use, general purpose moisture meter that is ideal for assessing the moisture content in buildings. The unit can be used for making rapid moisture assessments in a wide range of building materials including wood, brickwork, plaster and concrete. The instrument is housed in a flip-top polypropylene case and incorporates a clear analogue meter that has five colour-coded scales:- wood 1, wood 2, plaster, concrete and a reference scale.

The instrument measures free water in building materials, indicating the relative dampness of a material. Therefore, any high readings (in the absence of contaminating salts or carbonaceous materials) indicate a damp condition of approximately equal significance in wood, concrete, plaster or wallboard, regardless of their different moisture contents. The 7000 moisture meter is scaled with this in mind so that it can be used to measure moisture in a variety of materials.

The wood/timber scales are calibrated from 14% to 30% (wood 1) and 15% to 30% (wood 2). Comprehensive tables of wood groups are supplied for both scales. The plaster and concrete scales are calibrated from 8% to 20% (plaster) and 5% to 14% (concrete). The reference scale is calibrated 1 to 10 and is used to take comparison readings without reference to percentage moisture content. The scales incorporate colour-coded areas, red indicating high moisture content and green low.

Each unit is supplied with a remote 2-pin moisture probe with a one-metre PVC connecting lead which is ideal for taking readings in awkward places. The pins of the probe are fully replaceable by the user. The moisture meter's measuring pins are small and sharp which means that surface measurements can be taken with virtually no marks left behind. The 7000 moisture meter is ideal for many trades including surveyors, flooring contractors, wood product manufacturers and merchants. Each moisture meter is supplied with a moisture probe, instructions for use and 50 spare standard replacement pins. For full details of the range of probes available, see page 107.



specification	7000 moisture meter
range scale 1 (wood 1)	14 to 30%
scale 2 (wood 2)	15 to 30%
scale 3 (plaster)	8 to 20%
scale 4 (concrete)	5 to 14%
scale 5 (linear)	1 to 10
accuracy	±3%
battery & battery life	9 volt PP3 alkaline - 120 hours
sensor type	resistance probe (12.7mm spacing)
dimensions	58 x 127 x 195mm
weight	448 grams (including probe)

order code	description
224-070	7000 moisture meter
602-530	spare pins (50) - standard
602-535	spare pins (50) - hard



## 7150 timber moisture meter

- ✓ ideal for checking the moisture in a variety of woods
- ✓ supplied with a probe, carrying case & 50 spare pins

The 7150 is a compact timber moisture meter designed to be used by building professionals and tradesmen to check the moisture level of timber for moisture content diagnosis. The timber moisture meter incorporates a range of design features that make it simple to use and easy to read.

The analogue meter incorporates three colour-coded scales, wood scale 1 and 2 that indicate the moisture content of wood - 6 to 30% (tables of wood groups are supplied for both scales). A reference scale of 1 to 10 is included for comparison readings without reference to a particular % moisture content.

Scale 1 - calibrated from 15 to 30% moisture content

Scale 2 - calibrated from 6 to 16% moisture content

Scale 3 - reference scale calibrated from 1 to 10

For alternative probes available, see opposite.

order code	description
224-073	7150 timber moisture meter
602-530	spare pins (50) - standard
602-535	spare pins (50) - hard
830-200	protective PVC boot

specification	7150 moisture meter
range scale 1 (wood 1)	15 to 30%
scale 2 (wood 2)	6 to 16%
scale 3 (linear)	1 to 10
accuracy	±3%
battery	9 volt PP3
battery life	120 hours
sensor type	resistance probe (12.7mm spacing)
dimensions	36 x 80 x 147mm
weight	190 grams



## 7150 kit timber moisture meter

- ✓ a complete kit for checking the moisture in woods
- ✓ housed in a protective carrying case

The 7150 timber moisture meter is available as a complete moisture measuring kit.

The kit contains:

- 1 x 224-073 timber moisture meter
- 1 x 180-160 two-pin probe
- 1 x 180-170 heavy duty hammer probe
- 1 x 602-530 pack of 50 general purpose pins
- 1 x 602-537 pack of 10 heavy duty pins
- 1 x 839-050 PP3 battery
- 1 x 834-715 protective carrying case

For alternative probes available, see opposite.

order code	description
224-079	7150 timber moisture kit





## 7200 building moisture meter

- ✓ general purpose building moisture meter
- ✓ supplied with a probe, carrying case & 50 spare pins

The 7200 is a compact, easy to use, general purpose, building moisture meter designed to be used by building professionals and tradesmen to check the moisture level of building materials (plaster and concrete) for moisture content diagnosis.

The colour-coded analogue meter indicates high or low levels of WME % moisture content of plaster or concrete over the range of 4 to 20%. A reference scale of 1 to 10 is also included for comparison readings without reference to a particular percentage moisture content.

- Scale 1 - calibrated from 8 to 20% moisture content
- Scale 2 - calibrated from 4 to 14% moisture content
- Scale 3 - reference scale calibrated from 1 to 10

For alternative probes available, see below.










order code	description
224-072	7200 building moisture meter
602-530	spare pins (50) - standard
602-535	spare pins (50) - hard
830-200	protective PVC boot

specification	7200 moisture meter
range scale 1 (plaster)	8 to 20%
scale 2 (concrete)	4 to 14%
scale 3 (linear)	1 to 10
accuracy	±3%
battery	9 volt PP3
battery life	120 hours
sensor type	resistance probe (12.7mm spacing)
dimensions	36 x 80 x 147mm
weight	190 grams

## moisture probes

for use with 7000, 7150 & 7200 moisture meters

		order code
 26 x 33 x 60mm overall <b>general purpose probe</b>	This standard, general purpose, two-pin (12.7mm spacing) moisture meter probe is ideal for measuring moisture in a variety of building materials. Supplied with a one metre PVC lead and BNC connector.	180-160
 Spare standard pins Ø1.2 x 13mm (fitted) pack of 50  Spare hard pins Ø1.2 x 7mm (fitted) pack of 50		602-530 602-535
 Ø40 x 290mm overall <b>heavy duty hammer probe</b>	This hammer probe is designed for measuring moisture in wood and similar materials. The pin's insulated shanks ensure the measurements are taken at the pin tip, allowing varying depth measurements. Supplied with a one metre PVC lead and BNC connector.	180-170
 Spare standard pins Ø2.4 x 30mm (fitted) pack of 10		602-537
 Ø3.3 x 150mm overall <b>deep wall probe</b>	This insulated deep wall probe measures moisture deep within walls, regardless of surface dampness. The insulated shanks should be inserted into pre-drilled holes. Each pair of probe assemblies is supplied with a one metre PVC lead and BNC connector.	180-180
 Spare standard probes Ø3.3 x 130mm (pack of 2)		602-539

