



C400 DIGITAL TIMBER MOISTURE METER

An affordable digital resistance type moisture meter suitable for timber handlers, inspectors, tradesmen and home owners.

This instrument is simple to use and is also capable of correcting readings for temperature and common NZ building timbers.

The C400 meters measure the moisture content of timber using the electrical resistance method specified in the AS/NZS 1080 Standard.



C400-S



C400-P

Features

Calibrated to AS/NZS 1080 Standard (traceable)

Range: 10% to 100% moisture content

Optimum accuracy from 13% to 40% moisture content

Compact size: 130 x 67 x 25mm, weight 160gm

Sealed water resistant case

Long battery life on low cost 9V battery

Low battery indicator

Ambient temperature measurement on built in sensor

Automatic temperature correction of reading (selectable)

Correction scales for Standard, untreated Radiata Pine, NZ H1 & H3 treated Radiata Pine

Supplied with either:

Built in 18mm pin electrodes model C400-P

or

BNC connector for external slide hammer electrode model C400-S

Adaptor available to use pinned meter with slide hammer

CARREL & CARREL LTD

MANUFACTURERS, IMPORTERS AND DISTRIBUTORS OF ELECTRICAL ENGINEERING PRODUCTS

POSTAL ADDRESS: P O BOX 2102, AUCKLAND 1140, NEW ZEALAND

FACTORY AND OFFICE: 3 McDONALD STREET, MORNINGSIDE AUCKLAND

TELEPHONE: +64-9-846 9124 FACSIMILE: +64-9-846 8555

EMAIL: sales@carrel.co.nz WEB: www.carrel.co.nz



C400 DIGITAL TIMBER MOISTURE METER

The C400 moisture meters are initially set on the default settings which are:

No buzzer, no temperature correction and the standard scale (AS/NZS 1080 Standard Relationship).

These settings can be changed on a four way DIP switch located in the battery compartment (see below).

The C400-S is supplied with a BNC connector suitable for use with the CSH102 slide hammer electrode and has a battery fitted and is ready to use.

The C400-P is supplied with the electrode pins and battery already fitted and is ready to use.

Taking readings

C400-S Attach the slide hammer electrode unit and insert the pins into the sample. Hold down the button in the middle of the meter. The meter will briefly show the temperature, then display the moisture content in %. If the reading is below 10% (very dry timber) the display will flash "0.0". If the reading is more than 100% the display will flash "100.0". When the button is released the display will hold the reading for 5 seconds. To display the temperature give a very short press on the button.

C400-P Carefully insert the tips of the electrode pins into the sample and hold down the button. The meter will briefly show the temperature, then display the moisture content in %. If the reading is below 10% (very dry timber) the display will flash "0.0". If the reading is more than 100% the display will flash "100.0". When the button is released the display will hold the reading for 5 seconds. To display the temperature give a very short press on the button. Please note that excessive force on the pins will damage the meter and that such damage is not covered by our warranty. If you wish to take deeper readings into the sample you must use a slide hammer electrode such as the CSH102 with this meter. For this purpose a version of the meter is available fitted with a BNC connector instead of the pins. If both pins and slide hammer are required then an adapter is available.

Battery

The meter uses a common PP3 (6F22) type 9V battery. The meter automatically senses the battery voltage during a reading. If the battery needs replacing a message "Lo-b" will flash. Open the battery compartment by unscrewing two (flat head) screws on the cover.

Settings

The optional functions are selected using the switches in the battery compartment. The function is selected by pushing the relevant switch forward.

- Switch 1: Buzzer If the reading exceeds 20% the buzzer will sound, for use where the display is not visible.
- Switch 2: Temperature correction The reading is automatically corrected for the difference of ambient temperature from 20°C. The display will flash "t" on the LH side.
- Switch 3: Pine correction The reading is automatically corrected for untreated Radiata pine. The display will briefly show "PinE" at the start of the reading.
- Switch 4: H1/H3 correction The reading is automatically corrected for H1 and H3 treated timber. The display will briefly show "H1H3" at the start of the reading.

Note Switch 3 over-rides Switch 4. If both are up then untreated Radiata is selected.

Precautions

The meter will not work correctly if it is in a dirty or damp state. It should not be left in the kiln or outside nor be exposed to liquids or chemicals. This meter is specifically designed to work well in the range 13% to 40% moisture which is the range of interest for most users. It has a reduced resolution from 13% down to 10% and does not read below 10%. Such levels are very dry and only of interest to some timber processors. The values above 40% are very wet, are not specified in the AS/NZS 1080 Standard and are only an indication of the approximate moisture content. The ambient temperature is taken from a sensor inside the meter which may differ from the temperature of the timber. A version of the meter with an external temperature sensor is available and will overcome this difficulty.

MJH