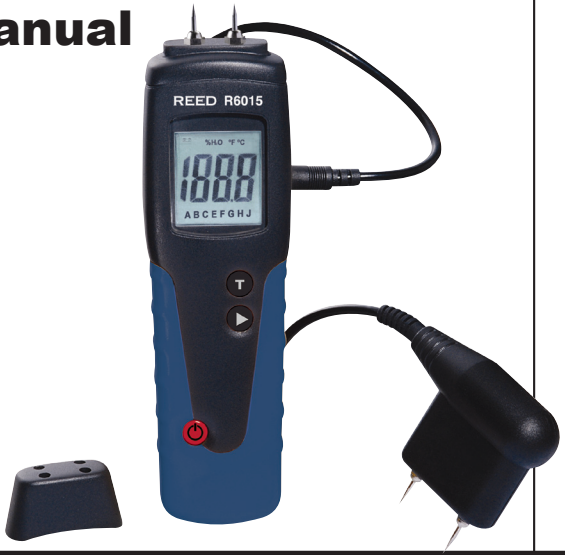
REED

Model R6015

Wood Moisture Meter

Instruction Manual



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Features

- Measure moisture content in wood either directly with the built-in moisture pins or use the remote hand-press probe (included) on hard surfaces
- Automatic Temperature Compensation when used with included temperature probe improves accuracy of moisture measurements
- Memory contains 8 wood groups with calibrations for approximately 170 species of wood
- Built-in 2-point calibration check
- User settable Auto Power-Off with override
- Low battery indicator

Specifications

Measuring Principle:	Electrical resistance
Measuring Range:	6 to 99.9% MC
Accuracy:	±1% MC
Moisture Electrode:	8mm long replaceable contact pins
Temp. Compensation:	-31 to 176°F (-35 to 80°C)
Power Supply:	2 x AAA batteries
Dimensions:	7 x 1.9 x 2" (180 x 50 x 31mm)
Weight:	6.1 oz (175g)
Includes:	Remote hand-press moisture probe, temperature probe, protective cap, replacement pins, two AAA batteries, and a soft carrying case
Optional Accessories:	Replacement pins (model R6015-P)

Operating Instructions

This instrument is a conductivity moisture meter specifically designed for the timber industry. This instrument has eight calibration scales enabling the user to take accurate moisture measurements in 150 wood species. Moisture measurements can be taken using the integral pin electrodes or by using the heavy-duty moisture probe. When used with the temperature probe the moisture measurements are automatically corrected with respect to the ambient temperature. This instrument is switched ON by pressing the ⏻ button and switched OFF by pressing the ⏻ button for approx 3 seconds. The default auto power-off for this instrument is 5 minutes but can be set manually (see auto power-off set-up).

Taking a Measurement

Remove the cap to expose the needle electrodes or connect the heavy-duty moisture probe on the right hand side of this instrument and switch the instrument on by pressing the ⏻ button. Select the appropriate wood calibration scale (A, B, C, E, F, G, H or J) by referring to the enclosed wood calibration table (see calibration table for wood and common timber species) and by pressing the ▶ button. Push the needle pins or the heavy-duty moisture probe pins into the wood and observe the reading in the LCD display.

Measuring Without Temperature Probe

This instrument is calibrated for wood at 20°C (68°F). In general, timber that is hotter than 20°C will give higher readings and timber colder than 20°C will give lower readings. An approximate manual correction of 0.5% moisture content per 5°C may be subtracted from timber that is above 20°C. For timber that is below 20°C, a manual correction of 0.5% moisture content per 5°C may be added to the measured value.

Automatically Temperature Corrected (ATC)

Switch the instrument ON and select the appropriate wood calibration scale as detailed in 'Taking a Measurement'. Using a hammer and nail of nominal 3mm diameter, make a hole in the wood to be tested. Remove the nail and push the temperature probe into the hole until the tip is at the required depth.

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Connect the temperature probe into the instrument via the temp socket. Using the instrument to measure timber you can obtain the automatically temperature corrected (ATC) moisture value. If you need to read the current temperature of the timber press the T button, then the LCD will display the temperature. Press the T button again and the LCD will display the other °C or °F temperature. Press the ▶ button and the LCD will display the moisture value again.

Auto Power-Off Set-up

To change the default auto power-off times press the ⏻ and ▶ buttons together. Hold the ⏻ button and press the ▶ button to change the auto power-off time (to either disable the auto power-off or to set it from 1 to 9 minutes) by changing the code.

0 disables the auto power-off function, 1 sets the instrument to auto power-off in one minute, 2 sets it to two minutes, 3 to three minutes, and respectfully up to 9 for nine minutes for the instrument to auto power-off.

Calibration Check

There are two checked calibrators in the cap of this instrument. When checking the calibration, the A scale should be selected and the temperature probe must be disconnected. Use the needle to touch the two poles of calibrator. If correctly calibrated, the instrument will register $\%H_2O$ values in the range 17.7 to 18.3 (at the "T" calibration) and in the range 25.5 to 26.5 (at "B" calibration). If the range is over +/-1 the Instrument can't accurately measure the moisture of timber. Open the back cover and adjust the rheostat to make the tolerance meet the range.

Care and Maintenance

When the instrument is not in use, keep it in its pouch together with its accessories. Store the kit in a stable, dust-free environment out of direct sunlight. Remove the batteries from the instrument if it is to be stored for periods of more than one month, or when the battery symbol appears on the display. Be sure to check the condition of the accessories used with this instrument on a regular basis and replace them if they become worn or damaged.

Calibration Table for Wood

The calibration data in the below table is based on standard tests by oven drying commercial samples of the various wood species, between 7% and fiber saturation. Above fiber saturation point (25%-30%) readings are approximate and only generally apply to wood that has been dried and re-hydrated. Readings higher by 1%-2% may be obtained where wood has been impregnated with a water-borne preservative. High readings obtained with some plywood of peculiar composition must be treated with caution. For measuring building materials select scale A and refer to the following table so you can obtain the building material moisture value.

Std Scale A	Build	Species Group							Chip-board
		B	C	E	F	G	H	J	
%H2O									
6	3								
7	4.8	9.2	9.4	8.6	6.8	6.7	11	10	
8	7	10	10	9.3	7.4	7.4	12	11	
9	8.7	11	11	9.7	7.9	8.1	12	12	8.5
10	10.5	12	12	10	8.6	8.8	13	12	9.4
11	12.2	13	13	11	9.5	9.7	13	13	10.5
12	13.3	14	14	12	11	11	14	14	11.5
13	14.8	15	15	13	11	11	15	15	12.5
14	16.2	15	16	13	12	12	15	16	13.5
15	16.6	16	17	14	13	13	16	17	14.4
16	17.2	17	18	15	13	13	16	18	14.9
17	18.8	18	19	16	14	14	17	19	15.3
18	19.6	18	20	16	15	15	17	19	16.1
19	20.2	19	21	17	16	15	18	20	16.7
20	20.6	20	23	18	17	16	18	21	17.2
21	20.9	21	24	19	18	17	19	22	18.3
22	21.5	22	25	29	18	17	20	23	19.1
23	22.1	23	26	20	20	19	21	25	19.9
24	22.7	24	27	21	20	19	22	26	20.5
25	23.2	24	28	21	21	19	23	26	23
26	23.6	25	29	22	22	20	24	27	
27	24	27	30	23	24	21	25	28	
28	24.2	28	31	24	25	22	26	29	
29	24.4	29	33	26	26	23	27	30	
30	24.6	31	34	27	28	24	28	31	
32	25								
37	25.8								
39	26.1								
40	27.2								
46.5	33								

Common Timber Species			
Cypress, Japanese (18-28%mc)	C	Guarea, White	H
Spruce, Japanese (18-28%mc)	C	Santa Maria	H
Cypress, Japanese (8-18%mc)	J	Cedar, WestIndian	J
Spruce, Japanese (8-18%mc)	J	Mahogany, West Indian	B
Meranti, Red (dark/light)	B	Birch, European	J
Redwood, Baltic (European)	A	Cherry, European	J
Spruce, Norway (European)	C	Empress, Tree	J
Ash, European	A	Fir, Noble	J
Ash, Japanese	A	Guarea, Black	J
Banga Wanga	A	Kauri, Queensland	J
Birch, Yellow	A	Mahogany, African	J
Boxwood, Maracaibo	A	Queensland Kauri	J
Fir, Grand	A	Walnut, African	J
Gum, Spotted	A	Cordia, American Light	F
Maple, Pacific	A	Pine, American long leaf	C
Maple, Rock	A	Pine, American pitch	C
Maple, Sugar	A	Pine, Caribbean Pitch	C
Myrtle, Tasmanian	A	Pine, Nicaraguan Pitch	C
Oak, European	A	Cedar, Western Red	C
Oak, Japanese	A	Gum, American Red	A
Panga Panga	A	Oak, American Red	A
Pine, Lodgepole	A	Oak, American White	A
Pine, Scots	A	Kauri, New Zealand	E
Pine, Yellow	A	Pine, New Zealand White	B
Poplar, Black	A	Abura	E
Pterygota, African	A	Afara	A
Rosewood, Indian	A	Aformosa	G
Sterculia, Brown	A	Afzelia	E
Walnut, American	A	Agba	J
Camphorwood, E African	C	Amboyna	G
Cypress, E African	A	Ayan	C
Olive, E African	B	Balsa	A
Silky Oak,African	C	Basswood	G
Silky Oak,Australian	C	Berlina	B
Ash, American	B	Binvang	E
Canarium, African	B	Bisselon	E
Cedar, Japanese	B	Bitterwood	F
Douglas Fir	B	Blackbutt	C
Fir, Douglas	B	Bosquiea	A

continued ...

Gum, Saligna	B
Gum, Southern	B
Maple, Queensland	B
Meranti, White	B
Pine, Bunya	B
Pine, Huon	B
Pine, Maritime	B
Pine, Parana	B
Pine, Red	B
Redwood, Californian	B
Pine, Japanese Black	B
Beech, European	C
Hemlock, Western	C
Larch, European	C
Larch, Japanese	C
Oak, Tasmanian	C
Pine, Corsican	C
Pine, Hoop	C
Pine, Ponderosa	C
Pine, Radiata	C
Pine, Sugar	C
Queensland Walnut	C
Seraya, Red	C
Spruce, Sitka	C
Stringybark, Messmate	C
Stringybark, Yellow	C
Walnut, European	C
Walnut, Queensland	C
Elm, English	E
Elm, Rock	E
Elm, White	E
Oak, Turkey	E
Pine, Kauri	E
Baguacu, Brazilian	F
Larch, Western	F
Padauk, African	F
Elm, Japanese Grey Bark	B
Walnut, New Guinea	B
Gegu, Nohor	H
Rubberwood	H

Chestnut	C
Coachwood	G
Dahoma	A
Danta	C
Erimado	F
Greenheart	C
Gurjun	A
Hiba	J
Hickory	F
Hyedunani	B
Iroko	F
Ironbank	B
Jarrah	C
Jelutong	C
Karpur	A
Karri	A
Keruing	F
Kuroka	A
Lime	E
Loliondo	C
Makore	B
Mansoia	B
Matai	E
Merbau	B
Missanda	C
Muhuhi	J
Muninga	G
Musine	J
Musizi	J
Naingon	C
Obeche	G
Odoko	E
Okwen	B
Olivillo	G
Opepe	H
Padang	A
Persimmon	G
Pillarwood	F
Pyinkado	E
Ramin	G

continued ...

Rubberwood	H
Sapele	C
Sen	A
Sycamore	F
Tallowwood	A
Teak	F

Totara	E
Turpentine	C
Utile	J
Wawa	G
Wandoo	J
Whitewood	C
Yew	C

Notes

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Notes

Pin, Kauri	C
Pin, Lodgepole	C
Pin maritime	C
Pin, Nouvelle-Zélande, blanc	C
Pin des marais, nicaraguayen	C
Pin, Parana	C
Pin, Ponderosa	C
Pin, Radiata	E
Pin, rouge	E
Pin, Scots	E
Pin à sucre	E
Pin, jaune	E
Peuplier, noir	F
Pterygota, africain	F
Pyinkado	F
Kauri de Queensland	B
Noyer de Queensland	B
Ramin	H
Séquoia redwood, Baltique (européen)	H
Séquoia redwood, californien	H
Bois de rose, indien	C
Bois à caoutchouc	A
Santa Maria	F
Sapele	A
Sen	F

Pin, japonais, noir	B
Seraya, rouge	C
Grevillea, africain	C
Grevillea, australien	C
Épicéa, japonais (8-18%mc)	J
Épicéa, japonais (18-28%mc)	C
Épicéa, Norvège (européen)	C
Épicéa, Sitka	C
Eucalyptus, Messmate	C
Eucalyptus, jaune	C
Sterculia, marron	A
Platane occidental	F
Pomme du Cayor	A
Teck	F
Totara	E
Térébinthe	C
Utile	J
Noyer, africain	J
Noyer, américain	A
Noyer, européen	C
Noyer, Nouvelle-Guinée	B
Noyer, Queensland	C
Wawa	G
Wandoo	J
Tilleul d'Amérique	C
If	C

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Notes