

**Scan Mode for Wood:**  
(only for Ligno-DuoTec BW)

**Spec. Gravity Range:** 0.3 - 1.0

**Measuring Range:** 5.4 – 60%

dependent upon wood species.  
Moisture readings above 25% are less accurate.

**Selectable Measuring Depth:**  
1/4" and 3/4"

can be changed to 7mm and 20mm

**Corrections for Wood Species:**

Setting 30-100. Settings for the most common wood species are listed on a separate card included with each meter.

For unlisted species the specific gravity can be entered instead of the wood species setting. For example: if the specific gravity is 0.42 the correct setting is #42. Values for the specific gravity for most woods can be found on the Internet by entering <specific gravity...> followed by the name of the wood.

The specific gravity can also be calculated, if the Weight (W) in

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ounces and the Length, Width and Heights in inches is available:

(Weight x 1.73)

(W x L x H)

**Reference Scale:** Setting 0 (0-99)  
For comparative readings of composite boards or laminates where no species setting can be found.

**Scan Mode Building Materials:**  
(for Ligno-DuoTec B and BW)

Comparative readings can be obtained in most building materials as long as the composition of the test sample does not change. Differences in readings indicate more or less moisture. If a dry sample is available, a base value can be established. Permissible moisture can vary for each application.

**Measuring Concrete:** Setting 25

Reference Scale (0-99.9)

based on Relative Humidity readings. The reference scale for concrete does not give moisture readings in percent, but allows finding areas of high and low moisture that may need

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further investigation. For best results take a series of readings and compare to readings from dry area.

More conclusive moisture testing is possible with the in-situ probes. The probes measure the evaporation out of the concrete, which is actually absorbed by the floor coverings.

**Measuring Sheetrock:**

Setting 15 (0-2.0%) Moisture readings are indicated in percent. A base value for dry is available: at 65% rel humidity and 70°F (20°C) sheetrock will reach an equilibrium moisture content between 0.7-0.9% depending on board manufacturer.

**Measuring all other Building Materials:** Setting 10 (0-99.9)

Reference Scale for comparative readings, for materials lighter than concrete but heavier than sheetrock.

**Sensor Plate:**

2 1/2"L x 1 1/2"W (65 x 40mm)

**Battery:** one 9V Battery. To change battery slide battery cover off on back of instrument.

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## Relative Humidity and Temperature

For Ligno-Tec RH or for Ligno-DuoTec B and BW

with RH BluePeg Sensor to obtain relative humidity readings, temperature and Dew Point. Once the RH cable and the RH BluePeg are connected, press READ. The humidity value appears in percent. To the left of the display the [ : ] sign appears. Press ▼ or ▲ key to obtain a temperature reading in °F. To the left of the display the [ + ] sign appears. After 2 seconds value toggles between temperature and Dew Point. The RH BluePeg sensor can be used for in-situ probe readings in concrete. Contact customer service for more information.

**Inches ↔ mm and F° ↔ C°**

Disconnect battery. Press SET twice. Connect battery. Software version appears. Press ▼ and ▲ key at the same time. The [ : ] sign appears/disappears briefly to indicate the switch.

**Warranty:** One-year warranty, battery excluded.

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## **UserInstructions** *for* **pin-less** **Ligno-DuoTec B** **Ligno-DuoTec BW** *and* **LignoTec RH**

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## Operation

**Scan Mode:** The Ligno-DuoTec B and BW are capacitance meters for wood and building materials.

**RH Mode:** The meters can measure relative humidity, temperature and Dew Point using Lignomat's RH BluePeg sensor. See page B4.

**Scan Mode:** Moisture readings generated by the Ligno-DuoTec are based on density changes caused by more or less water in the test sample. Since the density of wood also changes from species to species, readings need to be corrected for different species. See page F3.

The meters indicate the average moisture of the entire measuring field between the surface and maximum depth of penetration. Moisture closer to the surface has a greater effect on the average value than the moisture closer to the maximum depth of penetration.

All meters from Lignomat internally check and adjust the calibration. Manual recalibration is not needed.

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## Check / Change Material Settings:

Before taking readings, the settings on the meter should be checked and if necessary changed. Settings for the most common wood species and for building materials are listed on a separate card included with each meter.

Press SET key once and the chosen setting for the test sample is displayed. Press ▼ or ▲ key to change setting. Hold key down for fast-forward. Press repeatedly for slow-select. Settings can only be changed as long as meter is in set mode.

### Check / Change Measuring Depth:

Press SET key twice until [ : ] sign appears on left side of display. Two measuring depths are available:

1/4" : 1 4     3/4" : 3 4  
7 mm : 7     20 mm : 20

Press ▼ or ▲ key to change setting. Measuring depth can be instantly set and changed, if you press ▼ or ▲ while taking readings. For samples which can be measured from both

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sides, the maximum measuring depth is 1 1/2".

### Take Readings

After settings have been checked / changed, press the READ key to obtain moisture readings. If nothing is underneath the meter, a low value appears with a blinking decimal point. For actual measurements, place meter on test sample (for wood in the direction of the grain) and press down slightly, holding outer sides of meter without touching sample with your hand. All wood moisture readings are in percent. See page B2 for building materials.

When the moisture is too low to measure, the decimal point blinks. When the moisture is too high to measure the value flashes. Meter turns itself off after 1 minute.

For samples that can be measured from both sides, the maximum measuring depth is 1 1/2". The Ligno-DuoTec meters cannot read any deeper.

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### For accurate readings:

- Sample must be big enough to cover both sensor plates.
- Sample surface must be smooth and flat.
- Sample must be at least as thick as the measuring depth.

If the surface is not smooth and flat, several readings should be taken. The highest moisture value is representative.

The thickness of the sample and the chosen measuring depth of the meter are crucial. Moisture readings are wrong for samples thinner than the measuring depth:

Readings could be too low, because there is not enough of the test sample underneath the measuring plate. In which case we recommend stacking the samples to increase the thickness.

Readings could be too high, because measurements are influenced by material underneath the test sample. To eliminate any influence

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from material underneath the test sample, place a light-weight material such as Styrofoam under the sample or leave a small air space. This is highly recommended when measuring veneer. It not only prohibits inaccurate readings, but helps to create a flat measuring platform for the veneer.

To compare surface with core moisture you can select the measuring depth without moving the meter. While measuring, press the ▼ key for 1/4" (7mm) depth and the ▲ key for 3/4" (20mm). This is an easy way to switch between the two measuring depths.

### Hold Function:

At any time during measurements, the hold function can be activated by pressing the HOLD key. The last reading will be frozen for 1 minute and disappear when the meter turns itself off. To continue with moisture measurements press the READ key at any time.

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