

User Instructions for Ligno-Scanner SDM Moisture Meter



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Ligno-Scanner SDM, Meter Functions and Warranty

If the display is blank and the SET/HOLD key is pressed, the active setting is displayed:
 - wood species #30-100
 other materials #0-29

If the display shows a measured value and the SET/HOLD key is pressed repeatedly:
 - Scanner is put into Hold mode
 - Scanner is put into Set mode,
 - wood species setting can be changed.

On the left side of the display, the active wood species setting and measuring depth are indicated.

For measurements press the READ key. Automatic shut-off after 3 minutes.

Press up or down key to change settings

Two measuring pads are mounted on the back of the meter. The measuring pads cover an area of:
 2.75" L x 1.75" W
 (6.8 x 4.2 cm)

Overall size of Meter:
 4.5" x 2.4" x 1"
 (12 x 6 x 2.5 cm)



Measured value.

% sign is only present, if the indicated value is a moisture percentage. If % sign is missing, the value is a reference number.

Press up or down key to change settings.

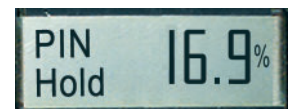
The up or down key can also be used to change depth settings in pinless mode while taking measurements. Toggle mode.

Battery cover is located at the back of the meter. Battery: One 9V battery.

A low battery symbol will appear on the display, when the battery is drained to 25%.

Hold Function for Pinless Mode

The HOLD key is used (while taking readings) to “freeze” measured values for three minutes. During that time you can switch back to measuring by pressing the READ key again. This feature is helpful when taking notes or when measuring in areas, where the display cannot be read.



Warranty: All Lignomat meters have a 2-year warranty.

. Battery is excluded.

SDM pinless, dual-depth Meter

The Ligno-Scanner SDM comes with 90 built-in corrections for measuring different wood species, bamboo, panel products and sheetrock. Also built-in are reference scales for measuring concrete and other building materials. Selectable Measuring Depth 3/4" and 1/4".



The Ligno-Scanner SDM is a capacitance-type meter in pinless (scan) mode. The measuring pads on the back of the meter emit and pick-up low-powered electromagnetic signals. The reading generated by the Ligno-Scanner SDM is an average of the entire measuring field between the surface and the maximum depth of penetration. Moisture closer to the surface has a greater impact on the average than the moisture closer to the maximum depth of penetration.

Wood Range 5*-60%. Readings above 25% fiber saturation point are less accurate. *To check the lowest possible reading, hold the meter in the air and push the READ key. The range for hardwoods with high specific gravity is lower than 5%. The range for softwood with low specific gravity is higher than 5%.

Settings 0-100#: Ligno-Scanner SDM pinless measurements have to be corrected for different wood species, bamboo products and other materials being measured. Table below and laminated species card lists codes for wood and other material settings.

Settings for Wood: #30-100. The most common wood species are listed on the laminated pocket guide included with each Scanner. Gravity Range is 0.3 to 1.0. For unlisted species the specific gravity can be entered as species setting. Example, for specific gravity of 0.42 the setting is #42. Values for specific gravity can be found on the internet by entering <specific gravity...> followed by the name of the wood. For calculations for SG see page 11.

For unlisted species or new products we offers testing to determine the correct setting.

Summary of available wood and material settings. For individual wood species see card.

| Materials to be measured | SDM Code # |
|---|---------------|
| Individual wood species, 5-60% based on Specific Gravity | 30-100 |
| Bamboo, vertical, horizontal, strand, etc., 5*-60% | 11-24 |
| Reference scale for concrete and other similar materials, 0-99 | 25 |
| Sheetrock and gypsum, 0.1-2% | 15 |
| Reference Scale for bldg materials other than concrete or sheetrock, 0-99.9 | 10 |
| Reference Scale for laminates and composites made of wood, 0-99.9 | 0 |

Reference scales 0, 10, 15: Different sensitivity levels are available for wood-based products, cementitious materials (concrete) and other materials. (Page 9)

Selectable Measuring Depths: Measuring depth is affecting pinless measurements. Choose between 1/4" (7mm) and 3/4" (20mm) depending on material thickness. (Page 6, 7)

Battery: One 9V battery (included). To exchange battery, slide battery cover off on back of instrument. A low battery symbol will appear on the display, when the battery has been drained to 25% of its capacity.



Size of meter: 2"W x 5.5"L x 1"H (12 x 6 x 2.5cm)

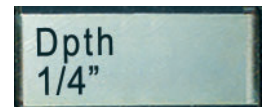
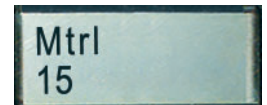
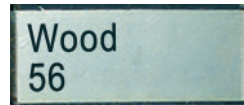
Size of measuring pads: 2 1/2"L x 1 1/2"W (65 x 40mm)

Warranty: All Lignomat meters have a two year warranty. Battery excluded.

First Step : Check and Change Settings

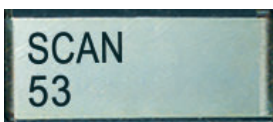
Before using the Ligno-Scanner SDM, the active (previously chosen) settings in the meter need to be checked and if necessary changed to fit the job to be done. To recall active settings, press the SET/HOLD key repeatedly. Use ▲ or ▼ keys to change settings.

1st Setting for wood and non-wood materials:
0-100. Corrections for different wood species and non-wood materials are needed. Check table page 4 and pocket-guide for available settings for pinless measurements.

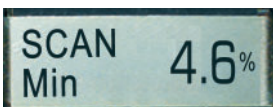


2nd Setting for measuring depth: Dual-depth 1/4" and 3/4". Page 6, 7.

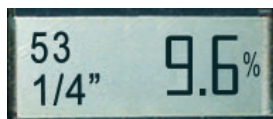
Taking Measurements



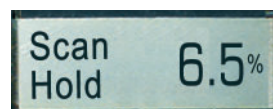
After settings have been checked / changed, press the READ key to obtain moisture readings. The active settings appear briefly. Then, if the measuring pads are not in contact with any material, the lowest possible value for the active wood setting appears: SCAN/min is 4.6 for setting #53.



If measurements are taken, the measured value (9.6%), the active wood species setting (53) and the measuring depth is displayed. (1/4" for Ligno-Scanner S, 3/4" for Ligno-Scanner D)



The HOLD key is used to freeze indicated values for one minute. Helpful when taking notes or when measuring in places, where the display cannot be read while measuring. At any time you can switch back to measuring by pushing the READ key again.



To obtain accurate measurements:

Turn the meter on and place it on the test sample (for wood in the direction of the grain). **Press down lightly**, holding the outer sides of the meter without touching the test sample with your hand. It is important to put light pressure on the meter towards the test sample.

For accurate measurements:

- The test sample should be big enough to cover both measuring pads.
- The test sample should be at least as thick as the selected measuring depth.
- If the surface is not smooth and flat, several readings should be taken. Select the highest value.

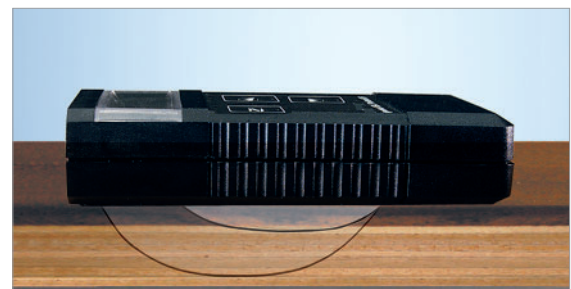
Note, all materials within the measuring field contribute to the value indicated. If the test sample is composed of different materials, the value indicated may not be a true moisture percentage, but only a reference number. It can be hard to find the correct code number for engineered or composite materials. Page 11: Find Settings for Composite and Engineered Boards.

To make sure the material underneath the test sample is not influencing the measurements, arrange an air space underneath the test sample. For example: Elevate one end of the test board to create an air space underneath the board. If this is not possible, make sure the Ligno-VersaTec is set for the correct measuring depth. Measuring veneer, page 8.



Dual-Depth 1/4” and 3/4”

Selectable dual-depth 1/4” and 3/4” is a unique feature only available in Lignomats dual-depth meters: Ligno-Scanners SD and SDM, Ligno-DuoTec BW and Ligno-VersaTec. All dual-depth meters from Lignomat have 2 independent sets of calibrations, one for 1/4” deep and one for 3/4” deep.



Measuring depth is crucial for all pinless meters. Most pinless meters are calibrated for a fixed material thickness of 3/4”. That means, accurate measurements can only be taken if the material is at least 3/4” thick and no more than 1.5” thick. If test samples are thicker than 1.5”, core measurements are only possible with a pin electrode.

If test samples are thinner than the measuring depth, readings may be inaccurate:

- If not enough test material is underneath the measuring pads, values will be too low.
- If material underneath the test sample is included in the measuring field, values could be too high.

New ways to use the dual-depth capability of the Ligno-Scanner SDM:

- **Measuring products less than 3/4" thick:** Many panel and floor products are only 5/8" thick, which does not work well for a 3/4" measuring depth. One example: When floor planks 5/8" thick are installed and measured with a pinless meter set for a 3/4" measuring depth, you cannot be sure that the subfloor or concrete underneath is not affecting the readings. With the Ligno-VersaTec on the 1/4" depth setting, you definitely only measure the floor planks .
- **Measuring engineered products:** You can find the moisture content of the thin top layer made from hardwood by using the corresponding species setting and 1/4" depth. Using those results, a setting can be found for the entire floor plank. Page 11.
- **Toggle function:** The measuring depth can be changed with up or down keys without moving the meter. This allows you to compare surface and core moisture. Toggling can also be used to diagnose floor failures or to monitor acclimation.
- **1/4" depth setting** allows for checking dryness of waterbased finishes. Works great for veneer or for measuring moisture close to the surface.
- Many **building materials** including drywall are less than 3/4" thick. For those materials the 1/4" depth works better and gives true measurements

Toggle between 1/4" and 3/4"



To toggle: Place the meter on the test sample and press READ. The active measuring depth is indicated on the left side of the display. Hold the meter with one hand and put light pressure on the meter to obtain accurate measurements. Use the other hand to toggle between 1/4" and 3/4":

Press the up key to switch to 3/4".

Press the down key to switch to 1/4".

You do not have to move the meter at all.

Toggling enables you to obtain 2 moisture values at different depth levels in the same location. This is the best way to compare surface and core moisture with the pinless measuring technology.

If you need to get core measurements especially for boards over 1.5" thick, we recommend a pin meter with the slide-hammer depth electrode E12 (See 14, last page).

Measuring Wood:

- Check/change wood species setting: Code numbers 30-100, based on specific gravity. For example: Code number 56 is for a specific gravity of 0.56. All pinless meters from Lignomat including the Ligno-Scanner SDM are programmed for code numbers 30-100 for wood.
- Check/change depth setting according to the thickness of the wood. See Pg 6, 7 Dual-Depth.
- Measure: Press the READ key and place the meter on the wood in the direction of the grain. **Press down lightly**, holding the outer sides of the meter without touching the test sample with your hand.

Measuring range for wood is 5*-60%.

Measurements above fiber saturation (25-30%) are less accurate.

* The lowest measurable moisture value depends on the specific gravity of the wood species. To find the lowest moisture value for a species setting, hold the meter in the air and press READ. The lowest values for hardwoods are usually lower than 5%. The lowest values for softwoods are usually higher than 5%. For example, the lowest value for setting #53 is 4.3%.

Measuring Bamboo:

Lignomat developed a unique set of calibrations for different types of bamboo floor planks and engineered bamboo products, code # 11-24. Depth is limited to 1/4" since bamboo products are usually less than 3/4" thick. Make sure the measuring depth is 1/4" when using one of the code numbers between 11 to 24.

The values indicated by the Ligno-Scanner SDM are WME percentages.

WME is the wood moisture equivalent. The following example shows what WME means: If bamboo is acclimated to ambient conditions of 45%, the Ligno-Scanner SDM on the correct bamboo setting indicates **8%**. If wood is acclimated to the same 45% relative humidity, the wood moisture content is also **8%**.

Measuring Veneer: We recommend placing a lite-weight (non-weight) material such as styrofoam underneath the test sample when measuring veneer or other thin materials. It not only prevents inaccurate readings, but also helps to create a flat measuring platform. To obtain accurate readings for very thin veneer it may be necessary to make a stack of several sheets.

You can also find a setting for single veneer sheets. See below: Start with **Step 2**, if you know the moisture content of the veneer sheet. Otherwise, start with **Step 1b**, if you have a sheet acclimated to a known relative humidity.

Measuring Building Materials:

Select the correct material setting. If the material is not listed on the laminated species card, use one of the reference scales:

- for laminates and composites made from wood code #0
- for concrete and building materials with a similar specific gravity code #25
- for building materials in between concrete and drywall code #10

Measuring with a reference scale is best done when a dry sample is available. Measure the dry sample and use the number as base value for comparing readings. Even if no dry sample is available, higher values indicate more moisture.



Note, no % sign. Reference scales do not indicate moisture percentages.

When taking measurements, make sure the surface is clean. If surfaces are uneven, try different orientations of the meter and use the highest value.

Water damage restoration: Pinless measurements are crucial when tracking moisture problems. The Ligno-Scanner SDM, a dual-depth pinless meter, measures up to 1/4" and 3/4" deep. A quick way to find trouble areas.

Sheetrock: Setting #15 (Range: 0-2.0%). The indicated moisture percentages are based on dry weight, same as wood moisture percentages. Meters indicating moisture values of 8-12% for dry sheetrock are using calibration settings based on WME, wood moisture equivalent.

Moisture percentages for sheetrock based on dry weight

- Dry sheetrock ranges from 0.1% to 0.7%.
- Values for 0.8% and 0.9% are questionable.
- Any value 1% and higher is considered wet.

Sheetrock is often thinner than 3/4". The 1/4" measuring depth is ideal to measure thinner sheetrock. If the sheetrock is installed, the 1/4" measuring depth gives true moisture percentages, without including any material behind the sheetrock. If the problem is buried deeper than 3/4", measurements with a pin meter, electrode E14V and EL pins 7" long are your only option.

Concrete: Setting #25 (Range: 0-99.9). Moisture readings are given on a relative scale comparable to relative humidity readings in concrete. Readings indicate high and low moisture areas. In addition, the measuring depth is limited to 3/4" deep. Measurements with pinless meters do not include the mid-section of a slab. Concrete floors are 4" and more!

Measurements with non-invasive meters provide a preliminary evaluation of moisture conditions. Moisture meters are not able to indicate absolute moisture percentages.

Warning: Test results from pin or pinless meters should not be used to decide whether or not to lay a wood floor over a concrete slab. An RH in-depth probe test and/or a Calcium-Chloride test is recommended by most wood floor manufacturers. Follow the floor manufacturer's installation instructions and perform the required testing to guarantee the manufacturer's warranty.

Pin and pinless meters, ASTM F2659, quantitative versus qualitative.

Wood Floor Installation

Wood moisture meters and thermo-hygrometers are essential tools for floor installers. Lignomat offers the Thermo-Hygrometer PN or a combination pinless/RH meters: Ligno-VersaTec or Ligno-DuoTec BW. (Summary last pg)



First: Take measurements when the floor is delivered, make sure the floor is dry.

Next: Take measurements (moisture and RH) before, during and after acclimation.

Mark sample boards and take readings of the same spot repeatedly.

Last: The moisture content of a floor should be documented at the time the customer signs off on the installation. Select several moisture sensitive areas, under windows, inside doors, by the refrigerator, etc. Take readings with both depth levels and document the measurements with moisture content, species setting, measuring depth and location. Take a photo to pinpoint the location. Use a thermo-hygrometer to take relative humidity and temperature measurements.

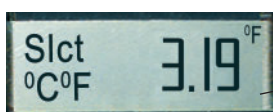
Keeping track of moisture conditions may in the end protect you from unwarranted claims and help find the cause of a problem. If you ever have to go back to check out a complaint, you can measure the same areas again and compare with the original measurements. The dual-depth readings can indicate if moisture was absorbed from the down-side of the floor or from the up-side of the floor. See EMC chart on page 12 for equilibrium moisture contents and the corresponding relative humidity and temperature. If EMC and MC are kept in close range, wood floors are absolutely stable.

Change Measuring Depth from US to Metric System Check Software Version

To change from US to metric system, disconnect the battery and press the SET key twice. Connect the battery again. Display shows software version as a 3-digit number. Example 3.19. To the right side of the software number in the upper or lower corner °C or °F appears. By changing from °F to °C, the measuring depth will change from mm to inches.

Use ▲ or ▼ keys to change settings.

The setting can only be changed, while the 3-digit software number is displayed.



To switch the setting from °F to °C, use down key.

To switch the setting from °C to °F, use up key.

Find Settings for Composite and Engineered Boards

Follow steps 1 and 2 to find settings for products not listed on the species card. For best results, the test sample should be acclimated to a uniform moisture content.

1: Determine the moisture content (MC value) of the test sample using 1a) or 1b).

- 1a)** If the top layer is wood, find the MC value by taking readings. Set the meter to the wood species of the top layer at 1/4" depth, even if the top layer is thinner than 1/4".
- 1b)** If the top layer is not wood or the product is less than 1/4" thick (veneer), the test sample has to be well acclimated in a known relative humidity. Then you can find the MC value in the EMC chart. Moisture measurements with the meter are not needed.

Look up the relative humidity and find the corresponding EMC value. For a test sample acclimated in 40-50% rel. humidity, the MC value is 8.5% . Page 18.

2: Determine the new setting using the MC value found in step 1. Take a measurement with setting # 50 and 3/4" depth. Use depth 1/4" for a test sample less than 3/4" thick.

- If the reading is lower than the MC value found in step 1, choose a setting lower than 50.
 - If the reading is higher than the MC value found in step 1, choose a setting higher than 50
- Then, take another measurement. Change the setting, until you get a reading close to the MC value determined in step 1.

The new-found setting can be used in the future for the same type of boards.

- If the reading is higher than the MC value found in step 1, choose a setting higher than 50.
- Then, take another measurement. Change the setting, until you get a reading close to the MC value determined in step 1.

The new-found setting can be used in the future for the same type of boards.

Calculating Specific Gravity

Specific gravity can be found on the Internet by entering <specific gravity> followed by the wood species. Specific gravity can be calculated by dividing:

| | | |
|---|--------|---|
| $\frac{\text{Dry Weight} \times 1.73}{\text{Length} \times \text{Width} \times \text{Heights}}$ | —————> | enter Dry Weight in ounces |
| | —————> | enter Length, Width and Heights in inches |
| $\frac{\text{Dry Weight}}{\text{Length} \times \text{Width} \times \text{Heights}}$ | —————> | enter Dry Weight in grams |
| | —————> | enter Length, Width, Heights in centimeters |

If the specific gravity is 0.42, the Ligno-Scanner SDM should be set to #42 in pinless mode. For unlisted species or new products call customer service at 800-227-2105. If no listing is available, Lignomat offers testing to determine the correct setting.

Relative Humidity, Wood Moisture and EMC Chart

Recommended ambient conditions in buildings are 30-50% relative humidity at 60-80°F. If ambient conditions stay within this range, the amount of expansion and contraction of wood floors and furnishings at 6-9% moisture content is limited. (Table from US Dept of Agriculture “Wood Handbook, Wood as an Engineering Material”)

EMC CHART

| Temp. | Relative Humidity in % | | | | | | | | | | | | | | | | | | | |
|-------|------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 98 |
| 30 | 1.4 | 2.6 | 3.7 | 4.6 | 5.5 | 6.3 | 7.1 | 7.8 | 8.7 | 9.5 | 10.4 | 11.3 | 12.4 | 13.5 | 14.9 | 16.5 | 18.5 | 21.0 | 24.3 | 26.9 |
| 40 | 1.4 | 2.6 | 3.7 | 4.6 | 5.5 | 6.3 | 7.1 | 7.8 | 8.7 | 9.5 | 10.4 | 11.3 | 12.4 | 13.5 | 14.9 | 16.5 | 18.5 | 21.0 | 24.3 | 26.9 |
| 50 | 1.4 | 2.6 | 3.6 | 4.6 | 5.5 | 6.3 | 7.1 | 7.9 | 8.7 | 9.5 | 10.3 | 11.2 | 12.3 | 13.4 | 14.8 | 16.4 | 18.4 | 20.9 | 24.3 | 26.9 |
| 60 | 1.3 | 2.5 | 3.6 | 4.6 | 5.4 | 6.2 | 7.0 | 7.8 | 8.6 | 9.4 | 10.2 | 11.1 | 12.1 | 13.3 | 14.6 | 16.2 | 18.2 | 20.7 | 24.1 | 26.8 |
| 70 | 1.3 | 2.5 | 3.5 | 4.5 | 5.4 | 6.2 | 6.9 | 7.7 | 8.5 | 9.2 | 10.1 | 11.0 | 12.0 | 13.1 | 14.4 | 16.0 | 17.9 | 20.5 | 23.9 | 26.6 |
| 80 | 1.3 | 2.4 | 3.5 | 4.4 | 5.3 | 6.1 | 6.8 | 7.6 | 8.3 | 9.1 | 9.9 | 10.8 | 11.7 | 12.9 | 14.2 | 15.7 | 17.7 | 20.2 | 23.6 | 26.3 |
| 90 | 1.2 | 2.3 | 3.4 | 4.3 | 5.1 | 5.9 | 6.7 | 7.4 | 8.1 | 8.9 | 9.7 | 10.5 | 11.5 | 12.6 | 13.9 | 15.4 | 17.3 | 19.8 | 23.3 | 26.0 |
| 100 | 1.2 | 2.3 | 3.3 | 4.2 | 5.0 | 5.8 | 6.5 | 7.2 | 7.9 | 8.7 | 9.5 | 10.3 | 11.2 | 12.3 | 13.6 | 15.1 | 17.0 | 19.5 | 22.9 | 25.6 |

Example: For a relative humidity of 35% and a temperature of 70°F, the EMC is 6.9%. A wood floor at 6.9% moisture content is stable, if the surrounding air has a relative humidity of 35% and a temperature of 70°F. In short a floor is stable, when MC and EMC are the same.

Dimensional Stability of Wood: Wood moisture and relative humidity are crucial factors for dimensional stability of wood. Use moisture meter and thermo-hygrometer to measure both. If wood shrinks, warps, cups, checks or delaminates, it always has to do with changes in wood moisture and/or relative humidity. No shrinking and warping occurs, when an equilibrium (see EMC chart above) with the surrounding air has already been reached, which means wood is not losing or absorbing any more moisture.

Predictions and Explanations: Measure relative humidity, temperature and moisture content. Compare the measured values with the EMC chart above to predict, if wood is stable or will loose or gain moisture.

- A hardwood floor shows gaps from shrinking. The moisture content at the present time measures 6.2% and the rel. humidity is at 30%. The only explanation for the gapping is, that the floor was installed at a higher moisture content. Once exposed to the dry air, the floor dried out and the gapping occurred.
- If a dry floor with a perfect moisture content of 6.2% is exposed for a long time to air with a relative humidity of 60% at 70°F, it can be predicted that the floor will absorb moisture until 11% has been reached. Depending on the wood species, a 5% increase in moisture content can be accompanied by a substantial amount of expansion.

No more surprises! Use the EMC chart and your Ligno-Scanner to predict problems. The chart is also helpful to explain to your customers, why relative humidity in their home matters.

Function and Calibration Check for Ligno-Scanners

All pinless meters from Lignomat are built with high quality components, micro-processor based, to guarantee stable calibrations for many years of usage. All meters from Lignomat internally check and if necessary adjust the calibration before each reading. Therefore, the meters are not set up to be re-calibrated manually by the user.

Before the battery is drained completely and the meter will not give any more values, a warning sign appears in the middle of the display, indicating the battery should be replaced soon.

Function Test: Pinless measurement functions can be tested for open and closed circuit connections manually without using the check block.

Calibration Verification: Pinless measurements can be tested for calibration accuracy with check block TS available from Lignomat.

For sensitive testing we recommend using the check block before and after a test series. Every time you check, the indicated value should be within +/- 1% of the test standard.

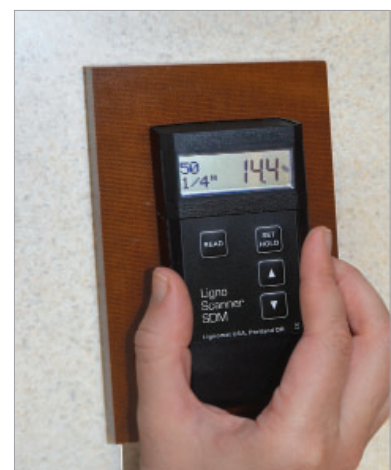
Manual function check for pinless meters: Step 1 and 2

Calibration verification for pinless meters: Step 3

Step 1: Open circuit check. Set the meter to pinless mode, choose code # 50. Hold the meter in the air to make sure no material is touching the measuring plates. When the READ key is pressed, a low moisture value of 5.4% should be indicated with SCAN/Min to the left side of the display. For 1/4" and the 3/4" depth the same value should appear.



Step 2: Closed circuit check. Place the pinless meter on your forearm and press the READ key. A high moisture value should be indicated. An additional meter check can be performed by measuring a ream of paper. If the paper test is done repeatedly with the same setting, the indicated value should not vary significantly over the course of a year. This can be used to check consistency / accuracy of the pinless calibration.



Step 3: Lignomat offers an external calibration check block TS for all Lignomat pinless meters. The check block for pinless meters from Lignomat is a material plate which produces a defined reading, when the meter is lightly pressed against its surface.

If step 1, 2 or 3 fail either the battery needs to be replaced or the meter is defective. Call customer service 800-227-2105.

Summary of Pinless Meters offered by Lignomat.

| Summary of all Pinless Meters | Item | Depth 1/4" | Depth 3/4" | Bamboo | Gypsum Sheetrock | Concrete Pinless Mode | Reference Scales | RH In-Situ Concrete | Pin Mode |
|-------------------------------|------|------------|------------|--------|------------------|-----------------------|------------------|---------------------|----------|
| Ligno-Scanner S | S | ✓ | | | | | | | |
| Ligno-Scanner D | D | | ✓ | | | | | | |
| Ligno-Scanner SD | SD | ✓ | ✓ | | | | | | |
| Ligno-Scanner SDM | SDM | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Ligno-DuoTec BW | BW | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Ligno-VersaTec | V-0 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

SPECIFICATIONS: Ligno-Scanner S, D, SD, SDM, Ligno-DuoTec BW and Ligno-VersaTec

All pinless meters from Lignomat indicate wood moisture in percent, corrected by 71 wood group settings or by the specific gravity between 0.3 to 1.0 (Settings 30 -100). Moisture Range: 5-60%. Resolution 0.1% . HOLD function. The calibration is internally checked and adjusted before each reading. Function and calibration can be verified with the pinless test block TS. Page

20 Additional calibrations for Ligno-Scanner SDM, DuoTec BW, Ligno-VersaTec:
 -- Bamboo and other strand woven products
 -- Sheetrock scale from 0-2%
 -- Reference scales with 3 sensitivity levels: concrete, standard bldg materials, laminates

Size of meter: 2"x 5.5"x1/2". Weight 8 oz.
 Measuring pad 1 5/8" by 2 5/8".
 Test sample should be as large as the measuring pads and as thick as the measuring depth of the meter.

Ligno-VersaTec ■ Pin - Pinless- RH ■ All-in-one



- Ligno-VersaTec
- Electrode E12
- Electrode E14
- RH Thermo-Hygro probe
- in-situ concrete testing



Specifications are subject to change without notice.
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