

User Instructions for mini-Lignos MD and MD/C



The mini-Lignos MD and MD/C come with 2 pairs of pins for a measuring depth of 3/16" and 7/16" (5, 10mm), green cap, wrist strap and pouch, one 9V battery, user instructions and laminated wood species card.

The mini-Ligno MD/C has a connection built-in for an external handprobe (electrodes E12, E14, E16) for depth measurements and remote cables for monitoring moisture in lumber dry kilns and otherwise hard to reach places.

User Instructions for mini-Lignos MD and MD/C

Before taking measurements remove the green cap and place it on the other end of the meter. The cap serves as handle for easy pin insertion. To obtain measurements, push the pins into the wood. As soon as the on-off switch between the pins is depressed, red LEDs indicate wood moisture in percent for a wood temperature of 70°F (20°C). A correction table is included on page 4 for higher or lower wood temperatures.

Wood Group Corrections: All mini-Lignos are equipped with built-in wood group corrections. The indicated moisture values are corrected for the chosen setting. A chart for wood species and corresponding wood group settings is included with each mini-Ligno. Wood species with similar electrical properties are in the same group. Lignomat offers oven-dry testing to determine the wood group for unlisted wood species.

Battery: One 9-Volt Battery. If the LED lights get dim or step 1 and 2 described in the next column fail, remove screw on back cover, open-up into 2 halves and replace battery.

Pins: Longer pins are stored inside the mini-Lignos. Remove screw on back cover, open-up into 2 halves. Pins are stored in back cover on either side of the indentations for the pins. Remove and replace pins using pliers.

Electro-Magnetic Interference: If you measure close to computers, power tools or electrical wires, indicate the moisture jump. To avoid the interference, take measurements in a different location. The wood, the meter and the person holding the meter should not move while taking measurements.

Core Measurements: For core measurements at least one third of the wood needs to be penetrated. The longer mini-Ligno pins reach 7/16" (10mm) deep into a board. For core measurements in lumber over 5/4" (30mm), make a fresh cut. Measure the end grain close to the surface and at the core with the integral mini-Ligno pins. Compare readings to detect uneven drying.

If it is not feasible to cut the wood, the core of the wood can only be reached with the mini-Ligno C-Models and the external Electrodes E12, E14, E16.

We also offer extension cables for building surveillance and in-kiln monitors (MD/C). See page 3.

Performance Tests:

Step 1: When the on/off switch is depressed by hand without touching the pins, the lowest moisture value is indicated:

6% for mini-Ligno E/D, MD, MD/C setting #2 and #3.
4.8% for mini-Ligno DX, DX/C on species setting #3.

Step 2: When the on/off switch is depressed by hand and both pins are touched with two fingers at the same time at least 12% should be indicated.

Step 3 optional: The external test block TP checks calibration and operation of all Lignomat pin meters, including cable and electrode. All Lignomat meters internally, automatically check and adjust the calibration. Therefore manual recalibration is not necessary.

If steps 1, 2 or 3 fail either the battery needs to be replaced or the mini-Ligno is defective.

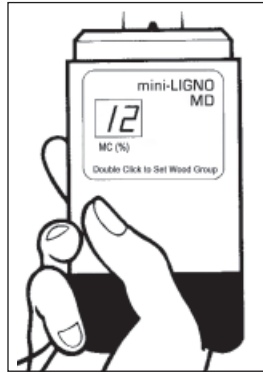
Call customer service at 800-227-2105.

mini-Lignos MD and MD/C

Measuring Range:

6% to 25% for wood and wood-products. For moisture values above 25%, number 25 flashes. For moisture values of 6% or less, the meter reads the number 6.

Red numeric LED Display:
Resolution: 1%



Wood Group Settings:

The yellow laminated card lists the most common wood species and corresponding wood group settings for wood groups 2 and 3.

There is a dot behind the settings 2 and 3 to indicate the displayed value is a number for a setting and not a measured moisture value.

Click on/off switch twice to check/change settings. Click on/off switch again to change settings. Check/change mode is only accessible when the meter is off. If a wood species is not listed on the laminated yellow card, contact customer service at 800-227-2105.

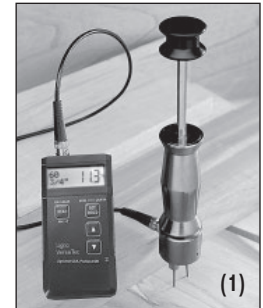
For Non-Wood Materials: Set mini-Ligno MD or MD/C to setting #2. First, take readings in a dry sample to establish a base value for dry. Next, measure areas, where higher moisture levels are suspected. Compare readings to the base value. Higher values indicate more moisture.

Add Electrode E14-m (7" deep with EL pins) to check hard to reach problem areas in water damage repair jobs. For hard materials (concrete, brick, stone) add Electrode E16 and E/C or EL pins. **For in-kiln and remote measurements** add cables, probes or pins. Pg 3.

Other Lignomat Products

The Ligno-VersaTec moisture meter combines the most advanced measuring technologies for wood, concrete and other building materials:

- Pin Mode with E12 (1)
- Non-Invasive Scan Mode
- RH Mode with relative humidity and temperature probe RH BluePeg.



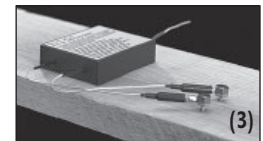
Lignomat's pinless meters for wood, concrete and other building materials are available for a measuring depth of 3/4" and/or 1/4" (20 or 7mm). All pinless meters have built-in corrections for different wood species. (2)



Wireless Sensors: (3)

Lignomat is the world leader for wireless systems to measure moisture and temperature in dry kilns and for heat treatments.

Call 1-800-227-2105 and ask about our latest catalog for handheld moisture meters, kiln controllers and in-line moisture meters.



Electrodes for mini C-Models



E12 Electrode is for measurements up to 2" (50mm) deep in wood and soft building materials (drywall, gypsum, plaster, etc.) Allows comparing surface and core moisture.

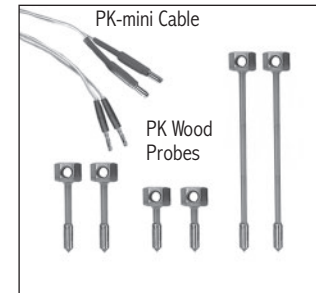
E14M Inspector Electrode in-Hand probe includes cable, EG Pins, teflon-coated. Measures hard to reach places easily, because of its slim shape. Extendable handle. Optional EL Pins 7" (17.5cm).

E16 Specialty/Concrete Electrode and mini-E16 Cable for moisture measurements of concrete and other hard building materials. Standard pins 5/8" (15mm). Optional add EL Pins 7" (17.5cm)

In-Kiln - Remote

In-Kiln PK Probes with PK-mini Cables

are used for moisture measurements of stacked lumber in kilns, air-drying yards or storage areas. PK Probes are available to measure up to 2.75" (7cm) deep. Cables can be made up to 50ft (15m) long. **M-11** package with PK-mini cables.



Non-Kiln Applications

Lignomat's cable system works well for monitoring inaccessible areas (underside of floor planks, structural components, behind drywall, roof trusses, crawl spaces and attics etc.) Teflon coated pins for a measuring depth of 3/4" and 7" are available. For those applications cables with loops allow for an easy connection. **M-10** package with LP-mini cables.

mini-Ligno C-Model

mini-Lignos MD/C, S/DC, DX/C have two integral pins and a cable connection built-in. When an external electrode is connected, depress the on-off switch between the pins by hand to activate the meter.



Warranty: All moisture meters from Lignomat including mini-Lignos have a 2 year warranty. The LED displays for the mini-Lignos have a life-time warranty, they virtually never brake. Accessories have a one-year warranty, pins and battery are excluded.

Wood Temperature Correction Chart

WOOD TEMP.		INDICATED MOISTURE CONTENT IN PERCENT																								
°C	°F	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
0	32	6	7	8.5	9.5	11	12	13	14.5	15.5	16.5	17.5	18.5	20	21	22	23	24	25	26	27	28	29.5	31	32	
5	41	5.5	6.5	7	9	10.5	11.5	12.5	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29.5	30.5	
10	50	5	4	7.5	8.5	10	11	12	13.5	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
15	59	4.5	5.5	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
20	68	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
25	77	3.5	4.5	6	7	8	9	10	10.5	11.5	12.5	13.5	14.5	15.5	16.5	17.5	18.5	19.5	20.5	21	22	23	24	25	26	
30	86	3	4	5.5	6.5	7.5	8.5	9.5	10	11	12	13	14	15	16	17	18	19	19.5	20	21	22	23	23.5	24.5	
35	95	2.5	3.5	5	6	7	8	9	9.5	10	11.5	12.5	13.5	14.5	15.5	16.5	17	18	18.5	19	20	21	21.5	22.5	23.5	
40	104	2	3	4.5	5.5	6.5	7	8	9	9.5	10.5	11.5	12.5	13.5	14.5	15.5	16	17	17.5	18	19	20	20.5	21	22	
45	113	1.5	2.5	4	5	6	6.5	8	8.5	9	10	11	12	13	14	15	15.5	16.5	17	17.5	18	19	20	20.5	21	
50	122	1	2	3.5	4.5	5.5	6.5	7.5	8	8.5	9.5	10.5	11.5	12.5	13.5	14.5	15	16	16	16.5	17.5	18.5	18.5	19	20	
55	131	0.5	1.5	3	4	5	6	7	7.5	8	9	10	11	12	12.5	13.5	14.5	15	15.5	16	17	17.5	18	18.5	19.5	
60	140		1.5	2.5	3.5	4.5	5.5	6.5	7	8	8.5	9.5	10.5	11	11.5	12.5	13.5	14	14.5	15	16	16.5	17.5	18	18.5	

WOOD TEMP.		INDICATED MOISTURE CONTENT IN PERCENT																
°C	°F	28	29	30	31	32	33	34	35	36	37	38	39	40				
0	32	33	34.5	36	37	38.5	40	41.5	42.5	43.5	44.5	46	47	47				
5	41	31.5	33	34	35	37	38.5	39.5	41	41.5	42.5	44	45	45				
10	50	30	31	32.5	33.5	35	36.5	37.5	39	40	41	42	43	43				
15	59	29	30.5	31	32	34.5	35	36	37	38	39	40	41	41				
20	68	28	29	30	31	32	33	34	35	37	37	38	39	39				
25	77	27	28	29	30	31.5	31.5	32.5	33.5	34.5	35.5	36.5	37.5	37.5				
30	86	25.5	26.5	27.5	28.5	29	30	31	32	33	34	35	36	36				
35	95	24.5	25.5	26	26.5	28	29.5	29.5	30.5	31.5	32.5	33.5	34.5	34.5				
40	104	23	24	24.5	25	26	27	28	29	30	31	32	33	33				
45	113	22	23	23.5	24	25.5	26	27	28	29	30	31	32	32				
50	122	21	22	22.5	23	24.5	25.5	26	27.5	28	29	30	31	31				
55	131	20	21	21.5	22.5	23.5	24.5	25.5	26.5	27.5	28	29	30	30				
60	140	19.5	20.5	21	22	22.5	23.5	24.5	25.5	26.5	27	28	29	29				

Example:

For an indicated moisture reading of 11% taken with a mini-ligno at a wood temperature of 41°F, the actual moisture value is 14%.

If using the correction chart is too time consuming, Lignomat offers the Lignometer K and Ligno-VersaTec with built-in wood temperature corrections.

For info call **1-800-227-2105**

The mini-Lignos are calibrated for a wood temperature of 70°F (20°C). For wood temperatures over 80°F and under 60°F we recommend using this chart.