

User Instructions for mini-Ligno 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 a handle for easy pin insertion. To obtain measurements, push the pins into the material. As soon as the on-off switch between the pins is depressed, red LED lights 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. The indicated moisture values are corrected for the chosen settings. 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 included. If the LED lights get dim or step 1 and 2 described in the next column fail, remove screw on the back cover, open-up into 2 halves and replace battery.

Pins: Each mini-Ligno comes with two sets of pins for 3/16" and 7/16" measuring depth. The longer pins are stored in the back cover. Remove screw on the back cover, open-up into 2 halves. Remove and replace pins using pliers.

Electro-Magnetic Interference: If you measure close to computers, power tools or electrical wires, readings may not be stable.

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, which is sufficient for 5/4" lumber. For core measurements in lumber over 5/4" (30mm) thick, 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 over 5/4" can only be reached with the mini-Ligno C-Models and the external Electrode E12. Page 3 shows cable connection of mini-Ligno C models, and shows external electrodes.

Performance Tests:

Step 1: When the on-off switch is depressed by hand without touching the pins, the lowest moisture value for the chosen wood group is displayed: 6% for mini-Ligno SD and SD/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 external cables and electrodes. All Lignomat meters internally and 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.

All mini-Lignos come with a two-year warranty, accessories have a one-year warranty, pins and batteries are excluded.

mini-Ligno MD and MD/C

Measuring Range:

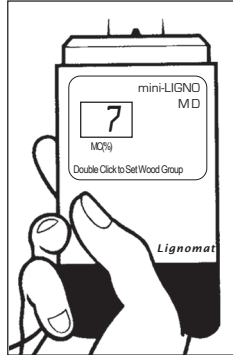
6-25% for wood and wood-products. For moisture values above 25%, number 25 flashes. for moisture values of 6% or less, the meter reads the number 6. Resolution: 1%

Wood Group Settings:

The yellow laminated card lists the most common wood species and corresponding wood group settings. Click on-off switch twice to check/change settings. Number (2.) or (3.) indicates wood group setting. Click on-off switch again to change setting. Check/Change Mode is only accessible when meter is off.

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.

Adding Electrode E14M to MD/C: The slim E14M is used to check moisture in hard to reach corners, window frames, ceilings, floors and to measure behind surfaces 7" deep. See page 3.



Other Lignomat Products

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

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

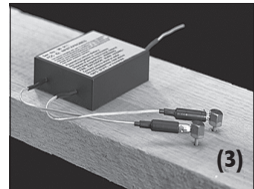


Lignomat's pinless meters for wood, concrete and other building materials are available for a measuring depth of 3/4" and/or 1/4" (20 or 7mm). All pinless meters have built-in corrections for different wood species. (2)



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 and mini-BNC Cable are for measurements up to 2" (50mm) deep in wood and soft building materials (drywall, gypsum, plaster, etc.) Allows comparing surface and core moisture.

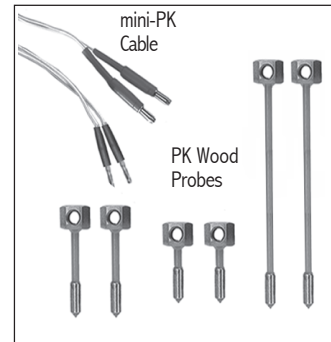
E14M Inspector Electrode comes with the cable and teflon-coated EG Pins. E14 Measures hard to reach places easily, because of its slim shape. The handle of the E14 can be extended. Optional EL Pins 7"(17.5 cm) can be added for depth measurements.

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 mini-PK Cables

are used to monitor places, which are hard to reach with handheld meters: Stacked lumber in kilns, air-drying yards or ware-houses. PK Probes are available to measure up to 2.75" deep. Cables can be made upon request up to 65ft (20m) long.



Non-Kiln Applications

Lignomat's cable system works well for monitoring inaccessible areas (underside of floor planks, structural components, behind drywall, roof trusses, etc.) Teflon coated pins EG and EL are available to measure 3/4" and 7" deep. Remote cables can be up to 65 ft (20m) long.

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.



Wood Temperature Correction Chart

WOOD TEMP.	INDICATED MOISTURE CONTENT IN PERCENT																										
°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			
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			
(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			
50	5	6	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			
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			
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			
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			
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			
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			
104	2	3.5	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			
113	1.5	2.5	4	5	6	6.5	7.5	8.5	9	10	11	12	13	14	15	15.5	16.5	17	17.5	18	19	20	20.5	21			
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			
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			
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 moisture meters with built-in wood temperature corrections and 150 different wood species settings:

- Lignometer K
- Ligno-VersaTec

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

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