# Package S24-M

# Applications

Used by inspectors, contractors and water restoration specialists, anyone who needs to investigate moisture conditions in wood floors, drywall, roofing materials, structural elements. With these 2 electrodes you can choose the right measuring tool for the job on-hand. Measuring wood with depth electrode E12 and using the E14-m for all other applications,

When the integral pins of the mini-Ligno S/DC are not reaching the areas to be measured or the material is too hard for the pins to be pushed in by hand

# Advantages

The mini-Ligno S/DC moisture meter measures all relevant materials for tracking moisture in buildings: hardwoods, softwoods and panel products and has percent scales for drywall, exterior and interior wall boards and a reference scale for concrete and other building materials.

Using the electrode E12 allows accurate measurements up to 2" deep in wood with insulated pins. Using the electrode E14-m allows measurements up to 7" in drywall, wall boards and other materials, in areas which would be hard to reach without the E14-m. Also used to measure very hard wood and other hard materials even concrete.

The **mini-Ligno S/DC** is a perfect meter for the construction, restoration and building maintenance professional. It comes with pins and a connection for external electrodes and monitor cables. Features are the wide measuring range and corrections for measuring softwood, hardwood and panel products, gypsum and different types of wall boards and a reference scale for concrete and other building materials.

**For wood:** The integral pins at the mini-Ligno measure 7/16" deep. When measuring thicker lumber, you can make a fresh cut and measure the end grain to reach the core. If it is not feasible to cut the wood, you can use the electrode E12 for depth measurements.

**For building materials:** The pins on the meter work well in soft materials such as drywall for a depth of 7/16". If corners and tight places cannot be reached with the integral meter pins, use the electrode E14-m or E16, whichever is more convenient. Add EL pins for measuring in-depth up to 7" deep.

The **slide-hammer electrode E12** is designed to measure wood from the surface up to 2" deep (with DB pins). All E12 pins are insulated and measure only at the tip. The slide hammer helps inserting and removing the pins. As pins are hammered into the material, consecutive readings show the moisture distribution within the material at every depth level the pins are driven to. The ability to measure a moisture gradient is one of the main reasons for our customers to use the E12.

**Wood:** Taking numerous readings as the pins are driven towards the core indicate if a moisture gradient exists or if the wood is dry throughout the core. Making sure wood is evenly dried is the best assurance for quality and stability of wood products. When inspecting wood floors, using the E12 gives you a tool to assess moisture distribution through floor planks into the sub floor without having to remove any floor planks.

**Restoration:** The moisture in structural component even behind wall coverings can be checked with the electrode E12. When assessing water damage, the pins of the E12 can be driven to different depth levels and thus indicate how far water has been absorbed or if there is still residual moisture inside the structure after drying. Insulated pins can measure dry material behind a wet surface. With these 2 electrodes you can always choose the right measuring tool for the job on-hand.

E12 pins are teflon-coated to only measure at the tip. This is important to determine if a moisture gradient exists from a dry surface towards to wet core, but it is equally important to be able to measure through a wet surface to determine how far moisture has been absorbed and at what depth the material stayed dry.



Pin meter mini-Ligno S/DC with Electrode E12 and E14-m.With the 2 electrodes you can always choose the right tool for the job to be done.



Bright LED display for optimum visibility. Display has a life-time warranty. Quality, performance and price have made mini-Lignos very popular.



In-depth measurements detect unevenly dried wood and help avoid costly mistakes. Used when installing, inspecting floors and for restoration jobs.



**Inspector Electrode E14-m** can be used for measuring moisture on any surface up to 3/4" deep with insulated pins EG. In addition, the slim shape allows for checking places, which cannot be reached with the electrode E12; around pipes, below window sills, into corners, through roof coverings. The light weight of the E14 makes it easier to obtain measurements in hard-to-reach areas. Adding the 7" long EL pins lets you reach through wall covers and insulation or under baseboards into structural components. Great for EIFS inspections.

The knob at the end of the handle can be removed and replaced by a paint brush handle or broom stick. Using the **paint brush** handle allows to extend the reach. You can stay a safe distance from mold infested areas and still be able to get reliable measurements. Extending the handle with **a broom stick** makes measuring carpets and carpet padding easy without crouching down. Ceilings can be checked for moisture leakage without a ladder.

Pins measure only at the tip. EG and EL pins are teflon-coated up to the electrode handle. Moisture from a wet surface is never picked up, even if the pins are pushed all the way into the material.

Using the external electrode E14-m allows you to keep the meter display visible in front of you. Measuring ceilings, walls or floors with the meter itself can make it impossible to read the numbers on the display.

**Hard Materials:** Electrode E14-m and pins EG are very sturdy and allow hard pounding to insert the pins into hard materials. Works for strand bamboo as well as hard and cementitious panel products.

# **Meter Specifications**

Size: 5.5"L X 2.75"W X 1"H

Measuring Range:

- Wood: 6-45%
- Gypsum, Sheetrock, Wall Boards: 0-7.5%
- Reference Scale: 0-99

Display: Resolution: 0.1% below 10% and 1% steps above 10%, life-time warranty Calibrated for a wood temp of 70°F (20°C).

A correction table for different wood temperatures is listed in the manual.

#### **Species Corrections**

- 2 settings for wood species corrections: hardwoods, softwoods and panel products
- 3 Settings for gypsum, drywall and wall boards (water resistant, exterior, interior)
- 1 reference scale 0-99 for non-wood building materials (concrete)

## **Electrode E12 Specifications**

Weight 3.5 lbs. Length without pins 12". A cable connector (BNC) is mounted at the head of the electrode. A mini-BNC cable (3ft) to connect electrode E12 to mini-Ligno C's is included in the pkg.

E12 pins are teflon coated to only measure at the tip and come in three options:

- DZ Pins insulated, measuring depth 1"
- DA Pins insulated, measuring depth 1.5"
- DB Pins insulated, measuring depth 2"

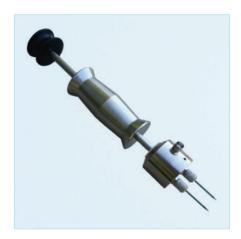
1 pair DZ pins and 1 pair DA pins are included in the package. DB Pins are not included.



For all areas in the building envelope where the meter pins cannot reach or the display cannot be read.



mini-Ligno S/DC meter with wrist strap in carrying pouch with belt loop, 1 9V battery 1 laminated wood group card and 1 instruction manual



Inspector Electrode E14M is designed to reach where moisture hides. E14M is tough enough to hammer pins into hard materials.



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### **Electrode E14-m Specifications**

Weight 5 oz. Length without pins 7". The electrode E14M can be connected to the:

#### mini-Ligno DX/C

mini-Ligno S/DC mini-Ligno MD/C

Electrode E14-m comes with a cable with a split end and 2mm plugs to fit the **mini-Ligno** C's.

**EG** and **EL** pins are teflon coated up to the electrode handle. Moisture on a wet surface is never picked up, even if the pins are pushed all the way into the material.

- EL Pins insulated, measuring depth 7"
- EG Pins insulated, measuring depth 3/4"

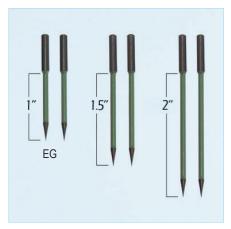


Inspector Electrode E14-m is designed to reach where moisture hides. E14-m is tough enough to hammer pins into hard

materials.

## Package Includes

- 1 mini-Ligno S/DC meter with wrist strap in carrying pouch with belt loop, 1 9V battery
- 1 laminated wood group card and 1 instruction manual
- 2 pair pins: 1 pair of 3/16" and 1 pair of 7/16" measuring depth (5mm, 10mm)
- Built in connector for an assortment of external electrodes and in-kiln probes 1 mini-BNC Cable
- 1 slide-hammer electrode E12
- 2 pair pins: 1 pair 1" DA pins and 1 pair 1.5" DZ pins
- 1 inspector electrode E14M
- 1 pair EG Pins, 3/4" measuring depth (19mm)
- 1 case M



Pins for E12: DZ, DA, pins can only be used with the Electrode E12. Insulated pins measure only at the tip.



Selection of Pins for E14M: coated EG 3/4" and EL 7"

