Scigiene

User manual
humimeter WLW
Moisture meter with ram electrode
for round timber & split logs

Version 1.1_en
2013

Short instruction manual

Inside the ram electrode a temperature sensor is situated, which measures the temperature of the wood. Let the sensor assimilate to the temperature of the wood, because the measured temperature is used for the internal material compensation.

To switch on the device, press the ⏻ key for three seconds.

With the standard nails the wettest part over the whole measuring depth will be measured. If you need the water content in a defined measuring depth, you should use the isolated green nails (article number 11482), because they are only measuring at the points.

Important: You have to remove the bark before you can start to measure.

The measuring depth should be a quarter of the wood diameter. In the worst case you have to cut away a part of the diameter. Choose a part of the wood, **WITHOUT bark, knots**, **pitch pockets or cracks** and drive the ram electrode in the right angle to the grain into the wood. Hold the top of the electrode with one hand, take the handhold with the other hand and push down the handhold with active force. Drive the nails about 2 cm deep into the wood.

Tip: Statistically, the spot that shows best the average moisture of the wood is at about 20% of the total wood length.

Plug in the sensor cable into the socket of the WLW. Take care of the correct position and fix it with the nut. Select the correct sort of wood by pressing the up ▲ or down ▼ key.

Now you can see the actually wood moisture and the temperature on the display.
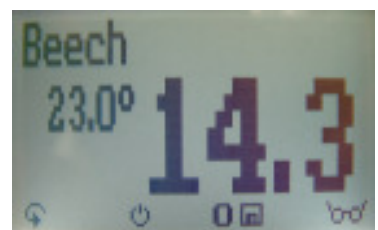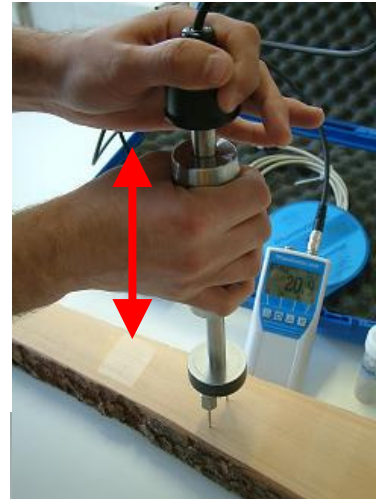
Now you can save the measurement by pressing the 🖫 key in the saving level. Press the ⇕ (Rolling Menu) key to enter the saving level. When the digit in front of the disk symbol 🖫 increases, the saving was successfully.

Tip: Take a few logs on different positions of each piece of wood you intend to measure, and the humimeter will calculate automatically the average value of the series.

If you press the ✐ key, you can add extra information to the active log series.

Push out the ram electrode of the wood.

Attention!! Risk of injury

List of calibration curves

Pressing the ▲ or ▼ key in the measuring for at least 3 seconds and a list with all available sorts will appear. Select your sort by pressing ▲ or ▼ and confirm it with the ⏎ key. The measurement will continue automatically.

Measuring Value

The measure value which is shown at the display of your humimeter WLW, represents the "wood moisture". So there is no conversion form the "water content" into "wood moisture" for use. It is also possible to change the value into "water content". If you need this, contact support@scigiene.com

Wood Moisture

The wood moisture is declared as the amount of water in a wood, which stands in relationship to the weight of the dried wood. For example: You have piece of wood with 1kg and 66,7% wood moisture. So you have 0,6kg wood and 0,4% water in this piece. The 0,6kg represents 100% based on the dry mass.

Water content

The water content is declared as the amount of water in a wood, which stands in relationship to the whole weight of the wood. Same example: You have 1kg Wood with 40% water content; the wood consist of 0,4kg water and 0,6kg wood.

Sort of wood

Main Group	Sub groups							
Beech	Rubber	Eucalyptus						
Oak	Mahogany	Wenge						
Alder	Acacia	Alstonia	Birch	European chestnut	Horse chestnut	Cherry Tree	Walnut	Okan
Ash	Keruing							
Spruce								
Pine	Balsa	Yew Tree	Stone Pine					
Larch	Maple	Douglas Fir	Hemlock	Cotton Wood	Elm			
Fir	Ceiba	Linden						
Willow	Pear	Hickory	Olive wood	Ramin	Teak			

Declaration: The main group of wood is the wood sort, which is shown on the measurement display of your humimeter WLW. Do you want to measure wood, which is not in the list of the main group, you should search it at the sub groups in the table above. Then use the wood of the main group for the measuring. For example: If you want to measure "Cherry Tree", you have to choose the "Alder" wood at you device.

Valid measuring Range

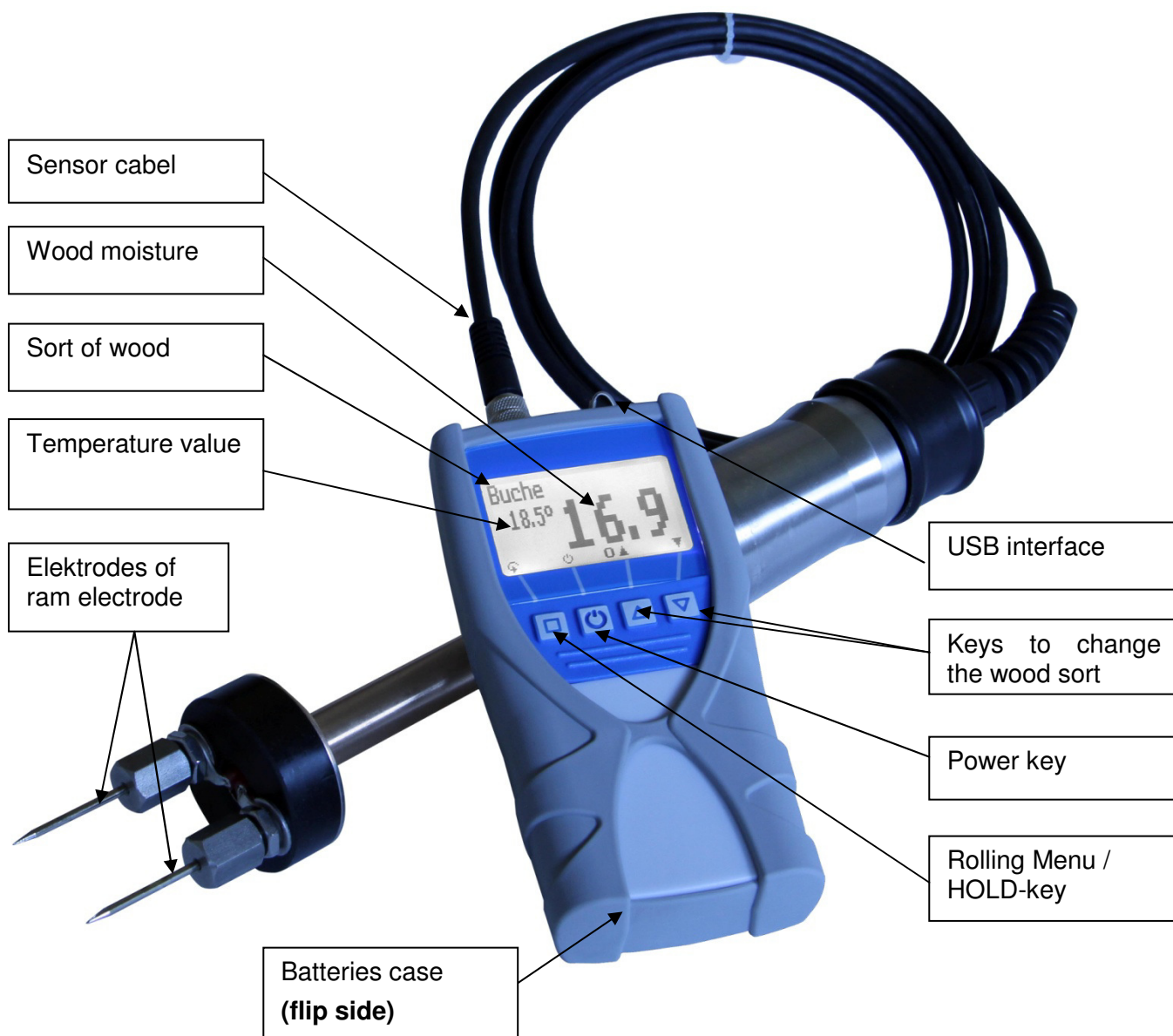|	
Beech	47,1%
Oak	47,1%
Alder	66,7%
Ash	53,9%
Spruce	66,7%
Pine	53,9%
Larch	47,1%
Fir	58,7%
Willow	66,7%

If the measure value is grey, the standard valid measuring range is exceeded (limits see Table). In this case the accuracy will be decreasing.

A blinking measuring value shows you the upper end of the measuring range.

View of the instrument (12626)

WLW Hammer (12630):

Sensor cabel

Wood moisture

Sort of wood

Temperature value

Elektrodes of
ram electrode

USB interface

Keys to change
the wood sort

Power key

Rolling Menu /
HOLD-key

Batteries case
(flip side)

Hand electrode (12847):

Sensor cabel

Elektrodes of
ram electrode

Wood selection menu

└ Next wood type
  Previous wood type
  Off (3 sec.) Backlight

Store **menu**

└ View last Logs
  Save Logs
  Off (3 sec.) Backlight

Main **menu**

└ Switch down
  Switch upper
  Open this menu / OK

Edit Logs	*Options*
Manual Logs	Date / Time
Clear Logs	Log Time
	Language
Print Logs	Unlock
Last Log	℃ / ℉
All Logs	o Userlevel
Clear Logs	BL On Time
	Auto Off Time
Send Logs	Material calib.
Manual Logs	Password
Clear Logs	Reset
Options	
Status	

Measuring window:

⚡	Rolling Menu
⏻	Power ON / OFF
▲	Switch upper
▼	Switch lower
▣	Save
⊞	Hold
'ᴏᴏ'	Watch the saved data
✎	Suppliers data can be added

Menu:

↵	Enter
▲	Switch upper
▼	Switch lower
↩	Exit
0..9	Enter numbers
A..Z	Enter letters
➤	Next or right
◀	Left
✓	Yes
✗	No
⇧	Shift
OK	OK

Running the instrument

Switch on the device: Press the ⏻ key for three seconds.

Change the kind of wood: Press the ▲ or ▼ key.

Set the clock: press two times the ✛ key - *Options – Date / Time*
Here you set the date and the time by pressing 0..9 (YY.MM.DD).
When you entered the Year push the ▸ key to get to the month and to
the day. Press the ▸ key again to get to the time. If you entered date
and time confirm it by pressing OK.

Hold the measure value: Press the ⊞ key in the save mode
(Function must be activated in the **Datalog Time menu**)

Display-Background lighting: Press the ⏻ key; Backlight will turn
off automatically after 20 seconds. Backlight will be activated by
pressing any key. Furthermore the Power off time is reset to four
minutes. (Both times can be modified in the options menu)

Power off: Press the ⏻ key three Seconds in the measuring
window; the device will be switched of when you leave the key. The
device also switched off automatically, when no key is pressed for
four minutes. (Time can be changed.)

Activation of the "super user" function

2 times ✛ - *Options* – Unlock

Enter the 4-digit password by using the ▲ button (standard is the 4-
digit serial number) and confirm by pressing the ↵ button.

Changing the Userlevel

Changing from advanced user to single user:

Make sure that you have activated the "super user" functions
according to the instructions above. Afterwards change to the menu
and choose „Options".

In the submenu please select „o Userlevel" (2 times ✛ - *Options* – o
Userlevel)

Confirm by pressing the ↵ button. Now the single user is activated.

Transfer saved data to the PC

To send your saved logs to the PC, connect the humimeter device to your PC using the USB cable that was delivered with your device. Carefully loose the protection cap on your humimeter and plug in the USB mini B connector. The bigger connector has to be

connected to a USB slot on your PC.

Start the LogMemorizer software on your PC and switch on your humimeter WLW.

The data transfer can be started on your humimeter or on the software.

Starting the data transfer on the humimeter:

Press the ↻ key until you reach the menu (see image on the right). Then choose „Send Logs" and confirm by pressing the ↵ key. Now choose „Manual Logs" and confirm with ↵ again. All saved logs will be

sent to your PC.

Starting the data transfer on your PC:

Press the button „remote control" in the LogMemorizer software. A drop-down menu with several options opens (see image below).

For transferring the data you can select „Import last manual log" (the last saved measuring series is transferred) or „Import all manual logs" (all saved logs are transferred).

If you click on one of these menu items, the transfer starts immediately.

For the basic adjustments of the software please look through the instructions on the LogMemorizer CD.
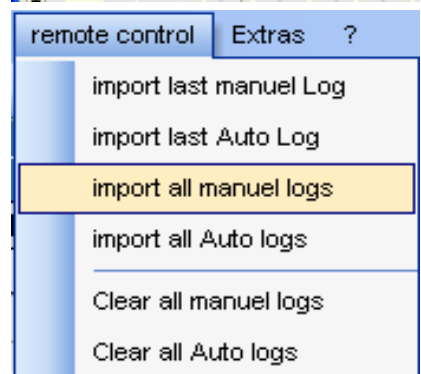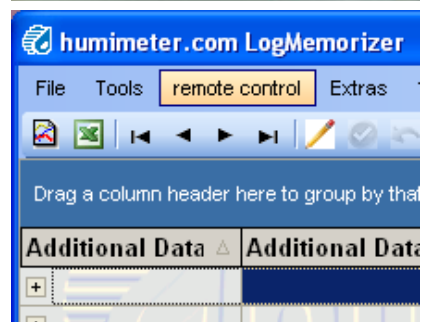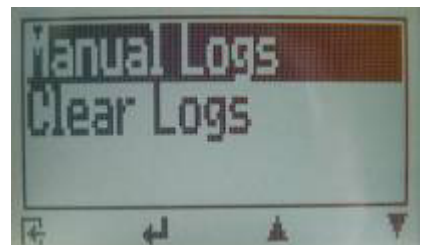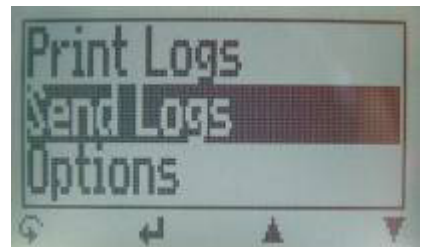
Print saved data

To print your saved data, connect the device to the printer using the printer cable that was delivered with your device. Carefully loose the protection cap on the humimeter WLW. At first plug in the side of the connector with the close plastic casing at the humimeter WLW. Then switch on the device.

Not till then the other side of the cable has to be plugged in at the printer. Switch on the printer by pressing ⏻. Now the green LED is blinking. If it does not blink, please change the batteries and try again.

Press the ↻ button at your humimeter until you reach the menu (see image on the right). Choose „Print Logs" and confirm by pressing ↵.

Now you can select if you want to print the last saved measuring series or all saved measuring series (logs).

Confirm by pressing ↵ again. The selected logs are printed out now.

To save paper, please think of clearing the data storage regularly.
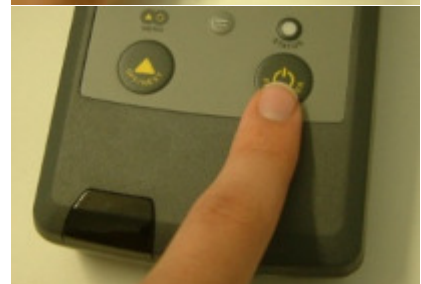
Exemption from liability

For miss-readings and wrong measurements and of this resulting damage we refuse any liability. This is a device for quick determination of moisture. The moisture depends on multiple conditions and multiple materials. Therefore we recommend a plausibility check of the measuring results. Each device includes a serial number and the guarantee stamp. If those are broken, no claims for guarantee can be made. In case of a faulty device, please contact Scigiene (www.scigiene.com)

Changing the batteries

Your new device is provided with batteries. Please find enclosed the manual for changing of batteries:

At first remove the rubber protective housing. For that, hold the rubber housing at the upper side and pull it over. If your humimeter is provided with an optional USB port, you have to remove the protection cap before. Press with your finger onto the arrow of the battery cap und pull it back.

Remove the empty batteries. Put four new batteries in the device. Make sure that the position of the battery poles is correct. Press down the batteries and close the cap. Fix the rubber protective housing at last.

If the battery symbol appears in the measuring window resp. if a critical charge of battery is shown in the status, the batteries have to be changed IMMEDIATELY. If you do not use your humimeter device for a longer period, remove the batteries. For eventual resulting damages we cannot provide any warranty.
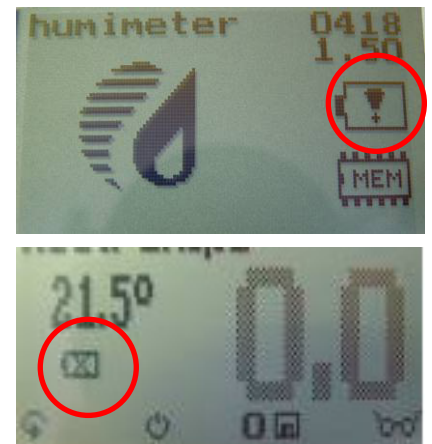
Care instructions

Do not drop the instrument or expose it to excessive temperatures. Clean it only with fuzz-free, **dry cloth**. The device is not waterproof.

The frequency for technical check of the instrument depends on the use and required level of accuracy.

For a fee, Messtechnik Schaller GmbH can also carry out a calibration at their factory. In this case you will receive a calibration certificate.

Technical Data

	Measuring range	/ Solution
Water content	7 to 150%	/ 0,1%
Temperature °C	-10 to +60°C	/ 0,1°C
Temperature °F	+14 to +140°F	/ 0,3°F
Operating temperature range	0°C to +50°C	/ +32 to +122°F
Storage temperature range	-20°C to +60°C	/ -4 to +140°F
Temperature compensation	automatically	
Value storage	appr. 10.000 measuring values	
Languages	German, English, French, Italian, Russian	
Power supply	4 pcs. 1,5Volt AA Alkaline batteries (appr. 1000 measuring cycles)	
Power off time	selectable, standard 4 min.	
Power consumption	60mA (with LED-Backlight)	
Display	128 x 64 matrix LC-display, with LED-Backlight	
Dimensions	147 x 75 x 30mm (without elektrode)	
Weight (including batteries)	265g	
Weight Ram electrode	1500g	
Protection Category	IP 40	
Scope of delivery	humimeter WLW, rubber protection cover, 4 x 1,5Volt AA Alkaline Batteries	
Optional	WLW ram electrode + plastic case (12846) WLW hand electrode (12847) WLW hammer (12630) plastic case (11929) 20 pieces replacement tips without insulation 40mm (12146) 20 pieces replacement tips without insulation 60mm (11775) 2 pieces replacement tips with insulation 60mm (11482)	

!IMPORTANT! Essential reading

Common reasons for incorrect measurements

- **Product temperature out of application range**

  Material **below 0 ℃** resp. **above +50 ℃** (32 to 122 ℉) may cause faulty measurements..

- **Not adjusted temperature of the device**

  Let your humimeter BLW adjust to the surrounding temperature of the material to be measured for at least half an hour.

  A very high temperature difference has a negative effect on the stability of the measurement results.

- **Measuring through the bark.**

  The accuracy is sinking rapidly (also with the isolated nails)

- **Wrong wood type**

  Before you measure your sample, double check the correct selection of the chosen wood type.

- **Direct sun radiation.**

- **Frozen, mouldy or bug damaged wood**

  The accuracy is sinking rapidly (also with the isolated nails)

- **device shows a moisture value even though it has not been beaten in the wood**

  Under particularly wet weather conditions the device can show wood moistures without hammering the hammer in the wood. The value returns to 0.0% when the humidity decreases. (Store the unit in accordance conditions)