humimeter.com®
SCHALLER GMBH

User Manual

humimeter SLW
moisture meter for textile and yarn

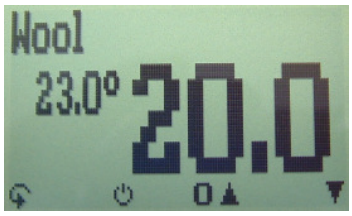
Version 1.0

Measuring procedure

1.) For a correct measurement please ensure that the device has the same temperature than the material under test (+/-3°C). For that reason, let your humimeter SLW adjust to the surrounding temperature of the material for at least half an hour before measuring.

2.) Switch on the device: Press the ⏻ **key for 3 seconds.**

3.) Changing the calibration curve: Press the key once and then the ▲ or ▼ key. The name of the calibration curve can be seen at the head of the display.



4.) Push the electrodes into the yarn or textile.
Within a second the water content is shown on the display.

6.) To save the results in the save menu press the 🖫 (▲ button). The storage was successful when the number in front of the symbol 🖫 increases. To reach the store menu please press (↻) until the 🖫 appears.

7) To name the saved results press the ✎ button.

Attention!! Risk of injury

List of calibration curves

Pressing the ▲ or ▼ key during the measurement for at least 3 seconds 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 measuring value shown on your humimeter SLW represents the “water content” of the testing material (textile). This means that no conversion from “textile moisture” into “water content” is necessary. If you prefer to change the shown value into “textile moisture”, please contact support@humimeter.com

Definitions:

Water content

The water content is the amount of water in a textile referred to its total weight. For example: 1kg of a textile with 40% water content consists of 0.4 kg water and 0,6 kg textile.

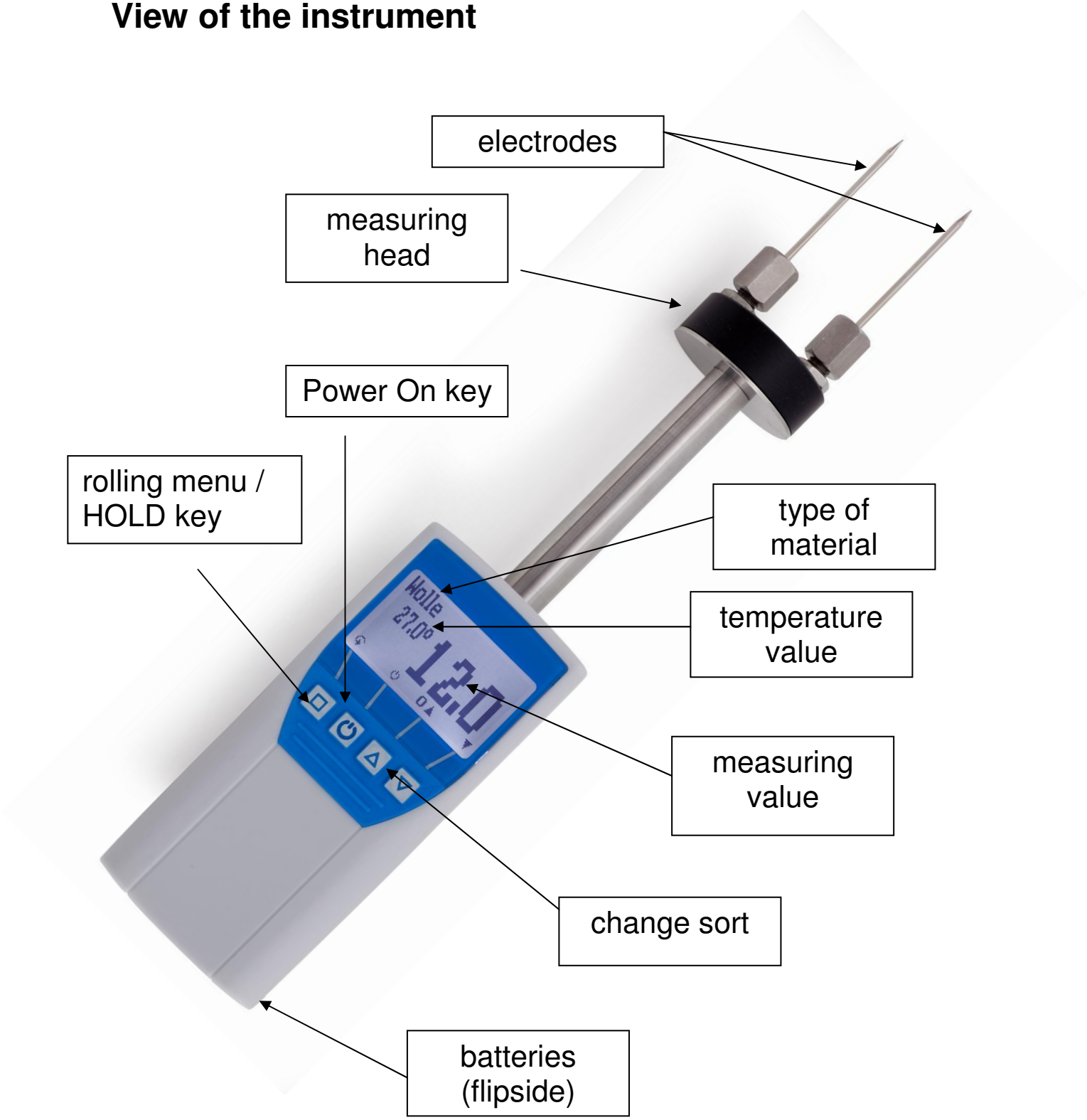
Textile Moisture

The textile moisture is the amount of water in a textile referred to its dry weight. The same example: 0.6 kg textile with 0.4 kg water; the 0.6 kg of the textile represents 100%, so the 0.4 kg of water are 66.7% textile moisture.

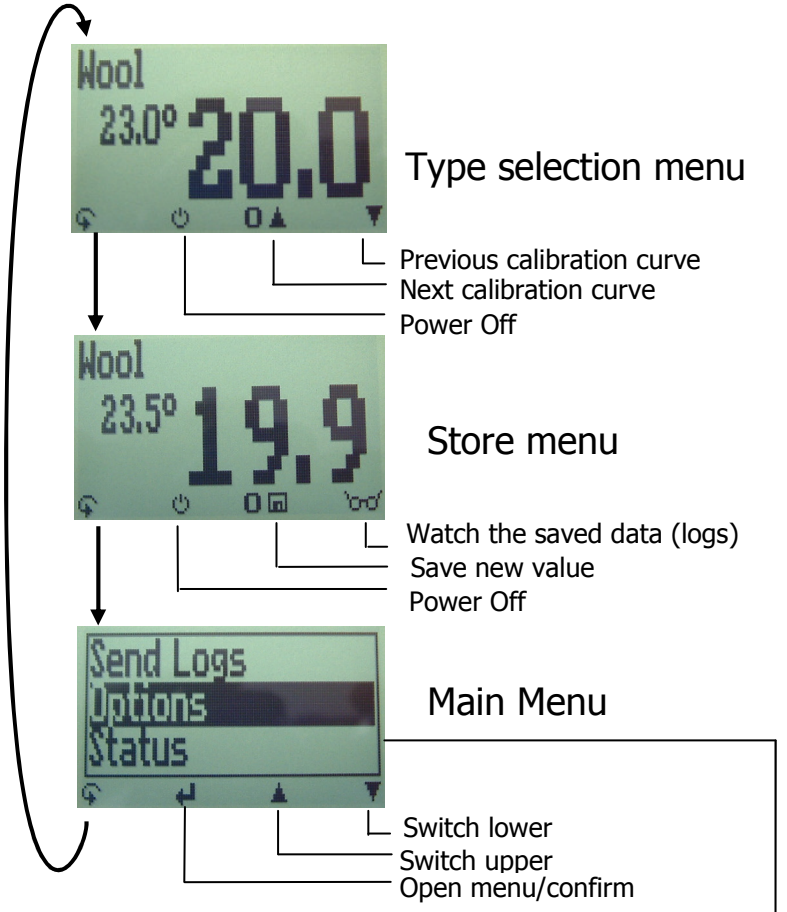
Type of material

sort	measuring range	sort	measuring range
Wool	**13% – 26%**	**Acetat**	**3,5% – 13%**
Cotton	**1,5% – 13%**	**Nylon**	**1,5% – 6,5%**
Rayon	**4% – 26%**	**Polyacrylics**	**0,2% – 3%**
Flax Yarn	**5,5% – 15%**	**Polyester**	**0,5% – 4%**
Jute Yarn	**8% – 24%**	**Digit**	**0 – 100**
Hemp Yarn	**5% – 17%**		

View of the instrument



Menu level overview



Overview main menu

Edit Logs
- Manual Logs
- Clear Logs

Print Logs
- Last Log
- All Logs
- Clear Logs

Send Logs
- Manual Logs
- Clear Logs

Options

Status

Options
- Date / Time
- Log Time
- Language
- Unlock
- °C / °F
- o Userlevel
- BL On Time
- Auto Off Time
- Material calib.
- Password
- Reset

Keypad symbols

Measuring window:

- Rolling Menu
- Power ON / OFF
- Switch upper
- Switch lower
- Save
- Hold
- 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

Running the instrument

Switch on the device: Press the ⏻ key for 3 seconds.

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

Set the clock: press 3 times the ↻ key - *Options – Date / Time* Set date and the time by pressing the 0..9 key (YY.MM.DD). When you have entered the year, push the ▸ key to get to the month and later to the day. Press the ▸ key again to get to the time. If you have entered both date and time, confirm by pressing OK.

Holding the measuring value: Press the H key in the save mode (function has to be activated in options/***log 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 4 minutes. (Both times can be modified in the options menu.)

Power off: Press the ⏻ key in the measuring window for 5 seconds; the device will switch off after releasing the key. The device also switches off automatically when no key is pressed for 6 minutes (Time can be changed in the options menu.)

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 of the device) and confirm by pressing the ↵ button.

Changing the Userlevel

<u>Changing from advanced user to single user:</u>

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.

<u>Changing from single user to advanced user:</u>

Keep both the buttons ▲ and ▼ pressed directly after switching on the device. Your humimeter automatically starts the main menu. Activate the "super user" functions according to the instructions above.

Navigate to "*Options* – o *Userlevel"* and confirm by pressing the ↵ button.

Overview of other instrument functions

- Manual saving of single measuring values in a measurement series.
- Display of the measuring series and measuring values directly on the instrument
- Printout of saved measuring series (when device is equipped with an interface)
- Transfer and saving of the measuring series on a PC (when device is equipped with an interface)
- Display of memory and battery status
- Selection of the menu language (DE, EN, FR, IT, ES, RU)
- Temperature in degrees Celsius or degrees Fahrenheit
- Activation of a simple user operation

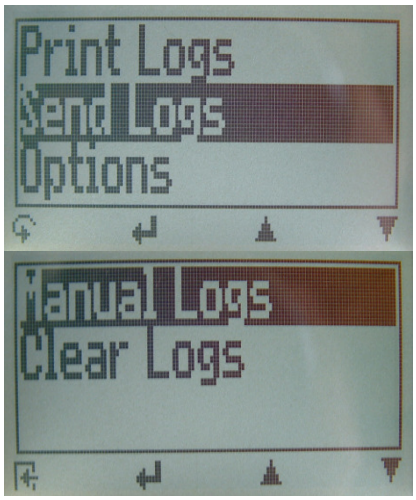
Transfer of saved data to the PC

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 SLW.

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

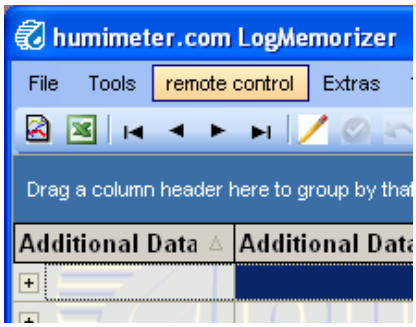
Starting the data transfer on the humimeter:

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.

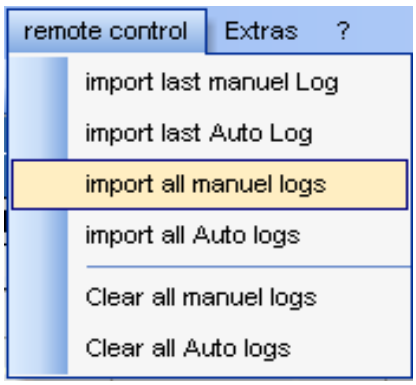


Starting the data transfer on your PC:

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.

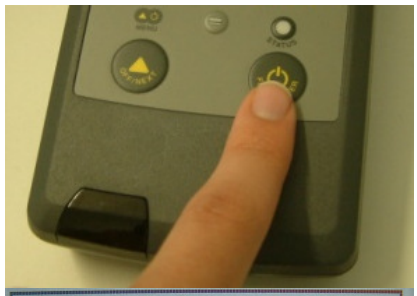
For the basic adjustments of the software please look through the instructions on the LogMemorizer CD.

Print saved data

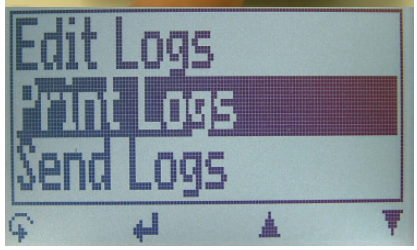
To print your saved data, connect the device to the printer using the printer cable that was delivered with your device. Carefully loose the protection cap on the humimeter SLW. At first plug in the side of the connector with the close plastic casing at the humimeter. Then switch on the device.

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.

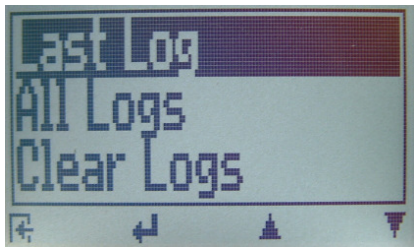


Press the ↶ button at your humimeter until you reach the menu (see image on the right). Choose „Print Logs“ and confirm by pressing ↵.



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.

Changing batteries

Your new device is provided with batteries.

Changing batteries:

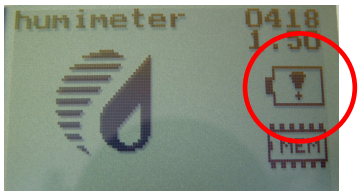
1.) Press with your finger onto the arrow of the battery cap und pull it back.

2.) Remove the empty batteries.

3.) Put four new batteries in the device. Make sure that the position of the battery poles is correct.

4.) Press down the batteries and close the cap.

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.



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 Schaller GmbH (www.humimeter.com) or our dealer.

Device maintenance instructions

To provide a long life of your device please do not expose it to strong mechanical loads or heat e.g. dropping it or direct sunlight exposure. Clean your device using a dry cloth. The measuring chamber needs to be cleaned with a dry and soft brush.

Any kind of wet cleaning damages the device. The instrument is not rainproof. Keep it in dry areas. When the device is not used for a longer period (6 months) or when the batteries are empty, they should be removed to prevent a leakage of battery acid.

Technical Data

Resolution of the display	0.5% water content 0.5°C temperature
Measuring range	0.2 to 26% water content
Operation temperature	0°C to 40°C
Storage temperature	-20°C to 60°C
Temperature compensation	automatically
Power supply	4 pcs. 1.5 Volt AA Alkaline batteries (1000 measurements)
Auto Switch OFF	after app. 6 minutes
Current consumption	55mA (with backlight)
Display	128 x 64 matrix display, lighted
Dimensions	740 x 65 x 40 mm
Weight	app. 450 g (including batteries)
Degree of protection	IP 40
Scope of supply	humimeter SLW, 4 pcs. 1.5 Volt AA Alkaline batteries, plastic case, nails for reserve
Optional	humimeter USB data interface module for connecting to a PC
Option 2 (only with Opt. 1)	Thermo printer, runs by battery

! IMPORTANT ! please read

Most common reasons for miss readings

- **Product temperature out of application range**

  Material **below 0°C** resp. **above +40°C** (32 to 104 °F) may cause faulty measurements. The storage of cold material in a warm storage area usually creates condensed water which may lead to major measuring errors.

- **Not adjusted temperature of the device**

  Let your humimeter adjust to the surrounding temperature of the material for approximate half an hour.

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

- ***Wrong calibration curve***

  Before measuring, double check the correct selection of the calibration curve.

- ***Water film at the measuring head***

  After measuring wet material a water film can arise on the sensor head. This can lead to a too high measuring result for the following measurements. After measuring wet material clean both black plastic parts accurately with a dry cloth.

- **Direct sun radiation**

ATTENTION: Risk of injury by measuring head!

Keep away from children under 16 years!