CHECKLINE®
MADE TO MEASURE

Moisture meter

User Manual

humimeter SLW & TMT-425

Moisture meter

for water content determination of textiles

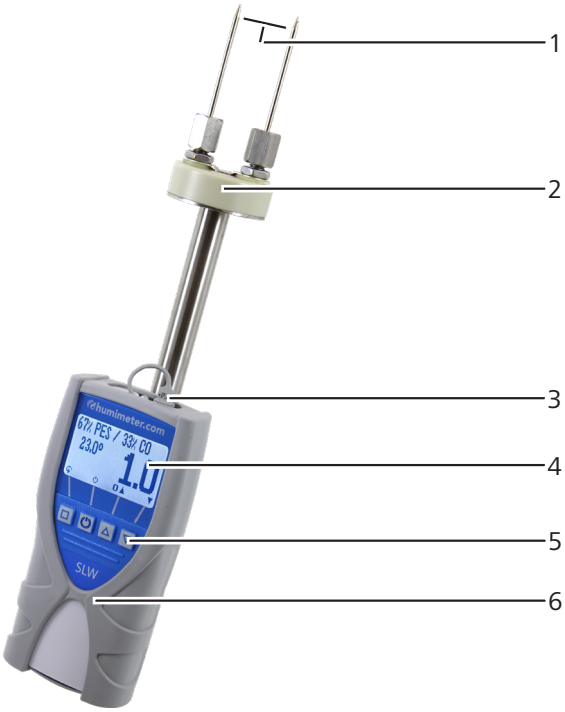
78,0 °F | 6,16% | 456kg/m³ | −27,3td | 0,64aw | 51,9%r.H. | 14,8%abs | 100,4g/m² | 09m/s | 4,90Ugl | 1

Version 3.0

Always read this user manual before using the humimeter SLW!

Your humimeter SLW at a glance

The main unit with probe

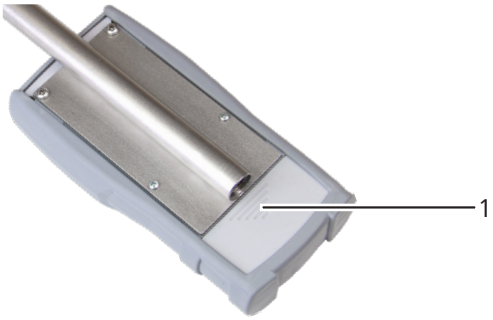


No.	Name
1	Measuring tips
2	Measuring head
3	USB port (optional)
4	Display
5	Keypad
6	Rubber protection cover

The main unit for external sensor

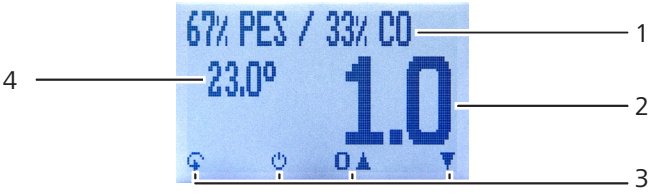
No.	Name
1	Sensor connector
2	USB port (optional)
3	Display
4	Keypad
5	Rubber protection cover
6	Hand electrode holder
7	Plastic mounting ring
8	Electrodes

Rear of the main unit



No.	Name
1	Battery compartment

The display



Nr	Bezeichnung
1	Characteristic curve
2	Material moisture in % ("6.1 Definition of material moisture")
3	Display symbols
4	Temperature display

The display symbols

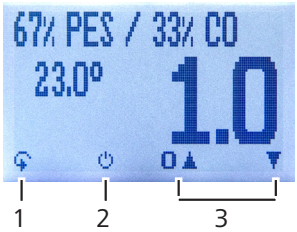
Symbol	Name
	Enter
	Up
	Down
	Back
	Enter numbers
	Enter letters
	Continue / go right
	Left
	Yes

Symbol	Name
	No
	Change input level
	OK
	Change menu
	Enter data
	View measurements
	Delete measurements
	On/off button, display light
	Save measured value

The menus

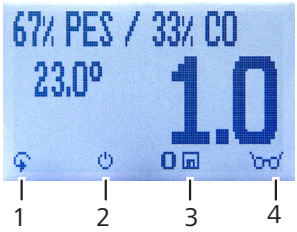
The device has three different menus: Data Log, product selection and main menu:

Product selection menu



No.	Name
1	Change menu
2	Display illumination / device on/off
3	For changing the product type

Data Log menu



No.	Name
1	Change menu
2	Display illumination / device on/off
3	Save measured value
4	Show the last recorded values

Main menu

The main menu comprises the following menu items:

- **Edit Logs:**
  Manual Logs, Clear Logs
- **Print Logs:**
  Last Log, All Logs, Clear Logs
- **Send Logs:**
  Manual Logs, Clear Logs
- **Options:**
  Bluetooth, Date/Time, Log Time, Language, Unlock, °C/°F, BL On Time, Auto Off Time, Materialcalibration, Password, Reset
- **Status**

Table of contents

Your humimeter SLW at a glance 2
The main unit with probe 2
The main unit for external sensor 3
Rear of the main unit 4
The display 4
The display symbols 5
The menus 5
1. Introduction 10
1.1 Information about this user manual 10
1.2 Limitation of liability 10
1.3 Symbols used in this manual 11
1.4 Customer service 11
2. For your safety 12
2.1 Proper use 12
2.2 Improper use 12
2.3 User qualifications 12
2.4 General safety information 13
2.5 Warranty 13
3. After receipt of your device 13
3.1 Unpack the device 13
3.2 Making sure that all of the components have been included 14
3.2.1 SLW with probe's scope of supply 14
3.2.2 SLW for external sensor's scope of supply 14
3.3 Inserting batteries 15
3.4 Inserting the measuring tips 16
4. Using the device - Basics 16
4.1 Switching the device on 16

4.2 Selecting the product type 17
4.3 Basic operation of the hand electrode holder 17
4.3.1 Connecting the hand electrode holder 17
4.3.2 Disconnecting the hand electrode holder 17
4.3.3 Inserting the electrodes 18
4.4 Taking a measurement 18
4.5 Switching the device off 18
5. The measuring process 19
5.1 Taking a measurement 19
5.2 Hold function - Freezing the displayed values 20
5.2.1 Activating the Hold function in the options menu 20
5.2.2 Using the Hold function 20
5.3 Saving individual readings 21
5.3.1 Activating the manual saving function in the options menu 21
5.3.2 Using the manual saving option 21
5.4 Saving several readings (a measurement series) at the same time 22
5.5 Viewing individual readings 24
5.6 Viewing individual readings from a series of measurements 24
5.7 Deleting all measured values (data log) 25
5.8 Deleting individual measurement series 25
5.9 Deleting single values from a series of measurements 26
6. Product types 27
6.1 Definition of material moisture 28
6.2 Definition of moisture content 28
7. Using the LogMemorizer program 29
7.1 Installing/opening the program 29
7.2 Exporting measured values to a computer 29
8. Checking on the device's status 32

9. Configuring the device 33
9.1 Turning on Bluetooth 33
9.2 Adjusting the date/time 33
9.3 Selecting a language 34
9.4 Activating options 34
9.5 Deactivating options 35
9.6 Selecting °C/°F 35
9.7 Reducing the device's power consumption 36
9.7.1 Configuring the display illumination time 36
9.7.2 Configuring automatic switch-off 36
9.8 Configuring the material calibration function 37
9.9 Changing the password 37
9.10 Resetting the device to its factory settings 38
10. Cleaning and maintenance 38
10.1 Changing batteries 38
10.2 Care instructions 39
10.3 Cleaning the device 39
11. Faults 40
12. Storage and disposal 41
12.1 Storing the device 41
12.2 Disposing of the device 41
13. Device information 42
13.1 EC declaration of conformity 42
13.2 Technical data 43

1. Introduction

1.1 Information about this user manual

This user manual is designed to enable you to use the humimeter SLW safely and effectively. It is part of the device, has to be stored nearby and must be easily accessible to users at all times.

All users are required to carefully read and make sure that they have understood this user manual before using the humimeter SLW. All of the safety and operating instructions detailed in this manual have to be observed to ensure the safety of the device.

1.2 Limitation of liability

All of the information and instructions provided in this user manual have been compiled on the basis of the current standards and regulations, the state of the art, and the extensive expertise and experience of Schaller Messtechnik GmbH.

Schaller Messtechnik GmbH does not accept any liability for damage associated with the following, which also voids the warranty:

- Non-observance of this operating manual
- Improper use
- Inadequately qualified users
- Unauthorised modifications
- Technical changes
- Use of unapproved spare parts

This fast measuring procedure can be affected by a range of different factors. For this reason, we recommend periodically checking the device's measurements with a standardised oven-drying method.

We, as the manufacturer, do not accept any liability for any incorrect measurements and associated consequential damage.

1.3 Symbols used in this manual

All safety informations provided in this manual are shown with a corresponding symbol.

WARNING

It is essential to observe this warning. Non-compliance can lead to serious irreversible or fatal injury.

CAUTION

It is essential to observe this warning. Non-compliance can lead to injury.

ATTENTION

It is essential to observe this warning. Non-compliance can lead to damage to property or equipment.

Information

This symbol indicates important information that enables users to use the device more efficiently and cost-effectively.

1.4 Customer service

For technical advice, please contact our customer service department at:

Schaller Messtechnik GmbH
Max-Schaller-Straße 99
A - 8181 St.Ruprecht an der Raab

Telephone: +43 (0)3178 288 99
Fax: +43 (0)3178 288 99 - 901

E-mail: info@humimeter.com
Internet: www.humimeter.com

CE

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2. For your safety

The device complies with the following European directives:

- Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS)
- Electromagnetic compatibility (EMC)

The device corresponds to state-of-the-art technology. However, it is still associated with a number of residual hazards.

These hazards can be avoided through strict observance of our safety information.

2.1 Proper use

- Easy to use device for quickly measuring the moisture content of textiles
- The device must only be used for taking measurements on products defined in the following sections of this manual (see "6. Product types").

2.2 Improper use

- The device is not suitable for measuring material with a temperature over +40 °C.
- The device is not waterproof and must be protected from water and fine dust (IP40).

2.3 User qualifications

Only those persons are permitted to operate the device who can be expected to carry out the work reliably. Persons whose reactions are affected, e.g. by drugs, alcohol or medication, are not allowed to operate with the device.

All persons using this device must have read, understood and follow the instructions provided in this manual.

2.4 General safety information

To avoid personal injury and damage to property, always observe the following safety instructions:

- Remove the batteries if the device is not used for a prolonged period of time (4 weeks).
- Keep the measuring tips away from your body throughout all activities.
- Keep the measuring tips away from other people throughout all activities.
- In case of damages or loose parts on the device, remove the batteries and contact Schaller Messtechnik GmbH or your dealer.

All of the device's technical features have been inspected and tested before delivery. Every device has a serial number. Do not remove the tag with the serial number.

2.5 Warranty

The warranty does not apply to:

- Damage resulting from non-observance of the operating manual
- Damage resulting from third-party interventions
- Products that have been used improperly or modified without authorisation
- Products with missing or damaged warranty seals
- Damage resulting from force majeure, natural disasters, etc.
- Damage from improper cleaning
- Damage due to leaking batteries
- Damage resulting from improper strain (pressure, bending) of the ram electrode or the measuring tips
- Damage from dropping the device

3. After receipt of your device

3.1 Unpack the device

- Take the device out of its packaging.
- Next, make sure that it is not damaged and that no parts are missing.

3.2 Making sure that all of the components have been included

Make sure that all of the components have been included by checking the package contents against the following list:

Optional accessories base device:

- humimeter USB data interface module - USB stick with software and USB cable
- Battery powered portable thermo-printer (only possible together with humimeter USB data interface module) - Described in a separate operating manual
- Bluetooth module (only possible together with humimeter USB data interface module) - Described in a separate operating manual

3.2.1 SLW with probe's scope of supply

- humimeter SLW
- 10 pieces of measuring tips without insulation (60 mm)
- 4 pieces of AA Alkaline batteries
- Rubber protection cover
- Plastic case
- User manual

Optional accessories:

- 2 replacement tips for measuring electrodes, without insulation, 255 mm length
- 2 replacement tips for measuring electrodes, insulated, 60 mm length

3.2.2 SLW for external sensor's scope of supply

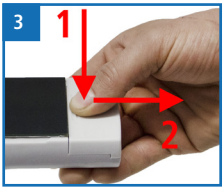
- humimeter SLW
- Hand electrode holder incl. BNC cable with 1 m length
- 4 pieces of AA Alkaline batteries
- Rubber protection cover
- Plastic case
- User manual

Optional accessories:

- SLW-E023: Surface electrode, diameter : 23 mm
- SLW-E100: Needle electrode, needle length: 100 mm
- SLW-E325: Rod electrode, rod length: 325 mm
- SLW-E025: Needle electrode, needle length: 6 x 25 mm

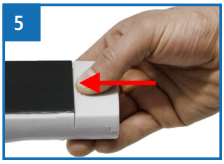
3.3 Inserting batteries

1. Remove the rubber protection cover.
   - » Humimeter SLW with probe: Remove the rubber protection from the top of the housing (figure 1 and 2).
   - » Humimeter SLW with Hand electrode holder: Disconnect it (see "4.3.2 Disconnecting the hand electrode holder") before you pull the rubber protection off the bottom of the housing.
   - » If your device is provided with an optional USB port, remove the protection cap of the USB socket before.



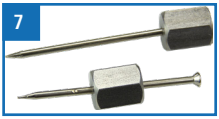
2. Take hold of the device with one hand, press your thumb onto the engraved area of the battery compartment (1) and drag downwards (2) (figure 3).

3. Insert the batteries with negative and positive terminals matching those indicated on the battery compartment. Press down the batteries so that they lay flat on the bottom of the housing (figure 4).
   - » As soon as all batteries have been inserted, the device switches on automatically.



4. Slide the battery cover onto the housing until it clicks into place (figure 5). Then mount the rubber protection cover onto the housing.
   - » Humimeter SLW with probe: start with the side on which the battery cover is.
   - » Humimeter SLW with Hand electrode holder: start with the side on which the sensor plug is positioned..

3.4 Inserting the measuring tips



- Unscrew the two nuts located on the measuring head (figure 6) counterclockwise.

» Loosen only the upper nuts. The botto nuts must not be loosened!

- Insert one measuring tip per nut from behind through the nut (figure 7).

» Measuring tips without insulation (article no. 12521) always measure the wettest spot across the entire insertion depth.

» By using insulated measuring tips (article no. 11482) it is possible to determine humidity at a defined measuring depth, as these only measure at the measuring tip.

- Now screw the nuts with measuring tips to the threads located on the measuring head and tighten the nuts by hand (figure 8).

WARNING

Risk of injury

Risk of injury due to measuring tips

► Keep the measuring tips away from your body throughout all activities.

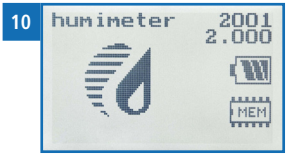
► Keep the measuring tips away from other people throughout all activities.

4. Using the device - Basics

4.1 Switching the device on

- Press the ⏻ button for 3 seconds.

» The display will then show the status indicator (figure 10).



» After inserting the batteries, the device switches on automatically.

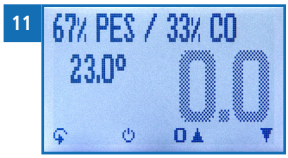
4.2 Selecting the product type

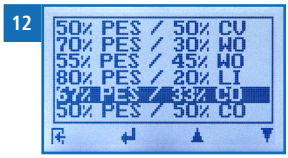
To do so: The device has to be in the product selection menu (figure 11).

For an overview of the different product types and the criteria for selecting them, please refer to "6. Product types".

1. Press the ▽ or △ button to move from one product to the next Or
2. Press the ▽ or △ button for 3 seconds to open the product type overview (figure 12).
3. Use the arrow keys to move from one product type to the next
4. and keep any of them pressed to scroll through the types.
5. Confirm your selection by pressing ↵

» The product type you selected will now be shown at the top of the display.





4.3 Basic operation of the hand electrode holder

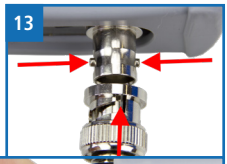
4.3.1 Connecting the hand electrode holder

- Connect the hand electrode holder to the device.

» Pay attention to the elevations at the socket and the guides in the plug and their correct positioning (figure 13).

- Now tighten the plug clockwise with a quarter turn.

» The plug snaps noticeably at the end of the guides.



4.3.2 Disconnecting the hand electrode holder

- Press the plug with slight force towards the device (figure 14).
- Now turn the plug counterclockwise with a quarter turn to the beginning of the guides (figure 15).
- Now pull the plug straight off the device.

» This should be done without great effort.

4.3.3 Inserting the electrodes

- Unscrew the dark-grey plastic fastening ring on the head of the hand electrode holder (figure 16).

» In case of an already inserted electrode, pull it straight out of the hand electrode holder.

- Place the two male contact pins of the electrode on the female sockets on the head of the hand electrode holder (figure 17) and press them together with enough force (figure 18).

» You don't have to pay attention to the correct polarity of the contacts.

- Screw the dark-grey plastic fastening ring back onto the head of the hand electrode holder and hand-tighten it..

WARNING

Risk of injury

Risk of injury due to the Elektrodenspitzen

► Keep the Elektroden tips away from your body throughout all activities.

► Keep the Elektroden tips away from other people throughout all activities.

4.4 Taking a measurement

- For information on how to take a measurement, see section "5. The measuring process".

4.5 Switching the device off

To do so: The device has to be in the product selection or the Data Log menu. It is not possible to switch off the device when it is in the main menu.

Press the ⏻ button for 3 seconds.

5. The measuring process

5.1 Taking a measurement

To do so: Let your device adjust to the surrounding temperature before the measurement.

- Hold the device in one hand and insert the measuring/electrode tips into the material (figure 19) or press the surface electrode onto the material to be measured (figure 20).

» Make sure that the sample is not damaged by the measuring/electrode tips..

» Do not drop the device!

- The device will now instantly display the moisture content on the display (figure 21).

» The displayed value flashes when the moisture content exceeds the measuring range of the selected product type (figure 22). A flashing value signals the end of the measuring range. The measuring range is dependent on the product type (see "6. Product types").

» Once the reading has been taken, it can be saved on the device (see "5.3 Saving individual readings" or "5.4 Saving several readings (a measurement series) at the same time").

19

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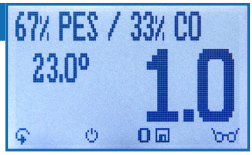
21



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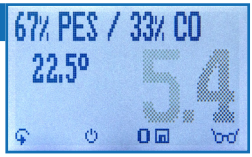


WARNING

Risk of injury

Risk of injury due to the Mess-/Elektrodenspitzen

- ▶ Keep the Mess-/Elektroden tips away from your body throughout all activities.
- ▶ Keep the Mess-/Elektroden tips away from other people throughout all activities.

Information - Measuring accuracy

This rapid and non-destructive measuring procedure allows you to take moisture readings at a number of different points. When saving the individual readings, the device will automatically calculate the readings' average (see "5.4 Saving several readings (a measurement series) at the same time").

Information - Incorrect readings

Always make sure to select the correct product type for the material you are measuring. This prevents taking incorrect readings (see "11. Faults").

5.2 Hold function - Freezing the displayed values

The device can be configured in such a way that the information being shown on the display will freeze at the touch of a button until a new button is pressed. This function can be very useful when e.g. taking readings in spaces where it is not possible to see the display (e.g. overhead).

5.2.1 Activating the Hold function in the options menu

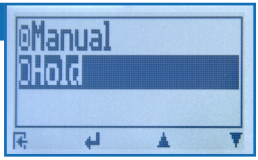
To do so: The device has to be switched on and be in the product selection menu.

1. Press twice or hold for 2 seconds.
2. Select **Options**. To do so, press or and confirm by pressing .
3. Select **Log Time** (figure 23). To do so, press or and confirm by pressing .
4. Select **Hold** (figure 24). To do so, press or and confirm by pressing .

   » The setting has been saved.
5. Press to leave the **Options** menu.
6. Press to leave the main menu.

23

24



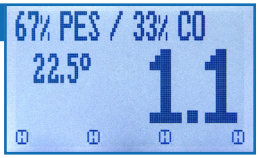
5.2.2 Using the Hold function

To do so: The device has to be switched on and be in the Data Log menu (see "Data Log menu" page 6).

- Press .

  » The current reading will be frozen. All of the four symbols will now be displayed as (figure 25).
- To reactivate the frozen display, simply press any button.

25



5.3 Saving individual readings

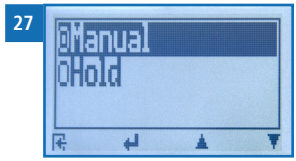
The device can be configured in such a way that the device will save a reading every time a button is pressed. This option (manual saving function) is the device's default setting.

5.3.1 Activating the manual saving function in the options menu

To do so: The device has to be switched on and be in the product selection menu.

1. Press twice or hold for 2 seconds.
2. Select **Options**. To do so, press or and confirm by pressing .
3. Select **Log Time** (figure 26). To do so, press or and confirm by pressing .
4. Select **Manual** (figure 27). To do so, press or and confirm by pressing .
   - » The setting has been saved.
5. Press to leave the **Options** menu.
6. Press to leave the main menu.

26

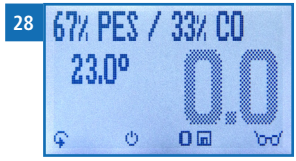


27

5.3.2 Using the manual saving option

To do so: The device has to be in the Data Log menu (see "Data Log menu" page 6). The device is set to Data Log time - Manual.

1. Press .
   - » The display will now appear as shown in figure 29 and the disc symbol will be preceded by the digit one.
2. Press to enter a name for the saved reading and to finish the measuring process.
   - » The display will now appear as shown in figure 30.



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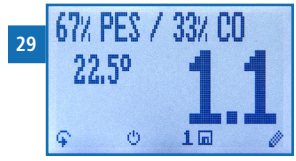

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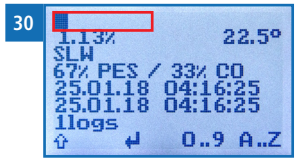
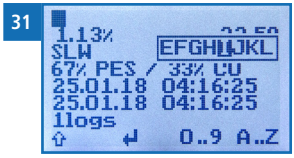


30

3. If an entry has already been made, the displayed entry can be overwritten.

4. Add characters:
Press and hold A..Z to quickly scroll to the required letter and either press it for 3 seconds or press ↵ to confirm the selected letter (figure 31).



5. Add numbers:
Press and hold 0..9 to quickly scroll to the required number and either press it for 3 seconds or press ↵ to confirm the selected number.

6. Moving forward/back:
Press ⇧ to switch to another input level. Press → or ← to move forward or back.

7. Confirm your entry by pressing ↵.

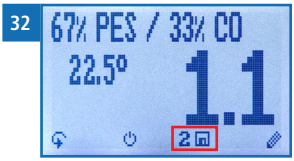
» The data you entered has been saved.

5.4 Saving several readings (a measurement series) at the same time

To do so: The device has to be in the Data Log menu.

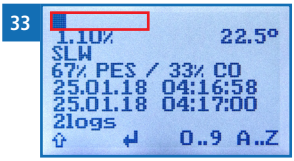
1. Take several measurements at different points (see "5. The measuring process").

2. After each measurement, press 📊 to save the reading.



» The display will appear as shown in figure 32. The marked number shows the number of readings that have already been saved.

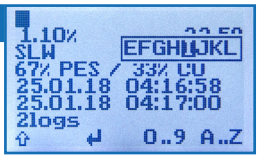
» Press ✎ to enter a name for the saved measurement series and to finish the measuring process.



» The display will appear as shown in figure 33.

3. The data you have entered can be overwritten at any time.

4. Add characters:
Press and hold A..Z to quickly scroll to the required letter and either press it for 3 seconds or press ↵ to confirm the selected letter (figure 34).



5. Add numbers:
Press and hold 0..9 to quickly scroll to the required number and either press it for 3 seconds or press ↵ to confirm the selected number.

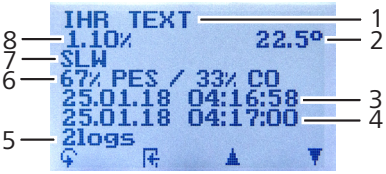
6. Moving forward/back:
Press ⇧ to switch to another input level. Press ⇨ or ⇦ to move forward or back.

7. Confirm your entry by pressing ↵.

» The data you entered has been saved.

» The device automatically determines the average moisture content of the saved measuring values.

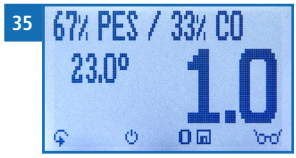
» The display will show the following information:



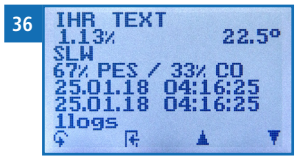
No.	Name
1	Name of the measurement series (editable)
2	Temperature (average)
3	Date & start time of the measurement series
4	Date & end time of the measurement series
5	Number of saved readings
6	Product type
7	Device name
8	Moisture content (average)

5.5 Viewing individual readings

To do so: You must have saved a reading (e.g. **1 Log**).
The display will now appear as shown in figure 35.

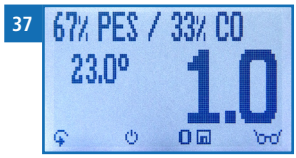


1. Press .
2. Select the required reading. To do so, press or .
   » The display will now appear as shown in figure 36.
   » Press to leave this screen.

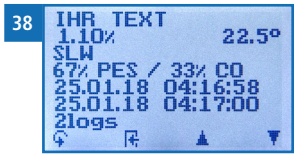


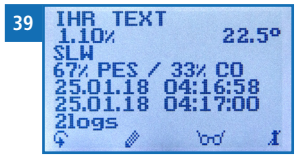
5.6 Viewing individual readings from a series of measurements

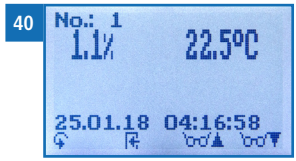
To do so: You must have saved a series of measurements (e.g. **2 logs**).
The display will now appear as shown in figure 37.



1. Press .
2. Navigate to the required measurement series. To do so, press or .
   » The display will now appear as shown in figure 38.
3. Press to switch to another input level.
   » The display will now appear as shown in figure 39.
4. Press again.
   » The display will now appear as shown in figure 40.
5. Navigate to the required reading (**No.: 1, No.: 2, No.: 3**). To do so, press or .
6. Press to leave this screen.







5.7 Deleting all measured values (data log)

To do so: You must have taken and saved one or several readings.

1. Press twice or hold for 2 seconds.
2. Select **Edit Logs** (figure 41). To do so, press or and confirm by pressing .
3. Navigate to **Clear logs** (figure 42). To do so, press or and confirm by pressing .

   » The display will show the message **clear?** (figure 43).

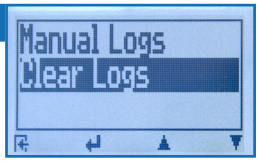
4. Confirm by pressing .

   » The data log has been deleted.

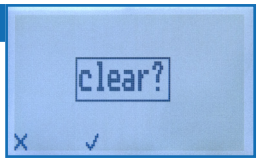
5. Press to leave the **Edit Logs** menu.
6. Press to leave the main menu.

41

42



43



5.8 Deleting individual measurement series

To do so: You must have saved a measured value (e.g. **1 log**) or a series of measurements (e.g. **3 logs**). The display will now appear as shown in figure 44.

1. Press .

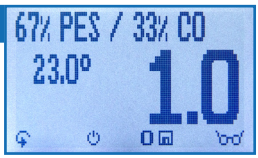
   » The display will now appear as shown in figure 45.

2. Select the required reading. To do so, press or .
3. Press to switch to another input level.

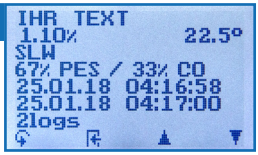
   » The display will now appear as shown in figure 46.

4. Press .

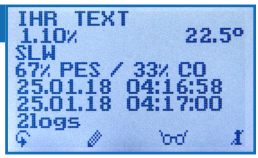
44



45



46

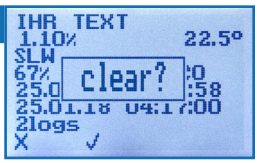


» The display will then show the message **clear?** (figure 47).

5. Confirm by pressing ✓.

» The value has been deleted.

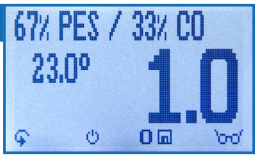
47



5.9 Deleting single values from a series of measurements

To do so: You must have saved a series of measurements comprising of at least 2 logs. The display will now appear as shown in figure 48.

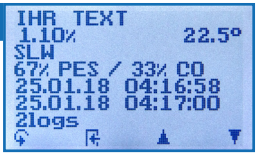
48



1. Press 👓.

» The display will now appear as shown in figure 49.

49

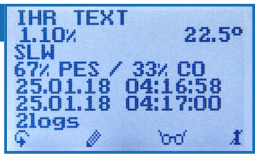


2. Select the required reading. To do so, press ▼ or ▲.

3. Press ↻ to switch to another input level.

» The display will now appear as shown in figure 50.

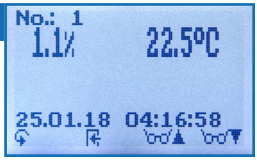
50



4. Press 👓.

» The display will now appear as shown in figure 51.

51

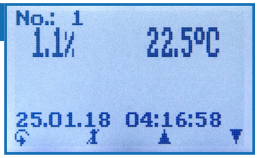


5. Select the required measured value. To do so, press 👓▲ or 👓▼.

6. Press ↻ to switch to another input level.

» The display will now appear as shown in figure 52.

52



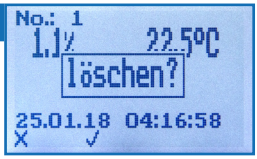
7. Press 🗑 to delete the value shown.

» The display will then show the message **clear?** (figure 53).

8. Confirm by pressing ✓.

» The value has been deleted.

53



6. Product types

Product name		Measuring range	Border
WO Wool	Wool	12 % - 25,8 %	25,9%
CO Cotton	Cotton	1,5 % - 13,1 %	13,3 %
CV Rayon	Rayon	4,1 % - 25,2 %	25,3 %
LI Flax yarn	Flax yarn	5,4 % - 15,3 %	15,5 %
JU Jute yarn	Jute yarn	7,4 % - 24,2 %	24,4 %
HA Hemp yarn	Hemp yarn	5,9 % - 17,5 %	17,5 %
PA Polyamide	Polymide	1,5 % - 6,5 %	6,6 %
PAC Polyacrylics	Polyacrylics	0,2 % - 2,8 %	2,9 %
PES Polyester	Polyester	0,7 % - 4,0 %	4,1 %
CA Acetate	Acetate	3,4 % - 13,4 %	13,5 %
70% PES / 30% CV	70% Polyester / 30% Rayon	0,8 % - 9,3 %	10,9 %
65% PES / 35% CV	65% Polyester / 35% Rayon	1,7 % - 9,9 %	10,6 %
55% PES / 45% CV	55% Polyester / 45% Rayon	1 % - 11,7 %	13,8 %
50% PES / 50% CV	50% Polyester / 50% Rayon	2,6 % - 12,4 %	14,5 %
70% PES / 30% WO	70% Polyester / 30% Wool	2,5 % - 7,9 %	8,5 %
55% PES / 45% WO	55% Polyester / 45% Wool	2 % - 13 %	14,7 %
80% PES / 20% LI	80% Polyester / 20% Flax yarn	0,6 % - 5,2 %	8 %
67% PES / 33% CO	67% Polyester / 33% Cotton	0,5 % - 5 %	5,5 %
50% PES / 50% CO	50% Polyester / 50% Cotton	0,6 % - 6,8 %	10,5 %
40% PES / 60% CO	40% Polyester / 60% Cotton	1,3 % - 10,5 %	17,5 %
50% PES / 50% PAC	50% Polyester / 50% Polyacrylics	0,1 % - 1,5 %	1,8 %
70% PAC / 30% WO	70% Polyacrylics / 30% Wool	2,9 % - 9,1 %	9,8 %
70% PAC / 30% CO	70% Polyacrylics / 30% Cotton	1,9 % - 6,4 %	7,2 %
67% PAC / 33% CO	67% Polyacrylics / 33% Cotton	1,2 % - 6,4 %	7,4 %
60% PAC / 40% WO	60% Polyacrylics / 40% Wool	3,8 % - 11,7 %	12,6 %
40% PAC / 60% WO	40% Polyacrylics / 60% Wool	4,3 % - 15,2 %	15,6 %
70% WO / 30% CV	70% Wool / 30% Rayon	6,4 % - 24,4 %	25,8 %
50% CO / 50% PON	50% Cotton / 50% Polynosic	4 % - 16,3 %	17,9 %
40% CO / 60% LI	40% Cotton / 60% Flax yarn	4 % - 16 %	19,5 %

80% CV / 20% WO	80% Rayon / 20% Wool	4,7 % - 23,5 %	29,9 %
Digit		0 - 100	
Empty 1 & 2			
Test block	! Only for testing the moisture meter !		

6.1 Definition of material moisture

In the standard delivery state, the device measures and shows the material moisture. The material moisture defines the amount of water contained in the material in relation to the material´s dry weight.

Example: 0.6 kg with 0.4 kg water
The dry weight of 0.6 kg corresponds to 100 %. In relation to the dry weight, the 0.4 kg water result in a material moisture of 66,7 %.

6.2 Definition of moisture content

The moisture content readings are calculated in relation to the material's overall mass:

$$\%WG = \frac{M_n - M_t}{M_n} \times 100$$

M_n: Mass of the sample with average moisture content

M_t: Mass of the sample with zero moisture content

%WG: Moisture content (in accordance with EN ISO 18134-2)

Example: 1 kg material with 40 % moisture content. The total weight of 1 kg (corresponding to 100%) consists of 0.6 kg (60 %) material and 0.4 kg (40 %) water.

It is possible to set the device to the calculation of moisture content at the factory. For that please contact support@schaller-gmbh.at.

7. Using the LogMemorizer program

To do so: The device is provided with USB interface, and the USB stick with LogMemorizer software and USB cable are available.

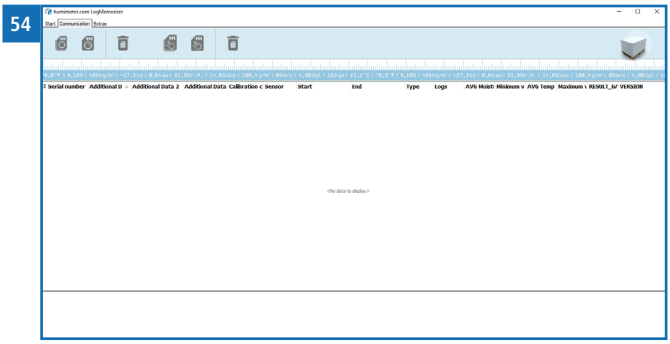
7.1 Installing/opening the program

1. Insert the USB stick with the LogMemorizer program into the USB port on your computer.
2. Open the **setup** application.
3. Follow the installation instructions.
4. Open LogMemorizer.

» The screen will now display the LogMemorizer's interface (figure 54).

» Before using LogMemorizer, please refer to the the separate LogMemorizer operating manual for the correct configuration of the USB COM Port.

54



For more information on LogMemorizer, please refer to the separate LogMemorizer operating manual supplied with the device.

7.2 Exporting measured values to a computer

To do so: The LogMemorizer program is installed. You must have taken and saved one or several moisture readings.

Options: You can export moisture readings from the humimeter SLW or initiate the export at your computer.

Exporting moisture readings from the humimeter SLW

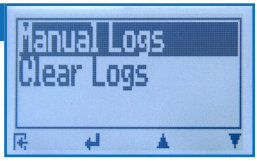
Connect the humimeter SLW to your computer using the supplied USB cable:

55

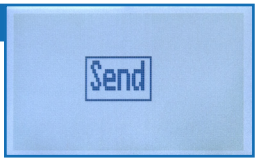
1. Insert the USB Mini B connector into the humi meter SLW (figure 55).
2. Insert the USB connector into the computer.
3. Open LogMemorizer on your computer.
4. Switch on the humimeter SLW.
5. Press twice or hold for 2 seconds.
6. Select **Send Logs** (figure 56). To do so, press or and confirm by pressing .
7. Select **Manual Logs** (figure 57). To do so, press or and confirm by pressing .
8. The display will then show the message **Send** (figure 58).

» All measuring values saved on the humimeter SLW will now be sent to your computer.

56



57



58

Initiating the data export at your computer

Connect the humimeter SLW to your computer using the supplied USB cable:

59

1. Insert the USB Mini B connector into the humim-eter SLW (figure 59).
2. Insert the USB connector into the computer.
3. Open LogMemorizer on your computer.
4. Switch on the humimeter SLW.
5. Open the **Communication** tab in LogMemorizer (figure 60).

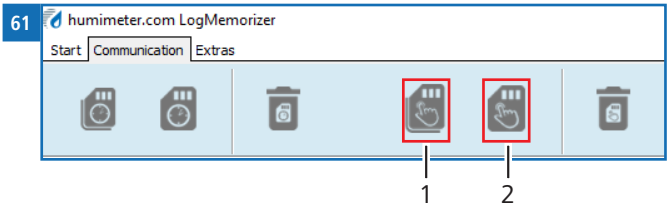
60

6. Select and click on one of the two buttons shown in figure 61.

» **Import all manual logs** (for importing all manually saved readings) or

» **Import most recent manual log** (for importing the most recent manually saved logs).

61

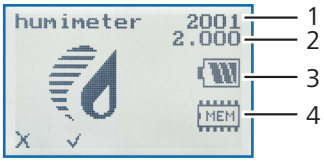


No.	Name
1	Import all manual logs
2	Import most recent manual log

» The measuring values saved on the humimeter SLW will now be sent to your computer.

8. Checking on the device's status

1. Press twice or hold for 2 seconds.
2. Select **Status**. To do so, press or and confirm by pressing .
   - » The display will then show the status indicator **humimeter**.
   - » The display will show the following information:



No.	Name
1	Serial number
2	Software version
3	Battery status
4	Memory status

3. Confirm by pressing .
4. Press to leave the main menu.

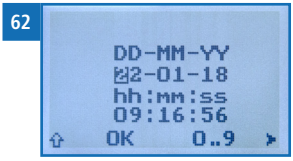
9. Configuring the device

9.1 Turning on Bluetooth

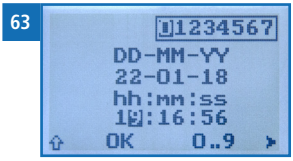
The information on Bluetooth is provided in a separate user manual.

9.2 Adjusting the date/time

1. Press twice or hold for 2 seconds.
2. Select **Options**. To do so, press or and confirm by pressing .
3. Select **Date/Time**. To do so, press or and confirm by pressing .
   - » The display will now appear as shown in figure 62.
   - » The format for the date is **DD-MM-YY** (Day-Month-Year).
   - » The format for the time is **hh:mm:ss** (Hour:Minutes:Seconds).



4. Add numbers:
   Press and hold 0..9 to quickly scroll to the required number and either press it for 3 seconds or press to confirm the selected number (figure 63).



5. Moving forward:
   To move forward between **DD-MM-YY** and **hh:mm:ss**, press .
6. Moving back:
   Press to switch to another input level. To move backward between **DD-MM-YY** and **hh:mm:ss**, press .
7. Confirm the date/time by pressing OK.
   - » The settings have been saved.
8. Press to leave the **Options** menu.
9. Press to leave the main menu.

9.3 Selecting a language

1. Press twice or hold for 2 seconds.
2. Select **Options**. To do so, press or and confirm by pressing .
3. Select **Language**. To do so, press or and confirm by pressing .
4. Navigate to the required language. To do so, press or and confirm by pressing .

» The settings have been saved.

5. Press to leave the **Options** menu.
6. Press to leave the main menu.

9.4 Activating options

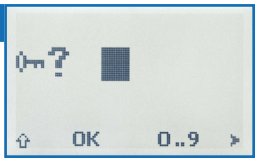
To do so: Some of the options must be deactivated.

1. Press twice or hold for 2 seconds.
2. Select **Options**. To do so, press or and confirm by pressing .
3. Select **Unlock**. To do so, press or and confirm by pressing .

» The display will now appear as shown in figure 64.

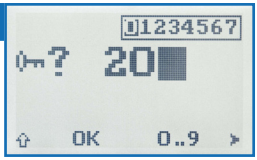
» On delivery, the four-digit password is the device's serial number.

64



4. Add numbers:
   Press and hold 0..9 to quickly scroll to the required number and either press it for 3 seconds or press to confirm the selected number (figure 65).

65



5. Moving back:
   Press to switch to another input level.
   To move back, press .
6. Confirm the four-digit password by pressing .

» The settings have been saved.

» The **°C/°F, BL On Time**, **Auto Off Time, Materialcalibration, Password**, **Reset** options are now activated.

7. Press to leave the **Options** menu.
8. Press to leave the main menu.

9.5 Deactivating options

Once the device has been restarted, the **°C/°F, BL On Time**, **Auto Off Time, Material calibration, Password**, **Reset** options will be deactivated again.

9.6 Selecting °C/°F

To do so: All of the options must be activated (see "9.4 Activating options").

1. Press twice or hold for 2 seconds.
2. Select **Options**. To do so, press or and confirm by pressing .
3. Select **°C/°F**. To do so, press or and confirm by pressing .
4. Navigate to the required temperature scale, i.e. Celsius (**°C**) or Fahrenheit (**°F**). To do so, press or and confirm by pressing .

» The settings have been saved.

5. Press to leave the **Options** menu.
6. Press to leave the main menu.

9.7 Reducing the device's power consumption

9.7.1 Configuring the display illumination time

To do so: All of the options must be activated (see "9.4 Activating options").

1. Press twice or hold for 2 seconds.
2. Select **Options**. To do so, press or and confirm by pressing .
3. Select **BL On Time**. To do so, press or and confirm by pressing .
4. Select the required display illumination period (30 seconds/2 minutes/5 minutes/10 minutes). To do so, press or and confirm by pressing .

» The settings have been saved.

5. Press to leave the **Options** menu.
6. Press to leave the main menu.

9.7.2 Configuring automatic switch-off

To do so: All of the options must be activated (see "9.4 Activating options").

1. Press twice or hold for 2 seconds.
2. Select **Options**. To do so, press or and confirm by pressing .
3. Select **Auto Off Time**. To do so, press or and confirm by pressing .
4. Select the period of time you want the device to stay switched on (3 minutes/5 minutes/10 minutes). To do so, press or and confirm by pressing .

» The settings have been saved.

5. Press to leave the **Options** menu.
6. Press to leave the main menu.

9.8 Configuring the material calibration function

The type calibration function is described in a separate operating manual.

9.9 Changing the password

To do so: All of the options must be activated (see "9.4 Activating options").

1. Press twice or hold for 2 seconds.
2. Select **Options**. To do so, press or and confirm by pressing .
3. Select **Password**. To do so, press or and confirm by pressing .

» The display will show the current password.

4. Overwrite the current password. To do so, press and hold to quickly scroll to the required number and either press it for 3 seconds or press to confirm the selected number.

   Moving back:
   Press to switch to another input level.
   To move back, press .

5. Confirm the new four-digit password by pressing .

» The settings have been saved.

6. Press to leave the **Options** menu.
7. Press to leave the main menu.

9.10 Resetting the device to its factory settings

To do so: All of the options must be activated (see "9.4 Activating options").

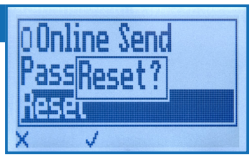
1. Press twice or hold for 2 seconds.
2. Select **Options**. To do so, press or and confirm by pressing .
3. Select **Reset**. To do so, press or and confirm by pressing .

» The display will then show the message **Reset?** (figure 66).

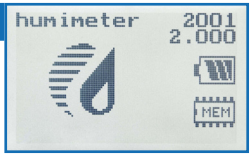
4. Confirm by pressing .

» The device will now be reset to its factory settings. All of your personal settings will be lost.

66



67



» The display will show the status indicator **humimeter** (figure 67).

» Resetting the device will not affect the saved measuring values.

10. Cleaning and maintenance

Regular cleaning and maintenance will ensure that your device remains undamaged for as long as possible.

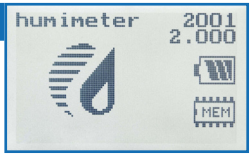
10.1 Changing batteries

The device constantly monitors the charge level of the batteries. The current battery status is shown on the status screen.

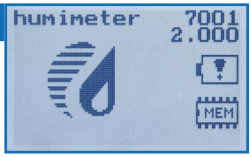
If the battery´s charge is very low, the battery symbol will be shown with an exclamation mark. In that case, the batteries must be changed immediately (figure 69).

For changing the batteries, see section "3.3 Inserting batteries".

68



69



You as a final consumer are legally obligated to return all used batteries! The disposal of batteries with domestic waste is prohibited (battery regulation).

10.2 Care instructions

- Do not leave the device out in the rain. The device is not waterproof.
- Do not expose the device to extreme temperatures.
- Protect the device from strong mechanical shocks and loads.

10.3 Cleaning the device

Plastic housing

- Clean the plastic housing with a dry cloth.

Measuring tips

- The measuring tips can be cleaned with a cloth and cleaning alcohol.

ATTENTION

Do not clean with fluids

Water or cleaning fluid getting inside the device can destroy the device.

► Only clean with dry materials.

11. Faults

If the measures listed below fail to remedy any faults or if the device has faults not listed here, please contact Schaller Messtechnik GmbH.

Fault	Cause	Remedy
Measuring errors	The temperature of the material being measured is too low or high. I.e. the material's temperature is lower than 0 °C or higher than +40 °C.	The temperature of the material being measured has to be between 0 °C and +40 °C.
	Temperature discrepancy between device and material being measured	Let the temperature adjust to the material being measured (permitted difference of max. 3 °C).
	Wrong product type	Check whether you have selected the right product type (product) before taking a reading (see "6. Product types").
	Moldy or rain wet material	The accuracy of the measurement decreases significantly
	Water film on the measuring/electrode tips	After a measurement of wet material, a film of water may appear on the measuring / electrode tips. Clean the measuring head (see "10.3 Cleaning the device").
Data transfer to Log Memorizer failed	Interface has not been configurated	The interface only has to be configurated once. To do so, press the F1 key on your computer and read the Help file of the Log-Memorizer program.

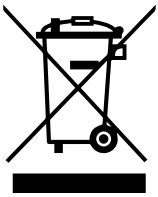
12. Storage and disposal

12.1 Storing the device

The device must be stored as follows:

- Do not store outdoors.
- Store in a dry and dust-free place.
- Protect the device from sunlight.
- Avoid mechanical shocks/loads.
- Remove the batteries if the device isn´t used for a period of 4 weeks or longer.
- Storage temperature: -20 °C to +60 °C

12.2 Disposing of the device



Devices marked with this symbol are subject to Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE).
If the device is being operated outside the European Union, the national regulations on the disposal of such devices that apply in the country of use must be observed.

Electronic devices must not be disposed of as domestic waste.

The device must be disposed of appropriately using appropriate collection systems.

13. Device information

13.1 EC declaration of conformity

CE DECLARATION OF CONFORMITY

We **Schaller GmbH**
Max-Schaller-Straße 99
A – 8181 St. Ruprecht

in accordance with the following Directives:

EMV - Richtlinie 2014/30/EU,
RoHS - Directives 2011/65/EG,

hereby declare that the following product types:

Product: **humimeter**

Types: **BL2 ; BLL ; BLH ; BLW ; FL1 ; FL2 ; FLH ; FLM ; FLS ; SLW ; WLW**

are in conformity with the applicable requirements of the following documents

- **EN 61326–1:2013** Electrical equipment for measurement, control and laboratory use – EMC requirements
- **EN 50581:2012** Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances:

I hereby declare that the equipment named above has been designed to comply with the relevant Sections of the above referenced specifications. The unit complies with all applicable Essential Requirements of the Directives.

St. Ruprecht a.d. Raab, 13.09.2018

Max Schaller

Schaller GmbH
Maximilian Schaller
General Manager

13.2 Technical data

Display resolution	0.1 % moisture content, 0.5 °C/°F temperature
Measuring range	0.3 % to 29.9 % moisture content (product type dependent)
Operating temperature	0 °C to +40 °C
Temperature measuring range	-10 °C to +60 °C
Storage temperature	-20 °C to +60 °C
Temperature compensation	Automatic
Data memory	Up to 10,000 measuring values
Power supply	4 pcs. of 1.5 Volt AA Alkaline batteries
Current consumption	60 mA (incl. display illumination)
Menu languages	German, English, French, Italian, Spanish, Portuguese, Czech, Polish, Russian, International
Display	128 x 64 illuminated matrix display
Device dimensions	334 x 75 x 62 mm
Device weight	450 g
Plastic case dimensions	450 x 360 x 110 mm
Plastic case + device weight	1.700 g
Device IP rating	IP 40

Climate Environment

Materials

Food

Buildings

Bioenergy

Paper / Board

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info@checkline.com | www.CheckLine.com