Schaller
Messtechnik / humimeter.com

Moisture meter

Operating manual

humimeter M30

Universal Material Moisture Meter

for water content determination of special materials

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

Version 1.1

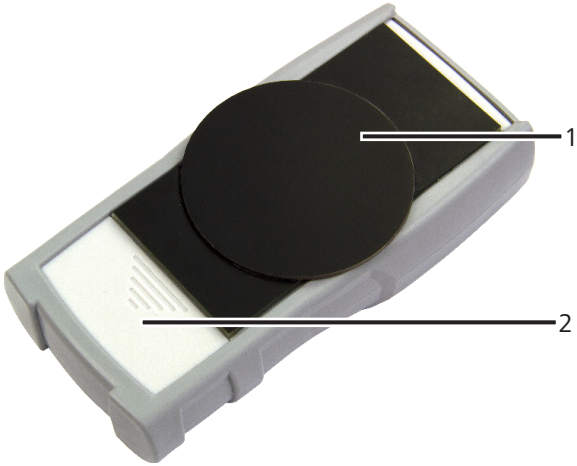
Always read the operating manual before using!

Your humimeter M30 at a glance

The main unit

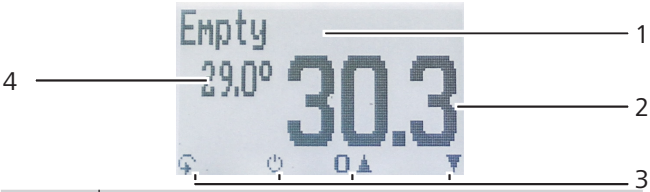
No.	Name
1	USB Port (optional)
2	Display
3	Keypad
4	Rubber protection cover

Rear of the main unit



No.	Name
1	Sensor surface
2	Battery compartment

The display



Nr	Name
1	Product type
2	Water content in % ("6.1 How moisture is defined")
3	Display symbols
4	Temperature display

The display symbols

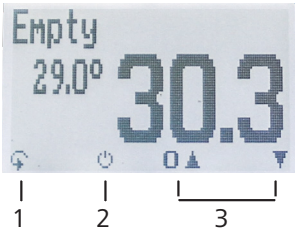
Symbol	Name
	Enter
	Up
	Down
	Back
0..9	Enter numbers
A..Z	Enter letters
	Continue / go right
	Left
	Yes

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

The menues

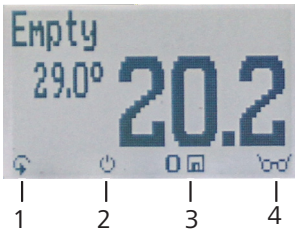
The device has three different menus: product selection, Data Log and main menu

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, Adjust, Userlevel, BL On Time, Auto Off Time, Materialcalibration, Password, Reset
- **Status**

Inhaltsverzeichnis

1. Introduction

1.1 Information about this operating manual

This operating manual is designed to enable you to use the humimeter M30 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 operating manual before using the humimeter M30. 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 operating 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 Measuring Technology GmbH.

Schaller Measuring Technology 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 of the safety information provided in this manual is shown with a corresponding symbol.

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 28899
Fax: +43 (0)3178 28899 - 901

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

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 different materials with plane surfaces
- The device must only be used for taking measurements on the products defined in the following sections of this manual (see "6. Product types").

2.2 Improper use

- The device must not be used in ATEX.
- The device is not waterproof and must be protected from water and fine dust.

2.3 User qualifications

The device must only be operated by people who can be expected to reliably take the measurements. The device must not be operated by people whose reaction times may be slowed due to, e.g. the use of drugs, alcohol or medication.

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

2.4 General safety information

The following safety information has to be observed at all times to avoid damage to objects and injury to people:

- Remove the batteries if the device isn't used for a prolonged period of time (4 weeks).
- In case of damages or loose parts on the device, remove the batteries and contact Schaller 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 resulting from battery leakage

3. On receipt of your device

3.1 Taking the device out of its packaging

- 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:

- humimeter M30
- 4 pieces AA alkaline batteries
- Rubber protection cover

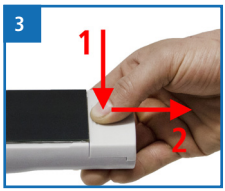
- humimeter USB data interface module - USB flash drive with software and USB-cable or download using humimeter.com/software
- Operating manual

Optional accessories:

- humimeter USB data interface module - USB stick with LogMemorizer software (measurement data acquisition and evaluation software) and USB cable
- Battery-powered portable thermal printer (can only be used in conjunction with humimeter USB data interface module) - Described in separate operating instructions.
- Bluetooth module (can only be used in conjunction with humimeter USB data interface module) - Described in separate operating instructions.

3.3 Inserting batteries

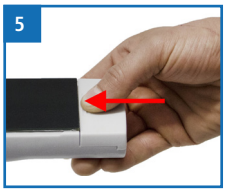
1. Remove the rubber protection cover. To do so, hold the rubber protection cover at the upper side and pull it over. If your device is provided with an optional USB port, remove the protection cap of the USB socket before (figure 1 and 2).



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. Push the battery cover onto the housing until it clicks into place. Then mount the rubber protection cover onto the housing, beginning at the end where the battery compartment is situated (figure 5).

4. Using the device - Basics

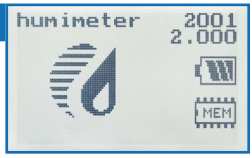
4.1 Switching the device on

- Press the button for 3 seconds.

» The display will then show the status indicator (figure 6).

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

6



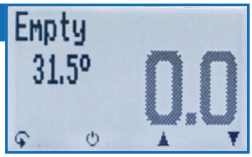
4.2 Selecting the product type

To do so: The device has to be in the product selection menu (figure 7).

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 8).
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 .

7



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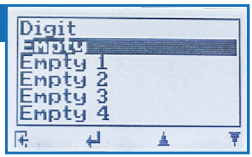

» The product type you selected will now be shown at the top of the display.

4.3 Taking a measurement

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

4.4 Switching the device off

To do so: The device has to be in the product selection or 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. Measuring process

5.1 Preparing a measurement

To do so: The device has to have nearly the same temperature than the product being measured. It is recommended to let your humimeter device adjust to the surrounding temperature of the product before the measurement.

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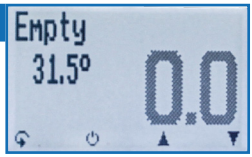

1. Switch on the device (see "4.1 Switching the device on").
2. Select the desired product type (see "6. Product types") by pressing the or . button (see "4.2 Selecting the product type").

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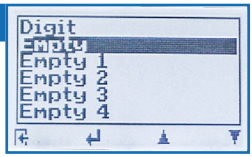

5.2 Taking a measurement

Due to the measuring method and the resulting required measuring depth, it is only possible to measure materials with a smooth surface. The material to be measured must not contain any metals or electrically conductive substances.

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To do so: The measured material is at least 30mm thick and the device has approximately the same temperature as the measured material.

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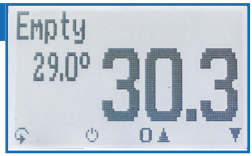

- Take the device in one hand and press it onto the sample with a pressure of approx. 4 kg. (figure 11).
- The sensor surface (black plate on the underside of the device) must lie completely on the material to be measured.

» The measured value is immediately shown on the display of the device (figure 12).

» Now the displayed measured value can be stored on the device (see "5.6 Saving several readings (a measurement series) at the same time" or "5.5 Saving individual readings").

Information - Measuring accuracy

This rapid and non-destructive measuring procedure allows you to quickly take moisture readings at a number of different points. When saving the individual readings, the device will automatically calculate the readings' average (see "5.6 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").

5.3 Simplified user

The device can be configured in such a way that the access of the user is restricted to the product selection menu combined with the Hold function.

5.3.1 Activating/Deactivating the simplified user

- For information on how to activate/deactivate the simplified user, see section"9.7 Changing the Userlevel".

5.3.2 Using the simplified user

The simplified user offers the following limitations:

- The only usable menu is a slightly modified product selection menu (figure 13).
- » No access to the Data Log or main menu.
- The Hold function replaces the function to switch between the different menus.

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5.4 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).

5.4.1 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 14). To do so, press or and confirm by pressing .
4. Select **Hold** (figure 15). 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.

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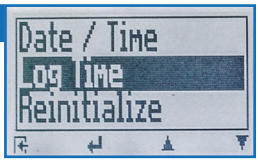

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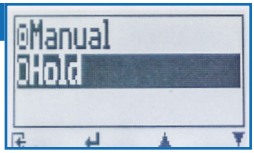


5.4.2 Using the Hold function

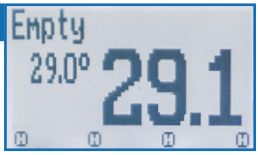
To do so: The device has to be switched on and be in the Data Log menu.

- Press .

» The current reading will be frozen. All of the four symbols will now be displayed as (figure 16).

- To reactivate the frozen display simply press any button.

16



5.5 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.

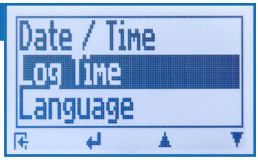
5.5.1 Activating the manual saving function in the options menu

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 17). To do so, press  or  and confirm by pressing  .
4. Select **Manual** (figure 18). 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.

17



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5.5.2 Using the manual saving function

To do so: The device has to be in the Data Log menu. The device is set to Data Log Time - Manual.

1. Press .

   » The display will now appear as shown in figure 20 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 21.

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

4. Inputting letters:
   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 22).

5. Inputting 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.

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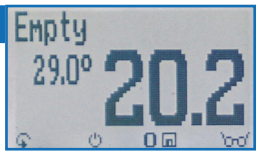

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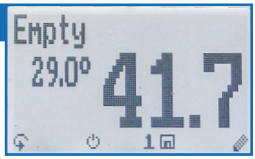

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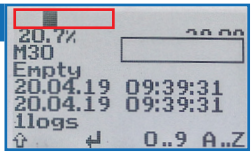

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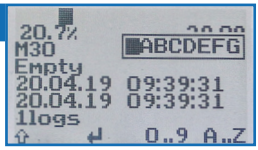
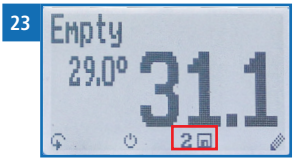


5.6 Saving several readings (a measurement series) at the same time

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

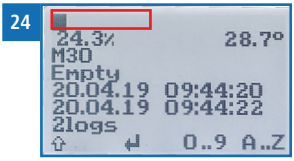
1. Take several readings (see "5. Measuring process").
2. To save a reading, press  as soon as the reading has been taken.

» The display will now appear as shown in figure 23. The marked number shows the number of readings that have already been saved.

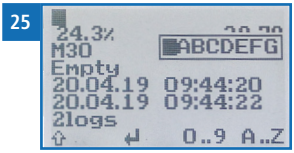


3. Press  to enter a name for the saved series of measurements and to finish the measuring process.

» The display will now appear as shown in figure 24.



4. The data you have inputted can be overwritten at any time.
5. Inputting letters:
   Press and hold  to quickly scroll to the required letter and either press it for 3 seconds or press  to confirm the selected letter (figure 25).

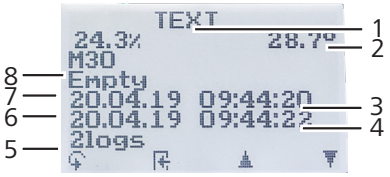


6. Inputting numbers:
   Press and hold  to quickly scroll to the required number and either press it for 3 seconds or press  to confirm the selected number.
7. Moving forward/back:
   Press  to switch to another input level. Press  or  to move forward or back.
8. Confirm your entry by pressing  .

» The data you entered has been saved.

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

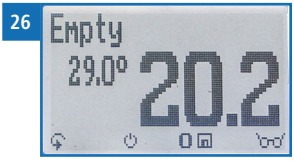
» The display will show the following information:



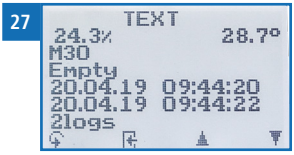
Nr	Name
1	Name of the measurement series
2	Temperature (average)
3	Date & start time of the measurement series
4	Date & end time of the measurement series
5	Number of saved readings
6	Product type
7	Device name
8	Water content (average)

5.7 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 26.

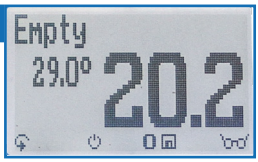


1. Press .
2. Select the required reading. To do so, press or .
   - » The display will now appear as shown in figure 27.
   - » Press to leave this screen.

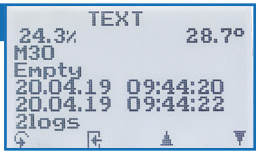


5.8 Viewing individual readings from a series of measurements

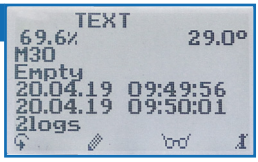
To do so: You must have saved a series of measurements (e.g. **2 logs**).
The display will now appear as shown in figure 28.



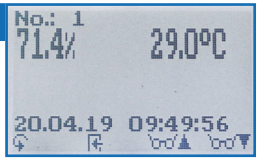
1. Press .
2. Navigate to the required measurement series. To do so, press or .
   » The display will now appear as shown in figure 29.



3. Press to switch to another input level.
   » The display will now appear as shown in figure 30.



4. Press again.
   » The display will now appear as shown in figure 31.
5. Navigate to the required reading (**No.: 1, No.: 2, No.: 3**). To do so, press or .

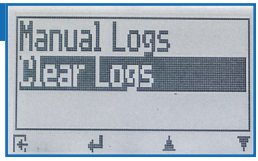


6. Press to leave this screen.

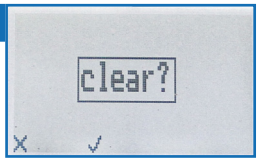
5.9 Deleting all measured values (data log)

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 32). To do so, press or and confirm by pressing .



3. Select **Clear Logs** (figure 33). To do so, press or and confirm by pressing .
   » The display will show the message **clear?**



4. Confirm by pressing .
   » The data log has been deleted.

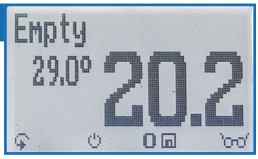
5. Press to leave the **Edit Logs** menu.
6. Press to leave the main menu.

5.10 Deleting individual measurement series

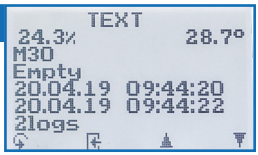
To do so: You must have saved a measured value (e.g. **1 log**) or a series of measurements (e.g. **3 logs**). The display will now appear as shown in figure 35.

1. Press .
   » The display will now appear as shown in figure 36.
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 37.
4. Press .
   » The display will then show the message **clear?** (figure 38).
5. Confirm by pressing .
   » The value has been deleted.

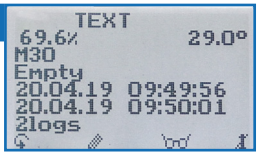
35



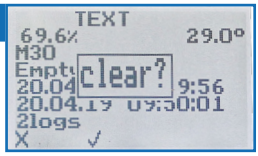
36



37



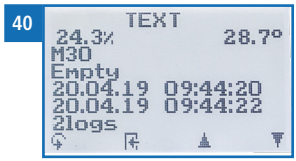
38

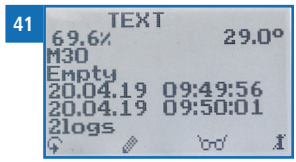


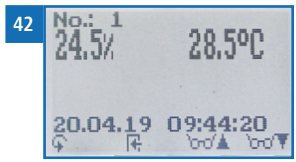
5.11 Deleting individual values from a single series of measurements

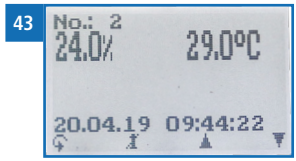
To do so: You must have saved a series of measurements comprising at least 2 logs. The display will now appear as shown in figure 39.

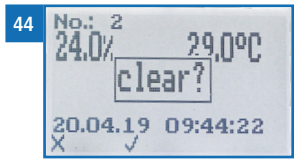
1. Press .
   » The display will now appear as shown in figure 40.
2. Select the required reading. To do so, press or .
3. Press to switch to another input level.
   » The display will now appear as shown in figure 41.
4. Press .
   » The display will now appear as shown in figure 42.
5. Select the required measured value. To do so, press or .
6. Press to switch to another input level.
   » The display will now appear as shown in figure 43.
7. Press to delete the value shown.
   » The display will then show the message **clear?** (figure 44).
8. Confirm by pressing .
   » The value has been deleted.











6. Product types

The humimeter M30 is equipped with 11 freely editable characteristic curves, as well as a digital characteristic curve and a reference characteristic curve. It is possible for the user to edit these free characteristic curves on the humimeter M30 and set the parameters of the material to be measured.

Grade calibration is described in separate instructions.

Product type	Application
Digit	Unitless measurement result from 0 to 100, which corresponds to the entire measuring range of the device.
Empty	Customer characteristic curve - freely editable
Empty 1	Customer characteristic curve - freely editable
Empty 2	Customer characteristic curve - freely editable
Empty 3	Customer characteristic curve - freely editable
Empty 4	Customer characteristic curve - freely editable
Empty 5	Customer characteristic curve - freely editable
Empty 6	Customer characteristic curve - freely editable
Empty 7	Customer characteristic curve - freely editable
Empty 8	Customer characteristic curve - freely editable
Empty 9	Customer characteristic curve - freely editable
Empty 10	Customer characteristic curve - freely editable
Reference	!Only for checking the measuring device!

6.1 How moisture is defined

The device displays the water content. This means that the moisture is calculated in relation to the total 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

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. Otherwise, you can also install the software at humimeter.com/software or by scanning the QR code.

7.1 Installing/opening the program

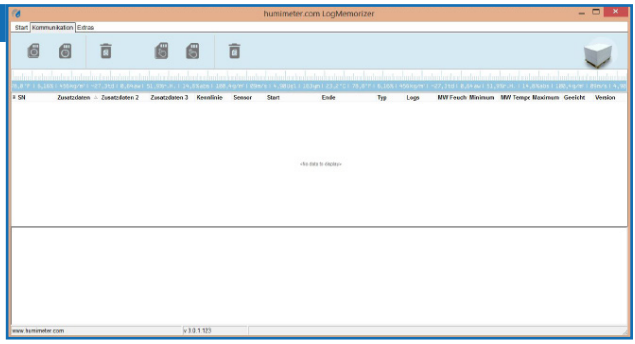
1. Insert the USB stick with the LogMemorizer program into the USB port on your computer or

» download the LogMemorizer software at humimeter.com/software or use the QR code.

2. Open the **setup** application.
3. Follow the installation instructions.
4. Open LogMemorizer.

» The screen will now display the LogMemorizer's interface (figure 45).

45



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

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 M30 or initiate the export at your computer.

Exporting moisture readings from the humimeter M30

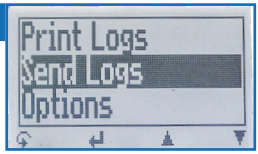
Connect the humimeter M20 to your computer using the supplied USB cable:

1. Insert the USB Mini B connector into the humi meter M30 (figure 46).
2. Insert the USB connector into the computer.
3. Open LogMemorizer on your computer.
4. Switch on the humimeter M30.
5. Press  twice or hold for 2 seconds.
6. Select **Send Logs** (figure 47). To do so, press  or  and confirm by pressing  .
7. Select **Manual Logs** (figure 48). To do so, press  or  and confirm by pressing  .
8. The display will then show the message **Send** (figure 49).

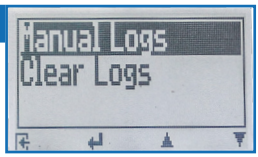
» All of the measuring values saved on the humimeter M30 will now be sent to your computer.

46

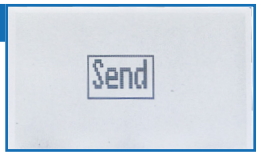
47



48



49



Initiating the data export at your computer

Connect the humimeter M30 to your computer using the supplied USB cable:

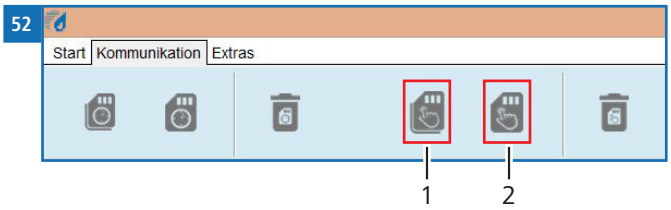
1. Insert the USB Mini B connector into the humimeter M20 (figure 50).
2. Insert the USB connector into the computer.
3. Open LogMemorizer on your computer.

50

4. Switch on the humimeter M30.

5. Open the **Communication** tab in LogMemorizer (figure 51)

6. .Select and click on one of the two buttons shown in figure 52.



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

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

Nr	Name
1	Import all manual logs
2	Import most recent manual log

» The measuring values saved on the humimeter M20 will now be sent to your computer.

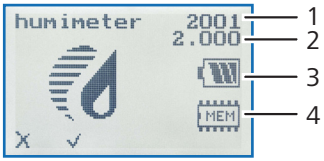
8. Checking the device's status

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 presssing .
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 operating manual.

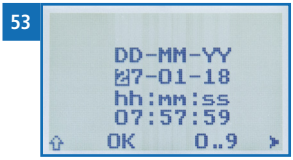
9.2 Adjust the date/time

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  .

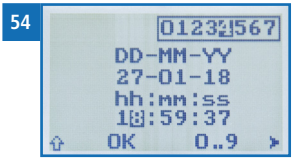
» The display will now appear as shown in figure 53.

» 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. Inputting numbers:
   Press and hold  to quickly scroll to the required number and either press it for 3 seconds or press  to confirm the selected number (figure 54).



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  .

» 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 setting has been saved.

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

9.4 Activating options

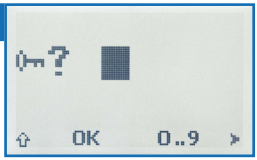
To do so: Some of the options must be deactivated.

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 55.

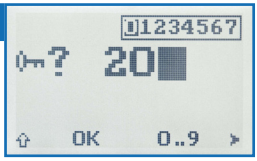
» On delivery, the four-digit password is the device's serial number.

55



4. Inputting 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 56).

56



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

6. Confirm the four-digit password by pressing OK.

   » The setting has been saved.

   » The **°C/°F, Adjust, Userlevel, 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 switched restarted, the **°C/°F, Adjust, Userlevel, BL On Time, Auto Off Time, Materialcalibration, 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 setting has been saved.

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

6. Press to leave the main menu.

9.7 Changing the Userlevel

9.7.1 Changing from the advanced to the simplified user

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 **Userlevel**. To do so, press  or  and confirm by pressing  .

» The simplified user is now activated.

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

9.7.2 Changing from the simplified user to the advanced user

To do so: The device has to be turned off.

1. Switch the device on (see "4.1 Switching the device on").
2. Press and hold  and  at the same time, directly after switching the device on.

» The device will automatically boot into the main menu.

3. Activate all of the options (see "9.4 Activating options").
4. Select **Userlevel**. To do so, press  or  and confirm by pressing  .

» The advanced user is now activated.

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

9.8 Reducing the device's power consumption

9.8.1 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 setting has been saved.

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

9.8.2 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, 5minutes, 10 minutes). 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.

9.9 Configuring the material calibration function

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

9.10 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 setting has been saved.

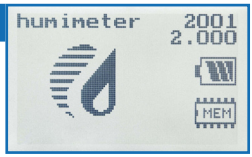
6. Press  to leave the **Options** menu.
7. Press  to leave the main menu.

9.11 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 57).
4. Confirm by pressing  .
   - » The device will now be reset to its factory settings. All of your personal settings will be lost.
   - » The display will show the status indicator **humimeter** (figure 58).
   - » Resetting the device will not affect the saved measuring values.

57

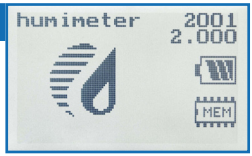

58


10. Cleaning and maintenance

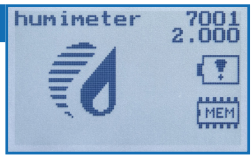
Regularly cleaning and maintaining the device will ensure that it will have a long service life and stay in good condition.

10.1 Changing batteries

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

59


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 60).

60


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

As the device's user, you are responsible by law for properly disposing of all used batteries, which must not be disposed of as domestic waste (Battery Directive).

10.2 Checking the calibration

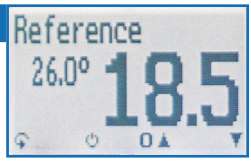
The calibration of the device should be checked every four weeks. Use the optionally purchasable test plate for checking.

To do so: The device and the test plate must have a temperature between 20.0 °C and 26.0 °C. The wooden cassette must lie on a wooden table. There must be no metal underneath the wooden cassette.

61

1. Switch on the device.
2. Select the "Reference" characteristic curve using the arrow keys (see "4.2 Selecting the product type").

62



3. Hold the device in the center with one hand and press it onto the gray test plate with a contact pressure of approx. 4 kg (figure 61).
   - » The displayed water content must be between 17.8 and 19.2 (the moisture value is displayed in black) (figure 62).
   - » If the displayed value is outside this range, an adjustment must be made.

63

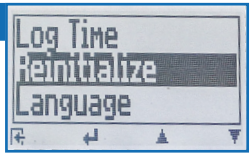
4. Take the device in one hand and hold it with the sensor surface (black plate on the back of the device) in the air (figure 63).
   - » There must be nothing but air behind the sensor plate within a range of 0.5 meters.
   - » The displayed value must be between 3.0 and 3.6.
   - » If the displayed value is outside this range, an adjustment (see) must be performed.

10.3 Configuring the material calibration function

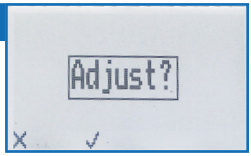
To do so: The device must have a temperature between 20.0 °C and 26.0 °C.

1. Switch on the device.
2. Press twice or hold for two seconds to enter the main menu level.
3. Select **Options**. To do so, press or and confirm by pressing .
4. Select **Reinitialize** (figure 64). To do so, press or and confirm by pressing .
5. The display will then show the message **Adjust?** (figure 65).
6. Lift the device up into the air with one hand. When doing so, there must be a minimum of 0.5 metres of empty space behind the sensor surface (black plate at the bottom of the device (figure 66).
7. Confirm by pressing .
   - » The display will now appear as shown in figure 66.
   - » The bar runs upwards. During this period, the device must be held in the air.
   - » After a few seconds, the adjustment is completed. The device displays the main menu again.
8. Press and then to return to the product selection menu.

64

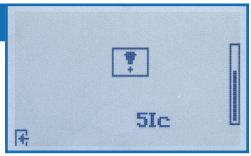


65



66

67



10.4 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.

10.5 Cleaning the device

ATTENTION

Do not clean with fluids

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

► Only clean with dry materials.

Sensor surface

- Clean the sensor surface with a cloth.

11. Faults

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

Fault	Cause	Remedy
Measuring error	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.

Fault	Cause	Remedy
	Material thickness not sufficient	Make sure that the minimum material thickness of 30 mm is given.
	Incorrect contact pressure	Press the device against the material being measured with a pressure of approx. 4 kg.
	Metal or similar conductive materials in the device's measuring range	Remove all metal or other conductive materials from the device's measuring range.
	Foreign materials below the material being measured	Stack the material being measured to avoid influences from foreign materials. If a stacking is not possible, a polystyrene plate can be placed underneath.
	Mouldy or rain wet material	In this case the accuracy decreases significantly.
Incorrect calibration (the exclamation mark on the display does not go away)	There is an object/material behind the sensor plate (during calibration)	Hold the device up into the air - make sure your fingers do not touch the sensor plate.
	Rubber protection cover mounted in the wrong direction	Mount the rubber protection cover as shown in "The main unit" Seite 2 and "Rear of the main unit" Seite 3.
	Polluted sensor surface	Clean the sensor surface (see "10.5 Cleaning the device")
Data transfer to Log Memorizer failed	Interface has not been configured	The interface only has to be configured once. To do so, press the F1 key on your computer and read the Help file for your LogMemorizer program.

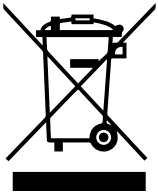
12. Storage and disposal

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 CE declaration of conformity

CE KONFORMITÄTSERKLÄRUNG
DECLARATION OF CONFORMITY

Name/ Adresse des Herstellers: *Name/ address of manufacturer:*	**Schaller Messtechnik GmbH** **Max-Schaller-Straße 99** **A – 8181 St. Ruprecht**
Produktbezeichnung: *Product designation:*	**humimeter**
Typenbezeichnung: *Type designation:*	**GE1 ; GF2 ; LM5 ; LM6 ; M05 ; M20 ; M30 ; M50**
Produktbeschreibung: *Product description*	**Messgerät zur Bestimmung des Wassergehalts und abgeleiteten Größen in diversen Materialien von der Oberflächennähe bis in die Materialtiefe** ***Measuring instrument for determining the water content and derived variables in various materials from near the surface to the depth of the material***

Das bezeichnete Produkt erfüllt die Bestimmungen der Richtlinien:

The designated product is in conformity with the European directives:

EMV - Richtlinie 2014/30/EC	***EMC Directive 2014/30/EU***
RoHS - Richtlinie 2011/65/EG	***RoHS-Directive 2011/65/EU***

Die Übereinstimmung des bezeichneten Produktes mit den Bestimmungen der Richtlinien wird durch die vollständige Einhaltung folgender Normen nachgewiesen:

Full compliance with the standards listed below proves the conformity of the designated product with the provisions of the above-mentioned EC Directives:

EN 61326–1:2013	Elektrische Mess-, Steuer-, Regel- und Laborgeräte - EMV-Anforderungen *Electrical equipment for measurement, control, and laboratory use – EMC requirements*
EN IEC 63000:2019-05 *ersetzt / replaced* **EN 50581:2012**	Technische Dokumentation zur Beurteilung von Elektro- und Elektronikgeräten hinsichtlich der Beschränkung gefährliche Stoffe. *Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.*

Für das angeführte Produkt ist eine vollständige Dokumentation mit Betriebsanleitung in Originalfassung vorhanden.

For the mentioned product a complete documentation with manual of instruction in original version is available.

Bei Änderungen, die nicht vom Hersteller spezifiziert sind, verliert diese Konformitätserklärung die Gültigkeit.

In case of any changes not agreed upon with the manufacturer, this declaration of conformity loses its validity.

Schaller
Messtechnik / humimeter.com
Schaller Messtechnik GmbH
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www.humimeter.com | info@humimeter.com

St. Ruprecht a.d. Raab, 31.07.2022 .....

Bernhard Maunz
Rechtsverbindliche Unterschrift des Ausstellers
Legal binding signature of the issuer

DECLARATION OF CONFORMITY

Name/ address of manufacturer:	**Schaller Messtechnik GmbH** **Max-Schaller-Straße 99** **A – 8181 St. Ruprecht**
Product designation:	**humimeter**
Type designation:	**GE1 ; GF2 ; LM5 ; LM6 ; M05 ; M20 ; M30 ; M50**
Product description	**Measuring instrument for determining the water content and derived variables in various materials from near the surface to the depth of the material**

The designated product is in conformity with the following directives:

- **Electromagnetic Compatibility Regulations 2016 Great Britain**
- **RoHS-Directive 2011/65/EU Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment**

Full compliance with the standards listed below proves the conformity of the designated product with the provisions of the above-mentioned Directives:

EN 61326–1:2013	Electrical equipment for measurement, control, and laboratory use – EMC requirements
EN IEC 63000:2019-05 replaced **EN 50581:2012**	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

For the mentioned product, a complete documentation with manual of instruction in original version is available.

In case of any changes not agreed upon with the manufacturer, this declaration of conformity loses its validity.

St. Ruprecht a.d. Raab, 31.07.2022

Bernhard Maunz
Legal binding signature of the issuer

13.2 Technical data

Display resolution	0.1 % wood moisture, 0.5 °C/°F temperature
Measuring range	Dependents on material
Operating temperature	0 °C bis +40 °C
Storage temperature	-20 °C bis +60 °C
Temperature compensation	Automatic
Data memory	up to 10.000 measured values
Measuring depth	30 mm
Minimum material thickness	30 mm
Power supply	4 pcs. of 1.5 Volt AA Alkaline batteries
Current consumption	60 mA (incl. display illumination)
Menu languages	English, German, French, Italian, Spanish, Portuguese, Czech, Polish, Russian, International
Display	128 x 64 illuminated matrix display
Device dimensions	147 x 75 x 30 mm
Device weight	265 g
Device IP rating	IP 40

14. Notes

Climate
Environment

Material

Food

Buildings

Bioenergy

Paper / Board

Schaller Messtechnik develops, produces and sells professional moisture meters and turnkey solutions..

Schaller Messtechnik GmbH

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