GRUBATEC
MESS- UND REGELTECHNIK

Schaller
Messtechnik / humimeter.com

Moisture meter

Instruction manual humimeter

FSW grain moisture meter

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 1.2

Read the operating instructions before starting all work!

Overview of your humimeter FSW

Overview of the basic unit

No	Description
1	Feed hopper
2	Measuring chamber
3	Display
4	Keyboard
5	USB port TYPE B mini

Overview back

No	Description
1	Battery compartment

Overview Display

No	Description
1	Characteristic curve
2	Water content in % ("6.1 Definition of water content")
3	Bulk density / hectolitre weight in kg/hl
4	Display icons
5	Stored measured values
6	Currently applied offset
7	Temperature display

Overview Display Icons

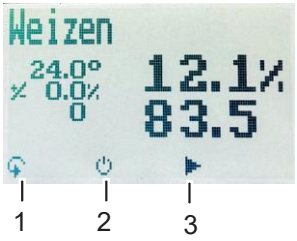
Symbol	Description
	Confirm
	Back to top
	Back to bottom
	Back
0..9	Enter numbers
A..Z	Enter letters
	Continue or Right
	Links
	Yes

Symbol	Description
	No
	Switch Input Level
OK	OK
	Switch menu level
	Enter data
	View measurement series
	Delete measurement series
	Power off/display illumination
	Save the measured value

Overview Layers

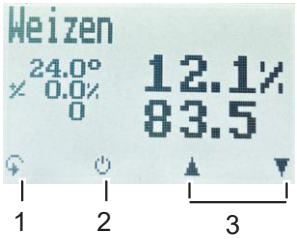
The device has four different levels: product selection level, storage level, offset level, and main menu:

Measurement plane



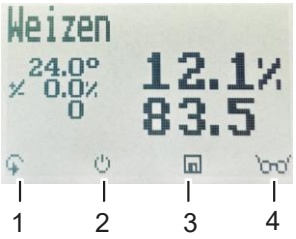
No	Description
1	Change Layer
2	Turn on the display backlight/turn off the device
3	Start measurement

Product selection level



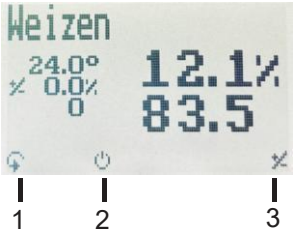
No	Description
1	Change Layer
2	Turn on the display backlight/turn off the device
3	Navigating between the characteristic curves

Memory level



No	Description
1	Change Layer
2	Turn on the display backlight/turn off the device
3	Save the measured value
4	View recently saved metrics

Offset plane



No	Description
1	Change Layer
2	Turn on the display backlight/turn off the device
3	Offset Adjustment

Main Menu

The main menu includes the following menu items:

- **Data storage:**
  Manual Logs, Delete Logs
- **Options:**
  Date/Time, Language, Unlock, °C/°F, Burn Time, Power Off Time, Varietal Control , Password, Reset
- **Status**

Table of Contents

1. Introduction

1.1 Information about this instruction manual

This instruction manual enables the safe and efficient use of the humimeter FSW. The operating instructions are part of the device and must be kept in its immediate vicinity accessible to the operator at all times.

The operator must have read and understood this instruction manual carefully before commencing any work. The basic prerequisite for safe working is compliance with all the safety instructions and instructions given in this operating manual.

1.2 Limitation of Liability

All information and information in this operating manual has been compiled taking into account the applicable standards and regulations, the state of the art and the many years of knowledge and experience of Schaller Messtechnik GmbH.

Schaller Messtechnik GmbH assumes no liability for damage in the following cases and the warranty claims expire:

- Failure to follow the instructions
- Unlawful use
- Insufficiently qualified operator
- unauthorized conversions
- Technical changes
- Use of non-approved spare parts

This rapid measurement method can be influenced by various boundary conditions. We therefore recommend checking the measurement results at periodic intervals by means of a standard-compliant drying sample for control.

1.3 Symbols used

Safety instructions are indicated by symbols in this user manual.

HINWEIS

Bei Nichtbeachtung kann es zu Sachschäden kommen.

Information

Identifies important information, the observance of which results in a more efficient and economical use.

1.4 Customer Service

For technical information, please contact our customer service: Schaller

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

Phone: +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 Directive)
- Electromagnetic compatibility (EMC Directive)

The device is built according to the latest state of the art. Nevertheless, there are residual dangers.

To avoid danger, you must follow the safety instructions.

2.1 Intended use

- Rapid measuring device for determining the water content of grain
- Only products that are defined below in these instructions may be measured (see "6.

2.2 Improper use

- No moldy material may be measured.
- The device is not waterproof, protect it from water and fine dust.

2.3 Qualification of the operator

Only persons who can be expected to carry out the work reliably are permitted to operate the device. Persons whose ability to react is affected, e.g. by drugs, alcohol or medication, are not admitted.

Persons using this device must have read and understood the user manual and follow its instructions.

2.4 General Security

Observe the following safety instructions to avoid personal injury and property damage :

- Remove the batteries from the device if it will not be used for an extended period of time (4 weeks).
- If you notice any loose parts or damage to the device, remove the batteries and contact your dealer or manufacturer.

Before your device is delivered, all technical characteristics have been checked and subjected to precise quality control. There is a serial number in each device. This sticker must not be removed.

2.5 Warranty

Excluded from the warranty:

- Damage caused by non-observance of the operating instructions
- Damage caused by third-party interventions
- Products that have been improperly used or altered without authorization
- Products where the warranty seal is missing or has been damaged
- Damage due to force majeure, natural disasters, etc.
- Damage due to improper cleaning
- Damage due to leaked batteries

3. Get started

3.1 Unboxing the device

- Unpack the device.
- Immediately after unpacking, check the integrity and completeness of the device.

3.2 Check the scope of delivery

Check the list below to check the completeness of the delivery:

- humimeter FSW
- Feed hopper
- 4pcs AA Alkaline Batteries
- Measuring cup 0.5 liters
- Softcase
- humimeter USB data interface module
- Instruction manual

3.3 Insert batteries

1. Loosen the screws at the bottom of the device to open the battery compartment. (Image 1).
2. Insert the batteries according to the specified polarity (+/-).
3. Close the battery compartment by tightening the screws again.

» Make sure that the compartment is securely locked. Sen is.

1

4. Basic operation

4.1 Turn on the device

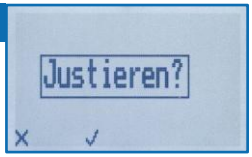
- Press the ⏻ button for 3 seconds.

» The status indicator appears on the display (Fig. 2).
» The device switches off after inserting the batteries automatically.

2

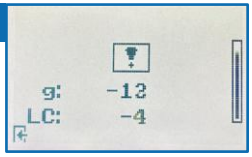

4.2 Automatic adjustment after each starting process

» The display displays the **Adjust?** (Fig. 3).

3


1. Check whether the measuring chamber of the instrument is empty and place the instrument on a flat table.

2. Confirm with ✓.

4


» The image appears on the display 4.
» The bar runs up. During this period the device must be placed on the
Remain at the table.

» After a few seconds, the adjustment is completed and the display can be the internal comparison of the measuring frequency and the empty weight is observed. den.

» If an adjustment is not possible, check whether you have removed the filling pin beforehand. For more information, see Chapters "11. Disturbances" page 40

» The device now displays the measurement window (see "Product Selection Level" page 5).

4.3 Select characteristic curve

Prerequisite: The device is located in the product selection level (Figure 5).

An overview of characteristic curves and the selection criteria for the characteristic curve to be selected can be found under "6.

1. Press the ▽ button to △ advance one characteristic curve at a time (Figure 5) or
2. Press the button ▽ for △ 3 seconds to access the characteristic curve overview (Figure 6).
3. To switch one characteristic curve further at a time, press one of the arrow keys.
4. To scroll through the characteristic curves, hold down one of the arrow keys.
5. Confirm your selection with ↵.

5

6

» The selected characteristic curve is shown at the top of the display.

4.4 Perform measurement

- The measurement is described in the chapter "5th measurement process".

4.5 Turn off the device

Prerequisite: The device is located in the product selection level or in the storage level. It is not possible to switch off the device in the menu level.

- Press the 3 button for 3 seconds.

5. Measurement process

5.1 Prepare measurement

The prerequisite: The measuring device must be as close as possible to the temperature of the product to be measured. It is recommended to let the measuring device adjust to the temperature near the product for at least 30 minutes before taking the measurement.

1. Check whether the measuring chamber of the instrument is empty . When the device is switched on, there must be no material to be measured in it.

   » Empty the device and clean the measuring chamber. if necessary (see "10.3 Cleaning the Device").

2. Switch on the meter (see "4.1 Switching on the device ").

3. Perform the automatic adjustment ("4.2 Automatic adjustment after each start-up").

4. Select the desired characteristic curve (see "6. characteristic curves"). To do this, press  or  (see "4.3 Select characteristic curve").

7

8

5.2 Perform measurement

The prerequisite: The device has about the same temperature as the material to be measured.

1. Place the supplied feed funnel on the measuring device.

» The opening of the feed hopper must be above the measuring chamber (Fig. 9).


9

2. Now fill the measuring chamber of the device slowly and evenly with the material to be measured (Fig. 10).


10

» Do not use a funnel or similar that is not included in the scope of delivery to fill the meter
.

3. Remove the remains of the material to be measured by pushing the moving part of the feed hopper to the side (Fig. 11).


11

4. Now remove the feed funnel with the remains of the material to be measured from the measuring device.

» The measuring chamber should now be evenly and evenly filled (Fig. 12).


12

5. Press the "Play" button to start the measurement (Fig. 13).

13

6. The measured value is immediately displayed on the device's display (Fig. 14).

» The water content, temperature and hectolitre weight can be seen here.

» The displayed measured value flashes when it exceeds the measuring range of the selected characteristic curve.
strides. A flashing value signals the decrease in measurement accuracy. The measuring range depends on the characteristic curve (see "6.

14

» Now the displayed measured value can be stored on the device (see "5.3 Single Measured Value").
"Save" or "5.4 Save multiple measured values (measurement series)").

» It is also possible to apply an offset to the displayed measured value (see "5.10 Offset Function").

7. Empty the device and make sure that there are no material residues in the measuring chamber.

» Clean the measuring chamber if necessary (see "10.3 Cleaning the Device").

> **Information - Measurement Accuracy**
>
> Nutzen Sie den Vorteil des sekundenschnellen zerstörungsfreien Messverfahrens and perform multiple measurements of the same object to be measured. The device automatically calculates the average value when the individual measured values are stored (see "5.4 Saving Multiple Measured Values (Measurement Series)").

> **Information - Incorrect measurements**
>
> Use the right characteristic curve and the right filling quantity for your measuring material. This will help you avoid incorrect measurements (see "11.

5.3 Saving a single metric

The device is configured in such a way that a measured value is stored on the device for each button press.

Prerequisite: The device is located in the storage tier (see "Storage Layer" page 6).

1. Press .

» The image appears on the display 16 - below the offet value is now the number one.

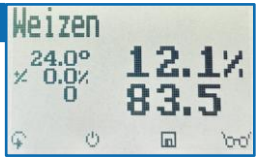
2. Press to add a name to the saved reading and complete the measurement.

» Picture 17 appears on the display.

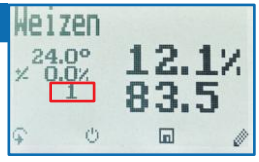
3. If an input has already been made before, the input shown can be overwritten if desired.

4. Add letters :
Press A..Z and hold to quickly navigate to the desired letter and
stay on the desired letter for 3 seconds or press to acc

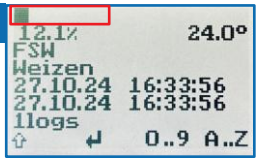
15



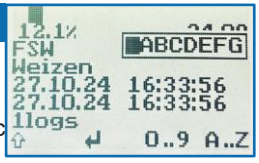
16



17



18



5. Add numbers:
   Press 0..9 and hold to quickly navigate to the desired number and stay on the desired number for 3 seconds or press to apply the number.

6. Navigate forward/back:
   Press to switch to another input layer. Navigate forward or back with or .

7. Confirm the entry with .

» The input has been saved.

5.4 Saving Multiple Metrics (Measurement Series)

Prerequisite: The device is in the storage tier (see "Storage tier" page 6).

1. Perform several measurements of the material to be measured (see "5.

2. Press on each measurement .

   » The image appears on the display 19. The number increases with each save process.

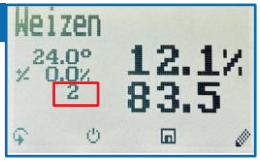
3. Press to add a name to the saved measurement series and complete the measurement series.

   » Picture 20 appears on the display.

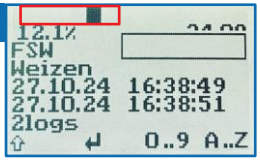
4. If an input has already been made before, the input shown can be overwritten if desired.

5. Add letters :
   Press and A..Z hold to quickly navigate to the desired letter and stay on the desired letter for 3 seconds
   or press to copy the letter (Figure 21).

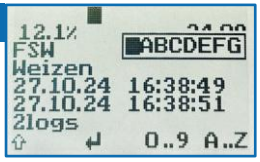
19



20



21



6. Add numbers:
   Press 0..9 and hold to quickly navigate to the desired number and stay on the desired number for 3 seconds or press to apply the number.

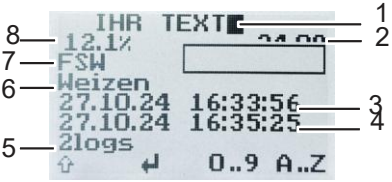
7. Navigate forward/back:
   Press to switch to another input layer. Navigate forward or back with or .

8. Confirm the entry with .

» The input has been saved.

» An average value of the individual measured values was formed.

» The display shows the following information:



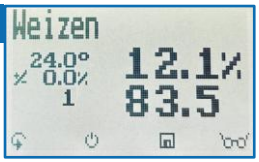
No	Description
1	Name of the measurement series
2	Temperature (average)
3	Start of the measurement series
4	End of the measurement series
5	Number of Measured Values Stored
6	Characteristic curve
7	Device name
8	Water content (average)

5.5 View a single metric

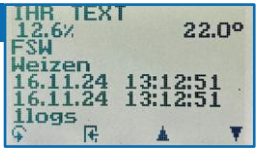
Prerequisite: At least one measurement (e.g. **1 log**) has been saved. In the display, .

1. Press .
2. Navigate to the desired measurement. To do this, press or .
   - » The image appears on the display 23.
   - » Press to exit the view.

22



23

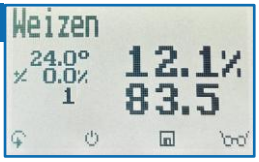


5.6 View individual measured values of a measurement series

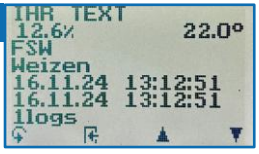
Prerequisite: At least one series of measurements has been stored.
In the display, .

1. Press .
2. Navigate to the desired measurement series. Press for it or .
   - » The image appears on the display 25.
3. Press to switch to another input layer.
   - » The image appears on the display 26.
4. Press again .
   - » The image appears on the display 27.
5. Navigate to the desired metric (**No.: 1, No.: 2, No.: 3**). To do this, press or .
6. Press They to exit the view.

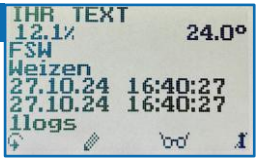
24



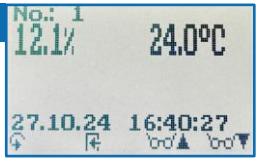
25



26



27



5.7 Delete all measured values (data storage)

Prerequisite: One or more measurements have been carried out and stored.

1. Press three times or hold for 2 seconds.

2. Navigate to **Data Storage** (Figure 28). To do this, press or and confirm with .

3. Navigate to **Delete Logs** (Figure 29). To do this, press or and confirm with .

» The display displays the **delete?** (Image 30).

4. Confirm with .

» The data storage has been deleted.

5. Press to exit the **data store** .

6. Press to exit the main menu.

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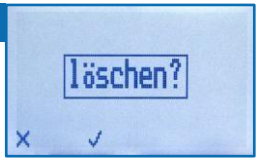
29

30



5.8 Delete a single series of measurements

Prerequisite: A measured value (**1 log**) or a series of measurements (e.g. **3 logs**) has been saved.
In the display, .

1. Press .

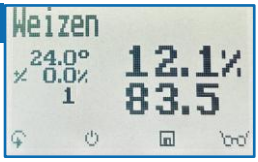
2. Navigate to the desired measurement. To do this, press or .

3. Press to switch to another input layer.

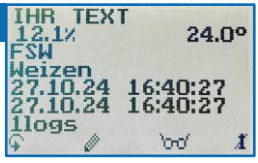
» The image appears on the display 32.

4. Press They .

31



32

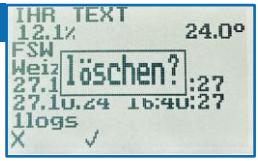


» The display displays the **delete?** (Image 33).

5. Confirm with .

» The measurement has been deleted.

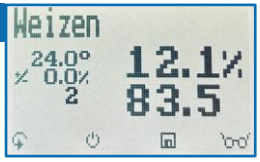
33



5.9 Delete a single value from a measurement series

Prerequisite: A measurement series with at least 2 logs has been saved. In the display, .

34



1. Press .
2. Navigate to the desired measurement. To do this, press or .
3. Press to switch to another input layer.

» The image appears on the display 35.

4. Press .

» The image appears on the display 36.

5. Navigate to the desired metric. To do this, press or .
6. Press to switch to another input layer.

» The image appears on the display 37.

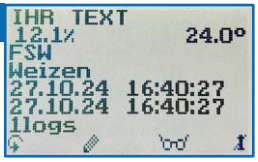
7. Press to clear the displayed value.

» The display displays the **delete?** (Image 38).

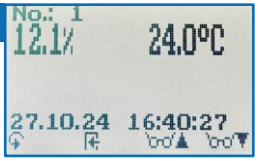
8. Confirm with .

» The measurement has been deleted.

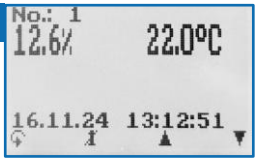
35



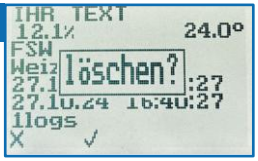
36



37



38



5.10 Offset function

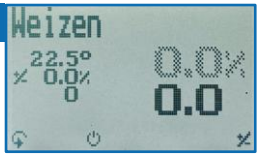
By changing the offset, the display of the measuring instrument can be adapted to other norms/standards. The display is corrected by the entered offset.

Example:
An offset of 1.5% applied to a measured value of 10.0% results in a displayed measured value of 11.5%.
An offset of -0.5% applied to a measured value of 10.0% results in a displayed measured value of 9.5%.

5.10.1 Adjust Offset

Prerequisite: The device is switched on and is located in the product selection level.

1. Select the desired characteristic curve (see "6. characteristic curves"). To do this, press or (see "4.3 Select characteristic curve").

39 

2. Press twice to switch to the offset layer.
3. Press .
   - » The display shows the grade calibration for the selected characteristic curve (Fig. 40).
   - » The offset is part of the grade calibration.

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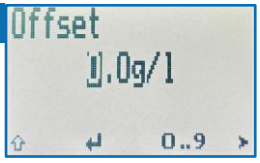
4. Navigate to Offset. To do this, press or and confirm with .
5. If an input has already been made before, the input shown can be overwritten if desired.
6. Add numbers:
   Hold 0..9 down to quickly navigate to the desired number and stay on the desired number for 3 seconds or press to accept the number (Figure 41).

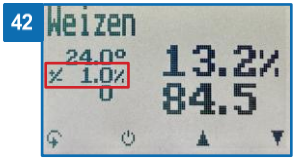
41 

   - » **Entering a negative offset is also possible!**
     To do this, insert a — place before the first digit.
   - » Pay attention to the position of the comma to prevent setting a Avoid offsets!

» ATTENTION: You can set an offset for both the displayed water content and the hectolitre weight. In the main menu, only a water sergehalt-offset.

7. Navigate forward: Navigate forward with .

8. Navigate back : Press to switch to another input level. Navigate back with .



9. Confirm the offset with .

» The offset has been saved.

10. Press to exit grade calibration.

11. The set offset is now applied to the selected characteristic curve and shown on the display (Figure 42).

» **The measured value displayed now deviates from the standard calibration!**

6. Characteristic curves

Characteristic curves are available for the following products:

Corn 5 % - 35 % 	Rye 5 % - 28 % 	Wheat 5% - 28% 	Durum 5 % - 28 % 
Oats 5 % - 20 % 	Barley 5 % - 28 % 	Spelt in husk 5 % - 18 % 	Spelt peeled 5 % - 20 % 
Rapeseed 5 % - 18 % 	Soybeans 5% - 18% 	Horse bean 5 % - 25 % 	Sunflowers 5% - 15% 
Pumpkin seeds 5 % - 15 % 	Rice peeled 5 % - 18 % 	Unpeeled rice 5% - 18% 	Millet 5 % - 18 % 

Fodder pea 5 % - 20 % 	Sorghum millet 5 % - 18 % 	Buckwheat unpeeled 5 % - 18 % 	Lenses 5 % - 18 % 
160g coffee roasted 1 % - 20 % 	Reference ! Only to check the measuring device !		

Schaller Messtechnik GmbH also develops customer-specific characteristic curves for your product on request. It is also possible to enter existing characteristic curves into the device at a later date.

6.1 Definition of water content

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

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

Mn: Mass of sample with average water content Mt:

Mass of dried sample

%WG: Water content (of the relevant product standards)

7. Using LogMemorizer Software

Prerequisite: You have the optional USB interface installed in the device.

7.1 Install/open program

1. Plug the supplied USB stick into your PC with the LogMemorizer software or

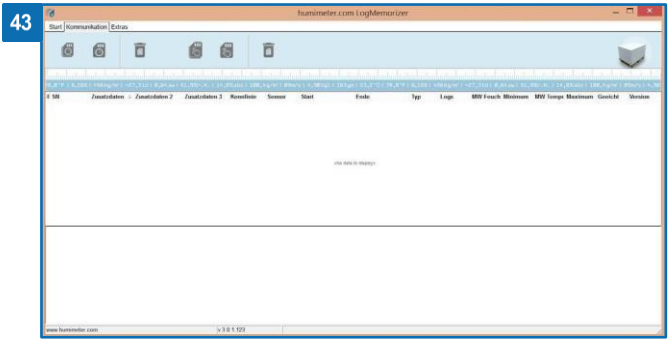
   » download the LogMemorizer software at humimeter.com/software or use the QR code.

2. Open the **setup** application.

3. Follow the instructions in the installer.

4. Open the LogMemorizer program.

   » The user interface of the LogMemorizer appears on the screen (Fig. 43).



   » Before using the LogMemorizer program, the USB COM port must be set up according to the LogMemorizer program.

More details about the LogMemorizer program are described in a separate user manual.

7.2 Send measured values to the PC

Prerequisite: You have installed the LogMemorizer software. One or more measurements were carried out and stored.

Option: The transmission of the measured values can be started from the humimeter FSW or from the PC.

Start transmission of the measured values on the humimeter FSW

Connect the humimeter FSW and the PC using the supplied USB cable:


44

1. Plug the USB Mini B connector into the FSW humimeter (Fig. 44).
2. Plug the USB connector into the PC.
3. Open the LogMemorizer software on your PC.
4. Turn on the humimeter FSW.
5. Press three times or hold for 2 seconds.
6. Navigate to **Send Logs** (Figure 45). To do this, press or and confirm with .
7. Navigate to **Manual Logs** (Figure 46). To do this, press or and confirm with .

45

46

47

» The display displays the **Send** (Image 47).

» All measured values stored on the humimeter FSW are sent to the PC. Start the transfer of the measured values on the PC

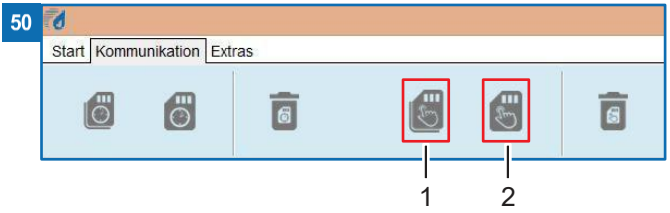
Connect the humimeter FSW and the PC using the supplied USB cable:


48

1. Plug the USB Mini B connector into the FSW humimeter (Fig. 48).
2. Plug the USB connector into the PC.
3. Open the LogMemorizer software on your PC.
4. Turn on the humimeter FSW.

5. Open the **Communication tab** in the LogMemorizer software (Figure 49).

6. Click the **Get All Manual Log** button (all saved values will be transferred) or **Get the last manual log** (the last saved measurement series is transferred) (Figure 50).



No	Description
1	Get All Manual Log
2	Get Last Manual Log

» The measured values stored on the humimeter FSW are sent to the PC.

8. Query device status

1. Press three times or hold for two seconds.
2. Navigate to **Status**. To do this, press or and confirm with .
   - » The status indicator appears on the display **Humimeter**.
   - » The display shows the following information:

No	Description
1	Serial number
2	Software Version
3	Battery charge level
4	Storage status

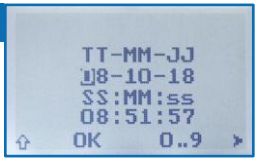
3. Confirm with .
4. Press They to exit the main menu.

9. Make settings

9.1 Set date/time

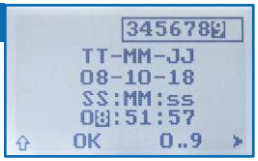
1. Press three times or hold for 2 seconds.
2. Navigate to **Options**. To do this, press or and confirm with .
3. Navigate to **Date/Time**. To do this, press or and confirm with .
   - » The image appears on the display 51.
   - » The format of the date is **DD-MM-YY** (Day-Month-year).
   - » The format of the time is **SS:MM:ss** (Hours:Wed-Seconds).

51



4. Add numbers:
   Hold 0..9 down to quickly navigate to the desired number and stay on the desired number for 3 seconds or press to accept the number (Figure 52).

52



5. Navigate forward:
   Navigate between **DD-MM-YY** and **SS:MM:ss** forward with .
6. Navigate back :
   Press to switch to another input layer. Navigate between **DD-MM-YY** and **SS:MM:ss** back with .
7. Confirm the date/time with OK.
   - » The settings have been saved.
8. Press to exit **the options**.
9. Press They to exit the main menu.

9.2 Set language

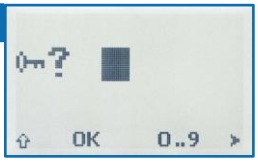
1. Press three times or hold for 2 seconds.
2. Navigate to **Options**. To do this, press or and confirm with .
3. Navigate to **Language**. To do this, press or and confirm with .
4. Navigate to the desired language. To do this, press or and confirm with .
   - » The setting has been saved.
5. Press to exit **the options**.
6. Press to exit the main menu.

9.3 Unlock options

Prerequisite: Certain options are disabled.

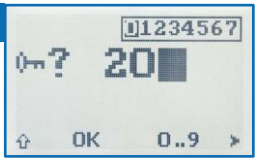
1. Press three times or hold for 2 seconds.
2. Navigate to **Options**. To do this, press or and confirm with .
3. Navigate to **Unlock**. To do this, press or and confirm with .
   - » The image appears on the display 53.
   - » The four-digit password is the serial number of the device when it is delivered.

53



4. Add numbers:
   Hold 0..9 down to quickly navigate to the desired number and stay on the desired number for 3 seconds or press to accept the number (Figure 54).

54



5. Navigate back :
   Press  to switch to another input layer. Navigate back with  .
6. Confirm the four-digit password with  .
   » The setting has been saved.
   » The options **°C/°F, burn time, switch-off time, grade calibration, password, reset Set** are now enabled.
7. Press  to exit **the options**.
8. Press  to exit the main menu.

9.4 Lock options

After switching the device off and on, the options **°C/°F, burn time, switch-off time, variety calibration, password, reset are** deactivated again.

9.5 Set °C/°F

Prerequisite: All options are activated (see "9.3 Unlock Options").

1. Press three times or hold  for 2 seconds.
2. Navigate to **Options**. To do this, press  or  and confirm with  .
3. Navigate to **°C/°F**. To do this, press  or  and confirm with  .
4. Navigate to the desired Celsius (**°C**) or Fahrenheit (**°F**) temperature scale.To do this, press  or  and confirm with  .
   » The setting has been saved.
5. Press  to exit **the options**.
6. Press They  to exit the main menu.

9.6 Set the power saving mode

9.6.1 Adjust the display backlight

Prerequisite: All options are activated (see "9.3 Unlock Options").

1. Press three times or hold for 2 seconds.
2. Navigate to **Options**. To do this, press or and confirm with .
3. Navigate to **Burn time**. To do this, press or and confirm with .
4. Navigate to the desired time you want the display to remain illuminated (30 seconds/2 minutes/5 minutes/10 minutes). To do this, press or and confirm with .

» The setting has been saved.

5. Press to exit **the options**.
6. Press to exit the main menu.

9.6.2 Set the device to turn off automatically

Prerequisite: All options are activated (see "9.3 Unlock Options").

1. Press three times or hold for 2 seconds.
2. Navigate to **Options**. To do this, press or and confirm with .
3. Navigate to **Power Off Time**. To do this, press or and confirm with .
4. Navigate to the desired time you want the device to remain on (3 minutes/5 minutes/10 minutes). Press or confirm with .

» The setting has been saved.

5. Press to exit **the options**.
6. Press They to exit the main menu.

9.7 Setting Grade Calibration

The setting of the grade calibration is described in a separate instruction manual.

9.8 Change password

Prerequisite: All options are activated (see "9.3 Unlock Options").

1. Press three times or hold for 2 seconds.
2. Navigate to **Options**. To do this, press or and confirm with .
3. Navigate to **Password**. To do this, press or and confirm with .

» The current password appears on the display.

4. Overwrite the current password. To do this 0..9 , press and hold to quickly navigate to the desired number and stay on the desired number for 3 seconds or press to apply the number.

   Navigate back :

   Press to switch to another input layer. Navigate back with .

5. Confirm the new four-digit password with OK.

» The setting has been saved.

6. Press to exit **the options**.
7. Press They to exit the main menu.

9.9 Factory reset device

Prerequisite: All options are activated (see "9.3 Unlock Options").

1. Press three times or hold for 2 seconds.
2. Navigate to **Options**. To do this, press or and confirm with .
3. Navigate to **Reset**. To do this, press or and confirm with .

» The display displays the **Reset?** (Image 55).

4. Confirm with .

» The device will be reset to factory settings. All personal settings go lost.

» The status indicator appears on the display **Humimeter** (Fig. 56).

» The stored measured values are not lost by the reset.

55

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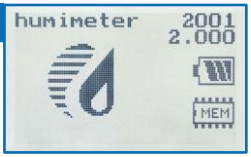

10. Care and maintenance

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

10.1 Changing batteries

The device constantly monitors the charge level of the batteries. The status screen shows the current battery charge level.

If an exclamation mark appears in the battery symbol, the batteries must be replaced immediately (Fig. 58).

To do this, proceed as in point 3.3 Insert batteries .

As an end consumer, you are legally obliged to return all used batteries, and disposal via household waste is prohibited (Battery Ordinance).

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10.2 Verification of calibration

The verification of the calibration is described in a separate test equipment operating instructions.

10.3 Cleaning the device

NOTE

Device damage due to damp cleaning
The device can be destroyed by water or cleaning agents.

► Carry out dry cleaning only.

Plastic housing

- Clean the device with a cloth.

Measuring chamber

- Clean the measuring chamber with a gentle brush.

11. Disruptions

If the measures mentioned below do not remedy the faults or if other faults not listed here occur, please contact Schaller Messtechnik GmbH.

Disruption	Cause	Action
Incorrect measurement	Temperature of the object to be measured outside the range of application: material below 0 °C or above +40 °C	Use the object to be measured at a temperature above 0 °C or below +40 °C
	Temperature difference between the object to be measured and the measuring device	Allow the temperature of the measuring device to match that of the material (a maximum difference of 3 °C is permitted).
	Wrong characteristic curve set	Before you start a measurement, check whether the correct characteristic curve (product) has been set (see "6.
	Measuring chamber not filled	Fill the hopper completely and make sure that the measuring chamber is completely filled when stripping.
	Rain-soaked or mouldy measuring material	In this case, the accuracy of the measurement drops sharply.
	Stored and fermented maize from whole grain silage	May result in a higher display value.
	Frozen or mixed with snow	In this case, the accuracy of the measurement drops sharply.
	Contaminated material	Heavily contaminated material such as long ears of barley or foreign material can have a major influence on the measurement result.

Disruption	Cause	Action
	Registered offset	An entered offset leads to deviations from the displayed measured value. If the deviation does not correspond to your reference method, enter an offset corresponding to the difference or set the offset to 0.0 (see "5.10 Offset Function") to restore the factory characteristic curve.
Data transfer to LogMemorizer software fails	Interface not configured	To configure the interface once, press the F1 key on your PC and read the help file of the LogMemorizer software.

12. Storage and disposal

12.1 Store the device

Store your device under the following conditions:

- Do not store outdoors
- Store in a dry and dust-free place
- Protect from sunlight
- Avoid mechanical vibration/loads
- Remove the batteries from the device if it will not be used for more than 4 weeks.
- Storage temperature: -20 °C to +60 °C

12.2 Disposing of the device

The equipment marked with this symbol is subject to the European Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment.
If the device is not operated within the European Union, the national disposal regulations in the respective user country must be observed.

Electrical appliances do not belong in the household waste.

Dispose of the device in an environmentally friendly manner via suitable collection systems.

13. Information about the device

13.1 CE Declaration of Conformity

DECLARATION OF CONFORMITY
DECLARATION OF CONFORMITY

Name/ Address of the manufacturer:	**Schaller Messtechnik GmbH**
Name/ address of manufacturer:	**Max-Schaller-Straße 99**
	A – 8181 St. Ruprecht
Product name:	**Humimeter**
Product designation:	
Type designation:	**FS1 ; FS1.1 ; FS2 ; FS3 ; FS4 ; FS4.1 ; FS4.2 ; FSW ; BP1**
Type designation:	
Product Description:	**Measuring device for determining the water content in food and beverage Funds**
Product description	***Measuring instrument for determining the water content in Foodstuffs***

The designated product complies with the provisions of the Directives:

The designated product is in conformity with the European directives:

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

The conformity of the designated product with the provisions of the Directives is demonstrated by full compliance with the following standards:

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	Electrical Measuring, Control, Regulation and Laboratory Equipment - EMC Requirements *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 equipment with regard to the restriction of dangerous Fabrics. *Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.*

For the listed product, complete documentation with operating instructions is available in the original version.

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

In the event of changes not specified by the manufacturer, this declaration of conformity loses its validity.

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

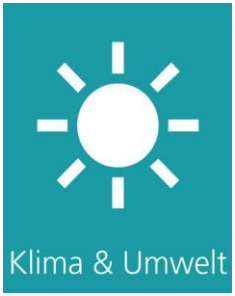
St. Ruprecht a.d. Raab, 31.07.2022

Bernhard Maunz
Legally binding signature of the issuer
Legal binding signature of the issuer

13.2 Technical data

Measuring range	5 % to 40 % water content (depending on variety) 30 to 90 kg/hl (depending on variety)
Resolution	0.1 % water content, 0.1 kg/hl hectolitre weight
Operating Temperature	0 °C to 40 °C
Storage Temperature	-10 °C to 50 °C
Calibration Accuracy Water Content to Reference Material	+/- 0,4 %
Calibration Accuracy Hectoliter Weight to Hectoliter Measuring Nozzle	+/- 0.7 kg/hl
Compensation	thanks to integrated hectolitre determination and sample temperature measurement
Average sample quantity	approx. 330 g (depending on variety)
Measurement result	within 3 seconds without sample preparation. Clean work possible thanks to filling buckets
Memory function	Hold function, manual measured value memory for 10,000 values with measuring location description
Dimensions FSW	250 x 80 x 180 mm
Dimensions of the hopper	160 x 100 x 25 mm
Weight	1.7 kg
Power supply	4 Alkaline AA Batteries 1.5 V
Offset function	Calibration Curve Adjustment
Menu languages	German, English, French, Italian, Spanish, Portuguese, Czech, Slovak, Hungarian, Romanian, Polish, Russian, Slovak

14. Notes



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