



humimeter.com[®]

by Schaller Messtechnik

User manual



grain moisture meter

humimeter FS2

Version 2.8_en

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2016

1. Place the empty provided cup (0.5 litre) on the scale and turn the scale on. It shows 0.0 gram.

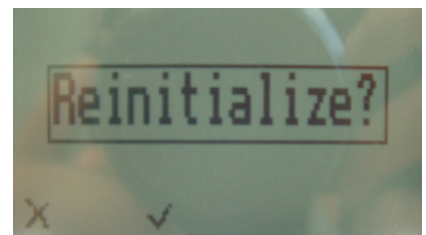


2. Make sure that the measuring chamber is completely empty. It is important that no material is left in the measuring chamber when you turn on the device.

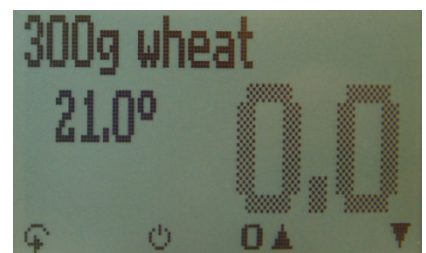
3. Switch on the humimeter FS2 by pressing the power button () for 3 sec.



4. The next step is a self calibration. The word “reinitialize” will show up on your display. Accept by pressing the  button.



5. Select the right calibration curve for your material under test using the buttons  or .



6. Fill up the cup with the sample material (+/- 1.0g). The filling quantity needed is shown on the upper left corner of the display of the device.



7. Fill up the measuring device with the sample material. The filling needs to be done slowly and constantly to ensure reproducible results.



8. The display shows the measuring result.



9. If the measuring value is blinking, the valid measuring range has been exceeded (limits see list on page 5). In this case the accuracy decreases.



10. To save the results in the store menu press the  (▲ button). Storage was successful when the number in front of the symbol  increases. To reach the store menu please press (⏻) until the  appears.



11. To name the saved results press the  button.

12. Empty the humimeter and ensure that no grain rests are accumulated in the measuring chamber.



Changing batteries

If the batteries are empty, please proceed as follows:

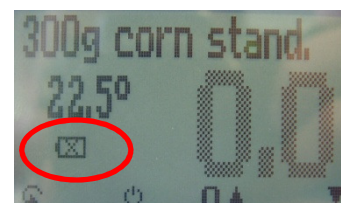
- 1.) Press with your finger onto the arrow of the battery cap und pull it back.
- 2.) Remove the empty batteries.
- 3.) Put four new batteries in the device.
Check the right position of the battery poles.
- 4.) Press down the batteries and close the cap.



If the battery symbol appears in the measuring window resp. if a critical charge of battery is shown in the status, the batteries have to be changed IMMEDIATELY.

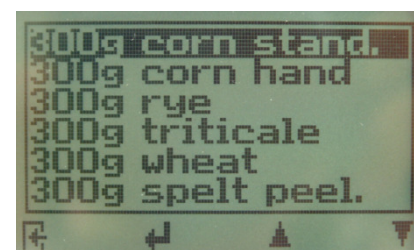


Also remove the batteries if you do not use your humimeter device for a longer period. For eventual resulting damages we cannot provide any warranty.



List of calibration curves

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



Calibration curves

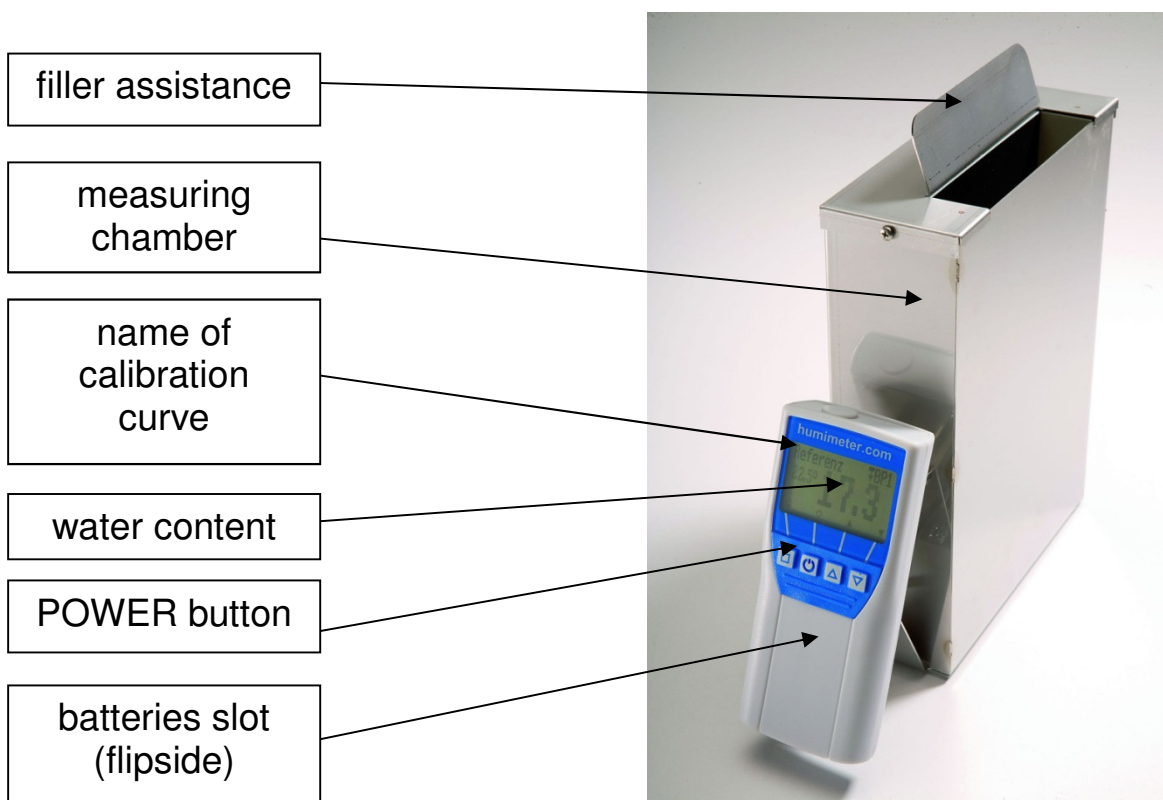
300g corn 5..40% 	300g hard corn 5..40% 	300g rye 5..28% 	300g triticale 5..28% 
300g wheat 5..28% 	300g durum 5..28% 	300g spelt peeled 5..28% 	300g barley 5..28% 
190g oats 5..25% 	300g rape 5..18% 	230g pumpkin seed 2..20% 	310g peas 5..25% 
300g soybeans 9..18% 	295g horse beans 10..20% 	277g scarlet runner 8..25% 	180g sunflower 5..18% 
300g rice peeled 9..25% 	250g rice unpeeled 4..30% 	300g rice brown 4..26% 	300g buckwheat 5..18% 

300g millet 5..15% 	300g sorghum millet 5..25% 	200g jatropha 5..18% 	reference only for internal use!
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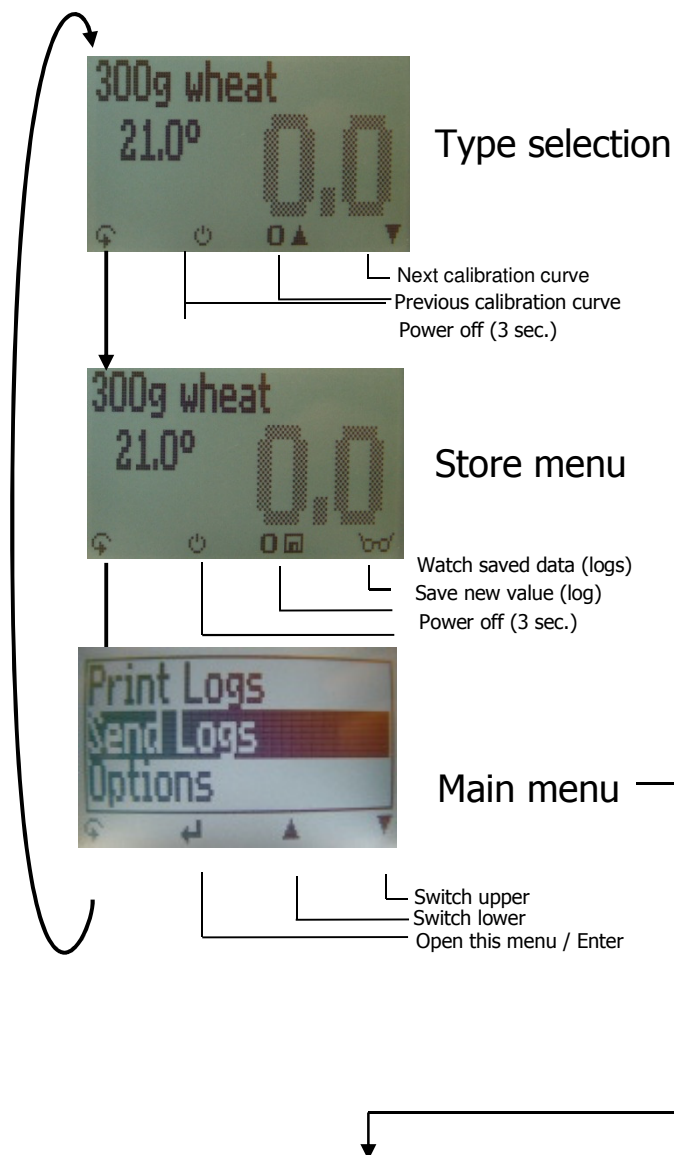
Additional calibration curves:

On request Schaller GmbH can develop customized calibration curves for your specific product. Schaller GmbH can also enter already existing calibration curves subsequently.

Design of the device



Menu level overview



Overview main menu

Edit Logs	Options
Manual Logs	Date / Time
Clear Logs	Log Time
Options	Language
Status	Unlock
	°C / °F
	o Userlevel
	Materialcalib.
	Password
	Reset

Keypad symbols

Measuring window:

	Rolling Menu
	Power ON / OFF
	Switch upper
	Switch lower
	Save
	Hold
	Watch saved data
	Add suppliers data

Menu:

	Enter
	Switch upper
	Switch lower
	Exit
	Enter numbers
	Enter letters
	Next or right
	Left
	Yes
	No
	Shift
	OK

[illegible]

Exemption from liability

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

Activation of the “super user” function

2 times  - *Options* – Unlock

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

Technical data

Resolution of the display	0.1% water content 0.5°C temperature
Measuring range	5 up to 40% depending on the material
Operation temperature	0 up to +40 °C (32 up to 104 °F)
Storage temperature	-20 °C to +60 °C
Temperature compensation	automatically
Power supply	4 pcs. 1.5 Volt AA <u>Alkaline</u> batteries (900 measurements)
Auto Switch OFF	After approx. 6 minutes
Current consumption	60mA (with light)
Display	128x64 matrix display, lighted
Dimensions	260 x 70 x 250 mm
Weight	approx. 1.3 kg (with batteries)
Degree of protection	IP 40
Scope of supply	FS2 incl. plastic case digital scale (max. 500g; 0.1g) measuring cup 0.5 liter 4 pcs. 1,5Volt AA Alkaline Batteries

Device maintenance instructions

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

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

! IMPORTANT ! please read

Most common reasons for miss readings

- ***Product temperature out of application range***

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

- ***Not adjusted material under test***

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

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

- ***Wrong calibration curve***

Before measuring your sample, please double-check the correct selection of the calibration curve.

- ***Wrong filling quantity***

Fill in exactly the right weight ($\pm 1.0\text{g}$) of material in the measuring chamber.

- ***Wet or mouldy material***

- ***Stored and fermented corn silage from whole grains may lead to higher value***

- ***Frozen measuring material***

- ***Polluted measuring material***

Polluted material e.g. barley spikes or other material mixed with the sample has a negative effect on the measurement