Schaller

Messtechnik / www.humimeter.com









HUMIMETER FOODS





Foods













İklim/ Çevre | Gıda | Biyoenerji | Malzeme | İnşaat | Kağıt ve karton

EXCLUSIVE DISTRIBUTOR

LOCATION

LONCA MAK. SAN. TİC. A.Ş.

Ferhatpaşa Mah. Gazipaşa Cad. No:104A
34888 Ataşehir / İSTANBUL - TURKIYE
Phone:+90 216 505 05 55
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WEB

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 | 163 ym | 23,2 °C | 78,8

humimeter FLH

hops moisture meter
for determination of water content of loose or compressed hops, air humidity in a kiln or hops equilibrium moisture content in conditioning chamber

with various available sensors for measurement of water content of loose hop cones, hops bales, air humidity in a kiln and in conditioning chamber, hops equilibrium moisture content, for long-term recording of temperature and climate data as well as for measurement of hay and straw.





Handling / measuring procedure

Switch on the instrument and connect the desired sensor - the device automatically recognises the connected sensor and provides the corresponding calibration curves. The following sensors are available: Hop cones sensor for measurement of loose hop cones, insertion probe for measurement in com- pressed bales, infrared sensor for non-contact temperature measurement of hops, air humidity and temperature sensor for measurement of hops equilibrium moisture content in conditioning chamber as well as for measurement of relative air humidity, e.g. in exhaust air during kiln drying. Hop cone sensor: Fill the measuring chamber with loose hop cones and compress the material by tightening the cap. The display immediately shows water content and temperature of the material. Insertion probe: After plugging the probe into the bale, water content and temperature can immediately be read off the display (the wrapping can be penetrated by the probe). If desired the measuring results can be saved via datalog. Infrared sensor: Point the non-contact infrared sensor to- wards the material - the display immediately shows the current temperature. Air humidity sensor: The sensor offers calibration curves for relative humidity, hops equilibrium moisture content and absolute moisture. The current temperature and humidity or water content can be read off the display and can be saved manually or automatically in adjustable intervals.

Features

- Measuring range:
- Insertion probe and hop cones sensor: 4 to 40% water content
- Air humidity sensor: 0 to 100% relative air humidity
- Infrared sensor: -25 to 125°C / -13 to 257°F
- Resolution:
- Insertion probe and hop cones sensor: 0.1% water content, 0.5°C
- Air humidity sensor: 0.1% RH; 0.1°C
- Infrared sensor: 0.1°C
- Operating temperature: 0 to 40°C / 32 to 104°F
- Temperature can be set to °C or °F as required
- Automatic temperature compensation
- Measurement within seconds without prior treatment of samples
- Datalog for up to 10,000 logs
- Supplier´s data management
- Menu languages: English, German, Italian, French, Spanish, Russian and many others on request
- Scope of supply: *humimeter* FLH, rubber protection cover and batteries
- Required accessories: external sensors
- Optional: *humimeter* USB data interface module with LogMemorizer measuring data recording and analysing software for PC, wooden case



humimeter FS1

Whole grain meter with low sample volume and sample temperature mesaurement for storage and field control in farming

technical data humimeter FS1 grain moisture meter

for maize, rye, triticale, wheat, barley, oats, rape, soybeans, broad beans, sunflower seeds, sorghum, mustard seeds, buckwheat, peeled rice
Resolution 0.1% water content Measuring range 5 to 30% water content (dependent on the type) Sample temperature measurement Temperature can be set to °C or °F as required Hold function Automatic temperature compensation Large, well-lit LC display Measurement within seconds without prior treatment of samples Robust housing Menu languages: English, German, Italian, French, Spanish, Russian and many others on request
Scope of supply: *humimeter* FS1 with batteries, digital scale, measuring cup and plastic case



Know-how obtained through decades of research and development!

device	resolution	calibration accuracy	measuring range	customer calibration	sample quantity	scale	temperature display	memory	PC-software + online function
FS1.1	0.1%	1.1%	5-25%		100ml	●	●		
FS1	0.1%	0.8%	5-30%		100ml	●	●		
FS2	0.1%	0.4%	5-40%		300g	●	●	●	
FS3	0.1%	0.4%	0-40%		300g	●	●	●	optional
FS4	0.1%	0.4%	0-50%	●	300g	●	●	●	●





Your benefits

- Very fast due to whole grain measurement
- Reduces your drying costs
- Optimal for grain producers

FS1 small and robust

- Automatic self-calibration
- very easy to operate
- Large, well-lit LC display
- Protecrs against mould and resulting damages

Only an exact moisture measurement of grain and special fruits allows fair payment for producers, suppliers and end customers. Therefore the quality control of grain and special fruits is of particular importance. Using a high quality grain moisture meter you can prevent machine problems and avoid paying the high product price only for water.

With *humimeter* FS1 grain moisture meter you can perform this procedure easily and within seconds:
Switch on the instrument, ill it with grain and read off the water content from the LCD.

To avoid very costly mistakes due to incorrect moisture levels it is necessary to check the moisture of a material in the manufacturing and treatment process in order to be able to take suitable measures in time.

Due to its longstanding experience in this ield and constant research, Schaller GmbH has attained the highest quality in the development and production of air humidity and material moisture meters for professional
applications. Our main areas are: climate, environment, food, bioenergy, buildings, paper, board and various other materials.

More than 40,000 customer-speciic solutions have been designed and produced for industry, universities and research institutions all over the world.

Our technicians provide reliable support and are available to answer your questions.

humimeter FS2 - Grain moisture meter

Grain and seeds moisture meter for use in farming, trade and animal feed industries



Whole grain meter with 300 gram sample size and sample tempera- ture measurement for agriculture, trading and feed industry. calibrated for corn, rye, triticale, wheat, durum (hard wheat), peeled spelt, barley, oats, rapeseed, pumpkin seeds, field peas, soybeans, scarlet runner beans, horse beans, jatropha, sunflower seeds, buck- wheat peeled and unpeeled, rice peeled and unpeeled, brown rice, millet, sorghum millet. Other sorts on request.



Measurement and handling:

To ensure precise long-term measured values, the FS2 grain moisture meter automatically performs a self-calibration after being turned on (this process takes only a few seconds). Afterwards, the relevant characteristic curve for the grain type to be measured can be selected on the measuring device. Then, the measuring chamber of the FS2 grain me- ter is filled with the required amount of sample. In order to determine the exact grain quantity, a scale and a measuring cup are included in the delivery of the grain moisture meter. The water content is displayed immediately, if nec- essary, it can be saved, edited, transferred to a PC or printed out using the integrated data logger (printer and USB interface are optionally available).



Technical data:

- Measuring range: 5 to 40 % water content (depending on product type)
- Resolution: 0.1 %
- Calibration accuracy to reference material:+/- 0.4 %
- Hectolitres compensated
- Sample temperature measurement
- Selectable temperature in °C or °F
- Automatic temperature compensation
- High accuracy due to 300 grams sample quantity
- Measurement results within seconds without sample preparation
- Hold function
- Manual memory for up to 10.000 measure- ments with measuring location description
- Supplier memory management
- Robust, stainless steel housing
- Large illuminated LC display
- Menu in English, French, German, Italian, Spanish, Russian, Portuguese, Czech, Polish and International
- Scope of supply: humimeter FS2, rubber pro- tection, digital scale, plastic case, user manual, measuring cup and batteries
- Dimensions: 260 x 70 x 250 mm
- Weight 1300 g (incl. batteries)

humimeter FS3

food moisture meter

Whole grain meter with 300 gram sample weight and sample temperature measurement for peeled and unpeeled raw coffee, roast and ground coffee, cocoa beans, poppy seeds, pumpkin seeds, peas, soybeans, scarlet runner beans, wheat, durum wheat, rape, peeled, unpeeled and brown rice, linseed, sesame, buckwheat, millet and sorghum millet







Measuring procedure:

To guarantee precise measuring values in the long run, after switching on the *humimeter* FS3 automatically effects a self-calibration. After that, choose the corresponding calibration curve for your product to measure. Fill the measuring chamber with the corresponding quantity of material. Water content and temperature can immediately be
read off the large, well-lit display of the *humimeter* FS3. Via the integrated datalog the measuring values can be stored and additional data like supplier or batch number can be added.
Optionally, the *humimeter* FS3 can be delivered with a USB
interface for connecting the device to a PC. The included LogMemorizer software can read off the measuring values from the device, addition information can be added and the data can be archived, exported and processed.

Features:

- Measuring range 0 to 40% (depending on the material)
- Resolution 0.1% water content
- Calibration accuracy to reference material +/-0.4%
- Hectoliter compensated
- Sample temperature measurement
- Temperature can be set to °C or °F as required
- Automatic temperature compensation
- Measurement within seconds without prior treatment of samples
- Hold function
- Manual saving of results, datalog for up to 10,000 logs with measuring point report
- Supplier´s data and batch number can be recorded
- Robust stainless housing
- Large well-lit LC display
- Fast and accurate whole grain measurement
- Calibration of special products possible by the manufacturer
- Scope of supply: *humimeter* FS3 with rubber protection cover, digital scale, plastic case, measuring cup and batteries

humimeter FS4

food moisture meter

universal food moisture meter
Whole grain meter with 300 gram sample weight and sample tempera- ture measurement, with integrated customer calibration function. Calibrated for maize, rye, triticale, wheat, durum wheat, spelt, barley, oats, rape, pumpkin seeds, field peas, soybeans, scarlet runner beans, horse beans, sunflower seeds, Jatropha, peeled and unpeeled raw coffee, roast and ground coffee, peeled, unpeeled and brown rice, poppy seeds, millet, sorghum millet, peeled buckwheat; further species on request.







Measuring procedure:

To guarantee precise measuring values in the long run, after switching on the humimeter FS4 automatically effects a self-calibration. After that choose the corresponding calibration curve for your product to measure. Fill the measuring chamber with the corresponding quantity of material. Water content and temperature can immediately be
read off the large, well-lit display of the humimeter FS4. Via the integrated datalog the measuring values can be stored and additional data like supplier or batch number can be added.
The USB interface module enables the connection of the humimeter FS4 to a PC. The included LogMemorizer software can read off the measuring values from the device, addition information can be added, and the data can be archived, exported and processed.

Features:

- Measuring range 0 to 50% water content (depending on the material)
- Resolution 0.1%
- Calibration accuracy to reference material +/-0.4%
- Customer calibration function for special crops
- Hectoliter compensated
- Sample temperature measurement
- Temperature can be set to °C or °F as required
- Automatic temperature compensation
- Measurement within seconds without prior treatment of samples
- Hold function, manual saving of results, datalog for up to 10,000 logs with measuring point report
- Integrated online function
- Supplier´s data management
- Robust stainless housing
- Large, well-lit LC display
- Fast and accurate whole grain measurement
- Scope of supply: *humimeter* FS4 with USB data interface module and LogMemorizer measuring data recording and analysing software, rubber protection cover, digital scale, plastic case, measuring cup and batteries

humimeter FL1 and FL2

Hay and straw moisture meters with stable, fix mounted insertion probe of 0.6 meters length



Measuring procedure:

After choosing the corresponding calibration curve for your product to measure, insert the measuring probe into the hay or straw bale. Water content and temperature can immediately be read off the large, well-lit display. Using the compression plate delivered with the humimeter FL2, also loose hay and straw before baling can be measured. Via the integrated datalog of the humimeter FL2, the measuring values can be stored and additional data like supplier or measuring point can be added. For transferring the measuring data to a PC, the humimeter FL2 is equipped with an USB interface. The included LogMemorizer software can read off the measuring values from the device, addition information can be added, and the data can be archived, exported and processed.



Features:

humimeter FL1

- Measuring range 8% to 40% water content, depending on the material
- Resolution 0.5%
- Calibration accuracy to reference material +/- 1.0%
- Temperature measurement: -20°C to +85°C / -4°F to 185°F
- Automatic temperature compensation
- Easy handling, measurement within seconds
- Hold function
- Scope of supply: humimeter FL1 with rubber protection cover and batteries



humimeter FL2

- Measuring range 8% to 60% water content, depending on the material
- Resolution 0.1%
- Calibration accuracy to reference material +/- 0.8%
- Temperature measurement: -20°C to +120°C / -4°F to 248°F
- Automatic temperature compensation
- Easy handling, measurement within seconds
- Hold function, manual saving of up to 10,000 logs with measuring point report
- Automatic averaging
- Calibration function for special materials
- Scope of supply: humimeter FL2 with rubber protection cover and batteries, humimeter USB data interface module with LogMemorizer measuring data recording and analysing software, compression plate for measuring bulk material and wooden case

humimeter RHL

Grain temperature & moisture meter

For grain storage or grain silo Temperature and climate data long-term recording

For measurement of grain moisture (water content), aw value, relative humidity and dew point. Specially developed to monitor humidity and temperature in grain stores and silos. Available with additional sensors.



LF_TB 120 Sensor - 300 mm
Optional up to 2000 mm



Basic information

- Measuring range:
  - Wheat, barley, rye, triticale, maize :12 to 18% water content
  - Aw-value: 0,001 to 1
  - Relative humidity: 0 to 100 %
  - Absolute humidity: 0 to 130 g/m³
  - Dew point: -55 to +60 °C
- Resolution: 0,1% WC, 0,001 aw, 0,5 °C / °F
- Temperature can be set between °C and °F
- Automatic temperature compensation
- Hold function
- Data memory for up to 10.000 values
- Menu languages: German, English, French, Italian, Spanish, Portuguese, Czech, Polish, Hungarian, Russian, International
- Storage temperature: -20 °C to +60 °C
- Power supply: 4 x 1.5 Volt AA alkaline batteries
- Power consumption: 60 mA (with backlight)
- Unit dimensions: 249 x 75 x 30 mm
- Unit weight: 266 g (incl. batteries)
- Protection class: IP 40
- External sensors (optionally):
  - LF_TB 120: Stainless steel insertion probe - Length: 300mm (Art.No. 12004)
  - LF_TB 120 Special length: stainless steel insertion probe length: up to 2000 mm (Art.No. 14640)
- Scope of supply: humimeter RHL, rubber protection, user manual and batteries
- Optionally available: external sensors, plastic case, USB data interface, portable printer

Measuring procedure and handling:

The main unit of the humimeter RHL enables the connection of different humidity sensors. With the aw-value measuring chamber it is possible to measure small sample volumes. The insertion probe can be produced in lengths between 300 and 2000 mm, depending on the customer‘s requirements. The standard length is 300 mm. It can be used to measure moisture even in deeper layers of the storage.

Immediately after turning on the device, the temperature and humidity values will be displayed. The measurements can be stored manually by pressing a button or via auto data logger with an adjustable time interval on the meter.

The measuring device provides curves for the following grains: wheat, barley, rye and triticale. Further sorts can be added on request. With the help of a capacitive humidity sensor you can determine the balance humidity based on the sorption isotherm.

The humimeter RHL offers as an additional option a USB interface to connect the device to a PC. The included software „Log Memorizer“ enables storage and evaluation of the measured data.

humimeter FSG

Measuring device for rapid water content determination of nuts and kernels Calibrated for peanuts, macadamia nuts, walnuts, almonds, cashew nuts, Brazil nuts and hazelnuts. Other sorts on request



Nondestructive Nut & Kernel Moisture Meter

Fast measuring device for water content determination of shelled and unshelled, roasted and ground nuts.Calibrated for following sorts: unshelled and shelled peanuts, roasted peanuts, large unshelled walnuts, shelled,unshelled and ground walnuts, unshelled and shelled macadamia, shelled almonds, unshelled and shelled hazelnuts, shelled brazil nuts, unshelled and shelled cashew nuts, spiral noodles



Measuring procedure and handling:

To ensure long-term precise measured values, the humimeter FSG automatically performs a self-calibration after being turned on.

Then select the required characteristic curve for the product to be measured on the display and fill the measuring chamber with the indicated material volume. Both water content and temperature can be read immediately from the large lighted display of the humimeter FSG. The nuts will not be damaged during the measurement. The moisture meter determines the average water content of all nuts in the measuring chamber, independent of the nuts‘ processing state. A digital scale and a filling container for the measuring chamber are included in the delivery.
Using the integrated data logger, it is possible to save measuring results and then add further information such as suppliers‘ data or charge numbers. The saved values can be transferred to a PC using the USB interface (optional). The „LogMemorizer“ software enables archiving and evaluation of the measurement data.

Basics:

- Measuring range 0 to 50% water content (depends on sort)
- Resolution 0,1%
- Operating temperature 0 °C to +50 °C
- Storage temperature -20 °C to +60 °C
- Customer calibration function for special fruits
- Hectoliters compensated
- Sample temperature measurement
- Temperature can be set to °C or °F as required
- Automatic temperature compensation
- Measurement result within seconds without sample preparation
- Hold function, manual storage for up to 10,000 values with measurement location description
- Integrated online function
- Suppliers memory manager
- Power supply 4 x 1.5 Volt AA alkaline batteries
- Current consumption 60 mA (with display lighting
- Robust stainless steel housing
- Display 128 x 64 matrix display lighting
- Device dimensions 226 x 165 x 240 mm
- Device weight approx. 3 kg
- Protection class IP 40
- Scope of supply: humimeter FSG, 4 batteries, digital scale 2200 grams, measuring bucket 2.5 liters, user manual
- Optional accessories: humimeter USB data interface module incl. PC software LogMemorizer, portable thermo printer with rechargeable battery (can only be used in conjunction with humimeter USB data interface module)

humimeter FSA

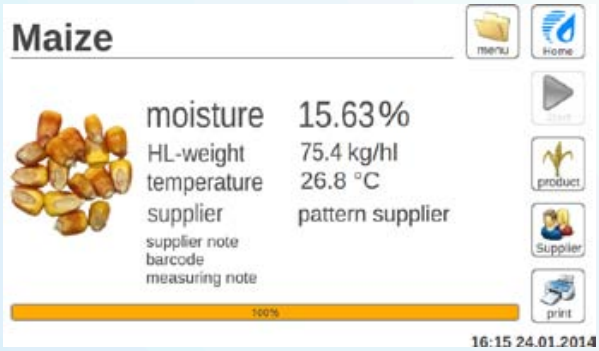
Fully automatic whole grain moisture analyser with integrated determination of hectolitre weight and infrared sample temperature measurement





fully automatic grain moisture analyser

Calibrated for maize, rye, triticale, wheat, durum wheat, peeled and unpeeled buckwheat, peeled and unpeeled spelt, peeled and unpeeled millet, sorghum millet, barley, oats, rape, soybeans, horse beans, scarlet runner beans, sunflower seeds, pumpkin seeds, rice, field peas and linseed. Further products on request, also special products can be calibrated!



Features:

- Measuring range 0 to max. 50% water content, depending on the product
- Resolution 0.01%
- Hectolitre measurement (kg/hl)
- Infrared sample temperature measurement
- Temperature can be set to °C or °F as required
- Automatic infrared temperature compensation
- Measurement within seconds without prior treatment of samples
- 7 inch colour touch display
- Integrated printer in a robust housing
- Datalog for up to 1,000,000 logs with measuring point report
- Suppliers data management
- Customer-specific calibration for special crops, granulate etc. possible
- Ethernet and USB data interface module
- Menu languages: English, German, Italian, French, Spanish, Portuguese and many others on request
- Very fast and accurate whole grain measurement
- Simple, convenient and quick handling via large touch display
- Official calibration in preparation
- Scope of supply: FSA, Ethernet and USB data interface module, integrated printer, measuring cup

Measuring procedure:

The right selection of the measured sort is essential to guarantee an accurate measuring result. For that, just select your product among the list of all calibrated sorts with pictures at the colour touch display. After that fill the sample to measure into the filling funnel of the device. The sample doesn´t have to be grinded or treated in any way. By pressing the Start button, the measurement is effected fully automatically. After approx. 30 seconds the measurement is completed and the display shows the water content, hectolitre weight as well as the temperature of the material. Now additional information such as supplier, barcode or a note can be added. The measuring results can be stored on the device, an USB flash drive or in the network. Furthermore the measuring results can immediately be printed out via the integrated printer.



humimeter FSO

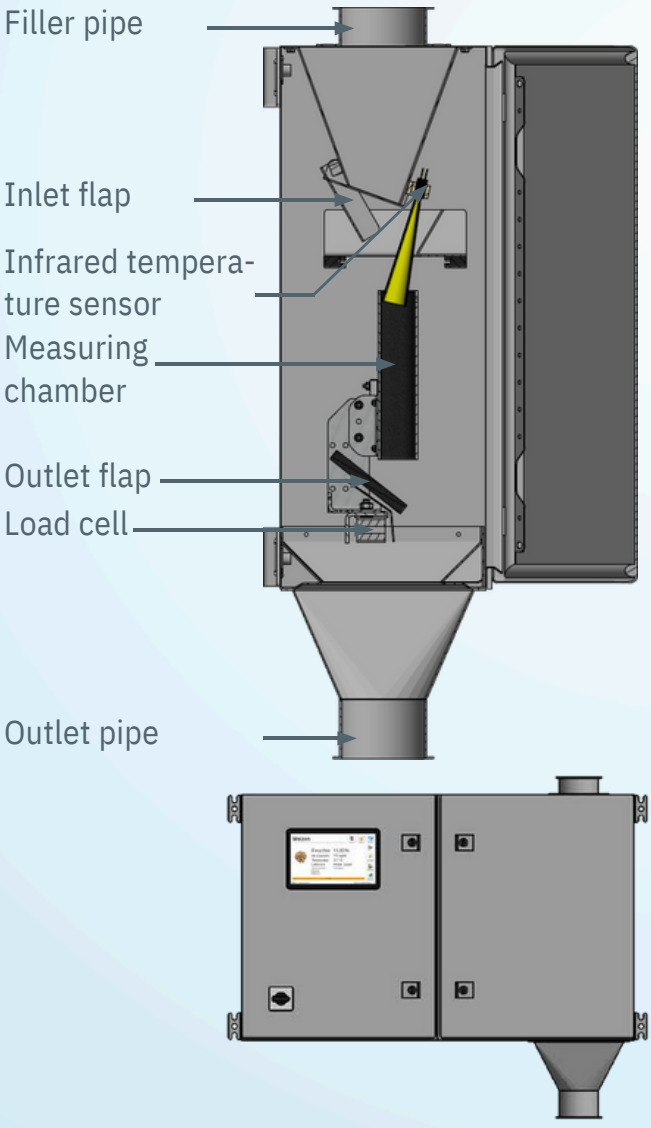
Online measuring system for the discontinuous determination of water content of grain



FSO

Precise fully automatic online whole grain moisture measuring system in the bypass with integrated determination of hectolitre weight and infrared sample temperature measurement. For the discontinuous measurement of grain moisture for quality control, documentation and process control purposes. Designed for the application in mills, grain processing companies or in grain trade.

Readily calibrated system for maize, rye, triticale, wheat, durum wheat, peeled buckwheat, peeled spelt, peeled and unpeeled millet, sorghum millet, barley, oats, rape, soybeans, horse beans, sunflower seeds, pumpkin seeds, rice, field peas and linseed. Further products on request, also special products can be calibrated.



Technical data FSO

article number: 13900

- Measuring range 0 to max. 50 % water content, depending on the product
- Resolution water content 0.01 %
- Resolution hectolitre weight 0.1 kg/hl
- Material temperature 0 to 50 °C / 32 to 122 °F
- Display of hectolitre weight in kg/hl
- Infrared sample temperature measurement
- Temperature can be set to °C or °F as required
- Automatic infrared temperature compensation
- Automatic bulk density compensation by integrated load cell
- 7 inch colour touch display
- Robust, easy to mount metal housing
- Power supply 24 VDC (max. 60 W)
- Compressed air connection 5 bar
- Dimensions: 860x700x260 mm
- Menu languages: English, German, Italian, French, Spanish, Portuguese, Slovenian, Hungarian, Polish, Romanian and Russian.

Optional:

- Ethernet data interface
- REST Interface
- Analog outputs for humidity and temperature
- Relay Alarm function
- Connection to various bus systems
- Data printer
- Grain pre-cleaning plant

V1.0