

Resistive material moisture measuring device

Product information

GMR 110

02/2013

with integrated measuring needles

Features

- new characteristic curves
- automatic temperature compensation
- comfortable rating display

Application

measuring device for fast evaluation of material moisture in

- firewood, timber,
- flake board, inlay,
- plaster, cement
- and lots more

Compact and robust measuring device for fast evaluation of material moisture in firewood, timber, flake board, inlay, plaster, cement and lots more. A suitable characteristic is selected with help of material table on the rear side of the device before measuring. The material is contacted by pressing the measuring needles into it. The measured value is displayed only a short time afterwards. The device is especially designed for precise firewood and timber measurements, however, a lot of additional building materials can be rated.



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suitable characteristic

 measured value
 display %
 material moisture u
 water content w

 Moisture rating via bar
 graph

hold-function

Material tables on rear side of device

3 wood groups:

- h.01 spruce, pine
- h.02 maple, birch, beech, larch (EUR), ash (EUR), fir
- h.03 oak, ash (AM), poplar, douglas fir

a lot of additional wood types can be determined with the table of the instruction manual

8 building material curves:

- c.01 cement screed, concrete
- c.02 anhydrite screed
- c.03 plaster, lime mortar
- c.04 cement mortar
- c.05 gas concrete
- c.06 lime sand brick
- c.07 clay brick
- c.08 gypsum plaster



Specifications

Measuring principle:	resistive material moisture measurement acc. to DIN EN 13183
Measuring range:	0,0 bis 100 % material moisture (depends on selected characteristics)
Moisture rating:	in 6 steps (wet ... dry)
Resolution:	0,1% (< 20 %), 1 % (> 20 %)
Accuracy:	wood: $\pm 0,2$ % material moisture (Deviation to wood characteristic curve in range 6 ... 20%) building materials: $\pm 0,2$ % material moisture (Deviation to corresponding characteristic curve)
Measuring probe:	2 needle holder M6x0.75 with 19 mm measuring needles (12 mm usable length)
Working temperature:	-5 ... 50 °C (material not frozen)
Working humidity:	0 ... 95 % RH (non condensing)
Features:	hold, auto-hold, auto-power-off
Scope of supply:	device, 2 needle protection caps, battery, operation manual

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Measuring material moisture for wood and building materials with extended functions



Resistive material-moisture meas. device

GMH 3810 with integrated measuring pins

The measuring pins integrated on the reinforced front numerous measurings can be done without additional accessories.

For measuring of very hard materials we suggest the components shown at the accessories section.

- 494 characteristic curves
- incl. calibration protocol

Specification:

Measuring principle:

moisture: resistive material-moisture-measuring matching DIN EN 13183-2:2002
temperature internal: NTC

Characteristic curves: 494

Measuring range:

moisture: 0,0 to 100,0 % moisture content (depending on characteristic curve)
temperature: -40,0...+200,0°C (-40,0...+392,0°F)

Estimation: in 9 steps (dry ... wet)

Resolution: 0,1% resp. 0,1°C (0,1°F)

Accuracy device: (at nominal temperature = 25°C)

wood: ±0,2 % moisture content (deviation from characteristic curve at range 6...30%)
building mat.: ±0,2 % moisture content (deviation from characteristic curve)

Temperature compensation: automatically or manual

Measuring probe: 2 pin holders M6*0.75 with 19mm pins (12mm utilisable)

Perm. working temperature: -25 to 50°C

Storage temperature: -25 to +70°C

Relative humidity: 0 to +95%RH (non-condensing)

Display: two 4-digit LCDs

Power supply: 9V-battery, type IEC 6F22

Power consumption: approx. 2.5 mA

Dimensions / Weight: 142 x 71 x 26 mm, 175 g

Housing: Impact-resistant ABS plastic housing, membrane keyboard, transparent panel. Front side IP65, integrated pop-up clip

Functions: Hold, Auto-Hold, Sort, Auto Power Off (description refer to GMH3830)

Accessories:

GST 3810 replacement pins (10 pcs.)

GMK 3810 1 m measuring cable, incl. adapter (2 x banana plug to 2 x banana plug) Allows connection of accessories



GSE 91 impact electrode

miscellaneous accessories p.r.t. pages 60 - 62

The compact solution for wood, plaster and building moisture measurements



**PREIS-
SENKUNG!**



Resistive material moisture measuring device

GMR 110

with integrated measuring needles

Compact and robust measuring device for fast evaluation of material moisture in firewood, timber, flake board, inlay, plaster, cement and lots more. A suitable characteristic is selected with help of material table on the rear side of the device before measuring. The material is contacted by pressing the measuring needles into it. The measured value is displayed only a short time afterwards. The device is especially designed for precise firewood and timber measurements, however, a lot of additional building materials can be rated.

- Material tables on rear side of device
- Integrated, exchangeable measuring needles
- Moisture rating (wet/dry) via bar graph
- Display of material moisture or water content
- Integrated temperature compensation
- Characteristic curve display

3 wood groups:

- h.01 spruce, pine
- h.02 maple, birch, beech, larch (EUR), ash (EUR), fir
- h.03 oak, ash (AM), poplar, douglas fir
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- new characteristic curves
- automatic temperature compensation
- material tables on rear side of device
- comfortable characteristic and rating display

Specifications:

Measuring principle: resistive material moisture measurement acc. to DIN EN 13183

Characteristic curves: 3 different wood groups (h.01, h.02, h.03) for a total of 130 wood types and 8 different building material curves (c.01, c.02, c.03, c.04, c.05, c.06, c.07, c.08)

Measuring range: 0,0 bis 100 % material moisture (depends on selected characteristics)

Moisture rating: in 6 steps (wet ... dry)

Resolution: 0,1% (<20%), 1% (>20%)

Accuracy: (at nominal temperature = 25 °C)

wood: ±0,2 % material moisture (Deviation to wood characteristic curve in range 6 ... 20%)

building materials: ±0,2 % material moisture (Deviation to corresponding characteristic curve)

Temperature compensation:

automatically or manual

Measuring probe: 2 needle holder M6x0.75 with 19 mm measuring needles (12 mm usable length)

Working temperature: -5 ... 50 °C

(material not frozen)

Working humidity: 0 ... 95 % RH

(non condensing)

Storage temperature: -25 ... 70 °C

Display: 2 LCD displays for characteristic and measuring value

Power supply: 9V battery, type IEC 6F22

Current consumption: approx. 1.8 mA

Housing: made of impact-resistant ABS, plastic foil keyboard, clear screen. IP65 at front

Dimensions: 110 x 67 x 30 mm + needles 26 mm

Weight: approx. 155 g

Features: hold, auto-hold, auto-power-off

Scope of supply: device, 2 needle protection caps, battery, operation manual

Accessories:

GST 3810

spare measuring needles (10 pieces)

GMK 3810 measuring cable incl.

socket adaptor

additional special accessories at page 25

GKK 252 small case (235 x 185 x 48 mm) with foam lining

GB 9 V spare battery

miscellaneous accessories p.r.t. pages 60 - 62