

## Resistive material-moisture measuring device



**FOR WOOD AND  
BUILDING  
MATERIALS**

### GMH 3810

material-moisture measuring device with integrated measuring pins

#### General:

The measuring pins integrated on the reinforced front numerous measurements 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

#### Specifications:

##### Measuring principle:

**moisture:** resistive material-moisture-measuring matching DIN EN 13183-2:2002

**temperature internal:** NTC

**Characteristic curves:** 494

##### Measuring range:

**moisture:** 0.0 ... 100.0 % moisture content  
0.0 ... 50.0 % water content  
(depending on characteristic curve)

**temperature:** -25.0 ... +50.0 °C (-13.0 ... +122.0 °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 material:** ±0,2 % moisture content  
(deviation from characteristic curve)

**Temperature compensation** automatically or manual

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

**Perm. working temperature** 0 ... 50 °C (not frozen)

**Storage temperature:** -25 ... +70 °C

**Relative humidity:** 0 ... 95 % RH (non-condensing)

**Display:** two 4-digit LCDs

**Power supply:** 9 V-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:

Auto-Hold, Sort, Auto Power Off, Hold

#### Accessories and spare parts:

**GST 3810**  
replacement pins (10 pcs.)

**GMK 3810**  
1 m connection cable with 2 x banana plug and 2 adapters. Allows connection of accessories (except GSF38..., GTF38 and GES38) on GMH3810/GMR110.



**GSE 91**  
impact electrode

## Resistive material-moisture measuring device



- automatic temperature compensation
- material tables on rear side of device
- comfortable characteristic and rating display

**WITH INTEGRATED  
MEASURING NEEDLES**

### GMR 110

Resistive material moisture measuring device with integrated measuring needles.

#### General:

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

#### Characteristic curves:

##### 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:

<b>Measuring principle:</b>	resistive material moisture measurement acc. to DIN EN 13183
<b>Characteristic curves:</b>	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)
<b>Measuring rang:</b>	0.0 ... 100 % material moisture (depends on selected characteristics)
<b>Moisture rating</b>	in 6 steps (wet ... dry)
<b>Resolution:</b>	0,1 % (<20 %), 1 % (>20 %)
<b>Accuracy: (at nominal temperature = 25 °C)</b>	
<b>wood:</b>	±0,2 % material moisture (Deviation to wood characteristic curve in range 6 ... 20 %)
<b>building materials:</b>	±0,2 % material moisture (Deviation to corresponding characteristic curve)
<b>Temperature compensation:</b>	automatically or manual
<b>Measuring probe:</b>	2 needle holder M6 x 0.75 with 19 mm measuring needles (12 mm usable length)
<b>Working temperature:</b>	-5 ... 50 °C (not frozen)
<b>Storage temperature:</b>	-25 ... +70 °C
<b>Working humidity:</b>	0 ... 95 % RH (non condensing)
<b>Display:</b>	2 LCD displays for characteristic and measuring value
<b>Power supply:</b>	9 V battery, type IEC 6F22
<b>Current consumption:</b>	approx. 1.8 mA
<b>Housing:</b>	made of impact-resistant ABS, plastic foil keyboard, clear screen. IP65 at front
<b>Dimensions:</b>	110 x 67 x 30 mm + needles 26 mm
<b>Weight:</b>	approx. 155 g
<b>Scope of supply:</b>	device, 2 needle protection caps, battery, operation manual

#### Functions:

Hold, Auto-Hold, Auto Power Off

#### Accessories and spare parts:

**GST 3810**  
spare measuring needles (10 pieces)

**GMK 3810**  
measuring cable incl. socket adaptor  
*additional special accessories at page 27*

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

**GB 9 V**  
spare battery