

Precision Material Moisture Meas. Device

for wood, building material, straw, hay, paper, textiles etc.

MPA certified
appr. for glued timber construction
acc. to DIN 1052-1



- 466 wood characteristic curves
- 28 building material characteristic curves
- moisture estimation
- display of moisture content u or wet-basis moisture content w
- external temperature probes connectable
- serial interface or analog output 0-1V, freely adjustable
- Future-proof via updates

Description: the GMH3830 offers important advantages in handling, user-friendliness, functional range and accuracy for your metrological work.

The absolute moisture content of 494 materials is displayed directly. The cumbersome usage of calculation tables now is history. Additionally you get a evaluation of your material state (wet/dry) of nearly all materials instantly. Of course the formerly used wood groups A, B, C and D of the predecessor models are further more supported.

GMH 3830 access. not included

Resistive material-moisture and temperature measuring device

General application: precision measurements in cut wood, chip board, veneer, sawdust, wood chips, wood wool, flax, straw, hay, concrete, gas concrete, bricks, wash floor, cast, limestone mortar, cement mortar, paper, carton, textiles etc.

User: architect, expert, inspector, building contractor, painter, carpenter, parquet joiner, floor tiler, wood works, timber desiccation plant, building repair company, textile industry etc.

Specification GMH 3830:

Measuring principle:

moisture: resistive material-moisture-measuring matching DIN EN 13183-2:2002
temperature external: thermocouple, NiCr-Ni (type K)
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)

wood: $\pm 0,2$ % moisture content (deviation from characteristic curve at range 6...30%)
building mat.: $\pm 0,2$ % moisture content (deviation from characteristic curve)
temperature (external): $\pm 0,5\%$ v. MW $\pm 0,3^\circ\text{C}$

Temperature compensation: automatically or manual

Sensor connection:

moisture: BNC
temperature: flat pin plug (free of thermo-voltage)

Perm. working temperature: -25 to 50 °C

Display: two 4 digit LCDs (12.4mm or 7mm high), as well as additional arrows.

Pushbuttons: 6 membrane keys

Output: 3-pin jack connector $\varnothing 3,5\text{mm}$, choice between serial interface or analog output

- **serial interface:** direct connection to RS232 or USB interface of a PC via electrically isolated interface adapter GRS3100 or GRS3105 resp. USB3100 (p.r.t. accessories).

- **analog output:** 0...1V, freely adjustable

Power supply: 9V-battery, additional d.c. connector for external 10.5-12V direct voltage supply (suitable power supply: GNG10/3000).

Power consumption: approx. 2.5 mA

Dimensions / Weight: 142 x 71 x 26 mm, 155 g

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

Functions:

Hold, Auto-Hold (automatic freezing of a constant value), **Low battery warning** (Δ and ' bAt '), **Sort** (limitation of the choice of materials to up to 8 favourites), **Auto Power Off**

GMH 3830 LW:

Complete material moisture measuring set optimized for use in agriculture



The set consists of GMH 3830 with preset material selection (Sort) and a rugged integrated probe (15) with integrated temperature sensor.

The set is excellently suitable for measuring in hay bales and bulk goods. Putting the probe into the medium, material moisture and temperature could be specified quick and easy.

Scope of Supply:

1x GMH 3830 (measuring device incl. battery), 1x GSF 38TF (injection probe), 1x BNC connection cable 1.5m, 1x NiCr-Ni connection cable 1.5m, 1x GKK 3500 (Koffer)

Accessories:

SET 38 HF (Wood moisture set)



contents: GKK3500 (case), GMK 38 (measuring cable), GSE 91 (impact electrode), GST 91 (steel nails), GTF38 (temperature probe)

SET 38 BF (Wood a. building material moisture set)



contents: GKK3500 (case), GMK 38 (measuring cable), GSE 91 (impact electrode), GST 91 (steel nails), GTF38 (temperature probe), GMS300/91 (measuring pins), GBSK91 (brush-type probe), GLP 91 (conducting paste)

SET 38 MPA (MPA wood moisture set)

contents: as SET38HF but instead of GSE 91 with GHE 91

USB 3100 N interface converter

GNG 10/3000 power supply

miscellaneous accessories p.r.t.p. 56 - 58

Accessories, spare parts:

- GMK 38**
measuring cable (BNC to 2 x banana plug) approx. 90cm long
- GHE 91**
reciprocating piston electrode
- GSE 91**
impact electrode
- GEG 91**
handle for retrofit of impact electrode
- GSG 91**
retrofitted impact electrode with front side of GSE 91 and handle GEG91
- GST 91**
steel nails (3 pieces each 12, 16 and 23 mm long) in plastic case
- GOK 91**
surfaces-measuring caps (pair) (to be screwed on GSG91 or GSE91)
- GMS 300/91**
measuring pins 300 mm long (pair) for wood chips, wood wool, paper, carton, etc. (to be screwed on GSG91 or GSE91)
- GBSK 91**
short brush-type probe (pair) for depth down to approx. 100 mm
- GBSL 91**
long brush-type probe (pair) for depth down to approx. 300 mm
- GLP 91**
conducting paste 100 ml, for surface measurements and depth indication in walls, wash floors etc. with brush probes
- GSP 91**
sensor for surface measurements on paper, textiles etc.
- GSP 91 ES**
spare sensor element for GSP 91
- GSF 38 (1 m)**
GSF 38K (25 cm)
injection probe (diff. meas. depths) with handle and 1.5 m connection cable (for bales of wood wool, wood chips etc.)
- GSF 38TF (1 m)**
GSF 38TFK (35 cm)
injection probe (diff. meas. depths) with integrated NiCr-Ni-temperature probe, with handle and connection cables (for bales of wood wool, wood chips, hay bales, bulk goods, etc.)
- GEF 38**
flat electrode (for floor pavement, etc.)
- GPAD 38**
testing adapter (with 2 test points)
- GTF 38**
insulated NiCr-Ni temperature probe, $\varnothing 2,2 \times 25\text{mm}$ (necessary for temperature differences between wood an device)
- GES 38**
insulated NiCr-Ni injection probe (e.g. for wood chips), $\varnothing 4 \times 150\text{mm}$
- GKK 3500**
case (394 x 294 x 106 mm) with punched lining for device an access.
- ST-RN**
protection pocket with openings for sensor connections (suitable for GMH 3830, GMH 3850)

pict.: GMH3830 in ST-RN