

# Short manual GMK 210

H68.0.02.6HC-05

## Capacitive moisture measurement caravan and boat

### 1 Display elements



- 1: current moisture (%u) or water content (%w)

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- 2: selected material (see chapter 6 respectively 7)

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- 3: Moisture rating (dry, wet)

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- 4: **HLD** - The measuring value is 'frozen' (hold-key)

### 2 Control elements



1



2



3

- 1: **on/off key** Press long: switch device off;  
Press shortly: activation of backlight

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- 2: **sort up** Material selection: upwards

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- 3: **hold** press shortly: Value is 'frozen' ('HLD' in display)  
press for 2sec.: **Zeroing function**

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- 2 + 3 together:** **sort down** Material selection: downwards

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- Depth switch:** **Sliding switch up: ca. 10 mm measuring depth (d 10)**  
(on the right side) **Sliding switch down: ca. 25 mm measuring depth (d 25)**

### 3 Zeroing function



press key “hold” for 2 seconds - in the air.

Please pay attention not to influence the zeroing function with your hands. The best way to ensure this is shown left.

Note: The zeroing function adjusts the zero-point for both 10 mm and 25 mm at the same time.

### 4 Operating-Modes „Measuring Mode“ and „Detector Mode“

The modes can be switched via the configuration menu.

(Call configuration menu: while turning on hold “sort” key. See operating manual chapter 11)

#### Measuring mode (Configuration dEt oF)

Material can be measured precisely, material curves are available. The display is done in absolute unit (%u or %w). An appropriate rating is shown as a bar graph or as an acoustic signal.

#### Detector mode (Configuration dEt on)

Material selection is fixed: (“dEt“ = rEF curve), searching very comfortably for moist spots with high resolution and adjustable alarm threshold („dEt SCL“), metal structures, reinforcements, etc. The measurement is relative (only rEF-curve! Display in „digit“= no unit)

#### Procedure:

Place the unit on a reference point (dry) and perform a zero calibration (see chapter 3)

Slowly scan the area -> if increased moisture is detected, the acoustic signal and corresponding bar graph will show this additionally to the changing display value.

#### Additional warnings in the detector mode:



Depth switch 10 mm: A measuring in the depth of ~25 mm is a much more moist, than the value shown in display.



Depth switch 25 mm: : A measuring in the depth of ~10 mm is a much more moist, than the value shown in display.

## 5 Hold the Device

The water content of the hand has an impact on the measuring value, if the device is held inappropriately. The best results will be obtained if you hold it the way as shown in picture 3.



**Picture 1: Held in a wrong way!**



**Picture 2: laid down – right!**



**Picture 3: The right way!**

## 6 Error and System Messages

**Er. 1** Value exceeding measuring range, value too high

**Er. 7** System error – (device defective or not within working temperature)



Value below display range, (value < 19)



Blinking: low voltage, device will continue to work for short time..



: Battery used.

## 7 Characteristic

d.45	Wood, 450 kg/m <sup>3</sup>	d.65	Wood, 650 kg/m <sup>3</sup>	d.85	Wood, 850 kg/m <sup>3</sup>
d.50	Wood, 500 kg/m <sup>3</sup>	d.70	Wood, 700 kg/m <sup>3</sup>	d.90	Wood, 900 kg/m <sup>3</sup>
d.55	Wood, 550 kg/m <sup>3</sup>	d.75	Wood, 750 kg/m <sup>3</sup>	d.95	Wood, 950 kg/m <sup>3</sup>
d.60	Wood, 600 kg/m <sup>3</sup>	d.80	Wood, 800 kg/m <sup>3</sup>	d.99	Wood, 1000 kg/m <sup>3</sup>
GrP	GfK	iSo	Light insulation materials,	rEF	Ref. characteristics

## 8 Wood types table

<b>Abachi</b>	d.45
Afzelia	d.75
Ash, American-	d.65
Ash, European-	d.65
Ash, Manchurian-	d.60
Balau, Bangkirai-	d.90
Balau, Red-	d.85
Beech, European-	d.65
Bintangor	d.65
Birch, White-	d.60
Birch, Yellow-	d.65
Bossè	d.55
Bubinga	d.85
Cedar, White	d.55
Cherry, Black-	d.60
Cherry, Wild-	d.55
Cypressus	d.45
Douglas-fir, Common-	d.50
Douka	d.65
Ebony	d.99
Elm	d.60
Fir, European Silver-	d.45
Fir, Grand-	d.45
Fir, Pacific Silver-	d.45
Fir, Red-	d.45

Gum, Sweet	d.50
Hemlock	d.45
Hickory	d.75
Iroko	d.65
Jarrah	d.75
Jelutong	d.45
Jequituba	d.70
Kapur	d.60
Karri	d.85
Larch, European-	d.55
Larch, Japanese-	d.55
Larch, Western-	d.55
Limba	d.50
Linden, American	d.45
Linden, Common-	d.50
Locust, Black-	d.70
Magnolia, Cucumber-	d.50
Mahogany	d.50
Mahogany, African-	d.50
Mahogany, Philippine-	d.50
<b>Maple, New Guinea</b>	d.55
<b>Maple, Sugar-</b>	d.70
Maple, Sycamore-	d.55
Mengkulang	d.65
Meranti, Dark Red-	d.65

Meranti, White-	d.55
Meranti, Yellow-	d.55
Merawan	d.70
Merbau	d.75
Mersawa	d.60
Messmate	d.80
Oak, Northern Red-	d.65
Oak, Sessile-	d.65
Oak, Sawtooth-	d.65
Oak, White-	d.65
Olive	d.85
Padouk, African-	d.70
Paldao	d.65
Pine, Black-	d.50
Pine, European Black-	d.55
Pine, Loblolly-	d.50
Pine, Lodgepole-	d.45
Pine, Longleaf-	d.60
Pine, Maritime-	d.50
Pine, Norway-	d.45
Pine, Parana-	d.50
Pine, Ponderosa-	d.45
Pine, Radiata-	d.50
Pine, Scots-	d.50
Pine, Sugar-	d.45

Poplar, Black-	d.45
Redcedar, Western-	d.45
Rengas	d.60
Rimu	d.50
Redwood, California-	d.45
Rosewood, Brazilian	d.85
Rosewood, New Gui.-	d.55
Rubber Tree	d.50
Sapele	d.65
Sipo	d.60
Spruce	d.45
Spruce, Sitka-	d.45
Tiama	d.55
Teak	d.65
Torem	d.95
Tualang	d.80
Walnut, Eastern Bl.	d.60
Walnut, Common-	d.60
Wenge	d.80