

Waterproof handheld measuring device for pH / Redox with external probe



**WATER-PROOF
DEVICE AND PLUG CONNECTIONS**

- Serial Interface
- analog output (GMH 5550)
- Data logger- and alarm function (GMH 5550)
- GLP-features (Good Laboratory Practice)
- Robust silicone protection cover
- Big dual display with background lightning
- High resolution (0.001pH / 0.1 mV)
- Incl. calibration protocol

GMH 5530

Waterproof handheld measuring device without electrode

GMH 5550

Waterproof handheld measuring device with analog output and data logger, without electrode

Application:

- Waters measuring, fishkeeping, aquafarming
- Drinking water monitoring, process control, soil measuring
- Food production and monitoring
- Laboratory: Medicine, pharmaceuticals, chemistry
- Quality management

Specification:

Measuring ranges:

pH:	-2.000 ... 16.000 pH
Redox / mV:	-2000.0 ... 2000.0 mV (for hydrogen system DIN38404: -1792 ... +2207 mV _H)
Temperature:	-5.0 ... +150.0 °C 23.0 ... 302.0 °F
rH:	0.0 ... 70.0 rH



Accuracy:

pH:	±0.005 pH
Redox / mV:	±0.05 % FS (mV or mV _H)
Temperature:	±0.2 °C (in the range of -5,0 ... 100,0 °C)
rH:	±0,1 rH

Connections:

pH, Redox:	BNC-female connector, compatible to standard BNC-plugs and waterproof BNC-plugs, additional banana-jack (4 mm) for separate reference electrode, input resistance: 10 ¹² Ohm
Temperature:	2 banana-jacks (4 mm) for temperature probes (Pt1000 or NTC 10K)
Interface / Supply:	4-pole bayonet connector for serial interface and supply (with accessory USB 5100)

Working conditions: -25 ... 50 °C; 0 ... 95 % RH (non condensing)

Display: two 4½ - digit seven-segment display (15 mm and 12 mm)

pH-Calibration:

Automatically: 1-, 2- or 3- point calibration, GREISINGER-Standard-Buffer or Puffer to DIN19266 (A,C,D,F,G)

Manually: 1-, 2- or 3- point calibration

Housing: impact resistant ABS housing with pop-up clip

Protection class: IP65 / IP67

Dimensions: 160 x 86 x 37 mm (H x W x D) incl. protection cover

Weight: 250 g incl. battery and protection cover

Power supply: 2 x AAA-battery (incl. in scope of supply)
power consumption: <1.0 mA

Battery life time: 1000 hours

Functions:

Min / Max Value Memory: highest and lowest measured value is saved

Hold: displayed value gets frozen by keypress

Auto-Hold: automatic freezing of a constant measuring value

Auto Power Off: device is automatically switched off after a selected period if unused (0 to 120 min, or deactivated)

Additional Display for pH-Electrode and Battery: Bar graph display

Low Battery Display „BAT“

Background illumination: duration adjustable (off, 5 s ... 2 min)

Automatic Temperature Compensation:

There is an automatic temperature compensation (ATC) in the range of 0-105 °C for operation mode "pH" and if a temperature probe is connected. Without connected probe the temperature can be input manually.

pH-Calibration:

The used buffer is detected automatically. The temperature dependency of the buffer is automatically compensated.

Permissible electrodes' data: Asymmetry: ±55 mV / Slope: 45 ... 62 mV/pH

The condition of pH-Electrode is checked at each calibration.

1-, 2- or 3- point calibration with characteristics bend for GREISINGER-Standard-Buffer, buffer to DIN 19266 or manual buffer input

Redox-Measurement (ORP): 2 choices:

"mV" Standard-redox- or mV- measurement

„mV_H“ Conversion to hydrogen systems according to DIN38404 Teil 6

rH-Measurement: The rH-value is calculated from a measured Redox-value and a manually input pH-value.

	GMH 5530	GMH 5550
Adjustable calibration intervals (GLP)	x	x
Calibration memory (GLP)	-	x (last 16 Calibrations)
Real-time clock	-	x
Analog output	-	0 - 1 V, freely adjustable, connection with 4-pole bayonet connector, Resolution 13 bit, accuracy 0.05 % at nominal temperature
Data logger	-	With measuring point input Recording interval: 1 s ... 1 h Recording period: 416 days at interval 1 h Value memory: cyclic: 10000 data sets; singular: 1000 data sets
Min-/max-alarm	-	Permanent monitoring of alarm boundaries (pH / mV and temperature) 3 alarm conditions - off: Alarm function inactive - on: Alarm report via display, integrated buzzer and interface - no Sound: Alarm report only via display and interface