

**Product Information**

**Measuring device for pH / Redox measurement GMH 5530 / 5550**



- Made in Germany
- Waterproof and impact-resistant
- GLP functions (Good Laboratory Practice)
- Large double display with backlighting
- High resolution (0.001 pH / 0.1 mV)
- including test report

**Features**

pH monitoring in aquaculture and aquariums, in drinking water supply and sewage treatment plants. Numerous agricultural applications (e.g. soil studies). Also suitable for quality assurance and control in industrial applications and in food production.

Also suitable for medical, pharmaceutical and industrial laboratories.

Designed for harsh environments: Impact-resistant and protected from water, the device even floats.

**Technical data**

**Measuring ranges**

**pH** -2.000..16.000 pH (variable resolution)  
**Redox / mV** -1999.9..1999.9 mV (variable resolution)  
 (Based on hydrogen system DIN38404:  
 -1792..+2207 mVH)

**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 mVH)  
**Temperature** ±0.2 °C (in range of -5.0..100.0 °C)  
**rH** ±0.1 rH

**Connections**

**pH, Redox** BNC socket, suitable for standard BNC plug and waterproof BNC plug with banana socket (4 mm) for separate reference electrode, input resistance: 10<sup>12</sup> Ω

**Temperature** 2 banana sockets (4 mm) for temperature sensor (Pt1000 or NTC 10K)

**Interface / power supply** 4-pole bayonet connection for serial interface and supply (with USB 5100 accessory)

<b>Operating conditions</b>	-25..+50 °C; 0..95 % r.h. (non-condensing)
<b>Display</b>	two 4 ½ digit 7-segment displays (15 mm and 12 mm)
<b>pH calibration</b>	
<b>Automatic</b>	1, 2 or 3-point calibration, GREISINGER standard buffer or buffer according to DIN19266 (A, C, D, F, G)
<b>Manually</b>	1, 2 or 3-point calibration
<b>Current supply</b>	2 x AAA batteries, power consumption: <1.0 mA
<b>Battery life</b>	1000 hours
<b>Housing</b>	Impact-resistant ABS, with stand/suspension clip
<b>Protection rating</b>	IP65 / IP67
<b>Dimensions</b>	160 x 86 x 37 mm (H x W x D) incl. protective cover
<b>Weight</b>	250 g incl. battery and protective cover

**Additional functions**

**Additional display for pH electrode and battery:** Bar graph  
 Backlighting: Adjustable lighting duration (off, 5 s..2 min.)

**Automatic temperature compensation:** With temperature sensor connected and operating mode 'pH', automatic temperature compensation (ATC) takes place in the range of 0..150 °C. Manual entry is possible without a temperature sensor.

**pH calibration:** optionally 1, 2 or 3-point calibration with characteristic curves for GREISINGER standard buffer (GPH or PHL) and buffer according to DIN19266 or with manual buffer input. With automatic buffer recognition, the temperature dependency of the buffer is compensated automatically.  
 Permissible electrode data: Asymmetry: ±55 mV / gradient: 45..62 mV / pH, determination of the status of the pH electrode during calibration.

**Redox measurement (ORP):** 2 options:

"mV" standard Redox or mV measurement  
 "mVH" conversion to hydrogen system according to DIN38404, part 6

**rH measurement:** The rH value is calculated by means of a redox measurement and manual input of the pH value.

**Calibration interval:** A warning for a necessary recalibration is shown after a selectable time interval after to a variable time period (1..365 days or deactivated).

**Calibration memory (only GMH 5550):** Last 16 calibrations

**Analogue output (only GMH 5550):** 0..1 V, freely scalable, connection via 4-pole bayonet jack, 13-bit resolution, 0.05 % accuracy at nominal temperature

**Data logger (only GMH 5550):** with measuring point input, recording interval: 1 s..1 h, recording duration: 416 days with 1 h interval, measurement value memory: Cyclical: 10,000 data records, individual: 1000 data records

**Scope of delivery**

- Device, battery, test report, operating manual

**Product Information**

**Accessories**

**GF 1T-T3-B-BS**

Pt1000 handheld sensor, Pt1000 Class B, with 2 banana plugs

**GE 105-BNC**

Redox, standard electrode, BNC plug

**GE 117-BNC**

pH electrode with integrated Pt1000 temperature sensor

**GE 125-BNC**

waterproof pH electrode, incl. Pt 1000 temperature sensor with waterproof BNC plug and banana plug

**USB 5100**

galvanically isolated interface converter with device power supply via USB

**GNG 5 / 5000**

Plug-type mains adapter 5 V DC, suitable for GMH 5000 series

**GKK 5001**

with cut-outs for 1 device of the GMH 5xxx-/7500 series and accessories for water analysis (395 x 295 x 106 mm)

**GKK 2019**

Device case 2 layers, for 1x GMH 5000 and 3 ready to use buffer solutions (450 x 360 x 140 mm)

**EBS 20M**

Software for transmission, recording and archiving of measurement data

**PHL 4**

ready-to-use buffer solution (pH 4.01 / 25 °C), 250 ml

**PHL 7**

ready-to-use buffer solution (pH 7.00 / 25 °C), 250 ml

**PHL 10**

ready-to-use buffer solution (pH 10.01 / 25 °C), 250 ml

**KCL 3 M**

3 mol KCl electrolyte for refilling or storage (fill into the protective cap) of electrodes with 3 mol KCl electrolyte, 100 ml spray bottle

**CaCl**

1000 ml, solution for measuring the base pH value

**GRL 100**

Pepsin cleaning solution, 100 ml

**GRP 100**

Redox testing solution (220 mV at 25 °C), 100 ml

**GAK 1400**

Working and calibration set consisting of:  
 5x each of GPH 4.0, GPH 7.0 and GPH 10.0 buffer capsules, 3 x 100 ml plastic bottle GPF 100, 1 x 3 mol KCL electrolyte KCL3M and 1 x pepsin cleaning solution GRL 100. If no buffer solutions are available, the GAK 1400 is recommended as standard equipment.

**Supplemental set for the device**

**GMH 55 ES set**

Supplemental set consisting of pH electrode (GE 100 BNC), temperature sensor (GF 1T-T3-B-BS), case and working and calibration set (GAK 1400)

- **Additional accessories on request or in our catalogue**

**Ordering code**

1.  
**GMH 5530** -

1. Option	
	Device alone (without electrode)
G135L02	Device complete with pH electrode GE 135 (PT1000) cable 2m
Set135L02	Device, GE135-L02, PHL 4, PHL 7, PHL 10, KCL3M, GRL100, software, USB 5100, GKK 2021

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**GMH 5550** -

1. Option	
	Device alone (without electrode)
G135L02	Device complete with pH electrode GE 135 (PT1000) cable 2m
Set135L02	Device, GE135-L02, PHL 4, PHL 7, PHL 10, KCL3M, GRL100, software, USB 5100, GKK 2021