

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: $10^{12} \Omega$

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)

Operating conditions -25..+50 °C; 0..95 % r.h. (non-condensing)

Display two 4 ½ digit 7-segment displays (15 mm and 12 mm)

pH calibration

Automatic 1, 2 or 3-point calibration, GREISINGER standard buffer or buffer according to DIN19266 (A, C, D, F, G)

Manually 1, 2 or 3-point calibration

Current supply 2 x AAA batteries, power consumption: <1.0 mA

Battery life 1000 hours

Housing Impact-resistant ABS, with stand/suspension clip

Protection rating IP65 / IP67

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

Weight 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

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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

1.
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