

**Product Information**

**GMH 3511 / 3531 / 3551**

**pH/Redox Temperature  
Measuring device GMH  
3511 / 3531 / 3551**



- Made in Germany
- Temperature compensation
- Automatic buffer recognition
- Evaluation of electrode quality
- New: Analogue output in all variants 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.

**Technical data**

Measuring range	
Temperature	-5.0..+150.0 °C or 23.0 ... +302.0 °F
pH	0.00..14.00 pH
Redox (ORP)	-1999..+2000 mV Based on hydrogen system: -1792..+2207 mVH (DIN 38404)
rH	0.0..70.0 rH (not GMH 3511)
Accuracy (device) ±1 digit at nominal temperature = 25 °C	
Temperature	±0.2 °C (at -5..+100 °C)
pH	±0.01 pH
Redox (ORP)	±0.1 % FS (mV or mVH)
rH	±0.1 rH (not GMH 3511)
Sensor connections	
Temperature	2 x 4 mm, banana for Pt 1000, 2-wire
pH, Redox	BNC socket
Display	2 four-digit LCDs, (12.4 mm and 7 mm high)
Working temperature	0..+50 °C
Storage temperature	-20..+70 °C

<b>Interface</b>	Serial interface with direct connection to a PC via galvanically isolated interface converter GRS 3100, GRS 3105 or USB 3100 N (accessory).
<b>Current supply</b>	9 V battery, mains adapter socket for external 10.5..12 V DC voltage supply (suitable mains adapter: GNG 10/3000)
<b>Battery life</b>	approx. 300 h
<b>Housing</b>	Made of impact-resistant ABS, foil keypad, clear viewing pane, integrated stand/suspension clip
<b>Dimensions</b>	142 x 71 x 26 mm (H x W x D)
<b>Weight</b>	approx. 170 g

**Additional functions**

**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 temperature input is possible without a temperature sensor.

**pH calibration:** Automatic buffer recognition, temperature compensation and a sensor evaluation takes place depending on the calibration (from 10..100 %).

**GMH 3511:** 2-point calibration with Greisinger buffer capsules (GPH 4, 7, 10)

**GMH 3531, GMH 3551:** Optionally 1, 2 or 3-point calibration with characteristic curve break for Greisinger standard buffer, buffer according to DIN19266 (A, C, D, F, G) or manual buffer input.

**Calibration interval (not GMH 3511):** Recalibration is initiated after to a variable time period (1...365 days or deactivated).

**GMH 3551:** additional calibration history

**Redox measurement (ORP):** 2 selection options are available: "mV": Standard Redox or mV measurement "mVH": A temperature-compensated conversion to a hydrogen system according to DIN38404, part 6, Table 1 takes place based on the standard redox electrode (e.g. GE 105 with Ag / AgCl and 3 mol KCl system).

**rH measurement (not GMH 3511):** The rH value is calculated by means of a redox measurement and manual input of the pH value. The pH value can also be adopted from the previous pH measurement.

**Analogue output:** 0..1 V, permanently adjusted to 0..1 V  $\Delta$  = 0 ... 14 pH or -2000..+2000 mV, connection via 3-pole jack socket  $\varnothing$  3.5 mm, 13-bit resolution, 0.05 % accuracy at nominal temperature

**GMH 3551:** Freely scalable analogue output

**Data logger (only GMH 3551):** Cyclical: 10,000 data records, individual value: 1,000 data records (with measuring point entry, 40 adjustable measuring point texts or measuring point numbers)

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**Electrode**



Low-maintenance gel electrode GE 114 WD  
(waterproof BNC connection)



GF 1T-T3-B-BS temperature sensor  
(waterproof BNC connection)

**Scope of delivery**

- Device, battery, test report, operating manual

**Accessories**

**GMH 55 ES**, art. no. 603066  
Supplemental set: GE 100-BNC pH electrode, GF 1T-T3-B-BS temperature sensor (Pt1000), GKK 3500 case, GAK 1400

**GF 1T-T3-B-BS**, art. no. 611088  
Pt1000 handheld sensor, Pt1000 Class B, with 2 banana plugs

**GE 100-BNC**, art. no. 600704  
Standard electrode, BNC plug

**GE 117-BNC**, art. no. 600730  
pH electrode with integrated Pt1000 temperature sensor

**GE 125-BNC**, art. no. 600732  
waterproof pH electrode, incl. Pt 1000 temperature sensor with waterproof BNC plug and banana plug

**GNG 10/3000**, art. no. 600273  
Plug-in mains adapter

**GKK 3001**, art. no. 611605  
with cut-outs for 1 device of the GMH 3xxx series and accessories for water analysis (395 x 295 x 106 mm)

**USB 3100**, art. no. 601092  
Interface converter to USB, galvanically isolated

**EBS 20M**, art. no. 601158  
Software for transmission, recording and archiving of measurement data

**Case set**

**GMH 3511-Set**, art. no. 605021  
Complete set for pH/temperature measurement)

- Additional accessories on request or in our catalogue

**Ordering code**

GMH 3511 -  1.

1. Option	
	Device alone (without pH electrode)
G125	Device complete with pH electrode GE 125 (PT1000)
Set	Device complete with pH electrode GE 114, GF1T-T3-B-BS, 5x GPH4, 5x GPH7, 2x GPF100

GMH 3531 -  1.

1. Option	
	Device alone (without pH electrode)
G125	Device complete with pH electrode GE 125 (PT1000)
Set 100	Device complete with GE 100, GF1T-T3-B-BS, 5x GPH4, 5x GPH7, 2x GPF100, GKK 3001
Set 125	Device complete with GE 125, 5x GPH4, 5x GPH7, 2x GPF100, GKK 3001

GMH 3551 -  1.

1. Option	
	Device alone (without pH electrode)
G125	Device complete with pH electrode GE 125 (PT1000)
Set 100	Device complete with GE 100, GF1T-T3-B-BS, 5x GPH4, 5x GPH7, 2x GPF100, GKK 3001
Set 125	Device complete with GE 125, 5x GPH4, 5x GPH7, 2x GPF100, GKK 3001