WATERPROOF METER FOR MEASURING PH/REDOX

WATER- PROOF DEVICE AND PLUG CONNECTIONS

HIGHLIGHTS:

○ GLP functions (good laboratory practice)

○ large backlit double display

○ high resolution (0.001 pH / 0.1 mV)

○ including test report

ADDITIONAL FUNCTIONS OF GMH 5550:

ALARM   LOGG

GMH 5530
Item No. 600041
Waterproof pH / ORP / temperature meter,
device only (without electrode)

GMH 5550
Item No. 600043
Waterproof pH / ORP / temperature meter with logger,
device only (without electrode)

APPLICATION:

• Measurements in water and aquaristics,
  fish farming
• Drinking water, process monitoring, soil measurements
• Food production and monitoring
• Laboratory: medicine, pharmacy, chemistry
• Quality assurance

TECHNICAL SPECIFICATIONS:

Measuring ranges

pH:	-2,000..16,000 pH (resolution selectable)
Redox / mV:	-2000.0..2000.0 mV (resolution can be selected) (based on 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 from -5.0 to 100.0 °C)
rH:	± 0.1 rH

connections

pH, redox:	BNC socket, suitable for standard BNC plugs and waterproof BNC plugs, plus banana socket (4 mm) for separate reference electrode, input resistance: 10^{12} ohms
Temperature:	2 banana sockets (4 mm) for temperature sensors (Pt1000 or NTC 10K)
Interface / supply:	4-pole bayonet connection for serial interface and supply (with USB 5100 accessory)
working conditions	-25 .. + 50 °C; 0..95 % RH (not condensing)
Display:	two 4 ½ digit 7-segment displays (15 mm and 12 mm)

PH CALIBRATION

Automatically:	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
Power supply:	2 x AAA batteries, power consumption: <1.0 mA
Battery life:	1000 hours
Housing:	impact-resistant ABS, with stand-up / hanging bracket
Protection class:	IP65 / IP67
Dimensions:	160 x 86 x 37 mm (H x W x D) including protective cover
Weight:	250 g including battery and protective cover
Scope of delivery:	Device, battery, test report, operating instructions

ADDITIONAL FUNCTIONS:

Status display for pH electrode and battery:
Bar graph

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

Automatic temperature compensation:
If the temperature sensor is plugged in and the "pH" operating mode is active, there is automatic temperature compensation (ATC) in the range 0..150 °C. Manual entry is possible without a temperature sensor.

pH calibration:
either 1-, 2- or 3-point calibration with characteristic curves for GREISINGER standard buffers (GPH or PHL) and buffers according to DIN19266 or with manual buffer entry. With automatic buffer recognition, the temperature dependency of the buffers is automatically compensated.

Permissible electrode data: Asymmetry: ± 55 mV / slope: 45..62 mV / pH Determination of the condition of the pH electrode during calibration.

Redox measurement (ORP): 2 options:
"mV"   Standard redox or mV measurement
"mV$_H$"   Conversion to hydrogen system according to DIN38404 part 6

rH measurement:
The rH value is calculated using an ORP measurement and manual entry of the pH value.

Calibration interval: after a selectable period (1..365 days or inactive) a recalibration is requested.

Calibration memory (only GMH 5550): last 16 calibrations

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

Data logger (GMH 5550 only):
with measuring point input, recording interval: 1 s..1 h, recording duration: 416 days at an interval of 1 h, measured value storage: cyclical: 10,000 data records, individual: 1,000 data records

ACCESSORIES OR SPARE PARTS:

EBS 20M
Item No. 601158
Measurement data acquisition software for EASYBus & GMH

GSOFT 3050
Item No. 601336
Windows software for GMH 3000 and GMH 5000 with logger

USB 5100
Item No. 601095
Interface converter GMH 5xxx <=> PC, Galvanic isolation

GNG 5/5000
Item No. 602287
Plug in power supply for GMH 5XXX series

GKK 5001
Item No. 611606
Case for GMH 5000 / G7500 series water analysis / universal, 395 x 295 x 106 mm (W x H x D)

DEVICE INCLUDING ELECTRODE

GMH 5530-G125
Item No. 475746
Waterproof pH / ORP / temperature meter, device complete with pH electrode GE 125 (PT1000)

GMH 5550-G125
Item No. 475747
Waterproof pH / ORP / temperature meter with logger, device complete with pH electrode GE 125 (PT1000)

PH MEASURING SET

GMH 5530-SET
Item No. 611614
Waterproof pH / ORP / temperature meter
Device, GE125-L02, PHL 4, PHL 7, PHL 10, KCL3M, GRL100, GKK 2021

GMH 5550-SET
Item No. 611254
Waterproof pH / ORP / temperature meter with logger:
Device, GE125-L02, PHL 4, PHL 7, PHL 10, KCL3M, GRL100, software, USB 5100, GKK 2021

GENERAL:
With our ready-to-use pHmeasuring set "SET" you not only have everything you need for your work in a practical case – with the set you save 23 % compared to the individual components

APPLICATIONS:
No matter what industry you are in, our comprehensive SET-GMH 5550 never lets you down and is always tidy thanks to the practical case

TECHNICAL SPECIFICATIONS:

Measuring ranges

pH:	-2,000..16,000 pH (resolution selectable)
Redox / mV:	-2000.0..2000.0 mV (resolution can be selected) (based on hydrogen system DIN38404: -1792 .. + 2207 mV$_H$)
Temperature:	-5.0 .. + 150.0 °C; 23.0..302.0 °F
rH:	0.0..70.0 rH
Dimensions:	450 x 360 x 140 mm (case)
Weight:	approx. 5700 g
Scope of delivery:	Device with silicone protective cover, pH electrode, 3 x buffer solution, KCl electrolyte, pepsin cleaning solution, case, battery, test report, operating instructions **SET-GMH 5550 only:** software, interface converter

ACCESSORIES OR SPARE PARTS:

GMH 5550
Item No. 600043
Waterproof pH / ORP / temperature meter with logger, without electrode

GSOFT 3050
Item No. 601336
Windows software for portable instruments with logger function

USB 5100
Item No. 601095
Interface converter GMH 5xxx <=> PC, Galvanic isolation

GKK 2021
Item No. 414760
Device case 2 levels, for 1x GMH 5500/7500 and 3 PHL solutions, 450 x 360 x 140 mm (W x H x D)

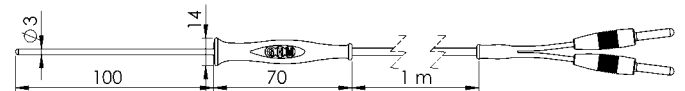# PH / ORP ACCESSORIES

Supplementary set GMH 55 ES

ACCESSORIES OR SPARE PARTS:

GMH 55 ES
Item No. 603066
pH add-on set for GMH 35xx and GMH 55xx
out pH electrode GE 100 BNC, temperature probe GF1T-T3-B-BS, case GKK3500, calibration set GAK1400

GE 125-BNC
Item No. 600731
waterproof pH electrode with Pt 1000, temperature probe with waterproof BNC plug and banana plug

GF 1T-T3-B-BS
Item No. 611088
compact Pt1000 hand probe with silicone handle
-70 .. + 250 °C, Pt1000 class B
Immersion tip Ø 3 mm made of V4A tube, black silicone handle up to +250 °C, 1 m, silicone cable up to +230 °C continuously / +250 °C 2 h, 2 x Ø 4 mm banana plugs
Response time T$_{90}$: Water 0.4 m / s <2 s, air 2 m / s approx. 40 s

GE 100-BNC
Item No. 600704
Universal pH electrode, BNC connector

GR 105-BNC
Item No. 607798
Redox electrode, BNC connector

PHL 4
Item No. 601369
Ready-to-use pH buffer solution (pH 4.01 / 25 °C), 250 ml

PHL 7
Item No. 601371
Ready-to-use pH buffer solution (pH 7.00 / 25 °C), 250 ml

PHL 10
Item No. 601373
Ready-to-use pH buffer solution (pH 10.01 / 25 °C), 250 ml

KCL 3 M
Item No. 602477
3 mol KCL electrolyte for refilling or storing (fill into the protective cap) electrodes with 3 mol KCl electrolyte, 100 ml spray bottle

CaCl
Item No. 603254
Electrolyte for soil pH measurement, 1000 ml

GRL 100
Item No. 601422
HCL / Pepsin cleaning solution, 100 ml

GRP 100
Item No. 601424
Redox test solution 220 mV, 100 ml

GAK 1400
Item No. 603523
pH work and calibration set
Scope of delivery:
5 buffer capsules each GPH 4.0, GPH 7.0 and GPH 10.0, 3xGPF100, 1x KCL3M, 1X GRL 100
If no buffer solutions are available, the GAK 1400 is a recommended standard equipment.