

Waterproof handheld measuring device for pH / Redox

Features

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

Field of application

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



GMH 5530 without electrode

GMH 5550 with analog output and data logger, without electrode

Technical data

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)
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
Protection class:	IP67 (Housing and connections)
Dimensions / Weight:	160 x 86 x 37 mm (H x W x D) incl. protection cover / 250 g incl. battery and protection cover
Housing:	impact resistant ABS housing with pop-up clip
Power supply:	2 x AAA-battery (incl. in scope of supply) power consumption: <1.0 mA
Battery life time:	1000 hours



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Functions	GMH 5530	GMH 5550
Min / max value memory	x	x
Hold / auto-hold	x	x
Auto power off	x	x
Low battery display "BAT"	x	x
Display of condition of pH-electrode	x	x
Background lightning	x	x
Period selectable (on/off or 5 s ... 2 min)		
Automatic temperature compensation	x	x
Adjustable calibration intervals (GLP)	x	x
Calibration memory (GLP)	-	x
Analog output	-	0 - 1 V, freely adjustable, connection with 4-pole bayonet connector, Resolution 13 bit, accuracy 0.05% at nominal temp.
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
Real-time clock	-	x
Min-/max-alarm	-	Permanent monitoring of alarm boundaries 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



General function description

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

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"

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

"mVH" 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.

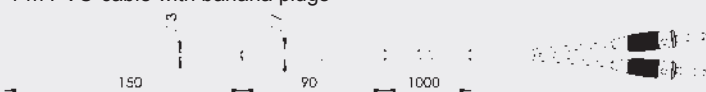
Accessories

GE 125 waterproof pH-electrode with integrated Pt1000 temperature sensor incl. waterproof BNC-plug (p.r.t. page 37)

GE 117 (p.r.t. page 37)
pH-electrode with integrated Pt1000 temperature sensor

GTF 55 B

Pt1000 temperature immersion sensor for liquids
1 m PVC-cable with banana plugs



GE 100 BNC pH-electrode (p.r.t. page 37)

GE 105 BNC Redox-electrode (p.r.t. page 37)

GAK 1400 Working and calibration set (p.r.t. page 37)

PHL 4 pH buffer (pH 4,01 / 25 °C) 250 ml

PHL 7 pH buffer (pH 7,00 / 25 °C) 250 ml

PHL 10 pH buffer (pH 10,01 / 25 °C) 250 ml



GMH 55 ES

Supplementary set, including pH-electrode (GE 100 BNC), temperature probe (GTF 55 B), case (GKK 3500), working and calibration set (GAK 1400)

EBS 20M Software for long-term monitoring (p.r.t. page 62)

GSOFT 3050 (p.r.t. page 62)

Software for operation of logger devices

USB 5100

Electrically isolated interface converter with supply of device via USB