

WATER-PROOF HANDHELD DEVICE FOR CONDUCTIVITY MEASUREMENT



WATER-PROOF DEVICE AND PLUG CONNECTIONS

GMH 5430

Art. no. 600035

Water-proof handheld device without electrode

GMH 5450

Art. no. 600037

Water-proof handheld device with analog output and data logger, without electrode

Application:

Mobile use for:

- industry and craft
- measurements of waters and aquaristics, fish farming
- drinking water monitoring, process control, soil measurements
- food production and control
- quality management

Additional applications at laboratory:

- medicine, pharmacy, chemistry

Specifications:

Measuring range

Number of measuring ranges: 5

Smallest range: 0.000 ... 5.000 $\mu\text{S}/\text{cm}$ * or 0.0 ... 500.0 $\mu\text{S}/\text{cm}$ **Biggest range: 0 ... 5000 $\mu\text{S}/\text{cm}$ * or 0 ... 1000 mS/cm **Resistivity: 0.005 ... 500.0 $\text{k}\Omega\text{m}$ * (depends on cell constant)TDS: 0 ... 5000 mg/l (depends on cell constant)

Salinity: 0.0 ... 70.0 (g salt / kg water)

Temperature: -5.0 ... +100.0 $^{\circ}\text{C}$, Pt1000 or NTC 10 kSupported cell constants: 4.000 ... 15.000 / cm - 0.4000 ... 1.5000 / cm - 0.04000 ... 0.15000 / cm - 0.004000 ... 0.015000 / cm Accuracy (at nominal temperature = 25 $^{\circ}\text{C}$)Conductivity: $\pm 0.5\%$ of m.v. $\pm 0.1\%$ FS (depends on electrode)Temperature: $\pm 0.2\text{ K}$

Connection

Conductivity, temperature: 1 x 7-pole bayonet connector for connection of different measuring cells, supported temperature sensors: Pt1000 or NTC (10 k)

Interface / ext. supply: 4-pole bayonet connector for serial interface and supply (with accessory: USB adapter USB 5100)

Analog output: (only GMH 5450) 0 ... 1 V, freely adjustable, connection with 4-pole bayonet connector, resolution 13 bit, accuracy 0.05 % at nominal temperature

Data logger: (GMH 5450 only) cyclic: 10.000 data sets, adjustable cycle time: 1 s ... 60 min manual: 1000 data sets (with measuring point input, 40 adjustable measuring point texts or measuring point numbers)

Display: 4 1/2 digit 7-segment, illuminated (white)

Operating conditions: Device: -25 ... +50 $^{\circ}\text{C}$, 0 ... 95 % RH (non-condensing)Storage temperature: -25 ... +70 $^{\circ}\text{C}$

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

Power supply: 2 x AAA battery (included), power consumption 6.25 mA

Battery life: approx. 160 h (without background illumination)

Protection class: IP65 / IP67

HIGHLIGHTS:

- Measurement of conductivity, resistance, salinity, TDS
- Large double display with background illumination
- Automatic cell correction with reference solutions
- Incl. calibration protocol

ADDITIONAL FUNCTIONS GMH 5450:



Housing:	Impact-resistant ABS plastic housing, integrated pop-up clip
Dimensions:	160 x 86 x 37 mm (H x W x D) incl. silicone protection cover
Weight:	approx. 250 g incl. battery and protection cover
Scope of supply:	Device, K 50 BL, battery, calibration protocol, manual depends on cell constant of used electrode
	* cell constant 0.01 / cm ** cell constant 0.1 ... 1.2 / cm (standard)

Additional functions:

Cell correction

Manually or automatically with reference solution

Automatic temperature compensation

As conductivity depends strongly on temperature, each conductivity value is only valid at the corresponding temperature. Therefore the device supports temperature compensation, i.e. referring the conductivity to a reference temperature (selectable: 20 $^{\circ}\text{C}$ or 25 $^{\circ}\text{C}$).

Supported types of compensation:

nLF: Non-linear function of natural waters acc. to DIN EN 27888 (ISO 7888)
(Reference temperature 25 $^{\circ}\text{C}$)

Lin: adjustable linear compensation

off: no compensation

Salinity measurement

Salinity means the sum of the concentrations of all dissolved salts in water. The unit is g / kg.
(equals PSU = Practical Salinity Unit).

TDS measurement (total dissolved solids)

TDS means the mass concentration of dissolved media in a liquid. The unit is mg / l.

GLP (Good Laboratory Practice)

adjustable calibration intervals

GMH 5450: Calibration memory: latest 16 calibrations

Accessories and spare parts:

GKL 10... conductivity control solution

see next page

EBS 20M

Art. no. 601158

Software for long-term monitoring (p.r.t. page 108)

GSOFT 3050

Art. no. 601336

Software for operation of logger devices (p.r.t. page 109)

USB 5100

Art. no. 601095

Electrically isolated interface converter, supplied via USB

GNG 5 / 5000

Art. no. 602287

Plug-in power supply 5 V DC, suitable for devices of the series GMH 5000 (p.r.t. page 113)

GKK 5001

Art. no. 611606

with cut-outs for 1 device of the GMH 5xxx-/7500 series and accessories for water analysis (395 x 295 x 106 mm), p.r.t. page 111