

# WATER-PROOF HANDHELD DEVICE FOR CONDUCTIVITY MEASUREMENT



STANDARD-FUNKTIONEN:



## HIGHLIGHTS:

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

## ADDITIONAL FUNCTIONS GMH 5450:



**WATER-PROOF  
DEVICE AND PLUG CONNECTIONS**

## GMH 5430

Product-ID: 600035

Water-proof handheld device without electrode

## GMH 5450

Product-ID: 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 meas. 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  $\text{mS}/\text{cm}$  \*\*

**Resistivity:** 0.005 ... 500.0  $\text{k}\Omega \cdot \text{cm}$  (depends on cell constant)

**TDS:** 0 ... 5000  $\text{mg}/\text{l}$  (depends on cell constant)

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

**Temperature:** -5.0 ... +100.0 °C, Pt1000 or NTC (10 k)

**Supported 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 °C):

**Conductivity:**  $\pm 0.5$  % of m.v.  $\pm 0.1$  % FS (depends on electrode)

**Temperature:**  $\pm 0.2$  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

**Datenlogger (nur GMH 5450):** Zyklisch: 10.000 Datensätze, Zyklus wählbar: 1 s ... 60 min Einzel: 1000 Datensätze (mit Messstelleneingabe, 40 einstellbare Messstellentexte oder Messstellenummern)

**Display:** 4 ½ digit 7-segment, illuminated (white)

**Operating conditions:** -25 ... +50 °C, 0 ... 95 % RH (non-condensing)

**Storage temperature:** -25 ... +70 °C

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

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

|                           |  |
|---------------------------|--|
| <b>Battery life time:</b> | approx. 160 h (without background illumination)              |
| <b>Protection class:</b>  | IP65 / IP67  |
| <b>Housing:</b>           | Impact-resistant ABS plastic housing, integrated pop-up clip |
| <b>Dimensions:</b>        | 160 x 86 x 37 mm (H x W x D) incl. silicone protection cover |
| <b>Weight:</b>            | approx. 250 g incl. battery and protection cover             |
| <b>Scope of supply:</b>   | Device, K 50 BL, battery, 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 °C or 25 °C).

#### Supported types of compensation:

- nLF: Non-linear function of natural waters acc. to DIN EN 27888 (ISO 7888) (Reference temperature 25 °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:

#### EBS 20M

Product-ID: 601158

Software for long-term monitoring (p.r.t. page 76)

#### GSOFT 3050

Product-ID: 601336

Software for operation of logger devices (p.r.t. page 77)

#### USB 5100

Product-ID: 601095

Electrically isolated interface converter, supplied via USB

#### GNG 5 / 5000

Product-ID: 602287

Plug-in power supply 5 V DC, suitable for devices of the series GMH 5000 (p.r.t. page 74)

#### GKK 3500

Product-ID: 601052

Device case (394 x 294 x 106 mm) with eggcrate foam and cut-outs for 1 device (p.r.t. page 72)