

CONDUCTIVITY MEASURING DEVICE



STANDARD-FUNCTIONS:



DISPLAY OF RESISTIVITY,
SALINITY OR TDSTDS

CONFORM TO THE REGULATIONS
OF THE DRINKING WATER ORDINANCE
(TRINKWV 2001) AND DIN EN 27888

ADDITIONAL FUNCTIONS GMH 3451:



GMH 3431

Product-ID: 601917

Conductivity measuring device incl. 2-pole measuring cell

GMH 3451

Product-ID: 601919

Conductivity measuring device incl. 4-pole measuring cell, with data logger

Specifications:

Measuring range:

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|----------------------|---|
| Conductivity: | 0.0 ... 200.0 µS/cm 0 ... 2000 µS/cm 0.00 ... 20.00 mS/cm 0.0 ... 200.0 mS/cm 0 ... 400 mS/cm (only GMH 3451) manually selectable or AutoRange |
|----------------------|---|

Temperature: -5.0 ... +100.0 °C

Resistivity: 0.005 ... 100.0 kOhm * cm

Salinity: 0.0 ... 70.0 g/kg water

TDS: 0 ... 1999 mg/l

Accuracy: (±1 digit) (at nominal temperature = 25 °C)

Conductivity: ±0.5% of m.v ±0.3 % FS or ±2 µS/cm

Temperature: ±0.2% of m.v ±0.3 K

Cell correction: adjustable 0.800 ... 1.200 cm⁻¹, manually or automatically with selectable reference solution

Temperature compensation: off or automatically (by temperature sensor integrated to electrode)

Type of compensation:
-nLF: Non-linear function of natural waters acc. to DIN EN 27888 (ISO 7888) (Reference temperature selectable: 20 °C or 25 °C)
-Lin: linear compensation from 0.3 ... 3.0 %/K (Reference temperature selectable: 20 °C or 25 °C)
-off: no compensation.

Display: two 4-digit LCD displays (12.4 and 7 mm high) for current conductivity (resistivity, salinity, TDS) and temperature, or for min-, max- value, hold function, etc. and additional indicator arrows.

Measuring cell: Conductivity measuring cell with integrated temperature sensor in shaft. Electrode material: graphite. Shaft material: PPE, PS (GMH 3431), Epoxide (GMH 3451). The graphite electrodes are the optimum solution for sewage and can be cleaned easily.

Warranty for sensor element: 12 months

Working conditions: device: -25 ... +50 °C, 0 ... 95 % RH; measuring cell: -5 ... +80 °C (permanent), up to +100 °C (short-term)

Relative humidity: 0 ... +95 % RH (non condensing)

Interface: serial interface; connectable to RS232 or USB interface of PCs via electrically isolated interface converter GRS 3100, GRS 3105 or USB 3100 N (accessories).

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|--------------------------------------|---|
| Operation buttons: | 6 membrane keys for ON/OFF-switch, selection of meas. range, min- and max-value memory, hold-function, etc. |
| Power supply: | 9 V-battery as well as additional PSU connector (internal pin Ø 1.9 mm) for external 10.5-12 V DC supply. (suitable power supply: GNG10/3000) |
| Power consumption: | approx. 2 mA |
| Dimensions (device): | 142 x 71 x 26 mm (L x W x D) impact-resistant ABS housing, membrane keyboard, transparent panel. Front side IP65, integrated pop-up clip for table top or suspended use. |
| Dimensions (electrode shaft): | approx. 120 mm long, Ø approx. 12 mm, 1 m of fixed connection cable between electrode and device |
| Weight: | approx. 230 g (incl. battery and measuring cell) |
| Scope of supply: | Device incl. measuring cell, battery, manual |

Additional functions:

Salinity determination:

Salinity is understood to be the sum of concentrations of all salts dissolved in water. Displayed in g/kg.

TDS-determination (total dissolved solids):

The dry residue of filtrate is understood to be the concentration of substances dissolved in a liquid. Displayed in mg/l

Additional functions GMH 3451:

Analog output:

0 - 1 V, freely scalable, connection via 3-pole jack socket Ø 3.5 mm, resolution 13 bit, accuracy 0.05 % at nominal temperature

4-pole measuring cell:

Better long-term stability at high conductivity values (>20 mS/cm) and for harsh environments, stable measuring values even in polluted media (e.g. sewage, salt water)

data logger:

cyclic 10,000 data sets, manual: 1,000 data sets (with measuring point input, 40 adjustable measuring point texts or measuring point numbers)

Option:

LTG

for organic matter (alcohol, petrol, diesel)
up to 1000 µS/cm with glass shaft, platinum electrodes, 1.35 m PUR-cable permanently connected to device

Accessories and spare parts:

GKL 100

Product-ID: 601396

100 ml conductivity test solution
(100 ml bottle with 1413 µS/cm, acc. to DIN EN 27888)

