

Conductivity measuring device



NEW

GMH 3431: COST EFFICIENT!

MEASURING RANGE FROM 0,0 µS/cm TO 200,0 mS/cm

GMH 3451 WITH DATA LOGGER AND ANALOG OUTPUT

EXTERMLY LONG-TERM STABLE 4-POLE ELECTRODE UP TO 400 mS/cm

- Display of resistivity, salinity or TDS (dry residue of filtrate)
- Conform to the regulations of the drinking water ordinance (TrinkwV 2001) and DIN EN 27888

GMH 3431

Conductivity measuring device incl. 2-pole measuring cell

GMH 3451

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

Specifications:

Measuring range:

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 GMH3451) manually selectable or AutoRange
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Temperature:

-5.0 ... +100.0 °C

Resistivity:

0.005 ... 100.0 kOhm * cm

Salinity:

0.0 ... 70.0

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:

2-pole (GMH 3431), 4-pole (GMH3451) conductivity measuring cell; temperature sensor integrated in shaft. Electrode material: graphite. 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).

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, type IEC 6F22 (included) 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. 3.5 ... 6.7 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

approx. 120 mm long, Ø approx. 12 mm, 1 m of fixed connection cable between electrode and device

Weight:

approx. 255 g (incl. battery and measuring cell)

Functions:

Min-/max- value memory: highest and lowest value and corresponding temperature are saved.

Hold function: current value and corresponding temperature are „frozen“ by keypress.

Automatic-Off function: Power-off delay: 1 ... 120 min or off.

Battery change indicator: Δ and „bAt“

AutoRange: Automatic selection of to the optimum measuring range for conductivity measurements. AutoRange mode can be deactivated by menu.

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 of GMH 3451:

Real-time clock: clock with day, month and year

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

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)

Min- / max- alarm: continuous checking of alarm boundaries for conductivity (or resistivity, TDS, SAL) and temperature

3 alarm settings:

- off: alarm inactive
- on: alarm via display, internal buzzer and interface
- no Sound: alarm only via display and interface

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)

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

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

