

CONDUCTIVITY MEASURING DEVICE



2-pole measuring cell GMH 3431



4-pole measuring cell GMH 3451

HIGHLIGHTS:

- Display of resistivity, salinity or TDS (total dissolved solids)
- Conform to the regulations of the drinking water ordinance (TrinkwV 2001) and DIN EN 27888

ADDITIONAL FUNCTIONS GMH 3451:

**GMH 3431**

Art. no. 601917

Conductivity handheld device with 2 pole measuring cell

GMH 3451

Art. no. 601919

Conductivity handheld device with measuring cell and data logger

General:

Intelligent set with 2-pole measuring cell for tap water, etc., 4-pole worry-free package also suitable for continuous measurement in high conductivity ranges (e.g. salt water)

Specifications:**Measuring range**

Conductivity:	0.0 ... 200.0 $\mu\text{S}/\text{cm}$ 0 ... 2000 $\mu\text{S}/\text{cm}$ 0.00 ... 20.00 mS/cm 0.0 ... 200.0 mS/cm 0 ... 400 mS/cm (GMH 3451 only)
	manually selectable or AutoRange

Temperature: -5.0 ... +100.0 °C

Resistivity: 0.005 ... 100.0 $\text{k}\Omega\text{m}^* \text{cm}$

Salinity: 0.0 ... 70.0 g / kg water

TDS: 0 ... 1999 mg/l

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

Conductivity: $\pm 0.5\%$ of m.v. $\pm 0.3\%$ FS or $\pm 2\ \mu\text{S}/\text{cm}$

Temperature: $\pm 0.2\%$ of m.v. $\pm 0.3\ \text{K}$

Cell correction: adjustable 0.800 ... 1.200 cm^{-1} manually or automatically with selectable reference solution

Temperature compensation: automatically or off, 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. GMH 3431: 2-pole; GMH 3451: 4-pole

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).
Pushbuttons:	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 \varnothing 1.9 mm) for external 10.5 ... 12 V DC supply. (suitable power supply: GNG10/3000)
Battery life:	approx. 150 h
Housing:	Impact-resistant ABS plastic housing, membrane keyboard, transparent panel, integrated pop-up clip
Dimensions:	Device: 142 x 71 x 26 mm (H x W x D) Dimensions (electrode shaft): approx. 120 mm long, \varnothing 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, calibration protocol, 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, \varnothing 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)

Variants:

GMH 3431-LTG

Art. no. 608399

GMH 3451-LTG

Art. no. 610028

for organic matter (alcohol, petrol, diesel) up to 1000 $\mu\text{S}/\text{cm}$ with glass shaft, platinum electrodes, 1.35 m PUR-cable permanently connected to device

Accessories and spare parts:

GKL 100

Art. no. 601396

Conductivity control solution (100 ml bottle with 1413 $\mu\text{S}/\text{cm}$, acc. to DIN EN 27888)

