

Conductivity measuring devices



- Wide measuring range from 0,0 $\mu\text{S}/\text{cm}$ to 200,0 mS/cm manually selectable or automatic range selection
- Double display for conductivity and temperature
- Display of resistance, salinity or TDS (dry residue of filtrate)
- Conform to the regulations of the drinking water ordinance (TrinkwV 2001) and DIN EN 27888
- Automatic temperature compensation, reference temp. ($20^\circ\text{C}/25^\circ\text{C}$) selectable
- Setting of different temperature coefficients
- Extremely small measuring probe (dimensions as for pH-probe)
- Min./Max. value memory, Hold function,
- Serial interface, device can be connected to bus system (up to 5 devices can be connected to one PC interface)
- Battery and d.c. operation

GMH 3430

Conductivity measuring device incl. probe

Specification:

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
manual setting or auto range

Temperature: $-5,0 \dots +100,0^\circ\text{C}$

Resistance: 0,005 ... 100,0 $\text{k}\Omega \cdot \text{cm}$

Salinity: 0,0 ... 70,0

TDS: 0 ... 1999 mg/l

Resolution: 0,1 $\mu\text{S}/\text{cm}$; 1 $\mu\text{S}/\text{cm}$; 10 $\mu\text{S}/\text{cm}$ or 0,1 mS/cm
 0,1 $^\circ\text{C}$
 0,001 $\text{k}\Omega$; 0,01 $\text{k}\Omega$ or 0,1 $\text{k}\Omega$
 0,1 (salinity)
 1 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 constant: adjustable from 0.800 ... 1.200 cm^{-1}

Temp. compensation: automatic or off

Compensation coefficient:

- nLF: non-linear function of natural water according to EN27888 (DIN38404) (reference temperature adjustable 20°C or 25°C)
- Lin: linear compensation from 0,3 ... 3,0 $\%/K$ (reference temperature adjustable 20°C or 25°C)
- off: no compensation

Display: 2 four digit LCDs (12.4mm and 7mm high) for conductivity (resistance, salinity, TDS) and temperature, min./ max values, hold function, etc. as well as additional functional arrows.

Measuring cell: 2-pol 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 temperature: 0 to $+50^\circ\text{C}$ (device)
 meas. cell: 0 to $+80^\circ\text{C}$ (permanent) 0 to $+100^\circ\text{C}$ (short time)

Relative humidity: 0 to $+95\%\text{RH}$ (non-condensing)

Min/Max-value memory: max. and min. values as well as the corresponding temperature will be memorized.

Hold function: the current meas. value will be 'frozen'.

Interface: serial interface, direct connection to RS232 or USB interface of a PC via electrically isolated interface converter GRS3100 or GRS3105 resp. USB3100 (p.r.t. accessories).

Pushbuttons: 6 membrane keys for ON/OFF-switch, selection of meas. range, min- and max-value memory, hold-function, etc.

Power supply: 9V-battery, type IEC 6F22 (included) as well as additional d.c. connector (internal pin $\varnothing 1.9\text{mm}$) for external 10.5-12V direct voltage supply. (suitable power supply: GNG10/3000)

Power-Off-function: Device will be automatically switched off if no key is pressed/no interface communication takes place for the time of the power-off delay. The power-off delay can be set to values between 1 and 120 min.; it can be completely deactivated.

Low battery warning: Δ and 'bAt'

Power consumption: approx. 3.5 mA (meas. power not incl.)

Housing dimensions (device): 142 x 71 x 26 mm (H x W x D)
 Impact-resistant ABS plastic housing, membrane keyboard, transparent panel. Front side IP65, integrated pop-up clip for table top or suspended use.

Electrode dim.: approx. 120mm long, \varnothing approx. 12mm, 1m of fixed connection cable between electrode and device.

Weight: approx. 255 g (incl. batteries and measuring cell)

Automatic temperature compensation: The conductivity is highly dependant on the temperature, i.e. it is only valid for one temperature. For better comparison the device offers the possibility to compensate the conductivity to a reference temperature (adjustable 20°C or 25°C).

Temperature measurement: The temperature of the agent can be displayed by means of the temperature probe integrated in the electrode.

AutoRange: Automatic selection of to the optimum meas. range for conductivity measurements. AutoRange mode can be deactivated by pressing a button.

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

TDS-determination (dry residue of filtrate): The dry residue of filtrate is understood to be the concentration of substances dissolved in a liquid. Reading in mg/l .

Option:

- LTG

for organic matter (alcohol, petrol, diesel)
 up to max. 1000 $\mu\text{S}/\text{cm}$

with glass shaft, unplatinized,
 1,35 m PUR-cable, fix connected with device



Accessories:

GKL 100 100ml conductivity control solution (100ml bottles with 1413 $\mu\text{S}/\text{cm}$. (pursuant to DIN EN 27888))

miscellaneous accessories (case, power supply, etc.)
 suitable for all GMH3xxx devices p.r.t.p. 56 - 58