

## WATERPROOF HANDHELD METER FOR MEASURING CONDUCTIVITY



WATERPROOF – DEVICE AND PLUG CONNECTIONS

### HIGHLIGHTS:

- Conductivity, resistance, salinity, TDS
- Large double backlit display
- Automatic cell correction with reference solutions
- Incl. test protocol

### ADDITIONAL FUNCTIONS GMH 5450:



### GMH 5430

Item No. 600035

Waterproof handheld conductivity meter, device only (without sensor)

### GMH 5450

Item No. 600037

Waterproof handheld conductivity meter with logger, device only (without sensor)

#### APPLICATION:

##### Mobile use for

- Industry and craft
- Measurements in waters and aquaristics, fish farming
- Drinking water, process monitoring, soil measurement
- Food production and monitoring
- Quality assurance

##### Additional applications in laboratories:

- Medicine, pharmacy, chemistry

#### TECHNICAL SPECIFICATIONS:

##### Measuring ranges

Number of measuring ranges:	5
smallest measuring range:	0.00..5.000 µS/cm * or 0.0..500.0 µS/cm **
largest measuring range:	0..5000 µS/cm * or 0..1000 mS/cm **
Spec. Resistance:	0.005..500.0 kOhm * cm (depending on cell constants)
TDS:	0..5000 mg/l (depending on cell constants)
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:	± 0.5 % of reading ± 0.1 % FS (depending on the electrode)
Temperature:	± 0.2 K

##### connections

Conductivity, temperature:	1 x 7-pole bayonet connection for connecting different measuring cells, supported temperature sensors Pt1000 or NTC 10 k
Interface/ext. care:	4-pole bayonet connection for serial interface and supply (with accessories: USB adapter USB 5100)

**Analog output: (only GMH 5450)** 0..1 V, freely scalable, connection via 4-pole bayonet socket, resolution 13 bit, accuracy 0.05 % at nominal temperature

**Data logger: (only GMH 5450)** Cyclic: 10,000 data records, cycle selectable: 1 s..60 min  
Single: 1000 data records (with measuring point input, 40 adjustable measuring point texts or measuring point numbers)

Display:	4 ½ digits 7-segment, illuminated (white)
Working conditions:	Device: -25 .. + 50 °C, 0..95 % r. F. (not condensing)
Storage temperature:	-25 .. + 70 °C
Backlit:	Light duration adjustable (off, 5 s..2 min)

Power supply:	2 x AAA batteries, power consumption: 6.25 mA
Battery life:	approx. 160 h (without lighting)
Protection class:	IP65 / IP67
Housing:	impact-resistant ABS, with stand-up / hanging bracket
Dimensions:	160 x 86 x 37 mm (H x W x D) including silicone protective cover
Weight:	approx. 250 g including battery and protective cover
Scope of delivery:	Device, K 50 BL, battery, test report, operating instructions

Depending on the cell constant of the LF electrode used

\* Cell constant 0.01 / cm \*\* cell constant 0.1..1.2 / cm (standard)

#### ADDITIONAL FUNCTIONS:

**Cell correction** Cell constant manually or automatically using reference solutions.

**Automatic temperature compensation** The conductivity depends strongly on temperature, so that it only applies to the corresponding temperature. The device therefore offers the option of compensating the conductivity to a reference temperature (adjustable to 20 °C or 25 °C). Supported Compensation Types:

nLF:	non-linear function of natural water according to DIN EN27888 (ISO 7888) (reference temperature 25 °C)
Lin:	adjustable linear compensation
off:	no compensation

##### Salinity determination

Salinity is the sum of the concentration of all dissolved salts in sea water. The information is given in g / kg (corresponds to PSU = Practical Salinity Unit).

##### TDS determination (total dissolved solids)

The total dissolved solids describes the mass concentration of the dissolved substances in a liquid. The information is given in mg / l.

##### GLP (Good Laboratory Practice)

adjustable calibration intervals GMH 5450: Calibration memory for the last 16 calibrations

#### ACCESSORIES AND SPARE PARTS:

GKL 10 ... Conductivity control solutions

##### EBS 20M

Item No. 601158

Measurement data acquisition software for EASYBus & GMH

##### GSOFT 3050

Item No. 601336

Windows software for GMH 3000 and GMH 5000 with logger

##### USB 5100

Item No. 601095

Interface converter GMH 5xxx <=> PC, Galvanic isolation

##### GNG 5/5000

Item No. 602287

Plug in power supply for GMH 5XXX series

##### GKK 5001

Item No. 611606

Case for GMH 5000 / G7500 series water analysis / universal, 395 x 295 x 106 mm (W x H x D)

## CONDUCTIVITY MEASURING CELLS

FOR PURE AND  
ULTRAPURE WATER



### LF 200 RW

Item No. 602841

Conductivity measuring cell, 7-pole, waterproof bayonet connection, for GMH 5400 series

<b>APPLICATION:</b>	
Pure and ultrapure water	
<b>TECHNICAL SPECIFICATIONS:</b>	
Measuring range:	0..200 $\mu$ S/cm
Temperature range:	-5 .. + 100 °C
Cell constant *:	approx. 0.1
Temperature measurement:	NTC 10 k
Shaft:	Stainless steel, $\varnothing$ 12 mm x 75 mm
Electrode:	2-pole stainless steel/PEEK
Cable length:	1 m
Scope of delivery:	Measuring cell, operating instructions

FOR ALCOHOL, GASOLINE, DIESEL



### LF 210

Item No. 602969

Conductivity measuring cell, 7-pole, waterproof bayonet connection, for GMH 5400 series

<b>APPLICATION:</b>	
Alcohol, gasoline, diesel	
<b>TECHNICAL SPECIFICATIONS:</b>	
Measuring range:	0..1000 $\mu$ S/cm
Temperature range:	-5 .. + 100 °C
Cell constant *:	approx. 1
Temperature measurement:	NTC 10 k
Shaft:	Glass, $\varnothing$ 12 mm x 120 mm
Electrode:	2-pole glass/platinum
Cable length:	1 m
Scope of delivery:	Measuring cell, operating instructions

HD-22-3 with sensor



### ACCESSORIES OR SPARE PARTS:

#### HD-22-3

Item No. 700040

Freely positionable laboratory sensor holding arm for sensors  $\varnothing$  12 mm

#### GKL 100

Item No. 601396

Conductivity control solution (100 ml bottle with 1413  $\mu$ S/cm, according to DIN EN 27888)

#### GKL 101

Item No. 601398

Conductivity control solution control solution 84  $\mu$ S/cm, 250 ml bottle

#### GKL 102

Item No. 601400

Conductivity control solution Control solution 50 ms/cm, 100 ml bottle

#### GWZ-01

Item No. 603499

Flow-through chamber for sensors with  $\varnothing$  12 mm, tube connection  $\varnothing$  6 mm



FOR UNIVERSAL USE



### LF 400

Item No. 602968

Conductivity measuring cell, 7-pole, waterproof bayonet connection, for GMH 5400/G 7500 series

<b>APPLICATION:</b>	
Universal use, economy class	
<b>TECHNICAL SPECIFICATIONS:</b>	
Measuring range:	0..200 mS/cm
Temperature range:	0..100 °C
Cell constant *:	approx. 0.55
Temperature measurement:	NTC 10 k
Shaft:	Epoxy, $\varnothing$ 12 mm x 120 mm
Electrode:	4-pole graphite
Cable length:	2 m
Scope of delivery:	Measuring cell, operating instructions

HIGH ACCURACY  
ROBUST AND PRECISE



### LF 425

Item No. 602840

Conductivity measuring cell, 7-pole, waterproof bayonet connection, for GMH 5400/G 7500 series

<b>APPLICATION:</b>	
High accuracy, robust and precise for the highest demands, high end class	
<b>TECHNICAL SPECIFICATIONS:</b>	
Measuring range:	0..1000 mS/cm
Temperature range:	-10 .. + 80 °C (90 °C – maximum 5 min.)
Cell constant *:	approx. 0.42
Temperature measurement:	Pt 1000
Shaft:	PVC-C, $\varnothing$ 16 mm x 145 mm
Electrode:	4-pole graphite
Cable length:	1 m
Scope of delivery:	Measuring cell, operating instructions

\* Note: The exact cell constant (shown in the calibration protocol and marking on the electrode) must be entered on the device and the device is then ready for use.

CONDUCTIVITY MEASURING SET



**GMH 5430-SET**

Item No. 611611  
Waterproof handheld conductivity meter, measuring set

**GMH 5450-SET**

Item No. 611246  
Waterproof handheld conductivity meter with logger, measuring set

**GENERAL:**

With our ready-to-use conductivity measuring set you not only have everything you need for your work in a practical case – with the set you save 10 % compared to the individual components.

**APPLICATIONS:**

No matter what industry you are in, our comprehensive SET-GMH 5450 will never let you down and, thanks to the practical case, is always tidy

**TECHNICAL SPECIFICATIONS:**

Measuring ranges device

Number of measuring ranges:	5
smallest measuring range:	0.000..5.000 µS/cm or 0.0..500.0 µS/cm
largest measuring range:	0..5000 µS/cm or 0..1000 mS/cm
Spec. Resistance:	0.005..500.0 kOhm cm (depending on cell constants)
TDS:	0..5000 mg/l (depending on cell constants)
Salinity:	0.0..70.0 (g salt/kg water)
Temperature:	-5.0 .. + 100.0 °C, Pt1000 or NTC 10 k

Electrode LF 425

Measuring range:	0..1000 mS/cm
Temperature range:	-10 .. + 80 °C (90 °C – maximum 5 min.)
Cell constant:	approx. 0.42
Temperature measurement:	Pt 1000
Shaft:	PVC-C, Ø 16 mm x 145 mm
Electrode:	4-pole graphite

Application:	High accuracy, robust and precise for the highest demands, high end class
Cable length:	1 m
Dimensions:	450 x 360 x 123 mm (case)
Weight:	approx. 1800 g
Scope of delivery:	Device with silicone protective cover, measuring cell LF 425, case GKK 5001, battery, test report, operating instructions <b>SET-GMH 5450 only:</b> software, interface converter

**ACCESSORIES AND SPARE PARTS:**

**GMH 5430**

Item No. 600035  
Waterproof handheld conductivity meter, device only (without sensor)

**GMH 5450**

Item No. 600037  
Waterproof handheld conductivity meter with logger, device only (without sensor)

**LF 425**

Item No. 602840  
Conductivity measuring cell, 7-pole, waterproof bayonet connection, for GMH 5400/G 7500 series

**GSOFT 3050**

Item No. 601336  
Windows software for GMH 3000 and GMH 5000 with logger

**USB 5100**

Item No. 601095  
Interface converter GMH 5xxx <=> PC, galvanic isolation

**GKK 3700**

Item No. 601064  
Case with knob foam for universal use 450 x 360 x 123 mm (W x H x D)

**GKK 5001**

Item No. 611606  
Case for GMH 5000/G7500 series water analysis/ universal, 395 x 295 x 106 mm (W x H x D)

PORTABLE INSTRUMENTS INCLUDING MEASURING CELLS



e.g. GMH 5450

LF 425

LF 400

**GMH 5430-400**

Item No. 602752  
Conductivity meter including measuring cell, precisely adjusted

**GMH 5450-400**

Item No. 602754  
Conductivity meter including measuring cell, precisely adjusted, with data logger

**GMH 5430-425**

Item No. 602753  
Conductivity meter including measuring cell, precisely adjusted

**GMH 5450-425**

Item No. 602755  
Conductivity meter including measuring cell, precisely adjusted, with data logger

**GENERAL:**

This set is already pre-adjusted and can be used immediately. No case included.

**ACCESSORIES OR SPARE PARTS:**

**GKK 5001**

Item No. 611606  
Case for GMH 5000/G7500 series water analysis/ universal, 395 x 295 x 106 mm (W x H x D)