

**Product information**

**GHMsilverline hand-held instruments**

**Conductivity**  
**- hand-held instrument**  
**SL-C-GL**  
**- full set SL-C Set**



- Water-proof and shock resistant instrument
- Water-proof conductivity electrode with temperature sensor
- Control solution 1413 µS/cm
- Software for operation, configuration, data read-out, etc.
- USB adapter
- High-class case
- High resolution (5000 digit per measuring range)
- Calibration certificate
- Gratis calibration after 1 year with automatic recall from calibration laboratory

**Characteristic**

The SL-C measures conductivity over a wide range (subdivided in 5 measuring ranges), or alternatively salinity, TDS (TDS (total dissolved solids) or conductivity in liquids .

The devices feature min-/max- value memory, HOLD, auto range, logger function with cyclic recording (10 000 data sets) or single values (1 000 data sets), analog output and a large illuminated 4 1/2- digit display.

The device can be optimally adjusted to the specific application via a menu-based configuration. A fully temperature compensated automatic calibration for different standard solutions is supported, alternatively a adjustment by trimming via keys is possible, too. The calibration data is stored in the GLP memory.

The housing, connectors and probes are water-proof.

**Specifications**

**Instrument SL-C**



**Sensor connection** : 7-pole bayonet socket  
**Output** : 4-pole socket for serial interface and supply, analog output 0..1 V  
**Suitable measuring cells:** 4-pole or 2-pole measuring cells with Pt1000 or NTC 10k temperature sensor (without temperature sensor: manual temperature input)

**Measuring ranges**

Number	5	
Cell constant	0.4.. 1.5	0.04..0.15
Conductivity 1 *)	0.0..500.0 µS/cm	0.00..50.00 µS/cm
" 2 *)	0..5000 µS/cm	0.0..500.0 µS/cm
" 3 *)	0.00..50.00 mS/cm	0..5000 µS/cm
" 4 *)	0.0..500.0 mS/cm	0.00..50.00 mS/cm
" 5 *)	0..1000 mS/cm	---
Specific resistance	0.0010..500.0 kOhm*cm	0.010..5000 kOhm*cm
TDS	0.0..5000 mg/l	0.00..5000 mg/l
Salinity	0.0..70.0 g/kg (PSU)	
Temperature	-5.0.. +100.0 °C, Pt1000 or NTC 10k 23.0..212.0 °F	

**Supported cell constants** : 4.000..15.000 / cm;  
 0.4000..1.5000 / cm;  
 0.04000..0.15000 / cm;  
 0.004000..0.015000 / cm  
 Cell constant manually or automatically via selectable reference solution

**Accuracy**  
**Conductivity** : ±0.5 % of m.v. ±0.1 % FS (system accuracy depends on electrode)  
**Temperature** : ±0.2 K

**Interface / ext. supply** : 4-pole bayonet connection for serial interface and supply (USB adapter SL-USB)

**Analog output** : 0..1 V, adjustable  
**Display** : two 4 1/2 - digit 7-segment displays (15 mm and 12 mm), illuminated (white)

**Protection class** : IP65 / IP67 (housing and connection)  
**Housing** : material made of shock-resistant ABS w/ support, incl. silicone protection cover

**Supply** : 2 x AAA battery (incl. in scope of supply) current consumption <6.5 mA (without illumination)

**Battery operation** : approx. 150 hours  
**Dimensions** : 160 x 86 x 37 mm  
**Weight** : 250 g incl. battery

## Product information

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### Functions

- **Min- / max- value memory**  
Highest and lowest value are saved
- **Hold**  
Freezing at keystroke
- **Automatic temperature compensation (diverse)**
- **Automatic measuring range switch-over (Auto Range)**
- **Automatic-Off function**  
Device gets automatically turned off after selected time. (0..120 min., or deactivated)
- **Status indicator for battery**  
Bargraph display, battery change indicator "BAT" display
- **Background illumination**  
Duration selectable (on / off or 5 s ... 2 min)
- **GLP**  
selectable calibration intervals (1 till 730 days, CAL-warning when due), storage: latest 16 calibrations
- **Analog output**  
0..1 V freely scalable, connection: 4-pole bayonet socket  
Resolution: 12 bit
- **Data logger**  
Measuring value memory:  
Cyclic: 10 000 data sets, multiple recordings  
Single: 1 000 data sets (with measuring with measuring point input, 40 selectable measuring point texts or numbers)
- **Min- / max- alarm**  
Continuous monitoring of alarm boundaries,  
3 alarm conditions:  
- off: alarm function inactive  
- on: alarm notification via display, integrated buzzer and interface  
- no Sound: alarm notification via display and interface

### Measuring cells:

#### SLF 425



4-pole standard measuring cell

Features : wide measuring range,  
high linearity over all measuring ranges,  
laboratory and universal usage,  
Ø 16 mm

In contact with fluid : graphite and plastic

Cell constant : 0.42 1/cm

Measuring range : 0-1000 mS/cm

Temperature sensor: Pt1000

#### SLF 200 RW



2-pole pure / ultra pure water measuring cells

Features : electrode for increased resolution in pure  
and ultra pure water measuring ranges  
Ø 12 mm

In contact with fluid : stainless steel and Peek

Cell constant : 0.1 1/cm

Measuring range : 0..100.0 µS/cm

Temperature sensor: NTC 10k

#### SLF 210



2-pole glass/platinum measuring cell

Features : special measuring cell with increase  
durability for use in oil, diesel, alcohol,  
patrol, acid, etc.  
Ø 12 mm

In contact with fluid : platinum and glass

Cell constant : 1 1/cm

Measuring range : 0..1000 µS/cm

Temperature sensor: NTC 10k

#### Case SKK 0400

High-quality case made of robust PP incl. rigid foam inlay with cut-outs for equipment

Dimensions : 450 x 360 x 110 mm (H x W x D)

#### Manufacturer's calibration WSC3 / WSC10

Calibration certificate

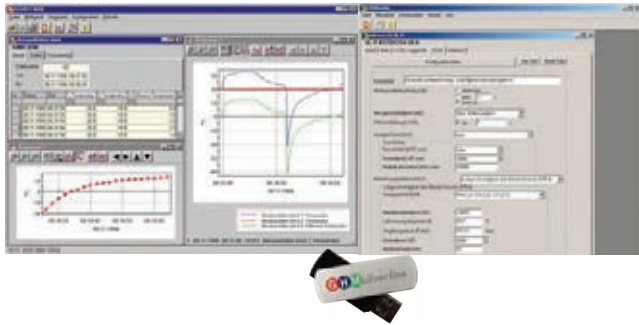
**WSC3** : included to set and as voucher  
3 test values: ~147 µS/cm,  
~1413 µS/cm, ~12.90 mS/cm

**WSC10** : optionally upon surcharge  
10 test values from 0.9 µS/cm  
till ~192 mS/cm

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**Software GSOF 3050 and GMHKonfig**



**GSOFT 3050**

The software allows operation of the logger function of hand-held measuring devices. The logger recording can be started and stopped and the logger data can be read-out and visualized. The multilingual software is executable with Windows 98, Me, NT, 2000, XP, Vista and 7.

The data is read-out via USB interface of a PC by means of an USB adapter and cable (included).

- Display of status information
- Setting of alarm function
- Operation of logger function
- Diagram display of logger data
- Logger data print-out
- Save logger data
- Export of logger data to ASCII (text, usable for MS Excel®)
- Memorizing of window settings

**GMHKonfig**

The software GMHKonfig allows the configuration of hand-held measuring instruments. It automatically detects the connected device type and provides the corresponding functions.

- Device configuration
- Set logger IDs
- Initialization of menu parameters
- etc.

**Adapter and cable SL-USB**

Electrically isolated interface converter with power supply via USB incl. connection for analog output



**Consumables**

WSC3 : included to set and as voucher  
 3 test values: ~147 µS/cm, ~1413 µS/cm, ~12.90 mS/cm  
 WSC10 : optional upon surcharge  
 10 test values from 0.9 µS/cm till ~192 mS/cm  
 Control solution 1413 µS/cm  
 Control solution 50 mS/cm

**Scope of supply SL-C-GL**

**Device bulk:**

- SL-C (conductivity hand-held measuring device),
- Operating manual,
- Short manual,
- Battery 2 x AAA

**Scope of supply SL-C Set**

**Set:**

- SL-C (conductivity hand-held measuring device),
- 1 measuring cell (4-pole graphite, 2-pole stainless steel, or 2-pole glass/platinum)
- SKK0400 (case incl. inlay),
- SL-USB (adapter and cable)
- Flash drive with GSOFT 3050 (software)
- WSC3 (calibration certificate)
- Control solution 1413 µS/cm
- Voucher for 1 x WSC3,
- Operating manual
- Short manual
- Battery 2 x AAA

**Optional:**

Second measuring cell

**Measuring cells:**

SLF 425: 4-pole measuring cell  
 SLF 200 RW: 2-pole pure / ultra pure water measuring cell  
 SLF 210: 2-pole glass/platinum measuring cell  
 Standard length: each 1 m (lengths up to 10 m available)

**Product key**

**SL-C-GL (device bulk)**

SL-C Set      -            -     

1. Measuring cell 1		
425	0-1000 mS/cm	4-pole standard meas. cell
200	0-100 µS/cm	2-pole pure / ultra pure water measuring cell
210	0-1000 µS/cm	2-pole glass/platinum measuring cell

2. Optional measuring cell 2		
425	0-1000 mS/cm	4-pole standard meas. cell
200	0-100 µS/cm	2-pole pure / ultra pure water measuring cell
210	0-1000 µS/cm	2-pole glass/platinum measuring cell

**Accessories**

**GEH 1**

Electrode holder suitable for electrodes with plastic handle

