




Water Quality Dipper Type KLL-Q-2

Multifunctional Water Quality Measurements in Groundwater or Lakes

NEW:

- Communication via Bluetooth  directly with the robust HDA-Pro Tablet PC
- Integrated data logger for automatic and manual data recording

Measuring parameters

- Water level
- Temperature
- Conductivity
 - Total Dissolved Solids (TDS)
 - Salinity
 - Density
- Dissolved oxygen
 - oxygen saturation
- pH-Value
- Redoxpotential (ORP)
- Ammonia
- Nitrate
- Chloride
- Ammonium
- Sodium
- Calcium
- Fluoride
- Potassium
- Chlorophyll a
- Cyanobacteria
- Rhodamine WT



KLL-Q-2



HDA-Pro



Groundwater Monitoring



Adjusting the KLL-Q-2



Water Sampling in Lakes



Evaluation with DEMASvis

Quality Measuring with KLL-Q-2

The SEBA-KLL, type **KLL-Q-2** is a unique mobile field laboratory for measurements of water quality at groundwater or surface water measuring sites. Suitable for 50mm (2") diameter wells. The instrument has an extremely compact design, easy operation with fast and precise acquisition of many water quality parameters. The current measured values are clearly displayed.

Optionally, the instrument can be equipped with an integrated data logger with a storage capacity of up to 280,000 values for an automatic or manual data recording. By default, the **KLL-Q-2** is supplied with an acoustic signal device when the sensor touches the water surface. The new graduated round-cable with robust PE-covering (laser-printed, cm/dm/m) is fade proof and abrasion resistant.

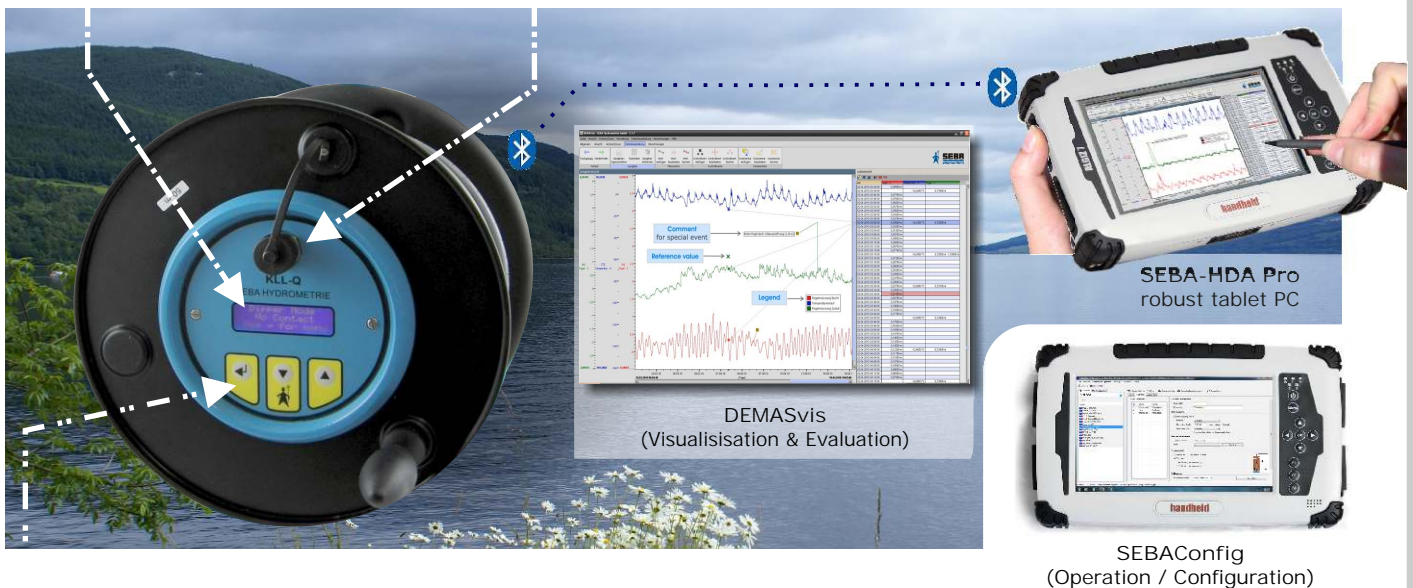
KLL-Q-2 in Detail

Display

3-lines Display with background lighting for clear indication of current measuring values.

RS 232 Interface & Bluetooth™

Calibration of the multiparameter sonde with comfortable operation software SEBAConfig via Notebook/PC. Alternatively, this can also be done via the optionally integrated Bluetooth interface inside the KLL-Q-2 and wirelessly with the HDA-Pro.



Keys

The instrument can be operated via 3 keys on the front. It is very user-friendly and menu-guided.

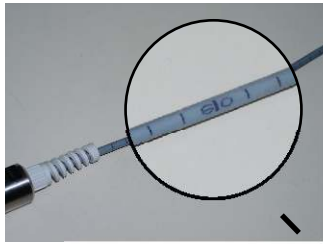
SEBA-HDA Pro

Alternatively to using a notebook, try using the SEBA HDA-Pro Tablet-PC for programming and readout of the collected measuring data as well as a visualisation directly at site. Transmission of the data from the instrument to the HDA-Pro can be done automatically via the optionally integrated Bluetooth interface in predefined timeslots, making the measurement very comfortable.

Data Logger

Full data logger functionality (optional) is possible for the automatic storage of up to 280,000 measured values. Instant logs can be obtained manually at the push of a button, suitable for quick assimilation of water quality profiles.

Operation via RS 232-interface with SEBA-HDA or laptop.



Cable

Due to the drum-combined supporting-frame the Multiparameter-probe can easily be lowered with our new improved laser-printed round-cable.

Transport-Container

The comfortable transport-container guarantees for a fast readiness as well as for a safe storage of the probes.

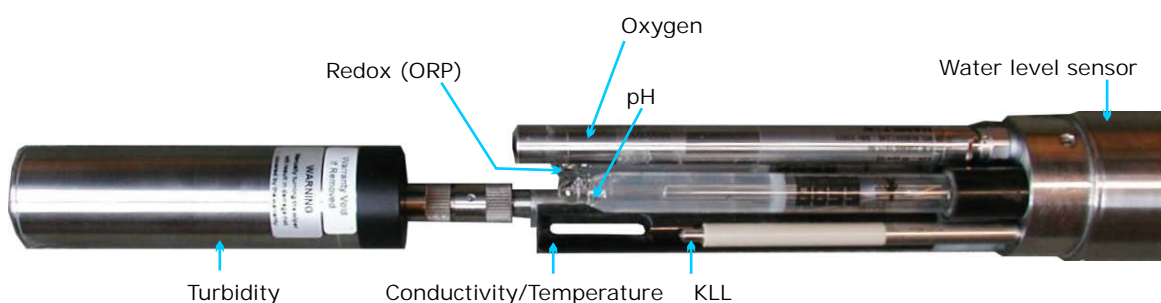
Multiparameter Sensor

Plug-in, maintenance-friendly high-quality-steel probe for connection to KLL-Q-2 or MPS-Checker. Individually configurable with different sensor-systems (e.g. pH, O₂, conductivity etc.)

For a detailed description of the Multiparameterprobe please see our Water Quality Monitoring brochure.

Measuring parameters

- Water level
- Temperature
- Conductivity
 - total dissolved solids(TDS)
 - salinity
 - water density
- Oxygen
 - Oxygen saturation
- pH-value
- Redox (ORP)
- Ammonia
- Nitrate
- Chloride
- Ammonium
- Sodium
- Calcium
- Fluoride
- Potassium
- Chlorophyll a
- Cyanobacteria
- Rhodamine WT
- Turbidity
 - total suspended solids(TSS)



Technical Data basic modul



Cable
4-cores round cable, polyethelene V2a-conductors with copper core, black cm-division with dm-marks and m-indications

Cable drum
impact-resistant, temperature stable synthetic material, with supporting frame made of aluminium

Power supply
rechargeable batteries 4x 2 V
operation period: 8...15 hours depending on cable length and configuration

Cable lengths: 50, 100, 200, 300, 400 m

Digital indication
alphanumerical 3 character LC-Display for indication of current value

Sensor body
non corrosive stainless steel V4a or PVC

Connectable Sensors:
- multiparameter sensor MPS-D3
- multiparameter sensor MPS-D8
- multiparameter sensor MPS-K16

Data Logger Function (Option)

Electronic System:

- internal power supply: 8V (4x2V Lead gel akku)
- external charger
- power consumption in power-down Mode: 140µA
- Flash-Controller M16C 16-Bit with integrated Watch-dog
- IC-Clock
- serial Flash-Memory with 4MB (approx. 280,000 measuring values)
- channels: maximal 32

Operation and indication:

- display (3 lines, 16 characters 3.65mm)
- keyboard with 3 keys

Interface:

- RS 232, Bluetooth (optional)

In-/Output:

- RS 485 sensor interface

Technical Data sensors

Parameter Measuring ranges

water level	0...200 m temperature: -5...50°C
temperature	-5...50°C pressure: 0...50 bar
conductivity	0...200mS temperature: -5...50°C pressure: 0...50 bar
total dissolved solids (TDS)	0...200,000mg/l temperature: -5...50°C pressure: 0...50 bar
salinity	0...70 temperature: -5...50°C pressure: 0...50 bar
density	988...1,060 g/l temperature: -5...50°C pressure: 0...50 bar
oxygen (amperometric)	0...40mg/l temperature: 0...50°C pressure: 0...10 bar
oxygen (optical)	0...25mg/l temperature: 0...50°C pressure: 0...10 bar
oxygen saturation	0...400% saturation temperature: 0...50°C pressure: 0...10 bar
pH	0...14 temperature: 0...50°C pressure: 0...20 bar
redox (ORP)	-1,200mV...1,200mV temperature: 0...50°C pressure: 0...20 bar
ammonia	0.01...17000mg/l temperature: 0...50°C pressure: 0...0,5 bar

Parameter Measuring ranges

nitrate	0.4...60,000mg/l temperature: 0...40°C pressure: 0...20 bar
chloride	1...35,000mg/l temperature: 0...50°C pressure: 0...20 bar
ammonium	0.2...18,000mg/l temperature: 0...40°C pressure: 0...1 bar
natrium	0.2...20,000mg/l temperature: 0...50°C pressure: 0...6 bar
calcium	0.5...40,000mg/l temperature: 0...40°C pressure: 0...1 bar
fluoride	0.2...20,000mg/l temperature: 0...40°C pressure: 0...1 bar
potassium	0.4...39,000mg/l temperature: 0...40°C pressure: 0...1 bar
chlorophyll a (optical)	0.03...500µg/l Chl a temperature: -2...50°C pressure: 0...60 bar
cyanobacteria (optical)	150...2,000,000 cells/ml temperature: -2...50°C pressure: 0...60 bar
rhodamine WT (optical)	0.04...1,000ppb RWT temperature: -2...50°C pressure: 0...60 bar
turbidity (optical)	0...1,000NTU temperature: 0...50°C pressure: 0...10 bar with wiper 0...20 bar without wiper
total suspended solids (TSS)	approx. 5 fold measuring range turbidity mg/l temperature: 0...50°C pressure: 0...10 bar with wiper 0...20 bar without wiper

The right is reserved to change or amend the foregoing technical specification without prior notice.



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