



Water Quality Dipper Type KLL-Q-2

Multifunctional Water Quality Measurements in Groundwater or Lakes

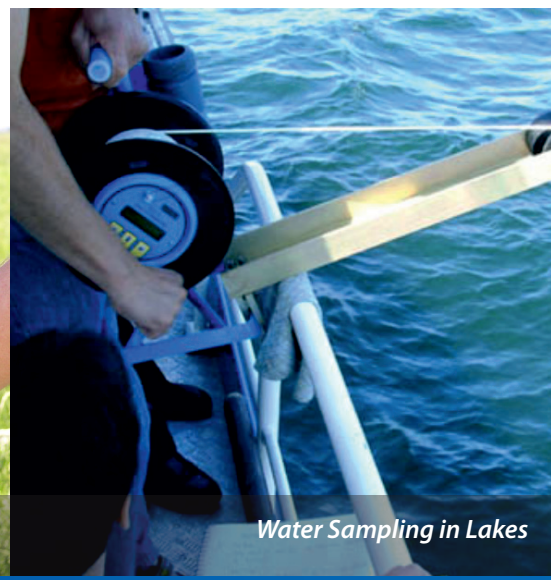
- Mobile field laboratory with electric cable contact gauge for measuring the water level, temperature and other water quality parameters (e.g. oxygen, pH, conductivity, redox potential, turbidity) in groundwater and surface waters
- SEBA Plug-in System for coupling with SEBA multiparameter sondes of the MPS-D3/D8/K16
- Printed tubular cable with cm/dm/m-scaling, available from 30 m to max. 400 m in length
- 3-line backlit LCD display
- Integrated logger for manual and / or automatic storage of measured values (optional)



Groundwater Monitoring



Adjusting the KLL-Q-2



Water Sampling in Lakes

Quality Measurements 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 1,120,000 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 (laserprinted, cm/dm/m) is fade proof and abrasion resistant.

Data Logger

Full data logger functionality (optional) is possible for the automatic storage of up to 1,120,000 measured values. Instant logs can be obtained manually at the push of a button, suitable for quick assimilation of water quality profiles.

Read-out and setting of measuring frequency via RS 232-interface with SEBA-HDA or laptop.

Software

Operating software:	SEBAConfig
Data readout:	Interfacekabel RS 232 - USB
Evaluation software:	DEMASvis
Archiving Software:	DEMASdb



Multiparameter Sensor

Double plug-in, maintenance-friendly high-quality-steel probe (MPS-D3, MPS-D8) or single plug-in plastic probe MPS-K16 for connection to Checker-2 or KLL-Q-2. Individually configurable with various sensors (e.g. pH, O2, conductivity etc.) For a detailed description of possible configurations refer to our Water Quality Monitoring brochure.

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
- RhodamineWT
- Turbidity
 - total suspended solids(TSS)



Technical data KLL-Q-2

Sensor:	Multiparameter probe MPS-D3 type Multiparameter probe MPS-D8 type Multiparameter probe MPS-K16 type
Housing:	
Support frame:	Aluminium
Cable drum:	Shock-resistant plastic
Dimensions:	Depending on cable length
Protection class:	IP 54
Keyboard:	3 multifunction buttons
Display:	3-line backlit LCD
Cables:	
Lengths:	30 m / 50 m / 80 m / 100 m / 150 m / 200 m / 300 m / 400m
Material:	PE jacket, printed with cm / dm / m scaling, food safe
Accuracy:	< 1 cm at 100 m cable length
Dimensions:	Ø 5 mm
Logger (option) Controller:	16 Bit Flash controller with integrated WatchDog RTC-IC Real Time Clock
Memory capacity:	16 MB (= 1,120,00 readings)
Save interval:	Manually or cycle-controlled by 2 min - 99 hours
Channels:	Maximum 32
Measurement routines:	Single value, average value, event clock, Delta mode
Communications Interface:	RS 232 (standard)
Operation:	RS 485 (SHWP)
Power supply:	4 x 2 V lead-acid batteries, rechargeable
Connection:	SEBA-plug system (stainless steel) for multiparameter probe of the MPS-D3/D8/K16 type

Technical data Sensors

Parameter:	Measuring ranges:
Pressure	0...200 mWs Temperature: -5...50 °C
Temperature	-5...50 °C Pressure: 0...500 mWs
Conductivity	0...200 mS Temperature: -5...50 °C Pressure: 0...500 mWs
Total dissolved solids	0...200.000 mg/l Temperature: -5...50 °C Pressure: 0...500 mWs
Salinity	0...70 Temperature: -5...50 °C Pressure: 0...500 mWs
Density	988...1060 g/l Temperature: -5...50 °C Pressure: 0...500 mWs
Oxygen (amperometric)	0-40 mg/l Temperature: 0...50 °C Pressure: 0...100 mWs
Oxygen (optical)	0-25 mg/l Temperature: 0...50 °C Pressure: 0...100 mWs
Oxygen saturation	0...400 % saturation Temperature: 0...50 °C Pressure: 0...100 mWs
pH	0...14 Temperature: 0...50 °C Pressure: 0...200 mWs
Redox	-1200 mV...1200 mV Temperature: 0...50 °C Pressure: 0...200 mWs
Ammonia	0,01...17000 mg/l Temperature: 0...50 °C Pressure: 0...5 mWs
Nitrate	0.4...60000 mg/l Temperature: 0...40 °C Pressure: 0...200 mWs

Parameter:	Measuring ranges:
Chloride	1...35000 mg/l Temperature: 0...50 °C Pressure: 0...200 mWs
Ammonium	0.2...18000 mg/l Temperature: 0...40 °C Pressure: 0...10 mWs
Natrium	0.2...20000 mg/l Temperature: 0...50 °C Pressure: 0...60 mWs
Calcium	0.5...40000 mg/l Temperature: 0...40 °C Pressure: 0...10 mWs
Fluoride	0.2...20000 mg/l Temperature: 0...40 °C Pressure: 0...10 mWs
Potassium	0.4...39000 mg/l Temperature: 0...40 °C Pressure: 0...10 mWs
Chlorophyll a (optical)	0.03...500 µg/l Chl a Temperature: -2...50 °C Pressure: 0...600 mWs
Cyanobacteria (optical)	150...2000000 cells/ml Temperature: -2...50 °C Pressure: 0...600 mWs
Rhodamine WT (optical)	0.04...1000 ppb RWT Temperatur: -2...50 °C Pressure: 0...600 mWs
Turbidity (optical)	0...1000 NTU Temperature: 0...50 °C Pressure: 0...100 bar with wiper 0...200 bar without wiper
Total suspended solids	approx. 5 fold measuring range turbidity mg/l Temperatur: 0...50 °C Pressure: 0...100 bar with wiper 0...200 bar without wiper

For further information on Multiparameter Sensors please see separate brochure on Water Quality Monitoring.

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

Contact:

SEBA Hydrometrie GmbH & Co. KG • Gewerbestraße 61 A • 87600 Kaufbeuren • Germany
Telefon: +49 (0) 8341 96 48 - 0 • E-Mail: info@seba.de • Web: www.seba.de