



SEBA
HYDROMETRIE

Electric Contact Meters Type KLL /KLL-T /KLL-Mini and TLG

Easy groundwater level and temperature measurement

Short description

- measuring of water level and total depth for groundwater
- quick and digitale temperature indication (LC-Display)
- optical and acoustical signal when probe touches water level
- low power consumption



Water level measurement



Ground water sampling



KLL with electrical drive



Well



Contact Meter Type KLL



Contact Meter KLL

The SEBA-Electric Contact Meter type KLL is a portable, reliable instrument for measuring the water level and total depth in boreholes, wells, reservoirs etc. For the measurement the bob is lowered to the water level. When touching the level, a sensor effects the illumination of a signal lamp. On request, an additional acoustic signal will be released by a buzzer. The depth is shown on the cable in metres and centimetres. If the measurement of water level and total depth is desired, an additional ground sensor (see accessories) is adaptable. When the sensor is touching the bottom, the signal lamp is switched off. In case of very small diameter tubes, instruments with a probe of 10 mm dia. (not suitable for ground-sensor and sensor-cap) are available.

Principle of function

When the probe is touching the water-level there is a conductive connection between the tip of the probe and the sensor-body. Thereby a circuit of the lamp and the buzzer will be closed.

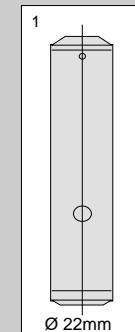


Contact Meter Typ KLL 15-50m with hand-drum

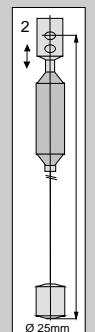
Accessories



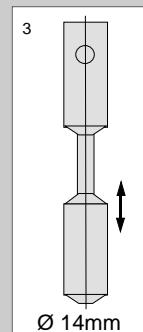
KLL with electrical drive



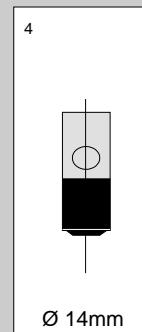
sensor for high
resp. non conducting liquids



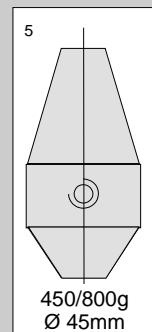
ground-sensor
with steel cable
for muddy bottom



ground-sensor



sensor cap
for salty water



additional weight

Technical Data KLL

cable: Polyethylene with 2 steel cores (anticorrosiv), metric scale, figures printed all metres in red colour and decimetres with centimetres in black colour

probe: *standard version:*
made of corrosion resisting material, 14mm dia., 175mm long with build-in electrode
special version:
10mm dia., 320mm long

cable drum: plastic, impact and temperature resistant

power supply: 6V DC, 4 Baby Cells each 1,5V

accuracy: < 1cm with cable length 100m

supporting frame: aluminium, formed parts, surface coated

Measuring ranges and weights

15m 1,4kg 2,0kg*	30m 1,6kg 2,2kg*	50m 1,9kg 2,5kg*	80m 3,3kg*	100m 3,6kg*
150m 4,9kg*	200m 5,5kg*	300m 8,4kg*	500m 11,5kg*) with support frame

On request, special ranges up to 1000m are available.

SEBA-Electric Contact Meter Type KLL-T

The SEBA-KLL-T has been developed for accurate measurements of water level and temperature in groundwater observation tubes and wells. Offering quick indication of the temperature, the instrument is suitable for the determination of temperature profiles.



KLL-T

The Functionality of KLL-T



carrying bag for KLL-T

Water level measurement:

Dipping into a fluid, a conducting connection between the probe head and the probe body is being established. This completes the circuit of the bulb and the buzzer.

Temperature measurement:

The temperature is measured with a semi-conductor sensor and transformed into proportional current. Through an A/D-transformer the analogue value is transformed into a digital value and indicated on an 3 1/2 digit LCD-display.

Technical Data KLL-T

cable:	2-core flat cable, polyethylene with V2a-leads, black cm-division with dm-figures and red m-marking.
power supply:	6V DC (4 batteries baby-cells 1,5V)
actual operation time with one set of battery:	approx. 1000 hours, with backlight 50 hours
accuracy temperature:	0,10°C ± 1/2 digit (range 0-25°C) 0,15°C ± 1/2 digit (range 0-50°C)
indication temperature:	°C, Fahrenheit (setup in menu)
accuracy probe:	1cm at 30m cable length
measuring ranges:	30m, 50m, 100m, 150m, 200m, 300m, 500m
display: languages:	in one row, 8 digits, contrast temperature controlled German, English, French, Spanish (setup through menu)
operating temperature: storage temperature:	- 15°C up to 50°C - 40°C up to 80°C
protection drum/probe:	IP 52 / IP 68
probe:	made of non-corrosive material, 16mm Ø
supporting frame:	aluminium, formed parts, surface coated
cable drum:	plastic, impact and temperature resistant
dimensions:	220 x 350 x 330, 280 x 415 x 330, 400 x 570 x 330 (width x height x depth, mm)
weight:	depends on the cable length, e.g. instrument with 30m cable weighs approx. 5,5kg
Conductivity:	range 1: 20 - 200µS/cm, range 2: 200µS/cm - 2mS/cm, range 3: 2 -20mS/cm, range 4: 20-50mS/cm This electric contact meter can be used for a rough measurement of conductivity. An exact measurement can be done with the SEBA electric contact meter type KLL-Q.

Contact-Meter Type KLL-Mini



Power in the pocket: small, light, easy to handle and precise

With the KLL-Mini a full contact-meter in pocket-format has been developed. In quality regards it's equivalent to the existing KLL-family. Generally it is equipped with optical and acoustic signal, which enables the exact measurement of the water level. The two 1,5V batteries are sufficient for approx. 250 measurements.

For convenient transport and safe storage a protection bag is available, made of textile with zip, carrying strap and belt loop.



carrying bag for KLL-Mini

Technical Data KLL-Mini

cable:	2-core flat cable, polyethylene with V2a-leads, black cm-division with dm-figures and red m-marking
probe:	made of non-corrosive material, 14mm Ø, 120mm long, with built-in electrode
drum:	plastic, impact and temperature resistant
power supply:	3 VDC, 2 standard batteries 1,5V (baby cells) Please use leakproofed batteries only!
accuracy:	< 1cm
measuring range/weights:	10m/550g, 15m/600g
dimension:	Ø140mm

Depth Indicator Type TLG Technical Data



The SEBA-Depth Indicator Type TLG has been developed as a portable unit for rapide and accurate observation of bore hole water levels. It also can be used for measurements in the open sea or for measurements of the cross section of a lake. Operated manually by holding above the bore hole it provides a clear, instantaneous indication on a five figure counter calibrated in metres and centimetres and is rapidly rewound.

Advantages:

- mech. measuring system
- rapide and accurate measurements
- digital indication of the measuring result
- handy and portable
- light in weight and compact design

measuring ranges:
50, 100 und 200m

Depth Indicator type TLG

bobs
20mm and 40mm dia. of plastic for water-level indication;
20mm dia. of metal for depth sounding

cable control
constant, due to stable centrifugal brake

steel wire
0,5mm dia. stainless, stretch- and acidproof

indication
5 digit indication in metres and centimetres

dimensions
250 x 120 x 8 (mm, height x width x depth)

weight
1kg

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



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