



Electric Contact Meter Type KLL

Easy groundwater level measurement

Operation Manual



Short description

- measuring of water level and total depth for groundwater
- optical and acoustical signal when probe touches water level
- low power consumption



Contact-Meter KLL



Water level measurement



Ground water sampling



KLL with electrical drive



Well

Content:

1	SAFETY AND DANGER INSTRUCTIONS	4
2	USE AS DIRECTED	5
3	DESCRIPTION OF PRODUCT	5
4	SETTING INTO OPERATION	5
5	ELECTRODE	5
6	SPECIAL SENSORS	5
7	SPECIAL SENSOR FOR HIGH- RESP. NONCONDUCTIVE LIQUID MEDIA.....	6
8	REPLACEMENT OF SIGNAL LAMP	6
9	TECHNICAL DATA:	6
10	DECLARATION OF CONFORMITY	7
11	SUPPORT	8

1 Safety and danger instructions



By handling products, which are supplied by electrical voltage, the valid VDE-instructions, especially VDE 0100, VDE 0550/0551, VDE 0700, VDE 0711 and VDE 0860 have to be observed.

Before opening an instrument, pull off the mains plug and make sure, that the instrument is without power supply.

Construction parts, construction groups or instruments must only be set into operation, if they are installed contact-free in a housing. During installation, they have to be without current.

Tools must only be used at instruments, construction parts or construction groups after securing, that the instruments have been separated from power supply and electrical loads, which are stored in inner construction parts have been unloaded.

Voltage leading cables or wires, to which the instrument is connected, must always be checked to isolation faults or points of fracture. By detecting a fault in the connection cable, the instrument must be set out of operation, till the defect cable has been exchanged.

Before using construction elements or construction groups, please make sure, that instruction is given to strict observance of the electrical characteristics mentioned in the respective manual.

For operation by non-commercial end-consumers, it must definitely be stated, which electrical characteristics are valid for a construction part or a construction group, how an external wiring has to be effected or which external construction parts or additional instruments can be connected and which connection values these components must have. If these information is not sure, please contact a specialist.

Before setting into operation, generally check if the instrument or construction group is suitable for the field of application. In case of doubts, unconditionally contact specialists, experts or the manufacturer of the used construction group!

Please be informed, that operation and connection faults are beyond our sphere of influence. So, understandably, we cannot take over liability for resulting damages.



Never connect the instrument directly to power supply (110V or 230V) !

Note on the Implementation of EC Directive accord. to “Battery-Law”

In connection with sales of batteries and accumulators we, as a retailer are committed to giving the following notice according to the “battery-law”:

The end-user is bound by law to return used batteries and accumulators.

The batteries and accumulators can be given back at municipal collection points or in stores or to the dealers.

Thereby the end of the usual life-time has to be reached; otherwise there is a risk of a short circuit, which has to be prevented.

The scope of returnable batteries / accumulators is limited to those batteries / accumulators which we, as the dealer, currently carry or previously carried in our product line. Moreover the returnable number of batteries and accumulators is limited to the typical end-user quantity, no commercial quantities.

Contaminant-laden batteries and accumulators are marked with a crossed waste container and a chemical symbol (Cd = Cadmium, Hg = quicksilver or Pb = Lead) which help to classify the harmful heavy metal.



Cd (Cadmium)



Pb (Blei)



Hg (Quecksilber)



Low-polluting batteries and accumulators only show a crossed waste container.

2 Use as directed

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.

3 Description of product

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.

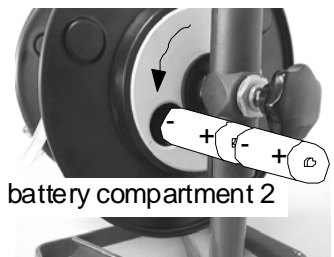
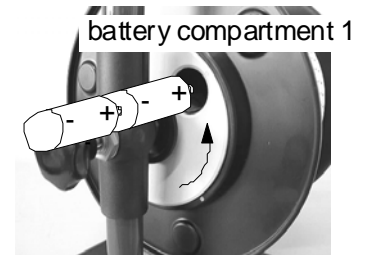
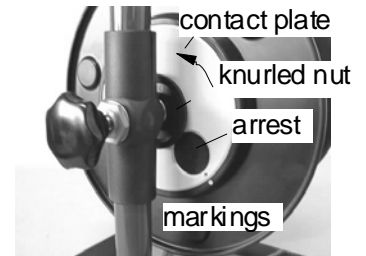
When the probe is touching the water-level there is a conductive connection between the tip of the probe and the sensor-body. Thereby a circuit of the lamp and the buzzer will be closed.

4 Setting into operation

Insertion of batteries

- Loosen the knurled nut by turning it to the left and then open the battery compartment by turning the contact plate to the left.
- Insert batteries with correct polation, as indicated in the battery compartment 1; see respective scheme.
- Turn the contact plate further to the left, so that the opening of the 2. battery compartment gets free. Insert further batteries
- Now in opposite direction, as indicated on the label in the battery compartment 2.
- Close the battery compartment by turning back the contact plate until the markings at the contact plate and the drum are right opposite to each other and the elevation at the drum arrests.
- Tighten the knurled nut

Now the instrument is ready to start. By dipping the electrode into water the signal lamp shines. If the instrument is equipped with an acoustic signal, additionally a signal sounds.



5 Electrode

Please clean the electrode(C) from time to time with smooth emery paper after screwing off the protection cover.

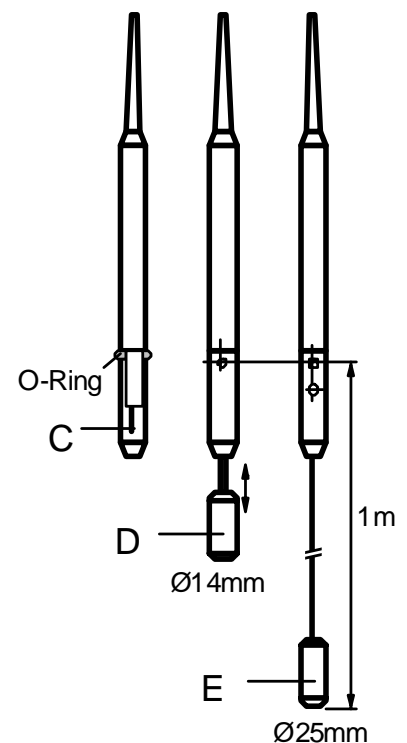
6 Special sensors

Ground Sensor

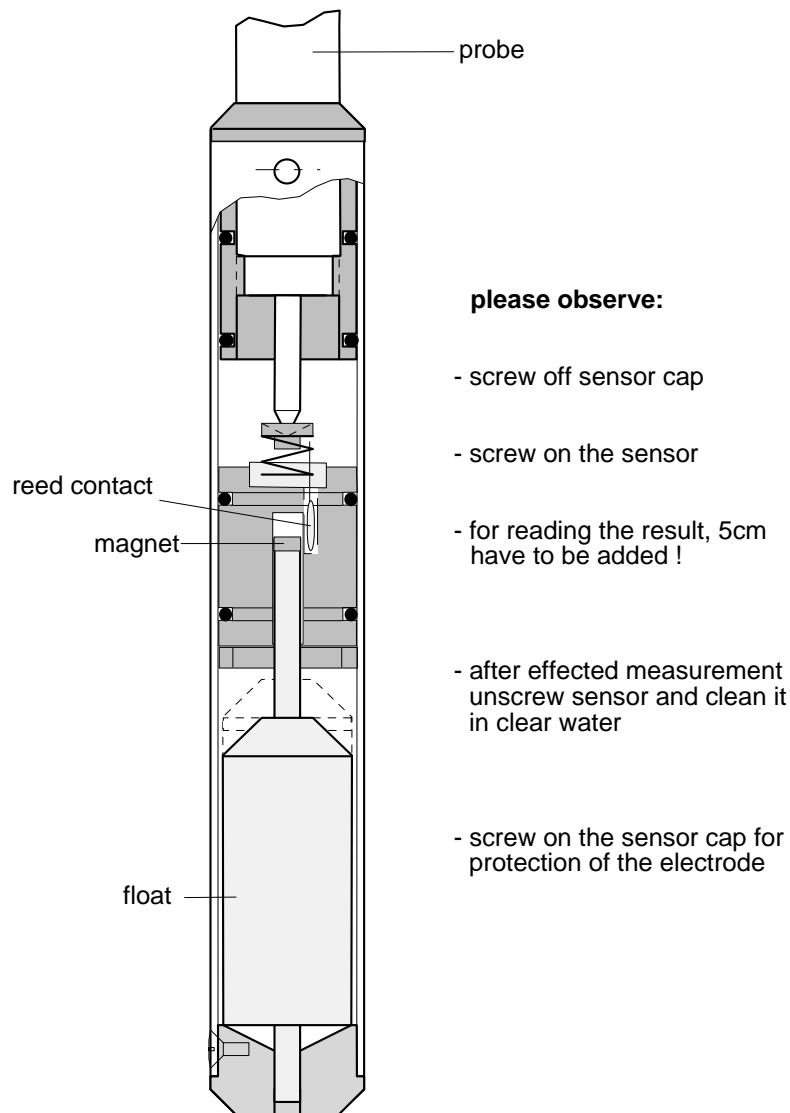
O-Ring 3x1 put on the top of the probe. If you screw on the ground sensor(D) instead of the protection cover, measurements of level and depth are possible. When the ground sensor touches the bottom, the signal lamp switches off. Please add **7cm** to the measured value.

Ground sensor with steel rope for muddy ground

O-Ring 3x1 put on the top of the probe. If you screw on the ground sensor(E) instead of the protection cover, measurements of level and depth are possible. When the ground sensor touches the bottom, the signal lamp switches off. Please add **100cm** to the measured value.



7 Special sensor for high- resp. nonconductive liquid media



8 Replacement of signal lamp

- screw off the orange protection cover
- exchange the bulb
- screw on the protection cover

If the instrument will not be used for a longer period, take out the batteries.

9 Technical Data:

power supply:	6VDC, 4 baby cells á 1,5V - divided to two battery compartments.
signal lamp:	5V / 0,15A
cable:	2-core flat cable, Polyethylene with 2 anticorrosive metal cores, cm-division with dm-indication and red meter markings
cable drum:	plastic, impact and temperature resistant
supporting frame:	Aluminium formed parts, surface coated
accuracy:	<1cm at 100m cable length

11 Support



Support by SEBA Hydrometrie GmbH & Co. KG

As we are interested in a continuous improvement and extension of our products, you are always welcome to send us your questions. Notify us about occurring bugs or send your requests to:

support@seba.de