

Conductivity Meter Stick LWT-01



Item No. 12 27 97

Introduction

Dear customer,

Thank you for acquiring this product. With this Voltcraft® product, you acquired a state-of-the-art device.

Voltcraft® - This name is a synonym for above average quality products in the area of measurement, charging as well as power technology.

And now enjoy your new Voltcraft® product!

With this measuring device it is very simple to find out the electrical conductivity of a liquid. The measure for this is conductivity and is indicated in $\mu\text{S/cm}$ (micro siemens per centimeter). The area of application is the domestic area but also (fish) ponds, swimming pools, photo laboratories, schools, nurseries, etc. The measuring device is not suitable for the use in the industrial area (eg galvanotechnics). ATC (automatic temperature compensation) makes sure that there are stable measurement values, even in the case of fluctuating temperatures.

The conductivity meter stick LWT-01 is a state-of-the-art product and therefore meets the requirements of the current European and national guidelines. All the relevant documents have been deposited at the manufacturer.

Prescribed Use

- Measurement of conductivity from 0 to 9990 μS of dead (idle), non-flammable or non-corrosive liquids (immersion depth min. 10 or max. 80 mm).
- Only a 9 V block battery may be used as power supply.



Any use other than one described above may damage this product. Moreover, this involves dangers such as short-circuit, fire, electric shock etc. Always observe the safety instructions!

Safety Instructions



In the case of any damages which are caused due to failure to observe these operating instructions, the guarantee will expire! We do not assume liability for resulting damages!

An exclamation mark in a triangle points out important instructions in the operating manual. Carefully read through the whole operating manual before putting the device into operation.

Measuring devices should be kept out of reach of children!

In industrial facilities, the safety regulations laid down by the professional trade association for electrical equipment and facilities must be adhered to.

Check the measuring electrode for damage before each measurement.

In the case of deliberate mechanical (deformation) or electrical changes (modification) of the measuring device the right to claim under guarantee expires.

Be careful when handling flammable or corrosive liquids. Make sure to wear protective gloves, goggles and apron. Only carry out measurements in well ventilated surroundings.

Dip the sensor head into the idle measuring medium. Immersion depth must not be under 10 mm or exceed 80 mm.

Included in Delivery

Measuring device LWT-01, 1413 $\mu\text{S/cm}$ conductivity calibration solution, calibration screwdriver, stable storage box and operating instructions.

Inserting the Battery - Changing the Battery

In order for the LWT-01 to work properly, it needs to be equipped with a 9 V block battery. When the display disappears, you need to change the battery. For this purpose, proceed as follows:

- Open the battery compartment on the back of the LWT-01 by pushing the battery compartment lid off with the belt clip.
- Replace the old battery with a new type of the same battery, slide the battery compartment lid back onto the LWT-01 until it clicks into place.



Warning!

Never operate the LWT-01 when it is open. Do not leave exhausted batteries in the LWT-01, because even leakage-proof batteries might corrode and thus release chemicals which are hazardous for your health and destroy the battery compartment. Do make sure to treat exhausted batteries as hazardous waste and therefore dispose of them in an environmentally friendly way. You can return spent batteries free of charge at any collecting point of your local authority, at our stores or at any other store where batteries/storage batteries are sold.

Getting Started, Calibration, Measuring

- Switch on the LWT-01 by pressing the ON/OFF button.
- Remove the square protective cap of the device and pull out the conductivity electrode until the necessary distance has been reached. Because of the slide-out conductivity electrode, the immersion depth can be up to 80 mm.
- Rinse the conductivity electrode with distilled or deionised water (also before and after every use/measuring) and rub it dry. Dip the conductivity electrode into the 1413 $\mu\text{S/cm}$ calibration solution, included in delivery, stir it briefly and wait until the display has stabilised (up to 5 minutes).
- Now set the display value to "141" (1410 $\mu\text{S/cm}$) by turning the calibration trimmer (CAL) on the side of the LWT-01 with the screwdriver included in delivery. In order to achieve the highest possible accuracy, the calibration should be carried out at 25° C.
- Clean the conductivity electrode again with distilled or deionised water and wipe it dry.
- Dip the conductivity electrode into the liquid to be measured and stir it briefly. After the stabilization of the display you can read the value and multiply it by factor 10. This result will now correspond to the conductivity of the liquid. The automatic temperature compensation (ATC) ensures precise measurements even in the case of variable temperatures of the liquid.
- In order to ensure the function of this device over a long period of time, the electrode needs to be cleaned after each measurement (see maintenance and cleaning).



Notes on calibration!

It is not necessary to calibrate the LWT-01 before each measurement. It is recommended to carry out a calibration after every tenth to twentieth measurement or every four weeks. If the 1413 $\mu\text{S/cm}$ calibration solution included in delivery is used up, it can be bought again.



Notes on conductivity electrode!

The conductivity electrode needs to be cleaned after each measurement in order to be able to supply precise measurement result over a long period of time. **The conductivity electrode is a wearing part. Worn out electrodes are not covered by the guarantee. Do not touch or wipe the black sensor.**

Maintenance and Cleaning

For cleaning (rinsing) of the conductivity electrode use only distilled or deionised water and paper towels, to dab off.

Disposal

Please dispose of the defective device which can no longer be used in accordance with the current legal regulations.

Technical Specifications

Conductivity measuring range	0 to 9990 $\mu\text{S/cm}$
Resolution	10 $\mu\text{S/cm}$
Accuracy	$\pm 1\%$
Ambient temperature	0 to +50° C
Working temperature	0 to max. +50° C
Power supply	9V block battery
Dimensions	158 x 40 x 34 mm
Weight	85 g