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Conductivity measuring cells

Putting into operation

The conductivity measuring cell has to be immersed in the measured solution according to the minimum of immersion depth. The measurement value may be read off as soon as the signal has stabilised. In the case of temperature changes, this may take up to two minutes.

Minimum of immersion depth:

- LTC0,35 = 20 mm
- LTC1 = 15 mm
- LTG0,1 = 35 mm
- LTG1 = 25 mm
- LVV0,1 = 33 mm

Storage and maintenance

The storage conditions for conductivity measuring cells may be within the range of a 0-50 °C and 5-95 % relative humidity. Any conditions leading to condensation of water at the plug ought to be avoided.

Cleaning

Thorough cleaning is particularly recommended prior to measuring low conductivities. To clean the device, please detach the sensor.

Contamination on the sensor can be removed with the following procedure:

Type LTC and LVV

Grease or oil, carefully clean the glass part and the ring electrodes using warm water containing a dishwashing detergent and a sponge. In the presence of lime, please place the parts shortly (five minutes) in acetic acid (10Vol%).

When using acids, leaches and solvents for cleaning, please make sure that they are compatible with the material of the shaft (plastic, epoxy)!

Type LTG

Platinum electrodes can be cleaned with acids (exception: HF!), leaches and solvents. After treatment a platination is necessary, therefore the electrode can be sent to Meinsberg.

Check and setting of the cell constant

Refer to the manual of the measuring device, please!

Electrical conductivity mS/cm of KCl solutions as a function of temperature

Temperature (°C)	KCl concentration in mol/l			
	0.001	0.01	0.1	1
18	0.127	1.225	11.19	98.24
19	0.130	1.251	11.43	100.16
20	0.133	1.278	11.67	102.09
21	0.136	1.305	11.91	104.02
22	0.138	1.332	12.15	105.94
23	0.141	1.359	12.39	107.89
24	0.144	1.386	12.64	109.84
25	0.147	1.413	12.88	111.80
30	0.163	1.552	14.12	-

Quality

Each electrode must meet the strict quality requirements of final testing. The durability depends mainly on the usage conditions. Strong acids, bases and solvents corrode the plastic and epoxy material.