DT-700

- Measurement range 10^{-4}-10^{-11} S·m^{-1}

- For low polar (alcohols) down to non-polar solvents (toluene, hexane, etc.)

- Measurement of impurities or ionic content of polar and non-polar solvents, suspensions and emulsions

- Stand-alone device with small monitor and integrated computer

- Easy cleaning and calibration

Electric conductivity
of organic solvents
and dispersions

Operating principle and example measurements

The measuring cell consists of two coaxial stainless steel electrodes and a guard electrode. The task of the latter is to eliminate leakage currents between the measuring electrodes. For easy cleaning after analysis, the outer hollow cylinder electrode can simply be pulled off.

During a measurement, the instrument applies a sinusoidal voltage to the outer electrode and measures the current that flows through the sample to the inner electrode. The frequency of this applied voltage is changed depending on the measured conductivity in the range from 1 to 10 Hz.
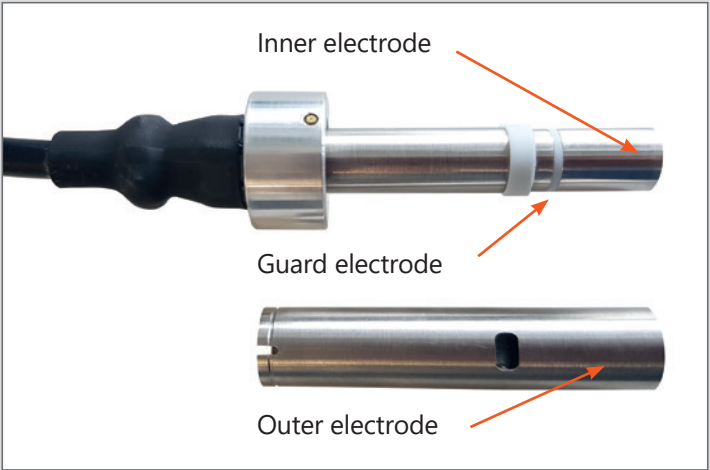
Essential advantages

- Continuous measuring range over 7 decades
- Easy cleaning thanks to removable outer electrode and easy calibration with toluene
- Windows-based software, export as Excel file

Figure 2 shows examples of some conductivity measurements on different solvents, carried out with the DT-700. These illustrate the wide application range of the measuring probe due to the unique wide measuring range over 7 decades.
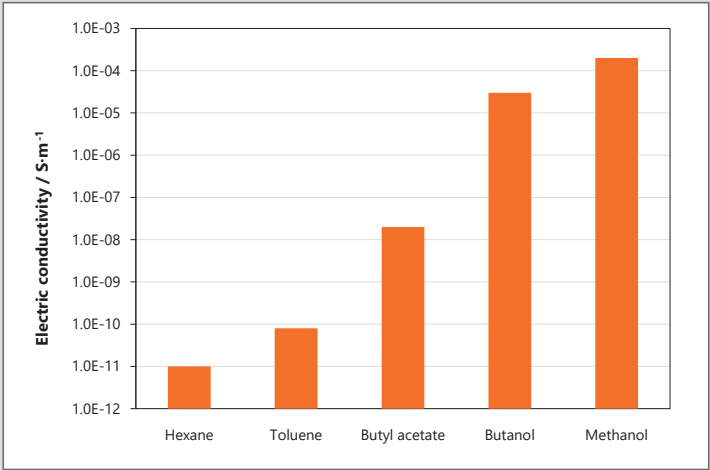

Figure 1 *Design of the electrodes*

Inner electrode
Guard electrode
Outer electrode

Figure 2 *Electric conductivity of various liquids*

Specifications	
Measurement principle	Frequency-dependent current flow measurement
Application	Polar and non-polar solvents, suspensions, emulsions
Measurement range	$10^{-4} - 10^{-11}$ S·m^{-1}
Accuracy	$\pm$ (1 % + 10^{-11} S·m^{-1})
Sample amount	> 20 ml
Temperature	< 100 °C
Dimensions (L x D x H) / Weight	200 x 250 x 75 mm / 5 kg
Probes	Stainless steel electrodes, Teflon, diameter 19 mm, length 150 mm
Cable length probe	2 m
Operating system	Windows 10
Output file	Excel file
Power supply	100 - 250 V, 50 - 60 Hz or 12 V direct current
Measurement voltage	5 V

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