

Benchtop Conductivity Meter Precision Laboratory Conductivity Tester

Item Number: DS01



Introduction

Engineered for high accuracy, this benchtop conductivity meter delivers precise measurement of conductivity, TDS, salinity, and resistivity. Featuring automated verification, IP54 protection, and complete data traceability, this reliable laboratory instrument ensures operational compliance and quality control across demanding industrial workflows.

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Application	Description	Key Benefit
Battery Electrolyte Formulation	Monitoring ionic conductivity and chemical stability of liquid and gel electrolyte solutions across broad concentration gradients.	Ensures optimal electrochemical transfer efficiency and high batch-to-batch repeatability in cell research.
Advanced Materials & Nanomaterials	Assessing ionic purity, dispersion stability, and washing bath conductivities during ceramic, polymer, and metallic powder synthesis.	Prevents ionic contamination and verifies complete removal of residual processing reagents.
Pharmaceutical & Biotech Processing	Performing purified water (PW) and water for injection (WFI) verification alongside standard formulation conductivity checks.	Guarantees stringent pharmacopeia regulatory compliance with automated pass/fail verification routines.
Chemical Manufacturing Quality Control	Characterizing raw chemical feedstock, concentrated acid/base baths, and finished chemical reagent solutions.	Delivers wide-range measurement capability spanning from trace ions up to 2,000 mS/cm without changing meters.
Environmental & Wastewater Analysis	Measuring salinity, TDS, and total ionic discharge in industrial effluent streams, municipal water sources, and environmental runoff.	Provides rapid multi-parameter analysis with robust IP54 protection in active environmental laboratories.
Semiconductor & Electronics R&D	Testing ultra-pure rinse water and plating bath chemistry where trace ionic presence directly dictates production yields.	High-resolution auto-ranging allows accurate detection of minute resistivity and conductivity shifts.

Parameter	Specification Details (DS01)
Product Item Number	DS01
Conductivity Measurement Range	0.000 μ S/cm to 2,000 mS/cm
Total Dissolved Solids (TDS) Range	0.00 mg/L to 1,000 g/L
Salinity Range	0.00 to 80.00 psu
Resistivity Range	0.00 to 100.0 M Ω -cm
Temperature Measurement Range	-30.0 $^{\circ}$ C to 130.0 $^{\circ}$ C
Conductivity Resolution	Auto-range, up to 0.001 μ S/cm
Temperature Resolution	0.1 $^{\circ}$ C
Conductivity Measurement Accuracy	$\pm$ 0.5% of measured value
Temperature Measurement Accuracy	$\pm$ 0.1 $^{\circ}$ C
Conductivity Calibration Modes	Linear calibration, manual cell constant entry
Calibration Points	1-point or 2-point calibration protocols

Parameter	Specification Details (DS01)
Display Interface	7-inch high-resolution color touchscreen
Primary User Modes	Standard analysis mode, uFocus parameter highlight mode
System Security & Governance	Two-level user access management (Administrator and Operator)
Data Logging & Traceability	Timestamped records including User ID, Sample ID, and Electrode ID
Method Automation	Automated routine verification with on-screen Pass/Fail indicators
Agitation Control	Programmable magnetic stirring duration and measurement stabilization delay
Housing Protection Rating	IP54 dust and splash water resistance
External Connectivity	Compatible with dedicated data management software export workflows