

RD3000B Ground Resistance Meter

RD3000B Ground Resistance Meter

is designed and manufactured specifically for the on-site measurement of ground resistance, soil resistivity, ground voltage, and AC voltage in combination with the new lightning protection ground resistance test standard. The test current reaches 20mA, using digital and micro-processing technology. Precise 4-wire method, 3-wire method, and simple 2-wire method for measuring ground resistance. Introduced FFT (Fast Fourier Transform) technology and AFC (Automatic Frequency Control) technology to automatically identify interference and select the measurement frequency to minimize the impact of interference. Provide More accurate grounding resistance. It has unique anti-interference ability and environmental adaptability, and it has good consistency in repeated tests to ensure high accuracy, high stability and high reliability of long-term measurement. This Ground Resistance Meter is widely used in power, telecommunications, meteorology, oil fields, construction, lightning protection and industrial electrical equipment, such as ground resistance, soil resistivity, ground voltage, AC voltage measurement.






Product features

1. Special toolbox design for mainframe, using polypropylene plastic as raw material, one-time injection molding with new compound filler, low density, strength, stiffness, hardness, abrasion resistance, heat resistance and insulation performance are superior.
2. Its box can withstand the pressure of about 200kg ensures high accuracy, high stability and high reliability in various environmental tests.
3. The host's large LCD display with backlight and bar graph indication is clear at a glance.
4. It can store 300 sets of data. Through the data software, functions such as reading, checking, saving, reporting, and printing of historical data can be realized.



Product specifications and technical parameters

Picture	
Model	RD3000B
Function	Ground resistance, soil resistivity test; ground voltage, AC voltage test
Power Source	DC 11.1V 2.6Ah rechargeable lithium battery
Backlight	Controllable white screen backlight, suitable for dark places
Measurement Mode	Precision 4-wire, 3-wire measurement, simple 2-wire measurement of ground resistance
Measurement Method	Grounding resistance: rated current changing pole method, measuring current 20mA Max
	Soil resistivity: four-pole method (Winner method)

	Voltage to ground: average rectification (between P (S) -ES interface)
Measuring Range	Measure the ground resistance (R) with two, three and four wires: $0.000\Omega \sim 200.0k\Omega$
	Soil resistivity (ρ): $0.00\Omega m \sim 9999k\Omega m$
	Ground voltage: AC $0.001 \sim 600.0V$
Maximum Resolution	Two, three or four wire method for measuring ground resistance (R): 0.001Ω
	Soil resistivity (ρ): $0.01\Omega m$
	Ground voltage: $0.001V$
Precision	Two, three and four wire method for measuring grounding resistance (R): $\pm 2\% \text{ rdg} \pm 5 \text{ dgt}$ ($0.000\Omega \sim 10.00k\Omega$) $\pm 3\% \text{ rdg} \pm 5 \text{ dgt}$ ($10.00k\Omega \sim 100.0k\Omega$) $\pm 3.5\% \text{ rdg} \pm 5 \text{ dgt}$ ($100.0k\Omega \sim 200.0k\Omega$)
	Soil resistivity (ρ): according to the measurement accuracy of R ($P = 2\pi aR$ a: $1 m \sim 100m$; $\pi = 3.14$)
	Ground voltage: $\pm 2\% \text{ rdg} \pm 3 \text{ dgt}$
	Note: 1. The additional error at rC max or rP max is $\leq \pm 5\% \text{ rdg} \pm 5 \text{ dgt}$. (rC max: $4k\Omega + 100R < 50k\Omega$, rP max: $4k\Omega + 100R < 50k\Omega$)
	2. The additional error at 5V interference voltage is $\leq \pm 5\% \text{ rdg} \pm 5 \text{ dgt}$.
Test Voltage Waveform	sine wave
Test Frequency	412Hz / 825Hz / 1280Hz (automatic frequency selection)
Short-Circuit Test Current	AC 20mA max
Open Circuit Test Voltage	AC 90V max
Electrode Distance Range	1m ~ 100m
Gear Shifting	Ground resistance: $0.000\Omega \sim 200.0k\Omega$ Full automatic

	shift
	Soil resistivity: 0.00Ωm ~ 9999kΩm Full automatic shift
LCD	LCD 6-digit LCD display, white screen backlight
LCD Size	128mm×75mm
LCD Display Field	124mm×67mm
Measurement Indication	LED flashing indication during measurement, LCD countdown, progress bar graph indication
Charging Indicator	The indicator light on the charger is red when charging, and green when fully charged
Size	Instrument size: 320mm × 275mm × 145mm
	Outer package size: 400mm × 245mm × 335mm
Standard Test Leads	4 standard test leads: 15m for red, 15m for black, 10m for yellow, 10m for green
Simple Test Lines	2 simple test lines: 1.6m each for red, 1.6m each for black
Auxiliary Ground Rods	4 strings: φ10mm × 150mm
Measurement Time	Voltage to ground: about 2 times / second; ground resistance: about 7 seconds / time; soil resistivity: about 7 seconds / time
Measurement Times	5000 times or more (short-circuit test, measure once, stop for 30 seconds and then measure)
Line Voltage	AC 600V or less
Communication Interface	With USB interface, the stored data can be uploaded to a computer, saved and printed
Communication Line	1 string USB communication line, 1.5m long
Data Hold	"HOLD" symbol indicates when data is held
Data Storage	300 sets, "MEM" storage indication, "FULL" indicates that the storage is full
Data Review	"READ" symbol indication when reviewing data
Overflow Display	"OL" symbol indication when overrange overflow
Interference Test	Automatic recognition of interference signals, interference voltage is higher than 5V "NOISE" symbol indicates
Alarm Function	When the measured value exceeds the alarm set value, "beep--beep--beep--" alarm prompts
Battery Voltage	When the battery voltage is low, the low battery voltage symbol is displayed to remind you to charge the battery.
Auto Power Off	Auto power off 15 minutes after power on
Working Current	Standby: 25mA Max (backlight off); Backlight: 25mA Max (backlight power consumption alone); Measurement: 150mA Max (backlight off)
Quality	instrument: 2.66kg (including battery)

	Total weight: 6.88kg (including packaging)
Toolbox	Military toolbox design, can bear 200kg
Working Temperature and Humidity	-10 °C ~ 40 °C; below 80% rh
Storage Temperature and Humidity	-20 °C ~ 60 °C; below 70% rh
Overload Protection	Measurement of ground resistance: AC 280V / 3 seconds between each port of C (H) -E, P (S) -ES
Insulation Resistance	above 20MΩ (500V between circuit and case)
Withstand Voltage	AC 3700V / rms (between circuit and case)
Protection Class	IP54
Electromagnetic Characteristics	IEC61326(EMC)
Suitable For Safety Regulations	IEC61010-1 (CAT III 300V, CAT IV 150V, pollution degree 2). IEC61010-031; IEC61557-1 (ground resistance); IEC61557-5 (soil resistivity); JJG 366-2004 (ground resistance table).



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