

Digital Earth Ground Resistance Tester

RD3011E & RD3012E



RD3011E



RD3012E

Digital Earth Ground Resistance Tester specially designed and manufactured for the field measurement of ground resistance, adopts digital and micro-processing technology, 3 wire or 2 wire method to measure ground resistance, with unique calibration function for wire resistance, anti-interference ability and environmental adaptability, to ensure the long-term measurement of high precision, high stability and reliability; The Digital Earth Ground Resistance Tester out shell adopts waterproof protection case, anti-collision, anti-fall, waterproof (protection grade IP65), which is strong, safe and durable, the instrument is also equipped with large capacity rechargeable lithium battery pack, especially suitable for outdoor construction site to use. It is widely used in measuring ground resistance of electric power, telecommunication, meteorology, oil field, construction, lightning protection and industrial electrical equipment.



Product features



1. The fuselage is light, easy to carry and operate.
2. The large LCD display of host machine, with white backlight and bar graph indicating that can be seen clearly.
3. It can store 400 groups of data,

4. With the indicator of max/min/average value
5. With the functions as historical data access, reading and preservation.
6. The instrument out shell adopts waterproof protection case, anti-collision, anti-fall, waterproof (protection grade IP65), which is strong, safe and durable.



Product specifications and technical parameters

1. Technical Parameters

Picture		
Model	RD3011E	RD3012E
Function	Measurement of earth resistance, voltage to earth	Measurement of earth resistance, voltage to earth, low value resistance
Power Supply	DC 9V Alkaline dry cell LR14 1.5V×6pcs	DC 7.4V 2600mAh rechargeable lithium battery, full of about 8.4V
Test Frequency	128Hz	128Hz/111Hz/105Hz/94Hz (AFC)
Meter Dimension	215mm(L)×178mm(W)×83mm(H)	280mm(L)×260mm(W)×160mm(H)
Simple Test Wire	Red 1.6m	2 wires: each for red 1.6m and black 1.6m
Communication Interface		With USB interface, software monitoring, storage data can be uploaded to computer, saved or printed.
Communication Wire		One piece of USB communication wire, wire length 1.5m
Auto-shut off		Automatically shut down after 10 minutes
Battery Voltage	While battery voltage decreases to around $7.8V \pm 0.1V$, will display battery voltage low symbol, and remind to charging the battery	While battery voltage decreases to around $7.2V \pm 0.1V$, will display battery voltage low symbol, and remind to charging the battery
Alarm Function	Measuring value exceeds alarm	Measuring value exceeds alarm

	setting value, LCD flashes display alarm symbol	setting value, will "Toot-toot-toot" alarm hint
Weight	Tester: 1.325kg	Tester: 4.73kg
	Test wires: 0.847kg (include the simple test wires)	
	Auxiliary Grounding Rod:0.468kg(2pcs)	
	Tester package: 0.915kg	
Power Consumption	Backlight: 25mA Max	
	Standby: 25mA Max (Backlight shut down)	
	Measurement: 200mA Max (Backlight shut off)	
Function	Description	
Backlight	Controllable screen backlight, suitable for dim places	
Measuring Mode	Precision 3-wire measurement, simple 2-wire measurement	
Measuring Method	Earth Resistance: rated current change-pole method, measurement current 20mA Max	
	Earth Voltage: Average rectification	
Short Circuit Test Current	AC 20mA max	
Data Mode	Average value, maximum value, minimum value	
Wire Resistance Verification	To avoid errors caused by incomplete insertion of test wire into instrument interface or poor contact or replacement of extended test wire by users, so as to make the grounding resistance measurement more accurate	
Display Mode	4-digital super-large LCD display, white screen backlight	
Measure Indicator	LED flash indicator and LCD count down display in measurement	
LCD Dimension	128mm×75mm; display area:124mmX67mm	
Test Wires	3 wires: each for red 15m, yellow 10m, and green 5m	
Auxiliary Grounding Rod	2 Pcs: Φ10mm×150mm	
Measuring Rate	Earth Voltage: about 3 times/second; Earth resistance: about 15 seconds/time	
Measuring Times	Over 5000 times (20Ω gear measure 10Ω, interval time should be at least 30 seconds)	
Line Voltage	Measurement of earth voltage: below AC 600V	
Data Storage	400 groups, "FULL" symbol flash display storage is full	
Data Hold	Data hold function: "HOLD" symbol display	
Data Access	Data read function: "READ" symbol display	
Overflow Display	Exceed measuring range overflow function: "OL" symbol display	
Working Temperature & Humidity	-10℃ ~ 40℃, below 80%RH	
Storage temperature & humidity	-20℃ ~ 60℃, below 70%RH	

Overload Protection	Measure earth resistance: between each interface of C-E, P-E, AC 280V/3 seconds
Insulation Resistance	Over 10MΩ (between circuit and outside shell is 500V)
Withstanding Voltage	AC 3700V/rms. (Between circuit and outside shell)
Electromagnetic Features	IEC61010-4-3,wireless frequency electromagnetic field ≤1V/m
Protection Type	IEC61010-1 (CAT III 300V, CAT IV 150V, Pollution 2);
	IEC61010-031;
	IEC61557-1 (Earth resistance);

2. Measurement Range & Accuracy

Model	RD3011E & RD3012E		
Test Function	Range	Accuracy	Resolution
Earth Resistance	0.01Ω ~ 20Ω	±2%rdg±3dgt (Auxiliary earth resistance 100Ω±5%, voltage to earth<10V)	0.01Ω
	0.1Ω ~ 200Ω		0.1Ω
	1Ω ~ 2000Ω		1Ω
Earth Voltage	0V~600V AC	±2%rdg±3dgt	1V



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