GDCR3200 Clamp Type Earth Resistance Tester

General Information

GDCR3200 is specially designed and manufactured for on-site measurement of earth resistance , soil resistivity , grounding voltage, ground wire leakage current, AC current and DC resistance. It adopts digital processing technology, precision 4 wire method,3 wire method and simple 2 wire method , selection method , double clamp method to measure grounding resistance , large-diameter current clamp design ,can measure the grounding system with large grounding down-conductor, and can flexibly and accurately measure various complexities such as single point and mesh grounding. Any grounding resistance value of the grounding condition, it is not necessary to disconnect any parallel grounding electrode when parallel grounding measurement, to maximize the convenience of measurement. The introduction of FFT (Fast Fourier Transform) technology, AFC (Automatic Frequency Control) technology, unique anti-jamming capability and environmental adaptability, repeated test consistency, ensuring high precision, high stability and high reliability for years of measurement. It is widely used in grounding resistance, soil resistivity, grounding voltage, alternating current and leakage current measurement of electric power, telecommunications, meteorology, oil field, construction, lightning protection and industrial electrical equipment.

GDCR3200 double clamp multi-function grounding resistance tester, also known as double-clamp grounding resistance tester, double-clamp grounding resistance meter, consists of main unit, current clamp (double clamp), data software, test line, auxiliary grounding rod, communication line and so on. The host has a large LCD display with backlight and bar graph indication at a glance. At the same time, it can store 2000 sets of data, and the data software can realize the functions of reading, checking, saving, reporting and printing of historical data.

Basic conditions & work conditions

Influence	**Basic conditions**	**Working conditions**
Environment temperature	23℃±1℃	-10℃～40℃
Environment humidity	40%～60%	＜80%
Working voltage	9V±0.1V	9V±1.5V
Auxiliary grounding resistance	＜100Ω	＜5kΩ
Interference voltage	Avoid	＜20V
Interference current	Avoid	＜2A
Electrode distance when measuring R	**a**＞5d	**a**＞5d
Electrode distance when measuring ρ	**a**＞20h	**a**＞20h

Specification

Function	Grounding resistance, soil resistivity, DC resistance, grounding voltage, AC current, leakage current measurement
Power Supply	DC 9V (alkaline dry battery LR14 1.5V 6 knots, continuous standby 300 hours)
Backlight	Controllable blue backlight, suitable for use in dark place.
Measuring Mode	Precision four-wire, three-wire method measurement, simple two-wire, selection method, double clamp method to measure grounding resistance
Measuring Method	Two-three four-wire method measurement: pole-changing method, measuring current 20mA Max Selection method measurement: pole-changing method, measuring current 20mA Max Double clamp method: non-contact mutual inductance measurement, test current 1mA Max Soil resistivity: quadrupole method (Wenner method) DC resistance: pole-changing method AC current: average rectification (clamp) Ground voltage: average rectification (between P(S)-ES interfaces)

Test voltage waveform	sine wave
Test frequency	128Hz/111Hz/105Hz/94Hz (automatic frequency selection)
Short circuit test current	AC 20mA max
Open circuit test voltage	AC 40V max
Electrode spacing range	1m ~ 100m
Display Mode	4-digital super-large LCD display with backlight
Measuring indicator	During measurement, LED flash indicator, LCD count down display
LCD dimension	128mm×75mm；Display field:124mm×67mm
Dimension	L×W×H: 215mm×190mm×95mm
Current clamp size	L×W×H: 185mm×115mm×43mm
Testing wires	Four wires: each for Red 20m, Black 20m ,Yellow 10m, and Green 5m
Simple testing wire	2 wires: each for Red 1.6m and Green 1.6m

Auxiliary earthing rod	4 PCS：Φ10mm×150mm
Current clamp	2 PCS: each for blue black plug, red black plug
Current clamp diameter	Φ68mm
Current clamp turns ratio	1000:1
Current clamp lead length	2m
Measuring time	AC current: about 2 times/s Voltage to ground: about 2 times/s Earth resistance: about 7s/times
Measuring Times	Over 5000 times (Short circuit test , stop 30 seconds after one test)
Circuit Voltage	Measuring voltage to ground: measuring below AC 600V
RS232 Interface	Possess RS232 interface, software supervision, storage data can be uploaded to computer, saved or printed.
Communication Wire	One piece of RS232 communication wire, with length 1.5m

Data Storage	2000 sets, “**MEM**” icon to indicate storage, “**FULL**” icon to indicate storage is full
Data Hold	Data hold function: “**HOLD**” icon display
Data Read	Data read function: “**READ**” icon display
Overflow Display	Exceeding measuring range overflow function: “**OL**” icon display
Current clamp low current indication	When the selection method or double clamp method is used, when the current signal received by CT2 is lower than 0.5mA, the “ ” symbol is displayed. In this case, check the clamping direction of CT2 current clamp.
Interference test	Automatic identification of interference signals, "**NOISE**" symbol indication when the interference voltage is higher than 5V
Auxiliary grounding test	With auxiliary grounding resistance test function, 0.00kΩ~30.00kΩ (100R+rC<50kΩ, 100R+rP<50kΩ)
Alarm Function	When measuring value exceeds alarm setting value, there is “Toot-toot-toot” alarm hint
Battery Voltage	When battery voltage decreases to about 7.5V, battery voltage low icon “ ” will display, reminding to charge.
Auto power off	automatically shuts down after 15 minutes of power on

Power Consumption	Backlight: 25mA Max. (backlight power consumption)
	Standby: 25mA Max. (Backlight shut off)
	Measurement: 150mA Max. (Backlight shut off)
Weight	Total: 8.05 kg (with accessories)
	Tester:1653g (including battery)
	Current clamp: 1050g (2 PCS)
	Testing Wires: 1560g(including simply testing wires)
	Auxiliary earthing rod: 935g (4 PCS)
Working Temperature & Humidity	-10℃~40℃:; below 80%rh
Storage temperature & humidity	-20℃~60℃; below 70%rh
Overload Protection	Measuring earth ground resistance: between each interfaces of C(H)-E, P(S)-ES, AC 280V/3 seconds
Insulation Resistance	Over 20MΩ(between circuit and enclosure it is 500V)

Withstanding Voltage	AC 3700V/rms (Between circuit and enclosure)
Electromagnetic characteristics	IEC61326(EMC)
Suitable for safety regulations	IEC61010-1 (CAT III 300V, CAT IV 150V, pollution degree 2); IEC61010-031; IEC61557-1 (earth resistance); IEC61557-5 (soil resistivity); JJG 366-2004 (earth resistance meter) JJG 1054-2009 (clamp earth resistance meter)