

**Clamp Earth Resistance Tester**

**6410** series of Clamp Grounding Resistance Tester, in the measurement of a grounding system with loop, does not require breaking down the grounding down lead, and no need the auxiliary electrode. It is safe, fast and simple in use.

**6410** series clamp grounding resistance meter can measure ground faults which cannot be measured by traditional methods. It can be used in applications where traditional methods cannot be measured, because the **6410** series clamp grounding resistance meter measures the combined value of grounding body resistance and grounding lead resistance. .

**Specification**

Model	Jaw Size (mm)	Range of Resistance (Ω)	Range of Current (A)	Storage Function	Alarm Function
6410	55×32	0.01~200	--	99 Units	Yes
6410A	55×32	0.01~1000	--	99 Units	Yes
6410B	55×32	0.01~1000	0.0~30.0	99 Units	Yes

**6410****Ranges and Accuracy**

Mode	Range	Resolution	Accuracy
Resistance Range	0.010Ω-0.099Ω	0.001Ω	± (1%+ 0.01Ω)
	0.100Ω-0.99Ω	0.01Ω	± (1%+ 0.01Ω)
	1.0Ω-49.9Ω	0.1Ω	± (1%+ 0.1Ω)
	50.0Ω-99.5Ω	0.5Ω	± (2%+ 0.5Ω)
	100Ω-199Ω	1Ω	± (3%+ 1Ω)
	200Ω-395Ω	5Ω	± (6%+ 5Ω)
	400-590Ω	10Ω	± (10%+ 10Ω)
	600Ω-1000Ω	20Ω	± (20%+ 20Ω)
Current Range	0.00mA-9.95mA	0.05mA	± (2.5%+ 1mA)
	10.0mA-99.0mA	0.1mA	± (2.5%+ 5mA)
	100mA-299mA	1mA	± (2.5%+ 10mA)
	0.30A-2.99A	0.01A	± (2.5%+ 0.1A)
	3.0A-9.9A	0.1 A	± (2.5%+ 0.3A)
	10.0A-19.9A	0.1 A	± (2.5%+ 0.5A)
	20.0A-30.0A	0.1 A	± (3%+ 1A)

**Technical Specifications**

**Power Source:** 6VDC (4pcs 5# alkaline battery)

**Working Temperature:** -10 ° -55 ° C

**Relative Humidity:** 10%-90%

**LCD:** 4-digital LCD, 47mm (L) × 28.5mm (W)

**Meter Size:** 275mm (L); 85mm (W); 56mm (H)

**Meter Weight (including batteries):** 1130g

**Protection Level:** Double insulation

**Structural Feature:** Clamp and jaw type

**Range Shift:** Automatic

**External Magnetic Field:** <40A/m

**External Electric Field:** <1V/m

**Single Measuring Time:** 1 second

**Measurement Resistance Frequency:** >1KHz

**Maximum Resistance Measurement Resolution:** 0.001 Ω

**Resistance Measurement Range:** 0.01-1000 Ω

**Current Measuring Range:** 0.00-30.0A(C type)\*

**Measured Current Frequency:** 50/65Hz

**Storable Measurement Data:** 99 Units

**Setting Range of Resistance Alarm Critical Value:** 1-199 Ω

**Setting Range of Current Alarm Critical Value:** 1-499mA(C type)\*

**Note:** with \*\*\* item is limited to C type

**6412****6412<sup>+</sup>****Technical data**

Basic Function		6412/6412 <sup>+</sup>	
Measure mode	Measuring range	Resolution	Basic accuracy
Resistance	0.010-0.099Ω	0.001Ω	±(1%+0.01Ω)
	0.10-0.99Ω	0.01Ω	±(1.5%+0.01Ω)
	1.0-49.9Ω	0.1Ω	±(1%+0.1Ω)
	50.0-99.5Ω	0.5Ω	±(2%+0.5Ω)
	100-199Ω	1Ω	±(3%+1Ω)
	200-395Ω	5Ω	±(6%+5Ω)
	400-590Ω	10Ω	±(10%+10Ω)
	600-1300Ω	20Ω	±(20%+20Ω)
Current	0-80mA	0.05mA	±(2.5%+1mA)
	80-650mA	0.5mA	±(2.5%+2mA)
	650mA-4A	5mA	±(2.5%+10mA)
	4-30A	10mA	±(2.5%+20mA)

Basic Function		140 Clamp leaker	
Range	Sampling rate	Range	Accuracy
30mA~300mA 30A/300A	Approx.2times/s	0.00mA~9.99mA	±1.2%±5dg
0.01mA		10.0mA~300.0mA	±1.5%±5dg
0.00~300.0A(50/60Hz)		0.00A~9.99A	±1.2%±5dg
CT pincer head		10.0A~99.9A	±1.5%±5dg
DC 3V Button-type battery LR44 2 or SR44 2		100A~199.9A	±2%±5dg
Approx.5mW		200.0A~300.0A	±4%±5dg

**140**

Special Function		6412	6412 <sup>+</sup>	140
Low battery indication	✓	✓	✓	✓
Date hold/storage	✓	✓	✓	✓
Auto power off	✓	✓	✓	✓
Relative humidity	10%~90%	10%~90%	10%~90%	10%~90%
Working environment	-10°C~55°C	-10°C~55°C	-10°C~55°C	0~40°C
Outer magnetic field	<40A/m	<40A/m	<40A/m	<40A/m
Outer electric field	<1V/m	<1V/m	<1V/m	<1V/m
Unit measuring time	1s	1s	1s	1s
Resistance measuring frequency	>1KHz	>1KHz	>1KHz	>1KHz
Highest resolution of Resistance measuring	0.001Ω	0.001Ω	0.001Ω	0.001Ω
Frequency of measured current	50Hz sine	50Hz sine	50Hz sine	50Hz sine
Storage measuring data	99 group	99 group	60 group	60 group
Setting range of resistance critical value alarm	1~199Ω	1~199Ω	1~199Ω	1~199Ω
Setting range of current critical value alarm	1~499mA	1~499mA	1~499mA	1~499mA
Protection scale	Double insulated	Double insulated	Double insulated	Double insulated
Operation way	Auto range	Auto range	Auto range	Auto range
Clamp size	32mm	32mm	32mm	40mm
Power	6V(4×1.5V)	6V(4×1.5V)	6V(4×1.5V)	DC 3V

Accuracy (23°C±3°C, below 70%RH)	+2%rdg±5dg(23°C±5°C, below 75%rh)
Display Mode	4digits LCD display
LCD Dimension	35mm×21.5mm; display area: 32mm×15mm
Sampling Rate	about 2 times/s
Frequency	AC 45Hz~400Hz
Polar Indication	Automatic identification, display “~” symbol
Wire Position	The tested wire in the center of the clamp jaw
Range Shift	Automatically
Line Voltage	Line measurement below DC 600V
RS232 Interface	With RS232 interface, storage data can be uploaded to computer, software monitoring
Communication Parameter	Baud rate:9600, data bit 8, stop bit 1, check bit NONE
Data Storage	99units, display FULL symbol indicate storage full
Data Hold	Data hold function: DH symbol display
Overflow display	Exceed measure range overflow function: OL symbol display
Auto Shut Down	5 Minutes after power on, the meter shuts down automatically without any operation to reduce battery consumption
Battery Voltage	While battery voltage decreases at around 7.2V, will display low battery voltage symbol:  ; and remind to replace the battery
Meter Weight	210g
Working Current	20mA

**140D**

CT Size	16mm×18mm
Meter Size	215mm×61mm×32mm
Function	Measurement of car dark current, leakage current and other AC/DC current, leakage current
Power Supply	Zn-Mn dry battery 6F22 9V
Test Mode	Clamp CT, Non contact measurement
Range	0mA~60.0A AC/DC
Resolution	1mA AC/DC

Working Temperature	-10°C ~ 50°C,below 80%rh
Limit Temperature Error	-10°C~0°C and 40°C~50°C, the maximum increase in error is 2%rdg
Storage Temperature	-10°C ~60°C,below 70%rh
Insulating Strength	AC3700V/rms (between the core and outside shell)
Suitable Safety Standard	IEC1010-1, IEC1010-2-032, pollution, etc 2, CAT III(600V)