

# ES3050 Digital equipotential tester



## I. Product Introduction

ES3050 digital equal potential tester is also known as micro-ohmmeter, ohmmeter, DC grounding resistance tester, using the most microprocessor technology, four-wire test, safe and reliable. It is a special instrument for detecting equipotential bonding quality between metal components of objects such as housings, lightning protection belts, ground beams, structures, cabinets, steel bars, pipes, windows, guardrails, radiators, and assembly lines. It can also measure the resistance of the connection conductors between various electrical equipments and earth ground, the DC resistance of transformers, and also can measure the contact resistance of switches and socket contacts, coils, metal wires, welding points and other low-value resistances. Widely used in telecommunications, electric power, meteorology, computer room, oil field, power distribution lines, iron tower transmission lines, gas stations, factory grounding grids, lightning rods, etc. It also has the function of measuring DC voltage and AC voltage.

The ES3050 digital equipotential tester consists of a host computer, monitoring software, test leads, and communication lines. The mainframe large-screen LCD display is clear at a glance. Can store 500 sets of data, resistance measurement range:  $0.0001\ \Omega \sim 30\text{K}\ \Omega$ , DC voltage range:  $0.0 \sim 1000\text{V}$ , AC voltage range:  $0.0 \sim 750\text{V}$ . The monitoring software has on-line real-time monitoring and historical query functions, dynamic display, alarm value setting and alarm indication function, and functions such as reading, reviewing, saving, reporting and printing of historical data.

## II. Technical Specification

Function	Equipotential bonding resistance test between metal components, low-value resistance test, resistance test of connecting conductors between ground and ground electrodes, contact resistance test, etc.	
DC resistance range	$0.0001\ \Omega \sim 30.00\text{K}\ \Omega$	Accuracy $\pm 1\% \text{rdg} \pm 5 \text{dgt}$
Resistance resolution	$0.0001\ \Omega$	
Test method	Four-wire test	
Test current	$\geq 1\text{A}$	
Open circuit voltage	$\leq 7\text{V}$	

<b>Capacity factor</b>	Measuring capacity factor $\leq$ 15W
<b>DC voltage range</b>	0.0V $\sim$ 1000V DC      Accuracy $\pm$ 1.5%rdg $\pm$ 5dgt
<b>DC voltage resolution</b>	0.1V
<b>AC voltage range</b>	0.0V $\sim$ 750V AC      Accuracy $\pm$ 1.5%rdg $\pm$ 3dgt
<b>AC voltage resolution</b>	0.1V
<b>Power</b>	DC 6V 4.5Ah Large-capacity battery Continuous standby for more than 100 hours
<b>Backlight</b>	Controllable gray screen backlight, suitable for use in dim places
<b>Display mode</b>	4-bit large LCD display, gray screen backlight
<b>Measurement instructions</b>	LED flashing indicator during measurement, LCD countdown display
<b>LCD size</b>	108mm $\times$ 65mm
<b>Instrument size</b>	L/W/H: 277.2mm $\times$ 227.5mm $\times$ 153mm
<b>Test line length</b>	Red 5m, black 5m each 2PCS
<b>Measure time</b>	Resistance test: about 3second/time; Voltage test: about 2times/sec
<b>USB interface</b>	With USB interface, software monitoring, storage data can be uploaded to the computer, save and print
<b>Communication Line</b>	USB Communication Line 1PC
<b>Data storage</b>	500 groups, "MEM" stores indicates, the "FULL" symbol indicates that the storage is full
<b>Data review</b>	Data review function: "MR" symbol display
<b>Overflow display</b>	Over-range overflow function: "OL" symbol display
<b>Alarm function</b>	Alarm when the measured value exceeds the alarm setting value
<b>Battery voltage</b>	Real-time display of battery power, reminding timely charging when battery voltage is low
<b>Automatic shut-down</b>	"APO" indicates automatic shutdown after 15 minutes
<b>Power consumption</b>	Standby: 30mA Max(backlight off)
	Turn on backlight: 43mA Max
	Measure: 2A Max(backlight off)
<b>Weight</b>	Instrument: 2397g(including battery)
	Test line: 850g(including simple test line)
	Instrument box: 1200g
<b>Working temperature and humidity</b>	-10 $^{\circ}$ C $\sim$ 40 $^{\circ}$ C; below 80%rh
<b>Storage temperature and humidity</b>	-20 $^{\circ}$ C $\sim$ 60 $^{\circ}$ C; below 70%rh
<b>Overload protection</b>	C1-C2 P1-P2 AC 280V/3 seconds between ports
<b>Insulation resistance</b>	Above 10M $\Omega$ (500V between circuit and housing)

<b>Pressure resistance</b>	AC 3700V/rms( between circuit and housing)
<b>Electromagnetic properties</b>	IEC61010-4-3, Wireless frequency electromagnetic field $\leq$ 1V/m
<b>Suitable for Safety Regulations</b>	IEC61010-1, CAT III 600V, pollution degree 2, JJG724-1991 "DC digital ohmmeter verification procedure", JJG166-1993 "DC resistance verification procedure", "DL/T967-2005 loop resistance tester and DC resistance fast Tester verification procedure"

### III. Accessories

<b>Instrument</b>	1PC
<b>Instrument box</b>	1PC
<b>Monitoring Software CD</b>	1PC
<b>USB communication line</b>	1PC
<b>Test line</b>	4PCS (red 5m, black 5m each 2)
<b>charger</b>	1PC
<b>Manual, certificate</b>	1SET



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