

# ES3030 Digital Earth Network Tester



## I. Product Introduction

ES3030 digital earth network tester, also known as the ground frequency resistance tester and grounding resistance meter, is a common instrument for measuring grounding resistance. It uses dual-frequency measurement technology, large LCD gray screen backlight display and microprocessor technology to meet the requirements of the two-line, three-wire, and four-wire test resistance, it can measure soil resistivity, step voltage, distribution potential, and contact voltage at the same time. Suitable for telecommunications, electricity, meteorology, computer rooms, oil fields, power distribution lines, iron tower transmission lines, gas stations, factory grounding networks, lightning rods and so on. Instrument testing is precise, fast, simple, stable and reliable.

ES3030 digital grounding resistance tester is controlled by a microprocessor. The automatic dual-frequency technology can accurately measure and calculate the grounding resistance value under 50 Hz power frequency in a strong interference state, and the large-screen display is clear at a glance. At the same time store 300 sets of data, resistance measurement range:  $0.030\Omega \sim 2000\Omega$ . The measurement data can be printed out via the serial thermal printer.

ES3030 digital grounding resistance tester consists of host, test line, thermal printer, and grounding pin. It has the functions of reading, viewing, saving, printing, and other functions of historical data.

## II. Technical Specification

<b>Ground resistance range</b>	$0.030\Omega \sim 2000\Omega$ Accuracy $\pm 1.5\% \text{rdg} \pm 3 \text{dgt}$
<b>Ground resistance resolution</b>	$0.001\Omega$
<b>Base condition</b>	$23^{\circ}\text{C} \pm 5^{\circ}\text{C}$ , below 75%rh      (Auxiliary ground resistance $10\Omega \pm 5\%$ , voltage to earth $< 10\text{V}$ )
<b>Function</b>	Ground resistant test, Soil resistivity test, Step voltage test, distribution potential test, contact voltage test
<b>Power</b>	AC 220V

<b>Backlight</b>	Controllable gray screen backlight, suitable for use in dim places
<b>Measurement mode</b>	Precise four-wire measurement, simple three-wire measurement, simple two-wire measurement
<b>Measurement method</b>	Grounding resistance: rated current method, 45Hz, 55Hz automatic dual frequency
<b>Test frequency</b>	45Hz、55Hz automatic
<b>Short circuit maximum current</b>	5A(Sine wave)
<b>No-load maximum voltage</b>	400V
<b>Wire resistance check</b>	Avoid grounding resistance measurement errors because of the test line is not fully inserted into the instrument interface or the contactor is incorrectly replaced or the user replaces the extended test leads, to make the ground resistance more accurate.
<b>Display mode</b>	4-bit large LCD display, gray screen backlight
<b>Measurement instructions</b>	LED indicator lights during measurement, LCD countdown display
<b>LCD size</b>	108mm×65mm
<b>Instrument size</b>	L/W/H: 277.2mm×227.5mm×153mm
<b>Standard test line length</b>	Red 15m, black 15m, yellow 10m, green 10m, yellow 1.5m, green 1.5m each one
<b>Auxiliary grounding rob</b>	2PCS: 1.5m 2PCS: 22cm
<b>Measurement time</b>	Ground resistance: about 50seconds/time
<b>Number of measurement</b>	More that 5000 times
<b>DB9 interface</b>	Connect a thermal printer to print measurement data in real time
<b>Print</b>	External serial thermal printer (with DB9 data cable)
<b>Data storage</b>	300 groups, "MEM" storage instructions, display "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>Automatic shut-down</b>	"APO" indicates, automatic shutdown after 15 minutes
<b>Power consumption</b>	Standby: <5W
	Measure: 600W
<b>Weight</b>	Instrument: 8kg
	Test line: 1.3kg(1 set)
	Auxiliary ground rob: 1.3kg(4PCS)
<b>Working temperature and humidity</b>	-10℃～40℃; Below 80%rh
<b>Storage</b>	-20℃～60℃; Below 70%rh

<b>temperature and humidity</b>	
<b>Insulation resistance</b>	10MΩ above(Between circuit and case500V)
<b>Pressure resistance</b>	AC 3700V/rms(Between circuit and case)
<b>Electromagnetic properties</b>	IEC61010-4-3, Wireless frequency electromagnetic field≤1V/m
<b>Suitable for Safety Regulations</b>	IEC61010-1、IEC1010-2-31、IEC61557-1,5、IEC60529(IP54)、Pollution Degree 2、CAT III 300V

### III. Accessories

<b>Meter</b>	1PC
<b>Meter bag</b>	1PC
<b>Auxiliary ground rob</b>	4PCS
<b>External thermal printer</b>	1PC (Including data lines, power lines)
<b>Test line</b>	4Strips (red 15m, black 15m, yellow 10m, green 10m each 1)
<b>Simple test line</b>	2Strips (yellow 1.5m, green1.5m each 1)
<b>220V power line</b>	1PC
<b>Manual, certificate</b>	1SET



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