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# ESD 20K (Electrostatic Discharge) ESD Generator

## Overview

Electrostatic discharge (ESD) is a common natural phenomenon. The effects of ESD on electrical and electronic equipments, devices or systems are everywhere. It is a very high degree of harmful electromagnetic energy. Only to improve the level of anti-static interference can ensure the safe use of electronic products. ESD generator is used to evaluate the electrostatic immunity performance of electrical components and electronic equipments by simulating real electrostatic discharge as defined in the standard IEC/ EN 61000-4-2. Kindly find below features & technical data of our model ESD 20K.

## Standard and basis of product designing & manufacturing

- GB/T 17626.2
- IEC/ EN 61000-4-2: Testing and measurement techniques – Electrostatic discharge immunity test

## Power supply

- Input voltage: AC220V ( $\geq 150W$ )
- Frequency: 50/60Hz
- Voltage resolution: 1V
- Voltage harmonic distortion  $\leq 5\%$

## Environment

- Indoor use
- Altitude not exceeding 1000metres
- Ambient temperature  $15^{\circ}C \sim 35^{\circ}C$
- Relative humidity no more than 85%
- No conductive dust, no fire or explosion hazard, no corroding metal or insulating gas, sine wave voltage waveform, waveform distortion rate  $\leq 5\%$
- Earthing resistance not more than  $0.5\Omega$

## Features

- User friendly 7" Touch Panel Display
- Support multi-language & facilitate users
- Built-in environment self-test program
- Programmable operation
- Pre-programmed IEC/ EN 61000-4-2 test settings
- Very convenient to replace the discharge modules to meet different standards of the test requirements

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- RS232 / USB Port, PC control operation & printable test report

## Picture



## Technical data

Model	ESD 20K
Standard	IEC61000-4-2、GB/T 17626.2
Operation	7" Touch Panel Display
Output voltage	0.2~±20kV
Polarity	Positive/ negative/ alternating
Energy storage capacity	150pF
Discharge resistor	330Ω
Discharge current rise time	0.6~1ns
The first peak current (±15%)	7.5A at 2kV/ 15.0A at 4kV/ 22.5A at 6kV/ 30.0A at 8kV
Current at 30ns (±30%)	4.0A at 2kV/ 8.0A at 4kV/ 12.0A at 6kV/ 16.0A at 8kV
Current at 60ns (±30%)	2.0A at 2kV/ 4.0A at 4kV/ 6.0A at 6kV/ 8.0A at 8kV
Holding Time (air discharge)	≥5s
Discharge Modes	Contact Discharge & Air Discharge
Operating Modes	Single discharge & repetitive discharges
Discharge Trigger	Manual, automatic or remote
Working Mode	IEC level mode/ user mode/ program mode/ voltage rising patterns

Discharge Interval	0.05~9.99s
Discharge Count	1~9999
Power Supply	AC220V ± 10%,50/60Hz
Ambient Temperature	15°C ~ 35°C

## Electrostatic discharge test configuration

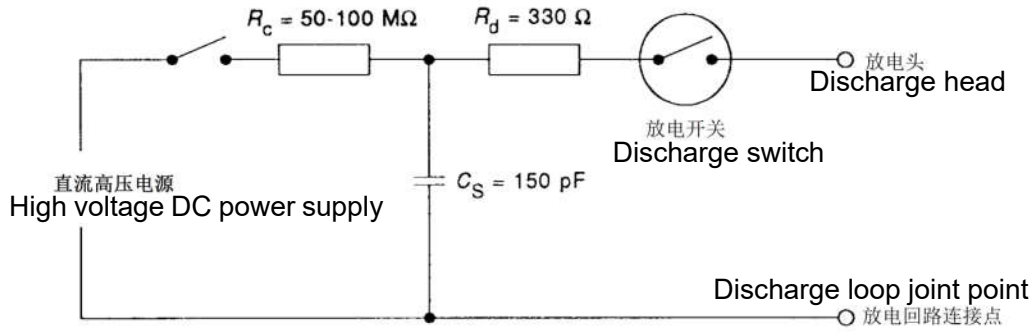
ESD1700 electrostatic discharge test set-up is for table-top/ floor-standing equipment laboratory tests (ESD immunity test environment configuration), which are designed in strict accordance with the latest IEC61000-4-2 standard requirements. Products have the advantage of flexible assembly, beautiful appearance, strong and so on.



Model	ESD 1700	
Specifications	Table-top equipment set-up	Floor-standing equipment set-up
Test Stand	1700*900*800mm	1100*800*100mm
Ground Reference Plane	2700*1800*1.5mm	2700*1800*1.5mm
Horizontal Coupling Plate	1600*800*1.5mm	/
Vertical Coupling Plate	500*500*1.5mm	500*500*1.5mm
Vertical Coupling Seat	/	500*500*1200mm
Insulation Pallet	1000*800*1.5mm	/
Resistance Cable	2*470KΩ	2*470KΩ

## Basic circuit diagram

In the figure, 150pF capacitor represents human body's energy storage capacitor, 330Ω resistor represents the body's resistance when the human body is holding keys and other metal tools.



### Measured waveform

