

# ESD - simulator IEC, ISO, ANSI,...

## SESD 30000

With self-test of the simulator



Saving costs for re-calibration

Absolutely necessary for automatically tests



- ◆ 30 kV air discharge and 30 kV contact discharge
- ◆ Version SESD 30000 - A Battery and / or main operation
- ◆ Automatic charge absorber integrated
- ◆ Plug-in R and C networks - it is possible to combine various C - modules and R – modules

### Introduction

The ESD simulator SESD 30000 can be used for EMC tests on systems and installations according to the standards IEC / EN 61000-4-2 and ISO 10605 (Automotive).

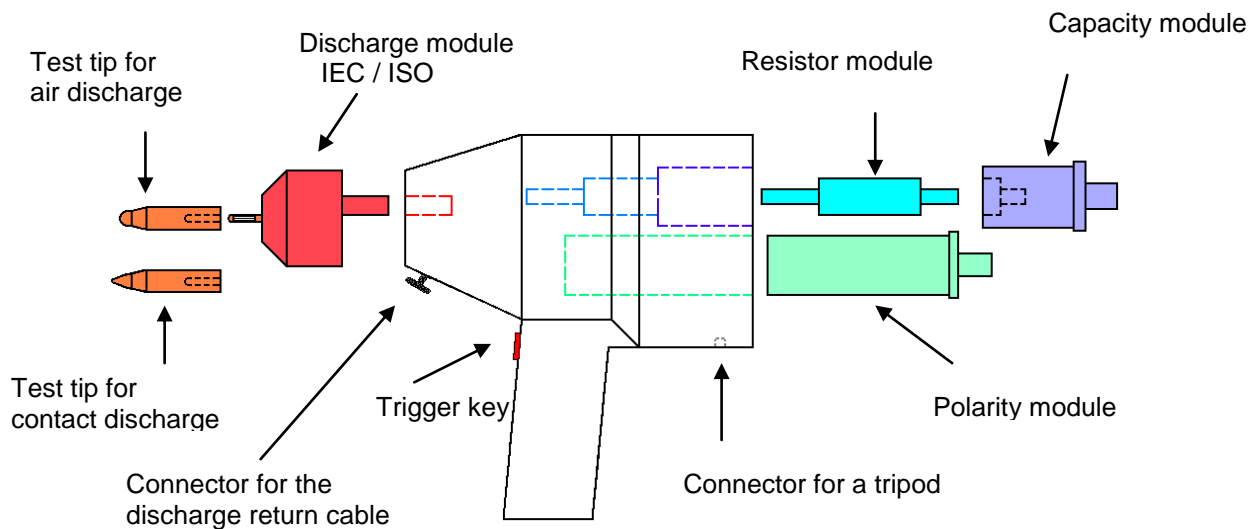
The flexible set-up of the SESD 30000 allows further tests according to different standard and customer definitions.

### Benefits

- ◆ Capacity modules available up to 1000 pF
- ◆ Resistor modules available from 50 Ohm up to > 5 kohm; **Special module 0 Ohm** (only for air discharge)
- ◆ **Automatic polarity switching module** (optional)
- ◆ **Fast Rise Time module to 0,3 ns** (optional). Possibility of stricter and more aggressive tests (e.g. ANSI)
- ◆ Desktop control unit with a **big display** and digits which are easy to read
- ◆ All **modules** are being **electronically recognised** – the result is shown on the display
- ◆ **Ergonomic grip** with big trigger key
- ◆ **Big keys** for easy and fast parameter adjustments
- ◆ User defined adjustments possible as following: contact discharge with contact control or external triggering via separate key
- ◆ Remote control including RS 232 optical set with 10 m fibre optics cable and control software (optional)
- ◆ Self-test of the ESD-generator, adjustment by remote control or service menu

### Example: test level and voltages according to IEC and ISO

IEC / EN 61000-4-2:	-> 150 pF / 330 Ohm, discharge voltage up to 30 kV
ISO TR 10605:	Tests from inside the vehicle -> 330 pF / 330 ohm and 2000 Ohm, up to 30 kV
	Tests from outside the vehicle -> 150 pF / 330 ohm and 2000 Ohm, up to 30 kV



## Technical data SESD 30000

### Generator

Output voltage	⊗ adjustable via digital pot	
Air discharge	⊗ 1 kV up to 30 kV	
(with contact control)	in steps of 100 V	Contact discharge ⊗ 1 kV up to 30,0 kV in steps of 100 V
Polarity	⊗ positive and negative	
Mode	⊗ air discharge and contact discharge	
Repetition frequency of the discharge pulses		
Air discharge	⊗ single or multiple pulses (frequency depends on the distance between probe and EUT)	
Contact discharge	⊗ single pulse, 0.1 Hz, 0.2 Hz, 1 Hz, 2 Hz, 5 Hz, 10 Hz, 20 Hz	
Continuous operation	⊗ at air discharge and contact discharge	
Pre-selection counter	⊗ 1 - 9999	
Impedance standard:	⊗ 150 pF / 330 Ω (IEC / EN 61000-4-2)	
Others:	see options	
Probes	⊗ acc. IEC / EN 61000-4-2 and ISO / TR 10605	
Operation temperature	⊗ 0 - 40° Centigrade	
Rel. humidity	⊗ 0 - 60%	
Weight	⊗ app. 1500 g	

### Basis configuration

Mechanical polarity module  
Capacity module 150 pF  
Resistor module 330 Ohm

### Desktop control unit

Power supply	⊗ 85 - 264 VAC, 47 - 63 Hz
Consumed power	⊗ < 50 VA
Weight	⊗ app. 1450 g



**Options**

SESD 30000 P	ESD generator includes electronically polarity module
SESD 30000 A	ESD generator for battery and / or main operation
SESD 30 Cxxx	Capacity module (values up to 1000 pF)
SESD 30 Rxxx	Resistor module (values (0) 50 Ohm up to > 5 kOhm)
SESD 30 P200	Electronic polarity module
SESD 30 M200	Faster discharging module (rise time to 0,3 ns)
SESD 30 S100	Optical set and remote software
SESD 30 MOD-1	HBM – module 100 pF / 1500 Ohm with rise time > 5 ns
SESD 271	VCP – vertical coupling plate, include earth cable SESD 272
SESD 272	Earth cable include 2 x 470 kOhm resistor, 2m long
SESD 3025	Test tip, diameter 30 mm, for AIR discharge > 15 kV
SEDS 3026	Test tip, length 50 mm with spring pin, for automatic tests with contact discharge
SESD 8800-4	ESD verification set 2 Ohm (4 GHz) to verify the ESD pulse