

## SESD 30000

### ESD Simulator

#### IEC / EN 61000-4-2, ISO 10605, and more

- For requirements with different R ( $\Omega$ ) and C (pF) combinations
- 30 kV air- and contact discharge
- Integrated automatic charge absorber
- Independent resistor and capacitor plug-in networks
- Option SESD 30 Battery with battery and mains operation



#### With self-test of the simulator

Saving costs for re-calibration.  
Absolutely necessary for automatic test.

#### Overview

The ESD simulator SESD 30000 can be used for EMC tests on systems and installations according to the standards IEC / EN 61000-4-2, ISO 10605 and others. The flexible set-up of the SESD 30000 allows further tests according to different standard and customer definitions. Higher test levels can be set far beyond the standard limits.

Depending on the test object and test setup, two test procedures are to be applied: **Air discharge (AIR) and contact discharge (CON)**.

Depending on the model, the ESD simulator can be supplied with an electrical or mechanical polarity module.

#### Key Facts

- 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 for  $t_r < 0,5$  ns (optional). Possibility more aggressive tests (e.g. ANSI)
- All modules are electronically recognised and identified on the display
- Desktop control unit with a big display and digits which are easy to read
- User defined adjustments like contact discharge with contact control or external triggering possible
- Ergonomic grip with big trigger key
- Big keys for easy and fast parameter adjustments
- Optional Software with RS 232 optical set with 10 m fibre optics cable
- Self- test of the ESD-generator, adjustment by remote control or service menu



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Models	
<b>SESD 30000</b>	ESD generator 30 kV CON / 30 kV AIR, 150 pF/ 330 Ω acc. to IEC/EN 61000-4-2 and suitable for other impedances like ISO 10605, mains operation, <b>mechanical polarity module</b> , incl. IEC/EN 61000-4-2 factory calibration traceable acc. ISO 17025.
<b>SESD 30000 P</b>	ESD generator 30 kV CON / 30 kV AIR, 150 pF/ 330 Ω acc. to IEC/EN 61000-4-2 and suitable for other impedances like ISO 10605, mains operation, <b>electronic polarity module</b> , incl. IEC/EN 61000-4-2 factory calibration traceable acc. ISO 17025.
<b>SESD 30000 ISO</b>	ESD generator 30 kV CON / 30 kV AIR, 150 pF, 330 pF, 330 Ω, 2000 Ω acc. to IEC/EN 61000-4-2 and suitable for other impedances like ISO 10605, mains operation, <b>mechanical polarity module</b> , incl. ISO 10605 factory calibration traceable acc. ISO 17025.
<b>SESD 30000 ISO P</b>	ESD generator 30 kV CON / 30 kV AIR, 150 pF, 330 pF, 330 Ω, 2000 Ω acc. to IEC/EN 61000-4-2 and suitable for other impedances like ISO 10605, mains operation, <b>electronic polarity module</b> , incl. ISO 10605 factory calibration traceable acc. ISO 17025.

### Electronic and mechanical polarity module

With the electronic polarity module, the polarity of the pulse can be changed between positive and negative by pressing the "Polarity" button on the base station.

With the mechanical polarity module, this is done by pulling out the polarity module, turning it through 180° and inserting it back into the generator.

### Technical data

SESD Generator 30000			
Output voltage	adjustable via digital pot.	Continuous operation	at air discharge and contact discharge
Mode	air discharge and contact discharge	Pre-selection counter	1 - 9999
Air discharge	1 kV up to 30,0 kV in steps of 100 V	Standard Impedances	150 pF / 330 Ω (IEC / EN 61000-4-2)
Contact discharge (with contact control)	1 kV up to 30,0 kV in steps of 100 V	Other impedances	see options
Polarity	positive and negative	Probes	acc. IEC / EN 61000-4-2
<b>Repetition frequency</b>		Weight	appr. 1500 g
Air discharge	single or multiple pulses	Operation temperature	0 - 40° Celsius
Contact discharge	single pulse, 0,1 Hz; 0,2 Hz; 1 Hz; 2 Hz; 5 Hz; 10 Hz; 20 Hz	Rel. humidity	0 - 60 %



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### Technical Data – Desktop Control Unit

Power supply	85 - 264 VAC, 47 - 63 Hz
Power consumption	< 50 VA
Weight	appr. 1450 g

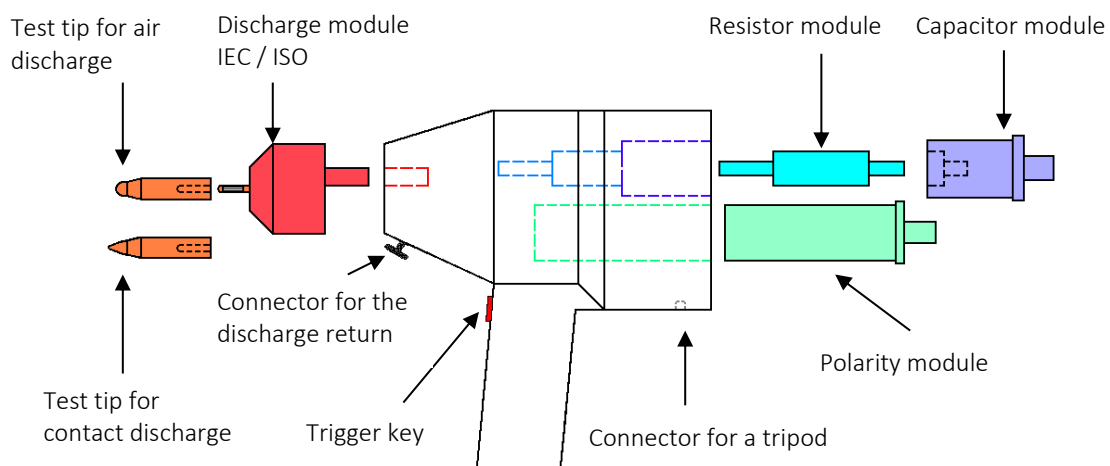


### Carry case SESD 30000 with accessories

- ESD Generator with connection cable
- Desktop control unit with mains cable
- Mechanical polarity switch modul
- Capacitor module 150 pF
- Resistor module 330 Ohm
- Test tip for contact and air discharge
- Discharge return cable, 2 m
- Manual
- Weight: 6,7 kg



### Technical drawing



# SESD 30000

## ESD Simulator

Options	
SESD 30 Battery	Retrofitting existing SESD 30000 to increase mobility
SESD 30 Battery N	Retrofitting existing SESD 30000 to increase mobility, <b>for new device only</b>
SESD 30 C xxx	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 typically 0,45 ns)
SESD 30 S120	Optical set and remote software
SESD 30 Z 02	Special module with HV connecting cable for electro-explosive device testing
SESD 30 MOD-1	HBM-Modul 100 pF / 1500 Ohm mit Anstiegszeit > 5 ns
SESD 30 MOD-5	„Beep“ sound
SESD 30 MOD-1-U2	Modified SESD 30000: for option HBM (new calibration necessary!)
SESD 30 MOD-3-U3	Modified SESD 30000: to provide a TTL trigger signal at the BNC connector. Delay of the SESD signal approx. 2-10 ms, jitter 2 ms
SESD 30 MOD-3-U1	Modified SESD 30000: for automatic absorption (additional calibration has to be quoted)
SESD 271	VCP – vertical coupling plate, include earth cable SESD 272
SESD 272	Earth cable with 2 x 470 kΩ resistors, 2 m long
SESD 3025	Test tip, diameter 30 mm, for AIR discharge > 15 kV
SESD 3026	Test tip, length 50 mm with spring pin, for automatic tests with contact discharge
SESD 3027	Test tip, length 70 mm with spring pin, for automatic tests with contact discharge
SESD 3036	Hook for use on a support arm
SESD 30 T 1000	Support arm with balancer
SESD 8800-4	ESD verification set 2 Ohm (4 GHz)

All informations regarding appearance and technical data correspond to the current state of development at the time of release of this data sheet. We reserve the right to make technical changes. 212009

