

# PESD 3010

## 30kV Electrostatic Discharge Generator

■ **Bringing dissimilar insulation** materials together and then parting them creates electrostatic charges. The resultant electrostatic discharge (ESD) can cause failures in electronic circuits. There are two principal methods of discharge: Air discharge and contact discharge. Contact discharge is the preferred test method because test results are more reproducible.

There are many standards which require discharge component (Resistor & Capacitor) values other than those described in the IEC/EN 61000-4-2 standard. With PESD 3010 it is possible to meet these requirements due to the changeable R&C modules.

PESD 3010 features a unique **NO CONTACT detection circuit**. During contact discharge tests, PESD 3010 continuously monitors if ESD pulses are really discharged to the EUT (**Equipment under Test**). In case of no contact to the EUT, the operator receives a warning message in the LCD display. This prevents the user from potentially wrong test results.

PESD 3010 has a **highly ergonomic design**. This includes a firm handle that insures safe and comfortable operation under any circumstances, and dedicated, large conventional pushbuttons for easy and convenient setting of all test parameters.

For long running tests, a screw socket on the bottom enables to mount the gun on a standard tripod.

**IEC test levels** L1 to L4 are predefined and are shown in the LCD together with the test voltage.



### Capacitor modules

for the PESD 3010 are available with any value in the range from 50pF to 1000pF and **Resistor modules** with any value in the range from 50 ohms to 5000 ohms, in any combination ensuring maximum flexibility.

### ■ Features

- ☑ 30kV Air discharge
- ☑ 30kV Contact discharge
- ☑ User selectable R&C networks
- ☑ Unique integrated self test function
- ☑ Contact discharge current flow detection
- ☑ Remote trigger input
- ☑ Slow repetition rates for Automotive testing

### ■ Benefits

**Flexible System** – PESD 3010 is a modular design that enables users to meet many different test specifications with maximum cost effectiveness.

**Efficiency and Reliability** – The integrated **self test function** verifies **all** the relevant functions of the ESD generator at the push of a button within 30 seconds.

This ensures correct test of the device under test at any time, without doing time-consuming manual verifications of the ESD generator.

**Comfortable to use** – The lightweight, balanced weight distribution and ergonomic handle design mean that testing can be performed over long periods without operators becoming fatigued. All actual test parameters are showed in a comfortable, **large LCD**.

**Sturdy and Reliable** – Careful component selection ensures that the PESD 3010 will continue to operate under the most strenuous testing regime.

### ■ Applications

- ☑ IEC/EN 61000-4-2
- ☑ ISO/TR 10605 for Automotive Testing
- ☑ MIL 464 system requirements
- ☑ MIL 331B Fuse & Fuse components
- ☑ MIL 1542B space system facilities
- ☑ Many more international product standards

## ■ Technical Specifications

Air Discharge Voltage	1 – 30kV	Voltage resolution	100 volt steps
Cont. Discharge Volt.	1 – 30kV	Discharge Polarity	Positive & Negative
Discharge Repetition	Single/0.1/0.2/1/2/5/10/20 Hz	Operating Modes	Single & Continuous
Discharge Counter	1 - 9999	Power Supply	85 – 264V 50/60Hz
Default RC-Network	150 pF / 330 Ohm	Power consumption	30VA
<b>Weights and Dimensions (W x H x D, net weight)</b>			
PESD 3010 Gun	10 x 21 x 29 cm		1.5 kg
PESD 3010 Controller	17 x 10 x 28 cm		1.5 kg

## ■ Scope of Supply Art. No. 249963

Qty. 1	PESD 3010 ESD Generator
Qty. 1	Carrying case
Qty. 1	Control and Power supply unit
Qty. 1	Ground Cable
Qty. 1	Test Finger Air discharge
Qty. 1	Test Finger Contact discharge
Qty. 1	Polarity module
Qty. 1	Capacitor module 150 pF IEC 61000-4-2
Qty. 1	Resistor module 330 Ohm IEC 61000-4-2
Qty. 1	User Manual

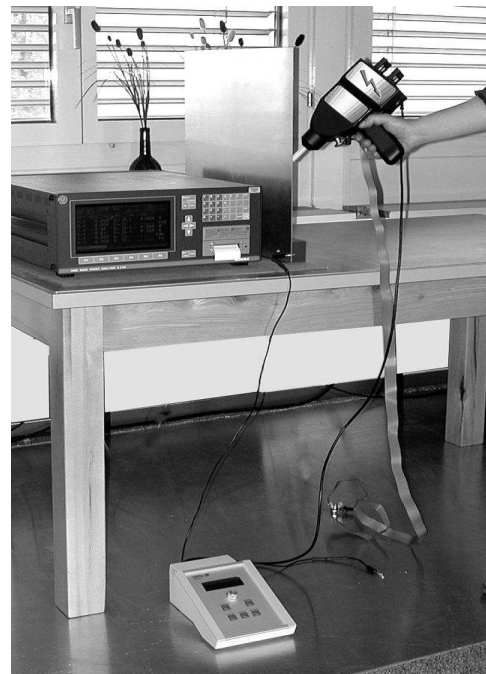
## Capacitor, Resistor & Polarity Modules



## ■ Options & Accessories

Capacitor Modules	Available with any value in the range from 50 to 1000pF. Fit in PESD 3010 rear panel. The Controller automatically shows the value in the LCD
Resistor Modules	Available with any value in the range from 50 to 5000Ω. Fit in PESD 3010 rear panel. The system automatically shows the value in the LCD display
VCP	Vertical Coupling Plane 0.5m x 0.5m, for indirect application of the ESD. Includes cable with 2 integrated 470 kOhm HV-Resistors
HCP	Horizontal Coupling Plane 1.6m x 0.8m for indirect application of the ESD. Includes cable with 2 integrated 470 kOhm HV-Resistors
Remote Control	Fibre optical RS 232 interface for remote control of ESD gun
Test Table	Made of wood without any metallic parts, as required by IEC 61000-4-2
Verification Set	For wave shape verification according to IEC/EN 61000-4-2. Includes 2 Ohm Target, Attenuators, BNC Cable, user manual

## ESD Test Table with VCP & HCP



Headquarters  
**Haefely Test AG**  
 Lehenmattstrasse 353  
 CH-4052, Basel  
 Switzerland

☎ + 41 61 373 41 11  
 ☎ + 41 61 373 45 99  
 ✉ [EMC-sales@haefely.com](mailto:EMC-sales@haefely.com)

Locate your local  
 sales representative at  
[www.haefelyEMC.com](http://www.haefelyEMC.com)



**HAEFELY** EMC  
 TECHNOLOGY

North American Office  
**Hipotronics Inc.**  
**Haefely EMC Division**  
 1650 Route 22  
 Brewster, NY 10509

☎ ++1 845 279 3644 x264  
 ☎ ++1 845 279 2467  
 ✉ [EMCsales@hubbell-haefely.com](mailto:EMCsales@hubbell-haefely.com)