

## 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 (**E**quipment **u**nder **T**est). 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

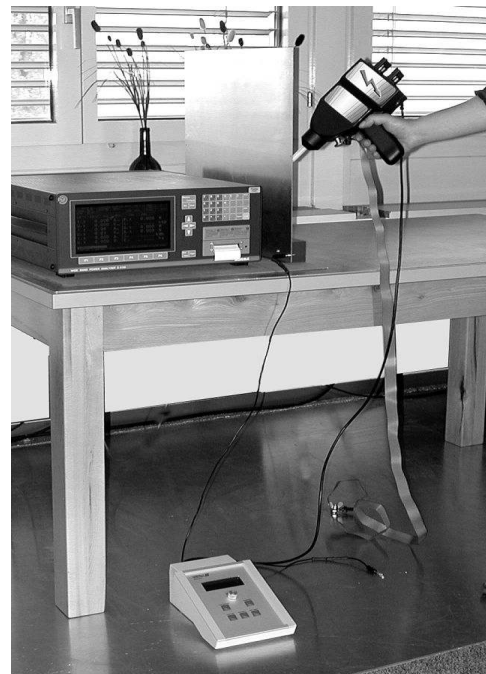
## Capacitor, Resistor & Polarity Modules



## ■ 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



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