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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
Cont. Discharge Volt.	1 – 30kV
Discharge Repetition	Single/0.1/0.2/1/2/5/10/20 Hz
Discharge Counter	1 - 9999
Default RC-Network	150 pF / 330 Ohm

10 x 21 x 29 cm

17 x 10 x 28 cm

Voltage resolution	100 volt steps
Discharge Polarity	Positive & Negative
Operating Modes	Single & Continuous
Power Supply	85 – 264V 50/60Hz
Power consumption	30VA
	1.5 kg

1.5 kg

Scope of Supply Art. No. 249963

Weights and Dimensions (W x H x D, net weight)

- PESD 3010 ESD Generator Qty. 1
- Qty. 1 Carrying case

PESD 3010 Controller

PESD 3010 Gun

- Control and Power supply unit Qty. 1
- 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
- Resistor module 330 Ohm IEC 61000-4-2 Qty. 1
- Qty. 1 User Manual

Options & Accessories

Capacitor Modules	Available with any value in the range from 50 to 1000pF. Fit in PESD 3010 rear panel. The Controller automati- cally 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
НСР	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

Capacitor, Resistor & Polarity Modules



ESD Test Table with VCP & HCP



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