

M Precision Laboratories

MiniZap-15 ESD Simulator

ESD simulator for direct, indirect and diagnostic ESD testing

The M Precision Laboratories MiniZap-15 ESD Simulator is an industry standard handheld, battery-operated 15KV ESD simulator that meets IEC 61000-4-2 and other ESD standards.

- Hand-held, portable and self-contained ESD simulator
- Intuitive operation
- Meets requirements of IEC 61000-4-2 and ANSI C63.16
- Contact mode and air discharge ESD testing
- E- and H-field diagnostics
- Vertical and horizontal coupling planes for indirect ESD testing
- Built-in safety features
- Field-configurable
- Rechargeable battery



High-performance, rugged, reliable tester for manufacturing, field service or lab

The M Precision Laboratories MiniZap-15 ESD Simulator is a totally integrated, lightweight, easy-to-use handheld tester that withstands long-term operation in rugged environments. By simply interchanging plug-in tips, you can test to other standards and perform reality checks that indicate product performance in intended environments.

Test without errors caused by simulator-generated multiple ESDs

Multiple ESD events can be generated by a human discharge or by other ESD simulators that introduce additional artificial and energetic multiple discharges. The MiniZap

tester does not use a voltage multiplier, and won't introduce testing errors and uncertainties due to streams of artificial, high-level ESD multiples. With its constant voltage ESD simulator design feeding back and monitoring right from the tip, you always know the exact voltage at which you've tested.

The correct tip voltage is maintained to the instant of discharge; it then drops to prevent simulator-induced multiples.

Reach the Next Level of Success

Experience the many benefits of working with recognized experts in the field of EMC (ElectroMagnetic Compatibility) testing. Our commitment to the discipline is wide ranging; we actively participate on global standards committees, and have helped define test methodologies to achieve regulatory standards such as CE Mark requirements, as well as company — and market-driven — product quality objectives. Our goal is to support you with lifelong service, from applications support, calibration services and preventative maintenance scheduling to full tactical field support.

General Specifications

Voltage Range	±0.5 to 8 kV, Contact Mode; ±0.5 to 15 kV, Air Discharge
Air Discharge	TRUE-ESD (<0.3 ns nominal rise time up to 4 kV)
Contact Mode	FR/CI std <0.3 ns rise time independent of charge voltage; 3.75 A/kV ±10% peak, e.g., 30 A @ 8 kV RC
Networks	150 pF/330 ohm standard (other RC networks available)
Lock On	Standard (with safety interlock)
Rep Rate	Single shot as well as 1/sec and 20/sec repetitive operation
HV Display	Digital LCD display measures actual HV at the tip with 10 V resolution, ~3% accuracy
Ground Connect Warning	LED indicates ground cable not connected to tester
Power	Operates from 120-240 VAC, 50/60 Hz or 4 NiCd batteries with LED charge status indicator
Size	10 in x 2.5 in x 3.2 in (25.4 cm x 8.9 cm x 8.1 cm)
Weight	29 oz (822 gm) nominal, plus case and accessories

Calibrators

DCA-2	Output Calibration Attenuator: network to allow oscilloscope or meter monitoring of DC stored on the discharge capacitor (10,000:1 ratio)
CTC-4	Coaxial Current Monitor: IEC 61000-4-2, coax monitor for ESD current waveform, with >4 GHz capability. Includes high-peak-power attenuator and scope cable
FCS-1	Field and Corona Sensor Group: Common Monitor Unit HEC-1, H-field sensor HFS-1, E-field sensor EFS-1 and pre-discharge corona sensor CCS-1

Accessories

TPC-1	True-ESD, fast rise time contact-mode tip
TPF-1	Self-discharge tip
50-MZ	Standoff spacer for air-discharge mode 1
VCP-1	Vertical Coupling Plane (VCP); 0.5 m x 0.5 m (19.7 in x 19.7 in) plane, in accordance with IEC 61000-4-2 and ANSI C63.16 ESD test standards. Includes bench-mount stand
MZT-11	E-field (static and dynamic electric field) Simulator Tip Assembly
MZT-12	H-field (magnetic field) Simulator Tip Assembly
MCA-1	Hard Carrying Case (does not include space for VCP-1, HCP-1, BTS-1, TP-3)
TP-3	Full Target Plane for mounting the CTC-4 coaxial target; 1.5 m x 1.5 m (59 in x 59 in) IEC-61000-4-2, and ANSI C63.16
HCP-1	Horizontal Coupling Plane (HCP); 0.8 m x 1.6 m (31.5 in x 63 in) for use on non-conducting tabletop under a small EUT, per IEC 61000-4-2, and ANSI C63.16. Includes one roll of <0.5 mm thick, static-dissipative sheet insulator