

ELECTROSTATIC DISCHARGE SIMULATOR

ESS-2000

with Discharge gun TC-815P

***CONFORMING TO
IEC 61000-4-2***



TC-815P

ESS-2000

(Gun stand in the photo is an optional accessory Model: PS-806.)

GENERAL

Among the causes of equipment malfunction, problems caused by ESD (electrostatic discharge) are the most difficult events against which to incorporate protective measures, since the causal relation generally cannot be found easily.

Air discharge testing, which is affected by numerous variable factors, is a widely adopted test method, since the actual ESD events in the field are air discharges.

On the other hand, contact discharges are preferably applied since the following two benefits are obtained: high repeatability and evaluation of ESD susceptibility in terms of discharge voltage. In the contact discharge method, the very fast but stable rise time of discharge current does not vary with charge voltage prior to discharge and the waveforms are proportional to charge voltages, which allows the engineer to define the ESD susceptibility of the equipment under test in terms of charge voltage. This simulator is designed to conduct both contact and air discharge testing.

FEATURES

1. This simulator meets and far exceeds the testing requirements in the IEC 61000-4-2, generating discharges up to 30kV. In addition, various waveforms can be generated by changing the energy storage capacitor and discharge resistor.
2. Since the energy storage capacitor, discharge resistor and discharge relay are incorporated in the gun, ESS-2000 is capable of generating current with a stable rise independent of applied voltage, making it possible to conduct a reproducible test.
3. This simulator provides four operation modes, allowing the operator to conduct a single step testing for the IEC specified test voltages and for a series of stored test settings.
4. Controllable from an external computer using various communication interfaces.

ELECTROSTATIC DISCHARGE SIMULATOR MODEL ESS-2000

SPECIFICATIONS

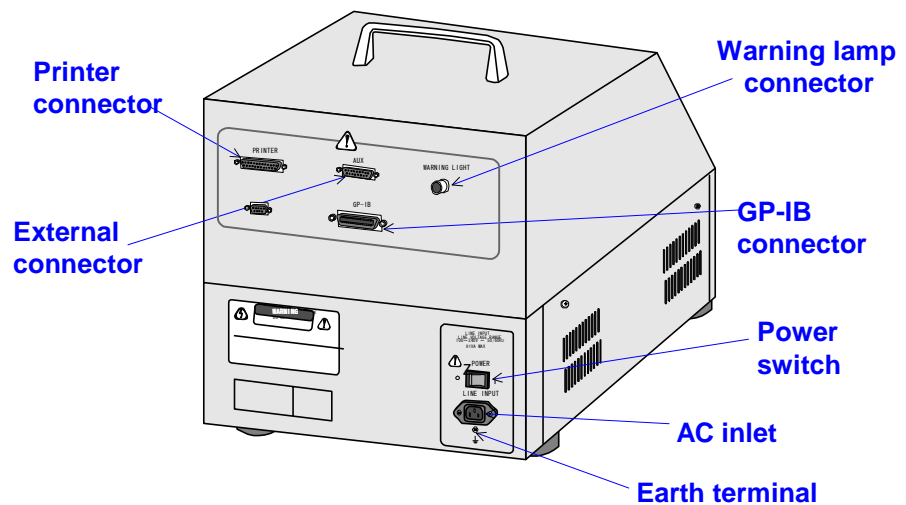
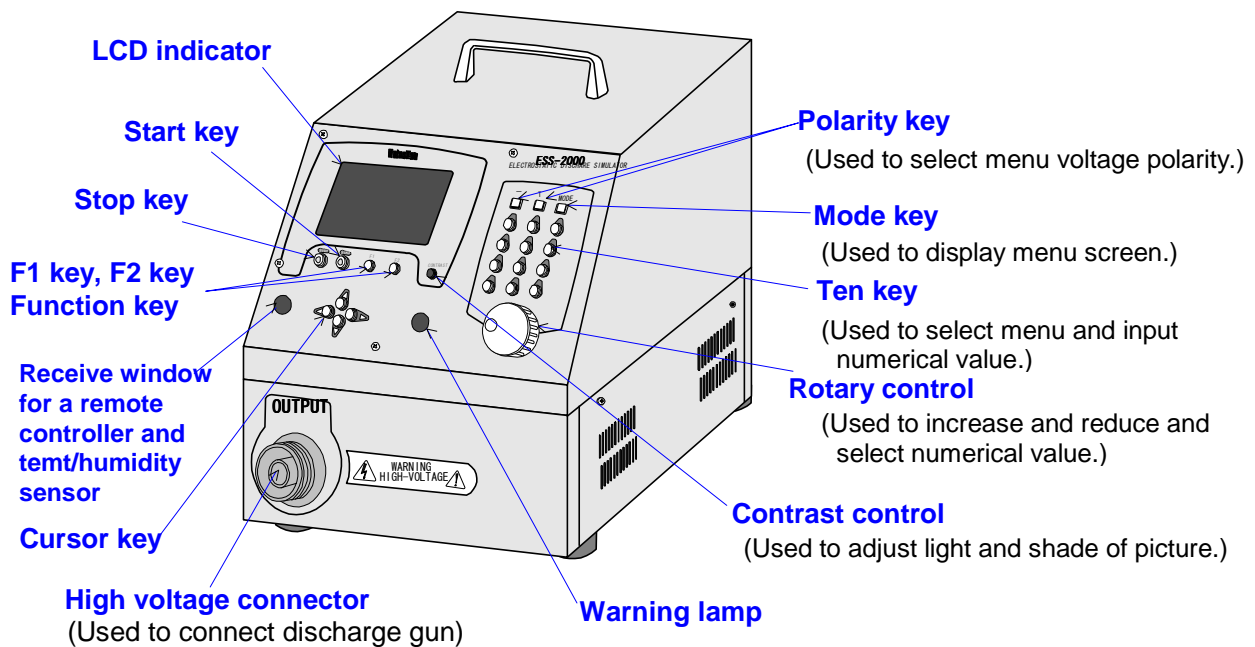
Output voltage:	0.20 ~ 30.0kV \pm 5%
Polarity:	Positive or negative
Charging resistance:	53 M Ω (for combination with TC-815P discharge gun)
Discharge mode:	Air discharge and contact discharge
Operation mode: IEC severity level	Level setting 1, 2, 3, 4
	Discharge interval 0.05 ~ 600.0s
	No. of times of discharge 1 ~ 60000 times
Manual	Discharge interval 0.05 ~ 600.0s
	No. of times of discharge 1 ~ 60000 times
	Setting storage function Up to 10 conditions storable
Sweep	Starting voltage \pm 0.20 ~ 30.0kV
	Ending voltage \pm 0.20 ~ 30.0kV
	Step voltage 0.00 ~ 30.0kV
	Discharge interval 0.05 ~ 600.0 S
	No. of times of discharge 1 ~ 60000 times
	Setting storage function Up to 10 conditions storable
Program	Voltage setting \pm 0.20 ~ 30.0kV
	Discharge interval 0.05 ~ 600.0s
	No. of times of discharge 1 ~ 60000 times
	No. of steps 30 steps maximum
	No. of programs Up to 50 conditions storable
	No. of program units Up to 100 conditions can be set.
Temp. and humidity measurement:	Current values are displayed
Display element:	LCD with back light
Character display:	English or Japanese
Setting method :	Ten-key pad , Rotary control, Function keys
Auxiliary function:	<ul style="list-style-type: none">◆Upper limit voltage setting function◆Trigger switch select function◆Auto stop function◆Inversion on the screen function
Clock function:	Year, month, day, hour, minute (Battery backup)
Memory function:	Clock work, contents of each setting and last operation display are backed up for more than 3 months with battery full charged.
External interface functions:	<ul style="list-style-type: none">◆GP-IB connecting I/F ◆Warning light connecting I/F◆External trigger input I/F ◆Elimination probe connecting I/F
Printer I/F:	Conforming to simple CENTRONIX I/F
Contents of print:	<ul style="list-style-type: none">◆Currently applied voltage/ Current date/ Current temp. and humidity◆Contents of various settings
Power supply:	90 ~ 120 / 200 ~ 240V AC 50/60 Hz
Operating temperature and humidity:	0 ~ 40°C 20 ~ 70% (No dewing shall occur.)
Dimensions and weight: ESS-2000	250(W) X 324(H) X 320(D) Approx. 8.0 kg
TC-815P	75(W) X 220(H) X 255 (D) Approx. 0.9 kg (Except a cable)

ELECTROSTATIC DISCHARGE SIMULATOR MODEL ESS-2000

STANDARD ACCESSORIES

- ◆ Discharge gun Model: TC-815P
- ◆ Discharge electrode Model: 12-00001A and 12-00002A
- ◆ Capacitor unit Model: 06-00014A (150pF)
- ◆ AC cord
- ◆ Discharge resistor (330Ω)
- ◆ Instruction manual
- ◆ Accessory bag

CONTROLS, INDICATORS AND TERMINALS



ELECTROSTATIC DISCHARGE SIMULATOR MODEL ESS-2000

OPTIONS

Options for ESS-2000

- ◆ Tem./humidity sensor
Model:07-00016A



- ◆ Automatic ESD eliminator
Model: 01-00013A



- ◆ Wireless remote controller
Model: 08-0006B



- ◆ Gun Holder
Model: 03-00040A



The gun holder can be screwed to the left-side panel of the ESS-2000.

- ◆ Printer
Model:16-00001A



- ◆ Printer cable
Model: 05-00005A



Options for TC-815P

- ◆ Free arm gun stand
Model: 03-00022B
Dimensions: (W)18x(H)76x(D)7cm
Weight: Approx.5kg

- ◆ Gun stand
Model:PS-806
Dimensions:(H)30cm (Diameter)16cm
Weight: Approx. 1.6kg

- ◆ Fast rise time adapter
Model:12-00003A



*) Included accessories for TC-815P

- ◆ Capacitor unit
100pF: Model 06-00013A
150pF: Model 06-00014A*
200pF: Model 06-00015A
250pF: Model 06-00016A
300pF: Model 06-00017A
330pF: Model 06-00032A
400pF: Model 06-00018A
500pF: Model 06-00019A

- ◆ Discharge resistor
100,150,200,250,300,330*,
400,500, 1k, 1.5k, 2k, 5k, 10k Ω

- ◆ Discharge electrode
Model:12-00001A*



Model:12-00002A*



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