

18-00086B

ESD Voltage Meter

For measuring the hold time and output voltage of electrostatic testers

The ESD voltage meter MODEL: 18-00086B is a device that can measure the voltage holding time (holding voltage after 5 seconds) and output voltage, which are the tester specifications during the air discharge test in IEC 61000-4-2.

The measured voltage is displayed on a 7-segment LED with peak and holding voltage values.

- Easily measure the Hold Time, the tester specification for air-discharge testing.
- Measure the output voltage from $\pm 2\text{kV}$ to 30kV .
- Monitor the measured voltage waveform by connecting to an oscilloscope.
- Compact, lightweight and easy to carry.



Easy measurement of tester specifications for the Air Discharge testing ! Hold time measurement function

IEC 61000-4-2 standard specifies the voltage "Hold Time" as a tester specification related to the Air discharge testing. The Hold Time is defined as "the time interval during which the output voltage decreases by 10% or less due to leakage before the discharge" and is required to be "at least 5 seconds". By using this product, the voltage "hold time" can be easily measured. Also, the output voltage specified in the IEC 61000-4-2 Standard can be easily measured without using a high-voltage probe or voltmeter.



■ Measuring Holding Voltage

- ① Connect the alligator clip on the end of the GND cable of the discharge gun to the GND terminal of the ESD voltage meter .
- ② Set the electrostatic tester to Air Discharge mode and the output voltage: set to the voltage set a the ESD voltage meter.
- ③ Press the [START] switch on the electrostatic tester to charge the discharge gun, then make contact of the discharge tip of the ESD GUN to the GND terminal of the ESD voltage meter. After eliminating the high voltage, press the trigger switch on the discharge gun while keeping the discharge tip in contact with the ESD input terminal of the ESD voltage meter.

【Example of measurement results】

When the holding voltage value is displayed in [HOLDING V.] in kV display mode. *Percentage (%) display mode is also available.



* for illustrative purposes only.

[PEAK V.] displays the Peak Voltage using the peak hold function.
[HOLDING V.] displays the holding voltage value and the reduction rate every second.

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■ Measuring output voltage

- ① Connect the alligator clip on the end of the GND cable of the discharge gun to the GND terminal of the ESD voltage meter .
- ② Set the electrostatic tester to Contact Discharge mode and the output voltage: set to the voltage set at the ESD voltage meter, the discharge interval: 0.05s, discharge count: 100 times or more.
- ③ Press the [START] switch on the electrostatic tester to charge the discharge gun, then make contact of the discharge tip of the ESD GUN to the GND terminal of the ESD voltage meter. After eliminating the high voltage, press the trigger switch on the discharge gun while keeping the discharge tip in contact with the ESD input terminal of the ESD voltage meter.

【Example of measurement results】

When the Holding Voltage value is displayed in [HOLDING V.] *kV display mode only.



* for illustrative purposes only.

【PEAK V.】displays the Peak Voltage using the peak hold function.
 【HOLDING V.】displays the holding voltage value and the reduction rate every second.

Specifications

Parameter	Functions / Performance
Input polarity	Positive/Negative
Input voltage	±2kV - 30kV *Voltage value set at the electrostatic tester
Voltage display accuracy (voltage display mode)	Within ±5% *for DC input
Display	Voltage value: 7-segment LED 4 digits. Polarity: LED
Buzzer	built-in
Monitor output	BNC connector Approx. 1/10,000 (Approx. 3V output at 30kV input). Output accuracy: ±20% of indicated voltage value
GND Terminal	Conductive to the GND of the product housing
Elimination terminal	Conductive to the GND of the product housing
Input resistance	1TΩ±20%
Voltage divider ratio	Approx. 1/3,333
Check voltage setting range	2.0kV, 4.0kV, 8.0kV, 15.0kV, 20.0kV, 25.0kV, 30.0kV * Input voltage threshold is 1/2 of the set check voltage value
Hold time setting range	5.0 - 30.0 sec.
Power supply	AC100V ~240V±10% 50Hz /60Hz
Power consumption	13VA
Operating temperature range	+15°C - +35°C
Operating humidity range	30%RH to 60%RH (no condensation)
External dimensions	(W)220mm x (H)256.5mm x (D)230mm (excluding protrusions)
Mass	Approx. 2kg

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