

FE-510

Static Eliminator

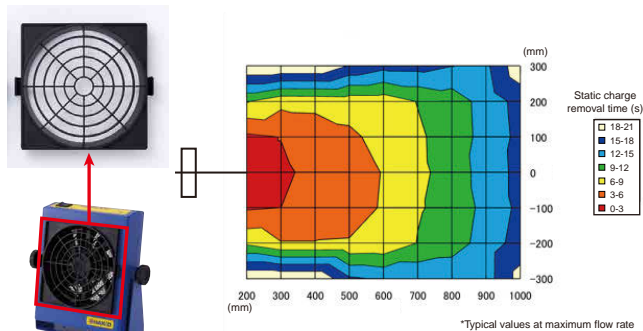


- Static eliminator enables the selection of the area in which static will be neutralized.
- Locking mechanism maintains the angle of the eliminator unit.
- Error output signal function is useful when incorporating the unit into line applications.

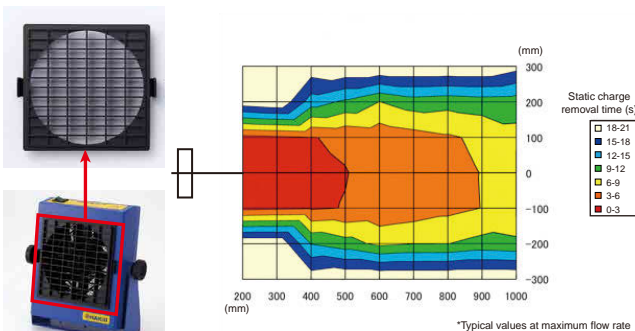
Features

Static elimination area

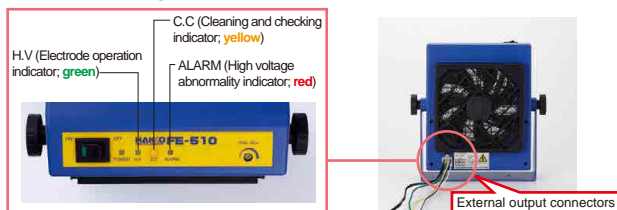
Wide-angle louver



Straight louver



Error output signal



Superb ease of maintenance

The discharge electrode can be replaced simply by turning it gently in the clockwise direction.



Packing List

FE-510

Unit (with wide-angle louver), Straight louver, Cleaning brush, Filter, AC adapter, Output signal connection lead (1 set), Instruction manual

Specifications

Model No.	FE-510
AC adapter output/Capacity	DC 24 V 10 VA
Discharge method	High frequency AC method
High voltage output	Approx. AC 2000 V
Ion balance*	±10 V or less
Static elimination time*	Straight louver: Approx. 1.5 sec. Wide-angle louver: Approx. 2.5 sec.
High voltage abnormality output (ALARM)	MOS FET relay output Maximum allowed current: 100 mA Applied voltage: DC 30 V or less
Cleaning check output (C.C)	MOS FET relay output Maximum allowed current: 100 mA Applied voltage: DC 30 V or less
Air flow	1.5 to 3 m ³ /min.
Air flow out angle	Vertically 360° variable (every 10°)
Quantity of produced ozone**	0.04 ppm or less
Operating environment	Ambient temperature/Humidity range: 0 to 40°C, 15 to 65% RH (without condensation)
Material for discharge electrode	Tungsten
Dimensions	150 (W) × 182 (H) × 50 (D) mm (without stand)
Weight***	0.79 kg

AC adapter

AC adapter output/Capacity	DC 24 V 1 A
Dimensions	34 (W) × 72 (H) × 51 (D) mm
Weight	100 g

* Typical value measured (before shipment) at a distance of 300 mm from the center of the fan outlet with the maximum flow rate

** Measured at a point 150 mm away from the center of the fan outlet

*** Including stand

FG-450

Static Level Meter



- Portable static level meter for the measurement of electric potential of films and plastic objects
- Useful when checking electric potential measurements in production lines.
- Also suitable for performing operation test of static eliminators.

Features

Rotating sensor head



Selectable two modes in measurement

- Measuring static electricity (resolution: 10 V)



The red light image is projected to a point about 30 mm from the meter.



- Measuring ion balance (resolution: 1 V)



Packing List

FG-450

Unit (with carrying case), Grounding wire, Strap, 006P 9 V Manganese dry battery (for trial), Ion balance plate (with screw), Instruction manual

Specifications

Model No.	FG-450
Power supply	006P 9 V dry battery
Measurable potential range	Normal mode: 0.00 to ± 19.99 kV (resolution: 0.01 kV) Ion balance mode: 0.000 to ± 1.999 kV (resolution: 0.001 kV)
Signal detection method	Oscillating chopper method
Display refresh frequency	0.5 seconds
Measurement precision	$\pm 10\%$ of reading ± 2 digits
Continuous operating limit	Approx. 10 hours (with an alkaline battery)
Measurement distance	30 mm (between object being measured and sensor)
Measurement distance adjustment	Red LED beam focusing method
Sensor head rotation angle	180° (stops every 45°)
Display	LCD display with built-in backlight
Polarity display	Positive polarity/negative polarity display
Mode switching	Switch modes by pressing MODE button
Battery check	Remaining charge displayed in display panel
Operating environment	Ambient temperature/Humidity range: 0 to 40°C, 20 to 70% RH (without condensation)
Dimensions	68 (W) \times 138 (H) \times 22 (D) mm
Weight*	160 g

* Including battery

Option

Part No.	Name	Specifications
B3586	Body changing level measurement plate	—

442B

Wrist Strap



- This antistatic wrist strap prevents the human body from becoming charged with static electricity.
- The stretchable band is easy to adjust.
- A conductive thread is used for the band lining.

Specifications

Part No.	442B-01	442B-02	442B-04	442B-05	442B-06	442B-07
Color	Blue		Light green		Gray	
Grounding wire	1.5 m	2.5 m	1.5 m	2.5 m	1.5 m	2.5 m

FG-470

Wrist Strap Tester



- Easy-to-use, quick-response tester for wrist straps
- A user-friendly pad secures pass/fail judgement on a wrist strap.
- Highly visible LED lamps and buzzer will indicate test result.

* Buzzer sounds only for "PASS".

Features

Connection patterns to choose depending on wrist straps

* Banana plug and grounding wire are included in FG-470.



Dedicated holder included

A mounting holder can make it easy to plug and unplug even with one hand. No tool is required to remove a unit. A unit can be portable off the holder.



* Example of installation



* 4 Wood screws provided

Packing List

FG-470	Unit, 006P 9 V dry battery (for trial), Grounding wire, Banana plug, Mounting holder, Wood screws (qty 4), Instruction manual
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Specifications

Model No.		FG-470
Power supply		006P 9 V dry battery (alkaline cell recommended)
Indication	LOW	$R < 800 \text{ k}\Omega$
	PASS	$800 \text{ k}\Omega \leq R \leq 9 \text{ M}\Omega$
	HIGH	$R > 9 \text{ M}\Omega$
Judgment level accuracy	800 kΩ	+ 10% / - 0%
	9 MΩ	+ 0% / - 10%
Battery life		Approx. 50,000 times (9 V alkaline)
Grounding wire		1 m
Operating environment		Ambient temperature/Humidity range: 0 to 40°C, max.80% RH (without condensation)
External dimensions		85 (W) × 44 (H) × 90 (D) mm
With mounting holder		92 (W) × 48 (H) × 97 (D) mm
Weight*		120 g
With mounting holder		160 g

* Without battery

FG-465 New

Footwear Tester



- Saves measurement data automatically
- Meets the requirement of JIS T 8103 : 2010
- Personal information can be registered in ID

Specifications

Model No.	FG-465	
Rating	24 VDC 50 mA	
Measurement voltage	20 VDC	
Measurement range	Upper evaluation limit	1000 MΩ (1×10 ⁹ Ω)
		100 MΩ (1×10 ⁸ Ω)
		10 MΩ (1×10 ⁷ Ω)
	Lower evaluation limit	1 MΩ (1×10 ⁶ Ω)
		0.1 MΩ (1×10 ⁵ Ω)
		R < 0.1 MΩ (1×10 ⁵ Ω)
Conductivity evaluation	R < 0.1 MΩ (1×10 ⁵ Ω)	
	R < 0.1 MΩ	
	± 5%	
	± 10%	
Evaluation level accuracy	± 8%	
	100 MΩ < R	
Operating environment	Ambient temperature/Humidity range: 0 to 40°C, max.80% RH (without condensation)	
Environment condition	Applicable rated pollution degree 2 (according to IEC / UL61010-1)	
Dimensions	120 (W) × 30 (H) × 185 (D) mm	
Weight*	0.55 kg	

Test plate

Cord length	1.6 m
Dimensions**	300 (W) × 30 (H) × 300 (D) mm
Weight**	1.9 kg

AC adapter

Output voltage	24 VDC
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* Including mounting base

** Without cord

Packing List

FG-465	Unit, Test plate, Mounting base, Knob (qty 2), Wood screw (qty 2), Pan head screw (qty 2), AC adapter*, USB cable, Instruction manual
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* AC adapter may not be included depending on the specifications.

Option

Part No.	Name
C5032	Stand
B5263	Unit integration base

Stand

No.C5032



Unit integration base (Connecting cable included)

No.B5263

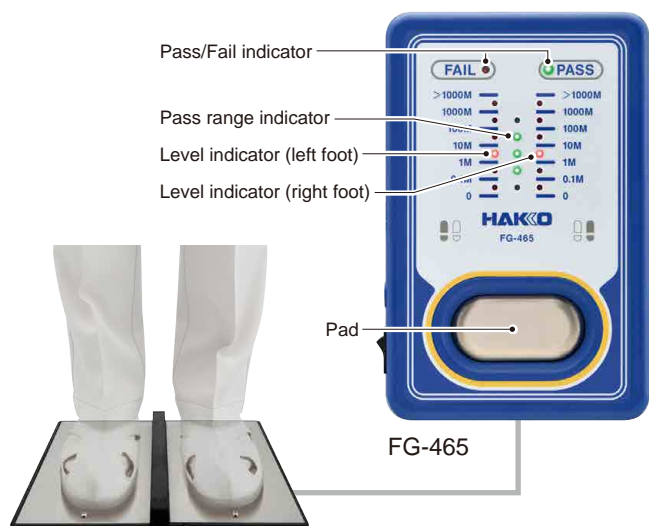


An option part to integrate FG-465 and FG-470 is available.

Features

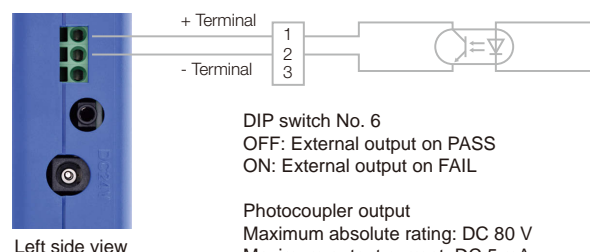
Dual foot plate

FG-465 measures anti-static performance of footwear on both feet but individually, and shows the results for each foot.



Evaluation external output

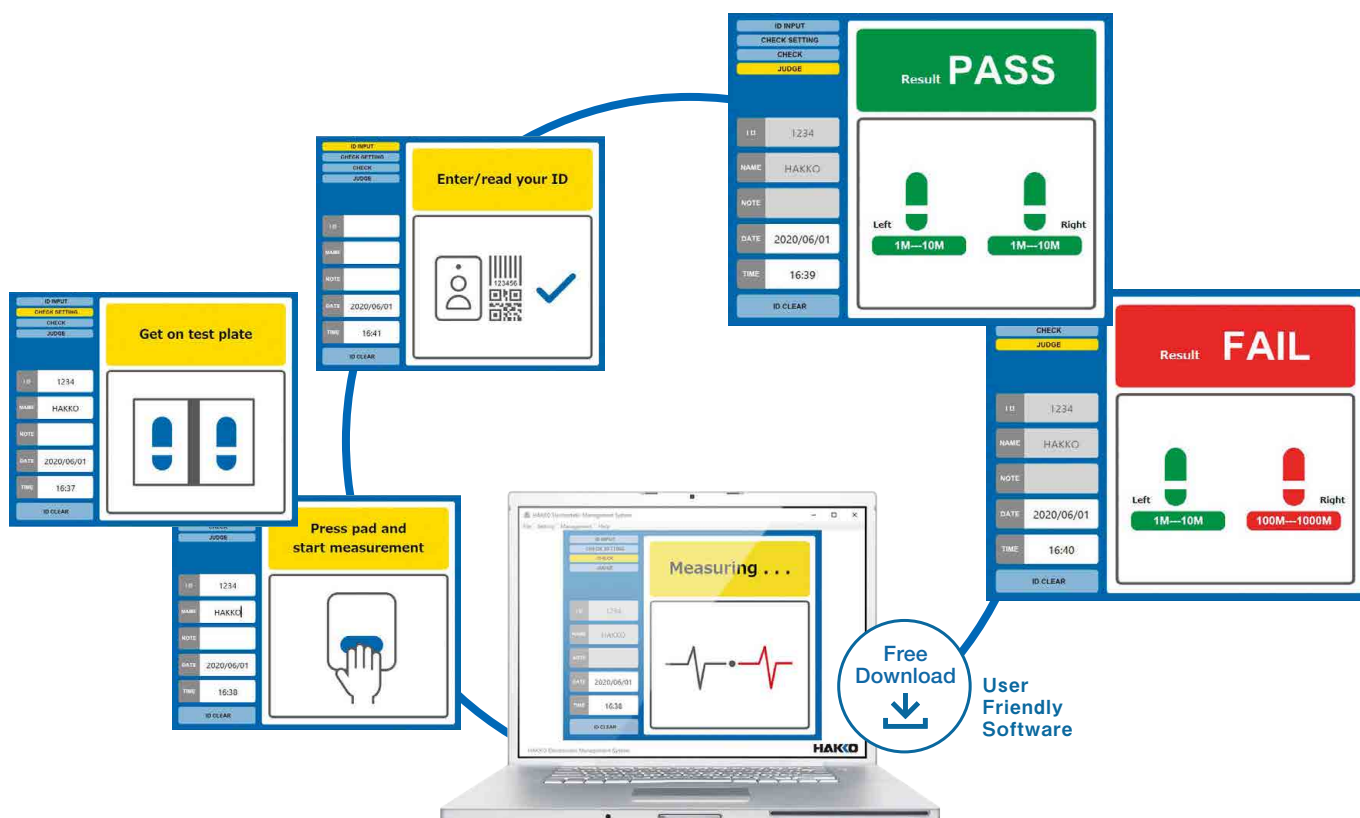
Evaluation results can be output through the external output terminal to interlock with other devices, to open a door, turn on a signal, etc.



User-friendly software

The dedicated software makes it easy to check measurement status of FG-465. The software enables digital management of all the related measurement information including operator IDs.

*The registrations on our website are necessary to download the software.

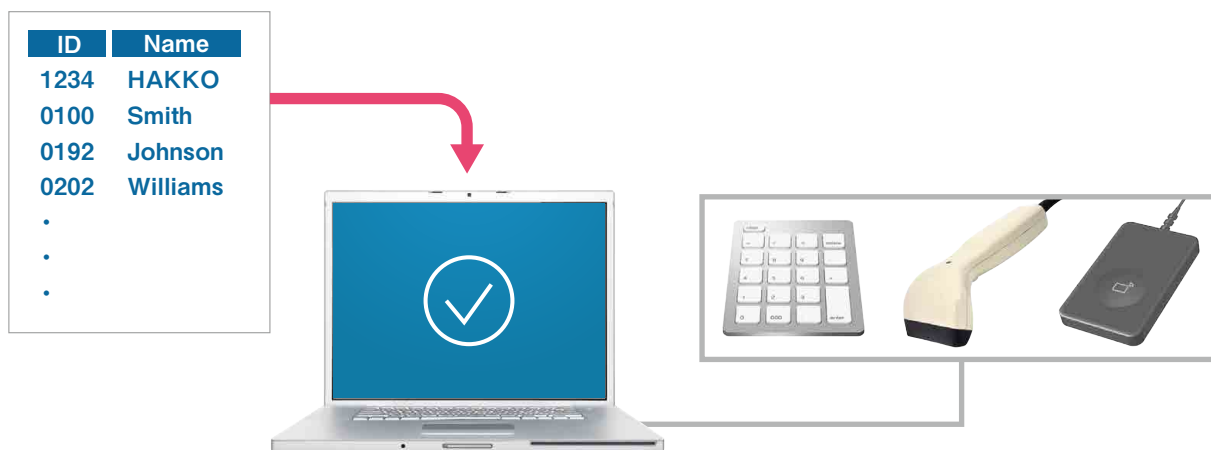


Features

ID Management

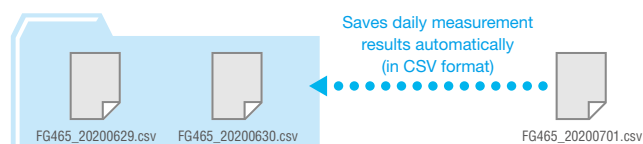
IDs can be input by entering numeric values, reading barcode or IC card.

Personal information can be registered in ID and operator IDs can be recorded as a part of measurement information.



Improved traceability

The measurement information can be automatically saved as a digital data in a specified folder. The information consists of measurement date, time, operator ID, and result of each foot to improve traceability.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Date	Time	ID	Name	Comprehe	Left foot (Left foot (Right foot	Right foot	Wrist strap	Conductiv	Lower eva	Upper eva	Evaluation	Evaluation	FG-470
2	2020/7/1	8:47	8:47	400 Smith	PASS	10M-100M	PASS	1M-10M	PASS	----	OFF	0.1M	100M	PASS	PASS	YES
3	2020/7/1	8:47	8:47	100 Jonson	PASS	10M-100M	PASS	10M-100M	PASS	----	OFF	0.1M	100M	PASS	PASS	YES
4	2020/7/1	8:47	8:47	192 Williams	PASS	10M-100M	PASS	10M-100M	PASS	----	OFF	0.1M	100M	PASS	PASS	YES
5	2020/7/1	8:48	8:48	202 Jones	FAIL	10M-100M	PASS	100M-100	PASS	----	OFF	0.1M	100M	PASS	PASS	YES
6	2020/7/1	8:49	8:49	410 Brown	FAIL	100M-100	FAIL	1M-10M	PASS	----	OFF	0.1M	100M	PASS	PASS	YES
7	2020/7/1	8:49	8:49	301 Davis	PASS	10M-100M	PASS	0.1M-1M	PASS	----	OFF	0.1M	100M	PASS	PASS	YES
8	2020/7/1	8:49	8:49	937 Miller	PASS	10M-100M	PASS									
	2020/7/1	8:47	8:47	420 Wilson	PASS											

Works as a combo tester

FG-465 can work as a combo tester with FG-470, a wrist strap tester, that makes it possible to conduct measurement, evaluation and recording of both footwear and wrist strap at once.

* Connecting cable (B5264) or Unit integration base (B5263), sold separately, is required.

