

3M™ Static Sensor 718, 3M™ Air Ionizer Test Kit 718A

Hand-held static sensor locates and measures static voltages

Static Sensor 718 can help companies competing in the global high-tech marketplace prevent costly losses due to electrostatic discharge (ESD) damage by playing a vital and valuable role in their own ESD control program. Easy to use, the hand-held Static Sensor 718 is designed to measure static voltages on objects and surfaces arising from electrostatic charge buildups, and can help identify ESD trouble-spots — helping ensure product reliability and customer satisfaction which translates into company profits. As a bonus, when used in conjunction with the Air Ionizer Test Kit 718A, the Static Sensor 718 can also be used to verify the operation of air ionizers as described in ANSI/ESD SP3.3-2006.

Static Sensor 718 Features

- Small-size, lightweight, conductive plastic housing
- Membrane switches for Power, Range/Zero and Hold functions.
- Digital, LCD (liquid-crystal) display is easy to read and updates quickly.
- Ranging system assists user in making quick and easy measurements.
- Output jack available for continuous measurements.

Convenient Size/Low Power Requirements

The Static Sensor 718 is small enough to be carried in a pocket and weighs less than 5 oz. (142 g), including battery. The lightweight plastic housing is conductive, allowing a properly-grounded user to dissipate all electrostatic charges from the surface of the meter.

Meter Functions

The meter is equipped with three membrane switches which control different functions. The POWER switch turns the instrument on and off. The RANGE/ZERO button performs two functions; when pressed momentarily it switches between the two measurement ranges of 0-1,990 volts and 0-19,900 volts, and if held for longer than 3 seconds, it resets the voltage display to 0 volts. The HOLD button allows the user to freeze a measurement on the LCD for later review.

Ranging System

Included with the Static Sensor 718 is a ranging system consisting of two light-emitting diodes (LEDs) which each emit a circular red light onto the surface being measured for static. When the two lights intersect and form a single focused light, the measurement distance is the prescribed 1 inch (2.54 cm).



3M™ Static Sensor 718
Range Finder Unfocused



3M™ Static Sensor 718
Range Finder at 1" away

Accuracy

The Static Sensor 718 is accurate to within $\pm 5\%$ of the displayed measurement, at a distance of one inch (2.54 cm) from the target. Accuracy will vary as the distance between measured object and instrument changes from the one inch (2.54 cm) specification.

Analog Output Jack

The analog output jack located in the front of the unit provides a convenient hook-up, via a 3/32 inch (2.5 mm) monophone jack, to a recorder/data acquisition console. The Static Sensor 718 may then be used for remote monitoring or permanent recording of electrostatic voltage readings.

Static Sensor 718 Specifications

Specifications	Typical Value
Dimensions	0.86" (H) x 2.4" (W) x 4.18" (L) 2.2 cm (H) x 6.1 cm (W) x 10.6 cm (L)
Weight	4.5 oz. (128 g) with battery
Power Requirements	One 9-volt alkaline battery
Measurement Ranges	0 – 1,990 kV Low Range 0 - 19,900 kV High Range
Voltage Display	Liquid crystal display
Voltage Output	1/1000 of measured voltage @ low range 1/10,000 of measured voltage @ high range
Distance Indicator	LED targets. Aligned targets indicate 1 in. (2.54 cm) measurement distance
Measurement Accuracy	Within 5% of actual voltage
Certifications	UL, C-UL, CE

3M™ Static Sensor 718, 3M™ Air Ionizer Test Kit 718A

Air Ionizer Test Kit 718A

When used with the Static Sensor 718, the Air Ionizer Test Kit 718A can provide periodic verification of air ionizer performance. The Air Ionizer Test Kit 718A consists of a charge plate and a charger. The system as a whole is designed to meet the guidelines specified in ANSI/ESD SP3.3-2006.

The charge plate slides over the housing of the Static Sensor 718. Placing the Static Sensor 718 in the air flow of an air ionizer allows for measurement of the ionizer's offset balance. The charger can be used to deposit an electrostatic charge on the plate. Measuring how long it takes the ionizer to neutralize this static charge gives the ionizer discharge time.

Important Notice

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Air Ionizer Test Kit 718A Specifications

Specifications	Typical Value
Charge Plate Assembly	ANSI/ESD SP3.3-2006
Charge Plate Area	1.25" (H) x 3.25" (W) 3.2 cm (H) x 8.3 cm (W)
Charger Dimensions	0.87" (H) x 2.4" (W) x 4.9" (L) 2.2 cm (H) x 6.1 cm (W) x 12.5 cm (L)
Charger Weight	5 oz. (141 g) with battery
Charger Power Requirements	One 9 volt alkaline battery
Charger Output	1100V minimum for positive or negative voltage
Certifications	UL, C-UL, CE

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