CORE INSIGHT
코어인사이트(주)

CONTROL SOLUTIONS

Product Catalog


A company with insight into the core
Core Insight

CONTENTS

We know ESD™

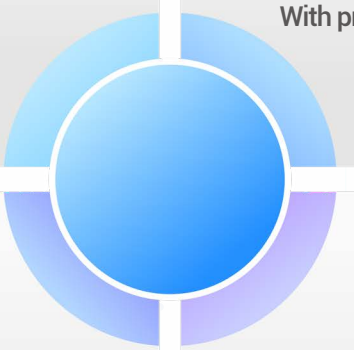
We provide ESD control, ~~not just solutions!~~

Expertise

We pursue excellence in EOS/ESD control.

Knowledge

With precise knowledge, we solve our customers' problems.



Challenge

We never give up on difficult challenges and persevere to the very end.

Passion

We handle every task with the same passion to the very end.

Light and Salt A company that realizes vision

Core Insight, Inc. has a passion to go beyond technical barriers and limitations in the field of EOS/ESD control industries since it was established on March 26, 2003. Since its foundation, Core Insight, Inc. pursues outstanding technical leadership based on latest theory and best practices of industry, strived to solve customers' problems beyond the business of EOS/ESD control solutions.

Core Insight, as the company name means that we have an insightful understanding about core knowledge and understanding of EOS/ESD controls. We have a lot of successful case studies in semiconductor, flat panel display (FPDs) and electronic assembly line EOS/ESD related problem solving and yield improvements. For example, we improved yields over 30% of AI related device assembly processes as ESD control issue and over 13% improvement of particle contamination controls in Mask manufacturing plants. We serve customer's success with great yield improvement and brought them beyond level in EOS/ESD controls throughout numerous cases.

Core Insight, Inc. is a small company but very strong EOS/ESD company, investing a lot of resources and efforts in research and development, and emerging leading company in the global EOS/ESD control industry. Besides this business effort, Core Insight contributed to serving the Korean electronics industry for understanding of EOS/ESD by establishing the Korea EOS/ESD Association and supporting academic research and annual events.

The EOS/ESD Association, which has been active member since 2000, has been participating in factory control standard working groups for EOS/ESD standard documents as updating and writing team. As STDCOM member, we vote on every single document release of EOS/ESD Association and reviews of all document changes.

Since 2023, Core Insight is contributing to significant yield improvement of Advanced Package Devices and AI-related GPU and etc. Core Insight, Inc. will do our very best to continue to demonstrate leadership in the changing semiconductor and AI industries and the electronics industry and to contribute to the development of the industry.

President **Joshua Yoo**

Company History

2025 Nvidia : Yield Improvement Solution Provided for EOS/ESD Failures
Foxconn Vietnam : EOS/ESD Assessment Service

2024 ZMC - Regional Distributorship Agreement Signed for Southeast Asia
Foxconn (Ingrasys) : Yield Improvement Solution Provided for ESD Failure

2023 RONGDI : China - Distribution Business Partnership
Scientech : Taiwan & China - Distribution Business Partnership
Apple : Qualified Supplier for Advanced Package Ionization Solutions

2022 HanHwa : China - Distribution Business Partnership
Production Automation : USA & Latin America - Distribution Business Partnership

2021 Intel : Qualified Supplier for ESD control Ionization Solutions
Model 7380d, QuadPoint Steady-State DC Bar Ionizer Development

2020 Certified by Ministry of SMEs and Startups "INNOBIZ"
R&D Funding Award by Ministry of SMEs and Startups

2019 Model 3890, Wide-Coverage Steady-State DC Ionizer Development
Model 2400, AirStat Technology, Digital Room Ionization System Development

2018 Korea Trade-Investment Promotion Agency Membership
Model 2100, AirStat Technology, Pulsed DC Ionization System Development
Model 470 & 472A, Steady-State DC Gun Ionization System Development

2017 Patent for "CoreStat" and "AirStat" Trade Marks
Model 3800 Series, CoreStat, Steady-State DC Overhead Ionizer Development
Single Crystal Silicon Emitter Point Development

2016 Hybrid Room Ionization System Development
Mini Air-Knife Ionization System Development

2014 Nozzle Ionization System Development

2013 PROSTAT certified Calibration & Repair Center

2012 Air Assist Ionizing Bar, Self-Balanced Blowing Ionizer, Model 310 Series Development
iNARTE Authorized Training Institution Designation

2011 Government Approval Research & Development Center
Venture Company certified by Ministry of SMEs and Startups

2010 Core Insight Co., Ltd. Acquires Factory Registration Certificate
Develops and Mass-Produces Air Knife and Shock-less Static Bar Ionizer

2009 Alternative Room Ionization System Development
Yield Improvement at LG Display

2006 Distribution Business with "MKS Ion Systems"
Distribution Business with "Saint-Gobain"

2005 Corporate Change "CORE INSIGHT, INC."

2003 Founded as "Sunwoo, Inc."
Distribution Business with - DESCO, Julie Industries, Monroe-Electronics

Partners & Clients

NVIDIA · Apple · ST · Samsung 삼성전자 · intel · Qualcomm
SK 하이닉스 · Amkor Technology · ASE Korea · Hana Micron · Synaptics · GlobalWafers America
SK 키파운드리 · Huawei · LB 세미콘 · 이오테크닉스 · SMIC · Texas Instruments
ZEN Semiconductor Search · CRRC · Freiberger · siltronic · AMD · SEMICS
LG 디스플레이 · Samsung 삼성디스플레이 · Hyundai Mobis · Bosch · Corning · FST
HL Mando · Hyundai Kefico · BYD · LG 전자 · LG 이노텍 · Foxconn
ingrasys · LG 에너지솔루션 · Boston Scientific · Silkroad Medical · LG 화학 · OE Solutions
Prostat · nFilter · ets · Static Clean

Certificates

Venture Company Certification

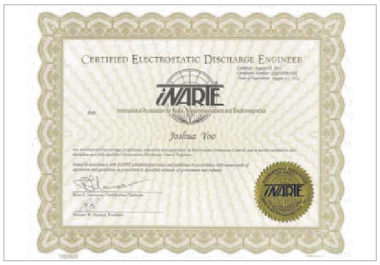
SEMI Member

Corporate Research Institute

ISO-9001 Quality Management Certification

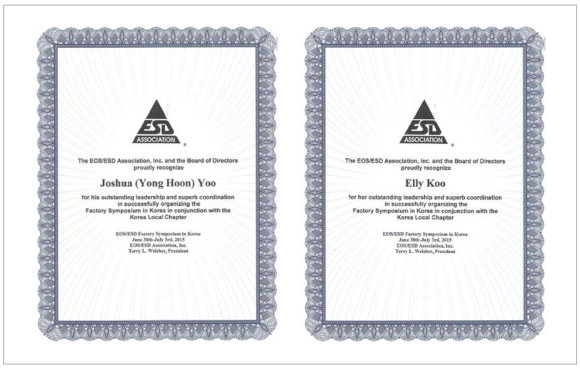
EOS/ESD Association Member

Professional Program Manager



iNarte ESD Engineer

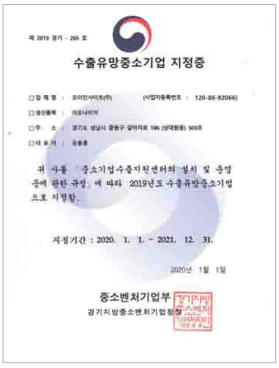
CE Certification



Leadership Award

Taiwan ESD Association Award

Philippine ESD Association Award



Export-Promising SME

ESD Association

Patents

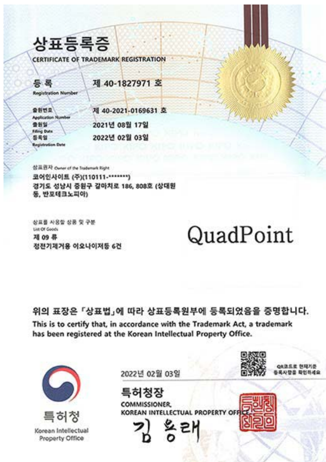

특 허 증
CERTIFICATE OF PATENT
특 허 제 10-1260733 호
2013년 04월 29일
특 허 청 장


특허증
CERTIFICATE OF PATENT
특 허 제 10-1967104 호
2019년 04월 02일
특허청장


특허증
CERTIFICATE OF PATENT
특 허 제 10-2344038 호
2021년 12월 23일
특허청장


실용신안등록증
CERTIFICATE OF UTILITY MODEL REGISTRATION
등 록 제 20-0477646 호
2015년 06월 29일
특허청장


상표등록증
CERTIFICATE OF TRADEMARK REGISTRATION
등 록 제 40-1335033 호
Airstat
2018년 02월 27일
특허청장


상표등록증
CERTIFICATE OF TRADEMARK REGISTRATION
등 록 제 40-1827971 호
QuadPoint
2022년 02월 03일
특허청장


상표등록증
CERTIFICATE OF TRADEMARK REGISTRATION
등 록 제 40-2008741 호
We Know ESD
2023년 04월 18일
특허청장


디자인등록증
CERTIFICATE OF DESIGN REGISTRATION
등 록 제 30-0806673 호
2015년 07월 14일
특허청장

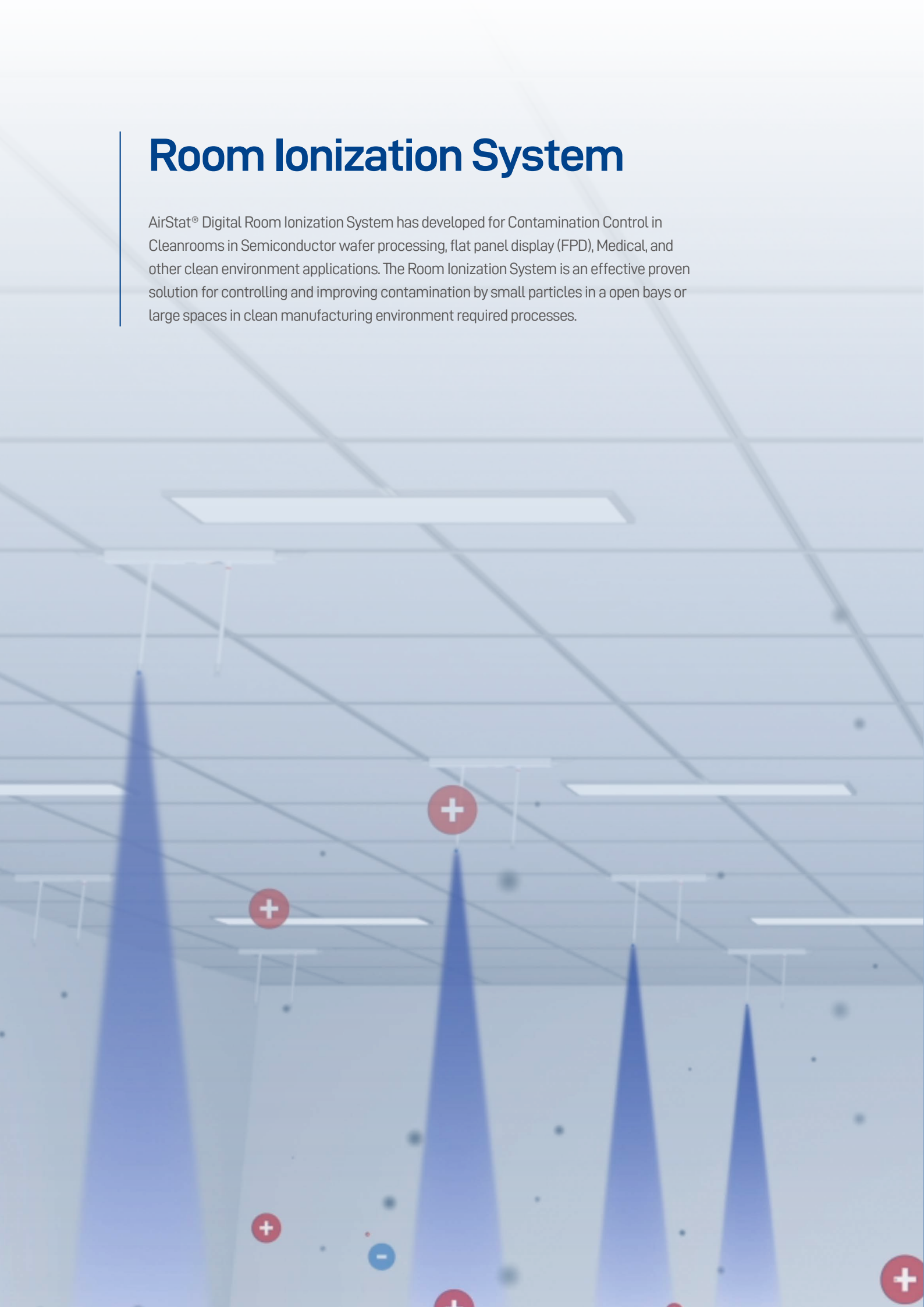

관련디자인등록증
CERTIFICATE OF RELATED DESIGN REGISTRATION
등 록 제 30-0819220 호
2015년 10월 05일
특허청장

1 Ionization

- Room Ionization
- Bar Ionizers
- Blowers
- Overhead
- Cleaning
- Industrial Application

Room Ionization System

AirStat® Digital Room Ionization System has developed for Contamination Control in Cleanrooms in Semiconductor wafer processing, flat panel display (FPD), Medical, and other clean environment applications. The Room Ionization System is an effective proven solution for controlling and improving contamination by small particles in a open bays or large spaces in clean manufacturing environment required processes.



Room Ionization System

Model 2400

AirStat® Digital Ceiling Emitter Ionizer

IR Remote Controller

Single Crystal Silicon Emitter Point

Micro-particle and ESD control for cleanroom environments

The Model 2400, incorporating CoreInsight's AirStat® technology, is a ceiling-mounted room ionizer system designed to efficiently control contaminants and fine particles in semiconductor fabs, flat panel display (FPD) manufacturing, medical device production, and other cleanroom manufacturing environments. The system can be connected to a controller capable of managing up to 120 ionizers simultaneously. Featuring a streamlined design for easy installation, the ionizer allows for comprehensive adjustment and monitoring of various parameters including output voltage, output timing, and ionizer status.

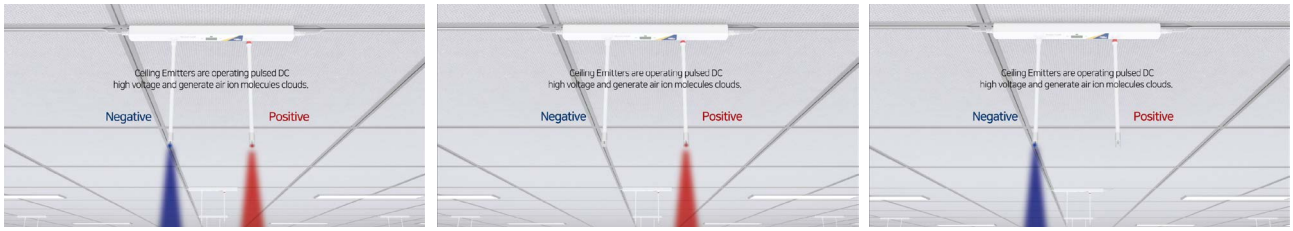
FEATURES

- Innovative Digital Technology
- Pulsed DC Ion Emission
- 4 Digit LED Display
- Audio & Visual LED Alarms
- IR Remote Controller
- Voltage Feedback Monitoring

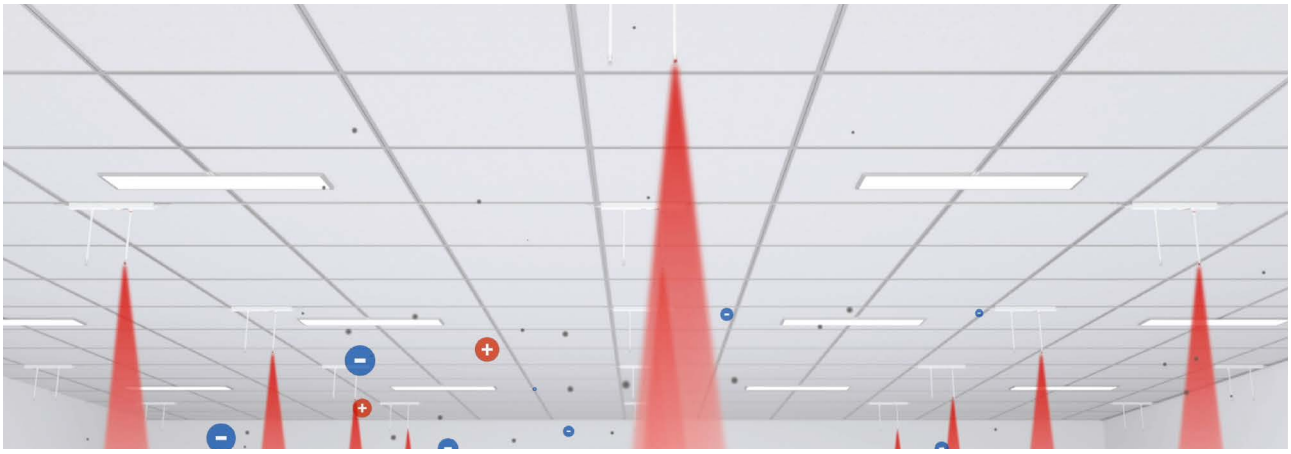
BENEFITS

- Fast Discharge Time
- ON & OFF Time Operation
- Highly Reliable Quality
- Output Parameter Display
- Large Capacity

Pulsed DC Ion Emission Technology



Room Ionization Operational Concept for Contamination Control

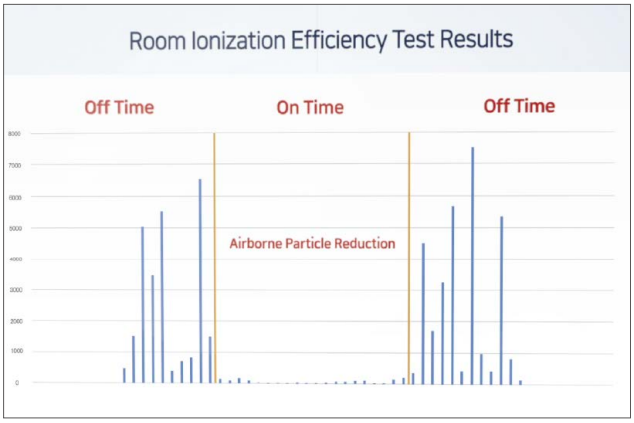


Room Ionization System

Model 2400/2300

AirStat® Digital Ceiling Emitter Ionizer

	Model 2400 SPEC	Model 2300 SPEC
Ion Emission	Pulsed DC Technology	
Output Voltage	±12 kV, 100 V Step	±10 kV, 100 V Step
Operation Mode	Pulsed DC, Standby	
On-Time	0.1 to 15.0 sec	
Off-Time	0.1 to 10.0 sec	
Connectivity	Up to 120 units	Up to 40 units
Compatibility	ISO 14644-1 Class 1	



Controllers SPEC	
Model 6320	Up to 20 units
Model 6340	Up to 40 units
Model 6340	Up to 40 units, MODBUS
Model 6380	Up to 120 units, MODBUS

RODS length(mm)	
125	Model 2400-125-XX
300	Model 2400-300-XX
450	Model 2400-450-XX
600	Model 2400-600-XX
750	Model 2400-750-XX
900	Model 2400-900-XX
1200	Model 2400-1200-XX

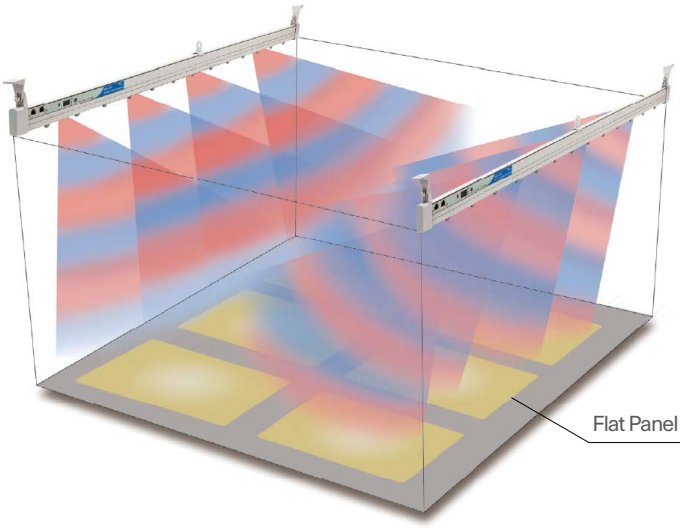
※ XX : ES-Single Crystal Silicon | ET-Titanium | EP-Tungsten

Related Product	
IR	Remote Controller
Model 5239	Junction Box - Extension function

Alternative Room Ionization for FPD

Model 2200

AirStat® FPD Room Ionization System



IR Remote Controller

Fine Particle and ESD Control in FPD Manufacturing Environments

The Model 2200, featuring CoreInsight's AirStat® technology, is an innovative room ionizer designed to control large-scale spaces such as FPD manufacturing environments. By utilizing existing airflow within cleanrooms or equipment interiors for spatial control, it eliminates the need for additional airflow supply devices while enabling easy installation and effective static control. The system offers convenient remote operation via remote control, allowing operators to manage the ionizer from outside the equipment. With individually adjustable output settings including voltage and frequency, the Model 2200 provides exceptional ease of management and operational flexibility.

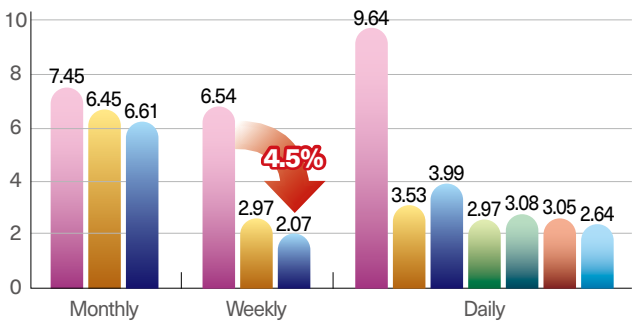
FEATURES

- Innovative Digital Technology
- Pulsed DC Ion Emission
- 3 Digit LED Display
- LED & Audio Alarm
- IR Remote Controller
- Syncronized Ion Emittion

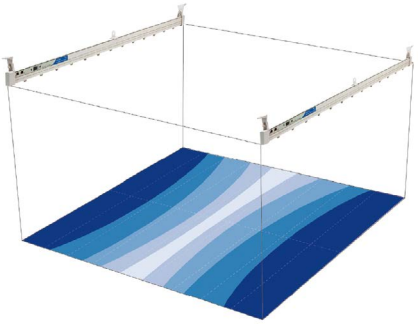
BENEFITS

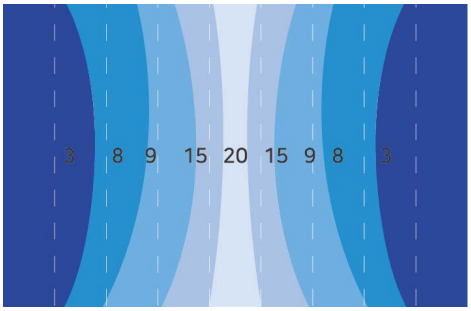
- Fast Discharge Time
- Programmable ON/OFF timing
- Output Parameter Display
- Extream Large Space Coverage

RODS length(mm)



Specifications	
Ion Emission	Pulsed DC Technology
Output Voltage	±14 kV, 100 V Step
Operation Mode	Pulsed DC, Independent
On-Time	0.1 to 99.9 sec
Monitoring	Relay Output
Connectivity	RJ-45 Terminal





ANSI/ESD SP3.5 - Alternative Room Ionization
Test Method Measurement unit - second

Bar Ionizers

QuadPoint® Steady-State DC Bar Ionizer is a new innovation technology that can be applied to ultra sensitive device ESD control application such as AI related GPUs and ASIC device handling processess. QuadPoint® technology can be achieve at very low peak offset voltage level and fast discharge time performance.

Ionization for Mini-Environment

Model 2100

AirStat® Digital Pulsed DC Bar Ionizer

IR Remote Controller

Single Crystal Silicon Emitter Point

Micro-particle and ESD control for cleanroom environments

The Model 2100, featuring AirStat® Pulsed DC technology, is a bar-type ionizer that operates without compressed dry air (CDA). By utilizing existing laminar airflow within cleanrooms or equipment, this technology effectively controls static electricity and fine particles without disrupting the cleanroom's airflow environment.
With a selection of discharge needles made from various materials, the system is suitable for deployment in Class 10 and below cleanrooms.

The Model 2100 is designed to allow users to control detailed parameters such as output voltage and output timing, optimized according to specific installation environments.

FEATURES

- Innovative Digital Technology
- Pulsed DC Ion Emission
- 3 Digit LED Display
- LED & Audio Alarm
- IR Remote Controller
- Current feedback monitoring

BENEFITS

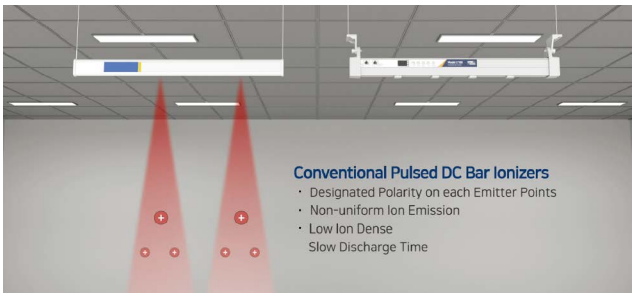
- Fast Discharge Time
- Programmable ON/OFF timing
- Output Parameter Display
- Power connection ready

Specifications	
Model 5220ES	Single Crystal Silicon
Model 5220EP	Tungsten Emitter

Specifications	
Ion Emission	Pulsed DC Technology
Output Voltage	±7 kV, 100 V Step
On-Time	0.1 to 99.99 sec
Daisy-Chain	Up to 2 units
Compatibility	ISO 14644-1 Class 1
Dimensions	95 x 39 x 600, 700, 900, 1200, 1600 and 2000L mm

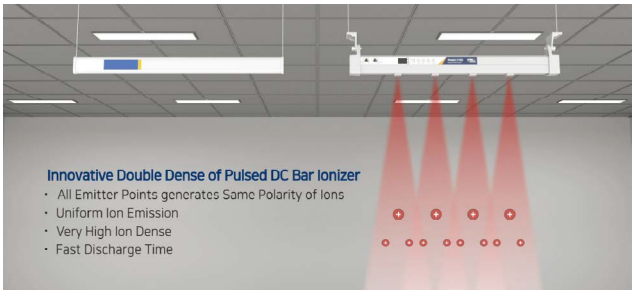
Conventional Pulsed DC Bar Ionizer

Designated Polarity on each Emitter Points



Innovative Double Dense of Pulsed DC Bar Ionizer

All Emitter Points generates Same Polarity of ions



The New Innovative Bar Ionizers

Model 7380d

QuadPoint® Steady-State DC Bar Ionizer

IR Remote Controller

Advanced Package Device ESD Control Ultra-high-speed, Die-to-Die Interface & HPC Application

The Model 7380d, featuring AirStat® Steady-State DC technology, is an ionizer specifically designed to maintain low Peak Offset voltage in manufacturing and handling processes for high-speed components used in AI and HPC applications. The QuadPoint® nozzle is a patented core technology that maintains low ion balance unachievable with conventional AC ionizer technology, making it the only Bar Type ionizer capable of fully complying with ANSI/ESD S20.20 control program requirements of ±35V or ±5V.

FEATURES

- Steady-State DC Ion Emission
- Class 0 ESD Control Application
- Output Voltage Adjustable
- Very Low Offset Voltage
- Audio & Visual LED Alarms
- FMS Monitoring Interface

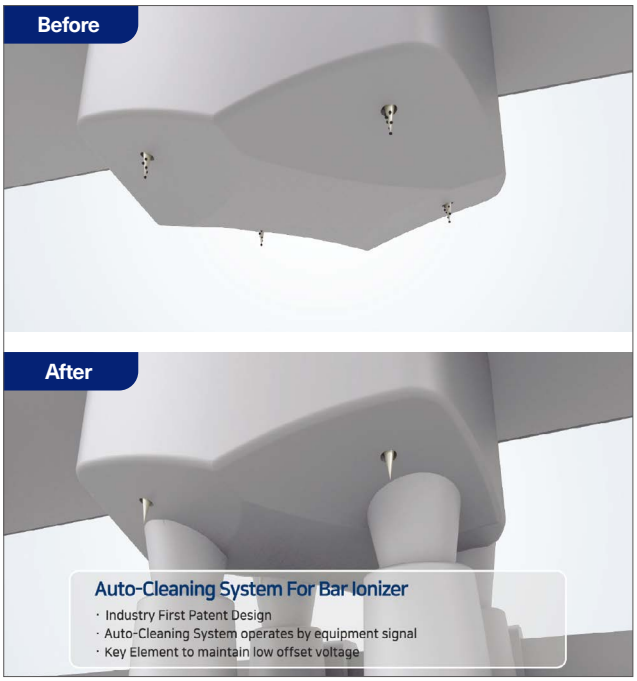
BENEFITS

- Ion Balance Alarms
- HV Power Failure Alarms
- No Swing Voltage
- No Induction Field

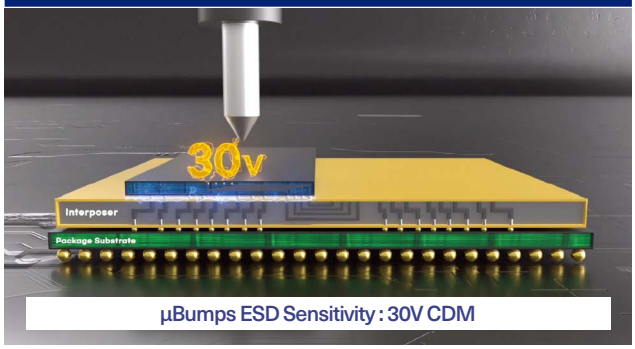
QuadPoint® Nozzle Design

Specifications	
Ion Emission	Steady-State DC Technology
Ion Balance	Less than ±25 V peak
Output Voltage	±3.5 kV, 10V Resolution Adjustment
Decay Time	Less than 2.0 sec at 300 mm
Dimensions	62.5 x 30 x 350, 590, 770, 860, 1040L mm

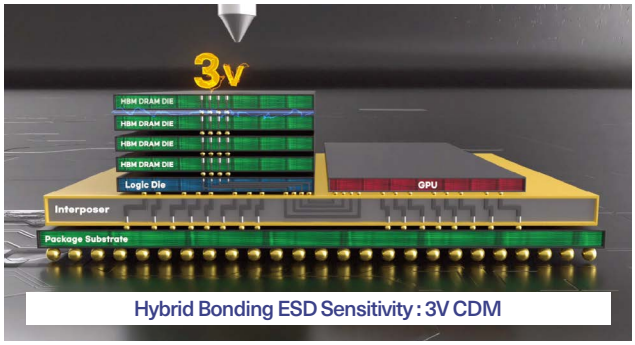
Emitter Point Information	
Model 5780ES	Single Crystal Silicon
Model 5780EP	Tungsten



Sensitivity Level of Advanced Package Device

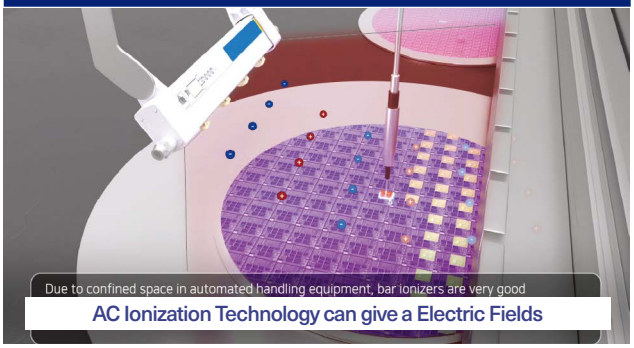


µBumps ESD Sensitivity : 30V CDM

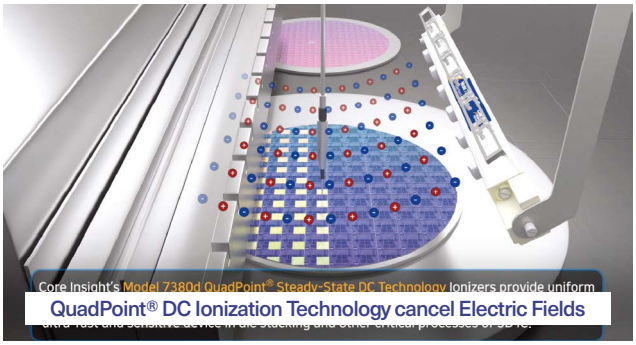


Hybrid Bonding ESD Sensitivity : 3V CDM

QuadPoint® DC Technology vs AC Technologies



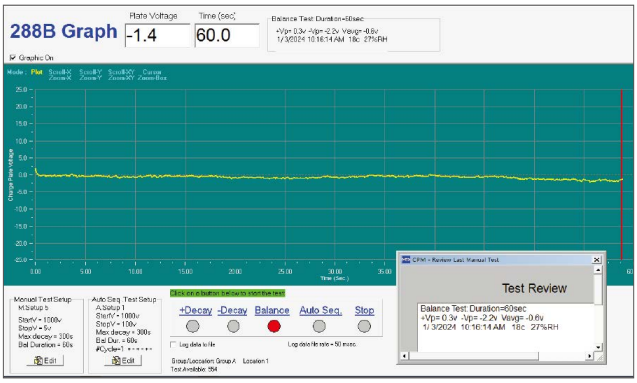
AC Ionization Technology can give a Electric Fields



QuadPoint® DC Ionization Technology cancel Electric Fields

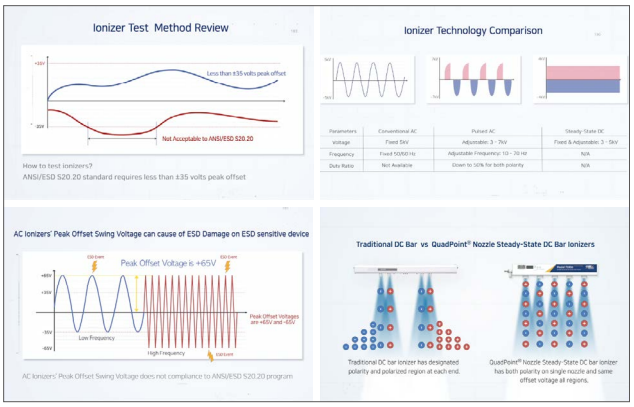
Ion Balance Test Results AC Switching Voltgae can cause of ESD Damage by Induction

- ANSI/ESD STM3.1 & S20.20 - Offset Voltage means for DC based ionizer
- Test Equipment - Model 288B CPM by Monroe Electronics



No Swing Voltage from Steady-State DC Ionizer

Induction Field Swing Voltage from Pulsed AC Ionizer
Peak-to-Peak value: +305V to - 393V



ANSI/ESD STM3.1 and ANSI/ESD S20.20 standard requirements

Auto-Cleaning System For Bar Ionizer

Automatic cleaning system - Patent registered

Air Assist Bar Ionizers

Model 7300

CoreStat® Self-Balanced DC Bar Ionizer

The Model 7300, featuring CoreStat® Steady-State DC technology, is a bar-type ionizer that operates with CDA or compressed air. Primarily designed for installation inside equipment, it maintains low ion balance (±35V peak), minimizing the risk of ESD failures caused by ionizer-induced charging. This makes it suitable for processes handling Class 0 level sensitive components.

FEATURES

- Steady-State DC Ion Emission
- Instrinsic Self-Balance Technology
- Low Offset Voltage
- Audio & Visual LED Alarms
- FMS Monitoring Interface

BENEFITS

- No Calibration
- No Swing Voltage
- Less Maintenance

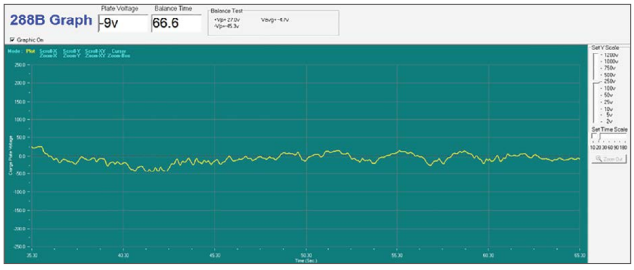
Emitter Point Infomation	
Model 5780EP	Tungsten

Specifications	
Ion Emission	Steady-State DC Technology
Output Voltage	5 kV
Ion Balance	±35 V
Dimensions	95 x 39 x 300, 400, 500 mm

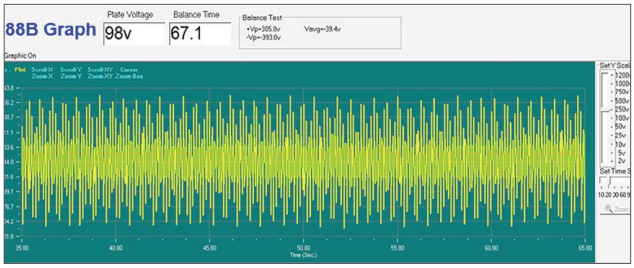
Ion Balance Test Results

AC Switching Voltage can cause of ESD Damage by Induction

- ANSI/ESD STM3.1 & S20.20 - Offset Voltage means for DC based ionizer
- Offset Voltage measurement should be change to Peak Voltage
- Test Equipment - Model 288B CPM by Monroe Electronics



No Swing Voltage from Steady-State DC Ionizer



Induction Field Swing Voltage from Pulsed AC Ionizer

Peak-to-Peak value: +305V to - 393V

Air Assist Bar Ionizers

Model 7110

AirStat® Digital Pulsed AC Bar Ionizer

IR Remote Controller

The Model 7110, featuring AirStat® Pulsed AC technology, is a bar-type ionizer that operates with CDA or compressed air. Using air flow, it neutralizes charged energy with rapid neutralization speed. Available in lengths up to 3 meters, it can be customized for various process applications.

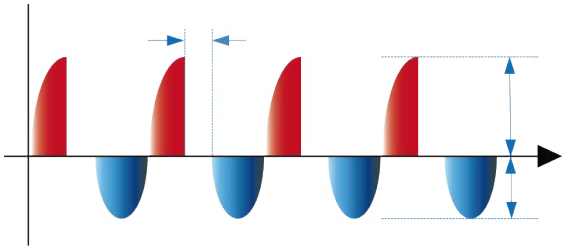
FEATURES

- Innovative Digital Technology
- Pulsed DC Ion Emission
- 3 Digit LED Display
- LED & Audio Alarm
- IR Remote Controller
- Current feedback monitoring

BENEFITS

- Fast Discharge Time
- Output Parameter Display
- Power connection ready
- FMS Interface

Pulsed AC Ionization Operating Theory

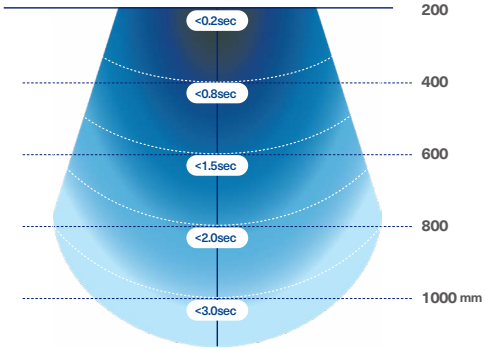


Frequency Change	Duty Cycle Ratio Adjustment	Independent Voltage Output

Specifications

Ion Emission	Pulsed AC Technology
Output Voltage	±7.0 kV (±3.5kV for short bar)
Frequency	1 to 50 Hz
Daisy-Chain	Up to 2 units
Dimensions	95 x 39 x 300, 400, 500, 600, 800, 1000, 1400, 1600, 1800, 2000L mm

Discharge Time



Air Pressure : 0.3 MPa
Decay Time Test from ± 1000 V to ± 100 V
Charge Plate Monitor, Model 156A/1

Emitter Point Infomation

Model 5780EP	Tungsten

Blowers

CoreStat® technology are developed for Class 0 device handling and all other common ESD control applications, such as semiconductor assembly and testing, and SMT/PCB assembly manufacturing processes. CoreStat® technology is a intrinsic self-balancing high-voltage power design technology that does not require any calibration and an easy to maintenance.

Single Fan Ionizer Series

Self-Balanced and No Calibraition

CoreStat® is a steady-state DC technology has internally connected positive and negative high voltage power units in circuit. Thus, it maintain same voltage output level with no calibration required.

No Ground Required

As essence of CoreStat® technology, it use opposite polarity power supply circuit as acting reference ground and do not need attach to electrical ground system.

Low Offset Voltage

As part of CoreStat® technology with mechanical design of all components in assembled, it maintain at very low peak offset voltage. This will not change offset voltage with no maintenance after a long operation time.

※ **Remark :** No maintenance will be a foreign material (FM) contamination issue.

One-Touch Auto-Cleaning

One-touch auto-cleaning brush activate to cleaning emitter points when power down or simply press LED button on ionizers. When fan motor loose power, brush built-in fan module get close to emitter points and provide cleaning. After cleaning cycle finished, motor activate power and brush get further from emitter point and do not touching when normal operation.

RJ-45 Terminal

24V DC can be supply by Model 5100D DC power supply unit or automated handling equipment via RJ-45 terminal to turn on/off and alarm status.

CDM & Class 0 ESD Control Ionizer

Model 360 Series

CoreStat® Self-Balanced Air Ionizing Blower

Auto-Cleaning Brush

One-Touch Cleaning Button

Self-Balanced Ionizer & Auto-Cleaning

A Steady-State DC ionizer featuring CoreStat Self-Balance technology, designed for use within automated equipment in various electronic manufacturing environments, including Class 0 semiconductor assembly and PCB handling processes.
The Model 360 Series is equipped with a one-touch automatic cleaning brush for easy discharge needle maintenance and offers convenient operation with no calibration or verification required.

Specifications			
	360E	360S	360A
Ion Emission	Steady-State DC		
Ion Balance	± 5 V peak	± 10 V peak	± 10 V peak
Decay Time	Less than 5 sec (300 mm)	Less than 3 sec (300 mm)	Less than 5 sec (300 mm)
Air Flow	27 CFM	34 CFM	27 CFM
Dimensions	80 x 110 x 64 mm (without bracket) / 105 x 120 x 64 mm (with bracket)		
Compatibility	ISO 14644-1 Class 4		

FEATURES

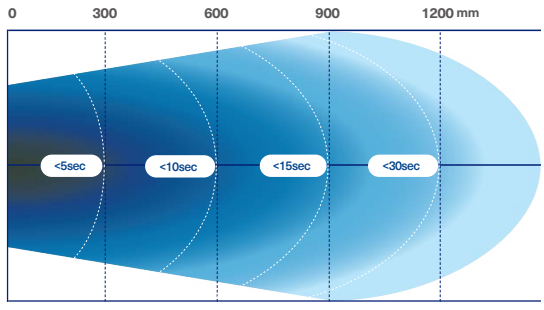
- Steady-State DC Ion Emission
- Class 0 ESD Control Application
- LED & Audio Alarm
- ONE-Touch Auto-Cleaning (Except 360A)
- FMS monitoring through RJ-45 port

BENEFITS

- No Calibration
- Low Offset Voltage
- No High Switching Voltage
- Easy Replacement of Emitter Points
- Auto Stop Safety function
- No Transient Noise Free

Product Infomation	
Model 360E	Built-in Auto-Cleaning Brush Type
Model 360A	General Type
Model 360S	High Speed Fan Type

Discharge Time * Based on 360S



Discharge time and balance measured according
to ANSI/ESD STM3.1 using a Charge Plate Monitor(CPM)

Self-Balanced Air Ionizing Blower

Model 310 Series

CoreStat® Self-Balanced Air Ionizing Blower

Auto-Cleaning Brush

One-Touch Cleaning Button

Ion Balance & HV Failure Alarm / Audio, LED Alarm

The Model 310 Series, featuring CoreStat Self-Balance technology, is a Steady-State DC ionizer equipped with a high-speed fan, designed for use in various electronic manufacturing environments including semiconductor assembly and PCB handling processes. It is equipped with a one-touch automatic cleaning brush that makes discharge electrode cleaning simple and convenient to use as it requires no calibration.

Specifications		
	310E	310S/SE
Ion Emission	Steady-State DC	
Ion Balance	± 10 V peak	± 20 V peak
Decay Time	Less than 3 sec (300 mm)	Less than 2 sec (300 mm)
Air Flow	60 CFM	100 CFM
Dimensions	125 x 135 x 70 mm (without bracket) / 152 x 155 x 70 mm (with bracket)	
Compatibility	ISO 14644-1 Class 4	

FEATURES

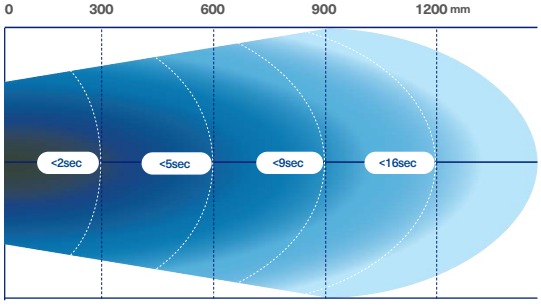
- Steady-State DC Ion Emission
- ANSI/ESD S20.20 compliance specifications
- LED & Audio Alarm
- ONE-Touch Auto-Cleaning (Except 310S)
- FMS monitoring through RJ-45 port

BENEFITS

- No Calibration
- Low Offset Voltage
- No High Switching Voltage
- Easy Replacement of Emitter Points
- No Transient Noise Free

Product Infomation	
Model 310E	Built-in Auto-Cleaning Brush Type
Model 310S	High Speed Fan General Type
Model 310SE	High Speed Fan, Built-in Auto-Cleaning Brush Type

Discharge Time * Based on 310S



Discharge time and balance measured according to ANSI/ESD STM3.1 using a Charge Plate Monitor(CPM)

CDM & Class 0 ESD 제어 이오나이저

Model 3810F

CoreStat® Self-Balanced Air Ionizing Blower

Auto-Cleaning Brush

One-Touch Cleaning Button

Self-Balanced Ionizer & Auto-Cleaning features

The Model 3810F, featuring CoreStat Self-Balance technology, is a Steady-State DC ionizer designed for use in various electronic manufacturing environments including Class 0 semiconductor assembly and PCB handling processes.
The Model 3810F is equipped with a one-touch automatic cleaning brush that makes discharge electrode cleaning simple and convenient to use as it requires no calibration. When the rear grill filter is opened or closed, power is automatically shut off, ensuring safety and convenience for maintenance work during internal cleaning.

FEATURES

- Steady-State DC Ion Emission
- Class 0 ESD Control Application
- LED & Audio Alarm
- ONE-Touch Auto-Cleaning (Except 3810)
- FMS monitoring through RJ-45 port

BENEFITS

- No Calibration
- Low Offset Voltage
- No High Switching Voltage
- Easy Replacement of Emitter Points
- Auto Stop Safety function
- No Transient Noise Free

Product Infomation	
Model 3810	General Type
Model 3810E	Built-in Auto-Cleaning Brush Type

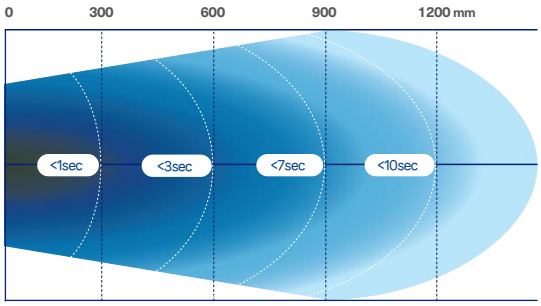
Specifications	
Ion Emission	Steady-State DC
Ion Balance	± 5 V peak
Decay Time	Less than 1.0 sec
Air Flow	150 CFM
Dimensions	148 x 185 x 77 mm
Compatibility	ISO 14644-1 Class 4

Easy Open Grill

FMS monitoring through RJ-45 port

Plug-and-Play Type

Discharge Time



Discharge time and balance measured according to ANSI/ESD STM3.1 using a Charge Plate Monitor(CPM)

Wide Coverage Ionizing Blower

Model 3890E

CoreStat® Self-Balanced Air Ionizing Blower

Auto-Cleaning Brush

IR Remote Controller

Self-Balanced Ionizer & Auto-Cleaning features

The Model 3890E, featuring CoreStat Self-Balance technology, is a Steady-State DC ionizer equipped with a high-speed fan, designed for use in various electronic manufacturing environments including Class 0 semiconductor assembly and PCB handling processes.
The Model 3890E is equipped with a one-touch automatic cleaning brush that makes discharge electrode cleaning simple and convenient to use as it requires no calibration. When the rear grill filter is opened or closed, power is automatically shut off, ensuring safety and convenience for maintenance work during internal cleaning. With 24-hour automatic cleaning setting capability, it performs daily automatic cleaning at user-specified times.

FEATURES

- Steady-State DC Ion Emission
- Class 0 ESD Control Application
- LED & Audio Alarm
- ONE-Touch Auto-Cleaning (Except 3890)
- 5 Step Fan Speed Control
- 24hour Auto-Cleaning Cycle

BENEFITS

- No Calibration
- Low Offset Voltage
- No High Switching Voltage
- Easy Replacement of Emitter Points
- Auto Stop Safety function
- No Transient Noise Free

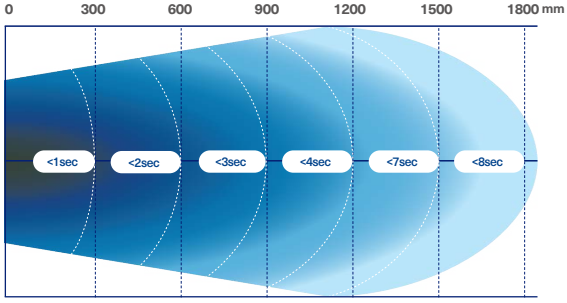
Product Infomation	
Model 3890	General Type
Model 3890E	Built-in Auto-Cleaning Brush Type

Specifications	
Ion Emission	Steady-State DC
Ion Balance	± 5 V peak
Decay Time	Less than 10 sec at 1800 mm
Air Flow	165 CFM
Dimensions	422 x 190 x 107 mm
Compatibility	ISO 14644-1 Class 4

5 Step Fan Speed Control

Safety Stop Feature

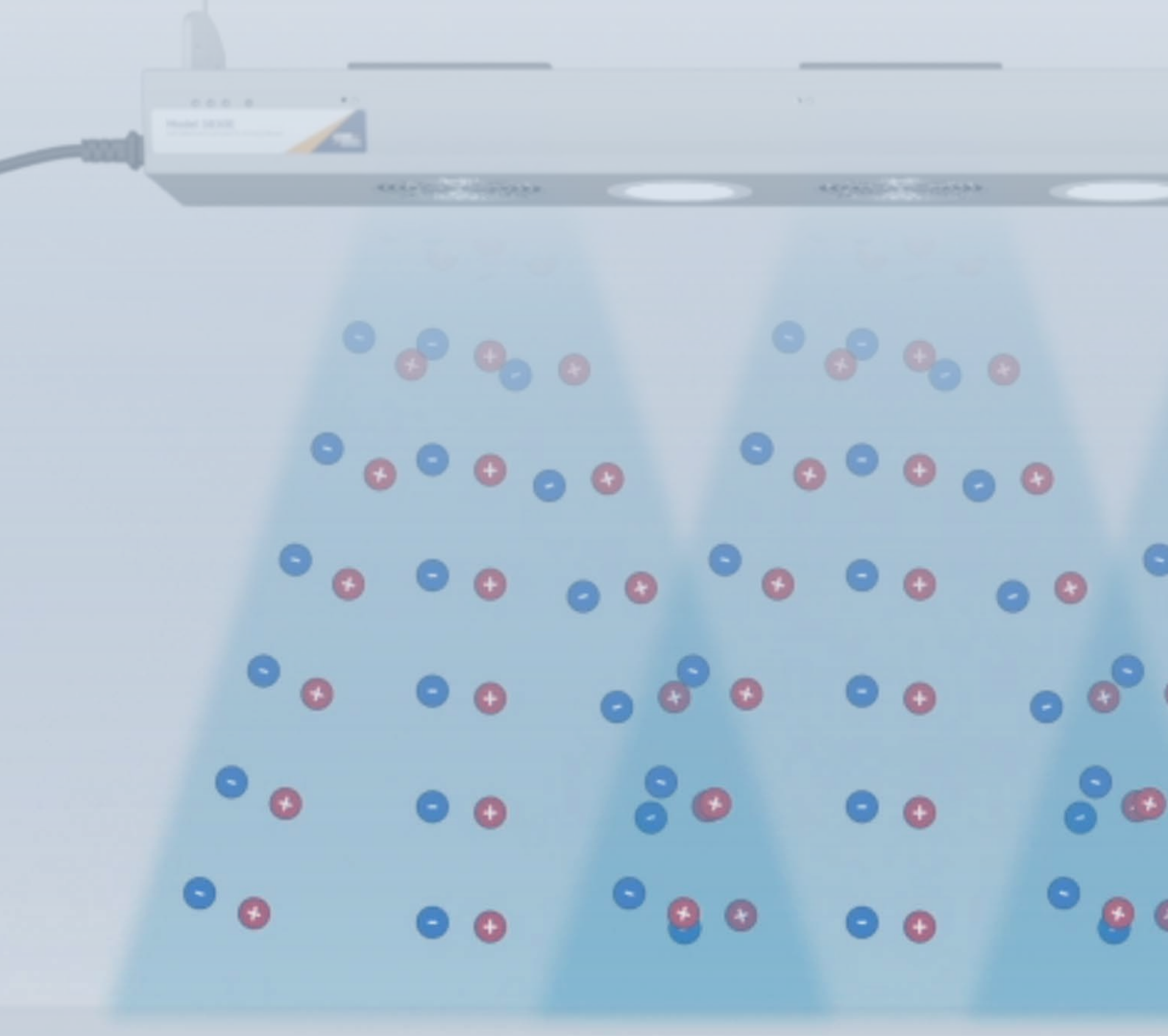
Discharge Time



Discharge time and balance measured according to ANSI/ESD STM3.1 using a Charge Plate Monitor(CPM)

Overhead

CoreStat® technology are developed for Class 0 device handling and all other common ESD control applications, such as semiconductor assembly and testing, and SMT/PCB assembly manufacturing processes. CoreStat® technology is a intrinsic self-balancing high-voltage power design technology that does not require any calibration and an easy to maintenance. Overhead Blowers are designed for large areas such as workbenches.



Overhead Ionizing Blowers

Self-Balanced and No Calibraition

CoreStat® is a steady-state DC technology has internally connected positive and negative high voltage power units in circuit. Thus, it maintain same voltage output level with no calibration required.

Remote Controller

Model 5331R Remote Controller can adjust fan speed of overhead and wide coverage blowers. Fan speed can locked by remote controller.

Low Offset Voltage

As part of CoreStat® technology with mechanical design of all components in assembled, it maintain at very low peak offset voltage. This will not change offset voltage with no maintenance after a long operation time.
※ **Remark :** No maintenance will be a foreign material (FM) contamination issue.

Auto-Cleaning

Auto-cleaning brush activate to cleaning emitter points when power down or press PWR button on remote controller. When fan motor loose power, brush built-in fan module get close to emitter points and provide cleaning. When press PWR button again, motor activate power and brush get further from emitter point and do not touching when normal operation.

Daisy-Chained

Daisy-chained power plug & connector allows to use multiple overhead blowers from a single AC outlet. ※ **Remark :** Single AC outlet could be typically 15 - 16 Amps. Note there is other electrical equipment connected at the same power source.

Class 0 & CDM Control Application

Model 3700 Series

CoreStat® Self-Balanced Overhead Ionizer

Auto-Cleaning Brush

IR Remote Controller

Cleaning Cycle Programmable

The Model 3700 Series, featuring CoreStat Self-Balance technology, is a Steady-State DC ionizer equipped with a high-speed fan, designed for use in various electronic manufacturing environments including Class 0 semiconductor assembly and PCB handling processes.
The Model 3700 Series is equipped with a one-touch automatic cleaning brush that makes discharge electrode cleaning simple and convenient to use as it requires no calibration.

When the top grill filter is opened or closed, power is automatically shut off, ensuring safety and convenience for maintenance work during internal cleaning. User-configurable automatic cleaning brush settings allow automatic cleaning to be performed at specified intervals and times.

The built-in MODBUS communication enables centralized monitoring of ionizer status and control of airflow speed and automatic cleaning functions via PC.

Specifications			
	3720	3730	3740
Ion Emission	Steady-State DC		
Ion Balance	± 10 V peak	± 5 V peak	± 5 V peak
Decay Time	Less than 2 sec (450 mm)	Less than 1 sec (450 mm)	Less than 1 sec (450 mm)
Air Flow	165 CFM		
Dimensions	680 x 120 x 180 mm (with bracket)	1000 x 120 x 180 mm (with bracket)	1200 x 120 x 180 mm (with bracket)
Compatibility	ISO 14644-1 Class 4		

FEATURES

- Steady-State DC Ion Emission
- Class 0 ESD Control Application
- LED & Audio Alarm
- ONE-Touch Auto-Cleaning * Except 3890
- 5 Step Fan Speed Control
- Auto-Cleaning Button & Brush
- MODBUS communication enabled

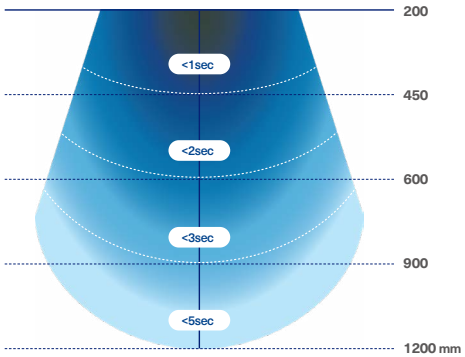
BENEFITS

- No Calibration
- Low Offset Voltage
- No High Switching Voltage
- Easy Replacement of Emitter Points
- Auto Stop Safety function
- Slim Design
- No Transient Noise Free

Product Infomation	
Model 3720E	2FAN / Power Alarm / Built-in Emitter Cleaning Cycle Programmable
Model 3720EL	2FAN / Power Alarm / Built-in Emitter Cleaning Cycle Programmable / Built-in LED Light
Model 3730E	3FAN / Power Alarm / Built-in Emitter Cleaning Cycle Programmable
Model 3730EL	3FAN / Power Alarm / Built-in Emitter Cleaning Cycle Programmable / Built-in LED Light
Model 3740E	4FAN / Power Alarm / Built-in Emitter Cleaning Cycle Programmable
Model 3740EL	4FAN / Power Alarm / Built-in Emitter Cleaning Cycle Programmable / Built-in LED Light

LED Lights Option

Discharge Time * Based on 3730/40



Discharge time and balance measured according to ANSI/ESD STM3.1 using a Charge Plate Monitor(CPM)

Class 0 & CDM Control Application

Model 3800 Series

CoreStat® Self-Balanced Overhead Ionizer

Auto-Cleaning Brush

IR Remote Controller

The Model 3800 Series, featuring CoreStat® Self-Balance technology, is a Steady-State DC ionizer that can be used in various electronic product manufacturing environments including Class 0 component handling processes, semiconductor assembly processes, and PCB assembly processes. Discharge electrode cleaning is performed through an automatic cleaning system, and the high voltage power technology, which is the ionizer's core patented technology, is designed to require no regular calibration, making maintenance work simple.

The Model 3800 Series overhead ionizer can achieve static elimination within 3 seconds at a distance of 450 mm. The 8-terminal monitoring I/O ports enable monitoring of the ionizer's status and power input control. LED indicators and audio alarms provide more intuitive confirmation of the ionizer's ion balance and high voltage power abnormal conditions. The built-in discharge electrode cleaning brush performs automatic cleaning within 10 seconds through remote control, effectively reducing maintenance resources.

Specifications			
	3820	3830	3840
Ion Emission	Steady-State DC		
Ion Balance	± 10 V peak	± 5V peak	± 5V peak
Decay Time	Less than 3 sec (450 mm)	Less than 1 sec (450 mm)	Less than 1 sec (450 mm)
Air Flow	150 CFM		
Dimensions	680 x 120 x 180 mm (with bracket)	1000 x 120 x 180 mm (with bracket)	1200 x 120 x 180 mm (with bracket)
Compatibility	ISO 14644-1 Class 4		

FEATURES

- Steady-State DC Ion Emission
- Class 0 ESD Control Application
- LED & Audio Alarm
- 3 Step Fan Speed Control
- Auto-Cleaning Button & Brush

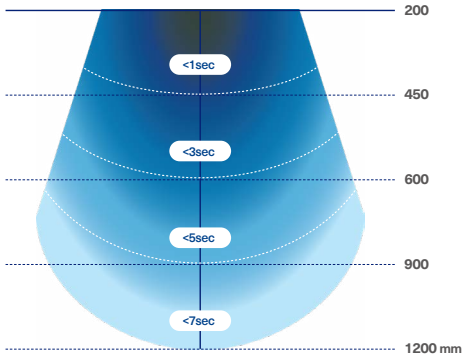
BENEFITS

- No Calibration
- Low Offset Voltage
- No High Switching Voltage
- Easy Replacement of Emitter Points
- Auto Stop Safety function
- Slim Design
- No Transient Noise Free

Product Infomation	
Model 3820E	2 FAN / Power Alarm / Grill Filter / Auto Stop, Auto Cleaning
Model 3820EL	2 FAN / Power Alarm / Grill Filter / Auto Stop, Auto Cleaning / Built-in LED Lights
Model 3830E	3 FAN / Power Alarm / Grill Filter / Auto Stop, Auto Cleaning
Model 3830EL	3 FAN / Power Alarm / Grill Filter / Auto Stop, Auto Cleaning / Built-in LED Lights
Model 3840E	4 FAN / Power Alarm / Grill Filter / Auto Stop, Auto Cleaning
Model 3840EL	4 FAN / Power Alarm / Grill Filter / Auto Stop, Auto Cleaning / Built-in LED Lights

LED Lights Option

Discharge Time * Based on 3830/40



Discharge time and balance measured according to ANSI/ESD STM3.1 using a Charge Plate Monitor(CPM)

Class 0 & CDM Control Application

Model 3900 Series

CoreStat® Self-Balanced Overhead Ionizer

Auto-Cleaning Brush

IR Remote Controller

The Model 3940E Series, featuring CoreStat Self-Balance technology, is a Steady-State DC ionizer equipped with a high-speed fan, designed for use in various electronic manufacturing environments including Class 0 semiconductor assembly and PCB handling processes.

The Model 3940E Series is equipped with an automatic cleaning brush that makes discharge electrode cleaning simple and convenient to use as it requires no calibration. When the top grill filter is opened or closed, power is automatically shut off, ensuring safety and convenience for maintenance work during internal cleaning.
When the PWR button on the remote control is pressed, the automatic cleaning brush is activated to automatically clean the discharge electrodes. Additionally, when power is turned off, the built-in automatic cleaning brush performs automatic cleaning. The automatic cleaning brush does not contact the discharge electrodes during ionizer operation.

Specifications			
	3920	3930	3940
Ion Emission	Steady-State DC		
Ion Balance	± 10 V peak	± 5 V peak	± 5 V peak
Decay Time	Less than 3 sec (450 mm)	Less than 1 sec (450 mm)	Less than 1 sec (450 mm)
Air Flow	150 CFM		
Dimensions	680 x 120 x 180 mm (with bracket)	1000 x 120 x 180 mm (with bracket)	1200 x 120 x 180 mm (with bracket)
Compatibility	ISO 14644-1 Class 4		

FEATURES

- Steady-State DC Ion Emission
- Class 0 ESD Control Application
- LED & Audio Alarm
- 3 Step Fan Speed Control
- Auto-Cleaning Button & Brush

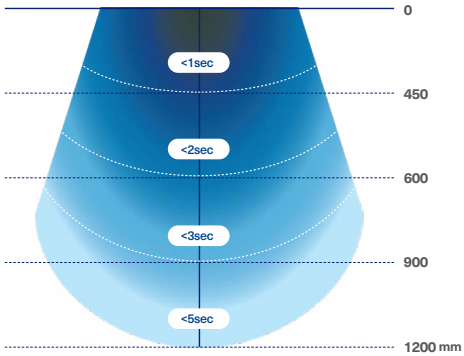
BENEFITS

- No Calibration
- Low Offset Voltage
- No High Switching Voltage
- Easy Replacement of Emitter Points
- Auto Stop Safety function
- Slim Design
- No Transient Noise Free

Product Infomation	
Model 3920E	High Speed 2 FAN / Power Alarm / Grill Filter / Auto Stop, Auto Cleaning
Model 3920EL	High Speed 2 FAN / Power Alarm / Grill Filter / Auto Stop, Auto Cleaning / Built-in LED Lights
Model 3930E	High Speed 3 FAN / Power Alarm / Grill Filter / Auto Stop, Auto Cleaning
Model 3930EL	High Speed 3 FAN / Power Alarm / Grill Filter / Auto Stop, Auto Cleaning / Built-in LED Lights
Model 3940E	High Speed 4 FAN / Power Alarm / Grill Filter / Auto Stop, Auto Cleaning
Model 3940EL	High Speed 4 FAN / Power Alarm / Grill Filter / Auto Stop, Auto Cleaning / Built-in LED Lights

LED Lights Option

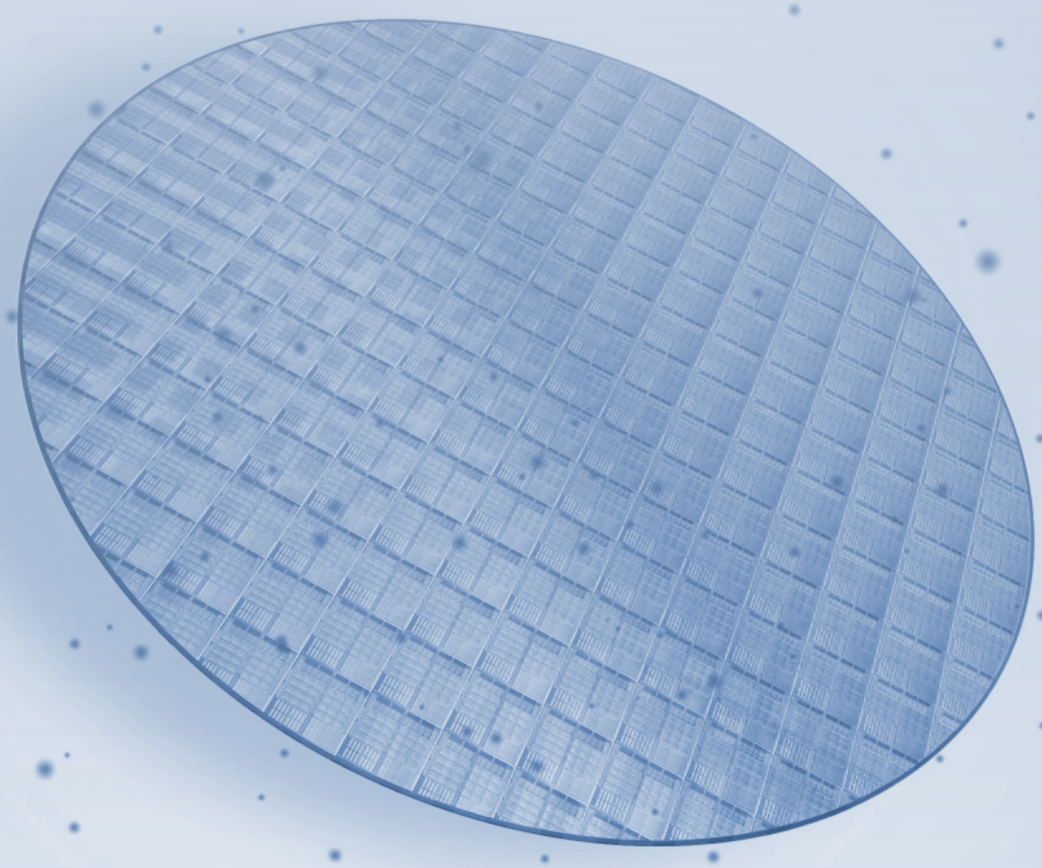
Discharge Time * Based on 3930/40



Discharge time and balance measured according to ANSI/ESD STM3.1 using a Charge Plate Monitor(CPM)

Cleaning

CoreStat® technology are developed for common ESD and contamination control applications, such as semiconductor assembly and testing, and SMT/PCB assembly manufacturing processes. CoreStat® technology is a intrinsic self-balancing high-voltage power design technology that does not require any calibration and an easy to maintenance. CoreStat® technology-based gun-type ionizer has designed to removing foreign materials on the surface of wafers and substrates.



Contamination Control Ionizer

Self-Balanced and No Calibraition

CoreStat® is a steady-state DC technology has internally connected positive and negative high voltage power units in circuit. Thus, it maintain same voltage output level with no calibration required.

Cleanroom Compatible

Model 472A Gun Ionizer has built-in HEPA filter and filtering over 99% at 1μm particle and compatible to use particle removable in cleanroom. Model 470 Gun Ionizer has all-in-one designed for general use to remove particle on the surface of printed circuit board or plastic materials.

Low Offset Voltage

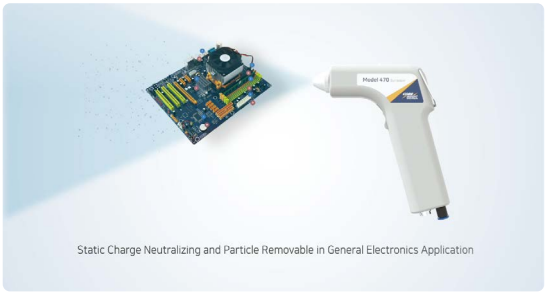
As part of CoreStat® technology with mechanical design of all components in assembled, it maintain at very low peak offset voltage. This will not change offset voltage with no maintenance after a long operation time.
※ **Remark :** No maintenance will be a foreign material (FM) contamination issue.

Ergonoic & Slim Design

Model 470/472 Gun Ionizer has ergonomic and comfortable design. Model 4110/4120 series of Nozzle Ionizer has very slim design and can be fit very limited space in-tool application.

Various Options

Several nozzle options available such as urethane tubing, metal rigid tube and IR distance indicating sensor response to black/white targets.



Self-Balanced Gun ionizer

Model 472A

CoreStat® Self-Balanced Air Ionizing Blower

LED & Audio Alarm

HEPA Filter Catridge

Micro-particle and ESD control for cleanroom environments

Model 472A gun ionizer is specially designed for cleanroom applications for semiconductor, flat panel display, hard disk and other high-tech industry. Strong ionized air force effectively removes attracted particles on the surface of the objects.
Model 472A gun ionizer does not requires any calibration due to intrinsically maintain low peak offset voltage.

Specifications	
Ion Emission	Steady-State DC
Ion Balance	± 15 V
Decay Time	Less than 1.0 sec
Air Pressure	0.1 to 0.5 MPa

FEATURES

- Steady-State DC Ion Emission
- Low Offset Voltage
- HEPA Filter Assembled Controller
- Air Speed Controller

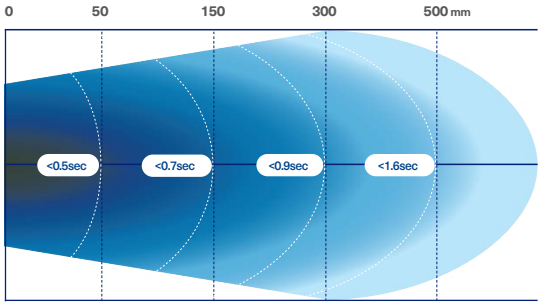
BENEFITS

- No Calibration Required
- Ergonomic Design
- Replaceable HEPA Filter

Related Product	
Model 5233ES	Single Crystal Silicon Emitter
Model 5360EP	Tungsten(99.99%) Emitter
Model 472C	Compressed Air Controller Model 472 Cleanroom Compatible Gun Only
Model 5470F	HEPA Filter for Model 472C

Control Box - Model 472C

Discharge Time



Discharge time and balance measured according to ANSI/ESD STM3.1 using a Charge Plate Monitor(CPM)

Self-Balanced Gun ionizer

Model 470

CoreStat® Self-Balanced Air Ionizing Blower

Easy Nozzle Open

DC Power and Air Connection

Micro-particle and ESD control for cleanroom environments

The Model 470 is optimally designed for cleanroom environments in advanced industries such as semiconductor, flat panel display, and hard disk manufacturing. It effectively removes particles attached by static electricity through strongly ionized airflow.
Due to its unique design, the Model 470 does not require periodic reference calibration and continuously maintains low peak offset voltage.

Specifications	
Ion Emission	Steady-State DC
Ion Balance	± 15 V
Decay Time	Less than 1.0 sec
Air Pressure	0.1 to 0.5 MPa

FEATURES

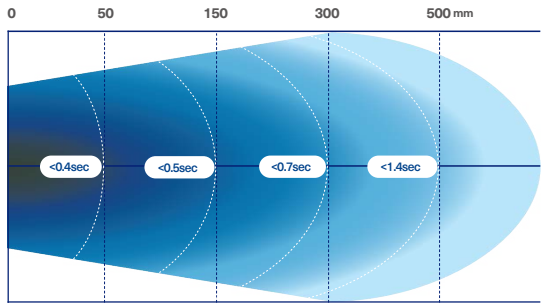
- Steady-State DC Ion Emission
- Low Offset Voltage
- HEPA Filter Assembled Controller
- Air Speed Controller

Related Product	
Model 5360EP	Tungsten (99.99%) Emitter
Model 5147D	DC Adapter

BENEFITS

- No Calibration Required
- Ergonomic Design
- Replaceable HEPA Filter

Discharge Time



Discharge time and balance measured according to ANSI/ESD STM3.1 using a Charge Plate Monitor(CPM)

High Frquency AC Nozzle Ionizer

Model 4110

Particle Contamination & ESD Controls with Compressed Air

Electrostatic force is a typical source of micro particle contamination in printed circuit board handling and general electronics industry. It is very hard to remove particle once they attracted on the charged surface of materials. Charge neutralization is important for remove particles from the surface. High frequency AC technology based, Model 4110 nozzle ionizer is designed small package for space limited in automated process and general cleaning applications. Strong ionized air force is effective for removing particles attracted objects. Model 4110 nozzle ionizer does not required calibration, but just cleaning emitter points in regular based due to high frequency AC power designed. Visual (LED) and audible (buzzer) alarms operates when high voltage power supply fail.

FEATURES

- High Frequency AC Technology
- Versatile Application
- Low Offset Balance
- Alarm for HV Power Fail

BENEFITS

- No Calibration Required
- Audio & Visual LED Alarms
- Particle Contamination Cleaning

Specifications	
Ion Emission	High Frequency AC
Ion Balance	Less than ± 30 V
Decay Time	Less than 1.0 sec
Air Pressure	0.1 to 0.5 MPa

Related Product	
Model 4110	Normal
Model 4120	IR Sensor Integrated
Model 4110U	Uretane Airtube Nozzle
Model 4111	IR Sensor Option - with Model 4110

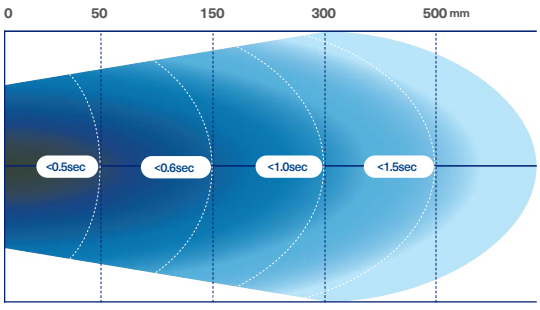
High Frquency AC Nozzle Ionizer

Model 4120

Extended Polyurethane Airtube
- Maximum 600mm Length

IR Detection Sensor Assembled
Target / Distance Adjustable

Discharge Time



Discharge time and balance measured according
to ANSI/ESD STM3.1 using a Charge Plate Monitor(CPM)

Industrial Application

Designed for automated equipment with limited space constraints in industrial work environments. Ideal for foreign particle removal and static electricity elimination applications.

Shockless Static Ion Bar

Model 6100

Industrial Ionizer

Model 620 Pulsed AC Power Supply

Particle Removal and Static Control in Work Environments

Core Insight's Model 6100 Shockless Designed Static Ion Bar is designed to neutralization solution for industrial applications such as web and roll-to-roll process to minimize static issue and particle contamination control. Capacitance coupled designed results electrical current limiting for personal safety.

Model 6100 Static Ion Bar Ionizer is specially suited for small and space limited environments such as winding and unwinding of films, paper and similar applications. Users can choose fixed output conventional AC Power Supply unit of output adjustable Pulsed AC Power Supply. Model 620 Power Supply unit have LED display and audio alarm features for high voltage filure and cleaning cycle.

Specifications	
Ion Emission	AC or Pulsed AC
Output Voltage	± 7k V
Enclosure	Stainless Steel
Emitter Point	Tungsten 99.99%

Model 620 Power Supply	
Output Voltage	0 to ±7 kV (Adjustable)
Ion Emission	Pulsed AC Technology
Power Consumption	500 ~ 2.7 Amps per Bar Length
Enclosure	Powder Coated Aluminum
Timing	1 ~ 50 Hz Frequency
Alarm	Visual & Audio alarm operates for power failures and cleaning cycle schedule
Display	3 Digit LED

FEATURES

- Shockless Design
- Conventional & Pulsed AC Optional
- Small Profile for Limited Space
- Neutralization for Industrial Applications
- Industrial Static Control

BENEFITS

- Fast Discharge Time
- Highly Reliable Quality
- Low Cost
- Roll to Roll Process

2

ESD Measurement

- Resistance Meter
- Resistance Probe
- Advanced Measurement
- Voltmeter & Fieldmeter
- Charge Plate Monitor
- Auditing Kit

PROSTAT®

Resistance Meter

Measuring the resistance value of ESD control materials are key test requirement for evaluation and suitability test of electrical property of materials. Prostat's high-precision resistance measuring instruments has constructed all necessary features and functions such as constant voltage selection and electrification time.

Resistance Measurement System

PRS-801B

EOS/ESD Diagnostic Instruments for Manufacturing Experts

The most imprtant ESD Audit & Evaluation instrument is this wide range, constant voltage resistance meter. Use with many accessories & fixtures. Unique wide range portable, constant voltage ohmeter with data logging, calculating and computer communication capabilities

- Resistance Range: 0.01 Ω to 2.0x10^{14}
- Accuracy of ±2% from 1.00 Ω to 9.99x10^{10}
- Constant Test voltages 10V and 100 V
- Rechargeable Li-ion Battery Pack
- Approximately 8,000 Measurements on a Single Charge
- Uses Micro USB Cable for Charging and Downloading Data
- Charges in 2 Hours
- 2-year Limited Warranty on Main Instrument

Resistance Fixtures & Electrodes

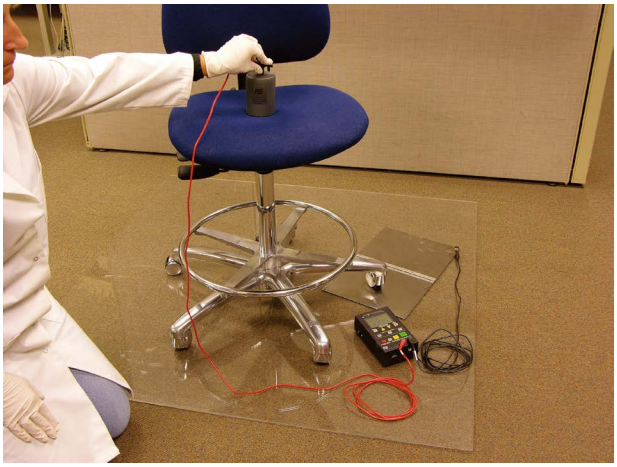
Use five-pound electrodes for measuring resistance of floors, worksurfaces, floor mats, etc.

Measures

- Resistance Point to Point (RTT)
- Resistance to Ground (RTG)

Evaluate

- Floors
- Worksurfaces
- Equipment
- Garments
- Production Aids



Resistance Meter

PRS-812B

The ideal choice for the ESD Auditor

The PRS-812B Resistance Meter delivers the full-featured functionality and advanced measurement capabilities that ESD Auditors need. It puts a lot of testing power in your hands to quickly and efficiently measure Resistance Point-to-Point (RTT) and Resistance-to-Ground (RTG) of floors, worksurfaces, carts, garments, packaging, planar material in accordance with all of the ESD Association documents for resistance measurements, such as ESD TR53, ANSI/ESD S4.1, ANSI/ESD S7.1 and ANSI/ESD STM97.1.

Fully automatic for peace of mind

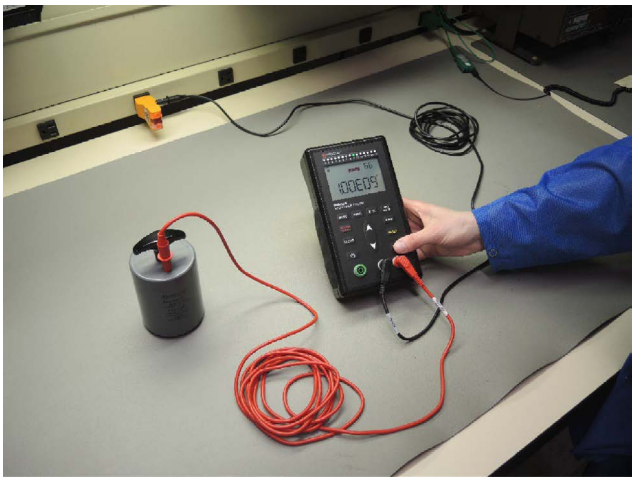
The PRS-812B uses 3 modes of measurements: Automatic, Manual and Auto-Manual. When measuring in Automatic mode, the resistance range and test voltage is automatically selected for you. Auto mode gives you peace of mind and saves you time.

A very accurate resistance meter

The PRS-812B's wide range meter offers fast, accurate resistance testing using the included high quality 10 foot test leads. The low resistance range is designed to measure from 0.10 to 1.0×10^4 Ω.

Portable, precision resistance measurement for ESD Auditor

- Measures resistance from < 0.1 to 1.00×10^{12} ohms with overall measurement accuracy of ±2%.
- Records and stores up to 120 measurements.
- Constant voltages 10 V & 100 V
- Rechargeable Li-ion Battery Pack
- Approximately 8,000 Measurements on a Single Charge
- Charges in 2 Hours
- 2-year Limited Warranty on Main Instrument



Wide Range Ohmmeter

PAS-853B

Compact Audit Kit for ANSI/ESD S20.20 Program and TR53 Compliance Verification Activity

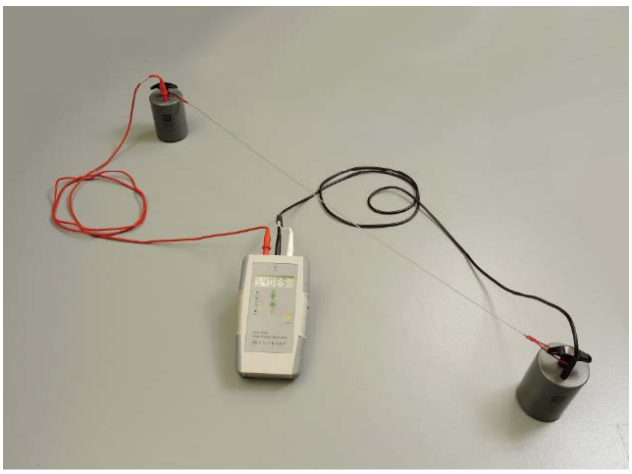
The PAS-853B is a wide range ohmmeter designed specifically for ESD Plant Auditors who must make many measurements quickly while supporting ANSI/ESD S20.20 Program Standard and periodic verification requirements. The PAS-853B performs in accordance with standard resistance measurement practices outlined in ANSI/ESD S541 Packaging and meets all audit reauirements of ESD TR53

- <10 Volts Variable from 0.01 to 9.9x10^3 ohms
- 10 Volts (±<5% Constant Voltage) from 1.0x10^4 to 9.99x10^5 ohms
- 100 Volts (±<2% Constant Voltage) from 1.0x10^6 to 9.99x10^{12} ohms

The PAS-853B is a constant voltage wide range ohmmeter designed specifically for ESD Plant Auditors who must make many measurements quickly while supporting ANSI/ESD S20.20 Program Standard and periodic verification requirements.

Wide Range Surface Resistance Ohmmeter Kit

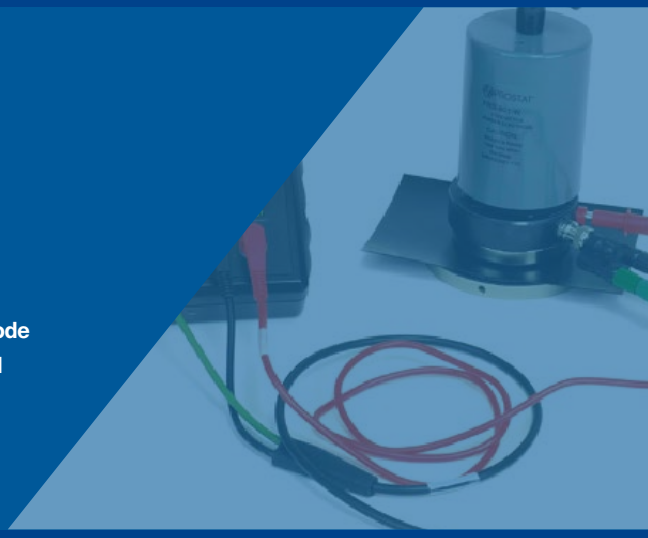
- Surface Resistance Kit from 0.01 ohm to 9.99x10^{12} ohms
- Nominal Full Range Tolerance Averages <±5%
- Fully Automatic Resistance Range, Test Voltage and Electrification Period control
- Determines if a surface is Dissipative, Conductive, or Insulative
- Measures Resistance Point-to-Point (RTT) and Resistance to Ground (RTG)
- Measures resistance of Static Control Floors, ESD Work Surfaces and Packaging Material
- Conforms to all ESD Association Standards for Resistive Characterization
- Includes 2 each Conductive Rubber Electrodes
- Packaged in a hard shell Carrying Case
- Certificate of Calibration Traceable to NIST included



PROSTAT®

Resistance Probe

When testing the resistance of ESD control materials, using the proper electrode and probe for the application is crucial and important for data comparison and repeatability. Every probe has its own application and limitations.



Concentric Ring Probe

PRF-911

The PRF-911 Connect Ring is a low-profile thex fixture conceived specifically for use with the Prostat PRS-801 Resistance System and PRS-812 Resistance Meter. It will measure surface reesistance per ANSI/ESD STM11.11, and volume resistance per ANSI/ESD STM11.12 and ANSI/ESD STM15.1.
It compact size allows the fixture to be inserted into small flexible containers, such as an ESD protective bag, without having to cut the package.

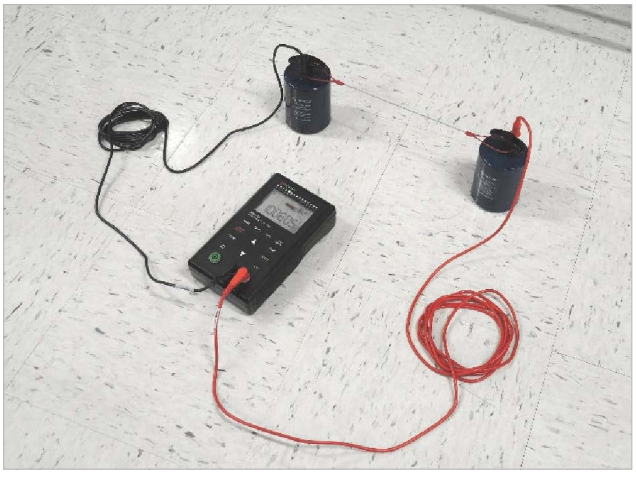
FEATURES

- Measure surface reesistance per ANSI/ESD STM11.11
- Measure surface reesistance per ANSI/ESD STM11.12
- Measure surface & volume resistivity per ASTM D-257
- Incorporates a spring loaded, self-aligning center electrode feature
- The included Dual Test Bed consissts of an insulated test surface for ANSI/ESD STM11.11 surface measurements laminated to a steel test plate for volume measurements.

Condeuctive Rubber Electrodes

PRF-801-W

The PRS-801-W is a precision milled resistance probe with conductive rubber pad for use with any resistance meter. Used in point to point and point to ground resistance testing of floors, worksurfaces, floor mats or any flat object. the PRS-801-W produces repeatable measurements in accordance with ESD Association standards.
The PRS-801-W will work with any other resistance measuring meter for specification measurements.



Miniature Concentric Ring Set

PRF-912B

Compatible with PRS-801/812 and compact version of PRF-911 probe.
All components available separately

- Measurement Range: 0.1 ~ 1.0xE12 ohms
- Measurement Size: 0.35" (8.89 mm)

What's Included
PRF-912B Miniature Concentric Ring
PRF-912C Connection Cable
BNC Adapter
1 each Spare Center Electrode Contact
2 each Spare Outer Contact Pins

Specifications	
Range	0.1 ~ $1.0x10^{12}$ ohms
Power	Resistance Meter
Test Lead	RG-174 BNC Coaxial Cable
Connections	BNC Type Terminal
Dimensions	150 mm Length, 12.7 mm diameter

Miniature Two-Point Probe Set

PRF-922B

Contact resistance measurement is critical due to semiconductor miniaturization and increased ESD sensitivity. Capable of measuring resistance of JEDEC IC trays, tweezers, and pick-up nozzles in equipment.
All components available separately

- Measurement Range: 0.1 ~ $1.0x10^{12}$ ohms
- Measurement Size: 0.25" (6.35 mm)
- Compliance to ANSI/ESD STM11.13

What's Included
PRF-922B Miniature Two-Point Probe
PRF-912C Connection Cable
BNC Adapter
Probe cover
1 set Conductive Rubber Boots
1 each Spare Center Electrode Contact
2 each Spare Outer Contact Pins

Specifications	
Range	0.9 ~ $1.0x10^{12}$ ohms
Power	Resistance Meter
Test Lead	RG-174 BNC Coaxial Cable
Connections	BNC Type Terminal
Contact Area	Gold Plated Electrodes - 2.54 mm diameter, Rubber Boots - 3.18 mm diameter, Probe-to-Probe Space 6.35 mm
Dimensions	150 mm Length, 12.7 mm diameter

Dual Verification Fixture

PRV-913B

PRV-913B Fixture is used to verify the accuracy of PRF-912B or PRF-922B probes. It can confirm probe accuracy around the $1.0x10^6$ ohms reference standard.

Specifications	
Finish	Black Anodized Body. Copper Substrate with Nickel and Hard Gold Plating
Contact Pads	Copper substrate with nickel and hard gold plating
Color	Black
Diemsnion	50.8 x 50.8 x 28.5 mm 2.0" x 2.0" x 1.12"
Weight	5.29 (150g)
Warranty	1 year Limited Warranty

Two-Point Resistance Checker

ACL-306

The ACL-306 integrated probe/meter design is a solution for measuring surface resistance of small areas and molded components. It can be used for incoming inspection and rapid measurement of multiple samples. Suitable for checking electrical characteristics of small structures like tape & reel and vacuum trays. Features LED indicators for resistance range measurement. Ideal for TR53 compliance verification.

APPLICATIONS

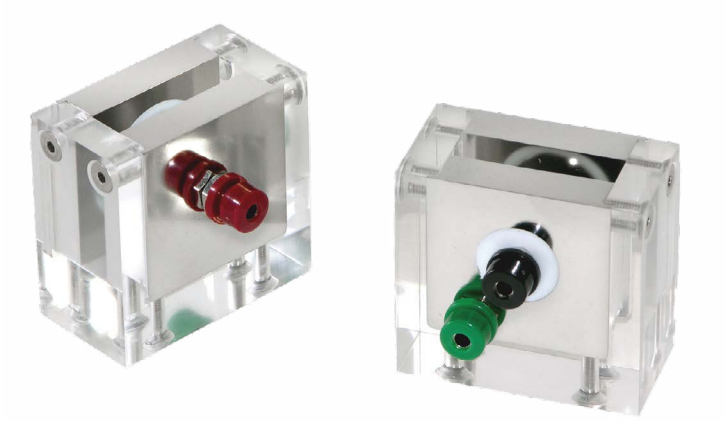
- ESD packaging and trays
- IC tubes and DIP packaging
- Maintenance checks

FEATURES

- Color LED display segments
- Measuring range: 10^3 - 10^{12} ohms
- Measures 0.5" wide
- Conductive pogo pins
- Dimensions: 2.8" x 5.1" x 1.4"

Powder Fixture Set

PRF-930



The PRF-930 probe is used to measure the volume resistivity of powder and granular materials. After inserting the material into the space between electrodes, measurements can be taken using a resistance meter to verify electrical characteristics.
Results can be converted to ohm-cm units based on electrode volume.

The PRF-300 probe is designed to be compatible with the PRS-801B resistance meter or equivalent high-precision measuring instruments. The PRF-900 probe meets the requirements of NIOSH Technical Report NIOSH-TR-No. 42.

APPLICATIONS

- Measure the resistance of powders and granulated materials
- Meets the requirements of NIOSH-TR-No. 42
- Includes caliper, spoon and brush
- Grounding accessories included
- Ideal for chemical, pharmaceutical, food and beverage industries
- Certificate of calibration traceable to NIST included

Specifications	
Upper Resistance Limit	Nominal 1.00×10^{14} ohms ±20% @ 500 Volts, 71°F (21.7°C), 18% Rh, Clean, empty fixture. Note that most resistance measurements are made at 100 volts and below.
Dimensions	60 x 32 x 57 mm
Volume	15 cm^3
Weight	350 g

AC Circuit Analyzer

CT70

The Extech CT70 AC Circuit Analyzer is a sophisticated measuring instrument that analyzes AC power wiring conditions at outlet points and assesses potential power quality hazards.

It can also easily and accurately measure ground impedance, verify ground adequacy, analyze GFCI protection circuits, and detect wiring errors.

Specifications	
AC Voltage	90.0 to 240.0 V
Frequency	45.0 to 65.0 Hz
Peak Line Voltage	350.0 V
% Voltage Drop	0.1 to 99.9 %
Dimensions	203.2 x 71.1 x 50.8 mm
Weight	317.5 g

FEATURES

- Large LCD display
- AC Ground Impedance Measurement
- Checks 3-wire receptacle configuration
- True RMS measurements
- Voltage drop measurements on 12A, 15A, and 20A loads

Advanced Measurement

Accurate and Advanced measurement technique requires for ultra sensitive device ESD control applications. Basic research instruments provides highly valuable information to understand technical background and root cause analysis. Device testing equipment test results will give best information how to correlate device sensitivity for factory ESD control guideline.

Contact Voltmeter Set

CVM-780

Professional ESD Auditing Measurements

Being a true electrostatic voltmeter, not a field meter means that it reads real voltage, without confusing it with electrostatic field strength, which can be distinctly different.

The CVM-780 Contact Voltmeter™ uses a unique active probe design which is fully guarded and shielded for minimal interference with the surrounding E-field.

The Contact Voltmeter™ is powered by rechargeable Nickel Metal Hybrid batteries and is a valuable ESD Analysis Tool.

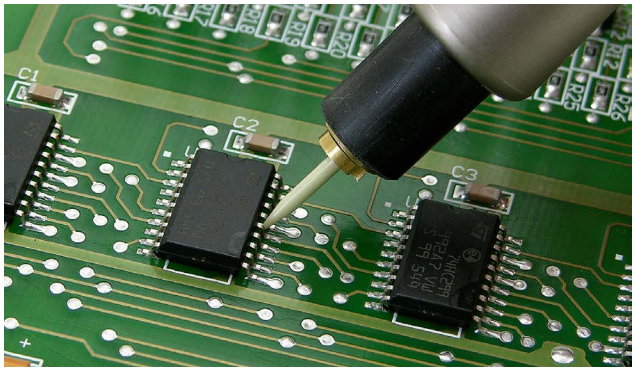
Compatible with the PGA-710 Autoanalysis System

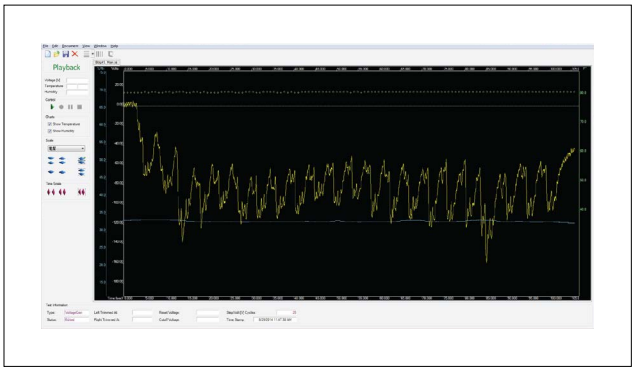
The CVM-780 is compatible with the PGA-710 Autoanalysis System® to record measurements for probability analysis and report generation.

APPLICATIONS

Analyze process, devices and assemblies for causes of Charged Device Model(CDM) and isolated conductor losses.
Measure voltages on:

- Device Lead Frame Contacts
- Circuit Board Traces
- Automatic Test Contacts
- Conductors in process critical path
- Machine parts
- Handlers
- Production Aids
- Chairs
- Carts
- Personnel
- Trays
- Shelving
- Conductive Containers





Autoanalysis System

PGA-712

Static analysis system for EOS/ESD professionals

- Connects to a Field Meter and Charge Plate Monitor
- Records Walking Voltages per ANSI/ESD STM 97.2 and IEC 61340-4-5
- Analyzes Offset and Decay Times of Ionizers per ANSI/ESD SP3.3 and ANSI/ESD STM3.1
- View Voltages in real time on your computer with the included Autoanalysis Software
- Professional Reports include Minimum, Maximum and Average of Voltage Generation or Decay Times
- Powered by USB
- Built-in temperature and humidity sensor

APPLICATIONS

- **Anti-static footwear and flooring combination analysis**

Measurement and analysis of human body charging based on combinations of anti-static footwear and ESD flooring

- **Mobile carts and ESD chairs**

Analysis of charging in mobile carts and ESD chairs during operator seating and movement

- **Ionizers**

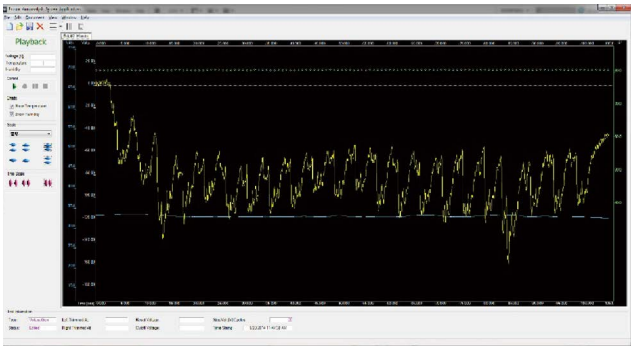
Evaluation and analysis reports on ionizer offset voltage and neutralization performance

- **Automated equipment**

Measurement and monitoring of electrostatic charging inside/outside automated equipment with charge level mechanism analysis

- **Workbenches**

Measurement and analysis of electrostatic field suppression on workbenches or work surfaces



ESD Event Detector

PED-718

ESD Event Detector

The PED-718 is a portable indicator that will help you quickly detect ESD events in your process. If you're handling ESD sensitive devices, use the PED-718 to detect and count discharges as well as showing you the relative strength of each ESD event.

Settings give the user the ability to adjust the alarm threshold to detect and count only those discharges that exceed the threshold. The LED's will turn red if the discharge exceeds the threshold. There is a sound switch that can also be used to detect ESD events that exceed the threshold.

To confirm that your ESD protection is effective is to know whether you have ESD events in your environment, how strong they are and how many of them occur. The PED-718 is the right tool to show you the effectiveness of your ED program.

The PED-718 is capable of rejecting most non-ESD related EMI events by using a filter that separates and rejects signals that are different from classic ESD events.

Installing and maintaining an effective ESD program requires a wide range of measuring equipment. The PED-718 can help determine the source of potentially damaging ESD events and is an important part of every ESD coordinator's tool kit.

FEATURES

- Display : Maximum 1,999 counts
- Frequency
  ESD Channel : 100 MHz
  CDM Channel : 3 kHz
- Power : 9 VDC Alkaline Battery
- Thresholds Adjustable
- Sound On/Off Switch
- 10 LED Bar Graph Display

APPLICATIONS

- Electronics Assembly
- Semiconductor Device Manufacturing
- Disk Drive Manufacturing
- Medical Environments
- Military Aerospace
- Wherever sensitive components are being handled

ESD Event Detector

EM EYE

The EM Eye ESD Event Detector enhances intuitive operation by displaying electrostatic discharge intensity and frequency on an LCD screen. Measurement parameters can be controlled through the touch screen interface. Data stored on a MicroSD card can be analyzed in Excel format on a PC. Audio output and earphone capabilities allow analysis while listening to discharge sounds.

Specifications	
Recording Interval	Storage time: 1 to 360 seconds
Display	Touch LCD
Dimension	65 x 32 x 105 mm

FEATURES

- Touch screen - intuitive operation
- Automatic data storage and PC Excel conversion
- Audio output

BENEFITS

- Portable design for convenient field mobility
- Digital discharge level display
- MicroSD card storage

ESD Event Cotinuous Monitor

EM Aware

The EM Aware ESD Event Detector is a solution that enables long-term monitoring through dedicated SMP software. It is designed for monitoring ESD event occurrence and levels over extended periods via PC. The discharge level control switch allows adjustment of response thresholds. It can be installed inside automated equipment to assist with ESD risk analysis.

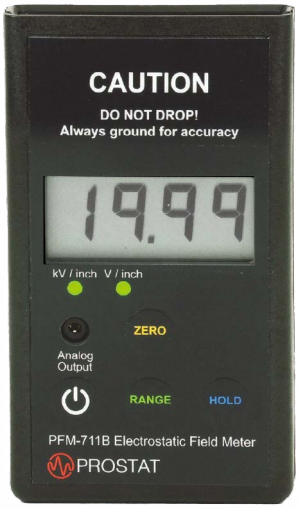
Specifications	
Audio Indicators	Audio Sounds Selectable
Display	TouchScreen LCD
Size	65 x 32 x 105 mm
Power	7.5 V DC
Network	RJ-45 Ethernet Terminal

Voltmeter & Fieldmeter

Charge measurement technique allows direct indication of ESD risk in processess especially CDM ESD control on isolated conductors and insulative materials in ESD protected areas.

Static Field Meter

PFM-711B



Measurement of charge levels in isolated conductors and insulators within industrial processes

The PFM-711B Field Meter is an accurate electrostatic field measuring device. The PFM-711B circuitry is a digital, electronic chopper design, which allows the instrument to make electrostatic field measurements in areas where ionized air is present. For accurate, repeatable performance, the PFM-711B must be grounded during normal operations. Used by itself, the PFM-711B will measure electrostatic fields emanating from virtually any flat surface or object.

In the kV/Inch range, the PFM-711B will indicate electrostatic field voltage from 0 to ±20,000 volts in 10 volt increments at 25mm distance from the charged surface. In the V/Inch range, the Field Meter measures field density from 0 to ±1,999 volts in 1 volt increments at 25mm distance from the charged surface. The instrument is easy to use and its controls are designed for one hand operation.

- Measurement Range: 0 V to ±1999 V (Low) or 0 V to ±19.99 kV (High)
- Accuracy: Better than ±5% of reading
- Display: 3.5 digits LCD
- Thresholds adjustable
- Resolution: 1 Volt (Low), 10 Volt (High)
- Power: 9 VDC Alkaline Battery
- Output: ±20.0 kV meter reading equals ±2.0 Volt output
  ±2,000 Volts is equal to ±0.2 Volts output
- Distance: 25mm ± 0.5mm LED distance indicator

FEATURES

- Light weight, Portable
- Dual Range up to 2 kV or 20 kV
- LED Ranging lights help position
- Zero Button
- Hold Button for record
- Output Signal for data analysis

Field Meter Set

PFK-100B

The PFK-100 set includes Prostat's unique PFM-711A dual range field meter, CPM-720 charged plate monitor assembly and PCS-730 ±1 kV charging source.

With this instrument set you can measure electrostatic fields, analyze ionizer performance and assess the voltage generation of materials, equipment and personnel.

Static Decay Timer

PDT-740B

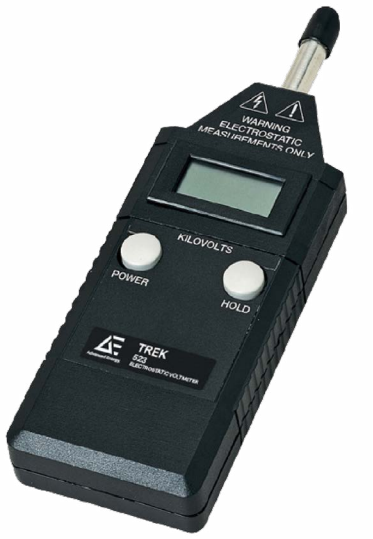
The PDT-740B Static Decay Timer is designed to measure the time required for a 1,000 volt charge to dissipate to less than 100, 50 or 10 volts in tenths of a second.

This extremely useful accessory is used with the Prostat PFM-711A Field Meter and CPM-720a Charge Plate Monitor to evaluate Ionizer Decay Time in accordance with ESD Association Ionization Standard SP3.3 and TR53.

The PDT-740B may be used to evaluate the static decay capabilities of materials, personnel, equipment and other products.

Hand-Held Electrostatic Voltmeters

Model 520



Hand-Held Electrostatic Voltmeters for ESD Applications

The Model 520 (±2 kV) and Model 523 (±20kV) hand held electrostatic voltmeters that utilize a measurement technique that overcomes the disadvantage of the typical hand held field meter by providing surface voltage measurements which are essentially independent of the sensor probe-to-measured surface spacing. The Model 520 is available in two versions. The 520-1 has a digital meter to display the measured voltage. The 520-2 has an analog output monitor in addition to the digital display. This analog output monitor can be used to record the measured voltage or to view it on an oscilloscope.

FEATURES

- Accurately measures surface voltage at a wide range of spacings
- No need to maintain a fixed spacing
- Chopper stabilized for drift-free operation in ionized environments
- NIST-traceable Certificate of Calibration provided with each unit

Specifications	
Measurement Range	0 to ±2,000 V
Measurement Accuracy	±5 %
Speed of Response	400 ms

APPLICATIONS

- Measurement of electrostatic surface charge build up
- Manufacturing processes
- Electronic assembly testing
- Semiconductor material testing
- Dissipative material testing
- Automotive electronics testing
- ESD Auditing and troubleshooting

Non-Contacting, Hand-Held Electrostatic Voltmeters

Model P0876

Non-Contacting, Hand-Held Electrostatic Voltmeters

The Model 876 (±2 kV) and Model 884 (±20 kV) hand held electrostatic voltmeters provide accurate, noncontacting measurements of electrostatic surface voltage for ESD applications in either ionized or non-ionized environments.
These two voltmeters utilize a measurement technique that overcomes the disadvantage of the typical hand held field-meter by providing surface voltage measurements which are essentially independent of the sensor probe-to-measured surface spacing.

Specifications	
Operational temperature range	15 to 35
Measurement Range	±2,000 V
Measurement Accuracy	±5 %
Speed of Response	<50 ms
Communications Interface	USB and RS232

FEATURES

- Chopper stabilized for drift-free operation in ionized environments
- NIST-traceable calibration certificate provided with each unit
- Features 3.5 digit, liquid crystal display

BENEFITS

- Accurately measure surface voltages
- No need to maintain fixed spacing
- Use in ionized or non-ionized environments

APPLICATIONS

- Measurement of electrostatic surface charge build up
- Manufacturing processes
- Electronic assembly testing
- Semiconductor material testing
- Dissipative material testing
- Automotive electronics testing
- ESD Auditing and troubleshooting

Non-Contacting Electrostatic Voltmeter

Model 542

Non-Contacting Electrostatic Voltmeter for EOS and ESD Processes

The Model 542A electrostatic voltmeter is configured with a miniature electrostatic field chopper probe. The probe can be remotely located and easily positioned within process equipment to provide highly accurate, non-contacting, DC-stable, spacing-independent voltage measurements in either ionized or non-ionized environments.
The unit's 20 x 4 alphanumeric LCD screen displays the present measured voltage, positive and negative peak voltage values, and additional menu information.

Specifications	
Voltage Range	0 to 10,000 V
Accuracy	5 %
Speed of Response	Less than 50 ms
Interface	USB and RS232

APPLICATIONS

- Semiconductor
- LCD
- Electronic assembly
- ESD-sensitive processes

FEATURES

- Chopper probe is DC-stable with or without incident airflow
- Analog voltage monitor output
- USB and RS-232 serial ports
- NIST-traceable calibration certificate provided with each unit
- Walking test adapter kit available

BENEFITS

- Enable drift-free measurements
- Benefit from visual and audible alarms that activate when preset voltage-threshold levels are reached
- Remotely locate or easily position miniature field chopper probe
- Use in ionized or non-ionized environments
- Take spacing-independent voltage measurements

Wrist Strap Auditor

PWA-805

Add the capability of electrically testing your wrist straps according to ESD S1.1 Evaluation Testing Paragraph 5.1.

FEATURES

- Chopper probe is DC-stable with or without incident airflow
- Analog voltage monitor output
- USB and RS-232 serial ports
- NIST-traceable calibration certificate provided with each unit
- Walking test adapter kit available

Specifications	
Power	Not applicable. Fixture powered by resistance instrument.
Dimensions	Case: (L x W x H) 4.6″ x 2.75″ x 0.95″ (11.69 x 6.99 x 6.35 cm) Two (2) top mounted metal cylinders: 1 fixed, 1 adjustable for cuff size) Cylinder Diameter: 1.25″ x 1″ H (3.18 x 2.54 cm)) Adjustable cylinder equipped with knurled locking screw for positioning
Controls	Three position rocker switch: (1) Cuff Only [Resistance between Cylinders] (2) Cuff & Cord Assembly [Resistance from cord ground point to cuff cylinder] (3) Cord Only [Resistance from cord ground point to cuff snap connections]
Connections	Megohmmeter: 2 banana receptacles for meter leads Cord Groundable Point: 1 banana receptacle 2 Cord Cuff Snaps: 1 each 7mm diameter, 1 each 4mm diameter
Weight	4.5 oz

Non-Contacting Electrostatic Voltmeter

PHT-771

The Prostat PHT-771 Digital Psychrometer is a highly accurate, battery operated temperature and humidity indicating instrument.
Its large LCD displays both temperature and humidity measurements simultaneously.

The PHT-771 provides several operational features such as “Data Hold”, and selection of ºF or ºC. Two AAA batteries are supplied that provide up to 80 hours of operation.
It offers that same performance as models costing 2-3 times as much.

Specifications	
Humidity Range	10 to 90% RH
Humidity Accuracy	±3% RH (10 to 90%) @ 23°C
Temperature Range	-20 to 50°C
Size	178.5 x 48.8 x 25.2 mm
Weight	4.5 oz (128g)

FEATURES

- Simultaneous display of %RH, Temperature and Dew point or Wet Bulb or Probe Temperature
- Calculates T1-T2 differential (Air Temperature-External Probe Temperature) using optional probe
- Unique sensor cap design twists to closed position for protection during storage
- Switchable °F/°C temperature units with 0.1° resolution
- Data Hold freezes current reading on display
- Max/Min readings

Charge Plate Monitor

Charge plate monitor (CPM) is designed to measure and evaluation of ionization systems and also can be used for charge accumulation testing on personnel along with hand-held electrode. Based on the operational bandwidth, some CPM can't measure accurately AC ionizers due to response speed mismatch.

Charge Plate Monitor

Model 256

Voltage Following Technology Electrometer

Model 256 Charge Plate Monitor is designed to provide accurate ionization system measurement and evaluation for the advanced ESD control program such ANSI/ESD S20.20 standard.
Model 256 CPM has adopted innovative high voltage electrometer that known as voltage following technology for low voltage measurement.

Model 256 CPM can test all ionizers including room ionization systems, blowers, gun/nozzle and bar types. Model 256 CPM is the fastest precision charge plate monitor for testing DC, AC and Pulsed AC ionizers. Model 256 resolves 1 volt and high accuracy with extremely low offset and drift. Start and stop voltages are programmable in 5 volts increments. Model 256 is small and light weight for compliance verification by alone and over 8 hours of battery at 1 hour charging.

FEATURES

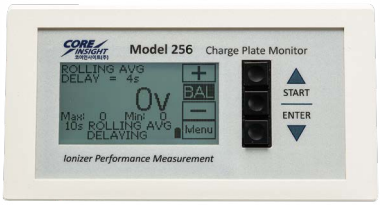
- Compliance to ANSI/ESD STM3.1
- Fastest Response Speed
- Peak Offset Voltage Measurement
- Standard CPM Plate
- Configurable Parameter Adjustment
- Manual / Automatic Test Sequence

BENEFITS

- Light Weight
- Long Battery Operation
- Large LCD Display
- Detachable 6" Plate

Related Product	
Model 256CPM	Charge Plate Monitor Kit
Model 256-INST	CPM Instrument
Model 256-150	Charg Plate 150 x 150 mm
Model 256-25	Charg Plate 25.6 x 25.6 mm

Specifications	
Bandwidth	DC to 200Hz at Large Signal
Start Voltage	Programmable ±1000 V by 5 V resolution
Stop Voltage	Programmable ±100 V by 5 V resolution
Display	40 x 70 mm
Size	74 x 190 x 248 mm
Weight	1.5 kg



· Three Position Toggle Switch that Select +Decay, -Decay and Balance Measurement Mode Selection
· Peak Offset Voltages and Average Display

· Main Switch in Rear Panel
· Low Noise Triax CPM Plate Connector
· 24V DC Input, Ground, Voltage Monitor BNC Output

Charge Plate Monitor

Model 288C

The Model 288C is an easy-to-use, charge plate monitor for manual or automated testing. All test parameters are programmable, allowing tests to be optimized and not dictated by equipment limitations. Once programmed, the Model 288C will perform a series of tests automatically: ± decays, balance, balance peaks, temperature, humidity, time/date are stored and may be reviewed via the display or downloaded to a PC. The included software permits the user to define and name ionizer locations, test setups, and sequences and upload them to the CPM. All of these features result in a flexible, easy-to-use instrument that facilitates audits while minimizing errors.

Specifications	
Measurement	0 to 1200 V
Bandwidth	DC to 10 Hz (Measurement at 2 kVp-p, -3dB)
Start Voltage	Programmable ±1000 V by 1 V resolution
Stop Voltage	Programmable ±100 V by 1 V resolution
Display	240 x 64 Character / Graphic
Size	280 x 152 x 229 mm
Weight	5.7 kg

FEATURES

- Internal battery for portable operation
- Detachable 6 x 6-inch plate with optional 1 x 1 in and 3 x 3 in plates
- Built-in temperature and humidity sensors
- Auto-ranging to 0.1 V resolution below 100 V Meets ESD Association Standard ANSI / ESD STM 3.1
- CE compliant

What's Included
Model 288 Charge Plate Analyzer
Optional : Carrying Case, 1" x 1" Plate, KEY Soft Ware

BENEFITS

- Perform manual and automated testing of decay and balance
- Store up to 1500 tests total (not for each location), 600 locations, and 4 test protocols
- Use the large, easy-to-read, high contrast LCD display
- Configure operating parameters
- Utilize soft keys for highly intuitive programming

Charge Plate Monitor

Model 157

The Model 157 combines patented precision charge measurement capability with features that drive down ionizer maintenance and performance testing costs. Enhanced features, such as those that enable the operator to store and retrieve data as data points or graphs and record operator comments for reference, make the Model 157 ideal for use in dissipative testing of materials and monitoring of static charge.

Specifications	
Measurement	0 to 1020V
Bandwidth	DC to 80Hz (Measurement at 2kVp-p, -3dB)
Start Voltage	Programmable ±1000 V by 1 V resolution
Stop Voltage	Programmable ±100 V by 1 V resolution
Size	254 x 102 x 241 mm
Weight	2.0kg

FEATURES

- Greater bandwidth enables “true” responses to be observed by avoiding the masking of results
- Extremely low offset and drift ensures high accuracy, making it ideal for applications requiring critical ion balance such as GMR and TMR manufacturing areas
- NIST-traceable Certificate of Calibration provided with each unit

BENEFITS

- Set custom measurement capacitance for assurance that ESD process needs are met in manufacturing
- Easily transport within a facility with the compact and lightweight design
- Use for ESD monitoring of sensitive manufacturing processes such as semiconductor, disk drive, and LCD

HIRIGHT OF PRODUCT

- Customizable measurement capacitance provides assurance that ESD process needs are met in manufacturing and that there is conformance to ANSI/ ESD-STM3.1 and IEC61340-5-1 standard test methods
- Greater bandwidth enables “true” responses to be observed by avoiding the masking of results which can occur with other vendors’ systems
- Extremely low offset and drift ensures high accuracy, making it ideal for applications requiring critical ion balance such as GMR and TMR manufacturing areas Compact and lightweight, for easy portability within a facility NIST-traceable Certificate of Calibration provided with each unit

Auditing Kit

Prostat Corporation's ESD Assessment Kits are prepared for all kinds of ESD measurements compliance to ANSI/ESD S20.20 and beyond advanced process requirements.

Process Analysis Kit

PPA-400

Complete Audit Kit

The PPA-400 ESD Process Analysis Kit is for advanced professionals who need materials testing, facility evaluation and process analysis capabilities all in one kit. This integrated kit has everything in one case for full evaluation of a companies' ESD program and process.
The PPA-400 includes all of the equipment in the PSK-310 Kit and adds the Prostat PGA-710B Autoanalysis System and the innovative CVM-780 Contact Voltmeter, miniature precision resistance fixtures and international adapters.

CVM-780 Contact Voltmeter

The New CVM-780 Contact VoltmeterTM combines the ease of use of a digital voltmeter with the high input impedance and low input capacitance of a true electrostatic voltmeter in a small, portable, battery operated package.
Also included is the PRF-912B Miniature E12 Micro Probe Set accurately measures surface resistance of small areas up to $1.0x10^{12}$ ohms.
It consists of a PRF-912B Concentric Resistance Fixture, shielded cable equipped with BNC connectors, and a BNC to male banana instrument adapter.

PGA-712 Automatic Analysis System

The PGA-710B is a unique electrostatic data analysis device for use with Prostat's PFK-100B Fieldmeter / Charge Plate Monitor Set. It records, plots, analyzes and automatically constructs reports of body voltage generation, electrostatic decay, voltage retention, ionizer performance and other static measuring functions. Its analytical features document and automatically calculate projected levels of typical Human Body (HBM) voltages. It helps determine the risk of equaling or exceeding damaging or hazardous HBM discharge voltages in static sensitive facilities.

Carrier Case

The PPA-400 Process Analysis Kit is shipped in our new Program Manager Case which is a Hybrid, ultra light Polycarbonate and aluminum construction.

ESD System Analysis Kit

PSK-310

PSK-310 ESD System analysis kit

The PSK-310 ESD system analysis kit is the choice of advanced professionals includes computer download capabilities

FEATURES

- Measure decay time
- Test footwear
- Analyze ionizer performance
- Measure body voltages
- Evaluate garments
- Measure wrist strap testers
- Measure electrostatic fields
- Balance ionizers
- Measure charge generation
- Measure temperature and relative humidity

What's Included
PRS-801B Resistance System
PFM-711B Electrostatic Field Meter
CPM-720B Charge Plate Monitor
PCS-730B Electrostatic Charger
PDT-740B Static Decay Timer
PFK-100H Instrument Holder
PHT-771 Digital Psychrometer
PGT-61-164 SureTest® Circuit Analyzer
PRF-911 Concentric Ring
PAR-809C Variable Resistance Reference
PRS-801W 5 lbs Conductive Rubber Electrodes (2)
PRS-800CS Cable Spacers Set - 36" & 10"
PWS-610M Fabric Band Wrist Straps (1)
PWS-620 Metal Band Wrist Straps (1)
Q007B Common Point Ground Connector (1)
PSC-010 Pony 3202 - 2 inch Spring Clamp
PK-375 SKB Carrying Case with Handle and Wheels
PAB-024 Accessories Box

Basic Field Kit

PFK-101

The PFK-101 Basic Field kit is an introduction to the portability and functionality of the prostat line

FEATURES

- Measure Electrostatic Fields
- Record Temperature and Relative Humidity
- Measure Decay Times
- Balance Ionizers and Analyze Ionizer Performance
- Measure Body Voltages
- Measure Charge Generation

What's Included
PFM-711B Electrostatic Field Meter
PCS-730B Electrostatic Charger
PCS-730BW 1kV Charging Rod
CPM-720B Charge Plate Monitor Assembly
PDT-740B Static Decay Timer
PFK-100H Instrument Holder
PHT-771 Digital Psychrometer
Q007B Common Point Ground Connector
PWS-610M Fabric Band Wrist Strap
PIK-110C Molded Carrying Case

Professional ESD Auditing Measurement

PFK-101 Basic Field Kit
An introduction to the Portability and Functionality of the Prostat Line

PIK-110 Ionization Kit
Measure Ionizer performance with the upgradable PIK-110

PRK-130 Advanced Powder Resistance Kit
For measurement of powder and granulated materials

PRF-911PT Packaging Engineers Test Kit
Packaging Test Kit

PGA-712 Autoanalysis System Kit
Measurement, recording, analysis, and reporting of electrostatic voltage generation and decay performance

PRS-801RM Resistance System Kit
Surface Resistance Meter System Kit

PMK-152 Floor Resistance Test Kit
General Floor Audit and Resistance Measurement

PRS-812RM Resistance System Kit
Surface Resistance Meter System Kit

PAK-210 ESD Auditor's Kit

Expand Your Measurement Capabilities by Downloading Data to your Computer. Designed for ANSI/ESD S20.20 Program Applications.

PFC-252 Professional Floor Certification Kit

Everything you need to certify a floor, or floor and footwear combinations.

PAS-853BRM Digital Surface Resistance Test Kit

The PAS-853BRM Digital Surface Resistance Test Kit is the ideal kit for the ESD Plant Auditor. It includes the PAS-853-B Wide Range Ohmmeter with 2 each PRS-801-W 5 lbs Conductive Rubber Electrodes.

PSK-310 ESD System Analysis Kit

The choice of advanced professionals includes computer download capabilities. Designed for ANSI/ESD S20.20 Program Applications.

PSK-312 ESD Basic System Analysis Kit

Includes PRS-812 Resistance Meter Set.
Designed for ANSI/ESD S20.20 Program Applications.

PPA-400 Process Analysis Kit

The PPA-400 ESD Process Analysis Kit is for advanced professionals who need materials testing, facility evaluation and process analysis capabilities all in one kit.

3

EMI Filter

- Measurement
- AC Power
- Ground
- Soldering
- Servo / VFD Motors
- DC Power
- Data

Power Line EMI/PLC Adapters

Measurement

EMI Noise can cause of EOS Failures

OnFILTER's EMI interface adapters provide galvanic separation from high mains' voltages but a straight path for high-frequency signals so that you can connect your sensitive instrument to live power lines for analysis and quantification. We offer plug-in and hand-held adapters which can measure both differential ("normal") and common-mode noise.

FEATURES

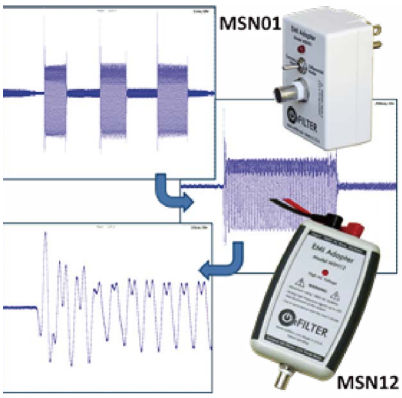
- Conducted Emission Measurement
- Compliant with SEMI E176 standard and IPC-A-610 EOS section
- EMI auditing, diagnostics, and troubleshooting
- PLC measurement capability
- Measurements independent of ground loops
- Signal measurements regardless of equipment grounding

APPLICATIONS

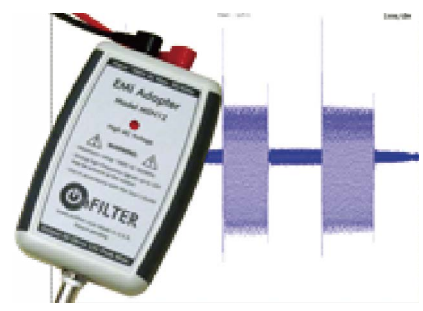
- Electronic manufacturing
- Semiconductor fabrication
- Test and measurements
- Power line communication (PLC)
- Data centers
- Industrial robotics
- Medical
- Military and aerospace
- Wherever EMI is an issue

Specifications	
Input Voltage	Up to 380 V

PLC Waveform Observation Using OnFilter's Power Line EMI Adapter



Power Line EMI Adapter MSN-12



CleanSweep® AC Power Line EMI Filters

AC Power

EMI Noise can cause of EOS Failures

The CleanSweep® AC EMI Filter effectively reduces noise in critical working environments. While typical EMI suppression filters work well in EMC test laboratories, they may become less effective or even amplify EMI in real-world field conditions. CleanSweep® is a patented power line noise filter that blocks EMI from actual power lines (both common mode and differential mode) from reaching sensitive equipment including ground connections. It also reduces EMI "backflow" from noise sources generated in the AC power network. Not only is it highly effective at reducing EMI, but the CleanSweep® AC filter also provides a high level of transient surge protection that cannot be achieved with conventional MOV-based surge protectors. The CleanSweep® filter can be installed in minutes without an electrician using a 'plug and play' approach.

FEATURES

- High-frequency noise elimination
- Noise on power and ground conductors
- Simultaneous effects at input and output
- Wide frequency band control

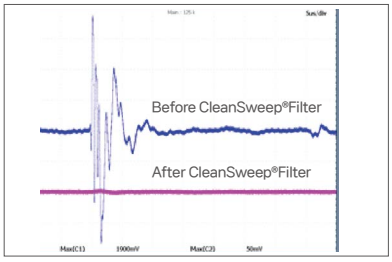
BENEFITS

- Plug and play approach
- No separate maintenance required
- Easy installation and use

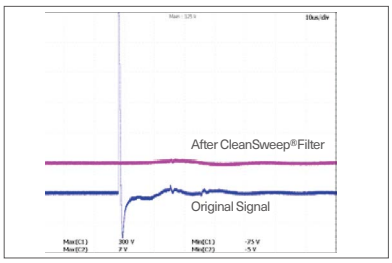
Related Product	
CleanSweep® AL Series	3A AC EMI Filters
CleanSweep® AL Series	10A AC EMI Filters
CleanSweep® AF Series	13...20A AC EMI Filters
CleanSweep® AF Series	30A AC EMI Filters
CleanSweep® AP Series	3A AC EMI Filters for Soldering

Specifications	
Input Voltage	110 to 250 V
Rated Current	3A, 10A, 20A and 30A
Attenuation	Differential Mode - 24 dB Common Mode - 20 dB`

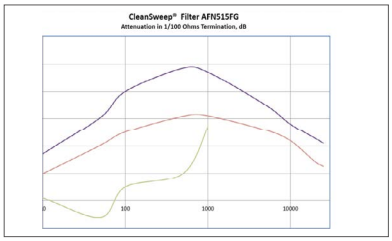
Typical Transient Attenuation



Typical Surge Attenuation

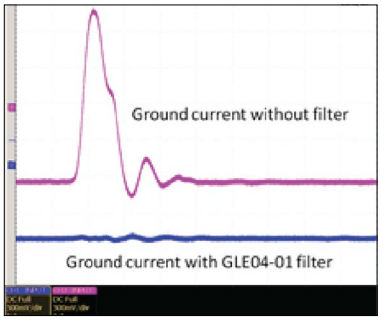


Typical Frequency Response 0.1/ 100 Ohms Setup



Ground EMI Filters

Ground



EMI Noise can cause of EOS Failures

High-frequency noise on ground is never good news. These high-frequency signals interfere with the normal operation of automation equipment and cause damage due to electrical overstress (EOS). Installing a high-efficiency ground EMI filter on such grounds can easily block EMI noise from the ground. OnFILTER's patented ground EMI filter provides very low impedance for DC and AC power while effectively blocking high-frequency noise currents throughout facility or equipment grounding. Ground filters comply with SEMI E176, ANSI/ESD S6.1, and ANSI/ESD S20.20 standards as well as safety standards.

OnFILTER provides ground EMI filters for facility and equipment internal grounding to offer comprehensive protection against EMI noise. Select ground EMI filters based on power lines or conductors within the facility.

FEATURES

- High-frequency noise elimination
- Optimized noise removal from ground conductors
- Simultaneous effects at input and output

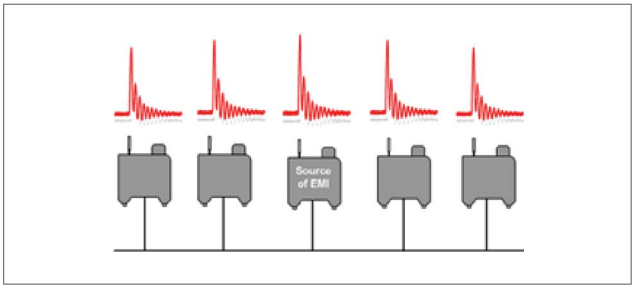
BENEFITS

- Reduced equipment service time
- Applicable in various locations
- Easy installation

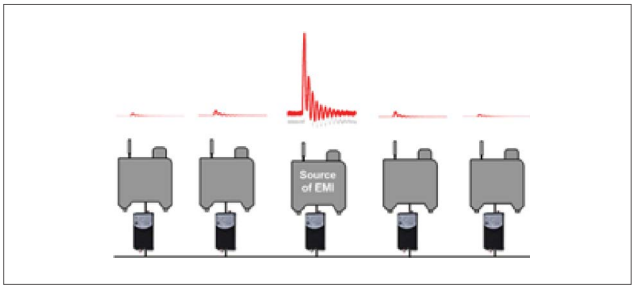
Specifications	
Max Current	30A (GLE30-1)
Frequency	50/60 Hz

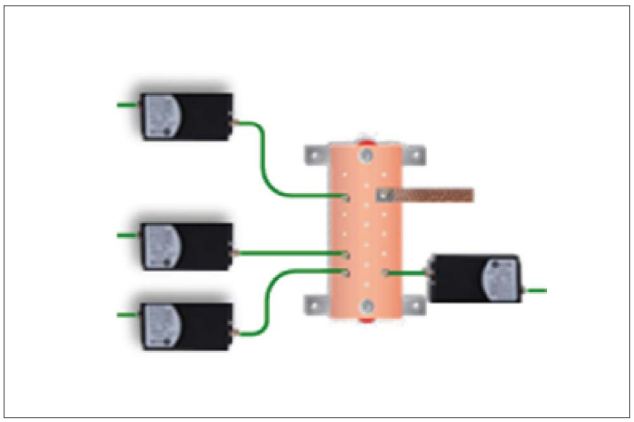
Options	
GLE30-1	30A EMI Filter to Facility Ground
GLE04-01	EMI Filters to Equipment Ground

EMI noise propagation situation with typical equipment ground connections



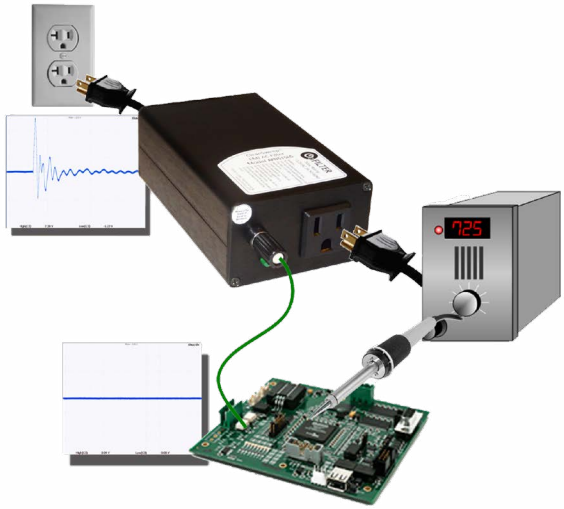
EMI noise propagation control using GLE30-1 ground filter





Reduce Electrical Overstress in Soldering Process

Soldering



EMI Noise can cause of EOS Failures

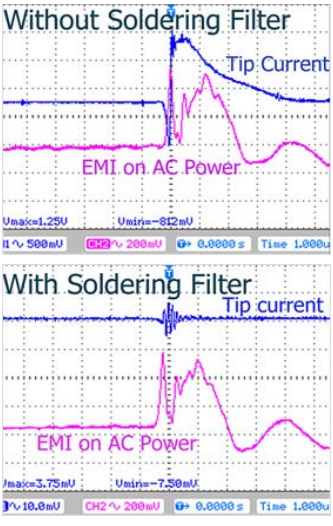
OnFILTER's patented soldering filters prevent EMI-caused electrical overstress (EOS) in soldering process – sometimes called EIPD (electrically induced physical damage). The filters block electromagnetic interference on both power lines and ground going to the soldering iron, plus they provide EMI-free ground for your workbench or a fixture which you would use as your ESD grounding.

Specifications	
Rated Voltage, RMS	110...250 V
Rated Current, RMS	3A
Transient Voltage Attenuation	40 dB (100 times)
Transient Current Attenuation Standard models	<3.5 mA
Power Indication	LED
Dimensions	3.12"x1.85"x5.0" 80 x 47 x 127 mm

FEATURES

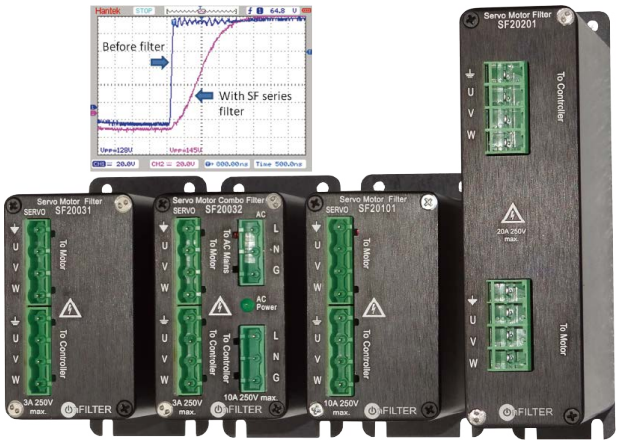
- EMI blocking in power and ground lines
- Easy plug-and-play installation
- Reduces EMI noise "backflow" within AC power networks

Current at soldering iron tip due to EMI from power and ground



Servo Motor and VFD Filters

Servo/VFD Motors



EMI Noise can cause of EOS Failures

The operation of PWM-driven motors (servo motors and variable frequency drives (VFDs)) causes multiple problems in equipment. These include motor bearing damage due to leakage currents (causing electrical discharge machining (EDM)), and motor insulation damage. PWM motors are also a major source of EMI in equipment.

OnFILTER's patented SF series filters significantly reduce high-frequency leakage currents in motors and wiring, supporting compliance with IEC60034-17/-25 requirements. They also reduce interference high-frequency noise within tools caused by PWM-driven motor operation.

SF series filters significantly reduce high-frequency currents in equipment ground and EMI throughout tools, lowering EOS (electrical overstress) risks and reducing errors in automation equipment and testers.

FEATURES

- EMI shielding on PWM control and ground lines
- Individual EMI shielding on UVW lines
- Suppression of EMI noise generated by the motor

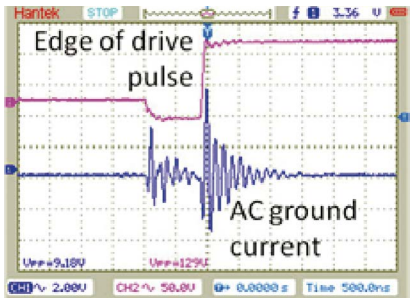
BENEFITS

- Plug and play approach
- No separate maintenance required
- Easy installation and use

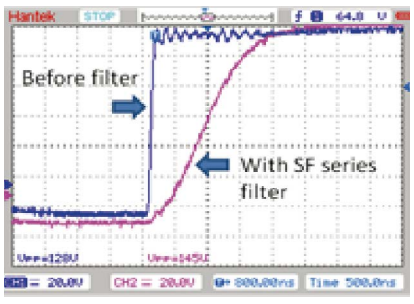
Related Product	
SF20031	3A Servo Motor EMI Filters
2SF20032	3A Servo Motor / AC Combo EMI Filters
SF20101	10A Servo Motor EMI Filter
SF20201	20A Servo Motor EMI Filter

Specifications	
Drive Voltage	250 V
Max Current	3A, 10A and 20A
Rise / Fall Times	1.5 micro second

AC ground current due to servo motor operation



Typical edge modification of servo drive signals by SF series filters



Clean Power Free of High-Frequency Noise

DC Power

EMI Noise can cause of EOS Failures

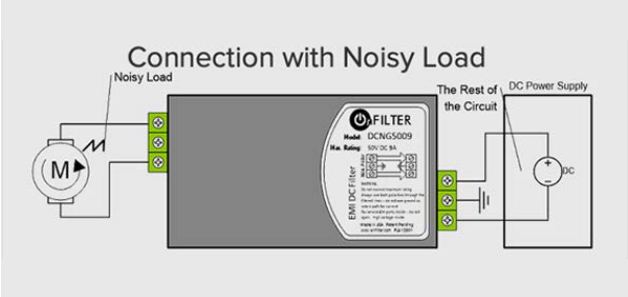
Clean DC power is essential for proper operation of electronics. Assure error-free uninterrupted operation of your electronics by providing it clean DC power with our DC filters. These electromagnetic interference filters help to reduce EMI from imperfect switched mode power supplies (SMPS) and protect your DC rails from EMI generated by other circuits connected to it.

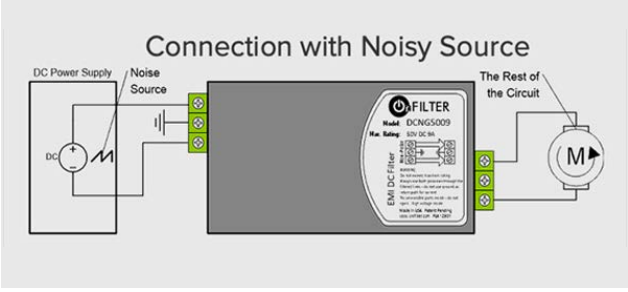
Specifications	
Rated Max. Voltage, DC	50 V
Rated Max. Current, DC	9A
Transient Signal Attenuation	30 dB
Termination	Terminal block
Dimensions	2.6"x5.3"x1.725" 66*135*43.8 mm

FEATURES

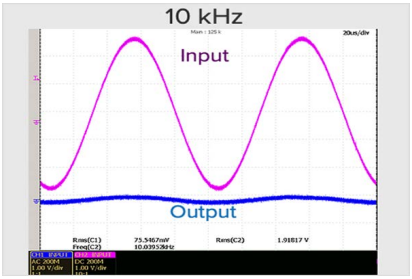
- Noise suppression for all DC power lines
- Plug-in terminal blocks for easy installation
- Rugged construction allows for use with a variety of industrial tools

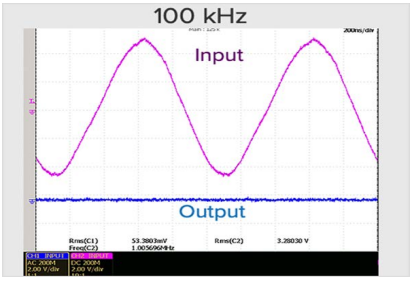
Main connection method guide

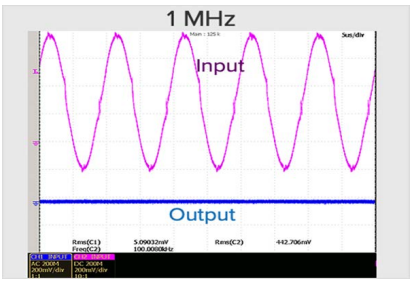




DC Filter Performance

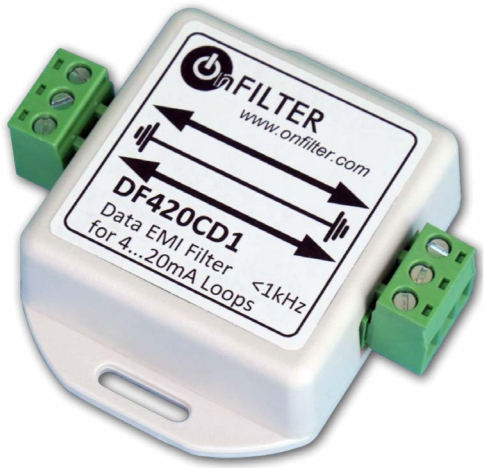






Protect integrity of your data from EMI

Data



EMI Noise can cause of EOS Failures

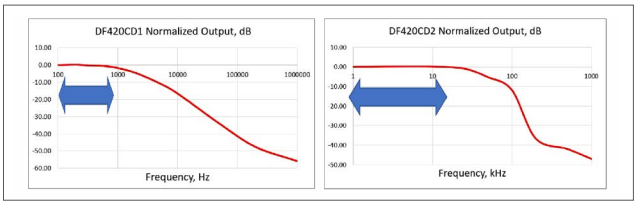
Long data lines from and to 4...20mA loop sensors and actuators "collect" plenty of noise which causes data misreading, errors and other malfunction. OnFILTER' data electromagnetic interference filters for such analog lines block EMI on long cables while providing pass through for the data.

FEATURES

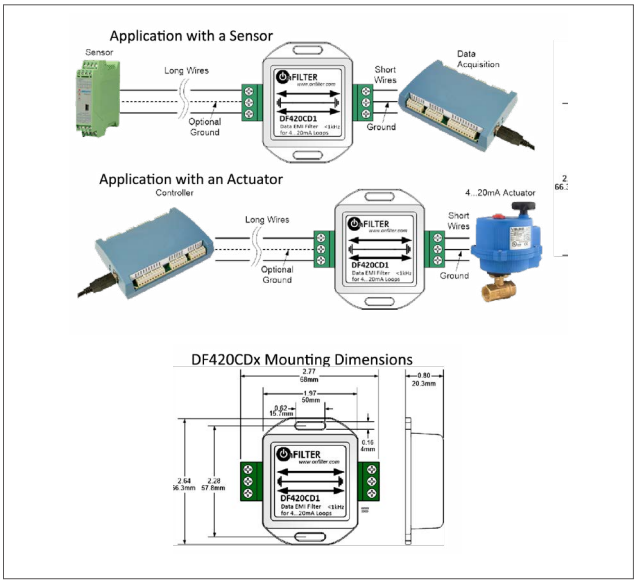
- Reduces electromagnetic interference (EMI) on data lines
- Suppresses differential mode and common mode EMI
- Easy installation
- Supports data bandwidths up to 10 kHz (higher bandwidth models also available)

Specifications	
Drive Voltage	250 V
Max Current	3A, 10A and 20A
Rise / Fall Times	1.5 micro second

Recommended Data Pass Band



Important: For Analog Data Only



Global Ionization Leader

We Know ESD

CoreInsight pursues excellence in the EOS/ESD business field and aims to practice knowledge management based on the challenging spirit and passion to overcome technological barriers and limitations.

We know **ESD**™

We provide ESD control, Not just solutions!

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