



High-Accuracy High-Speed Sensing Ionizer

NEW SJ-Q Series



[10 Times Greater Static Elimination Performance]

&

[Maintenance-Free]

Reliable Static Elimination

ISO Clean Class 3



SJ-Q Series

High-powered elimination for the most difficult problems

Maintenance-free, high-performance antistatic bar

10 times*
the accuracy

Ion balance

± 3 v

Brings ion balance as close to zero as possible

Automatically adjusts high-accuracy ion balance

No voltage swing

*Compared with ion balance specifications ± 30 V of conventional models

10 times* the static
elimination speed

Static elimination speed

High-speed **0.1 sec**

Delivers stable ions at high speed

High-speed static elimination at 10 mm **0.39"** proximity

Controls the amount of ions generated

*Comparison of the fastest static elimination speeds for installation distances that meet the ion balance specifications

High-Accuracy High-Speed Sensing Ionizer

NEW SJ-Q Series



RoHS2



Maintenance-free

Electrode probe replacement

Not needed for 10 years

Electrode probe cleaning

Not needed for 1 year*

Dirt-resistant Electrode Probes

Eliminates static electricity even when probe is worn out

Controls ion generation

*The cleaning frequency may be higher depending on the usage environment.

A dramatic increase in production efficiency

High static elimination

Accuracy

Reduces risks on any production line

Ion balance

$\pm 3\text{V}$

A world
first

10 times
conventional
models

Brings ion balance as close to zero as possible

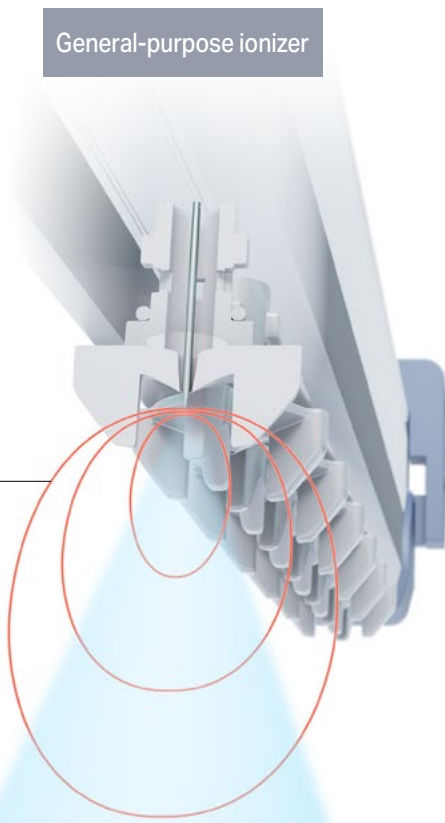
New Inside Supersonic structure "reduces electric field to zero"

Conventional bar-type ionizers not only emit ions, but also cause voltage fluctuations in the target due to the electric field from the electrode probe. For the SJ-Q Series, we have developed a new electric field shielding technology that eliminates electric fields using GND plates at the tip of each electrode.

Allows delivering only ions to the target, improving ion balance by ten-fold.

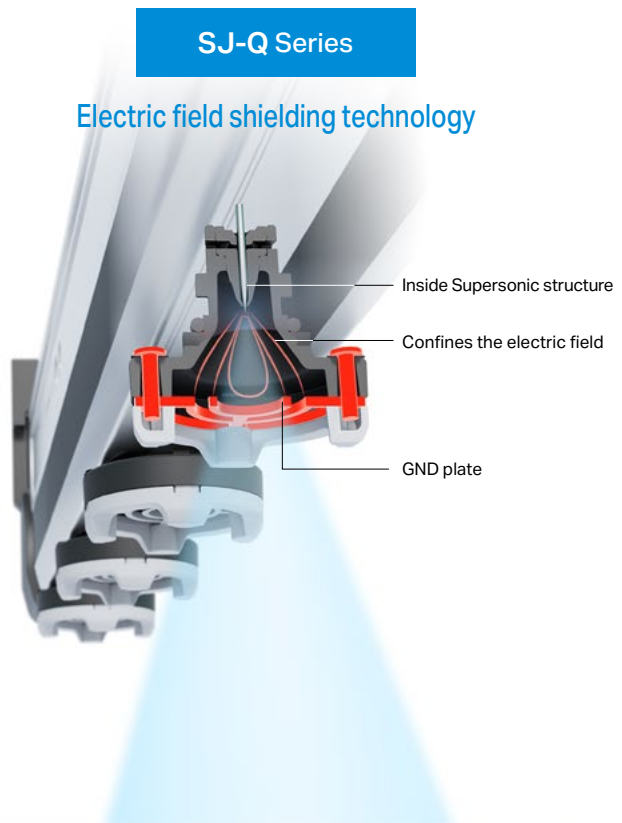
General-purpose ionizer

Electric field
affects target

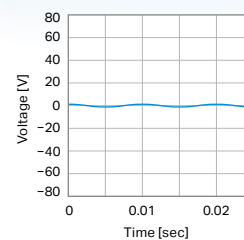
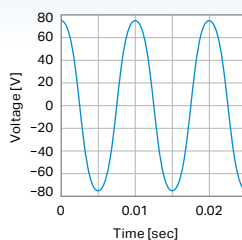


SJ-Q Series

Electric field shielding technology



Voltage of target
fluctuates due
to electric field

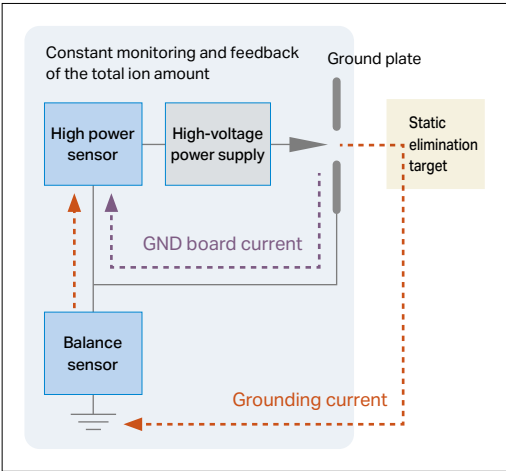


Almost no
fluctuation as
there is no
electric field

High accuracy ion balance is automatically adjusted

Hi-Power I.C.C., an industry-first control mode

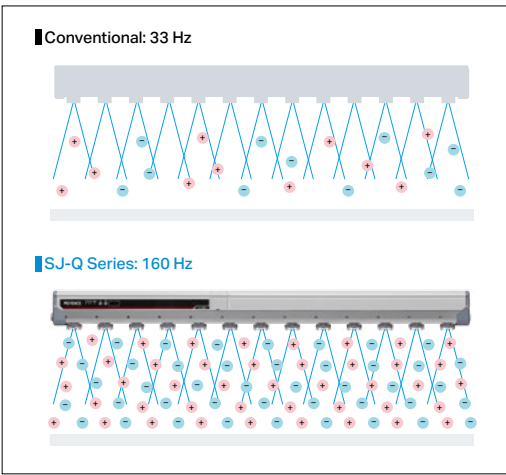
This mode eliminates the conventional need for a charge monitor to adjust ion balance, and automatically adjusts ion balance with high accuracy. The earth current only indicates the amount of ions heading toward the target and can therefore be adjusted with high accuracy.



No voltage swing

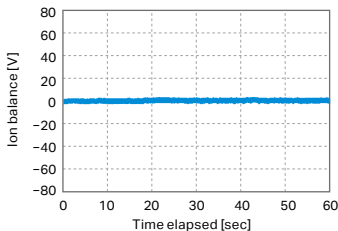
High-speed ion frequency

In addition to electric field shielding, the frequency of positive and negative ions has been increased to 160 Hz. The time taken for ions to reach the target has been reduced to minimize voltage swings.



Ion balance (typical example)

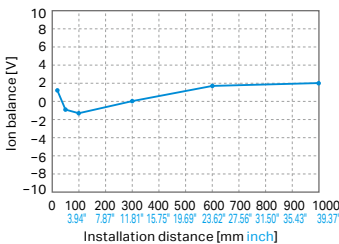
By time



[Measurement Conditions]

- Using 150 mm × 150 mm 5.91" × 5.91" plate monitor (20 pF)
- Distance: 100 mm 3.94"
- 0.2 MPa 29.01 PSI of pressure

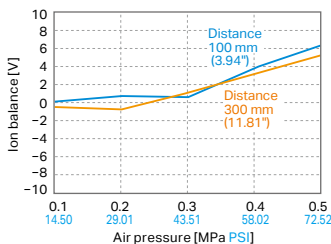
By distance



[Measurement Conditions]

- Using 150 mm × 150 mm 5.91" × 5.91" plate monitor (20 pF)
- 0.2 MPa 29.01 PSI of pressure

By pressure



[Measurement Conditions]

- Using 150 mm × 150 mm 5.91" × 5.91" plate monitor (20 pF)
- Distances: 100 mm 3.94", 300 mm 11.81"

Reduce takt times on production lines

Static elimination speed

Fastest **0.1 sec**

A world
first

10 times
conventional
models

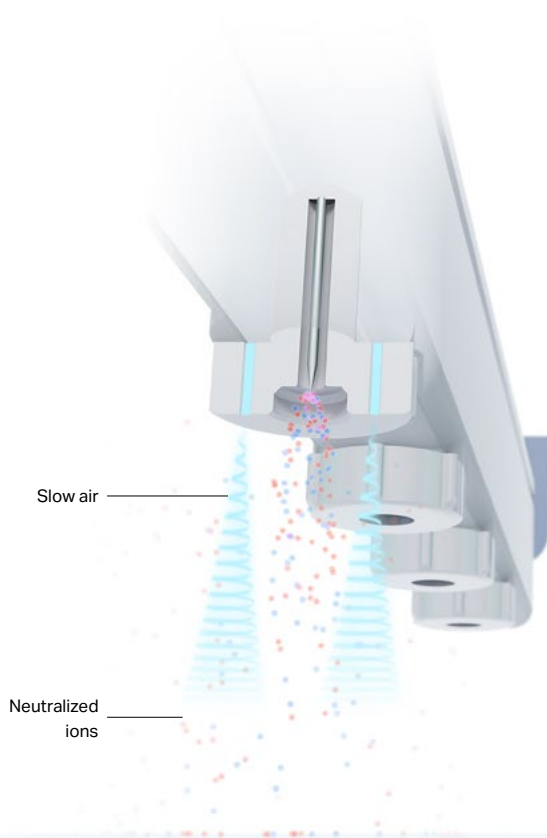
Delivers stable ions at high speed

Inside Supersonic structure delivers ions with ultra-high speed coaxial air

Air ions neutralize each other over time and disappear. Conventional ionizers have slow air speeds, which means it takes more time for ions to reach their target, resulting in slower static elimination. With the SJ-Q Series' Inside Supersonic structure, air flows coaxially with the electrode probe, making it possible to emit ions more powerfully than conventionally possible.

This means that the ions generated can reach the target without being neutralized by ions in the air.

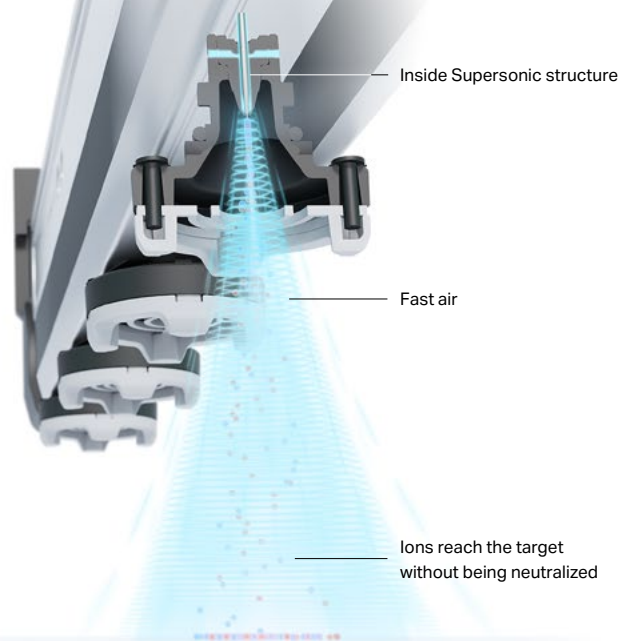
Standard ionizer



Required ions do not reach their target

SJ-Q Series

Ultra-high-speed
coaxial air

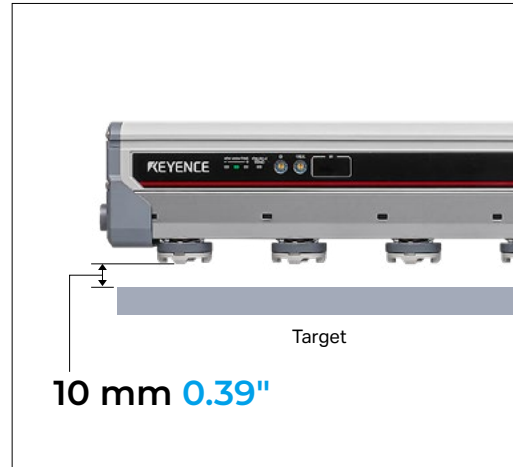


Required ions reach their target

High-speed static elimination at close (10 mm 0.39") mounting distances

Inside Supersonic structure "reduces electric field to zero"

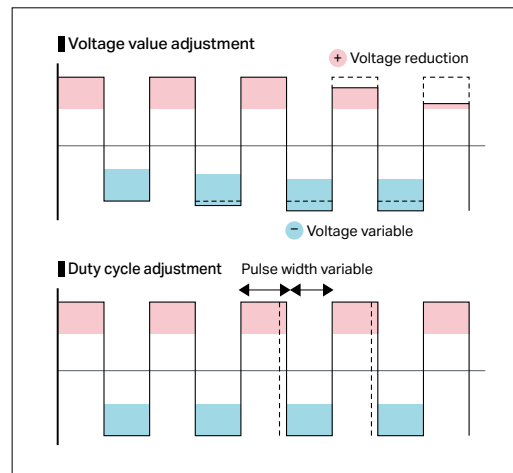
Conventional ionizers need to be installed 50 to 300 mm 1.97" to 11.81" away from the target. However, the SJ-Q Series can be installed as close as 10 mm 0.39" as the reverse charge caused by the electric field is negated. Neutralization of ions is minimized, allowing for high-speed static elimination.



Strong ion generation control

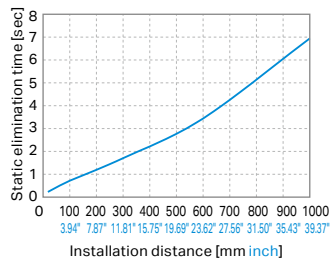
Hi-Power I.C.C., an industry-first control mode

The pulse duration and voltage value of the applied voltage are adjusted according to the charged state of the target. This enables high-speed static elimination. Variable pulse duration to match frequency allows you to control the quantity of ions generated, as well as enabling 2.5× greater voltage variation than conventional models.



Static elimination speed (typical example)

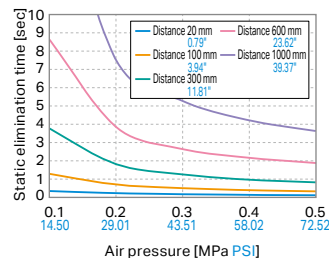
■ Static elimination times by installation distance



[Measurement Conditions]

- Using 150 mm × 150 mm 5.91" × 5.91" plate monitor (20 pF)
- Distance 20 to 1000 mm 0.79" to 39.37"
- Frequency 160 Hz • Pressure 0.2 MPa 29.01 PSI

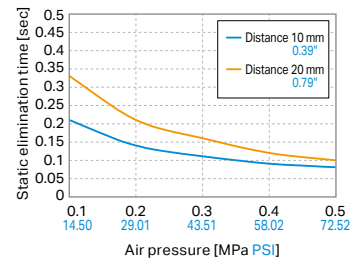
■ Static elimination time by pressure



[Measurement Conditions]

- Using 150 mm × 150 mm 5.91" × 5.91" plate monitor (20 pF)
- Distance 20 to 1000 mm 0.79" to 39.37"
- Frequency 160 Hz • Air 0.1 to 0.5 MPa 14.50 to 72.52 PSI

■ Static elimination times with shorter installation distance



[Measurement Conditions]

- Using 150 mm × 150 mm 5.91" × 5.91" plate monitor (20 pF)
- Distance 10 mm 0.39", 20 mm 0.79"
- Frequency 160 Hz • Pressure 0.1 to 0.5 MPa 14.50 to 72.52 PSI

Significant reduction in work required for operation

Maintenance-free

Electrode probe cleaning

Not needed for 1 year*

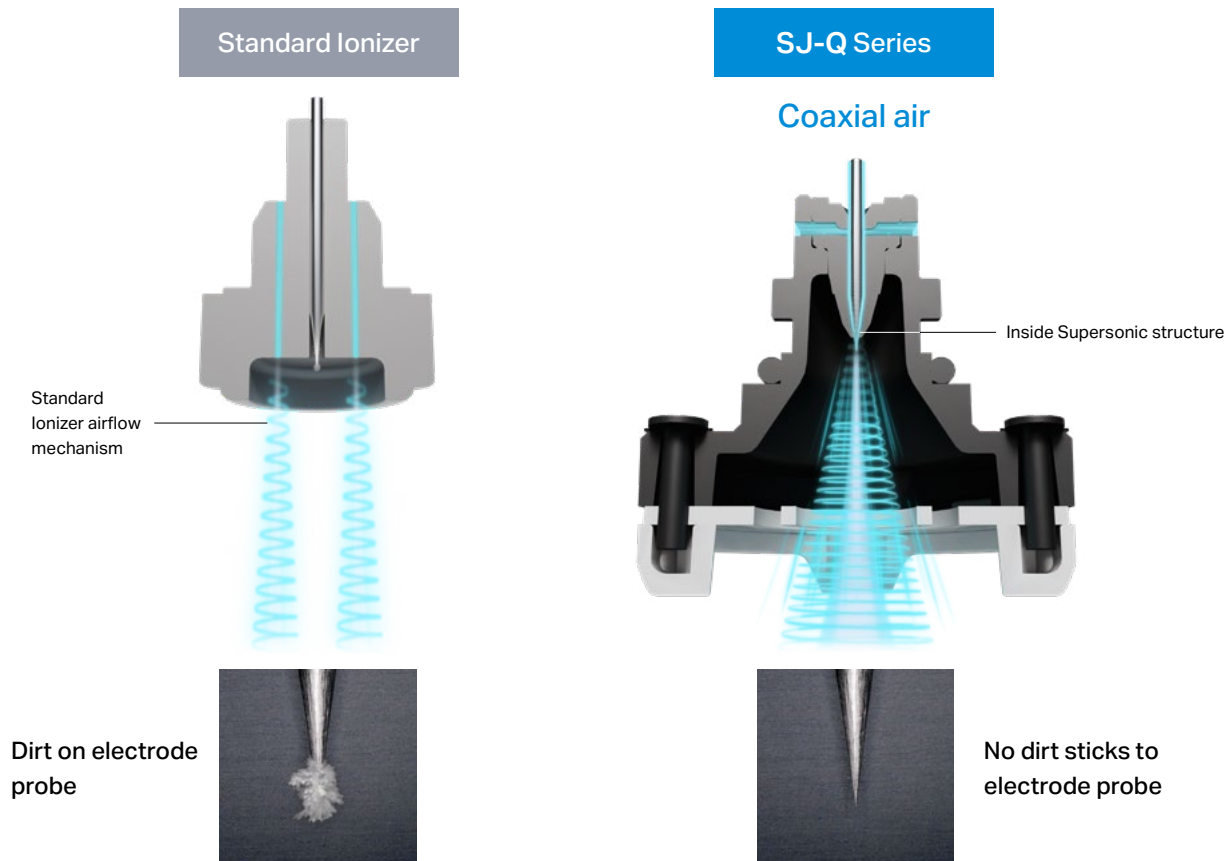
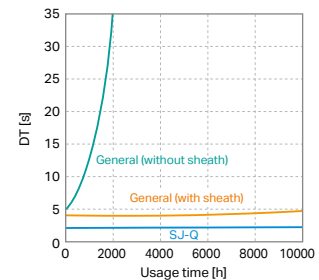
General: Once every 2 to 4 weeks

Dirt-resistant Electrode Probes

The Inside Supersonic structure envelops the electrode probe with coaxial air

If an electrode probe that generates ions is not protected, tiny particles will adhere to it as it discharges. Therefore, it was necessary to clean the electrode probe every few weeks or months. With the SJ-Q Series, supersonic air is sprayed coaxially onto the electrode probe, enveloping it and repelling dirt from outside air.

Probe contamination comparison



Electrode probe replacement

Not needed for 10 years

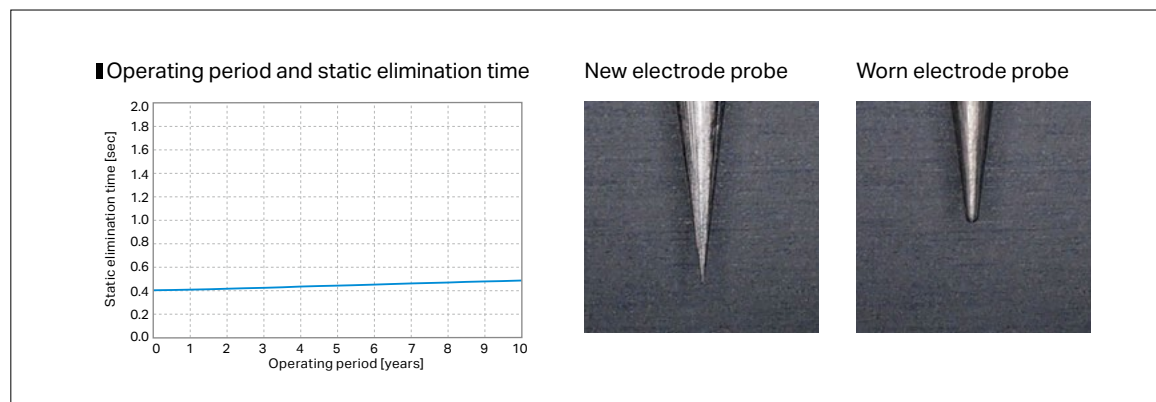
Last **5x** longer than
conventional models!

Conventional: Replace every two years

**Eliminates static
electricity even when
probe is worn out**

Hi-Power I.C.C. maintains generation efficiency

The SJ-Q Series constantly monitors ion generation status using Hi-Power I.C.C. Applied voltage is automatically increased depending on wear.

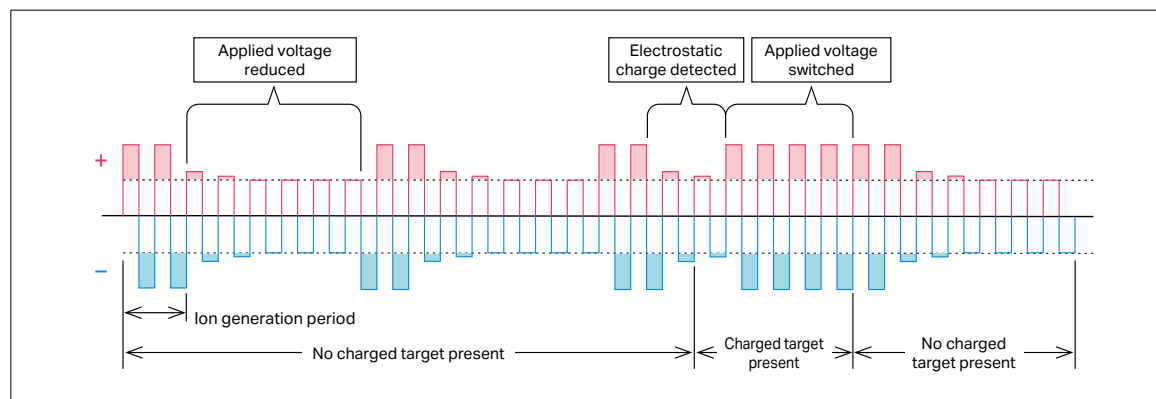


**Controls ion
generation**

L.P.C. feature

Equipped with an L.P.C. feature that optimally controls the generation of positive (+) and negative (-) ions. Extends the oscillation cycle while continuing static elimination and reducing maintenance.

*The L.P.C. feature must be set using the remote control.



Eliminates quality issues due to static electricity while reducing costs

Conventional ionizer

Product yields are limited due to static elimination inaccuracy

In the electrical machinery and electronics industries, the risk of electrostatic damage has increased in recent years due to the pursuit of higher performance and downsizing. Generally, ICs require 100 V management, so an ionizer with an ion balance accuracy of 10 V (10%) is required. Until now, many bar-type ionizers were not effective enough due to having ion balance of ± 30 V.



Many industries that are concerned about foreign particles are now concerned about even the smallest adhesions. Small, light particles are attracted even at a low electrostatic charge.



High air consumption relative to compressor capacity

Conventional bar-type ionizers consumed large volumes of air, accounting for the majority of the air supplied by the compressor. This led to cases in which other equipment was left short of air, or insufficient air reached the ionizer itself, causing unstable performance.



Ionizer running costs

*Simulation when supplying 0.5 MPa 72.52 PSI CDA to SJ-H108 (10 years)

[Example of labor hours required for cleaning electrode probes]

239 hours

[Example of electrode probe costs]

\$ 1,664

[Example of factory air costs for ionizers]

\$ 119,104



SJ-Q Series

Ion balance of ± 3 V maximizes improvement

An ion balance of ± 3 V eliminates electrostatic damage in the electrical machinery and electronics industries

[Learn more online](#)



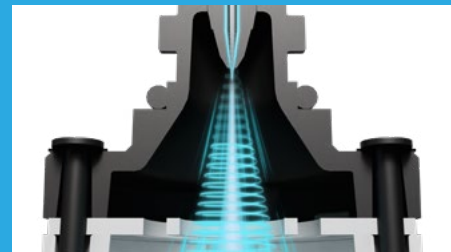
Minimized risk of minute foreign particles adhering to products

[▶ Watch video to learn more](#)



Low-flow static elimination dramatically reduces compressor load and CO₂ emissions

The SJ-Q Series can reduce air consumption by approximately 90% compared to conventional models. This allows both the equipment and the ionizer to operate stably without placing demands on compressor capacity. The reduction in air consumption also contributes to lower CO₂ emissions.



Expected running cost reduction with the SJ-Q Series

*Simulation when supplying 0.5 MPa (72.52 PSI) CDA to SJ-Q108 (10 years)

[Example of labor hours required for cleaning electrode probes]

9 hours

[Example of electrode probe costs]

\$ 0

[Example of factory air costs for ionizers]

\$ 12,844

Specific cost reduction examples

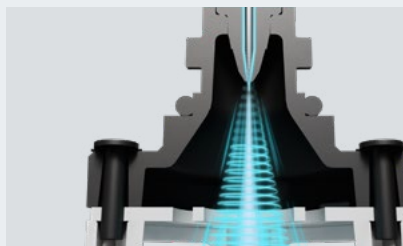
Reduced Factory Air Consumption

	Conventional: SJ-H108	SJ-Q108	
Electricity bill ^{*1}	\$ 11,910 per bar	\$ 1,284 per bar	Reduction of \$ 10,626 per year
Air usage	66,169 kWh	7,135 kWh	
Air volume	784 L/min	85 L/min	
Air pressure	0.5 MPa 72.52 PSI	0.5 MPa 72.52 PSI	

^{*1} Annual electricity bill calculated at \$ 0.18/kWh

Inside Supersonic structure

With the Inside Supersonic structure, ions exceed the speed of sound, enabling high-speed static elimination even with a minimal flow rate.



This world-first supersonic structure is achieved by using Laval nozzles, which are used in supersonic jet engine technologies, for the electrode probes.

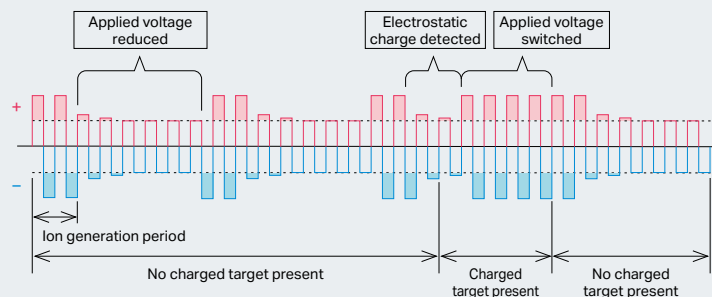
Reduced Main Unit Power Consumption

	Conventional: SJ-H108	SJ-Q108	
Electricity bill ^{*1}	\$ 19 per bar	\$ 6 per bar	Approx. 2/3 reduction
Main unit power	105 kWh	36 kWh ^{*2}	

^{*1} Annual electricity bill calculated at \$ 0.18/kWh, ^{*2} Minimum specifications

L.P.C. feature

Equipped with an L.P.C. feature that optimally controls the generation of positive (+) and negative (-) ions. Extends the oscillation cycle while continuing static elimination and reducing maintenance.



Reduced Probe Unit Replacement Costs

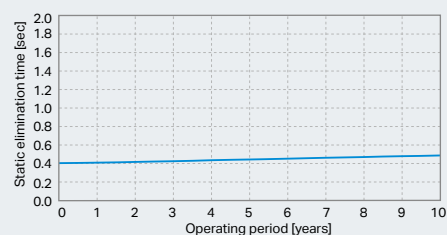
	Conventional: SJ-H108	SJ-Q108
Costs	\$1,664 per bar	\$ 0 per bar
No. of replacements	4	0
Replacement frequency	2 years	10 years
Probe model/No. of probes required	OP-84292 × Set of 4	OP-89051 × Set of 4
Probe unit cost	\$ 104	\$ 75

10 year reduction of
\$1,664

Hi-Power I.C.C. eliminates static electricity even if probes are worn out

The SJ-Q Series constantly monitors ion generation using Hi-Power I.C.C. Applied voltage is automatically increased according to the decrease in the amount of ions caused by wear.

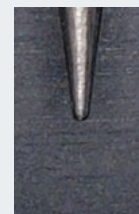
■ Operating period and static elimination time



New electrode probe



Worn electrode probe



Reduced Probe Cleaning Labor

	Conventional: SJ-H108 ^{*3}	SJ-Q108
Total labor hours	239 hours/per bar	9 hours/per bar
Hours per bar	0.5 H	0.5 H
Workers required	2	2
Cleaning frequency	Twice per month	Once per year
Hours spent cleaning over 10 years	239	9

230 hours saved
over **10** years

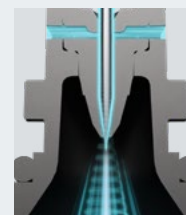
Inside Supersonic structure

Peripheral foreign particles cannot get close to the electrode probe tip because it is cut off from the peripheral space.

Conventional



SJ-Q Series



^{*3} With airless

Usable globally as it complies with international standards

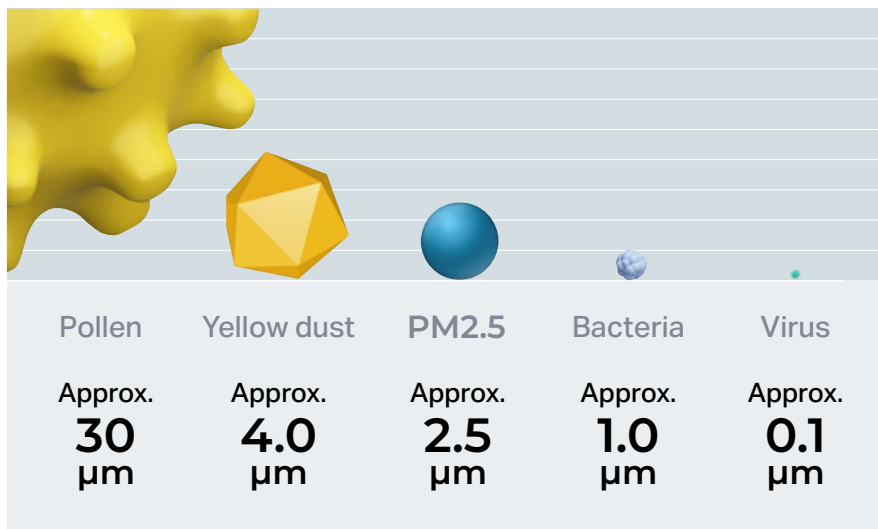
Clean Class 3

Cleanliness Class		Maximum Density (units/m ³)					
ISO 14644-1	US Federal Standard Fed.Std.209D (Target particle size 0.5 µm)	Measurement Particle Size					
		0.1 µm	0.2 µm	0.3 µm	0.5 µm	1.0 µm	5.0 µm
Class 1		10					
Class 2		100	24	10			
Class 3	1	1,000	237	102	35		
Class 4	10	10,000	2,370	1,020	352	83	
Class 5	100	100,000	23,700	10,200	3,520	832	
Class 6	1,000	1,000,000	237,000	102,000	35,200	8,320	293
Class 7	10,000				352,000	83,200	2,930
Class 8	100,000				3,520,000	832,000	29,300
Class 9					35,200,000	8,320,000	293,000

Clean Class (cleanliness) is a standard that quantifies the number of particles in the air. The scale of the class is shown by the number of particles contained in a unit volume. The ISO standard is based on the number of particles 0.1 µm or larger in 1 m³ **35.32 ft³** of air, with classes ranging from ISO class 1 to 9. The US federal standard classifies cleanrooms according to the number of particles 0.5 µm or larger contained in 1 cubic foot of air (approximately 30.5 cm³ **1.86 in³**). For example, if there are 100 or fewer

0.5 µm particles in 1 cubic foot, it is class 100, and if there are 10,000 or fewer 0.5 µm particles, it is class 10,000. An increasing number of industries are requiring ionizers, which are used to prevent particle adhesion and remove dust, to be Clean Class compliant. The SJ-Q Series undergoes clean washing and clean packing before shipping. It can be used safely even in environments where particles are a problem, such as clean rooms.

Size comparison



Packing image



Process image



ANSI/ESD S20.20 IEC61340

ESD Control Item	Product Qualification		Compliance Verification	
	Test Method	Required Limit(s) ^(B)	Test Method	Required Limit(s)
Ionization	ANSI/ESD STM3.1	Discharge Time User defined	ESD TR53(11) Ionization Section	Discharge Time User defined
		Offset Voltage -35 volts < Voffset (Peak) < 35 volts		Offset Voltage -35 volts < Voffset (Peak) < 35 volts

In 2021, the content of ANSI/ESD S20.20 was revised for the first time in seven years. In the future, it will be necessary to check ion balance at peak values. ANSI/ESD is cited in RCJS-TR-5-4, JIS C 61340-4-7, IEC61340-4-7ED.2, etc. The SJ-Q Series has ion balance performance that fully meets standard requirements, enabling it to be used with confidence.

***The content of the IEC was revised to reflect the same requirements in IEC61340-5-1:2024.**

***2025 RCJS-TR-5-4 was also added to see ion balance in Peak.**

CSA certification



The US Nationally Recognized Testing Laboratories (NRTLs) and Canadian Accredited Certification Organizations (ACOs) are third-party private organizations certified by OSHA (Occupational Safety and Health Administration) and the SCC (Standards Council of Canada) respectively. They perform safety evaluation and certification of products to be used in North America.

Products are required to conform to the UL standards for the US and the CSA standards for Canada, and the certified products are eligible to bear the mark of the certification body. Those that are compliant with both UL and CSA standards are marked with adjacent indicators "C" and "US" on either side. UL and CSA are given as the representative certification bodies, but whichever certification body grants the certification, the certification itself is considered to be equivalent.

Products must pass factory audits by the relevant agency at least once every six months in order to obtain these certifications, so they are also considered effective as a criterion for whether a product maintains consistent quality, and they are increasingly being checked outside North America as well.

CE Marking



This standard conformity mark is given to products that meet the standards of all EU (European Union) member states. The displaying of this mark is called "CE marking." Evaluation of CE marking compliance is achieved either through evaluation by a Notified body, or declaration of conformity by the manufacturer, and some products are not required regular audits by a Notified body.

Safety Bar Type Ionizer



Conventional products
Accidental discharges may occur when performing maintenance or equipment inspections.



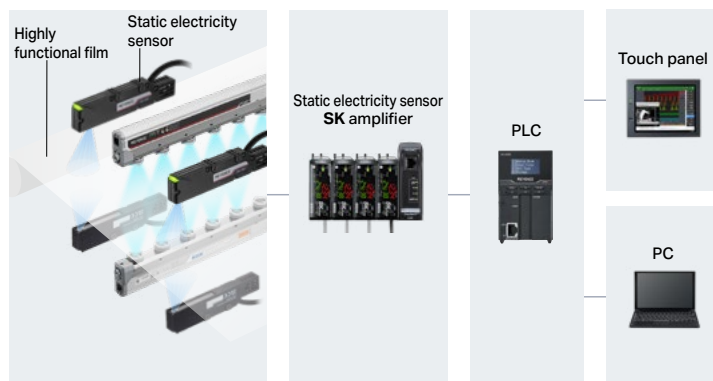
SJ-Q Series
The tip of the electrode probe will not give off a discharge, even if touched.

A safe bar-type ionizer that does not give off a discharge even if touched
Increased safety with the Inside Supersonic mechanism

The tip of the electrode probe is covered by a GND plate, so it won't give off a discharge even if touched. You can use this device safely and with confidence of reduced risk of any discharge occurring when contact is made with the ionizer during maintenance or equipment inspections.

Improved quality through traceability

Monitoring Target Electrostatic Charge

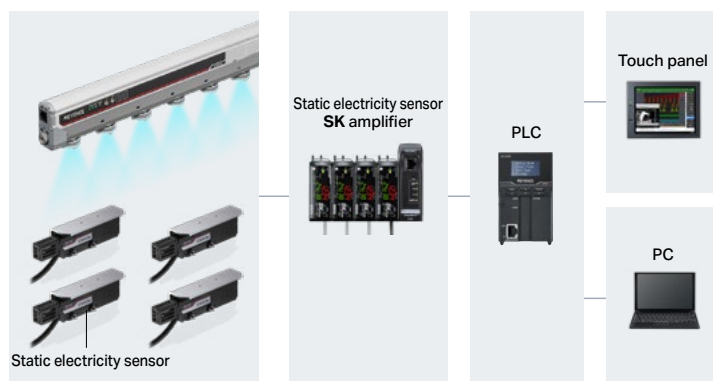


The electrostatic charge on the target is constantly monitored, allowing for appropriate predictive maintenance to be carried out. If the predetermined standard is exceeded during a regular inspection such as that conducted once a month, there was a risk of loss of products during that period. By constantly managing the static electricity values for each product, quality can be improved more than ever before.

[Learn more online](#)



Constantly Monitor Ionizer Ion Balance



This is an effective method when voltage needs to be kept under 100 V. It carries out constant monitoring of the ionizer's ion balance, allowing for appropriate predictive maintenance to be carried out. If the standard is found to have been exceeded during regular maintenance, there was a risk of loss of products during that period. By constantly managing the static electricity values, quality can be improved more than ever before.

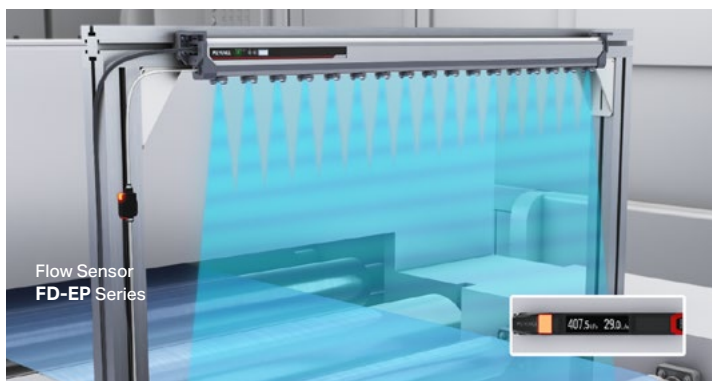
Periodically Measure Electrostatic Charge and Ionizer Performance



A hand-held type that allows measurement of the target's electrostatic charge, temperature, humidity, static elimination (+), static elimination (-), and ion balance, all in a single unit. Conventionally, two separate devices were necessary for this: a heavy charge plate monitor and a surface potential sensor. The SK-H Series performs both roles with one unit. This reduces the level of verification work needed.

Constantly Monitor Ionizer Air Usage

[Learn more online](#)



An air supply is essential for maintainability when using bar-type models. Able to check air volume, maintain static elimination performance and constantly monitor air consumption. This allows for unexpected issues to be identified early, leading to greater production efficiency.

Constantly Monitor Ionizer Operating Status

Equipped with three alarm outputs

Alarm

Interrupts high voltage power supplies when there is internal circuit damage or abnormal discharge.

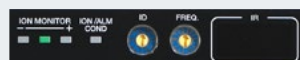
Condition alarm

Monitors impact of installation environment instability on static electricity elimination.

Ion level alarm

Monitors drops in amount of ions generated due to electrode probe contamination or abrasion.

The status can be checked on the main unit charge monitor.



You can check the static elimination status via the electrostatic charge monitor. It will also constantly monitor for three types of error and provide an error display via the LEDs on the main unit. Allows for the centralized management of ionizers by monitoring the external output.

Periodically Check Ionizer Operation

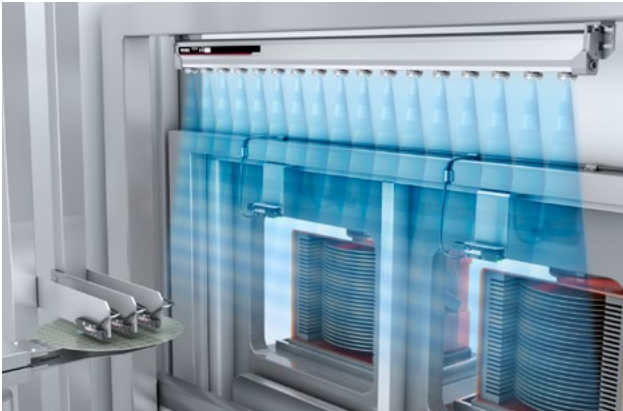


Newly developed highly functional remote control capable of two-way communication with ionizer. The remote control enables hand-held checking of static elimination status and alarm information, as well as performing a variety of operations, such as fine ion balance adjustments and setting electrostatic charge monitor sensitivity.

Applications by Industry

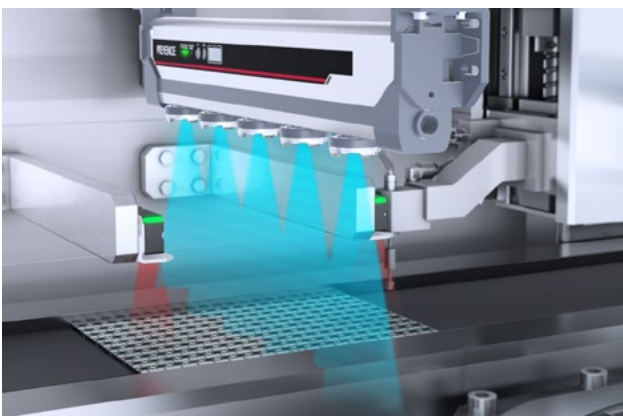
Semiconductors

EFEM static elimination



Enables high ion balance static elimination, even directly below EFEM ionizers. Also allows voltage swing, an issue with conventional bar types, to be kept to a minimum. There are an increasing number of cases where ion balance is monitored over time in combination with the SK Series.

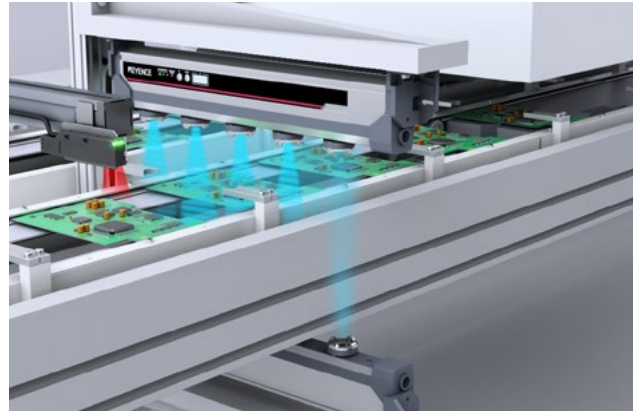
Static electricity management when die bonding



Die bonding requires little space due to the nature of the process, so bar or nozzle types are commonly used. Recently, there have been an increased number of cases where the standard ion balance specification of $\pm 30V$ is insufficient, but the SJ-Q Series meets the required specifications with just $\pm 3V$. Can also be combined with the SK Series to enable numerical control.

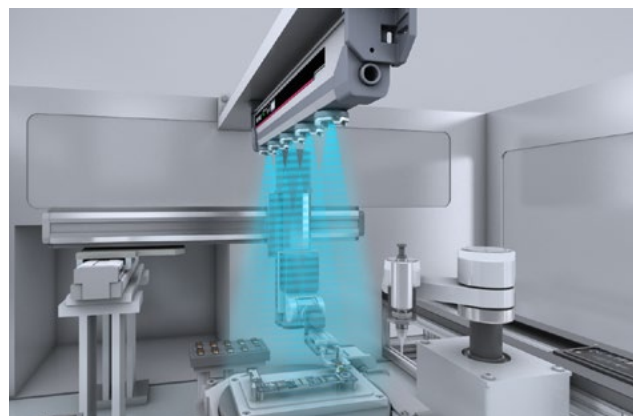
Electronics Manufacturing

Eliminating Static Electricity During PCB Transport



As PCBs become more multifunctional, there are an increasing number of cases where current accumulates and makes static elimination difficult, even with the same static voltage. There have been issues where installing an ionizer close to a board to shorten static elimination time caused reverse charging, but a further installation distance lead to slowed static elimination. With the SJ-Q Series, there is no need to worry about reverse charging even when the ionizer is installed 10 mm 0.39" away. Can be paired with the SK Series to check the effectiveness of static elimination.

Preventing electrostatic damage when assembling camera modules



As various electronic devices such as camera modules become smaller, stricter particle management is required. Fine particles are attracted even with small amounts of static electricity. The SJ-Q Series' Inside Supersonic structure ensures reliable static elimination while minimizing adhesion to electrode probes. Clean Class compliant, so can be used with confidence.

Food/Pharmaceuticals

Static elimination with horizontal pillow-type packaging machinery



We often hear that packaging machines have long operating times and it is difficult to allocate time for maintenance. As a result, the effectiveness of their vital anti-jamming functionality decreases, leading to risks of reduced productivity. The SJ-Q Series maintains necessary static elimination even without maintenance work.

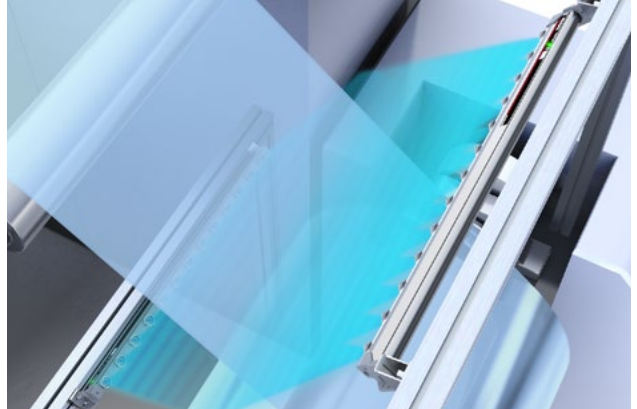
Static elimination during transport of cup ramen



We want to minimize the risk of foreign particles getting into food as much as possible. Static electricity builds up when containers move, attracting foreign particles such as hair. The SJ-Q Series' Inside Supersonic structure ensures reliable static elimination while minimizing adhesion to electrode probes. Clean Class compliant, so can be used with greater confidence.

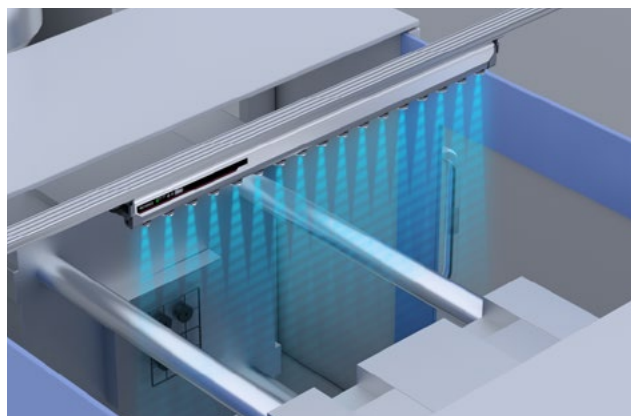
Plastics/Films

Static elimination during transport of film



Maintenance is essential to optimize the performance of an ionizer, but in some cases, cleaning or replacing electrode probes can be difficult due to safety and space constraints, such as with film transportation. The SJ-Q Series' Inside Supersonic structure is maintenance-free. This allows the required level of static elimination to be maintained for ten years for many applications.

Static elimination for entire molds



Ionizers are used to reduce the risk of mold damage caused by part sticking. While they work as expected to begin with, problems can occur when probes are not regularly cleaned. The SJ-Q Series significantly minimizes this risk. It consumes little air and does not cool the mold.

Specifications

SJ-Q Series Specifications

Item		Specifications
Ion generation method		Corona discharge method
Structure		Shockless resistive coupling type
Voltage application method/applied voltage		Pulse AC method/±8000 Vmax
Ion balance control method		Hi-Power I.C.C. method
Ion balance ^{*1}		±3 V
Clean rating ^{*2}		ISO14644-1 Class 3
Installation distance		10 mm 0.39" or more
Control input	Static elimination stop input	NPN open collector or non-voltage contact signal
	Ion level alarm	NPN open collector
	Condition alarm	Maximum 100 mA (40 VDC or less)
Control output		Alarm output
Communication functions		Remote control
Ratings	Power voltage	24 to 36 VDC±10%
	Current consumption ^{*3}	Normal operation: 700 mA or less, LPC mode: 170 mA (typical)
	Overvoltage category	I
	Pollution degree	2
Average power consumption ^{*3}		Normal operation: 8.4 W, LPC mode: 4.1 W
Main functions		Condition alarm, ion level alarm, alarm output
Air connection port		Rc1/8
Air supply pressure		0.1 to 0.5 MPa 14.50 to 72.52 PSI (recommended air pressure: 0.2 MPa 29.01 PSI) ^{*4}
Material	Electrode probe	Tungsten
	Main body	ABS/PBT/PP/LCP/PPS/SPS/SUS
Environmental resistance	Operating ambient temperature	0 to +40°C 32 to 104°F
	Operating ambient humidity	85% RH or less (no condensation)

*1 Measured under the following conditions.

Installation distance	300 mm 11.81"
Air supply pressure	0.2 MPa 29.01 PSI
Frequency	Highest device driving frequency
Operating ambient temperature	0 to +40°C 32 to 104°F
Operating ambient humidity	35 to 65% RH
Measurement position	Bar Center

*2 Contact us for detailed conditions. *3 24 VDC

*4 If you wish to use the air purge function with intermittent air supply, contact us.

Operating frequency

Frequency	SJ-Q Series			
	036 to 084	108 to 132	156 to 204	228 to 300
160 Hz	✓			
130 Hz		✓		
100 Hz			✓	
68 Hz	✓	✓	✓	✓
33 Hz	✓	✓	✓	✓
10 Hz	✓	✓	✓	✓
5 Hz	✓	✓	✓	✓
1 Hz	✓	✓	✓	✓
P only	✓	✓	✓	✓
N only	✓	✓	✓	✓

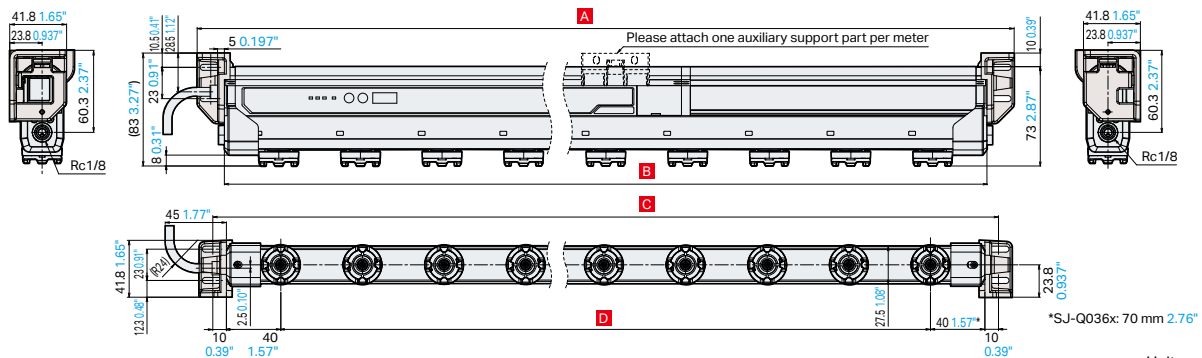
Effective length/total length/weight

Item	Specifications										
Model	SJ-Q036	SJ-Q060	SJ-Q084	SJ-Q108	SJ-Q132	SJ-Q156	SJ-Q180	SJ-Q204	SJ-Q228	SJ-Q252	SJ-Q300
Effective length* (Unit: mm <i>inch</i>)	440 17.32"	680 26.77"	920 36.22"	1160 45.67"	1400 55.12"	1640 64.57"	1880 74.02"	2120 83.46"	2360 92.91"	2600 102.36"	3080 121.26"
Total length (Unit: mm <i>inch</i>)	350 13.78"	560 22.05"	800 31.50"	1040 40.94"	1280 50.39"	1520 59.84"	1760 69.29"	2000 78.74"	2240 88.19"	2480 97.64"	2960 116.54"
Number of electrodes	5	9	13	17	21	25	29	33	37	41	49
Weight (Unit: g <i>oz</i>)	690 24.35 oz	890 31.41 oz	1120 39.53 oz	1340 47.30 oz	1580 55.77 oz	1800 63.54 oz	2010 70.95 oz	2230 78.71 oz	2440 86.13 oz	2660 93.89 oz	3090 109.07 oz

*Effective length is for static elimination range when installation distance is 100 mm 3.94".

Dimensions

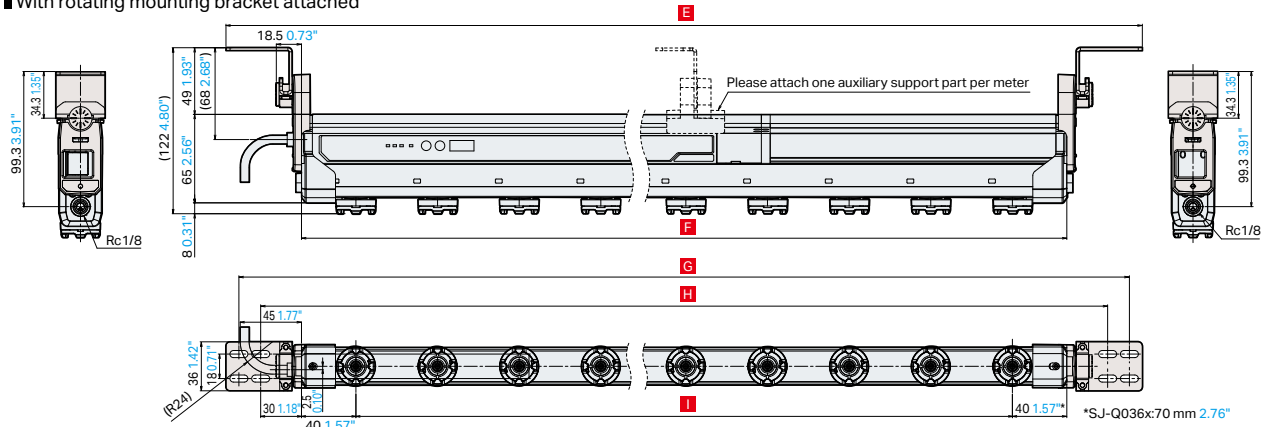
■ With standard mounting bracket attached



Units: mm inch

Model	Total length A	Static elimination bar length B	Mounting pitch C	Electrode pitch and length D
SJ-Q036	390 15.35"	350 13.78"	370 14.57"	P60 × 4 = 240 P2.36" × 4 = 9.45"
SJ-Q060	600 23.62"	560 22.05"	580 22.83"	P60 × 8 = 480 P2.36" × 8 = 18.90"
SJ-Q084	840 33.07"	800 31.50"	820 32.28"	P60 × 12 = 720 P2.36" × 12 = 28.35"
SJ-Q108	1080 42.52"	1040 40.94"	1060 41.73"	P60 × 16 = 960 P2.36" × 16 = 37.80"
SJ-Q132	1320 51.97"	1280 50.39"	1300 51.18"	P60 × 20 = 1200 P2.36" × 20 = 47.24"
SJ-Q156	1560 61.42"	1520 59.84"	1540 60.63"	P60 × 24 = 1440 P2.36" × 24 = 56.69"
SJ-Q180	1800 70.87"	1760 69.29"	1780 70.08"	P60 × 28 = 1680 P2.36" × 28 = 66.14"
SJ-Q204	2040 80.31"	2000 78.74"	2020 79.53"	P60 × 32 = 1920 P2.36" × 32 = 75.59"
SJ-Q228	2280 89.76"	2240 88.19"	2260 88.98"	P60 × 36 = 2160 P2.36" × 36 = 85.04"
SJ-Q252	2520 99.21"	2480 97.64"	2500 98.43"	P60 × 40 = 2400 P2.36" × 40 = 94.49"
SJ-Q300	3000 118.11"	2960 116.54"	2980 117.32"	P60 × 48 = 2880 P2.36" × 48 = 113.39"

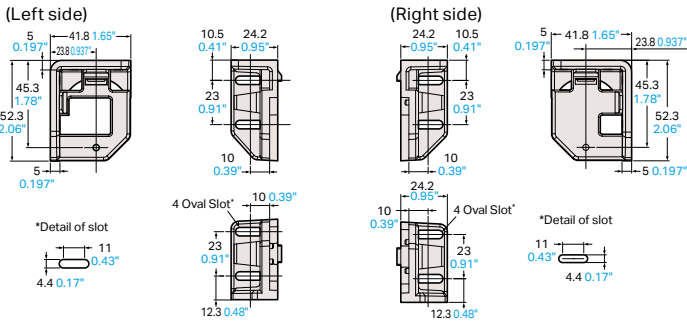
■ With rotating mounting bracket attached



Units: mm inch

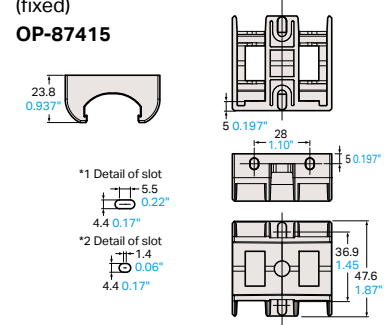
Model	Total length E	Static elimination bar length F	Mounting pitch G	Mounting pitch H	Electrode pitch and length I
SJ-Q036	451 17.76"	350 13.78"	432 17.01"	400 15.75"	P60 × 4 = 240 P2.36" × 4 = 9.45"
SJ-Q060	671 26.42"	560 22.05"	652 25.67"	620 24.41"	P60 × 8 = 480 P2.36" × 8 = 18.90"
SJ-Q084	911 35.87"	800 31.50"	892 35.12"	860 33.86"	P60 × 12 = 720 P2.36" × 12 = 28.35"
SJ-Q108	1151 45.31"	1040 40.94"	1132 44.57"	1100 43.31"	P60 × 16 = 960 P2.36" × 16 = 37.80"
SJ-Q132	1391 54.76"	1280 50.39"	1372 54.02"	1340 52.76"	P60 × 20 = 1200 P2.36" × 20 = 47.24"
SJ-Q156	1631 64.21"	1520 59.84"	1612 63.46"	1580 62.20"	P60 × 24 = 1440 P2.36" × 24 = 56.69"
SJ-Q180	1871 73.66"	1760 69.29"	1852 72.91"	1820 71.65"	P60 × 28 = 1680 P2.36" × 28 = 66.14"
SJ-Q204	2111 83.11"	2000 78.74"	2092 82.36"	2060 81.10"	P60 × 32 = 1920 P2.36" × 32 = 75.59"
SJ-Q228	2351 92.56"	2240 88.19"	2332 91.81"	2300 90.55"	P60 × 36 = 2160 P2.36" × 36 = 85.04"
SJ-Q252	2591 102.01"	2480 97.64"	2572 101.26"	2540 100.00"	P60 × 40 = 2400 P2.36" × 40 = 94.49"
SJ-Q300	3071 120.91"	2960 116.54"	3052 120.16"	3020 118.90"	P60 × 48 = 2880 P2.36" × 48 = 113.39"

■ Standard end unit L/R (fixed) **OP-87414**

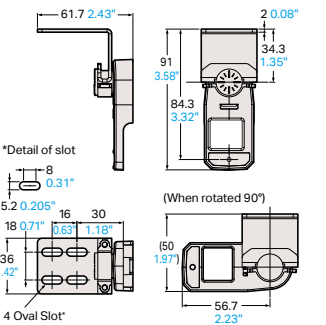


■ Standard intermediary support bracket (fixed)

OP-87415

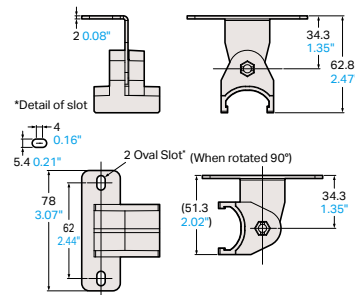


■ SJ-H/GL/G/V/R conversion end unit **OP-87416**

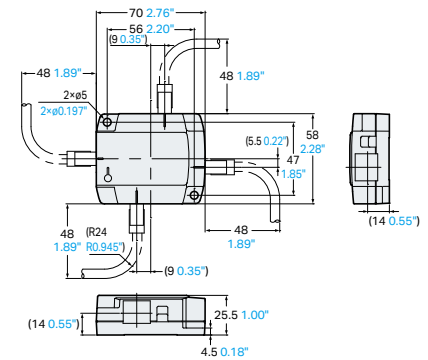


■ SJ-H/GL/G/V/R intermediary rotating support bracket for conversion

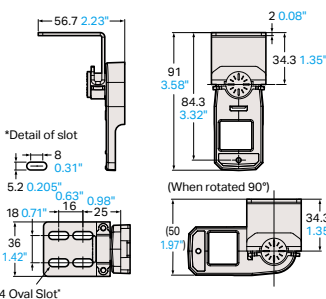
OP-87417



■ Series junction box **OP-87422**



■ SJ-H/GL/G/V/R conversion end unit for SJ-Q036 **OP-87525**



Options

Cable

10pin I/O cable
SJ-C2U
SJ-C5U
SJ-C10U



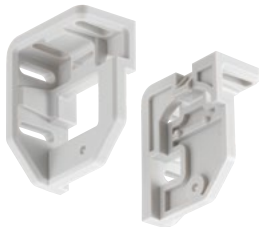
Electrode probe

Tungsten electrode probe for SJ-Q
(Pack of 5)
OP-89051

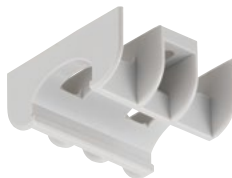


Mounting adapter

Standard end unit L/R (fixed)
OP-87414



Standard intermediary support bracket (fixed)
OP-87415



For SJ-H/GL/G/V/R conversion
End unit (adjustable angle)
OP-87416



For SJ-E/Q036 SJ-H/GL/G/V/R conversion
End unit (adjustable angle)
OP-87525



For SJ-H/GL/G/V/R conversion
Intermediary support bracket
(adjustable angle)
OP-87417



PNP conversion box for SJ-E/Q
OP-89229



Cleaning kit

Electrode probe for SJ-Q
High-performance cleaning kit
OP-89052



Remote control

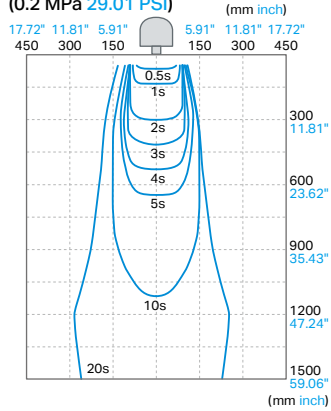
Highly functional remote control
for the SJ-Q
SJ-Q01



Static elimination area and static elimination time

Static elimination area and time

(0.2 MPa 29.01 PSI)

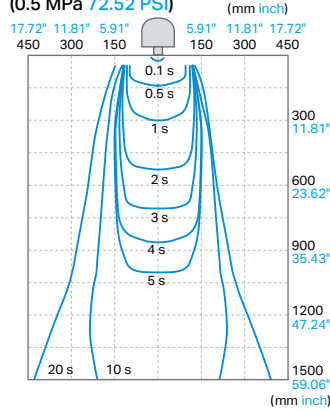


[Measurement Conditions]

- Static elimination time from ± 1000 V to ± 100 V
- Using 150 mm $\times$ 150 mm 5.91" $\times$ 5.91" plate monitor (20 pF)
- Using SJ-Q108 • Air pressure 0.2 MPa 29.01 PSI
- No downflow

Static elimination area and time

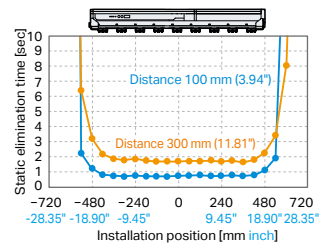
(0.5 MPa 72.52 PSI)



[Measurement Conditions]

- Static elimination time from ± 1000 V to ± 100 V
- Using 150 mm $\times$ 150 mm 5.91" $\times$ 5.91" plate monitor (20 pF)
- Using SJ-Q108 • Air pressure 0.5 MPa 72.52 PSI
- No downflow

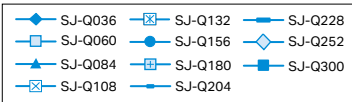
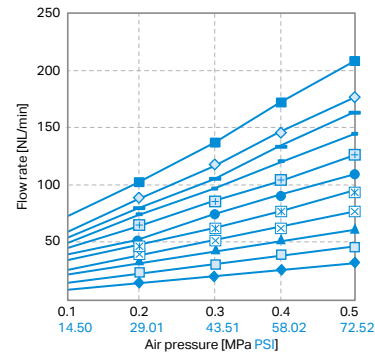
Longitudinal static elimination area



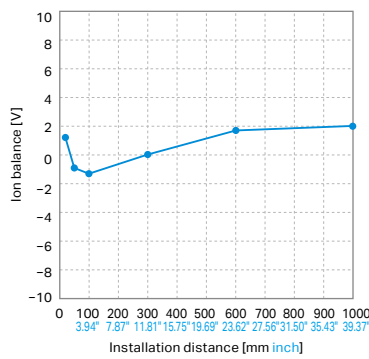
[Measurement Conditions]

- Static elimination time from ± 1000 V to ± 100 V
- Using 150 mm $\times$ 150 mm 5.91" $\times$ 5.91" plate monitor (20 pF)
- Using SJ-Q108
- Air pressure 0.2 MPa 29.01 PSI
- No downflow
- Installation distances: 100 mm 3.94", 300 mm 11.81"

Characteristic of air supply volume versus air pressure



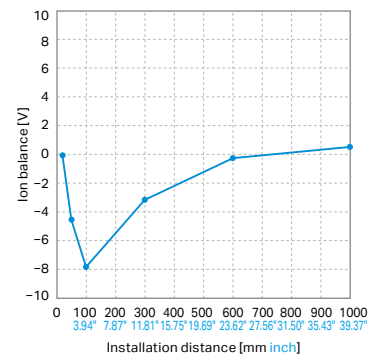
Ion balance by distance (160 Hz)



[Measurement Conditions]

- Static elimination time from ± 1000 V to ± 100 V
- Using 150 mm $\times$ 150 mm 5.91" $\times$ 5.91" plate monitor (20 pF)
- Air pressure 0.2 MPa 29.01 PSI • No downflow

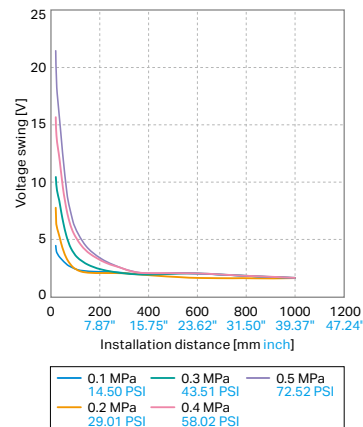
Ion balance by distance (10 Hz)



[Measurement Conditions]

- Static elimination time from ± 1000 V to ± 100 V
- Using 150 mm $\times$ 150 mm 5.91" $\times$ 5.91" plate monitor (20 pF)
- Air pressure 0.2 MPa 29.01 PSI • No downflow

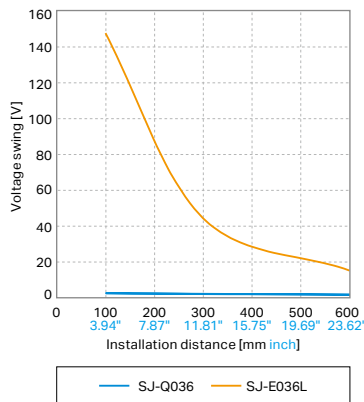
Voltage swing by distance/pressure



[Measurement Conditions]

- Using 150 mm $\times$ 150 mm 5.91" $\times$ 5.91" plate monitor (20 pF)
- Using SJ-Q036 • Frequency 160 Hz
- No downflow

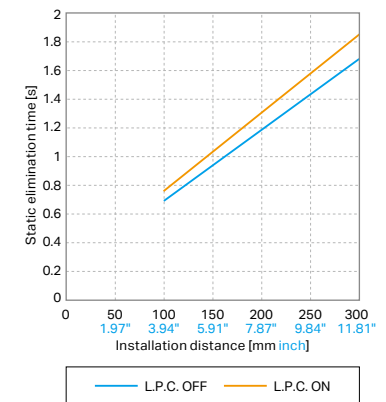
Voltage swing conventional comparison



[Measurement Conditions]

- Using 150 mm $\times$ 150 mm 5.91" $\times$ 5.91" plate monitor (20 pF)
- Using SJ-Q036, SJ-E036L
- Highest frequency
- Air pressure 0.2 MPa 29.01 PSI • No downflow

Static elimination time during L.P.C. use



[Measurement Conditions]

- Static elimination time from ± 1000 V to ± 100 V
- Using 150 mm $\times$ 150 mm 5.91" $\times$ 5.91" plate monitor (20 pF)
- Using SJ-Q060 • Air pressure 0.2 MPa 29.01 PSI
- No downflow

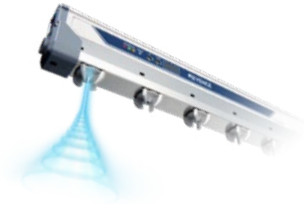
A Wide Variety of Ionizers

Bar Types

Energy-Saving High-Speed Sensing Ionizer

SJ-E

High-speed static elimination using small amounts of air even from long distances.



Type	Bar type with built-in controller (360 to 3000 mm 14.17 to 118.11")
Method	Pulse AC
Ion balance	±30 V

Air-Free High Speed Sensing Ionizer

SJ-H

Effective for airless static elimination, silicone probes, long-distance high-speed static elimination, and bar-type dust removal.



Type	Bar type with built-in controller (360 to 3000 mm 14.17 to 118.11")
Method	Pulse AC
Ion balance	±30 V

Blower Type

Multi-Sensor Ionizer

SJ-F700



Method	Variable DC
Ion balance	±1 V
Features	Probe Cleaning/Replacement Not Required Enables ionizer traceability.

Compact Fan Static Eliminator

SJ-LF



Method	High frequency AC
Ion balance	±10 V
Features	Convenient type usable anywhere with a power supply.

In-line type/hand-held type

Electrostatic Sensor

SK



Measurement accuracy	±1 V (High-precision mode)
Features	Simultaneously measures potential, temperature, and humidity. Equipped with a charge monitor function.

Nozzle Type

Compact Nozzle Static Eliminator

SJ-LM



Method	High frequency AC
Ion balance	±10 V
Features	A versatile type that can be installed in any narrow space.

Gun Type

Ultra-durable, High-power Static Elimination Gun

SJ-LG



Method	High frequency AC
Ion balance	±10 V
Features	An all-in-one gun type that provides powerful dust removal.

Focused spot type

High-Performance Micro Static Eliminators

SJ-M



Method	Pulse AC
Ion balance	±15 V
Features	A versatile type with a choice of eight heads.

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