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QP-S35

SERIES INSTRUCTIONS

INTELLIGENT STATIC ELIMINATOR



PREFACE

Thank you for using QEEPO electrostatic eliminator. Before using this electrostatic eliminator, please carefully read the operation manual and understand the information we provide you, so as to better use the electrostatic eliminator.

Attention

In order to ensure safe operation and achieve the best performance of the product, please follow the following precautions and warnings and other information in the manual.

- The equipment has no anti riot function, and it is strictly prohibited to use in the anti riot area.
- The equipment can work normally only if it is reliably grounded, so please ensure that the ground wire connected to the equipment is firm and reliable.
- the equipment is a high-voltage discharge product, so it cannot be used in a humid environment. Please ensure that the working environment humidity of the equipment is $\leq 75\%$ RH.
- operating temperature: $-10^{\circ}\text{C} \sim 65^{\circ}\text{C}$.
- do not disassemble the equipment without permission.

Before using the electrostatic eliminator, please read this operation manual to obtain the best performance. Please keep this manual properly for reference at any time.

Product introduction

QP-S35 series intelligent electrostatic eliminator is independently developed, designed and produced by our company. It can be interconnected with qp-c01 sensor, display the detection voltage in real time, and adjust automatically to make the product performance reach the most ideal actual use state. The structure adopts integrated design, with low power consumption and high energy, which can quickly eliminate the static electricity carried by the object.

- the nixie tube displays the working status, working parameters and external electrostatic voltage, and the use is visualized.
- cleaning reminder, nixie tube code display, prompting the operator to clean the electrostatic eliminator.
- the discharge electrode is made of tungsten, with longer service life and better effect, and the discharge electrode is replaceable.
- it has short-circuit protection function. When abnormal discharge occurs at the discharge electrode, the electrostatic eliminator stops working.
- the output parameters can be adjusted by pressing the key to achieve the ideal electrostatic removal effect.

AFTER SALES SERVICE AND GUARANTEE

Strictly abide by the tenet of product quality first, reputation first and customer first, and make the following commitments to the sold products:

- (1) Warranty period:
The warranty period of products sold by the company is one year from the date of purchase.
- (2) Warranty scope:
In case of product failure during the warranty period, the company will repair or replace any defective parts or products inspected by the company free of charge, but this commitment does not apply to the following situations:
 - The product is not used according to the use conditions and environment specified in the operation manual, instructions or technical requirements;
 - Faults caused by equipment modification or maintenance not carried out by our personnel;
 - Faults caused by incorrect operation of operators;
 - Our company is not responsible for the warranty of disasters caused by force majeure such as earthquake and fire, or faults caused by external reasons such as abnormal voltage.
- (3) Post warranty services
The company is still responsible for the repair of the products sold after the warranty period, and only a certain cost is charged to protect the interests of customers. QEEPO products are subject to strict ex factory inspection. If there is any fault in use, please contact the after-sales department.

PARTS LIST

QP-S35W series			QP-S35C series		
Num	Name	Quantity	Num	Name	Quantity
1	certificate	1	1	certificate	1
2	warranty card	1	2	warranty card	1
3	an instruction manual	1	3	an instruction manual	1
4	3M network cable	1	4	2.5m cable with adapter	1
5	The power adapter	1			

TROUBLESHOOTING

Fault phenomenon	Cause analysis	Exclusion method
Indicator light inoperative	Power cord connection error	Check that the input power cord is properly connected
The indicator light is dim	Input voltage too low	Check whether the input voltage is 24VDC
The green light of the indicator flashes	Discharge needle contamination	Turn off the power and clean the discharge needle with an electrostatic brush
Nixie tube display exception code	See Figure 4-1 on page 8 for details	
When using the button, the nixie tube flashes	Balance adjustment to limit	Use other methods for adjustment, such as adjusting frequency and adjusting installation position
The effect of removing static electricity is not ideal	The electrostatic eliminator is too close to the conductor	Adjust the installation position of the electrostatic eliminator to a sufficient distance from the conductor
	Insufficient electrostatic energy	When the static electricity of charged objects is too large, the energy generated by electrostatic eliminators may be insufficient, and the requirements shall be met by increasing the number of electrostatic eliminators
	No wiring ground wire	Check whether the ground wire is connected
	Input voltage too low	Check whether the input voltage meets the requirements
	Incorrect parameter setting	Change the product output status through the adjustment button

MAINTENANCE

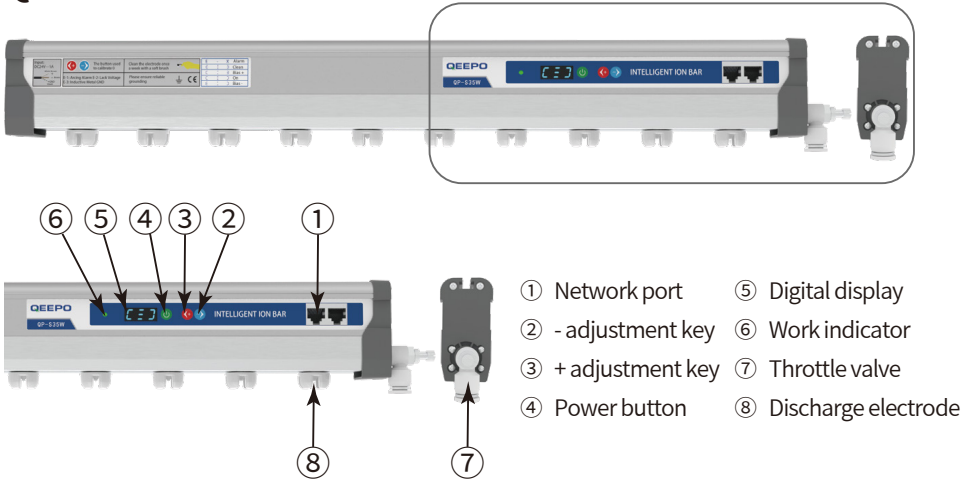
- (1) Routine maintenance:
Regularly clean the discharge needle of electrostatic eliminator and its surroundings. It is recommended to wipe it with an electrostatic brush stained with alcohol. Note: please make sure that the power supply of electrostatic eliminator is turned off before cleaning.
- (2) Discharge electrode replacement:
If the discharge electrode cannot meet the use requirements due to needle tip loss after long-term use, it needs to be replaced. The replacement cycle is also different according to the use environment and working time. If the ideal working state cannot be reached after repeated maintenance or parameter adjustment, the gas nozzle discharge electrode shall be replaced. When removing the discharge electrode, hold it by hand and rotate it counterclockwise to remove it.



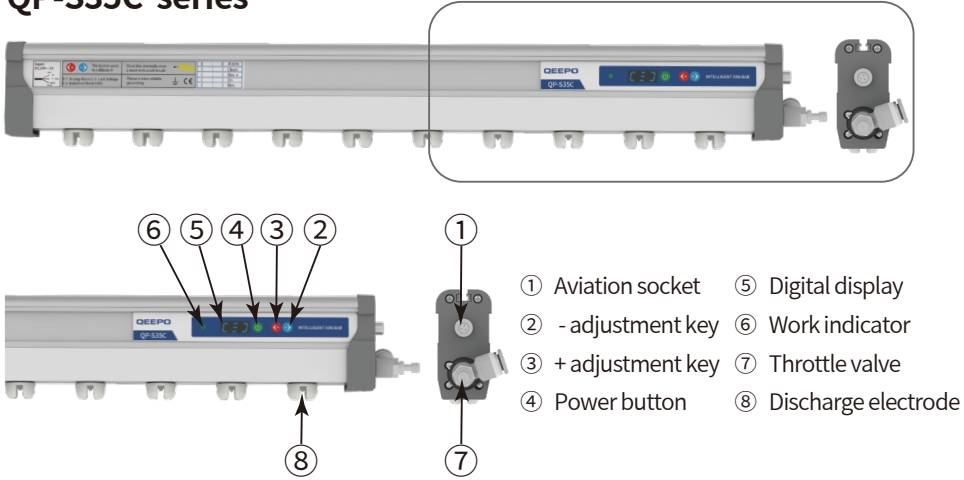
BRIEF INTRODUCTION OF ELECTROSTATIC ELIMINATOR

1、STRUCTURE NAME

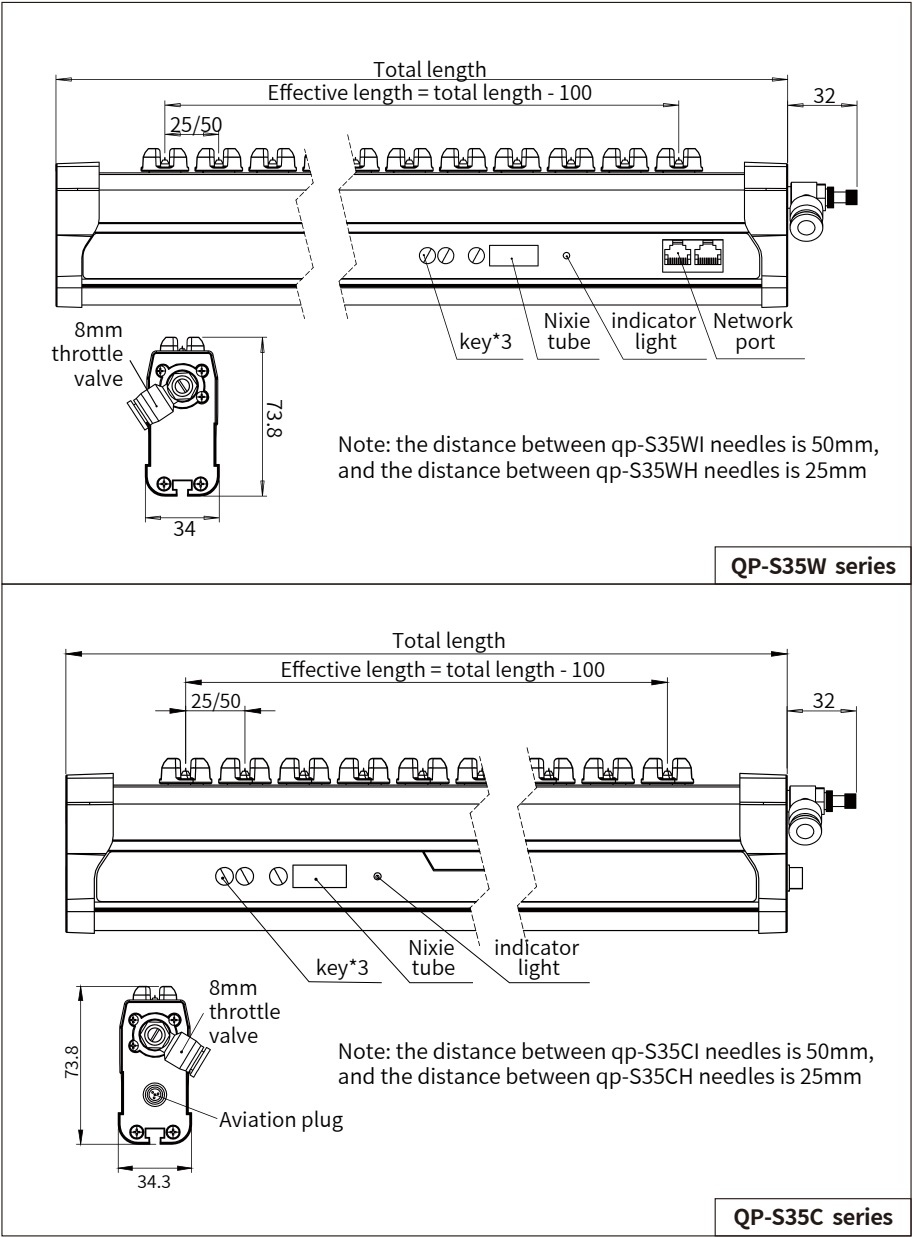
QP-S35W series



QP-S35C series



2、Product size



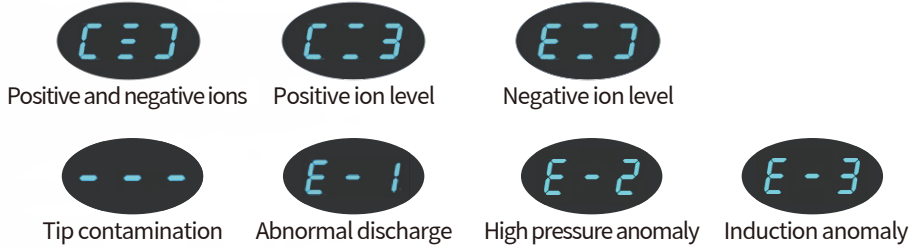
4、Function description of electrostatic eliminator

- (1) Description of indicator light and nixie tube Code: it is used to display the balance and status in the working state. When the sensor is connected, it displays the electrostatic value detected by the current sensor, unit kV; Used for parameter display when setting status.

Indicator / code	working condition	meaning
green light	twinkle	Normal power supply (standby)
green light	Always on	Normal operation
red light	Always on	Abnormal work
Red light / E-1	Buzzer / stop	Abnormal discharge
Red light / E-2	Buzzer / stop	High pressure anomaly
Red light / E-3	Buzzer / stop	Induction anomaly
Green light / --- (flashing)	Normal operation	Clean pollution

When the sensor detects that the external static electricity is negative, the green light is always on, and the red light is always on when the external static electricity is positive.

Figure 4-1



- (2) press Key description

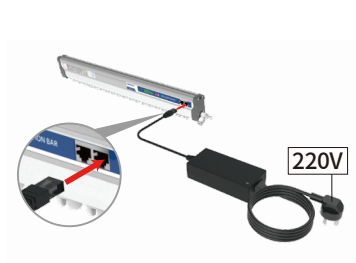
Note: the electrostatic eliminator has been adjusted before leaving the factory, which is the best state. If there is no professional instrument test, please do not adjust it at will.

1. Long press the power key until the nixie tube displays a number, release the key, and then enter the setting mode.
2. Short press the power key to switch the function settings.
3. Press "+" - "key" to set parameters. Refer to the following table for details:

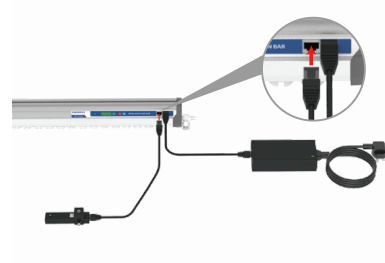
Function code	Power on description	Function code	Power on instructions
A-0	Power on without direct start	C-0	The abnormal discharge of discharge electrode will give an alarm immediately
A-1	Power on direct start	C-1	1s alarm for abnormal discharge of discharge electrode
B-0	No automatic adjustment when connecting the sensor	C-0	5S alarm on abnormal discharge of discharge electrode
B-1	Automatic adjustment when connecting the sensor		

(2) QP-S35w series connection method

2.1 Connect the power adapter with the power supply, and insert the network cable end of the power adapter into the electrostatic rod network interface.

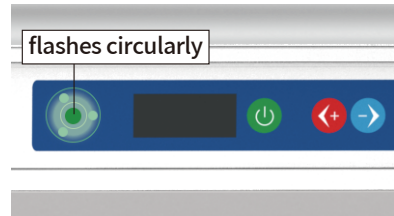


2.2 Insert the sensor network cable end into the electrostatic rod network interface.

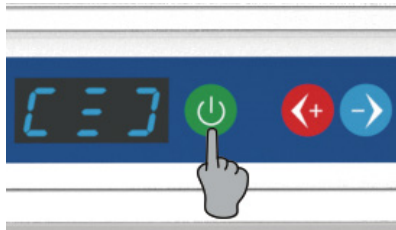


3、 Use of electrostatic eliminator

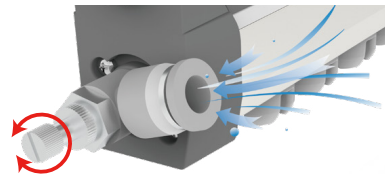
(1) Turn on the external power supply. At this time, the green indicator flashes circularly and is in standby mode.



(2) Press the green power button once to start the device. When the electrostatic eliminator is not used, press the power key to turn it off and stop working.



(3) Insert the 8mm air pipe into the adjustable air connector and inject 0.1 ~ 0.5MPa compressed air (0.3MPa is recommended). The interior is a high-pressure environment. Please ensure that the input compressed air is clean and dry. Rotate the throttle head to adjust the air intake.



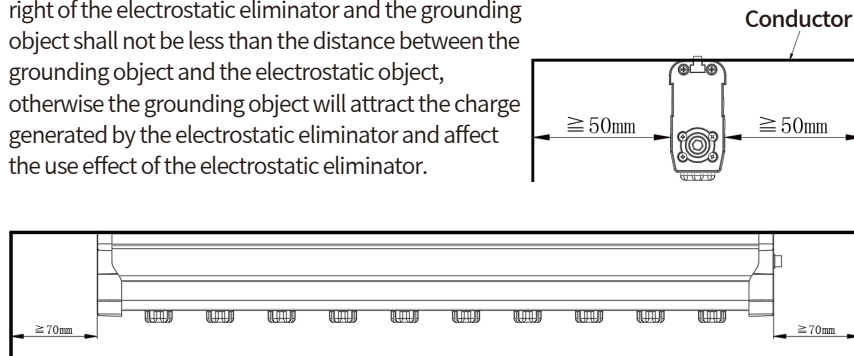
3、 Specification parameters

	① QP-S35CI	② QP-S35CH	③ QP-S35WI	④ QP-S35WH
Name	① spacing 50mm		③ spacing 50mm	
	② spacing 25mm		④ spacing 25mm	
Ion balance	$\leq \pm 30V$	$\leq \pm 50V$	$\leq \pm 30V$	$\leq \pm 50V$
Electrostatic removal speed	0.1S			
Ion balance control mode	SIS control system			
input voltage	20~36VDC			
Voltage operating mode	Pulse AC			
Rated power	24W			
Rated current	1A			
Frequency setting	10、20、50、60、100Hz			
Working distance	50-1000mm	50-1500mm	50-1000mm	50-1500mm
Recommended installation distance	300mm	50mm	300mm	50mm
Needle pitch	50mm	25mm	50mm	25mm
Connect the sensor	/	/	Yes	Yes
Size of gas pipe connector	$\Phi 8mm$			
Working pressure	0.1Mpa-0.5Mpa			
The discharge electrode can be replaced	Yes			
Operating ambient temperature	$-10^{\circ}C \sim 45^{\circ}C$			
Operating ambient humidity	10~65%RH			
application area	Electronic industry, automobile industry, etc	Film industry, rubber industry, etc	Food, pharmaceutical industry, glass industry, etc	Film industry, rubber industry, etc
Note: the measurement conditions of the above data are: temperature 26 °; Humidity 67%, test voltage 1kv-100v; Test distance 50mm; Test instrument: 3m711				

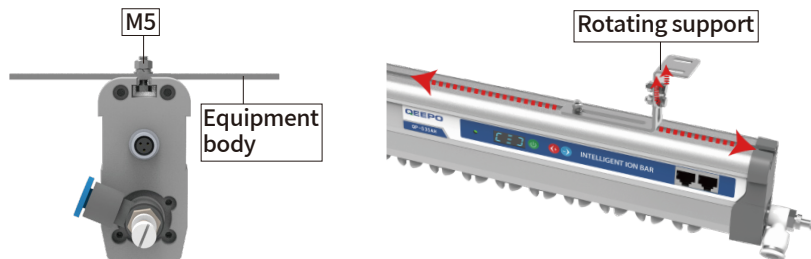
INSTALLATION AND USE OF ELECTROSTATIC ELIMINATOR

1、Installation of electrostatic eliminator

- (1) The electrostatic eliminator shall be installed 30-1500mm away from the object with static electricity, and the best distance is 50-300mm. Note that the distance between the left and right of the electrostatic eliminator and the grounding object shall not be less than the distance between the grounding object and the electrostatic object, otherwise the grounding object will attract the charge generated by the electrostatic eliminator and affect the use effect of the electrostatic eliminator.

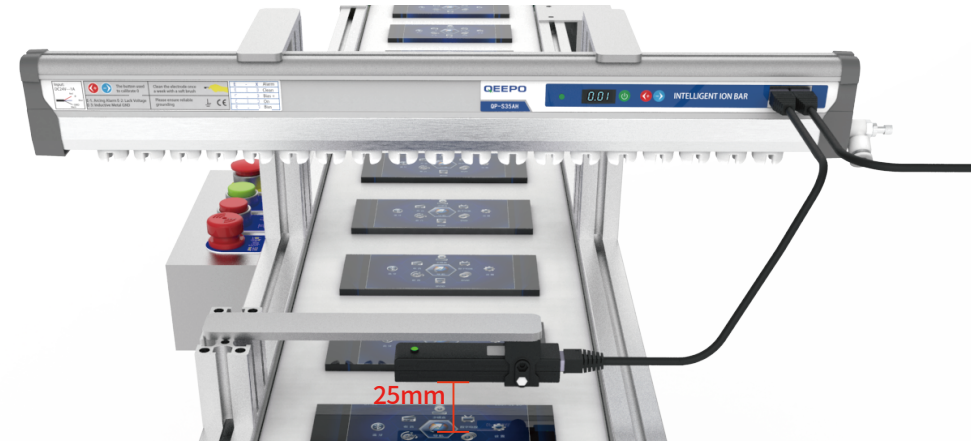


- (2) M5 hexagon screw can be directly slid into the back to be fixed with the equipment. Or use a rotating support to fix it to the equipment.



- (3) The electrostatic eliminator is installed at the position affected by static electricity, so as to better meet the production demand. During installation, the distance between the electrostatic eliminator and the object with static electricity shall be installed according to the use industry. The installation distance in the industrial environment is close to 50mm, and the installation distance in the electronic industry is close to 300mm. The faster the static electricity elimination speed is. After installation, adjust the frequency of the electrostatic eliminator according to different installation distances to achieve the best electrostatic elimination effect.

- (4) Please keep the plane where the sensor detection window is located parallel to the surface of the measured object to ensure the accuracy of measuring charged objects. The distance from the measured object is 25mm.
Note: please do not install it around high-voltage equipment, such as high-voltage power supply, electrostatic generator, ion generator and eliminator. High voltage will affect the performance and detection accuracy of the sensor (recommended installation distance $\geq 500\text{mm}$)

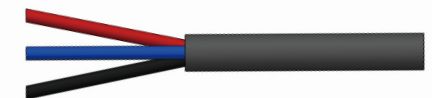


2、Connection of electrostatic eliminator

(1) QP-S35C series connection method

1.1 Line connection

Line color	input voltage
red	+24VDC
blue	-24VDC
black	GND



Note: reliable grounding must be ensured before the equipment can work normally

1.2 Insert the aviation plug into the electrostatic rod interface

