

# High Frequency Ionization Systems

## Model 4120 Nozzle Ionizer

### FEATURES

- High Frequency Ion Emission
- Facility Monitoring System(FMS) Interface
- Power Failure Alarm
- Compact Size

### BENEFITS

- Multi-Color Visual Alarm
- Audio Alarm
- Emitter Point Easy Clean and Replace
- Connect to Process Equipment
- Versatile Application
- IR Sensor Detect Operation

### APPLICATIONS

Tribocharging is a typical ESD source and induced field from insulators must be controlled in EPA(ESD protected area). Process required insulators are commonly used in many places and should be neutralize by ionization systems.

Model 4120 has designed versatile applications for semiconductor backend, printed circuit board assembly and general electronics applications. Model 4120 Nozzle Ionizer has built-in feedback sensor to detect out of balance in low voltage level.

Output alarm monitoring interface will allow real time ionizer status monitoring and give visual(LED) & audio(buzzer) alarms when HV power fail.



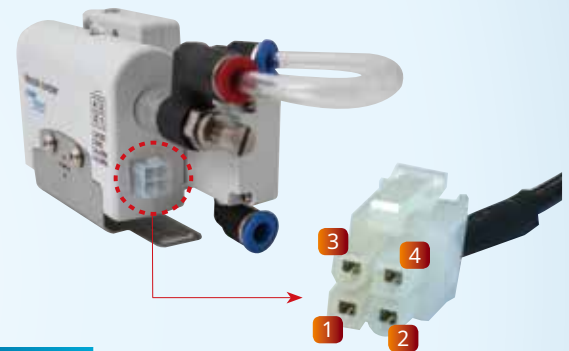
# Model 4120 Nozzle Ionizer

## SPECIFICATIONS (Preliminary)

Input Voltage	24V DC, 4.1W (Maximum)
Ion Emission	High Frequency AC (70kHz)
Balance	Avg. $\leq \pm 10V$ , Max. $\leq \pm 30V$
Discharge	$\pm 1000V$ to $\pm 100V$ less than 1 seconds at 15cm
Emitter Point	Tungsten 99.99%
Alarm Function	Visual (LED), Audio (Buzzer) HV Power Fail (Normal open)
Output Monitoring	FMS Interface
Air Pressure	0.1~0.5 Mpa
Air Inlet	6mm Inlet
Material	Ionizer body : ABS (White) Bracket : SUS
Detection Method	Diffuse reflection
Detection Distance	$\leq 1m$
Response Time	$\leq 1ms$ Initial activation time is less than 500ms, Normal operation time is less than 1ms for recovery.
Operation Mode	Light On / Dark On (2 step operation)
Emitter	IR (Infrared Ray) Sensor
Ambient Illumination	Sunlight : $\leq 11,000$ Lux, Incandescent Lamp : $\leq 3,000$ Lux (Receiving surface illumination)
Operating Environment	Temperature: 15~35°C, Humidity : 35~85% RH
Dimension (W x H x D)	134 x 55.5 x 39.9 (with bracket 134 x 61.1 x 39.9mm )
Weight	170g (with bracket)
Warranty	1year



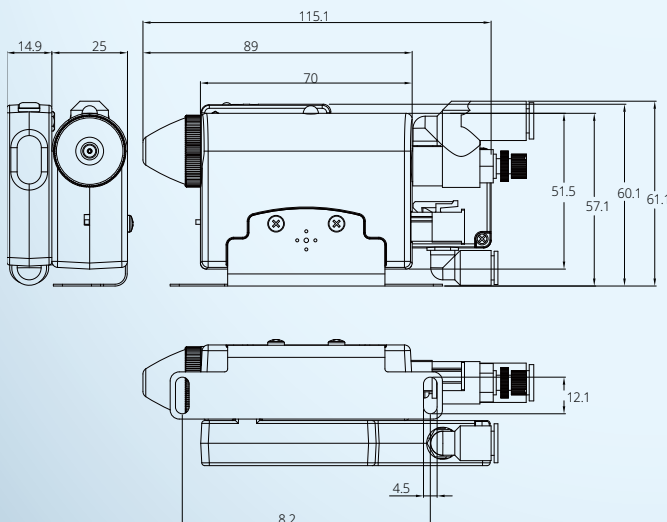
## CONNECTOR



## DC 24V & Alarm Interface

Pin No.	Description	Facility Monitoring System Output Signals	
FMS 1	DC 24V +	Conditions	FMS 3-4
FMS 2	DC 24V - (Ground)	Normal	OPEN
FMS 3	HVP Alarm relay output	Alarm	CLOSED
FMS 4	HVP Relay common	Power OFF	CLOSED

## Sizes & Dimensions (mm)

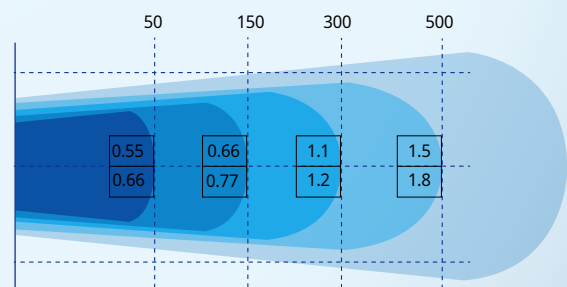


## Model 4120 Discharge Time

Air Pressure 3bar

+Decay time(sec)

- Decay time(sec)



## Accessories

wall mount Adapter

Interface cable



or

