



## Static Eliminators

Point-of-Use Ionizing Air Nozzle  
Model IN3425PE



Instruction Manual

# Contents

<b>1</b>	<b>Description</b>	
	Model IN3425PE	1
	About <i>Plec™</i> Technology	1
	Power Requirements	2
<b>2</b>	<b>Operation and Use</b>	
	Environmental Conditions	2
	Set-up and Placement	2
	Mounting	3
	Power and Gas Connection	3
<b>3</b>	<b>Maintenance</b>	
	Periodic Maintenance	4
	Cleaning Exterior	4
	Cleaning Emitter Points	4
	Emitter Point Replacement	5
	Service	6
	Troubleshooting	6
<b>4</b>	<b>Specifications</b>	7
<b>5</b>	<b>Service and Warranty</b>	8
<b>6</b>	<b>IN3425PE Line Drawing</b>	9

# Service and Warranty

Transforming Technologies, LLC provides a limited warranty for the Model IN3425PE ionizing air nozzle. All new products are guaranteed to be free from defects in material and workmanship for a period of one (1) year from the date of shipment. Liability is limited to servicing (after evaluating, repairing or replacing) any product returned to Transforming Technologies. The company does not warrant damage due to misuse, neglect, alteration or accident. In no event shall Transforming Technologies be liable for collateral or consequential damages.


To receive service under warranty, please contact Transforming Technologies Technical Support.

## About Transforming Technologies

Since 1998, Transforming Technologies has helped electronic manufacturing facilities to protect their products and processes from the many serious problems associated with static electricity.

Transforming Technologies offers a wide range of unique and outstanding products to detect, protect, eliminate and monitor electrostatic charges. Our products are integral components of an effective static control program.

## Specifications

<b>Ion Emission</b>	AC, 68KHz
<b>Balance</b>	+/- 30 volts, typical offset
<b>Decay Time</b>	1000V - 100V < 2 seconds at 6"
<b>Temperature</b>	66-78°F (19-25°C)
<b>Airflow Requirements</b>	28-100 psi
<b>Indicators</b>	Power: green LED Alarm: red LED
<b>Controls</b>	On/Off sliding switch
<b>Emitter points</b>	Durable Alloy
<b>Ozone</b>	Less than 0.01ppm
<b>Mounting</b>	Four (4) mounting holes
<b>Sensing Distance</b>	>30 cm
<b>AC/DC adapter</b>	AC 80V~240V 50/ DC24V 200mA
<b>Certifications</b>	

## Performance

Test is done according to EOS/ESD-STM3.1-2000 standard of America. Test data can be referred as follows:

Pressure( PSI)	45	55	70	85
Positive Decay Tim(sec)	0.4	0.4	0.3	0.3
Negative Decay Tim(sec)	0.5	0.4	0.3	0.3
Ion Banlance(V)	Within 0±10V			

## Description

### Ionizing Air Nozzle Model IN3425PE

The Model IN3425PE 68KHz AC ionizing air nozzle is a point-of-use solution for a wide range of static problems. A proximity sensing photoelectric eye controls the power and air flow for easy hands free ionization. The IN3425PE easily connects to a compressed air source and offers various output nozzles for specialized applications. Using AC corona technology to make the air more conductive, Ptec™ ionizers produce a balanced stream of positive and negative air ions that never need calibration. The main unit of the device is equipped with a small HV power unit so no external HV power unit or HV wiring is needed. The IN3425PE is light, small and free from EMI. It is equipped with an auto ion balance and abnormal HV monitoring systems. These devices are used in many industries and manufacturing applications where static electricity is a problem.

### About Ptec™ Technology

A specialized piezoelectric high voltage transformer makes Ptec™ ionizers among the most reliable products available. Ptec™ ionizers are designed to remain in balance and to alarm when the HV output affects performance. The model IN3425PE ionizing air nozzle produces a 68KHz AC output of approximately 2200V and a continuous stream of balanced air ions. Ionizers that use Ptec™ technology do not require calibration and only minimal maintenance.

## Features

- Photoelectric eye with 30cm range.
- Complete point-of-use protection.
- Rapidly decays static charges. (1KV to 100V, < 2 sec. @ 6", typical).
- Excellent ion balance,  $0 \pm 30V$ .
- Stable AC technology.
- Ionization indicator light.
- HV alarm (red) lights.
- No periodic adjustments.
- Durable alloy discharge needles
- Up to 100 PSI output, adjustable.
- Optional output nozzle configurations.

## Power Requirements

The Model IN3425PE High Frequency AC ionizing air nozzle is powered by a AC 80V~240V 50/ DC24V 200mA switch power supply. Note: Ionizer must be grounded.

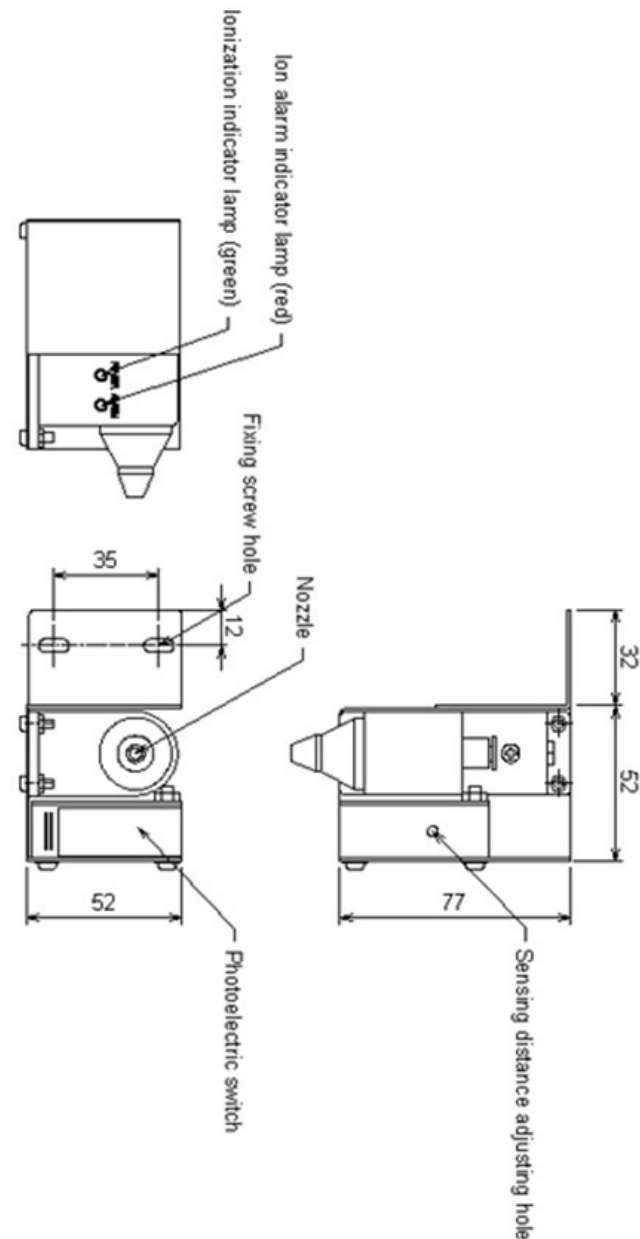
## Operation and Use

### Environmental Conditions

The IN3425PE can be operated in areas where humidity is 20-70% RH (Non-condensing). Excess humidity may affect ionizer performance. The temperature range for the IN3425PE is 65-78°F (18-25°C).

<b>Caution</b>  !	<b>Do not use this ionizer in an explosive environment! Keep it away from inflammable gas or solvent.</b>
-------------------------	---

## IN3425PE Line Drawing

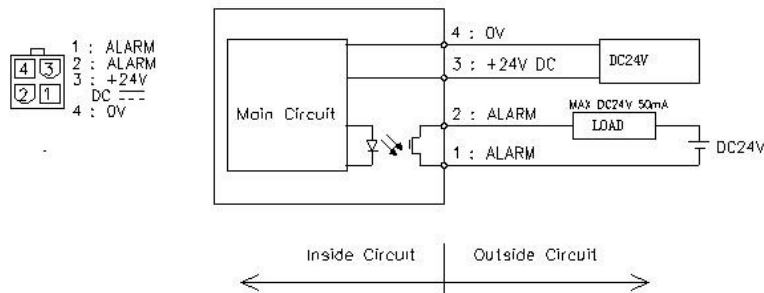


## Service

Ptec™ ionizers are reliable products with a long service life. If you feel your unit is not operating properly, turn off the unit and disconnect the power cord. Contact Transforming Technologies' Technical Support for repair assistance.

## Wiring Diagram

The following is power inlet and signal output figure:



## Caution

The IN3425PE operates only with clean dry air (CDA) or nitrogen (N<sub>2</sub>). Operator must provide clean and filtered incoming gas to remove moisture, oil and particles from the source supply.

## Caution

The IN3425PE is not designed to withstand high air pressure. The product should be installed with shutoff valve upstream. The output side of the nozzle should always be at atmospheric pressure.

## Set-up and Placement

Use the IN3425PE ionizing air nozzle in immediate proximity to a static sensitive area or object. The unit can be mounted on process equipment or attached to a structure using the mounting holes provided.

## Mounting

No equipment or tools are necessary, except for permanent mounting and air line. The grounding of the ionizer can be carried out through the mounting bracket.

## Power and Gas Connection

- Attach the IN3425PE to the gas line with appropriate tubing.
- Connect the power transformer to the unit, and plug it in an AC socket.
- A green light will illuminate to signal the IN3425PE is operating.
- The red alarm indicator light illuminates in the event of a problem with the high voltage power output.
- Supply only clean compressed air/nitrogen (water and oil free) to the ionizer.

## Photoelectric Eye

The device is equipped with proximity sensing photoelectric eye with a 30cm range. Distance can be adjusted with the sensitivity screw located on the top of the sensor.

## Abnormal HV Alarm

The device is equipped with abnormal HV alarm. The red alarm indicator light illuminates when the following situations occur:

- (1) Low output HV
- (2) Short circuit
- (3) Abnormal HV discharge
- (4) Wet air flow
- (5) Air pressure is over 7Pa.

## Setting the Alarm Signal Output

The IN3425PE has a built in NO/NC relay that can be connected to an external 24volt alarm or signal to alert users of an abnormal situation. Shift the NO/NC selector switch to the desired position by using a precision screw driver, etc before turning on the unit. The output wires are located on the end of the power cord and can be removed if the

Setting mode	Power OFF	Power ON
NO	OPEN	OPEN
NC	OPEN	CLOSE

## Periodic Maintenance

The only regular maintenance required for the IN3425PE is the periodic cleaning of the emitter point. Emitter point cleaning affects the static decay ability of the ionizer and is important for maintaining its optimal performance.

<b>Caution</b> !	<b>The only serviceable parts inside the ionizer are the emitter points. Any unauthorized service will void the warranty and may result in additional repair fees.</b>
---------------------	--

## Cleaning the emitter points

Contaminants will gradually accumulate on the tip of the emitter points with continuous use. Periodic cleaning of the emitter points is necessary to maintain the performance of the ionizer. If the emitter points are dirty, clean them with a polyester or cotton swab and IPA. Do not damage or loosen the emitter points.

### Follow these instructions to clean the emitter points:

1. Remove the output nozzle (threaded).
2. Moisten a swab in the IPA solution.
3. Swab or wipe the emitter point until it is free of particles.
4. Make certain the emitter point is straight and undamaged.
5. Replace the output nozzle.
6. Make sure the emitter points are dry before powering the ionizer again.