Instruction Manual

Air Blow Single Head-type Ionizer【DTRY－ELB01】
Air Blow Twin Head-type Ionizer【DTRY－ELB02】

Thank you very much for your purchase of DTRY-ELB01/DTRY-ELB02. Although this Product is not classified as a high-voltage device under any electrical equipment standard, it uses a high voltage of 2000 V. Please read this manual diligently to handle this Unit in a careful and correct manner. Keep this manual on hand for your reference and consult it repeatedly as required.

Safety Precautions

⚠ Warning

This Product is not specified as an Explosion-proof Type. Do not use this Unit at a location or an atmosphere, in which combustible gas or solvent is handled, or else ignition or explosion may occur.
A high voltage is applied to the Discharge Needle. Do not allow any conductive material, including your finger, any part of your body, wire or any tool to get close to the Needle, or an electrical shock accident or a malfunction of the Unit may occur.
The Discharge Needle has a sharp edge. Pay special attention to handling of the Needle, or you may injure yourself.
Never disassemble, repair, or remodel this Unit, or else an accident or a malfunction of the Unit may occur.
When any wiring, installation, or inspection work is to be carried out, make sure that the Unit is disconnected from the power supply, or else an accident, an electrical shock or a malfunction may be caused.
For any other Items of Warning, please refer to the Safety Precaution in the Static Electricity Elimination Unit; Ionizer Catalog (Catalog No. C2167).

⚠ Caution

This Product contains a High-Voltage Generating Device inside the Unit. Do not install the Unit at a location where it may be exposed to splashing of water or oil, high temperatures, or excessive humidity. Make sure the Unit is protected from condensation.
Make sure that the air is supplied to the Unit before turning on the power to this Unit.
Make sure that the Ionizer is properly grounded and to ensure that the static electricity elimination characteristic is adequately maintained and to prevent any electric shock accident from occurring.
Make sure that any unserviceable Unit or any unnecessary Unit should be properly disposed of as an industrial waste material.
Make sure that all wirings are correctly carried out. Be sure to observe the correct polarity of the power source when connecting a wire, or else a malfunction may occur.
For any other Items of Precaution, please refer to the Safety Precaution in the Static Electricity Elimination Unit; Ionizer Catalog (Catalog No. R0003).

1. Product Overview

This product is an Air Blow-type Ionizer (static electricity eliminating device) capable of immediately solving any problems that occur in connection with static electricity. By using ionized air it generates, the Unit can promptly and efficiently eliminate the static electricity charged on electrified bodies to control any problems occurring from static electricity.

2.Specifications

Type	DTRY－ELB01	DTRY－ELB02
Input Power Source	DC24V± 5 %	
Current Consumption	100mA	
Output Voltage:	2 k V	
Abnormal Output	Output at a time of abnormality of discharge: FET 24 VDC; 50 mA Max. (Switching between N.C. and N.O. possible)	
Outside Dimensions: (mm)	92（L）×30（W）×54（H） (for the Main Unit only)	92（L）×62（W）×54（H） (for the Main Unit only)
Mass: g	190 g	300 g
Ion Balance:	±15V	
Generated Ozone Volume:	0.037 ppm (at 300 mm from the center of the blow-out opening; with a pressure of 0.25 MPa applied)	
Environmental Temperatures:	0 to 40ºC indoor (no condensation)	
Fluid to be Used:	Air	

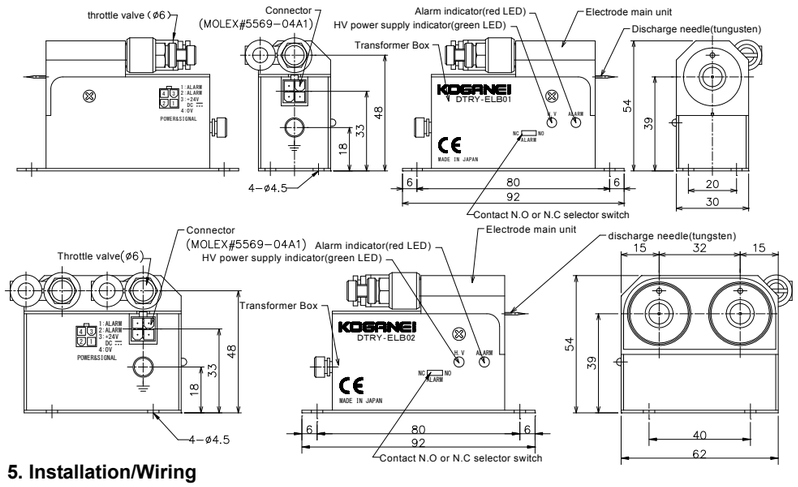
Air Pressure Working Range

DTRY-NZR01NS	0.02～0.25MPa	DTRY-NZR02S	0.02～0.12MPa
DTRY-ADN-U	0.02～0.12MPa	DTRY-ADN-F	0.02～0.12MPa
DTRY-ADN-S	0.02～0.12MPa	DTRY-NZR100～500ND	0.05～0.25MPa
DTRY-NZR20SW	0.05～0.4MPa	DTRY-NZR100～500B	0.05～0.4MPa
DTRY-NZR21SW	0.05～0.4MPa	DTRY-NZR100、200L	0.05～0.4MPa
DTRY-NZR01FT	0.05～0.4MPa	DTRY-NZR100、200FMT	0.05～0.4MPa
DTRY-NZR200SP	0.05～0.4MPa	DTRY-NZR100U	0.05～0.4MPa

3.Contents of the Package

Main Unit ..... 1 Unit
Discharge Needle ..... 1 (attached to the Main Unit before shipment)
Throttle Valve:..... 1 piece (attached to the Main Unit before shipment)
Grounding Lead Wire (2 m) ..... 1 line
Selector switch protection seal..... 1 sheet
Instruction Manual (this book)..... 1 booklet
Power supply signal cable (2 m) .....1 line

4.Appearance



5. Installation/Wiring

5-1 Method of Installation

○When the ionized air is directly blown out from the Nozzle:
Screw the Air Nozzle selected onto the Main Unit of the Ionizer until it is firmly settled on the Unit.Aim the Nozzle at an electrified object to allow the ionized air to be blown over the object.
○ When the ionized air is to be transferred to the electrified objects from the Nozzle through a tube:
Screw the standard Nozzle separately available onto the Main Unit of the Ionizer until it is firmly settled on the Unit. Insert a selected tube into the standard Nozzle, and aim the ionized air outlet to the electrified object to allow the ionized air to be blown over the object.

5-2 Method of Mounting

○Mount the Main Unit at the specified position of the machine by using the mounting holes (4-Φ4.5 mm) on the Main Unit. Make sure that the Nozzle part of the Ionizer does not get in contact with the metal frame of the machine when mounting Unit.

5-3Wiring with the Power Source

○Supply 24 V DC power to the Unit by using the accessory power signal cable.
If 100 V AC power source is to be used, use the separately available AC Adapter (DTRY-ELC04).

5-4 Wiring for Grounding

○When using a grounding wire for grounding the Ionizer, make sure that the wire is properly connected to the ground.

5-5 Air Piping

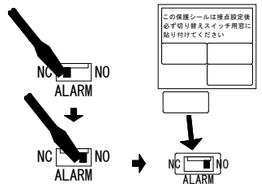
○Use the air as the fluid for discharging.
○Attach an air tube (with an outside diameter of Φ 6 mm) to the air inlet of the Ionizer.
○Connect the air tube via the regulator to the air supply.
○Supply cleaned air (not containing water or oil) to the Ionizer.

5-6 Setting of Contacts for Abnormal Output

○Confirm that the cable is not connected to the connector and that the power is not supplied to the Unit.
○Shift the NO / NC selector switch to the desired position by usinga precision screw driver, etc.
○See the table below for the outputs when setting the contacts.

SETTING MODE	POWER OFF	POWER ON
NO	OPEN	OPEN
NC	OPEN	CLOSE

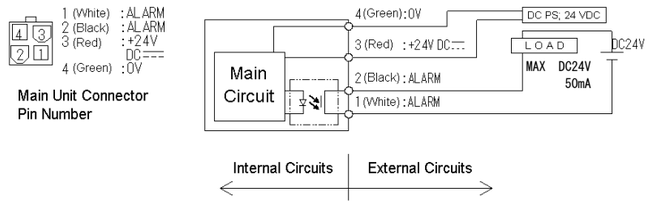
○ After the contact setting is completed, be sure to paste the contact switch protection seal supplied with the product.



⚠ Caution

Do not forcefully insert the precision screw driver into the switch. Do not use any tool with a sharp edge.
Shift the switch with a positive action. If not, the Unit may not operate properly.
Be sure to carry out confirmation of the conduct operations. An unexpected operation may cause a physical injury or a malfunction of the Unit.

6.Wiring Diagram



7. Operation

(1) Install the Ionizer at the specified position. Make sure that the power source wiring, the grounding wiring, and the air piping have been correctly carried out.
(2) Supply the air appropriately pressure-regulated by the regulator to the Ionizer. (See the table under "Air Pressure Working Range" under "2. Specifications" for the working range of air pressure.)
(3) Supply the 24 V DC power to the Unit.
(4) Confirm that the green LED on the Main Unit of the Ionizer is lighted.

8.Maintenance and Precautions

○Make sure that the Unit is installed at the location not exposed to splashing of water or oil, etc. In case water or oil is attached to the Unit, use a piece of cleaned cloth to clean the Unit. When cleaning the Unit, pay special attention to the high-voltage output terminal part to prevent it from being damaged.
○Attachment of contamination to the tip of the Discharge Needle will deteriorate the static and elimination effect. If deterioration of the static elimination effect is observed, clean the Needle using a nylon brush etc. (Never use a wire brush for cleaning the Needle.)
○The Discharge Needle is a consumable material and requires occasional replacements. When replacing the Needle, use the dedicated tool (DTRY-ELB21) for the correct control of torque. (The correct tightening torque: 15 to 20N･cm). Application of an inappropriate torque may damage the screw on the Main Unit.
Type of Discharge Needle for replacement: DTRY-ELB11
○Do not turn ON the Ionizer immediately after you have turn it OFF, or else and abnormal output is supplied. After turning OFF the Ionizer, wait 1 second or more before turning it ON again.
○The Abnormal Output Circuits will start working about 2 seconds after the power is turned on. Pay special attention when designing the Abnormal Detection Circuits when this Product is to be built into a system.
○ Make sure you turn ON the power to the air-blow type Ionizer after you turn ON the air to the Unit. Turning ON the power to the Unit before turning ON the air will cause the internal density of ozone to rise, which may adversely affect the Unit and/or the environment.
○ Make sure that turning ON/OFF the power to the Ionizer is carried out at the power input side(the DC 24 V side).
○ The tube is a consumable material, requiring occasional replacements. If you notice it has become softened or deteriorated, make sure to replace it with a new one.

9. Troubleshooting

○If no red or green LED is lighting:
→Check the input power supply of 24 V DC to confirm that it is correctly supplied.
○If the red LED is lighting:
→Check the metal cap or Nozzle to confirm that it is not touching the grounded body.
→Check the metal cap to confirm that it is not loosened
→Remove the metal cap and clean the Main Unit surrounding area of the Discharge Needle and the insulated area using a clean cloth damped with isopropyl alcohol, and attach the cap again.
→Check the grounding wiring to confirm that grounding is properly carried out

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