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ISO 9001 ISO 14001



## *Koganei Desktop Robot* Creceed

### Static Electricity Removing Unit

# IONIZER

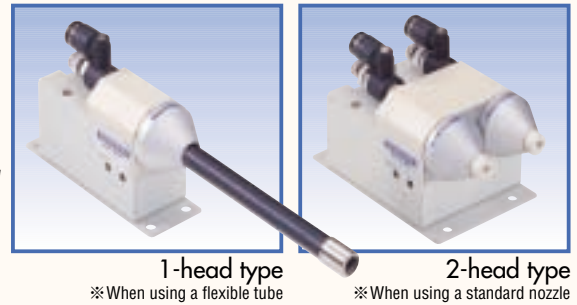


**Meets the need for pinpoint or wide-area static electricity removal** ⚡  
**Release of New generation's AC Ionizer!**

## Static Electricity Removing Unit IONIZER

### Release of New generation's AC Ionizer!

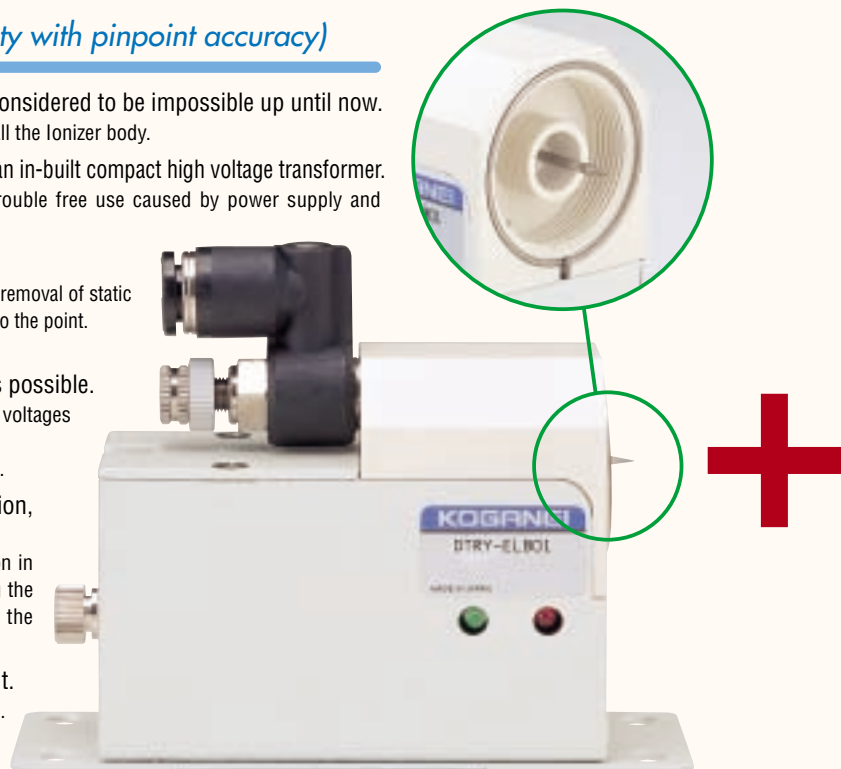
Two types are available; the Blow type version can remove static electricity with pinpoint accuracy, and the Fan type does not require an air supply. As distinct from current AC type ionizers, these units can be used with a low voltage DC power supply due to the use of a compact high voltage transformer, which eliminates high voltage wiring.



### Blow type (For removal of static electricity with pinpoint accuracy)

- Enables carrying ion through a tube or metal pipe, which was considered to be impossible up until now.
  - Allows removal of static electricity where there is limited space to install the Ionizer body.
- These units can be used with a low voltage DC power supply due to an in-built compact high voltage transformer.
  - This eliminates high voltage wiring and power supply, leading to trouble free use caused by power supply and wiring section.
- Enables static electricity removal with pinpoint accuracy.
  - By using an air tube or flexible metal piping, the Blow type enables quick removal of static electricity on a targeted point due to the ability to move the nozzle closer to the point.
  - Minimum distance between the nozzle and the targeted object is 1mm.
- Due to good ion balance, removal of static electricity is always possible.
  - ±15 V range at 10 mm distance. Under some conditions, within 10 voltages could be attainable.
  - Decay time from 1000V to 100V at 100mm distance is within a second.
- There is no electric field concentration at ion generating section, therefore there is no detriment to the device.
  - A strong electric field is generated at the high voltage applying section in current ionizers. This can cause breakage of the device when bringing the ionizer close. However, the Koganei Ionizer causes no damage to the device even when bringing it close.
- Very low generation of electrical noise due to low voltage output.
  - EMI locator reacts at 1mm position from the tip of a discharging needle.
- Alarm output when abnormality occurs in high voltage section where generating ion.
  - Ensures prevention of producing defective products caused by faulty removal of static electricity.
- Controller is available
  - The controller includes an in-line filter **PLF100** and a regulator. The former removes particles and the latter adjusts pressure, enabling control of both power supply and air for the Blow type.

Note: Ensure removal of oil and water in the air beforehand.



**IONIZER body**  
(In combination with a nozzle.)

Photo shows a full-size.

### Application example

Conductive tube holder DTRY-NZR31

- Removal of static electricity
  - Low-level electric noise  
(A measurement value of electric noise: 19dB $\mu$  V/m or less at 30MHz)
  - No damage to a device caused by induction electric field from the discharging needle.
  - Removal of static electricity with pinpoint accuracy. (It is possible to bring the nozzle close to a device.)
- Removal of static electricity in a small bottle
  - By using pipe/tube type nozzle enables removal of static electricity inside of a bottle necked container.

**Caution** Please always read the "Safety Precautions" on p.5 before use.

Various applications are possible by replacing the choice of nozzle.

Standard nozzle  
DTRY-NZR01

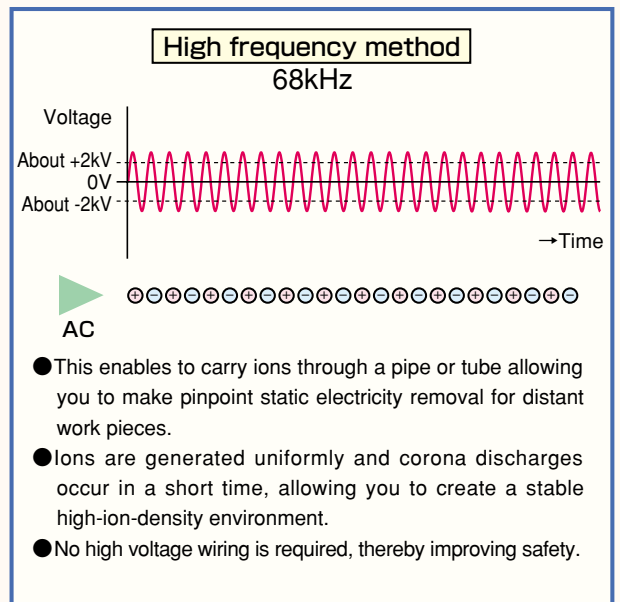
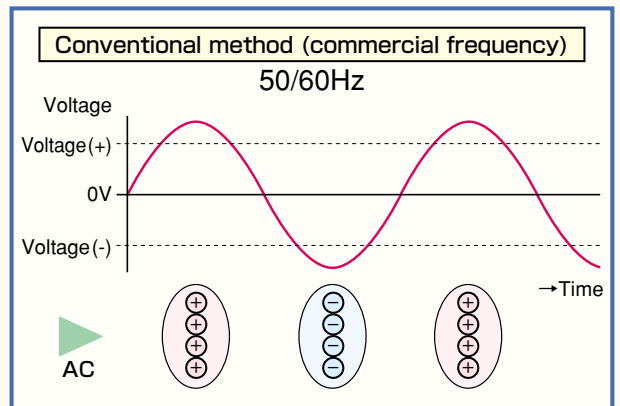
Nozzle with a conductive tube. (500mm)  
DTRY-NZR03

Nozzle with a stainless steel tube. (120mm)  
DTRY-NZR02

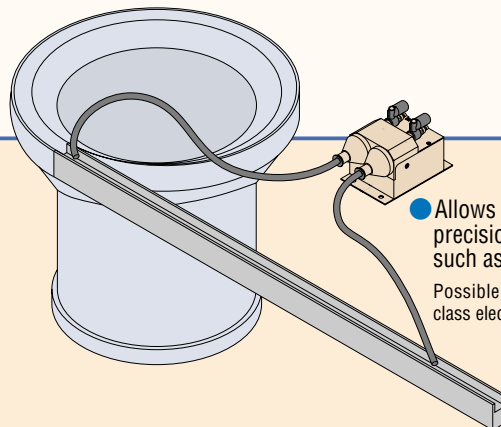
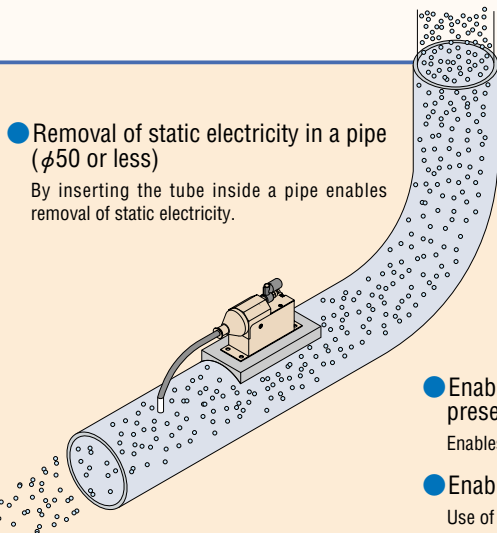
**Nozzle with a flexible tube enabling to keep its shape.**

Nozzle with a flexible tube.  
DTRY-NZR04~08

DTRY-NZR08	(500mm)
DTRY-NZR07	(400mm)
DTRY-NZR06	(300mm)
DTRY-NZR05	(200mm)
DTRY-NZR04	(100mm)



● Removal of static electricity in a pipe (φ50 or less)  
By inserting the tube inside a pipe enables removal of static electricity.



● Allows removal of static electricity on precision parts with pinpoint accuracy, such as in part feeder applications.  
Possible to remove static electricity on 100S class electronic parts.

● Enables the removal of static electricity with pinpoint accuracy and where a high density is present such as in textile fabrics.  
Enables the removal of static electricity on a narrow part and large ion quantity per unit area.

● Enables the removal of static electricity on moving sections such as in robotic applications.  
Use of a flexible tube can be used on the moving section.

## Fan type



- Compact body unit allows installation in confined spaces such as inside application equipment.
  - Placing the Ionizer close to a product rapidly removes the static electricity with pinpoint accuracy. The closest minimum distance to a targeted charging object is 10mm.
- Due to good ion balance, the removal of static electricity is always possible.
  - $\pm 15$  V range at 100 mm distance.
- Compact but superb removing static electricity performance.
  - Decay time from 1000V to 100V at 100mm distance is within 3 seconds.
- You are not required to supply air to the Fan type Ionizer therefore reducing running costs.
- Alarm output in case abnormality occurs in the Ionizer.
  - Enables prevention of manufacturing defective products caused by a faulty Ionizer.
- Alarm output when a blower fan stops.
  - An alarm is produced within a second when an ion blower fan stops.
- Possible to connect in series.
  - By using the DC power output from the Ionizer, it is possible to connect up number of units in series.

Note: In the case of series connection, the error signal on each Ionizer is not available.

## Turbo-flow fan type



- You can make pinpoint static electricity removal for distant work pieces.
  - A sirocco fan generating a large volume of air is used, making it possible to achieve high-speed pinpoint static electricity removal for distant work pieces without using compressed air.
- Using a flow rate adjusting plate, you can easily obtain the required flow rate.
  - By using the provided flow rate adjusting plate, you can adjust your required airflow rate easily.



Flow rate adjusting plate

- Compact space saving design.
  - The palm-size compact design offers you a space-saving ionizer, allowing you a wider choice of installation positions.
- Using the optional bracket, you can install the ionizer flexibly.
  - By using the optional bracket, you can easily make angle adjustments and installation adjustment in vertical direction of the main unit of the ionizer. (DTRY-ELQ01)
- Using the flow direction adjusting plate at the fan outlet, you can make fine adjustment of the direction of the airflow.
  - By using the flow direction adjusting plate at the fan outlet, you can make fine adjustments of the horizontal direction airflow.

## Wide-flow fan type

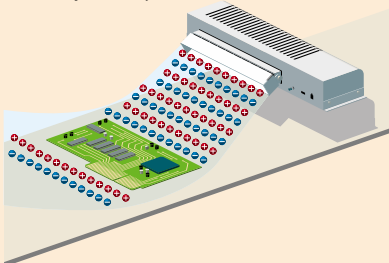


- Most suitable for static electricity removal for wide and large work pieces.
  - The ionizer uses a cross flow fan, allowing you to make high-speed static electricity removal for wide circuit boards, liquid crystal works, packaging films etc.
- Using the optional flow direction-adjusting bracket, you can make fine adjustment of the ion flow.
  - Installing the optional flow direction-adjusting bracket, you can adjust the vertical direction (upward and downward directions) of the flow up to 15°.
- Depending on the size of the work piece, you can choose between two types of ionizers.
  - Two types of ionizers are available. One is fitted with a 100mm wide flow outlet and the other comes with a 200mm wide flow outlet, enabling you to select the appropriate one according to the size of the work concerned.
- Thin space-saving design.
  - Unlike conventional ionizers, this ionizer is thin, allowing you a wider choice of installation positions. Use of the bracket provided allows you to mount the ionizer with the main unit's upper surface as its mounting surface.
- The airflow rate selector switch enables to adjust the flow rate.
  - By using the flow rate selector switch on the front of the main unit, you can adjust the airflow rate according to the work concerned.
- The airflow rate selector switch and the abnormal condition LED indicator are placed on the flow outlet side, giving you excellent performance and visual confirmation.

## Application examples

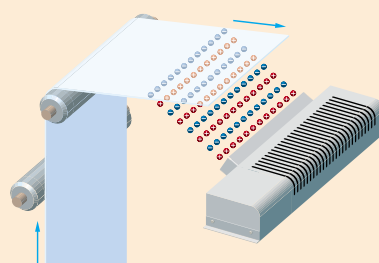
### ● Static electricity removal for circuit boards etc..

You can make static electricity removal for relatively wide objects.



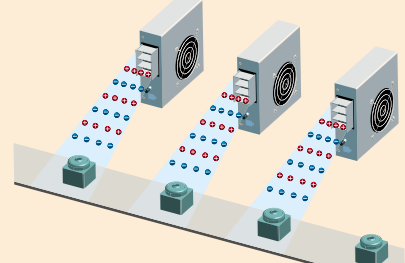
### ● Static electricity removal for packaging films etc.

You can remove the static electricity generated when the film leaves the film roller.

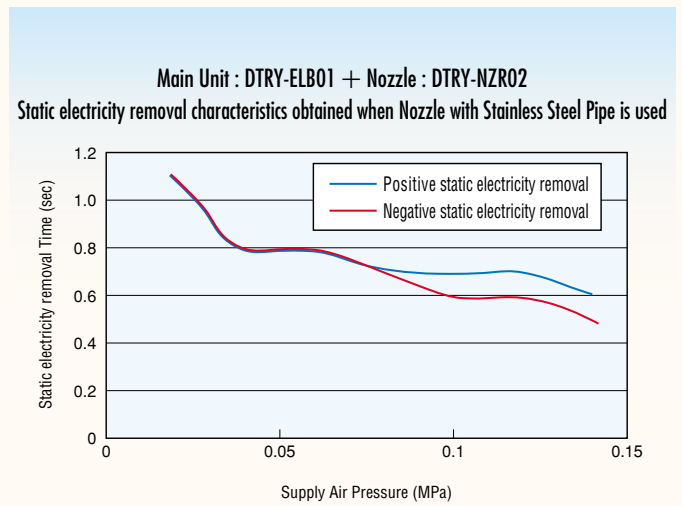
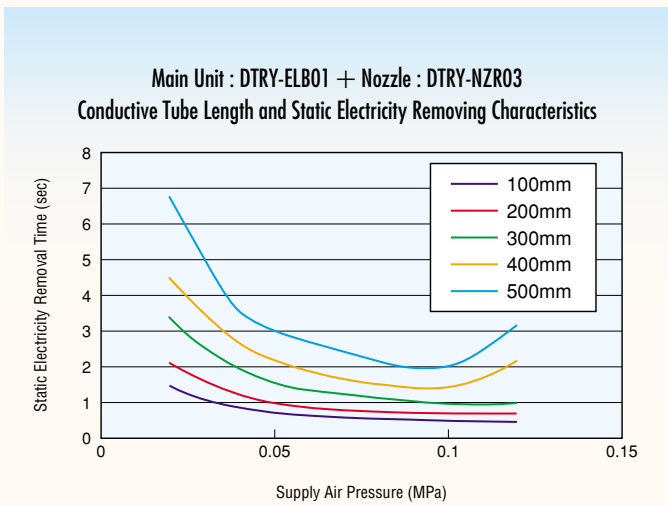
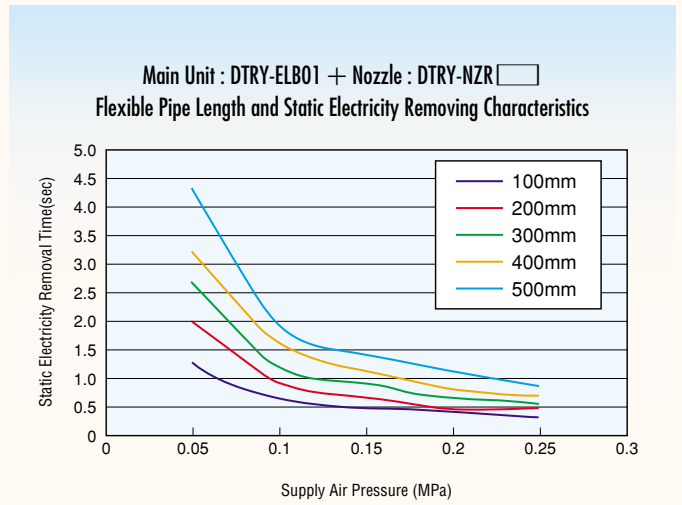
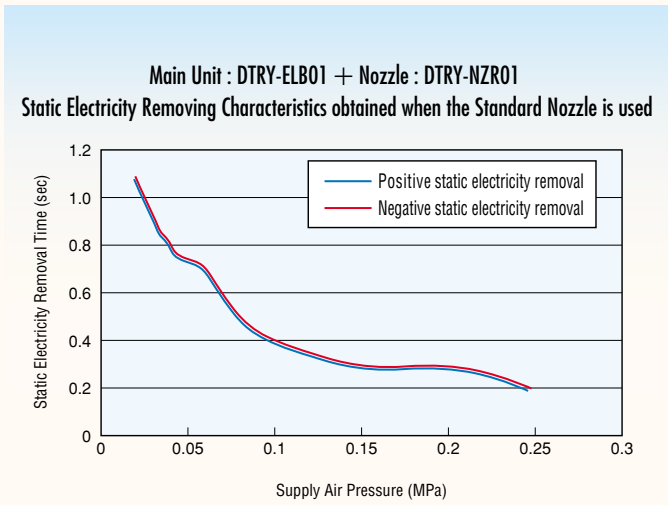


### ● Static electricity removal for plastic container and parts etc.

You can make static electricity removal from relatively far locations.



# Graphs of Static Electricity Removing Characteristics







## Safety precautions (IONIZER)

**Always read these precautions carefully before use.**

Before selecting and using products, please read all the Safety Precautions carefully to ensure proper product use. The Safety Precautions shown below are to help you use the product safely and correctly, and to prevent injury or damage to assets beforehand. Follow the Safety Precautions for: ISO4414 (Pneumatic fluid power--Recommendations for the application of equipment to transmission and control systems), JIS B 8370 (Pneumatic system regulations)

The directions are ranked according to degree of potential danger or damage: "DANGER!" "WARNING!" "CAUTION!" and "ATTENTION!"

 <b>DANGER</b>	Expresses situations that can be clearly predicted as dangerous. If the noted danger is not avoided, it could result in death or serious injury. It could also result in damage or destruction of assets.
 <b>WARNING</b>	Expresses situations that, while not immediately dangerous, could become dangerous. If the noted danger is not avoided, it could result in death or serious injury. It could also result in damage or destruction of assets.
 <b>CAUTION</b>	Expresses situations that, while not immediately dangerous, could become dangerous. If the noted danger is not avoided, it could result in light or semi-serious injury. It could also result in damage or destruction of assets.
 <b>ATTENTION</b>	While there is little chance of injury, this content refers to points that should be observed for appropriate use of the product.

- This product was designed and manufactured as parts for use in General Industrial Machinery.
- Before selecting the equipment and using any product, always read the Safety Precautions, the Catalog, the Instruction Manual, etc.
- After reading the Instruction Manual, etc., always place the Manual where it can be easily available for reference to users of this product.
- If transferring or lending the product to another person, always attach the Instruction Manual, etc., to the product where it is easily visible, to ensure that the new user can use the product safely and properly.
- The danger, warning, and caution items listed under these "Safety Precautions" do not cover all possible cases. Read the catalog and user's manual carefully, and always keep safety first.

### **DANGER**

- Do not use for the purposes listed below:
  1. Medical equipment related to maintenance or management of human lives or bodies.
  2. Mechanical devices or equipment designed for the purpose of moving or transporting people.
  3. Critical safety components in mechanical devices.  
This product has not been planned or designed for purposes that require advanced stages of safety. It could cause injury to human life.
- Do not use in locations with or near dangerous substances such as flammable or ignitable substances. This product is not explosion-proof. It could ignite or burst into flames.
- When attaching the product, always ensure that it is securely fixed in place. Dropping or falling the products, or improper operation could result in injury.
- The ionizer generates high voltages. Do not disassemble, adjust, or modify the device, because it can be very dangerous. Such action could result in a malfunction, injury, electric shock, fire, etc.
- Do not splash water on the product. Spraying it with water, washing it, or using it underwater could result in malfunction of the product leading to injury, electric shock, fire, etc.
- Always shut off power when inspecting, cleaning and performing maintenance. Leaving the power on could result in electric shocks.
- Never touch the discharging needle when the green LED is ON. You may receive an electrical shock as a high voltage is applied to the discharging needle.

### **WARNING**

- Do not use this product in excess of its specification range. Such use could result in product breakdowns, cessation of function, or damage. It could as well result in a significant reduction of its service life.
- Before supplying air or electricity to the device and before starting operation, always conduct a safety check of the area of machine operation. Careless supply of air or electricity could possibly result in electric shocks, or in injury caused by contact with moving parts.
- Do not touch the discharging needles, the terminals and the miscellaneous switches, etc., while the device is plugged in. There is the possibility of electric shock and abnormal operation.
- Do not allow the product to be thrown into fire. The product could explode and release toxic gases.

- Do not sit on the product, place your foot on it, or place other objects on it. Accidents such as falling and tipping over could result in injury. Dropping the product may damage or break the product resulting in abnormal, improper or erratic operation.
- Handle the discharging needle with caution, since it has a sharp-pointed tip. Wrong handling of it could result in bodily injury.
- Before performing product maintenance/inspection, piping mounting/dismounting or replacement, be sure to isolate the air supply completely and make sure that the pressure inside the product and the piping to which the product is connected is exhausted. Note that the air compressor and especially the air storage tank will have air residue.
- Always shut off power when performing wiring work. Leaving the power on could result in electric shocks.
- Avoid scratching the cords of the sensor switch lead wires, etc. Letting the cords be subject to scratching, excessive bending, pulling, rolling up, or being placed under heavy objects or squeezed between two objects, may result in current leaks or defective transmission that lead to fires, electric shocks, or abnormal operation.
- Do not pull out the connectors while the power is ON. Also, do not put unnecessary stress on the connector. It could result in erroneous equipment operation that could lead to personal injury, equipment breakdown, or electrical shocks, etc.
- Always check the Catalog to ensure that the product wiring and piping is done correctly. Errors in wiring and piping could lead to abnormal operation of the actuators, etc.
- After wiring work, always check to ensure that no wiring connection errors exist before turning on the power.
- The media used for the blow type must be air; do not use any media other than air.

### **CAUTION**

- When mounting the product, leave room for adequate working space around it. Failure to assure adequate working space will make it more difficult to conduct daily inspections or maintenance, which could eventually lead to system shutdown or damage to the product.
- The ionizer emits ozone into an atmosphere. If a single unit is operated, ozone will reach the saturation point and will not increase beyond the certain level. However, if several units are operated together and if you smell ozone, pay attention to the venting of the ambient. Do not attempt to check the smell of ozone by directly bringing your face close to the outlet of a nozzle, since you might get your nose and throat hurt.

## HANDLING PROCEDURES AND PRECAUTIONS



### ATTENTION

- When considering the possibility of using this product in situations or environments not specifically noted in the Catalog or Instruction Manual, or in applications where safety is an important requirement, such as in an airplane facility, combustion equipment, leisure equipment, safety equipment and other places where human life or assets may be greatly affected, take adequate safety precautions such as applications with enough margins or fail-safe measures for ratings and performance. Please consult KOGANEI with any questions.
- Always check the catalog and other reference materials for product wiring and piping.
- When handling the product, wear protective gloves, safety glasses, safety boots, etc., to ensure safety.
- When the product can no longer be used, or is no longer necessary, dispose of it appropriately as industrial waste.
- Do not use the Ionizer for any other purpose than the static electricity removal.



### OTHER

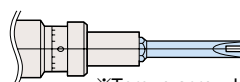
- Always observe the following items.
  1. When using this product in pneumatic systems, always use genuine KOGANEI parts or compatible parts (recommended parts). When conducting maintenance and repairs, always use genuine KOGANEI parts or compatible parts (recommended parts). Always observe the required procedures.
  2. Do not attempt inappropriate disassembly or assembly of the product relating to basic configurations, or its performance or functions. KOGANEI cannot be responsible if these items are not properly observed.

### Installation

1. For installation of the unit, pay attention to the contamination by oil or water, high temperatures or high humidity. Especially, avoid a place subject to dew condensation.
2. Install the ionizer in a place where ions can be sprayed on the charged object, when the charged object is far from the other objects or is suspended in the air.  
Reason: Even if ions are sprayed on the charged object when it is near other objects or in contact with them, no electrostatic removal can be made.
3. If the ionizer is not grounded properly, static electricity removal level will be reduced.
4. When mounting the fan, turbo-flow fan or wide-flow fan type ionizers, do not thread mounting screws in 5mm or deeper; otherwise the mounting screws may touch the inner circuit board.
5. When installing the fan, turbo-flow fan or wide-flow fan type ionizers, ensure sufficient space so as not to block the suction opening, allowing for the use of the airflow rate adjusting plate.

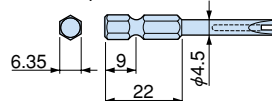
### Precautions on Use

1. Before inspections, cleaning, or maintenance, be sure to switch off power supply.
2. If the supply air to the Blow Type unit is suspended for some time, a red indicator could turn on.
3. If the tube metal section of the Blow Type unit is connected to a ground, the unit will automatically be powered down.
4. In case the unit turns faulty, it will have to be adjusted and repaired by specialized personnel. Contact Koganei for such a service.
5. To replace the discharging needle of the Blow Type unit, a dedicated tool has to be used. The dedicated tool (**DTRY-ELB21**) is used in combination with a torque-screwdriver that accepts the bit-socket illustrated below. The dedicated tool is designed to prevent the discharging needle and screws of the main unit from being broken under excessive force. Try to limit the tightening torque to 19.6 N·cm {2 kgf·cm} or less. If the discharging needle or the main unit is damaged because the discharging needle was replaced without using the dedicated tool, it will not be covered under our warranty.



※Torque-screwdriver is sold separately.

Shape of the bit-socket



6. The service life of the discharging needle varies depending on the environmental conditions where it is used. A poor operating environment (e.g., very humid conditions) or failure to clean the pin will lead to degraded performance of the discharging needle. Hence, periodic maintenance is required.
7. Take care to wire correctly. When the + side and the -side of the power supply wiring are reverse-connected to the main unit of the ionizer, a failure will occur.
8. When the power to the main unit of the ionizer is turned on immediately after being turned off, an abnormal output is produced. When performing such an operation, be sure to allow at least 1 second or longer after turning off.

## Specifications

### Blow Type

Item	Model	DTRY-ELB01 (Main Unit for a Single Nozzle)	DTRY-ELB02 (Main Unit for Twin Nozzles)
Power supply <sup>Note 1</sup>		24 VDC ± 5%	
Consumption current	mA	Approx. 100	
Operating high-voltage power supply		Miniaturized AC high-voltage high-frequency type	
Output voltage	kV	Approx. 2	
Power safety circuit <sup>Note 2</sup>		Alarm signal output when abnormality in high-voltage section. (When this unit is used, supply air continuously.)	
Abnormal output circuit		Open collector 24 VDC (10 mA, max.)	
Outer dimensions	mm	92 (L) × 30 (W) × 54 (H) (Main unit only)	92 (L) × 62 (W) × 54 (H) (Main unit only)
Mass	g	190 (Main unit only)	300 (Main unit only)
Ion balance	V <sup>Note 3</sup>	±15	
Ozone generation amount	ppm <sup>Note 4</sup>	0.037 or less	
Supply air flow rate	ℓ/min(ANR)	100 (With DTRY-NZR01 nozzle and 0.15 MPa air at primary side)	
Operating air pressure range	MPa(kgf/cm <sup>2</sup> )	0.02 ~ 0.25(0.2 ~ 2.5)(With DTRY-NZR01 nozzle)	
		0.02 ~ 0.12(0.2 ~ 1.2)(With DTRY-NZR02 nozzle)	
		0.02 ~ 0.12(0.2 ~ 1.2)(With DTRY-NZR03 nozzle)	
		0.05 ~ 0.25(0.5 ~ 2.5)(With DTRY-NZR04-08 nozzle)	
Operating environmental temperature	°C	0 ~ 40 indoors	
Accessories		1 power and signal cable (2 m) and 1 ground wire (2 m).	

Notes 1: Power supply is common with ELB01 and ELB02.

2: To use the power safety circuit correctly, recommend to use the controller(DTRY-ELC11).

3: Ion balance is measured by using DTRY-NZR01.

4: Ozone generation amount is measured by using DTRY-NZR01 at a 50mm position from the outlet.

### Controller (for the blow type)

Item	Model	DTRY-ELC11
Power supply		24 VDC ± 5%
Consumption current	mA	410
Outer dimensions	mm	222 (L) × 60 (W) × 135 (H) (Main unit only)
Mass	g	830 (Main unit only)
Media		Air
Max. flow rate	ℓ/min(ANR)	100 ( 0.5 MPa at primary-side pressure and 0.15 MPa at secondary-side pressure)
Operating pressure adjusting range	MPa(kgf/cm <sup>2</sup> )	0.02 ~ 0.3(0.2 ~ 3.0)
Proof pressure	MPa(kgf/cm <sup>2</sup> )	0.3(3.0)
Filter capacity	Collected particle size μm	0.01
	Collection efficiency %	99.99
Operating environmental temperature	°C	5 ~ 45 indoors
Accessories		1 power and signal cable (1.5 m).

### Fan Type

Item	Model	DTRY-ELF01
Power supply		12 ~ 24 VDC ± 10%
Operating high-voltage power supply		Miniaturized AC high voltage high-frequency type
Consumption current	mA	300 (with 12 VDC power supply) / 150 (with 24 VDC power supply)
Output voltage	kV	Approx. 2
Indicator lamp	Power supply	POWER LED (green) on the top of the main unit turns on, while the power is supplied
	Abnormality	ALARM LED (red) on the top of the main unit turns on, when abnormality occurs.
Power safety circuit		Provides an abnormal contact signal and alarm signal in the case of abnormality in high voltage section. (ALARM LED on the top of the main unit turns on) Provides an abnormal contact signal and alarm signal, when a blower fan stops. (ALARM LED on the top of the main unit turns on)
Outer dimensions	mm	46 (L) × 67 (W) × 81 (H) (Main unit only)
Mass	g	320 (Main unit only)
Ion balance	V	±10
Ozone generation amount	ppm	0.04 or less
Fan capacity	Max. flow rate m <sup>3</sup> /min	0.225
	Adjusting	High-Low 2-step selection
Operating environmental temperature	°C	0 ~ 40 indoors
Accessories		1 power and signal cable (2 m) and 1 in-line connection cable (2 m).



### Turbo-flow fan type ionizer

Item	Model	DTRY-ELT11
Power supply		DC24V $\pm 10\%$
Operating high-voltage power supply		Miniaturized AC high-voltage high-frequency type
Consumption current	mA	207
Output voltage	kV	About 2
Indicator lamp	Power supply	When the supply power is turned on, POWER LED (green) on the front of the main unit lights up.
	Abnormality	When an abnormal condition occurs, ALARM LED (red) on the front of the main unit lights up.
Power safety circuit		When an abnormal high-voltage condition occurs, the warning signal is output (open collector output: DC24V, 10mA Max)
Outer dimensions	mm	102 (L) $\times$ 114 (W) $\times$ 37 (H)
Mass	g	455
Ion balance	V	$\pm 20$
Ozone generation amount	ppm	0.05 (200 mm away from the front of the flow outlet)
Fan capacity	Max. flow rate	m <sup>3</sup> /min 0.26
	Adjusting	Adjustments are made using the flow rate adjusting plate.
Operating environmental temperature	$^{\circ}\text{C}$	0 to 40 for indoor
Accessories		1 power and signal cable (2 m), 1 ground wire (2 m), and 1 flow rate adjusting plate

### Wide-flow fan type ionizer

Item	Model	DTRY-ELW11	DTRY-ELW12
		(100 mm opening type)	(200 mm opening type)
Power supply		DC24V $\pm 10\%$	
Operating high-voltage power supply		Miniaturized AC high-voltage high-frequency type	
Consumption current	mA	137	154
Output voltage	kV	About 2	
Indicator lamp	Power supply	When the supply power is turned on, POWER LED (green) on the front of the main unit lights up.	
	Abnormality	When the supply power is turned on, POWER LED (green) on the front of the main unit lights up.	
Power safety circuit		When an abnormal high-voltage condition occurs, the warning signal is output (open collector output: DC24V, 10mA Max)	
Outer dimensions	mm	204(L) $\times$ 90(W) $\times$ 46(H)	304(L) $\times$ 90(W) $\times$ 46(H)
Mass	g	762	1039
Ion balance	V	$\pm 20$	
Ozone generation amount	ppm	0.05 (200 mm away from the front of the flow outlet)	
Fan capacity	Max. flow rate	m <sup>3</sup> /min 0.22	0.7
	Adjusting	Switching is performed using the flow rate selector switch.	
Operating environmental temperature	$^{\circ}\text{C}$	0 to 40 for indoor	
Accessories		1 power and signal cable (2 m), 1 ground wire (2 m), and mounting bracket	

## Order code

### BLOW TYPE

#### Main Units

##### 1-head type DTRY-ELB01

**Caution** The main unit cannot be operated alone.  
Always use it with a nozzle.



##### 2-head type DTRY-ELB02

**Caution** The main unit cannot be operated alone.  
Always use it with a nozzle.



#### Nozzles

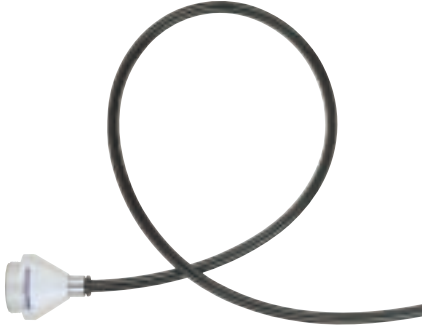
##### Standard nozzle DTRY-NZR01



##### Stainless steel pipe (120 mm) DTRY-NZR02



##### Conductive tube (500 mm) DTRY-NZR03



##### Flexible pipe DTRY-NZR04 (100 mm) DTRY-NZR05 (200 mm) DTRY-NZR06 (300 mm) DTRY-NZR07 (400 mm) DTRY-NZR08 (500 mm)



#### Options

- AC adapter (For Blow Type : DTRY-ELB01 & 02)  
Note: This adapter cannot be used for the fan type, turbo-flow fan type, wide-flow fan type and for the controller.

##### DTRY-ELC02



Ratings:  
Input: 100 VAC, 50/60 Hz, 10.1 VA  
Output: 24 VDC, 100 mA

- Conductive tube holder  
DTRY-NZR31

For application examples, refer to p.1.



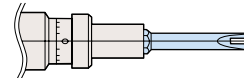
- Tungsten discharging needle for replacement (supplied by a set of 5 needles)  
DTRY-ELB11



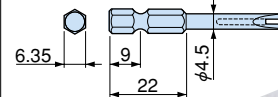
**Caution** Dedicated for blow type DTRY-ELB01 & 02.

- Dedicated tool for replacement of discharging needle (To be manufactured on order)  
Note: Bit at the tip part alone will be available for purchase.

##### DTRY-ELB21



Shape of the bit-socket



- Controller (For Blow Type : DTRY-ELB01, 02)  
DTRY-ELC11



### FAN TYPE

#### Main Unit

##### Fan Type DTRY-ELF01



#### Options

- AC adapter (For Fan Type : DTRY-ELF01)  
Note: This adapter cannot be used for the blow type, turbo-flow fan type, wide-flow fan type and for the controller.

##### DTRY-ELC01



Ratings:  
Input: 100 VAC, 50/60 Hz, 14 VA  
Output: 12 VDC, 500 mA

- Optional bracket (for the fan type)  
Note: This bracket cannot be used for the turbo-flow fan type.

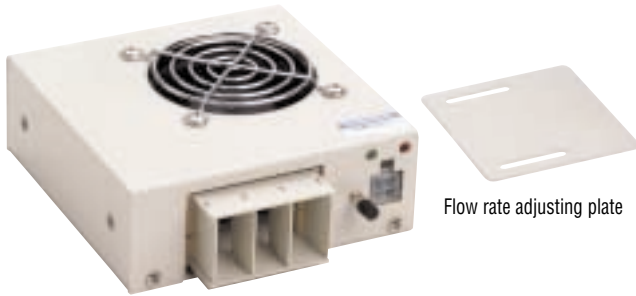
##### DTRY-ELF31



## Turbo-flow fan type

### Main unit

- Turbo-flow fan type  
**DTRY-ELT11**



### Options

- AC adapter (for the turbo-flow fan type and the wide-flow fan type)  
**DTRY-ELC03**



Rating  
Input: AC100V to AC240V  
50/60 Hz 40VA  
Output: DC24V 750mA

- Optional bracket (for the turbo-flow fan type)  
Note: This bracket cannot be used for the fan type.  
**DTRY-ELQ01**



## Wide-flow fan type

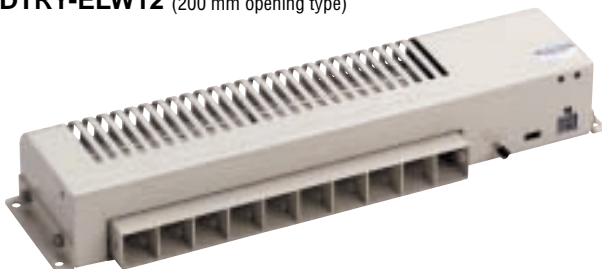
### Main units

- Wide-flow fan type  
**DTRY-ELW11** (100 mm opening type)



Note: An optional flow direction-adjusting bracket is available.

- DTRY-ELW12** (200 mm opening type)



Note: An optional flow direction-adjusting bracket is available.

### Options

- Flow direction-adjusting bracket for the wide-flow fan type  
**DTRY-NZB11** (100 mm opening type)



- DTRY-NZB12** (200 mm opening type)



- AC adapter (for the turbo-flow fan type and the wide-flow fan type)  
**DTRY-ELC03**

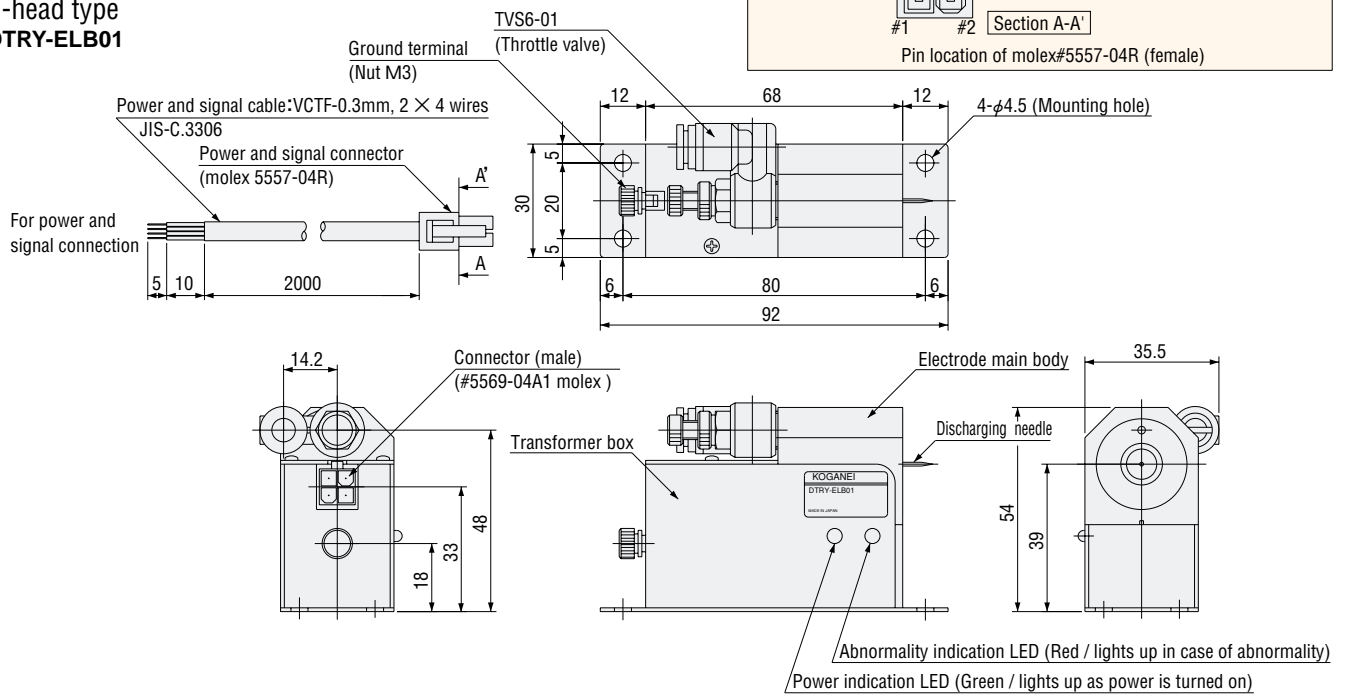


Rating  
Input: AC100V to AC240V  
50/60 Hz 40VA  
Output: DC24V 750mA

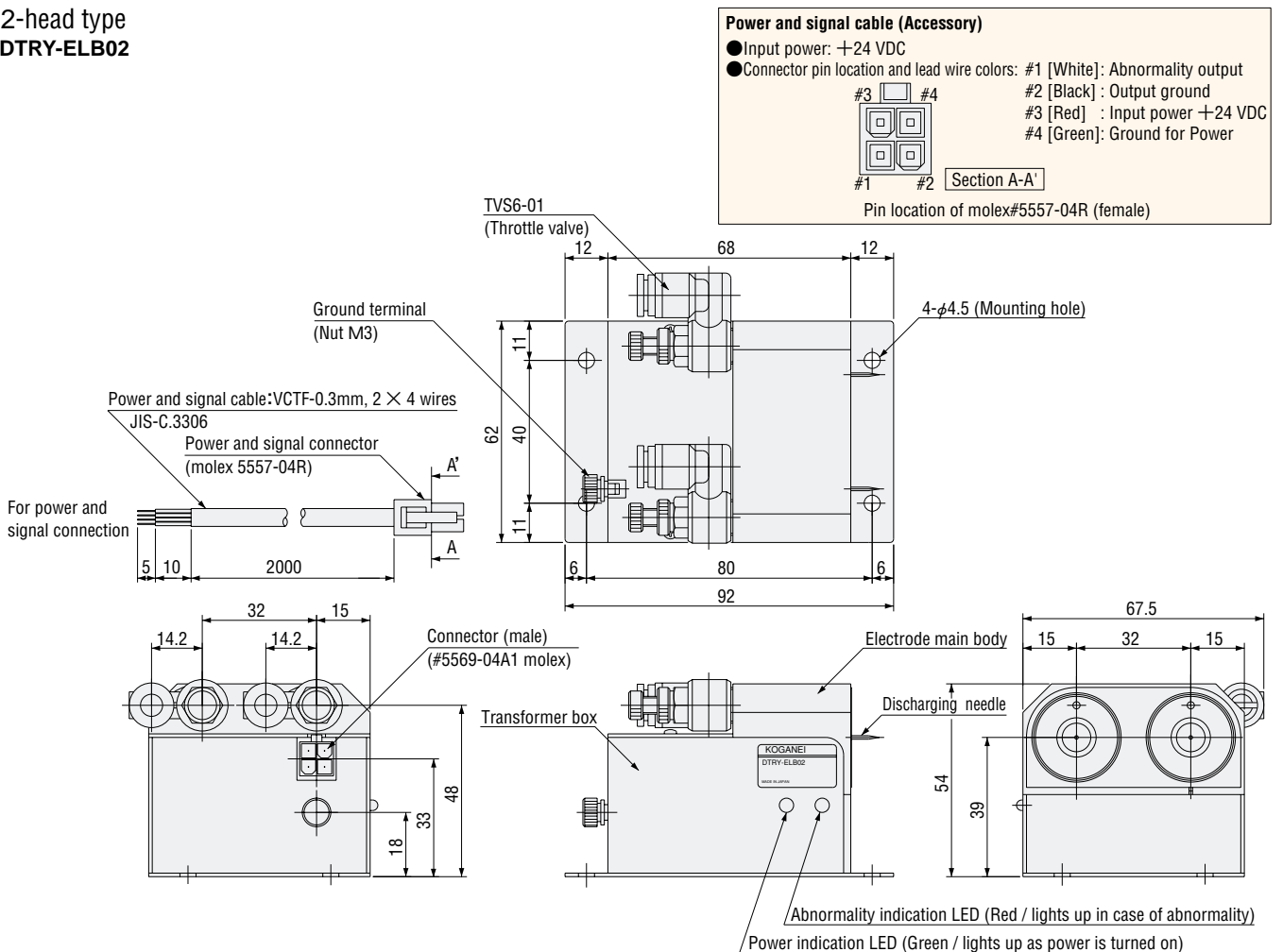
## Dimensions (Unit mm)

### BLOW TYPE

#### ● 1-head type DTRY-ELB01



#### ● 2-head type DTRY-ELB02

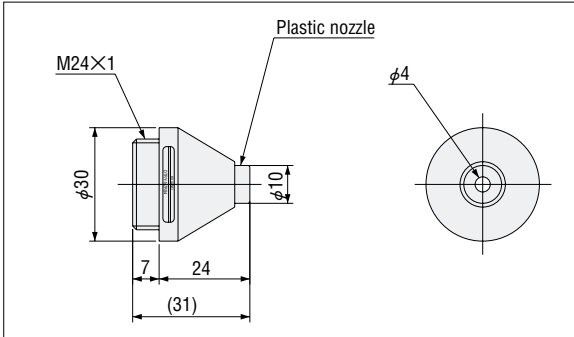


# Dimensions (Unit mm)

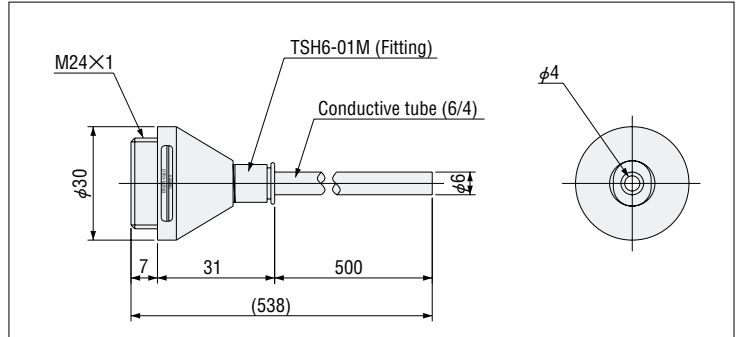
## BLOW TYPE

### Nozzles

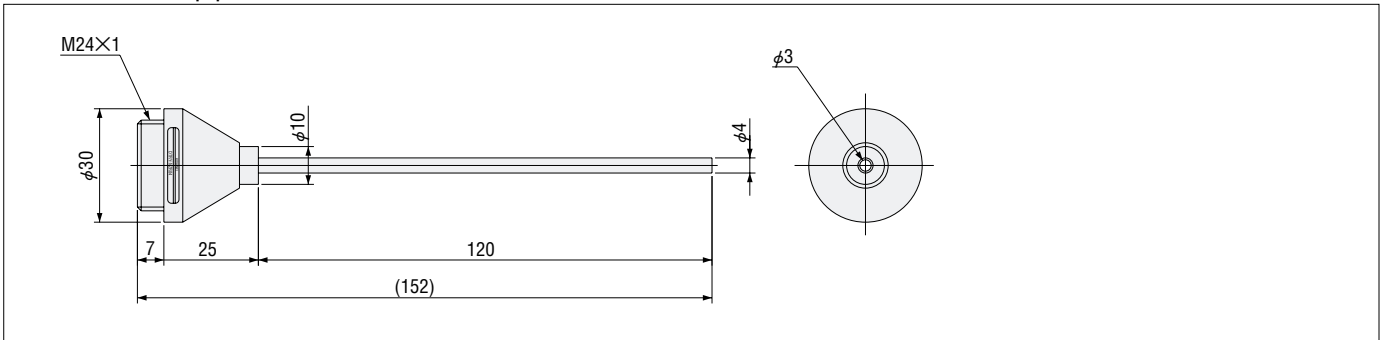
#### ● Standard nozzle DTRY-NZR01



#### ● Conductive tube DTRY-NZR03



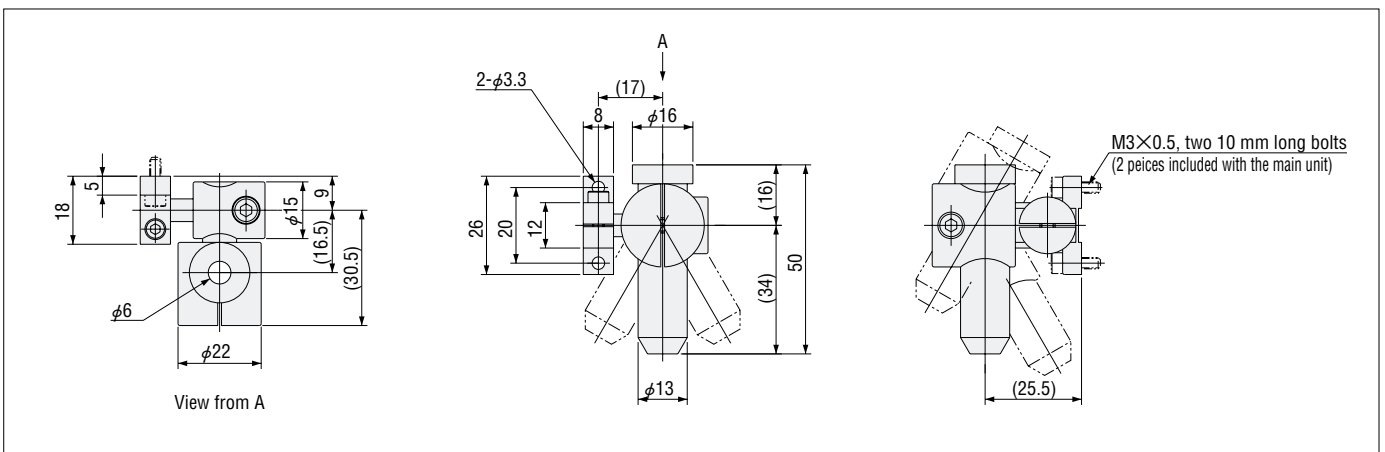
#### ● Stainless steel pipe DTRY-NZR02



#### ● Flexible pipe DTRY-NZR

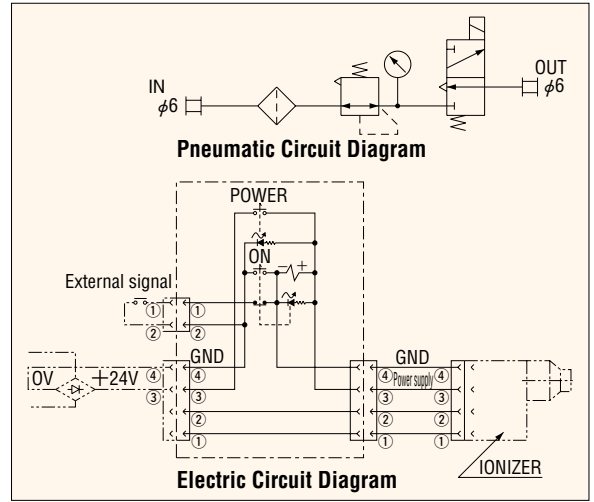
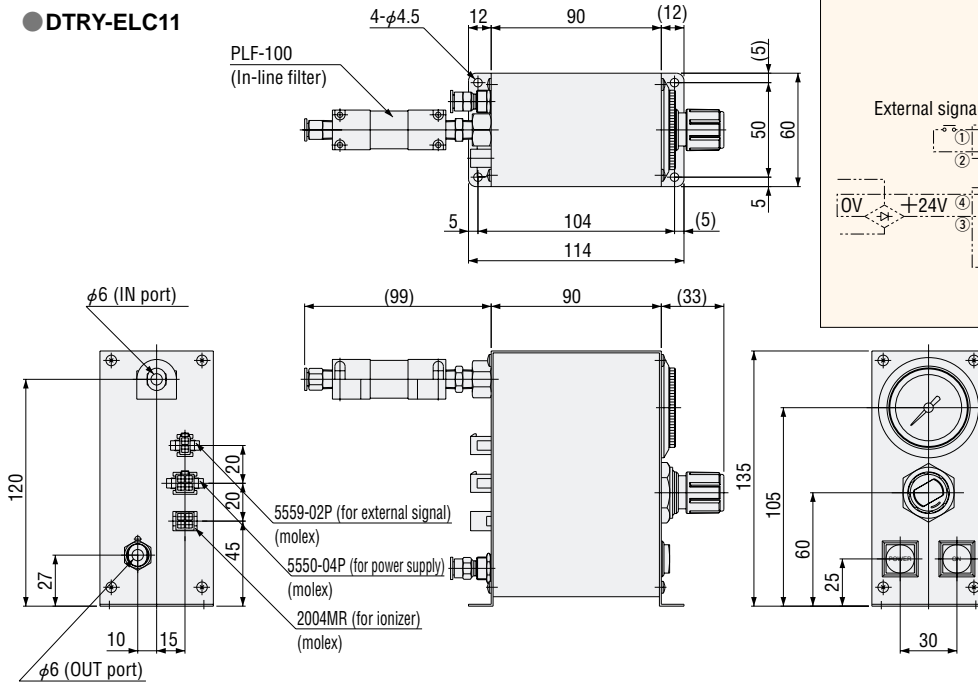
Model	A	(L)	Mass (g)
DTRY-NZR04	100	127	32
DTRY-NZR05	200	227	37
DTRY-NZR06	300	327	42
DTRY-NZR07	400	427	47
DTRY-NZR08	500	527	52

#### ■ Tube holder DTRY-NZR31



## CONTROLLER (For Blow Type)

### ● DTRY-ELC11



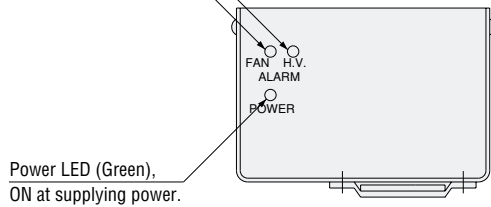
**Notes:**

1. The Controller is for the Blow Type ionizer.
2. Provide the power DC24V and 410mA or larger. AC adapters **DTRY-ELC01** and **DTRY-ELC02** cannot be used, but **DTRY-ELC03** can be used.
3. The cable used to connect the controller and the ionizer is included in the product.
4. Ground the controller power supply and the ionizer cables separately.

## FAN TYPE

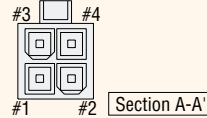
### ● DTRY-ELF01

FAN ALARM LED (Red), ON at abnormality.  
H.V. ALARM LED (Red), ON at abnormality.

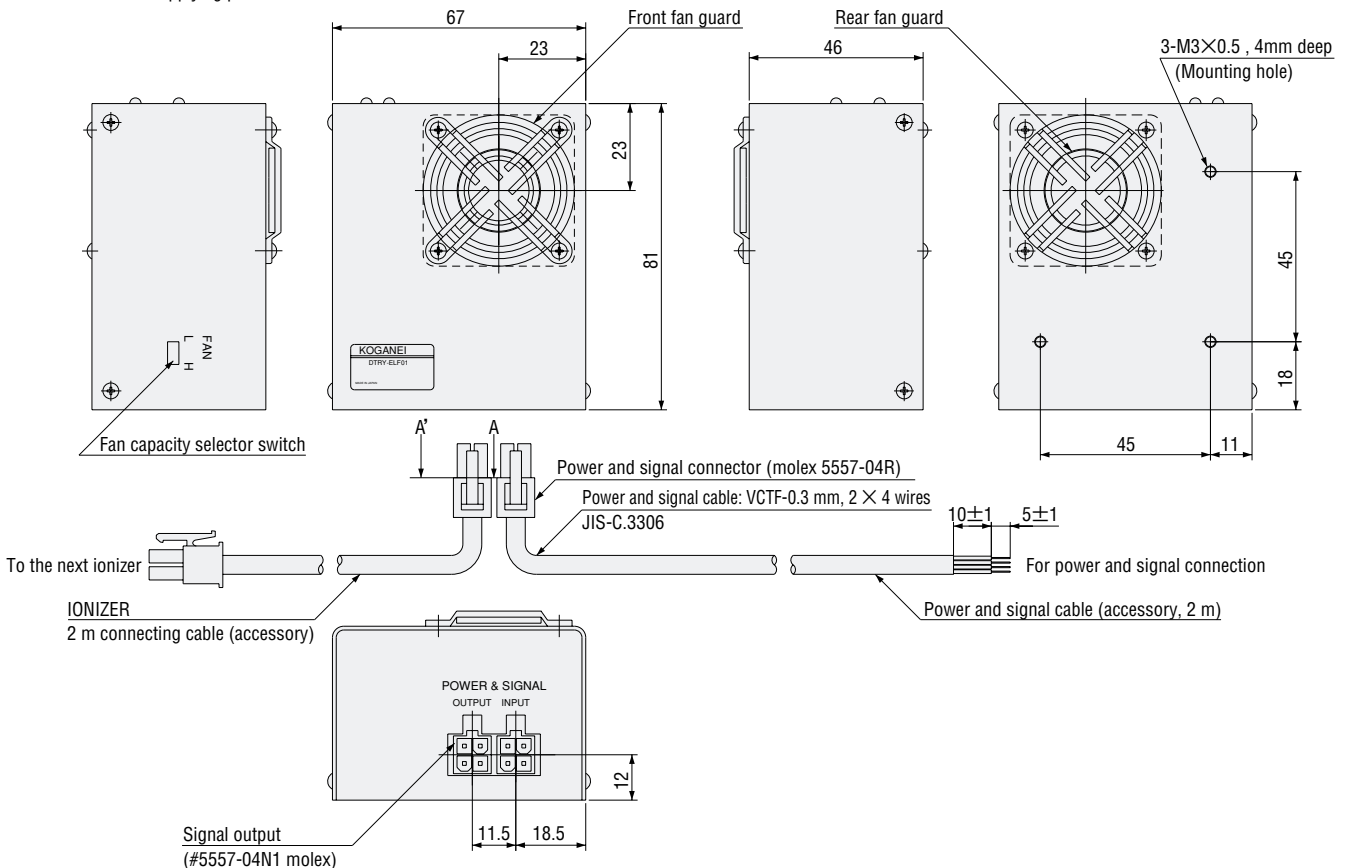


**Power and signal cable (accessory)**

- Power supply: +12 VDC to 24 VDC
- Abnormality alarms: 2 types - Abnormality at high voltage section and on fan stoppage.
- Contact signal: Normally open (OFF in normal condition / ON in abnormal conditions). \* Shares common wire.
- Power consumption: 300 mA at 12 V supply voltage; 150 mA at 24V supply voltage.
- Connector pin location and lead wire colors: #1 [White] & #2 [Black]: Contact signals
- #3 [Red] : Power supply of +12 VDC ~ 24 V DC
- #4 [Green] : Ground for power

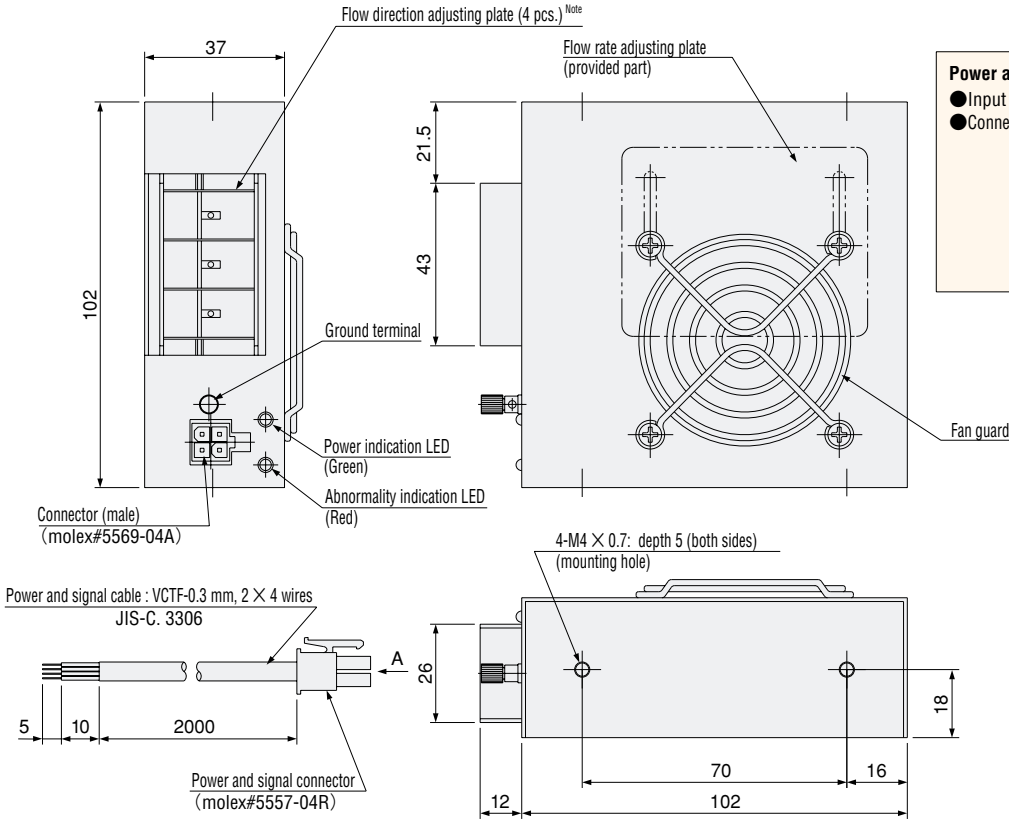


Pin location of molex#5557-04R (female)



**Turbo-flow fan type**

● **DTRY-ELT11**



**Power and signal cable (Accessory)**

- Input power: DC+24V
- Connector pin location and lead wire colors:

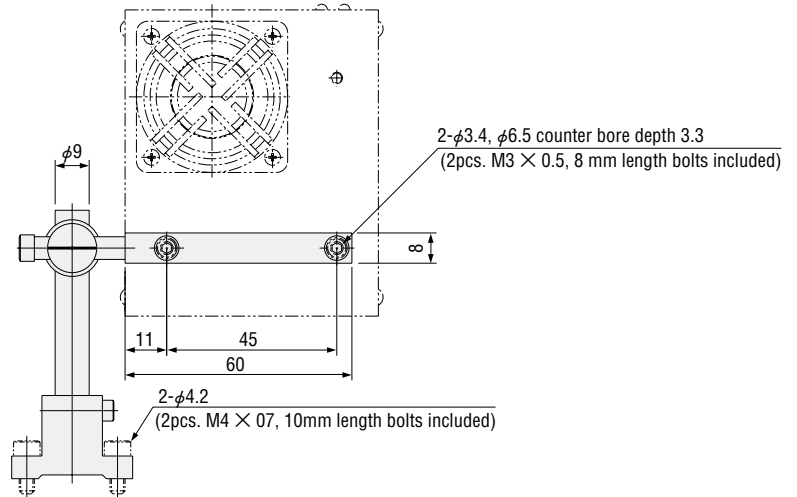
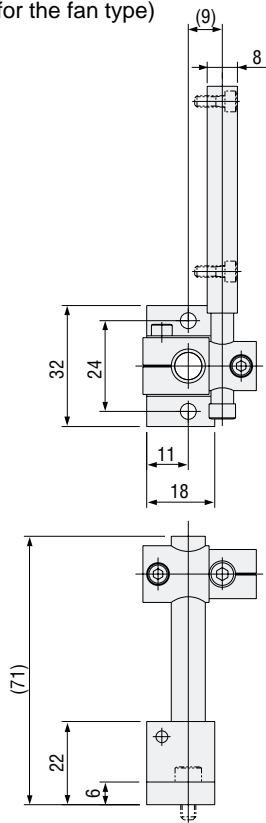
#3	#4	#1 [white]	:Abnormal output
		#2 [black]	:Output GND
		#3 [red]	:Input power DC+24V
		#4 [green]	:Power GND

Pin location of molex #5557-04R (female)

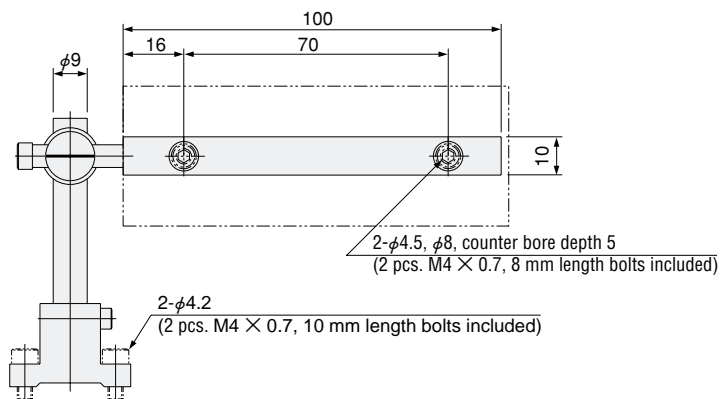
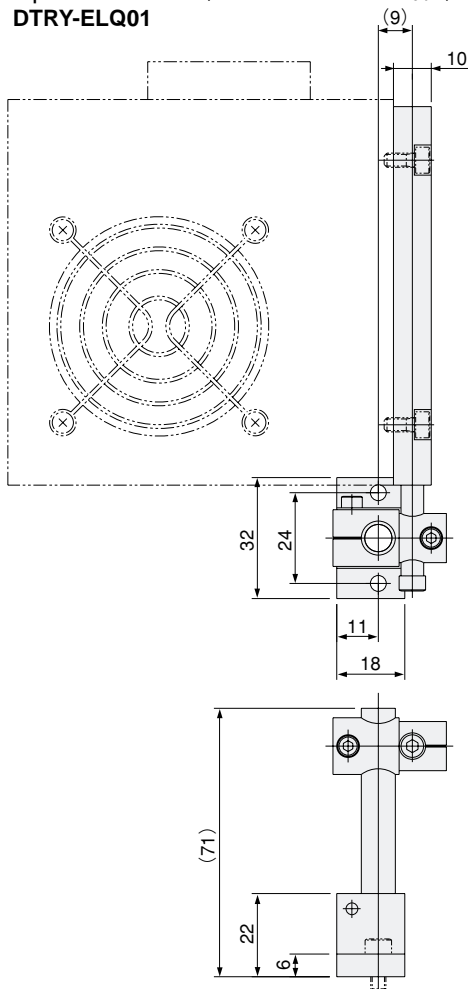
**Notes:**  
 After mounting the turbo flow fan type by using the optional bracket (**DTRY-ELQ01**), the flow direction adjusting plate allows fine adjustment of the direction of the flow by bending it. However, repeated bending may break the plate. Number of bending of the plate should be kept to a minimum (around several times).

## Dimensions (Unit mm)

● Optional Bracket (for the fan type)  
DTRY-ELF31



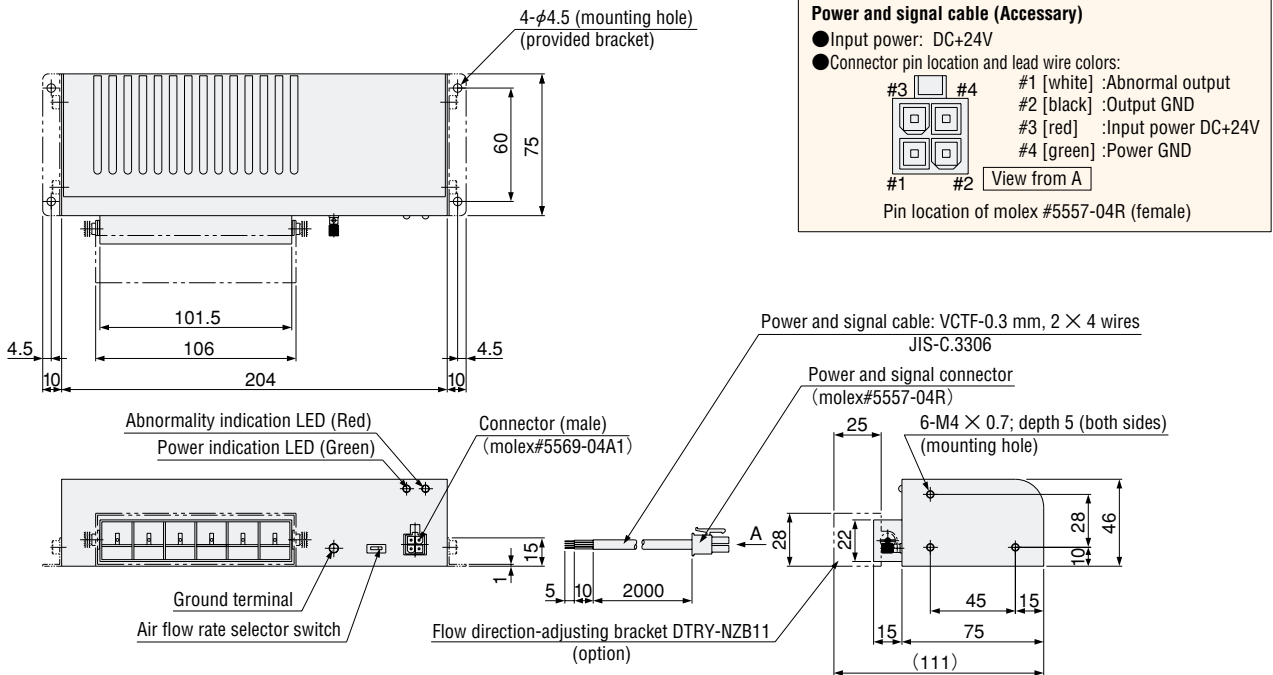
● Optional bracket (for the turbo-flow fan type)  
DTRY-ELQ01



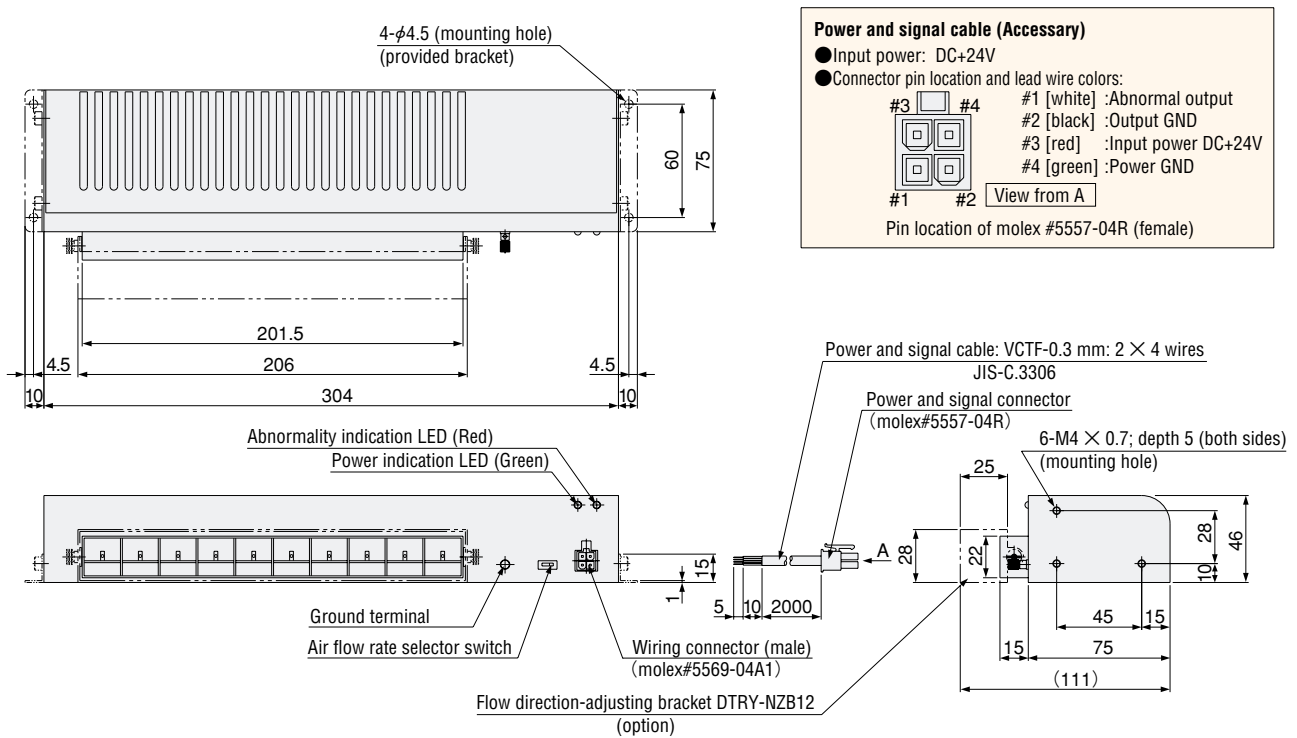


Wide-flow fan type

● DTRY-ELW11 (100 mm opening type)



● DTRY-ELW12 (200 mm opening type)







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