

Static Electricity Removing Unit IONIZER STEADY FLOW FAN TYPE

Features

- Available in three models in accordance with where to install, and type of applications, thanks to no air supply requirement.
- Changeable louver enables selection of static charge removal area.
- Improved maintenance by detachable louver and discharging needle unit.
- Flow rate adjusting knob enables you to obtain the required air flow rate.
- High frequency AC method provides good ion balance. (within ± 10 V)
- CE marking compliant products

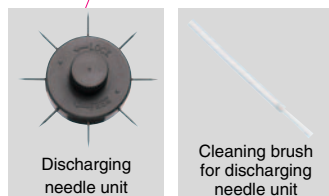


Discharging Needle Unit

During maintenance, the discharging needle unit can be removed for cleaning, eliminating any concern about particles uncovered during cleaning falling onto the interior of the body. (cleaning brush for discharging needle included)



IONIZER louver removed



Discharging needle unit

Cleaning brush for discharging needle unit

Air Flow Rate Adjusting Knob

Using the adjusting knob enables stepless air flow rate adjustment.

Selector Switch of Abnormality Output Contact Point

Contact point is switchable between NO (a-contact) and NC (b-contact). (Dedicated protection sticker for selector switch of contact included)

Connector



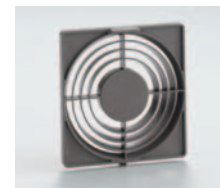
Front of the unit

Straight-flow Louver Note

Ionized straight air flow through the louver removes static charges on the front of the product powerfully and directly. Straight-flow louver and wide-angle louver in the accessory are interchangeable.

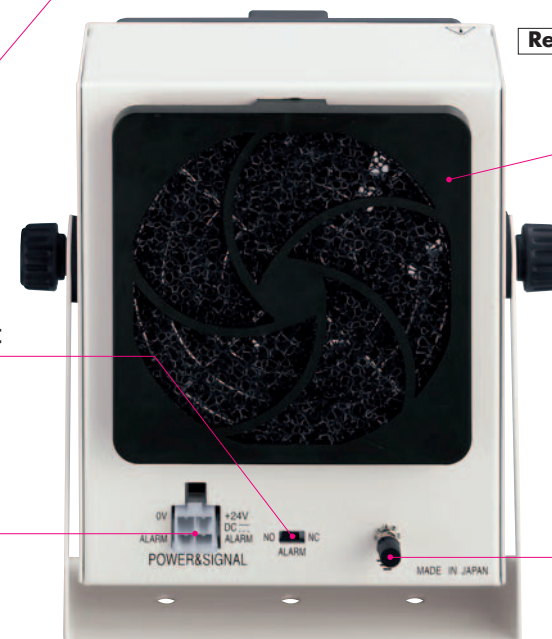
Wide-angle louver Note

Dispersed ionized air through the louver removes static charges in a broader range.



Note: A safety circuit will shut the unit off when the louver is removed during operation.

Power Switch



Rear of the unit

Filter / Filter Cover

The filter cover can be removed. IONIZER of these models can be used without the filter.



The filter cover removed state

Filter Cover

Filter

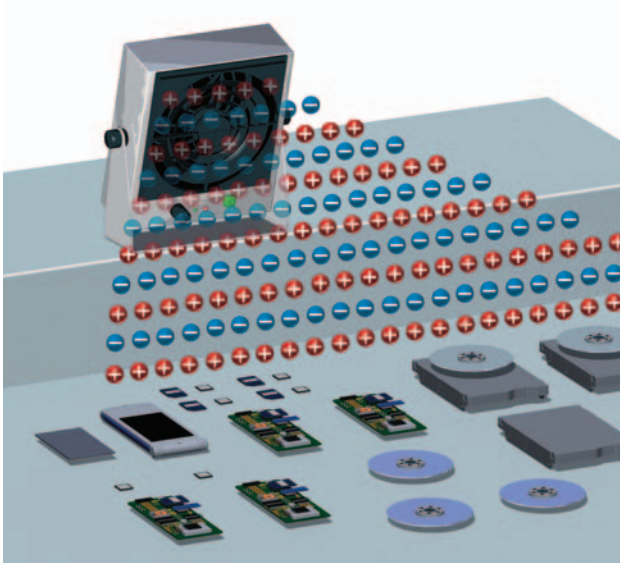
Ground terminal

Photo: DTRY-ELF03

Steady Flow Fan Type Application Examples

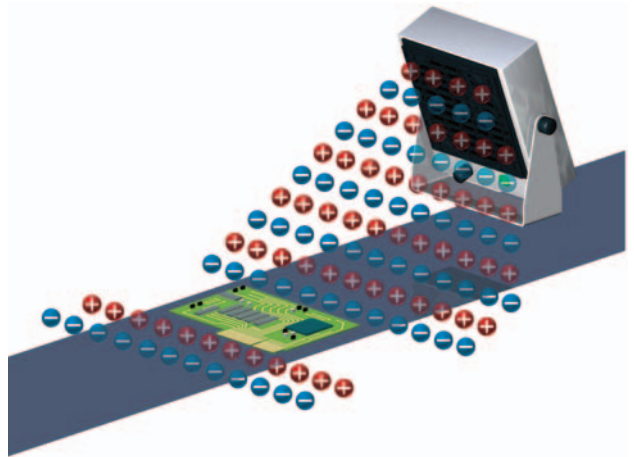
- **Static charge removal for parts on a work bench**

Removes static charges from various parts when assembling



- **Static charge removal for circuit boards etc.**

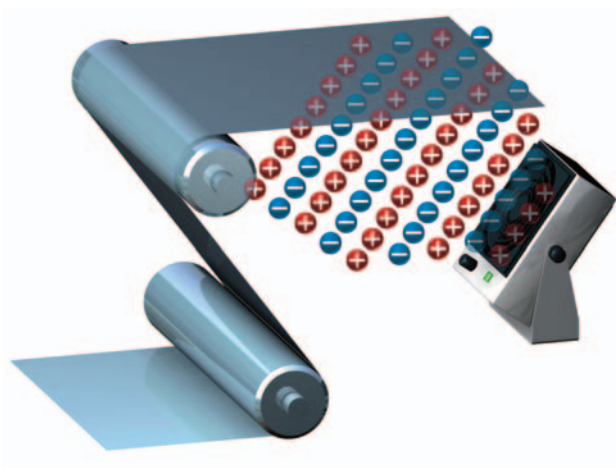
You can make static charge removal for relatively wide objects.



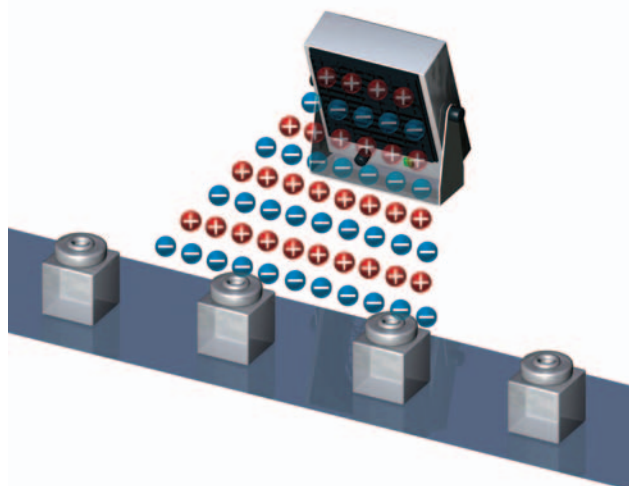
STEADY FLOW
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- **Static charge removal for packaging films etc.**

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

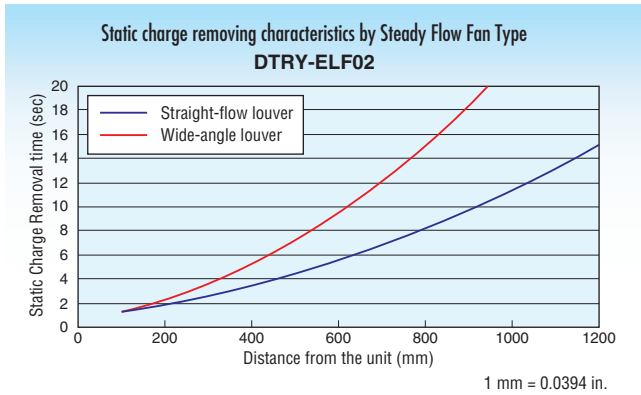


- **Static charge removal for plastic containers and parts etc.**

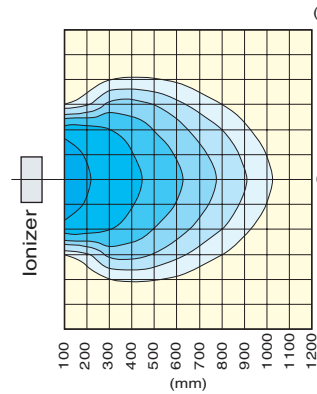


Graphs of Static Charge Removing Characteristics / Static Charge Removal Range of Straight-flow and Wide-angle Louver (image)

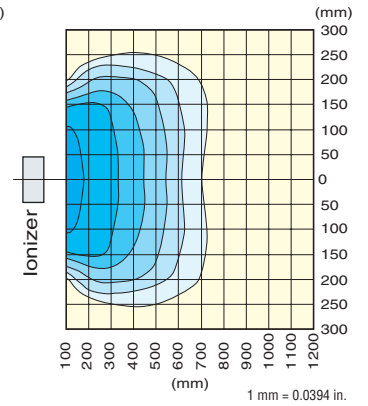
● DTRY-ELF02



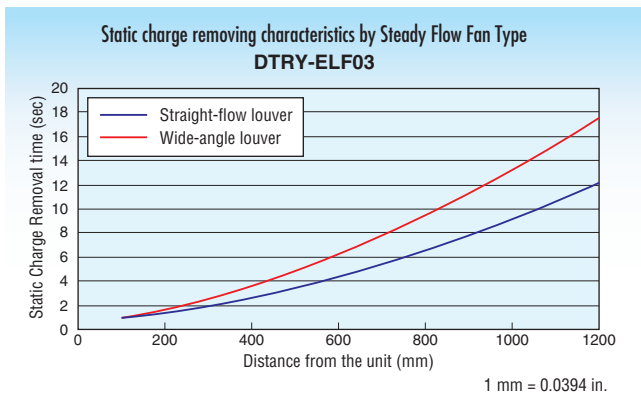
● Static charge removal range when the straight-flow louver is used



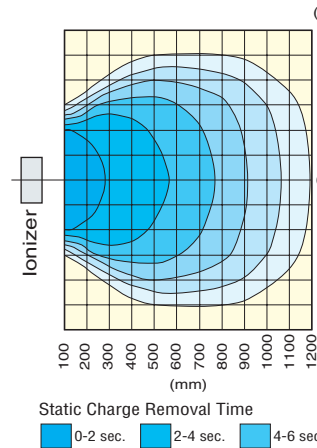
● Static charge removal range when the wide-angle louver is used



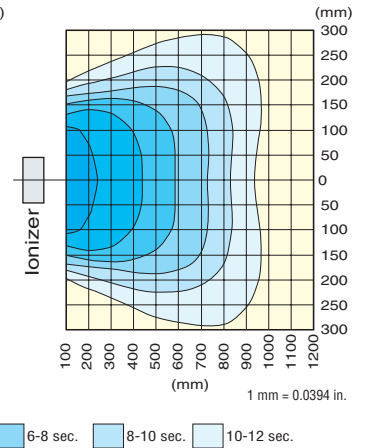
● DTRY-ELF03



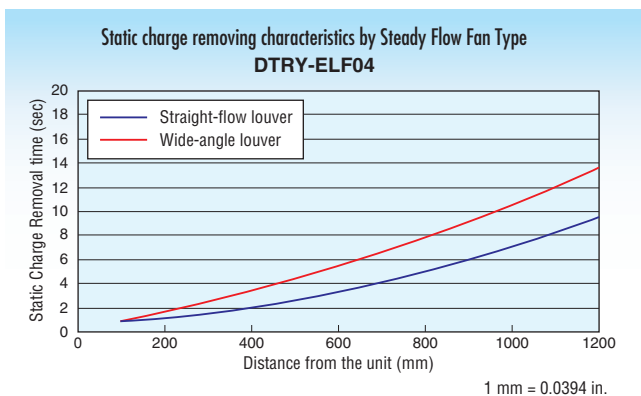
● Static charge removal range when the straight-flow louver is used



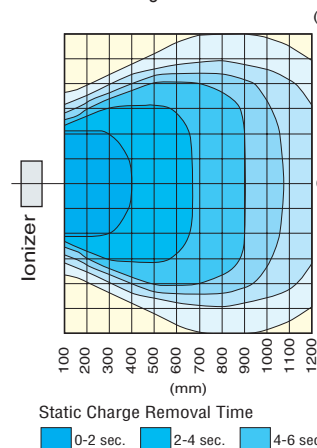
● Static charge removal range when the wide-angle louver is used



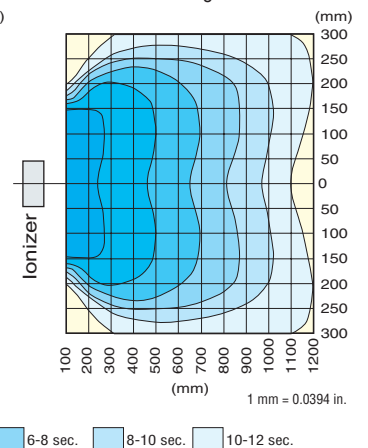
● DTRY-ELF04



● Static charge removal range when the straight-flow louver is used



● Static charge removal range when the wide-angle louver is used



Notes 1: The static charge removing characteristics are measured by in-house test standard using the charged plate monitor of 20 pF, 150 mm.
 2: The static charge removal time means decaying time from ±1000 V to ±100 V at the max. flow rate without filter.
 3: The static charge removing characteristics were measured from the center of the fan outlet.

Specifications

Steady Flow Fan Type

Item	Model	DRY-ELF02	DRY-ELF03	DRY-ELF04
Power supply		24VDC ±5%		
Consumption current	mA	200	210	350
Output voltage	kV	Approx. 2 (high frequency type)		
Indicator LED	Power supply	While the Power Switch is pushed ON, the Power Switch (Green) and the H.V.power indicator LED (Green) on the front of the main unit turn on.		
	Abnormality	When an abnormality occurs during discharge, the abnormality indicator LED (Red) on the front of the main unit turns on.		
Power safety circuit		The contact point output NO/NC is selectable when an abnormal discharge occurs. ^{Note 1} (24 DVC, 50 mA Max.)		
Outer dimension ^{Note2}	mm	61 (L) × 80 (W) × 100 (H)	62 (L) × 100 (W) × 120 (H)	62 (L) × 140 (W) × 160 (H)
Mass ^{Note3}	g [oz.]	400 [14.1]	520 [18.3]	830 [29.3]
Ion balance ^{Note4}	V	±10		
Static charge removal time ^{Note4}	sec.	3 or less	2.2 or less	1.5 or less
Ozone generation amount ^{Note4}	ppm	0.04 or less		
Fan capacity	Max. flow rate m ³ /min [ft ³ /min]	0.5 [17.7]	1.1 [38.8]	3.0 [105.9]
	Adjustment	Stepless adjustment by using the flow rate adjusting knob		
Operating ambient temperature	°C [°F]	0 ~ 40 [32 ~ 104] (avoid a place subject to dew condensation)		
Accessories		User's manual, 1 pc. wide-angle louver, 1 pc. power and signal cable (2 m[78.7in.]), 1 pc. ground lead wire (2 m[78.7in.]), 1 pc. rear filter, 1 pc. cleaning brush for discharging needle, and 1 pc. contact point selector switch protection sticker		

Notes 1: For output of abnormality output contact point, see page 41.

2: When a bracket and a filter removed (Does not include protruding portions).

3: When a bracket and a filter removed.

4: 300 mm [11.8in.] from the center of the fan outlet, at maximum flow rate when the straight-flow louver used.

Remark: Ion balance and static charge removal time were measured by in-house test standard. Contact us for more detail.

STEADY FLOW FAN TYPE

Order code

STEADY FLOW FAN TYPE

Main unit

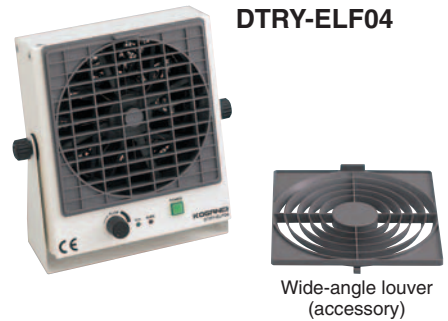
DRY-ELF02



DRY-ELF03



DRY-ELF04



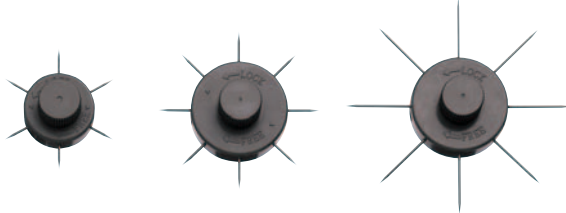
Option

● Discharging needle unit for replacement (sales unit: 1 pc.)

DRY-ZEM-F02
(for DRY-ELF02)

DRY-ZEM-F03
(for DRY-ELF03)

DRY-ZEM-F04
(for DRY-ELF04)

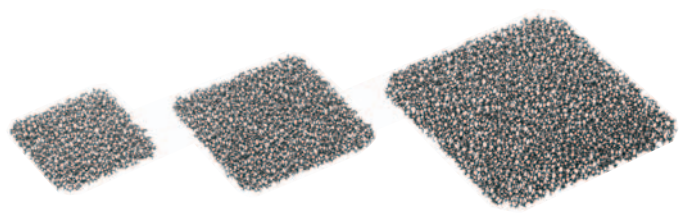


● Rear filter for replacement (sales unit: a set of 5 pcs.)

DRY-ZFR-F02
(for DRY-ELF02)

DRY-ZFR-F03
(for DRY-ELF03)

DRY-ZFR-F04
(for DRY-ELF04)



● AC adapter

DRY-ELC04

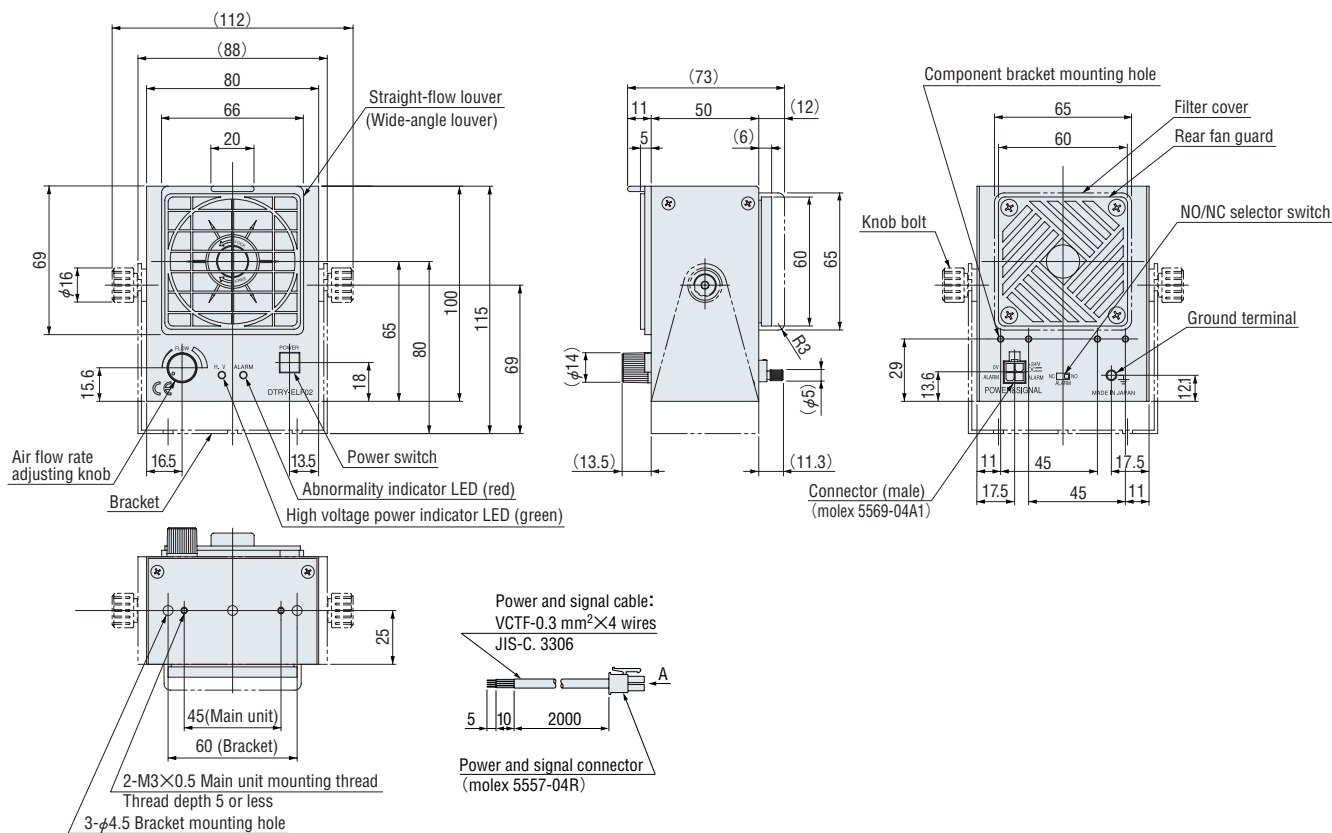
Rating
Input: 100 VAC to 240 VAC
50/60 Hz, 0.6 A
Output: 24 VDC, 750 mA



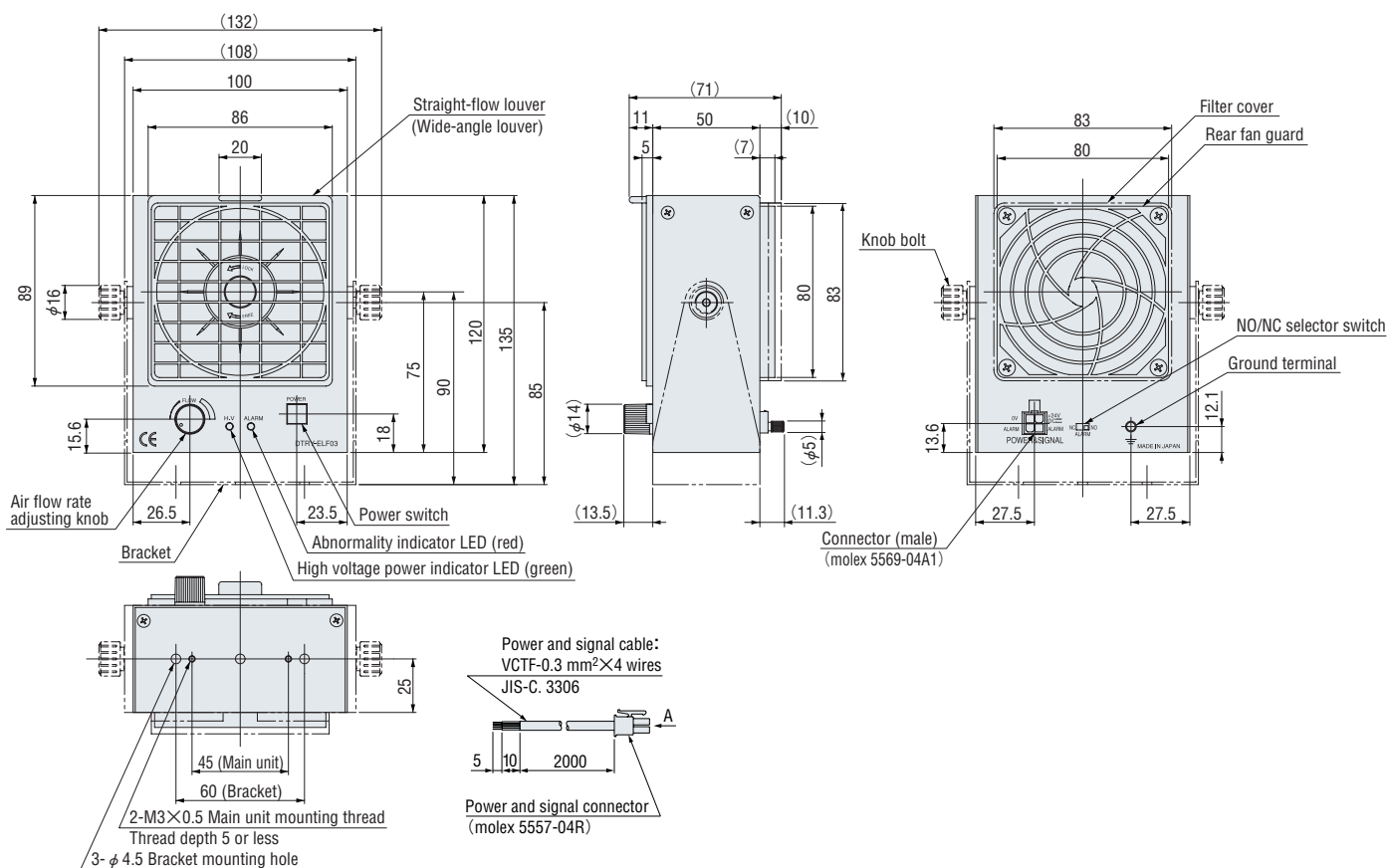
Dimensions (mm)

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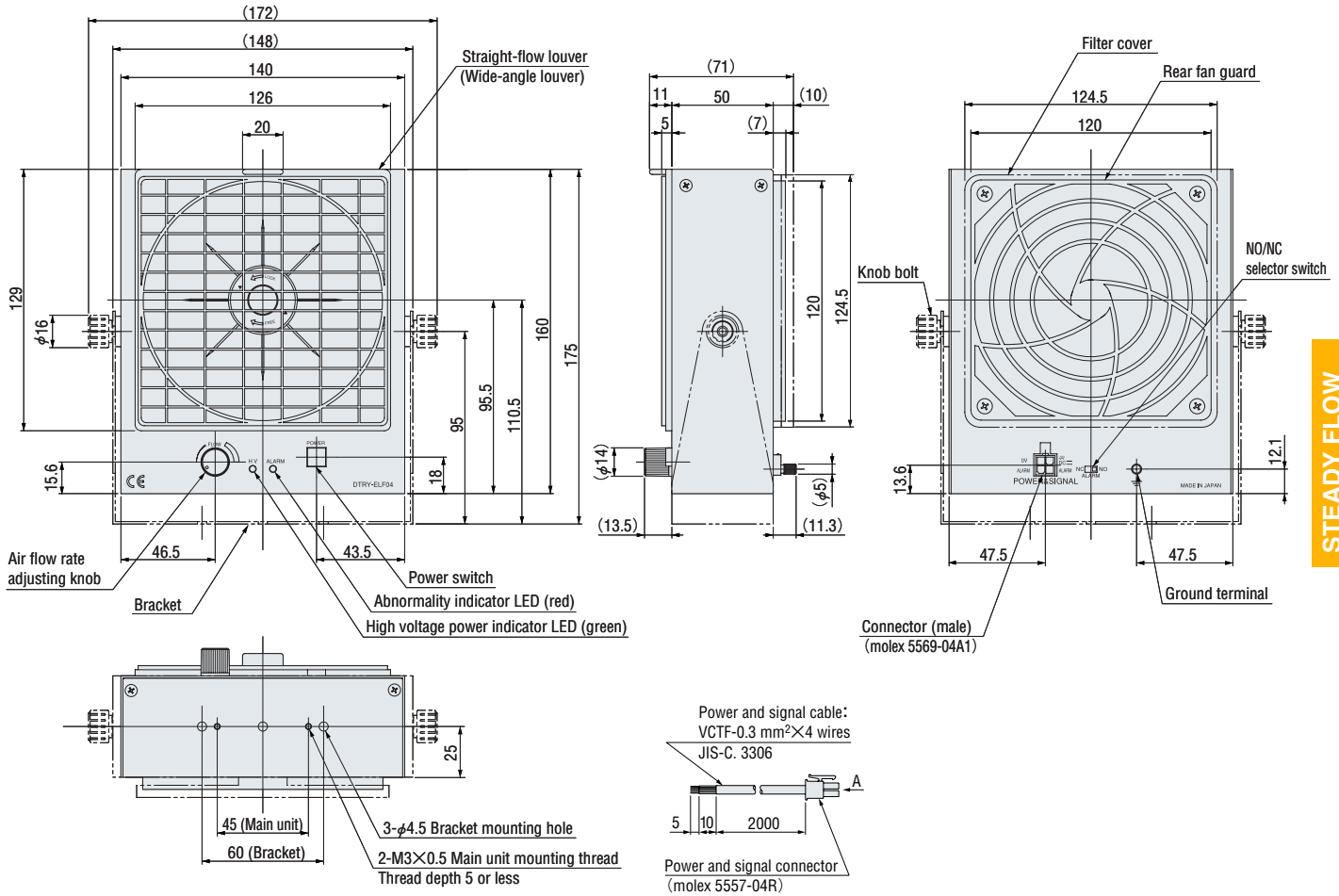
● DTRY-ELF02



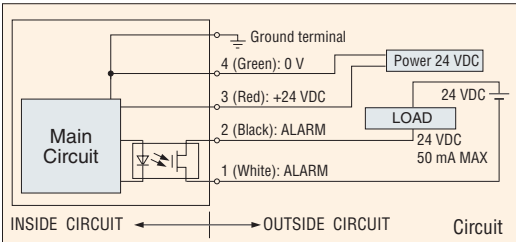
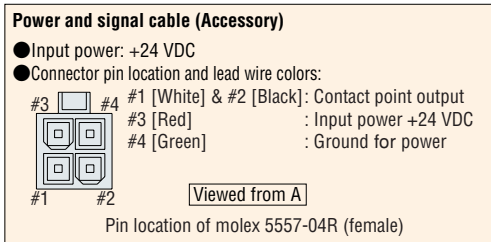
● DTRY-ELF03



● DTRY-ELF04



STEADY FLOW FAN TYPE



- Notes
- 1: ON/OFF of the power to the Ionizer should be done at the input side (+24 VDC side)
 - 2: Ground for power and ground terminal are connected inside
 - 3: For output of abnormality output contact point, see page 41.

Handling Instructions and Precautions (for STEADY FLOW FAN TYPE)

Installation

1. When mounting, do not thread mounting screws in 5mm or deeper; otherwise the mounting screws may contact the inner circuit board. It could result in damage to the product.
2. When installing, ensure sufficient space so as not to block the suction opening.

Precaution on Use

1. Before inspections, cleaning, or maintenance, be sure to disconnect a power cable from a connector.
2. The discharging needle has a sharp-pointed tip. Handle the discharging needle unit with care when removing or cleaning it. Otherwise it could possibly result in injury. Pay attention not to bend or break a discharging needle. Otherwise, you could not get the desired effect.
3. Do not disassemble the discharging needle unit. Since the discharging needle has a sharp-pointed tip, you could be injured.
4. A poor operating environment (e.g., very humid conditions) or failure to clean the discharging needle will lead to degraded performance of the Ionizer. Hence, periodic maintenance is required to maintain performance. For maintenance, refer to the supplied instruction manual.
5. To turn ON/OFF externally, make it the input on +24 VDC side.

Output of abnormality output contact point

1. The abnormality output circuit of this product will be active normally about 2 seconds later after being turned on. Sufficient care should be taken to design an error detection circuit at the time of the unit installation on other equipment, etc.
2. When the power to the main unit of the Ionizer is turned on immediately after being turned off, an abnormality output may occur. When performing such an operation, be sure to wait at least 2-second or longer after turning off.
3. Caution should be exercised to design the error detection circuit not to detect the Ionizer's abnormality output for one second after turning off the power to the Ionizer main unit.

Note: Either of the above cases, no problem with the Ionizer performance.

For output at the time of setting each contact point, see the table below.

Setting MODE	Power OFF	Power ON	Abnormality
NO (a-contact)	OPEN	OPEN	CLOSE
NC (b-contact)	OPEN	CLOSE	OPEN

※ For the precautions for IONIZER, see page 41.