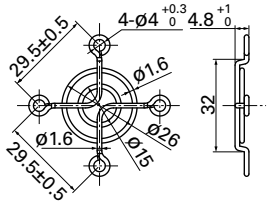
36 mm sq. type

Model no.	Surface treatment	Mass (g)
109-1050	Nickel-chrome plating (silver)	4

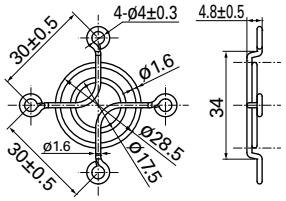
Inlet side, Outlet side



38 mm sq. type

Model no.	Surface treatment	Mass (g)
109-1065	Nickel-chrome plating (silver)	5

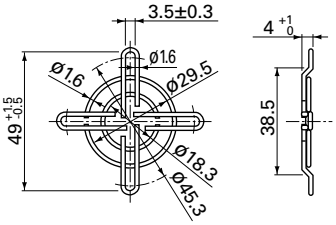
Inlet side, Outlet side



40 mm sq. type

Model no.	Surface treatment	Mass (g)
109-059	Nickel-chrome plating (silver)	7
109-059H	Cation electropainting (black)	

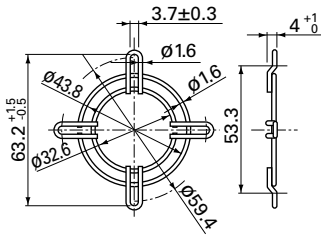
Inlet side, Outlet side



52 mm sq. type

Model no.	Surface treatment	Mass (g)
109-149	Nickel-chrome plating (silver)	7

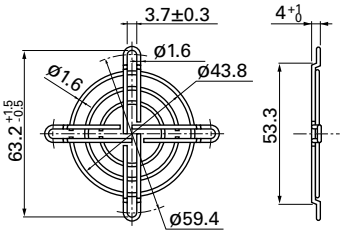
Outlet side



52 mm sq. type

Model no.	Surface treatment	Mass (g)
109-149E	Nickel-chrome plating (silver)	9

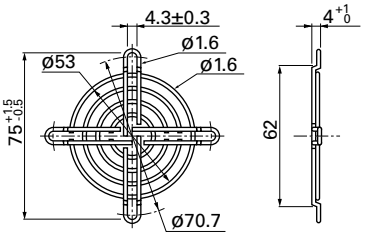
Inlet side, Outlet side



60 mm sq. type

Model no.	Surface treatment	Mass (g)
109-139E	Nickel-chrome plating (silver)	14.5
109-139H	Cation electropainting (black)	

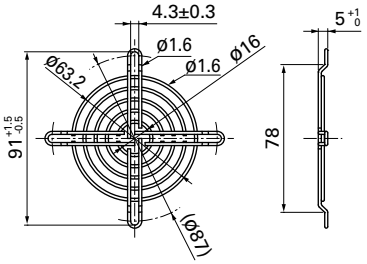
Inlet side, Outlet side



70 mm sq. type

Model no.	Surface treatment	Mass (g)
109-1128	Nickel-chrome plating (silver)	17

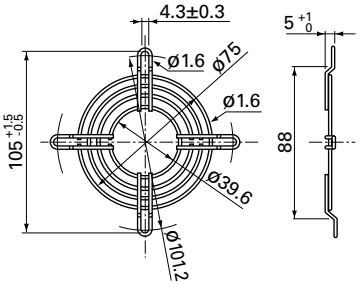
Inlet side, Outlet side



80 mm sq. type

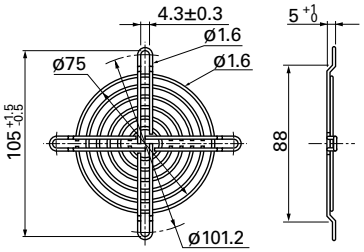
Model no.	Surface treatment	Mass (g)
109-049C	Nickel-chrome plating (silver)	17

Outlet side



Model no.	Surface treatment	Mass (g)
109-049E	Nickel-chrome plating (silver)	21
109-049H	Cation electropainting (black)	

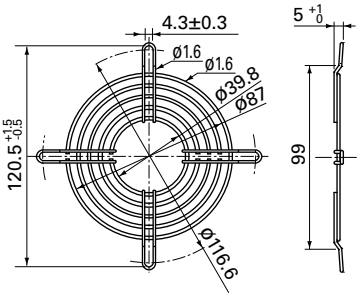
Inlet side, Outlet side



92 mm sq. type

Model no.	Surface treatment	Mass (g)
109-099C	Nickel-chrome plating (silver)	22

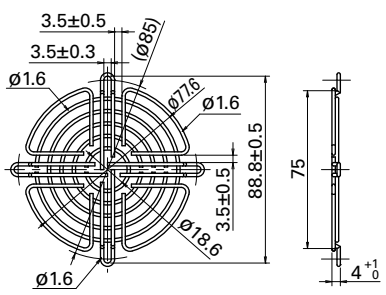
Outlet side



ø92 mm type

Model no.	Surface treatment	Mass (g)
109-1147	Nickel-chrome plating (silver)	23

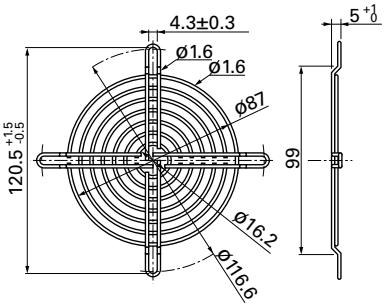
Impeller side, Nameplate side



92 mm sq., ø100 mm type

Model no.	Surface treatment	Mass (g)
109-099E	Nickel-chrome plating (silver)	29
109-099H	Cation electropainting (black)	

Inlet side, Outlet side



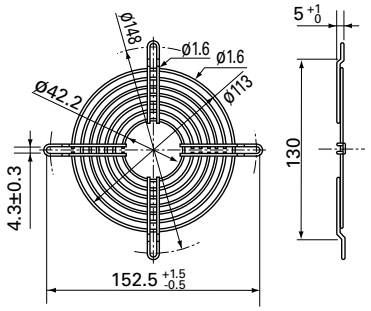
Option

Finger guards Dimensions (unit: mm) DC AC

120 mm sq. type

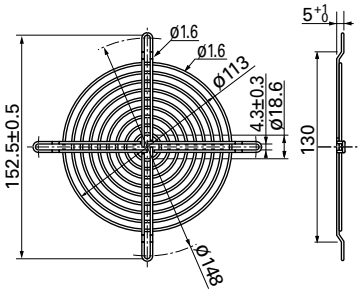
Model no.	Surface treatment	Mass (g)
109-019C	Nickel-chrome plating (silver)	32
109-019H	Cation electropainting (black)	

Outlet side



Model no.	Surface treatment	Mass (g)
109-019E	Nickel-chrome plating (silver)	42
109-019K	Cation electropainting (black)	

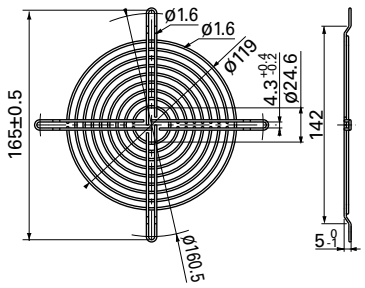
Inlet side, Outlet side



127 mm sq., ø175 mm type

Model no.	Surface treatment	Mass (g)
109-722	Nickel-chrome plating (silver)	43

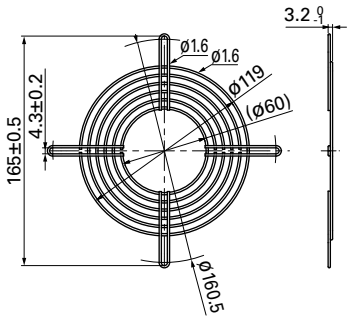
Inlet side, Outlet side



127 mm sq. type

Model no.	Surface treatment	Mass (g)
109-723	Nickel-chrome plating (silver)	34

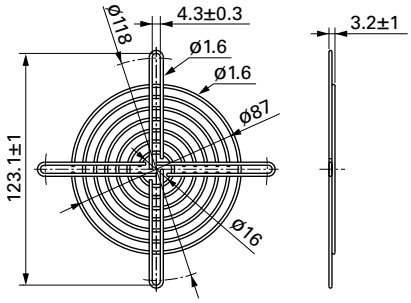
Outlet side



ø133 mm type

Model no.	Surface treatment	Mass (g)
109-1112	Nickel-chrome plating (silver)	65

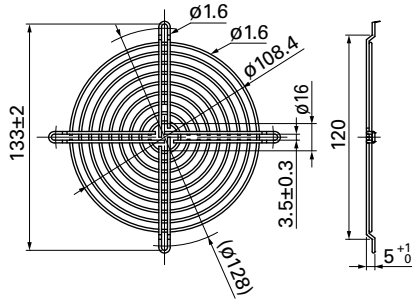
Inlet side



ø136 mm type

Model no.	Surface treatment	Mass (g)
109-1139	Nickel-chrome plating (silver)	41

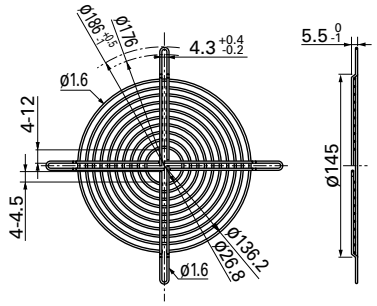
Impeller side, Nameplate side



140 mm sq. type

Model no.	Surface treatment	Mass (g)
109-719	Nickel-chrome plating (silver)	51
109-719H	Cation electropainting (black)	

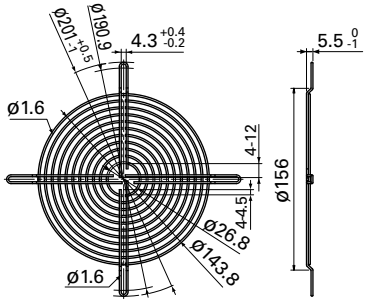
Inlet side, Outlet side



150 mm sq. type

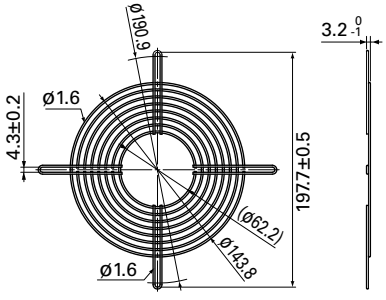
Model no.	Surface treatment	Mass (g)
109-1051	Nickel-chrome plating (silver)	63

Inlet side, Outlet side



Model no.	Surface treatment	Mass (g)
109-1052	Nickel-chrome plating (silver)	53

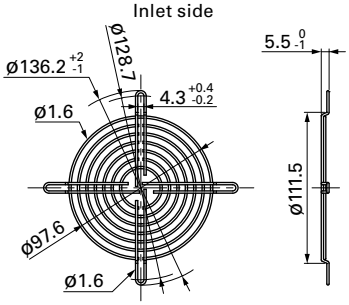
Outlet side



ø150 mm type

Model no.	Surface treatment	Mass (g)
109-1104	Nickel-chrome plating (silver)	31
109-1104H	Cation electropainting (black)	

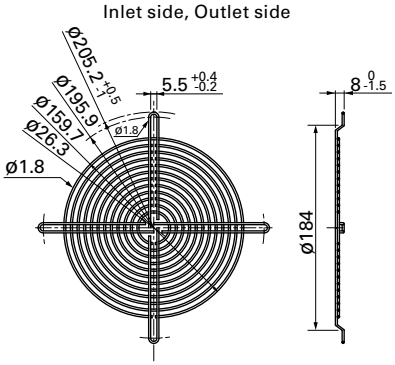
Inlet side



160 mm sq. type

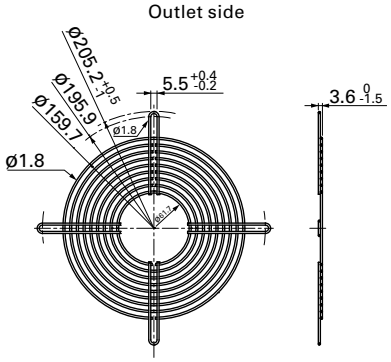
Model no.	Surface treatment	Mass (g)
109-619E	Nickel-chrome plating (silver)	85
109-619H	Cation electropainting (black)	

Inlet side, Outlet side



Model no.	Surface treatment	Mass (g)
109-620	Nickel-chrome plating (silver)	74

Outlet side

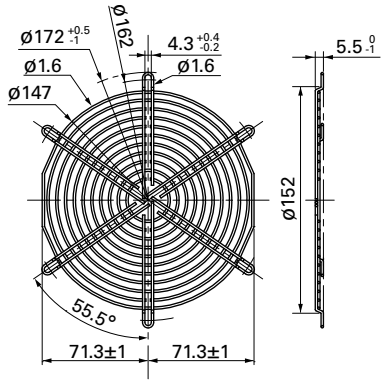


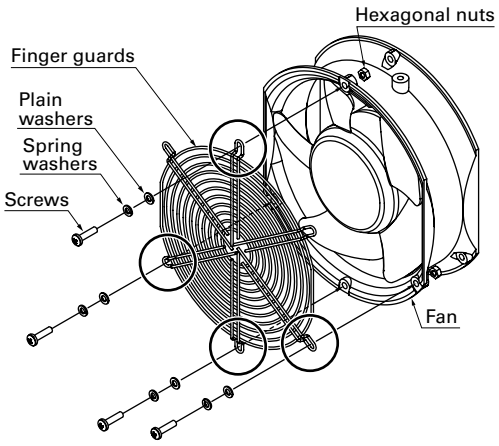
ø172 mm Sidecut type

Model no.	Surface treatment	Mass (g)	Applicable model no.
109-319J	Nickel-chrome plating (silver)	65	9SG57□□P5□□□/9GV57□□H501 9CR5748P9G001/9WG5748P5□001

Finger guard 109-319J should be mounted with four holes as in the drawing.

Inlet side, Outlet side





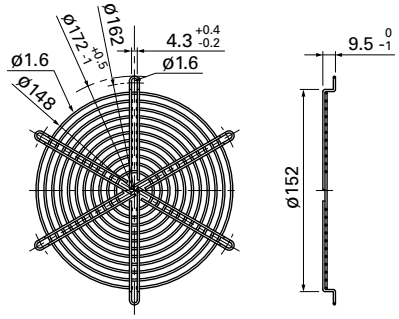
ø172 mm Sidecut, Round type

Model no.	Surface treatment	Mass (g)
109-319E	Nickel-chrome plating (silver)	69
109-319H	Cation electropainting (black)	

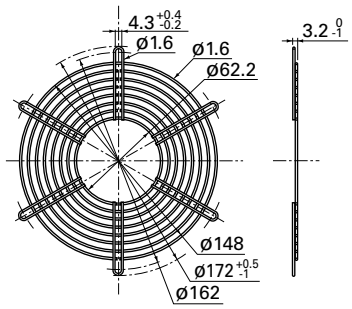
Model no.	Surface treatment	Mass (g)
109-320	Nickel-chrome plating (silver)	53

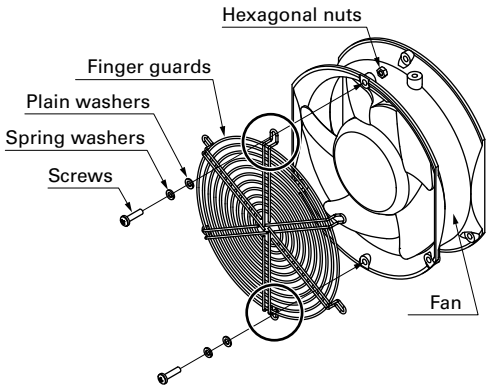
Finger guards 109-319E, 109-319H, and 109-320 should be mounted with two holes as in the drawing and do not use any other holes.

Inlet side, Outlet side



Outlet side



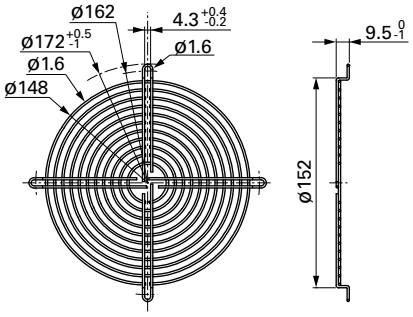


ø172 mm Round type

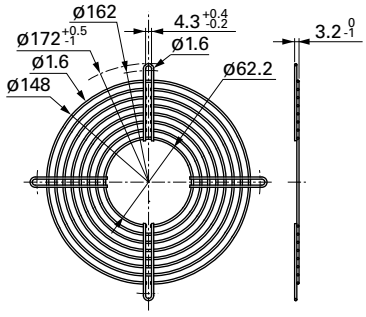
Model no.	Surface treatment	Mass (g)
109-1066	Nickel-chrome plating (silver)	61

Model no.	Surface treatment	Mass (g)
109-1068	Nickel-chrome plating (silver)	54

Inlet side, Outlet side



Outlet side



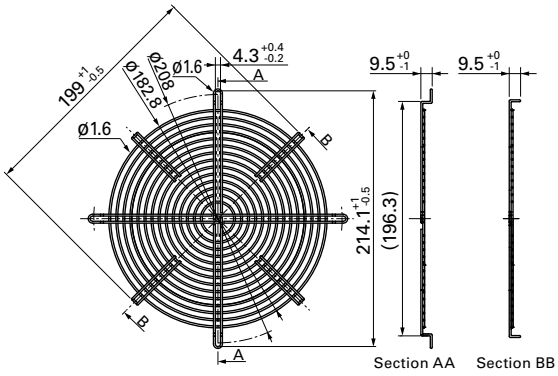
Finger guards Dimensions (unit: mm) DC AC

ø200 mm type

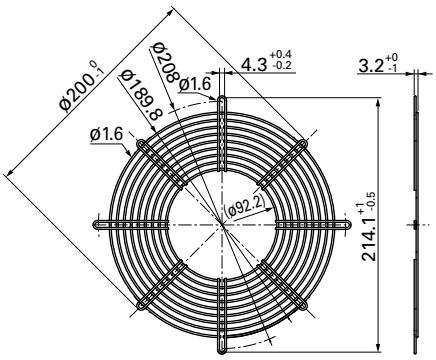
Model no.	Surface treatment	Mass (g)	Applicable model no.
109-1102	Nickel-chrome plating (silver)	100	9GV2048P0G201

Model no.	Surface treatment	Mass (g)	Applicable model no.
109-1103	Nickel-chrome plating (silver)	80	9GV2048P0G201

Inlet side, Outlet side



Outlet side

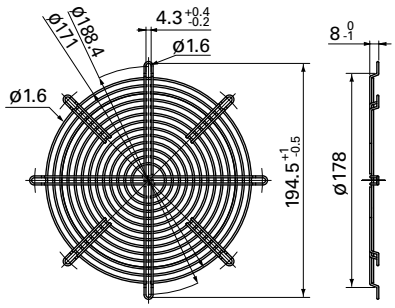


ø200 mm type

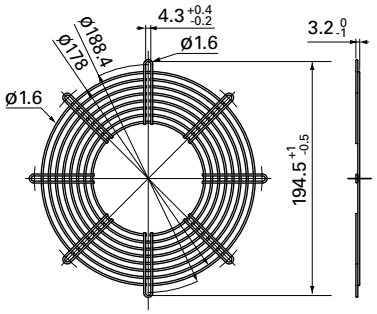
Model no.	Surface treatment	Mass (g)	Applicable model no.
109-720	Nickel-chrome plating (silver)	84	109E2024□□□□ 9EC20□□□001
109-720H	Cation electropainting (black)		

Model no.	Surface treatment	Mass (g)	Applicable model no.
109-721	Nickel-chrome plating (silver)	66	109E2024□□□□ 9EC20□□□001
109-721H	Cation electropainting (black)		

Inlet side, Outlet side



Outlet side



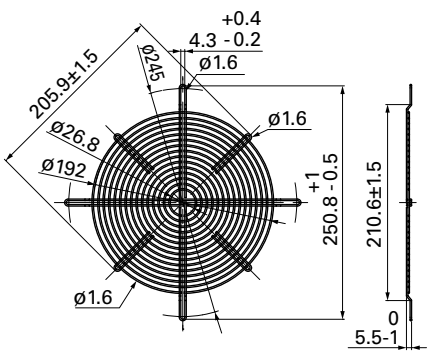
ø221 mm type

Model no.	Surface treatment	Mass (g)
109-1138	Nickel-chrome plating (silver)	105
109-1138H	Cation electropainting (black)	

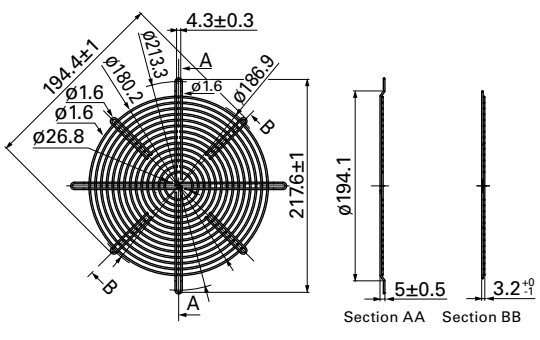
ø225 mm type

Model no.	Surface treatment	Mass (g)
109-1137	Nickel-chrome plating (silver)	94
109-1137H	Cation electropainting (black)	

Inlet side



Inlet side

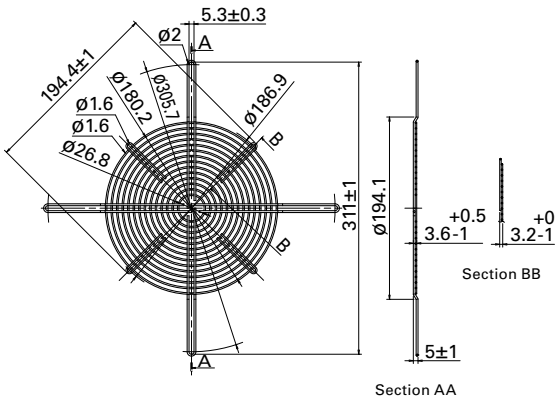


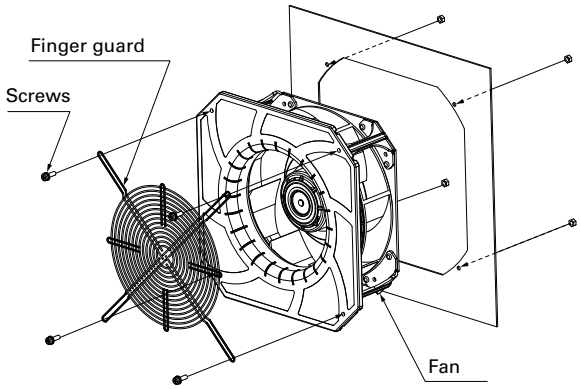
270 mm sq. type (for Bracket-mounted Centrifugal Fan)

Model no.	Surface treatment	Mass (g)
109-1146	Nickel-chrome plating (silver)	106

Finger guard 109-1146 should be mounted with four holes as in the drawing.

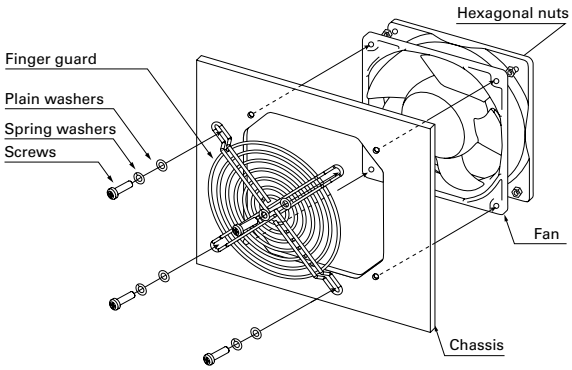
Inlet side



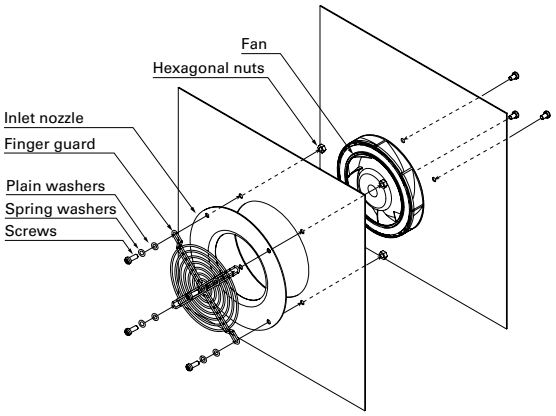


Mounting example

Axial fan



Centrifugal fan

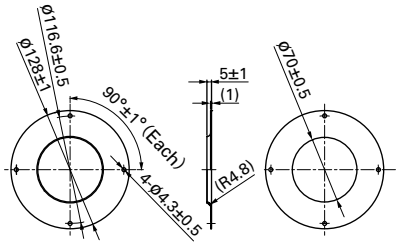


Inlet nozzle for centrifugal fan and splash proof centrifugal fan Dimensions (unit: mm) DC

Nozzle mounted in fan inlet side to adjust the flow of introduced air. Material: Steel sheet

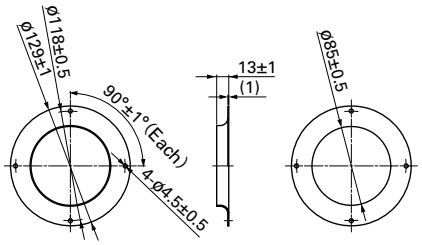
ø100 mm type

Model no.	Surface treatment	Mass (g)
109-1080	Electro nickel plating (silver)	80



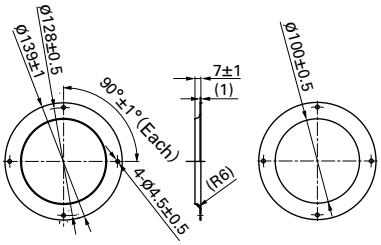
ø133 mm type

Model no.	Surface treatment	Mass (g)
109-1069	Electro nickel plating (silver)	76
109-1069H	Cation electropainting (black)	



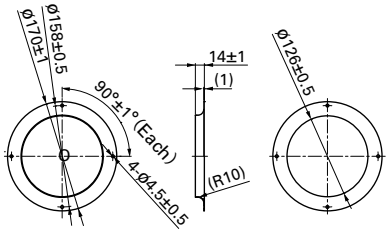
ø150 mm type

Model no.	Surface treatment	Mass (g)
109-1081	Electro nickel plating (silver)	70
109-1081H	Cation electropainting (black)	



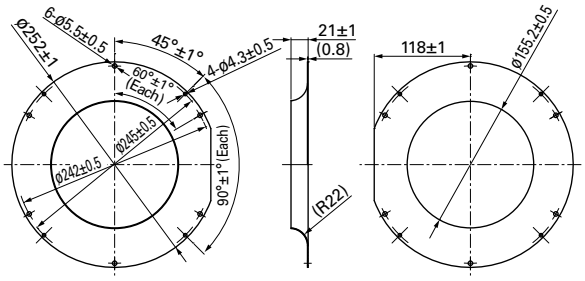
ø175 mm type

Model no.	Surface treatment	Mass (g)
109-1073	Electro nickel plating (silver)	100
109-1073H	Cation electropainting (black)	



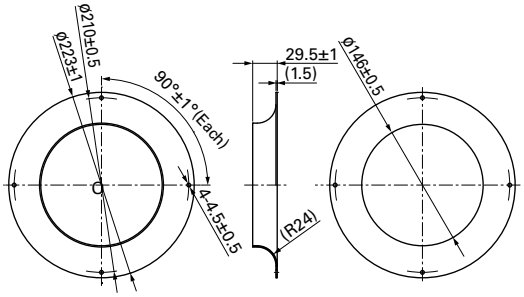
ø221 mm type

Model no.	Surface treatment	Mass (g)
109-1135	Electro nickel plating (silver)	230
109-1135H	Cation electropainting (black)	



ø225 mm type

Model no.	Surface treatment	Mass (g)
109-1134	Electro nickel plating (silver)	360
109-1134H	Cation electropainting (black)	



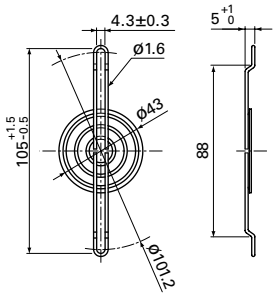
EMC guards Dimensions (unit: mm) DC

It is a metallic piece that protects materials from the adverse effects of electromagnetic noise sources. It provides electromagnetic shielding. It is attached to the casing of a device by means of the fan fixing screw (s). Ground the devices equipped with an EMC guard.

80 mm sq. type

Model no.	Surface treatment	Mass (g)
109-1038	Nickel-chrome plating (silver)	14

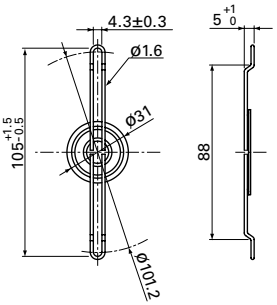
Representative fans model numbers	Dimensions of fans (mm)
109P08*	80×80×20
9GV08*	80×80×25
9GV08*	80×80×38
9HV08*	
9HVA08*	



80 mm sq. type

Model no.	Surface treatment	Mass (g)
109-1039	Nickel-chrome plating (silver)	10

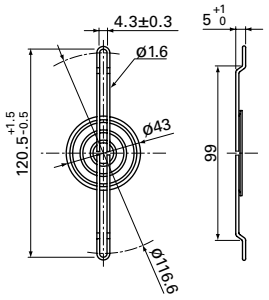
Representative fans model numbers	Dimensions of fans (mm)
109P08*	80×80×15
9GA08*	80×80×20
109R08*	80×80×25
9A08*	
9GA08*	
9GA08*	80×80×32
9G08*	80×80×38
9GA08*	



92 mm sq. type

Model no.	Surface treatment	Mass (g)
109-1040	Nickel-chrome plating (silver)	15

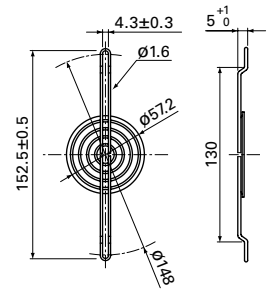
Representative fans model numbers	Dimensions of fans (mm)
9G09*	92×92×32
9G09*	92×92×38
9GV09*	
9GA09*	



120 mm sq. type

Model no.	Surface treatment	Mass (g)
109-1037	Nickel-chrome plating (silver)	26

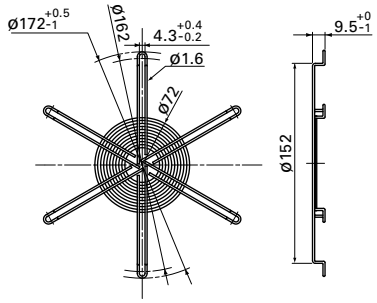
Representative fans model numbers	Dimensions of fans (mm)
9G12*	120×120×25
9GV12*	
9GL12*	120×120×38
9G12*	
9GV12*	
9HV12*	
9LG12*	

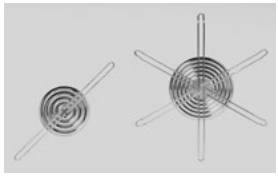


ø172 mm type

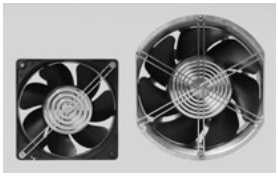
Model no.	Surface treatment	Mass (g)
109-1036	Nickel-chrome plating (silver)	49

Representative fans model numbers	Dimensions of fans (mm)
109E47*	Ø172×25
109L17*	Ø172×51
9GV57*	
109E17*	
109E57*	
9SG57*	





EMC guard



attached to a cooling fan

Option

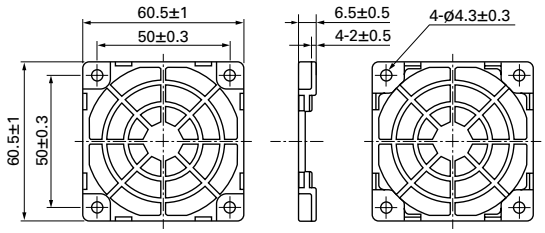
Resin finger guards Dimensions (unit: mm)

DC AC

Material Frame: Resin (PPE+PS) UL file no. E82268 94V-0

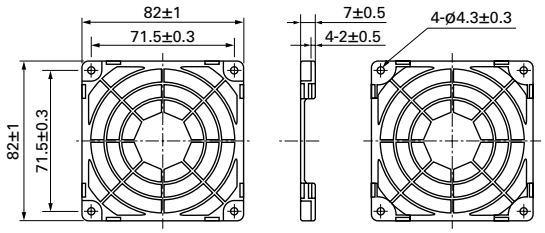
60 mm sq. type

Model no.	Mass (g)
109-1003G	7



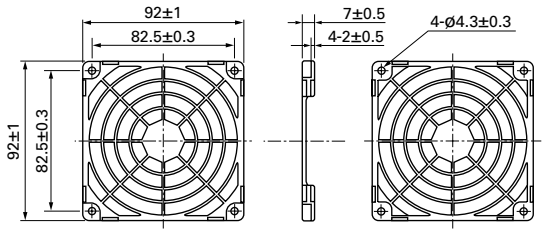
80 mm sq. type

Model no.	Mass (g)
109-1002G	10



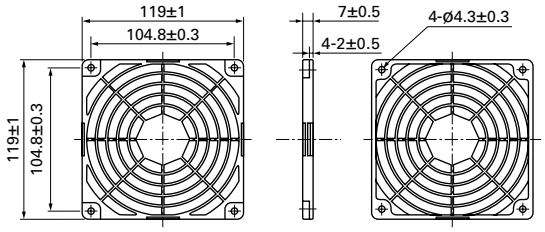
92 mm sq. type

Model no.	Mass (g)
109-1001G	12



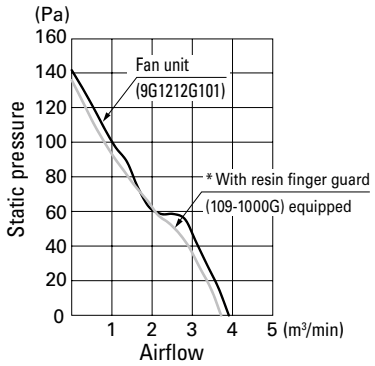
120 mm sq. type

Model no.	Mass (g)
109-1000G	23



Airflow - Static pressure characteristics

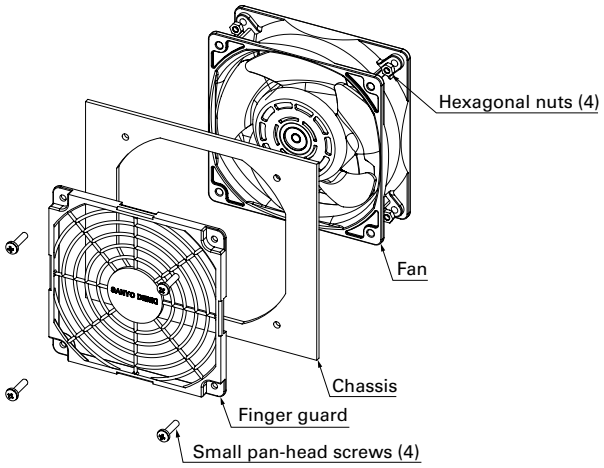
Measured with our double chamber measuring device (120 mm sq. type)



Applied voltage: 12 VDC

* Finger guard is attached on air inlet side of fan.

Mounting example



- Operating temperature limit is between -20 to +70°C. (non condensing)
- Plastic finger guards are placed on both the intake and exhaust sides of the fan.
- No nuts or screws for use in attachment included.

Resin filter kits Dimensions (unit: mm)

DC AC

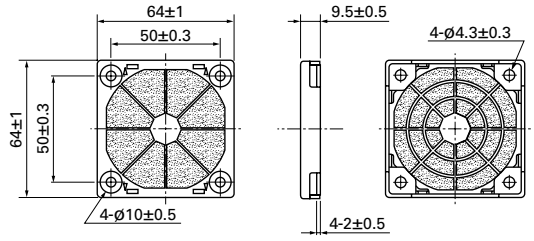
Material Guard, cover: Resin (PPE+PS) UL file no. E82268 94V-0 Filter: Polyurethane foam UL file no. E74916 (S) 94HF-1

PPI: Particles Per Inch Indicates the number of holes per inch. Note that the higher the number, the finer the grain of the sponge.

60 mm sq. type

Model no.	Mass (g)
109-1003F13 (13 PPI)	11
109-1003F20 (20 PPI)	
109-1003F30 (30 PPI)	
109-1003F40 (40 PPI)	

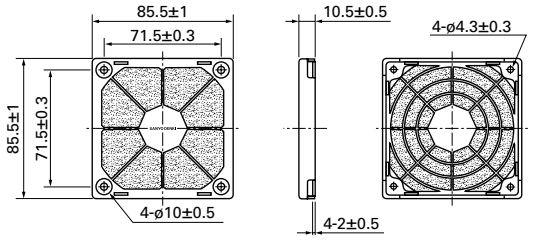
Replacement filter model no.	Quantity
109-1003M13 (13 PPI)	5
109-1003M20 (20 PPI)	
109-1003M30 (30 PPI)	
109-1003M40 (40 PPI)	



80 mm sq. type

Model no.	Mass (g)
109-1002F13 (13 PPI)	19
109-1002F20 (20 PPI)	
109-1002F30 (30 PPI)	
109-1002F40 (40 PPI)	

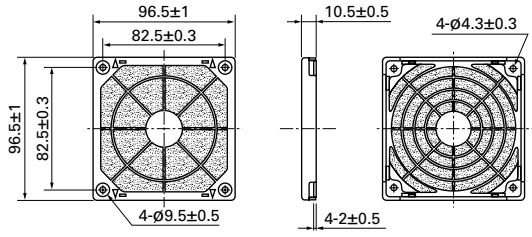
Replacement filter model no.	Quantity
109-1002M13 (13 PPI)	5
109-1002M20 (20 PPI)	
109-1002M30 (30 PPI)	
109-1002M40 (40 PPI)	



92 mm sq. type

Model no.	Mass (g)
109-1001F13 (13 PPI)	25
109-1001F20 (20 PPI)	
109-1001F30 (30 PPI)	
109-1001F40 (40 PPI)	

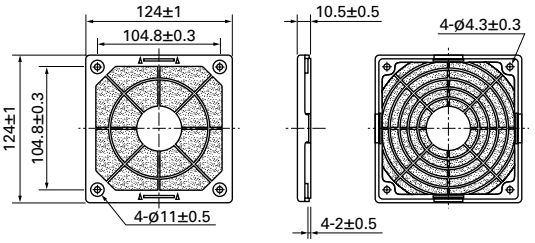
Replacement filter model no.	Quantity
109-1001M13 (13 PPI)	5
109-1001M20 (20 PPI)	
109-1001M30 (30 PPI)	
109-1001M40 (40 PPI)	



120 mm sq. type

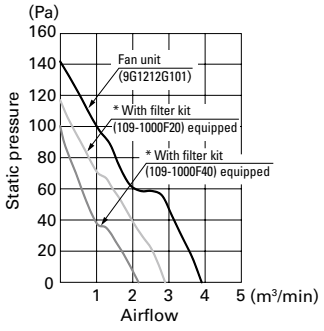
Model no.	Mass (g)
109-1000F13 (13 PPI)	44
109-1000F20 (20 PPI)	
109-1000F30 (30 PPI)	
109-1000F40 (40 PPI)	

Replacement filter model no.	Quantity
109-1000M13 (13 PPI)	5
109-1000M20 (20 PPI)	
109-1000M30 (30 PPI)	
109-1000M40 (40 PPI)	



Airflow - Static pressure characteristics

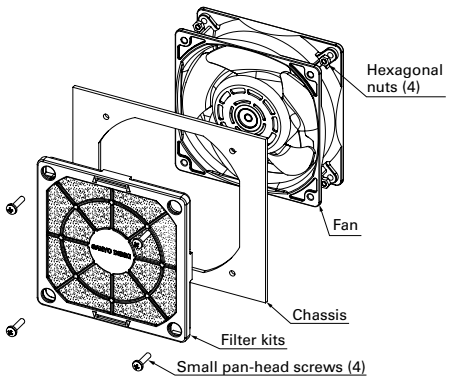
Measured with our double chamber measuring device (120 mm sq. type)



Applied voltage: 12 VDC

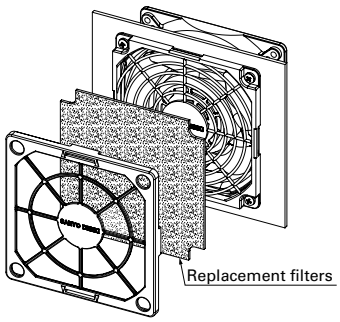
* Filter kit is attached on air inlet side of fan.

Mounting example



Filter replacement (example)

Replacement filters can be replaced by taking off the front part of the filter kit. There is no need to remove the screws.



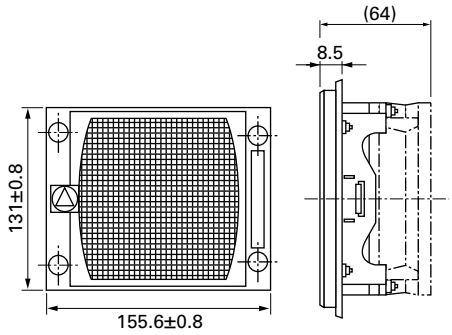
- Filter kit is one of the option to keep air in the chassis clean filtering dust in external atmosphere when pulling-air cooling is implemented. The filter kit is hooked up through mounting hole of fan frame with screw as well as finger guard. Some performances (airflow & static pressure) of the fan motor decreases when filter kit is hooked up.
- This Filter Kit is composed of 3 components, including a guard, a filter and a cover. It is delivered as a finished product at delivery, saving assembly time when mounting. It can be mounted by inserting a screw in the apertures of the cover.
- The filter and cover can be easily removed from the guard with one touch. There is no need for fan removal when undertaking maintenance. ● Operating temperature limit is between -10 to +60°C. (non condensing)
- The filter will deteriorate with age, and the level of deterioration will vary upon usage conditions. Please be aware that the filter has a greater tendency to deteriorate under high temperature and humidity. For long-term storage, please store under the temperature range of 10 to 30°C, humidity range of 20 to 65%. Usage and storage period is approximately 2 years.
- Cooling ability decreases with filter contamination due to clogging. Filter replacement is recommended approximately every six months of usage. Please replace the filter if deterioration or clogging is seen at inspection.
- When replacing the filter, please use genuine SANYO DENKI filters. ●Do not water-wash the filter.
- Avoid use and storage under high temperature or humidity, direct sunlight or exposure to ultraviolet light, or in corrosive gas. ●No nuts or screws for use in attachment included.

Filter kits Applicable models: AC Fan 120×120×38 mm Dimensions, Reference Dimensions of Mounting Holes (unit: mm) AC

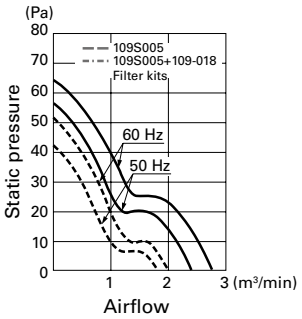
Neither filter kit can be installed on ACDC fans, or AC fans with sensors. Please evaluate it by assembly filter kits on the derice.

Model no.	Material	Mass (g)
109-018	Steel Wire Mesh: Stainless 16-mesh nets in 3 layers Cover: Resin Metal fittings: Steel (chromate-plated)	182

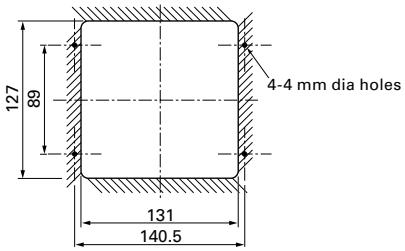
Dimensions



Airflow - Static Pressure Characteristics
(Measured with our double chamber measuring device)

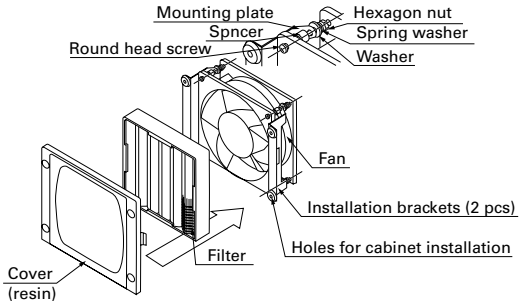


Reference Dimensions of Mounting Holes



●The parts shown in the installation diagram (nuts, washers, and screws) are included.

Mounting Example

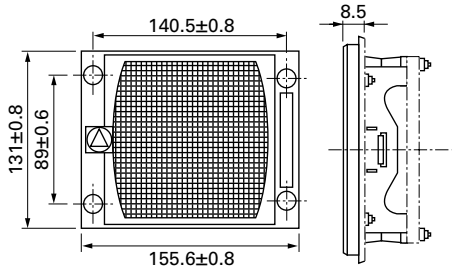


Screen kits Applicable models: AC Fan 120×120×38 mm Dimensions, Reference Dimensions of Mounting Holes (unit: mm) AC

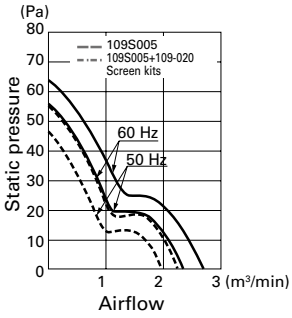
Neither screen kit can be installed on ACDC fans, or AC fans with sensors.

Model no.	Material	Mass (g)
109-020	Steel Wire Mesh: Stainless 16-mesh nets in 1 layers Cover: Resin Metal fittings: Steel (chromate-plated)	135

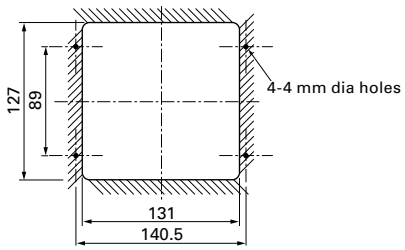
Dimensions



Airflow - Static Pressure Characteristics
(Measured with our double chamber measuring device)

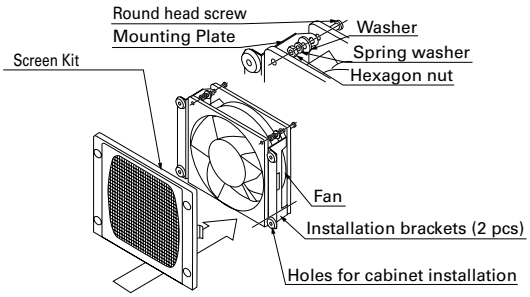


Reference Dimensions of Mounting Holes



●The parts shown in the installation diagram (nuts, washers, and screws) are included.

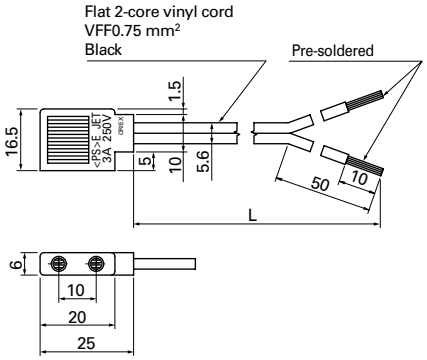
Mounting Example



Products compliant with electrical appliance and material safety law

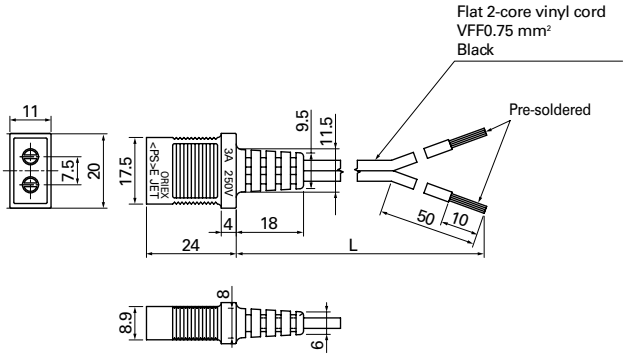
For 80×80×42 mm

Model no.	Power cord length [L] (mm)	Mass (g)
489-008-L10	1000	30
489-008-L21	2100	61
489-008-L35	3500	99



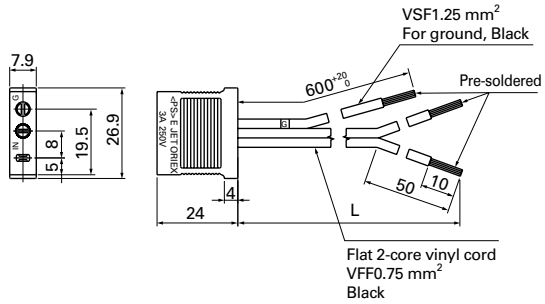
For 80×80×25 mm, 80×80×38 mm, 92×92×25 mm, 120×120×25 mm

Model no.	Power cord length [L] (mm)	Mass (g)
489-016-L10	1000	34
489-016-L21	2100	64



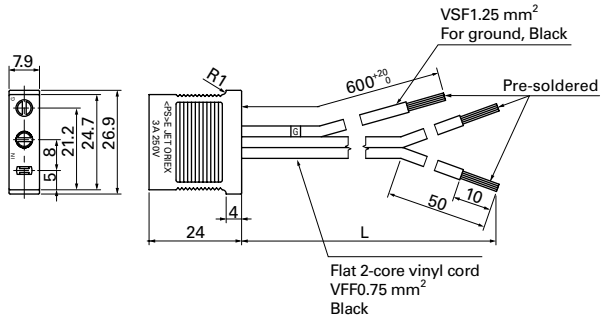
For 120×120×38 mm (not including AC/DC fan)

Model no.	Power cord length [L] (mm)	Mass (g)
489-006-L10	1000	47
489-006-L21	2100	76
489-006-L35	3500	114



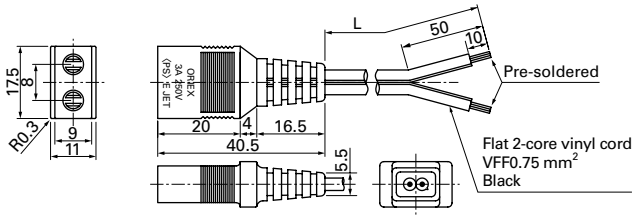
For 120×120×38 mm (not including AC/DC fan)

Model no.	Power cord length [L] (mm)	Mass (g)
489-037-L10	1000	46
489-037-L21	2100	76
489-037-L35	3500	114



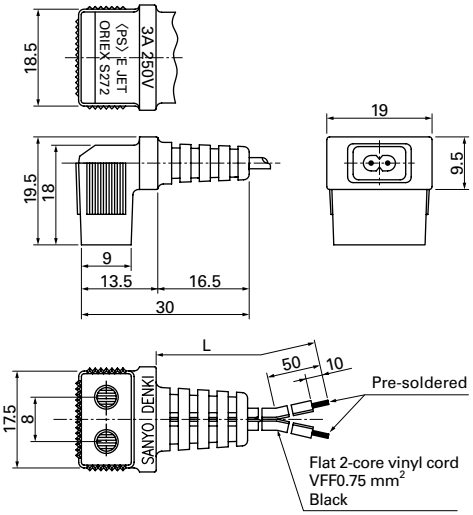
For 160×160×51 mm

Model no.	Power cord length [L] (mm)	Mass (g)
489-1618-L10	1000	34
489-1618-L21	2100	63
489-1618-L28	2800	83



For ø172×51 mm, ø172×150×51 mm, 160×160×51 mm

Model no.	Power cord length [L] (mm)	Mass (g)
489-1619-L10	1000	34
489-1619-L21	2100	64



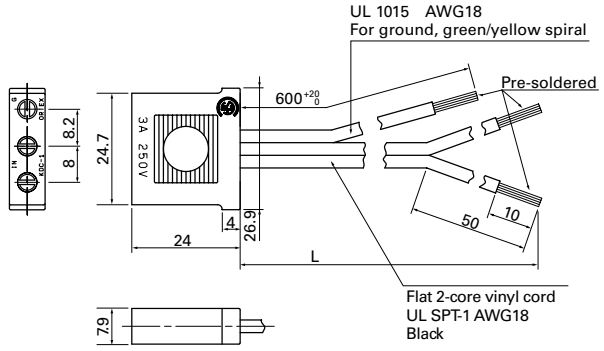
●Be careful not to damage the plug/cord when taking them out of the package.

Plug cord for AC fan Dimensions (unit: mm) AC

UL/CSA certified UL file no.: E50197 CSA file no.: LR67048

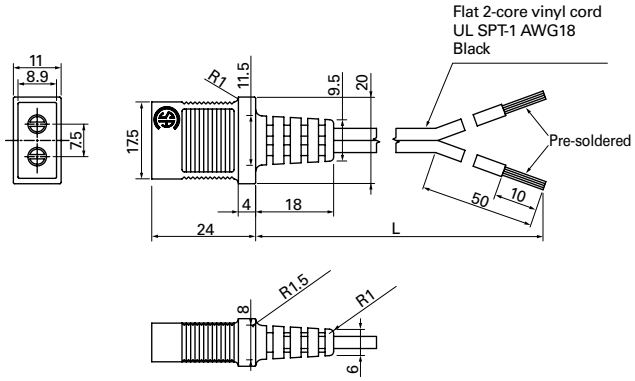
For 120×120×38 mm (not including AC/DC fan)

Model no.	Power cord length [L] (mm)	Mass (g)
489-007-L10	1000	48
489-007-L21	2100	80



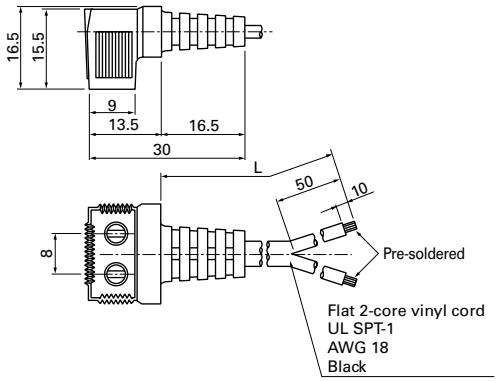
For 80×80×25 mm, 80×80×38 mm, 92×92×25 mm, 120×120×25 mm

Model no.	Power cord length [L] (mm)	Mass (g)
489-047-L10	1000	38
489-047-L21	2100	71



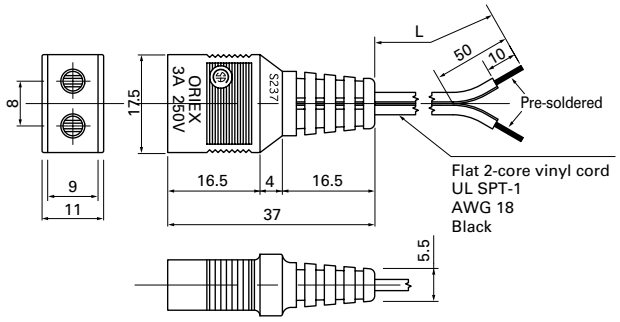
For ⌀172×51 mm, ⌀172×150×51 mm, 160×160×51 mm

Model no.	Power cord length [L] (mm)	Mass (g)
489-084-L10	1000	37
489-084-L21	2100	70



For 160×160×51mm

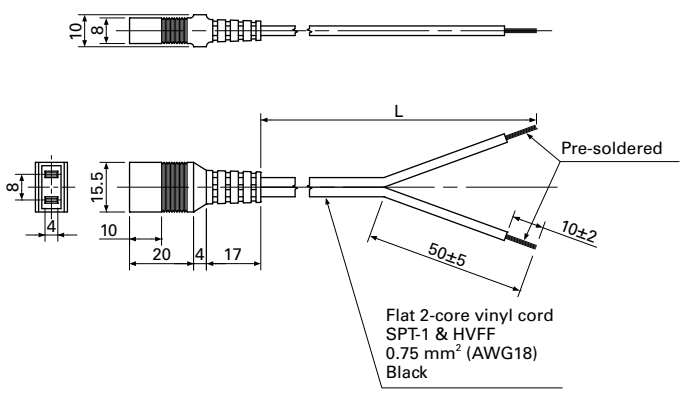
Model no.	Power cord length [L] (mm)	Mass (g)
489-086-L10	1000	37
489-086-L21	2100	70



Plug cord for ACDC fan Dimensions (unit: mm) AC

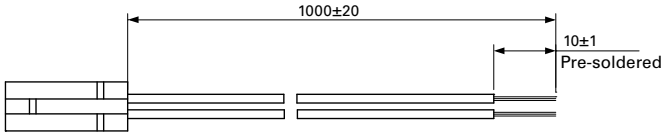
Products compliant with electrical appliance and material safety law, UL/CSA [c-UL] certified UL file no.E43202

Model no.	Power cord length [L] (mm)	Mass (g)
489-1635-L10	1000	38
489-1635-L21	2100	74



Wiring Harness for Sensor

Model no.	Mass (g)
489-1636	9



●Be careful not to damage the plug/cord when taking them out of the package.