

Finger guards List

Increases safety by preventing foreign objects from entering fans. Fans can be used with little effect on airflow and static pressure.

Size	Model no.	Mounting side	Surface treatment	
			Nickel-chrome plating (silver)	Cation electropainting (black)
36 mm sq. type	109-1050	Inlet side, Outlet side	✓	–
38 mm sq. type	109-1065	Inlet side, Outlet side	✓	–
40 mm sq. type	109-059	Inlet side, Outlet side	✓	–
	109-059H		–	✓
52 mm sq. type	109-149E	Inlet side, Outlet side	✓	–
	109-149	Outlet side	✓	–
60 mm sq. type	109-139E	Inlet side, Outlet side	✓	–
	109-139H		–	✓
70 mm sq. type, \varnothing70 mm type	109-1128	Inlet side, Outlet side	✓	–
80 mm sq. type	109-049E	Inlet side, Outlet side	✓	–
	109-049H		–	✓
	109-049C	Outlet side	✓	–
92 mm sq. type	109-099C	Outlet side	✓	–
\varnothing92 mm type	109-1147	Impeller side, Nameplate side	✓	–
92 mm sq. type, \varnothing100 mm type	109-099E	Inlet side, Outlet side	✓	–
	109-099H		–	✓
120 mm sq. type	109-019E	Inlet side, Outlet side	✓	–
	109-019K		–	✓
	109-019C	Outlet side	✓	–
	109-019H		–	✓
127 mm sq. type, \varnothing175 mm type, \varnothing190 mm type	109-722	Inlet side, Outlet side	✓	–
	109-722H	Inlet side, Outlet side	–	✓
127 mm sq. type	109-723	Outlet side	✓	–
\varnothing133 mm type	109-1112	Inlet side	✓	–
\varnothing136 mm type	109-1139	Impeller side, Nameplate side	✓	–
140 mm sq. type	109-719	Inlet side, Outlet side	✓	–
	109-719H		–	✓
150 mm sq. type	109-1051	Inlet side, Outlet side	✓	–
	109-1052	Outlet side	✓	–
\varnothing150 mm type	109-1104	Inlet side	✓	–
	109-1104H		–	✓
160 mm sq. type	109-619E	Inlet side, Outlet side	✓	–
	109-619H		–	✓
	109-620	Outlet side	✓	–
\varnothing172 mm Sidecut type	109-319J	Inlet side, Outlet side	✓	–
\varnothing172 mm Sidecut, Round type	109-319E	Inlet side, Outlet side	✓	–
	109-319H		–	✓
	109-320	Outlet side	✓	–
\varnothing172 mm Round type	109-1066	Inlet side, Outlet side	✓	–
	109-1068	Outlet side	✓	–
\varnothing200 mm type	109-1102*	Inlet side, Outlet side	✓	–
	109-1102H*		–	✓
	109-1103*	Outlet side	✓	–
	109-1103H*		–	✓
	109-720	Inlet side, Outlet side	✓	–
	109-720H		–	✓
	109-721	Outlet side	✓	–
109-721H	–		✓	
\varnothing221 mm type	109-1138	Inlet side	✓	–
	109-1138H		–	✓
\varnothing225 mm type	109-1137	Inlet side	✓	–
	109-1137H		–	✓
\varnothing250 mm type	109-1152	Inlet side	✓	–
	109-1152H		–	✓
270 mm sq. type (for Bracket-mounted Centrifugal Fan)	109-1146	Inlet side	✓	–
	109-1146H		–	✓

* Applicable model no.: 9GV20*

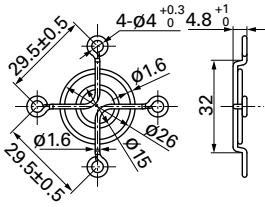
Finger guards Dimensions (unit: mm)

For use in environments subject to water splashes, cation electroplating models are recommended.

36 mm sq. type

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

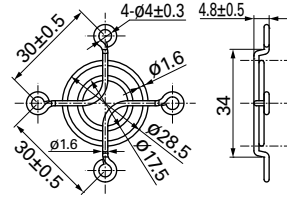
Inlet side, Outlet side



38 mm sq. type

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

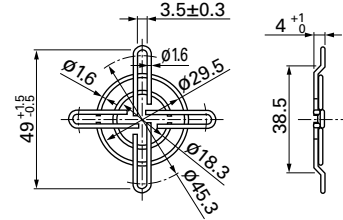
Inlet side, Outlet side



40 mm sq. type

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

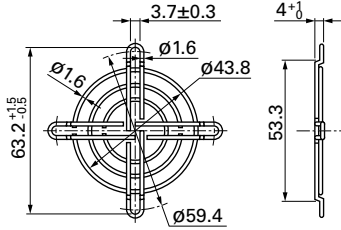
Inlet side, Outlet side



52 mm sq. type

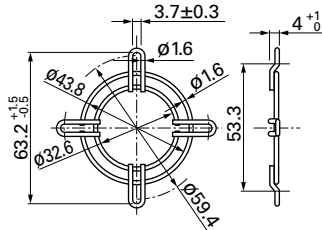
Model no.	Surface treatment	Mass (g)
109-149E	Nickel-chrome plating (silver)	9

Inlet side, Outlet side



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

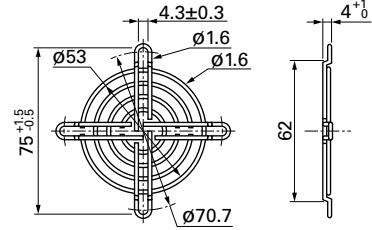
Outlet side



60 mm sq. type

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

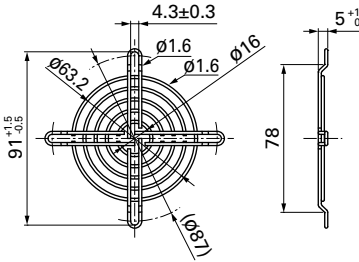
Inlet side, Outlet side



70 mm sq. type, ø70 mm type

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

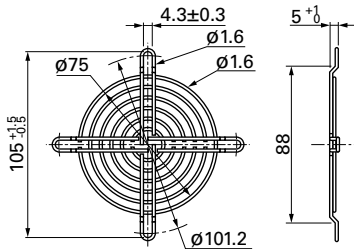
Inlet side, Outlet side



80 mm sq. type

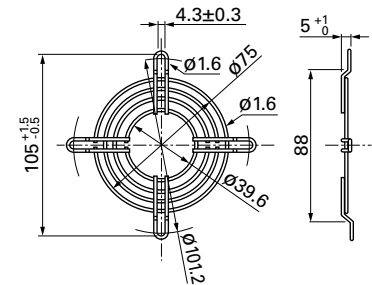
Model no.	Surface treatment	Mass (g)
109-049E	Nickel-chrome plating (silver)	21
109-049H	Cation electroplating (black)	

Inlet side, Outlet side



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

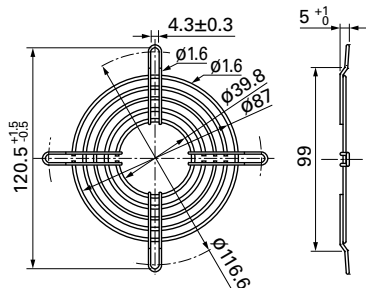
Outlet side



92 mm sq. type

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

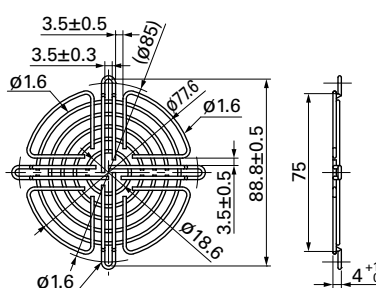
Outlet side



ø92 mm type

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

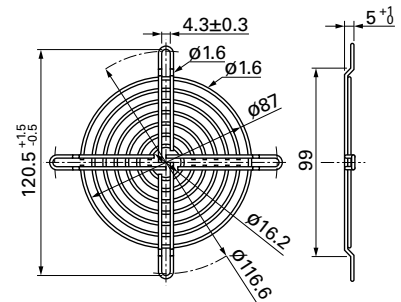
Impeller side, Nameplate side



92 mm sq., ø100 mm type

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

Inlet side, Outlet side



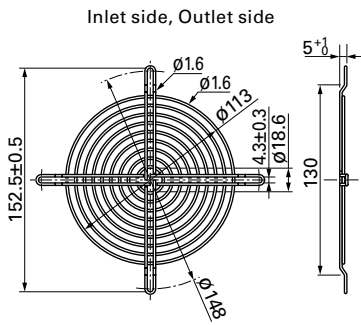
Option

Finger guards Dimensions (unit: mm)

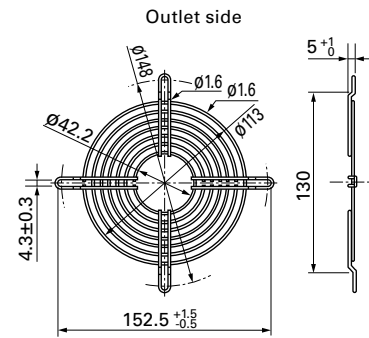
For use in environments subject to water splashes, cation electroplating models are recommended.

120 mm sq. type

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

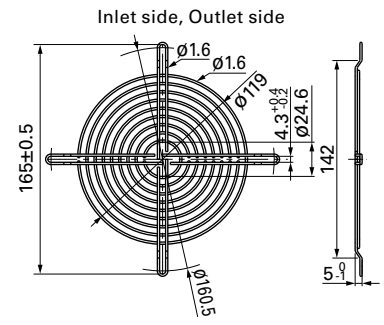


Model no.	Surface treatment	Mass (g)
109-019C	Nickel-chrome plating (silver)	32
109-019H	Cation electroplating (black)	



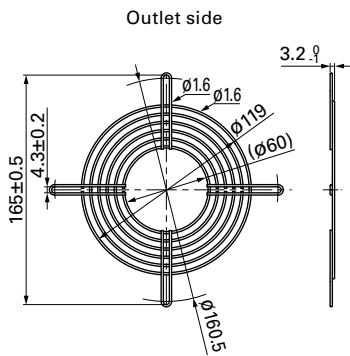
127 mm sq., Ø175 mm, Ø190 mm type

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



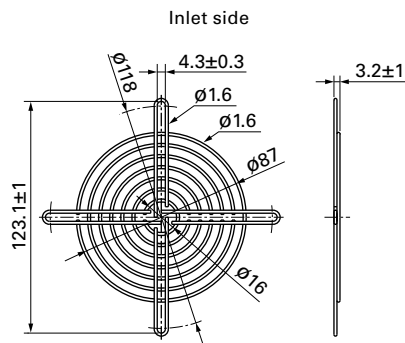
127 mm sq. type

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



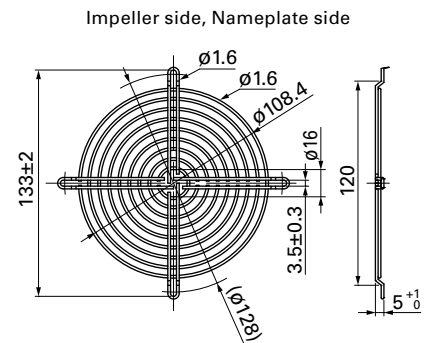
Ø133 mm type

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



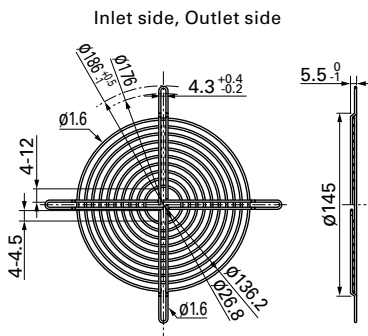
Ø136 mm type

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



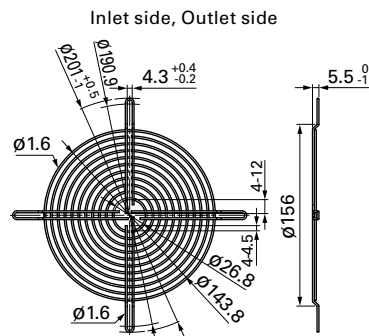
140 mm sq. type

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

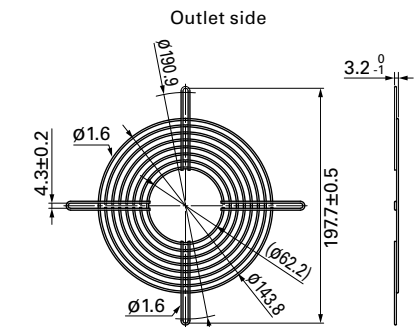


150 mm sq. type

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

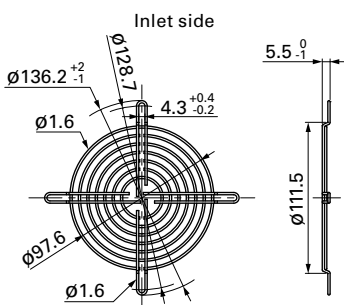


Model no.	Surface treatment	Mass (g)
109-1052	Nickel-chrome plating (silver)	53



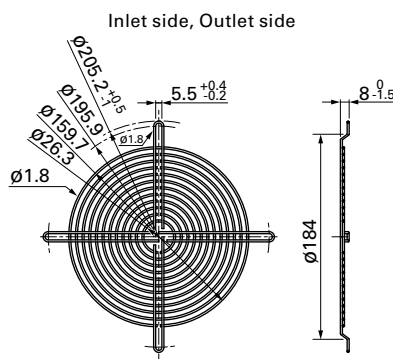
Ø150 mm type

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

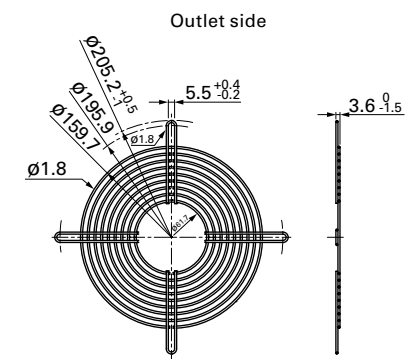


160 mm sq. type

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



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



Option

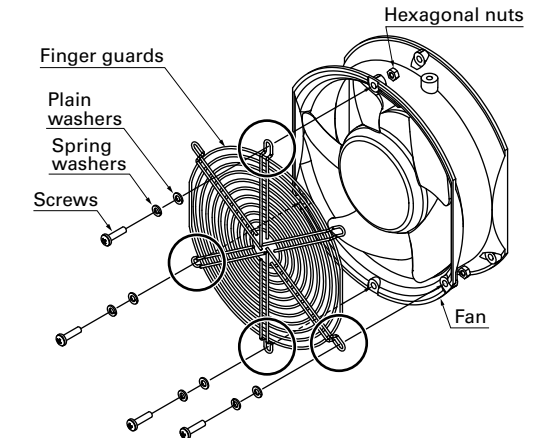
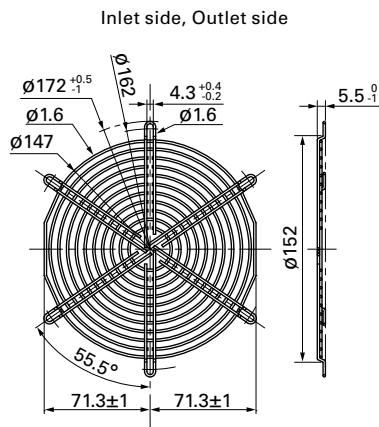
Finger guards Dimensions (unit: mm)

For use in environments subject to water splashes, cation electroplating models are recommended.

Ø172 mm Sidecut type

Model no.	Surface treatment	Mass (g)	Applicable model no.
109-319J	Nickel-chrome plating (silver)	65	9HV57*/9SG57*/9GV57* 9CR57*/9WG57*/9GP57*

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



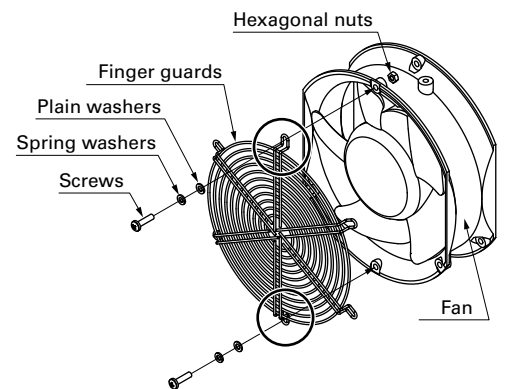
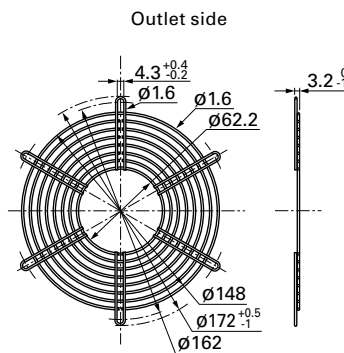
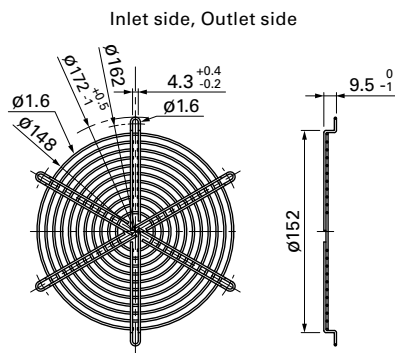
●No nuts or screws for use in attachment included.

Ø172 mm Sidecut, Round type

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



●No nuts or screws for use in attachment included.

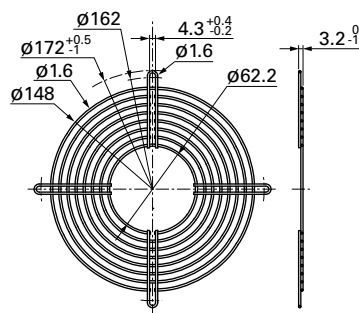
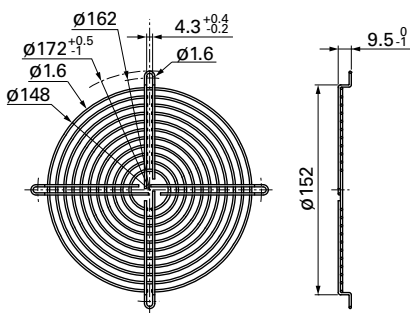
Ø172 mm Round type

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



Option

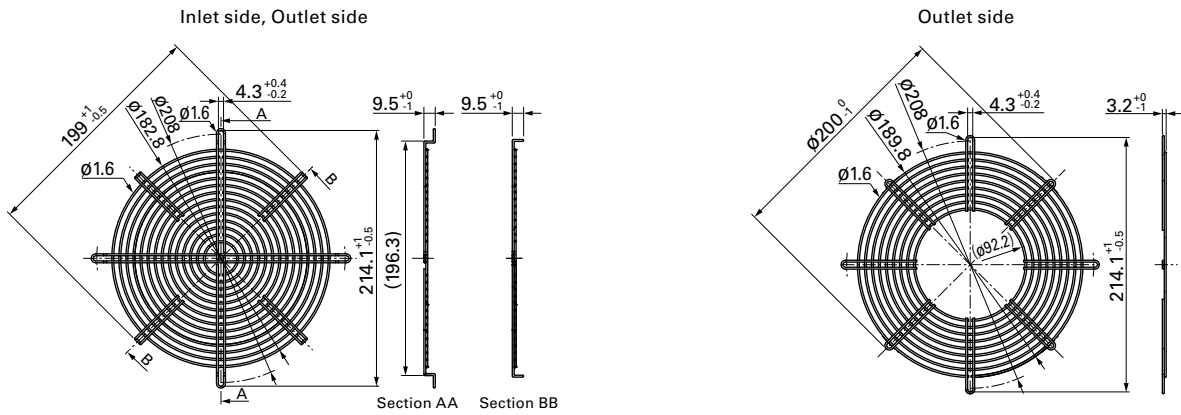
Finger guards Dimensions (unit: mm)

For use in environments subject to water splashes, cation electroplating models are recommended.

ø200 mm type

Model no.	Surface treatment	Mass (g)	Applicable model no.
109-1102	Nickel-chrome plating (silver)	100	9GV20*
109-1102H	Cation electroplating (black)		

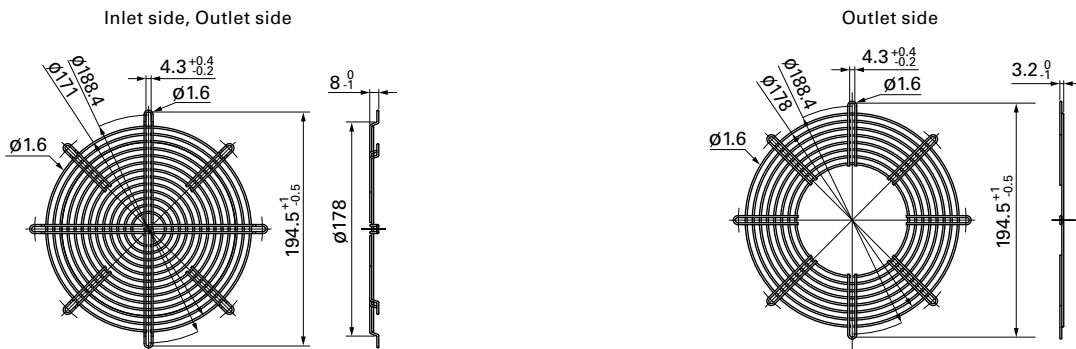
Model no.	Surface treatment	Mass (g)	Applicable model no.
109-1103	Nickel-chrome plating (silver)	80	9GV20*
109-1103H	Cation electroplating (black)		



ø200 mm type

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

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

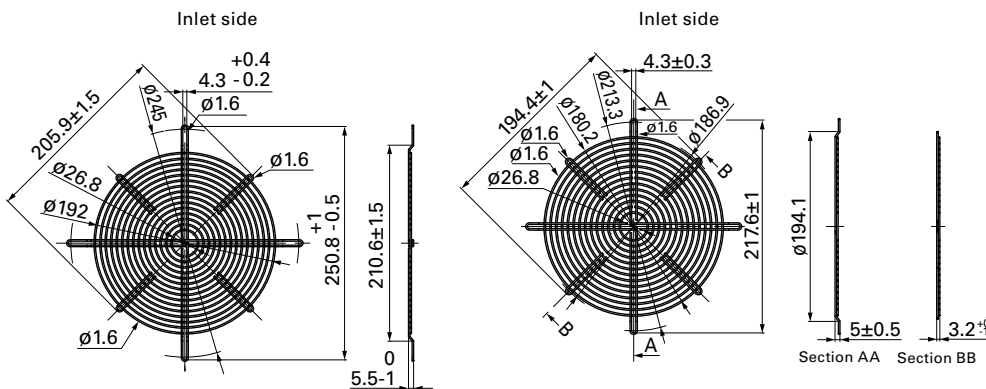


ø221 mm type

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

ø225 mm type

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



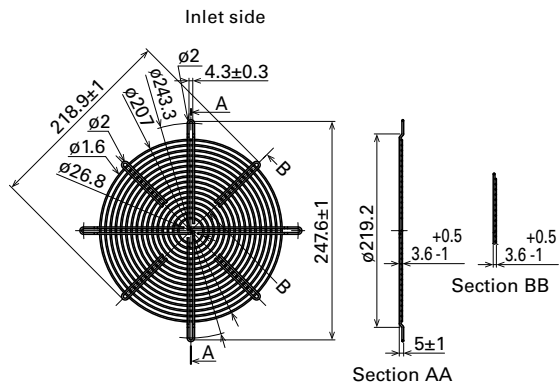
Option

Finger guards Dimensions (unit: mm)

For use in environments subject to water splashes, cation electroplating models are recommended.

ø250 mm type

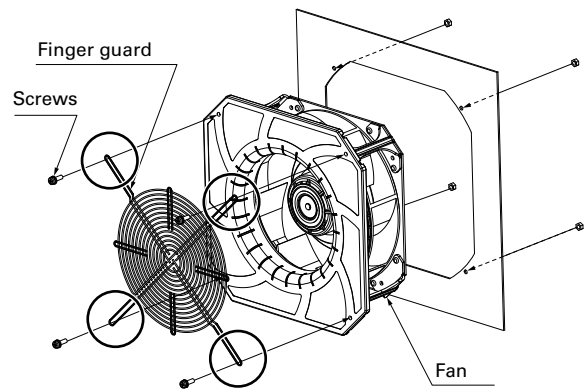
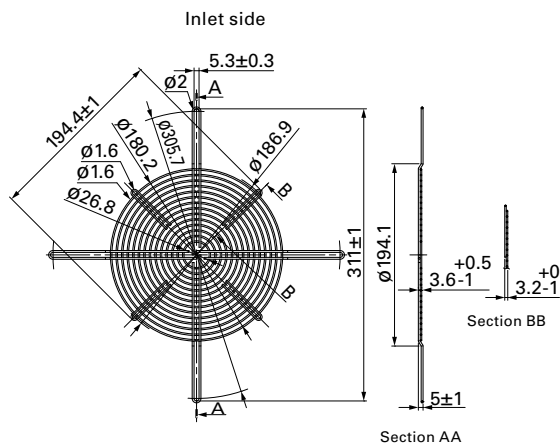
Model no.	Surface treatment	Mass (g)
109-1152	Electro nickel plating (silver)	140
109-1152H	Cation electropainting (black)	



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

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

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

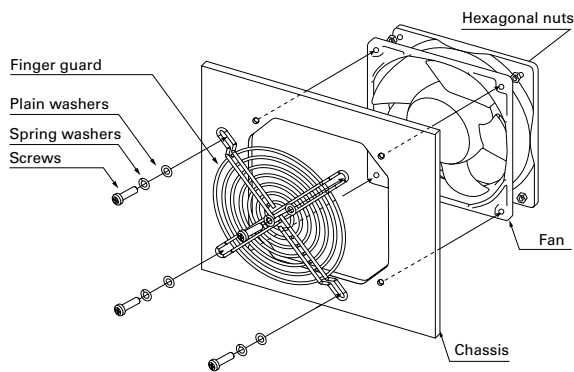


●No nuts or screws for use in attachment included.

Mounting example

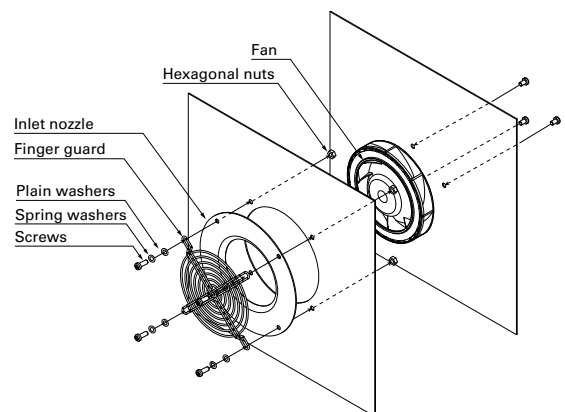
Option

Axial fan



●No nuts or screws for use in attachment included.

Centrifugal fan

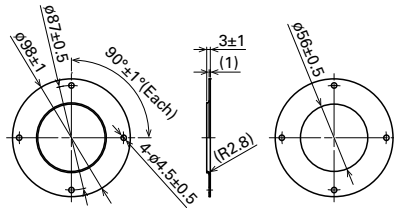


Inlet nozzle for centrifugal fan and splash proof centrifugal fan Dimensions (unit: mm)

Nozzle mounted in fan inlet side to adjust the flow of introduced air. Material: Steel sheet
 For use in environments subject to water splashes, cation electroplating models are recommended.

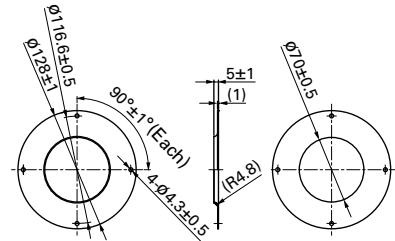
ø70 mm type

Model no.	Surface treatment	Mass (g)
109-1106	Electro nickel plating (silver)	40



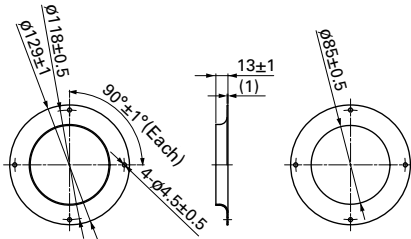
ø100 mm type

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



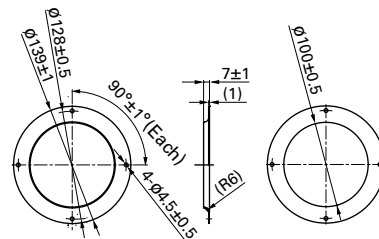
ø133 mm type

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



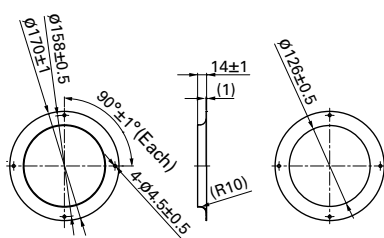
ø150 mm type

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



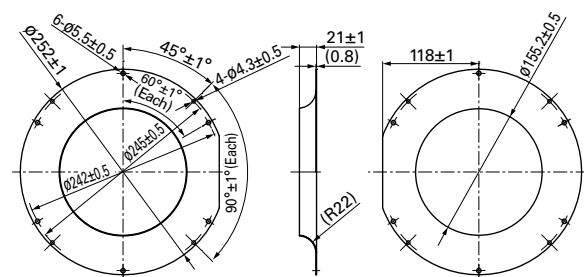
ø175 mm, ø190 mm type

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



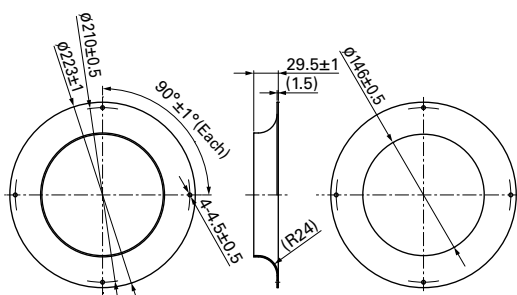
ø221 mm type

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



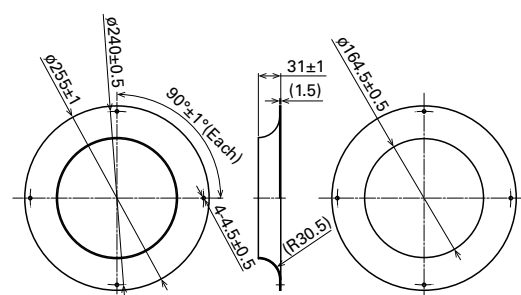
ø225 mm type

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



ø250 mm type

Model no.	Surface treatment	Mass (g)
109-1151	Electro nickel plating (silver)	440
109-1151H	Cation electroplating (black)	

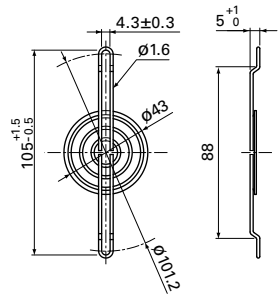


Option

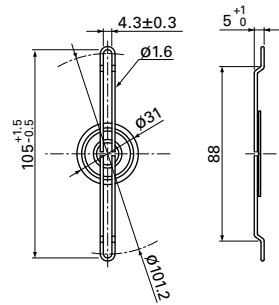
EMC guards Dimensions (unit: mm)

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. Rust may occur if used in wet environments. Please refer to page 588 for detail.

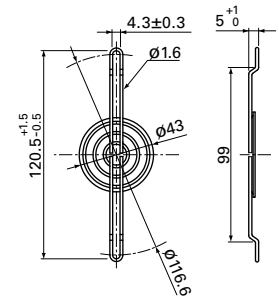
80 mm sq. type		
Model no.	Surface treatment	Mass (g)
109-1038	Nickel-chrome plating (silver)	14
Representative fans model numbers	Dimensions of fans (mm)	
109P08*	80×80×20	
9GV08*	80×80×38	
9HV08*		
9HVA08*		
9HVB08*		



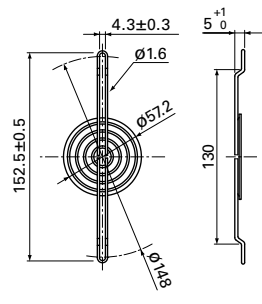
80 mm sq. type		
Model no.	Surface treatment	Mass (g)
109-1039	Nickel-chrome plating (silver)	10
Representative fans model numbers	Dimensions of fans (mm)	
9GA08*	80×80×20	
9GA08*	80×80×25	
9GA08*	80×80×32	
9G08*	80×80×38	
9GA08*		



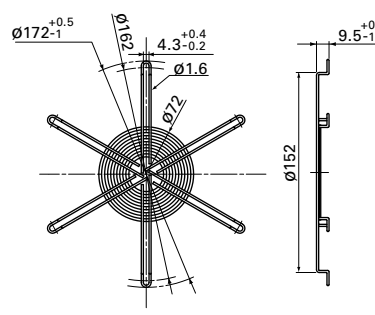
92 mm sq. type		
Model no.	Surface treatment	Mass (g)
109-1040	Nickel-chrome plating (silver)	15
Representative fans model numbers	Dimensions of fans (mm)	
9G09*	92×92×32	
9G09*	92×92×38	
9GV09*		
9GA09*		
9AD09*		



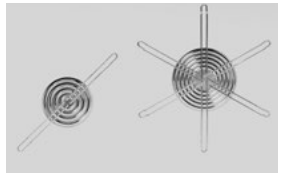
120 mm sq. type		
Model no.	Surface treatment	Mass (g)
109-1037	Nickel-chrome plating (silver)	26
Representative fans model numbers	Dimensions of fans (mm)	
9GV12*	120×120×25	
9GL12*	120×120×38	
9G12*		
9GV12*		
9HV12*		
9LG12*		
9AD12*		



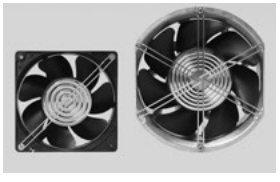
ø172 mm type		
Model no.	Surface treatment	Mass (g)
109-1036	Nickel-chrome plating (silver)	49
Representative fans model numbers	Dimensions of fans (mm)	
109E47*	ø172×25	
109L17*	ø172×51	
9GV57*		
109E17*		
109E57*		
9SG57*		



Option



EMC guard



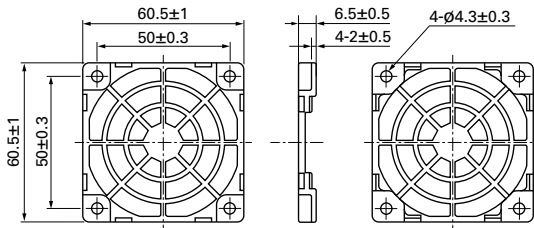
attached to a cooling fan

Resin finger guards Dimensions (unit: mm)

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

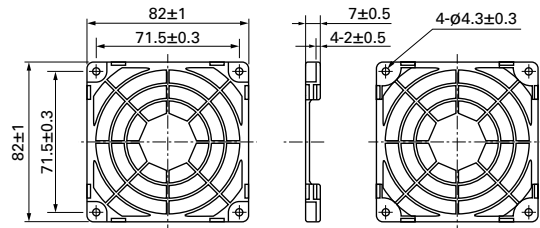
60 mm sq. type

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



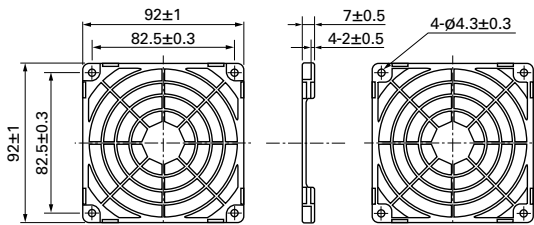
80 mm sq. type

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



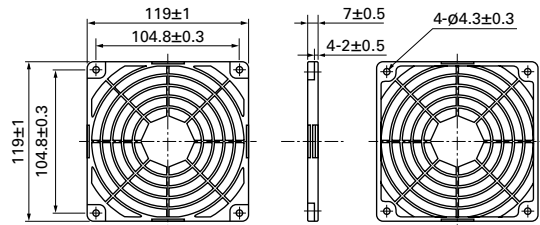
92 mm sq. type

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



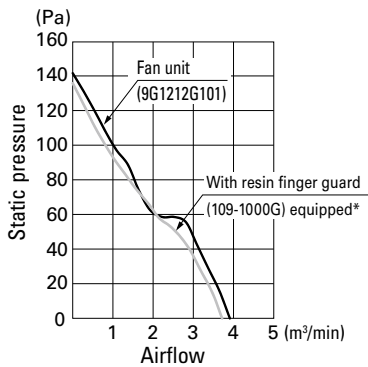
120 mm sq. type

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



Airflow - Static pressure characteristics

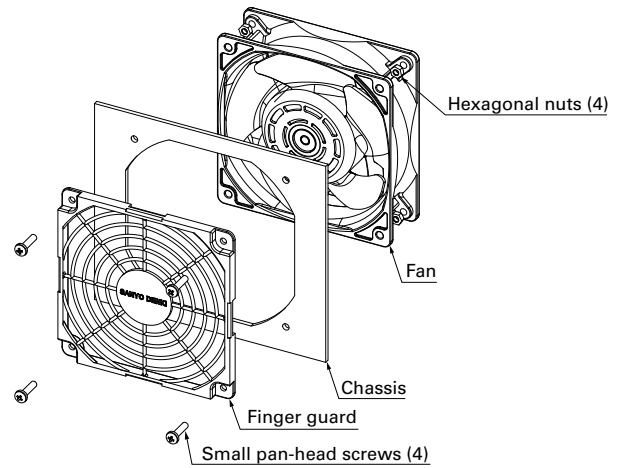
Measured with our double chamber measuring device (120 mm sq. type)



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.

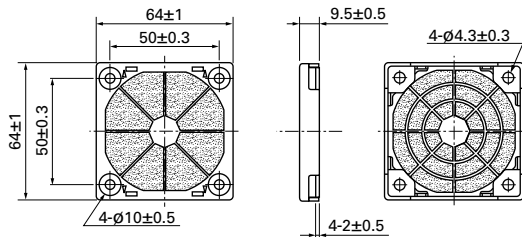
Option

Resin filter kits Dimensions (unit: mm)

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.

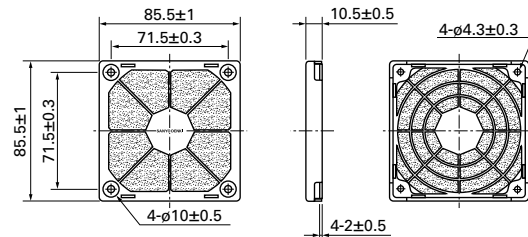
60 mm sq. type

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)	



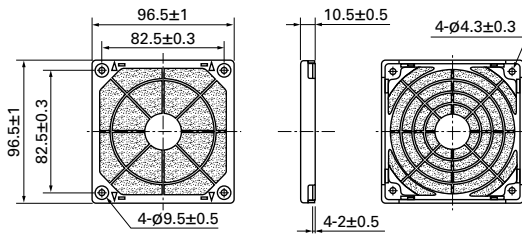
80 mm sq. type

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)	



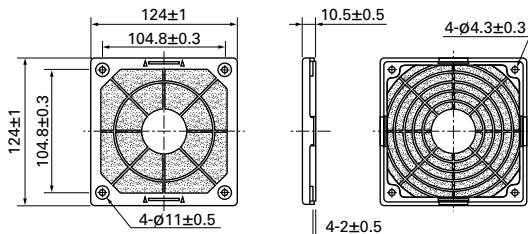
92 mm sq. type

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)	



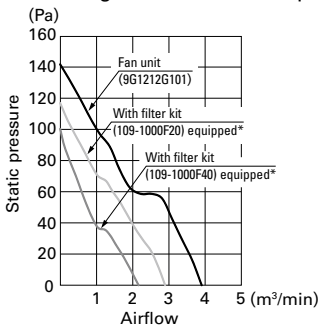
120 mm sq. type

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

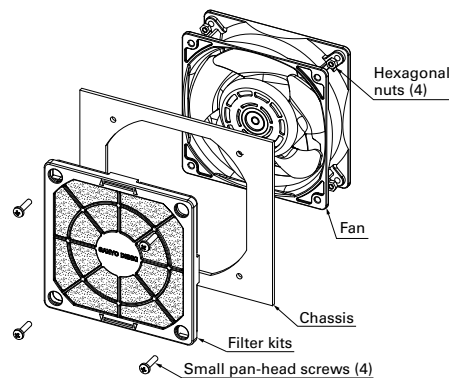
Measured with our double chamber measuring device (120 mm sq. type)



Applied voltage: 12 VDC

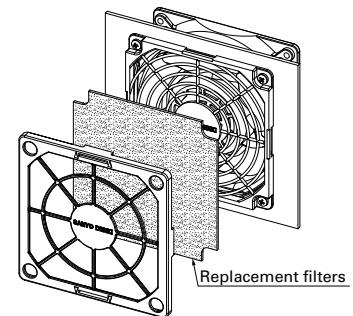
* Filter kit is attached on air inlet side of fan.

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.



Option

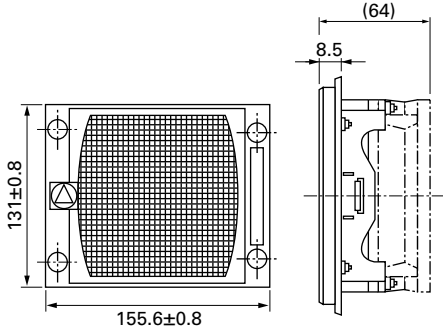
- Filter kit is one of the option to keep air in the chassis clean filtering dust in external atmosphere when pulling-air cooling is implemented. The filter kit is hooked up through mounting hole of fan frame with screw as well as finger guard. Some performances (airflow & static pressure) of the fan 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)

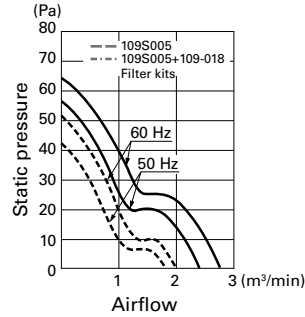
Neither filter kit can be installed on ACDC fans, or AC fans with sensors. Please evaluate it by assembly filter kits on the device.

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

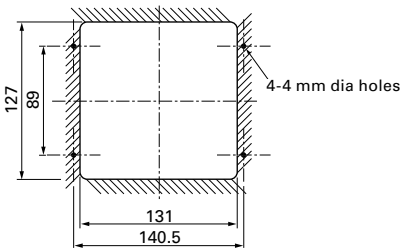
Dimensions



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

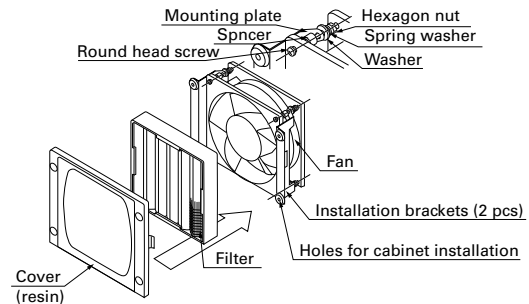


Reference Dimensions of Mounting Holes



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

Mounting Example

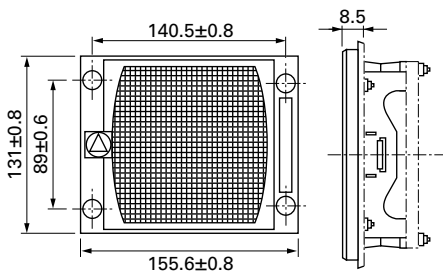


Screen kits Applicable models: AC Fan 120×120×38 mm Dimensions, Reference Dimensions of Mounting Holes (unit: mm)

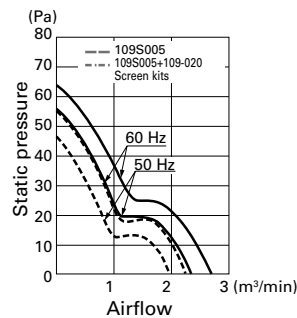
Neither screen kit can be installed on ACDC fans, or AC fans with sensors.

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

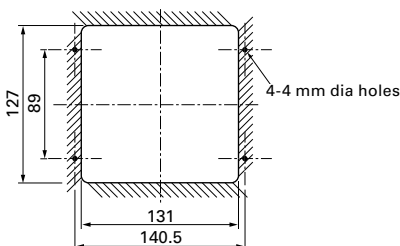
Dimensions



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

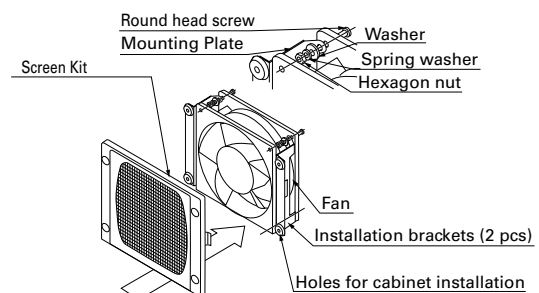


Reference Dimensions of Mounting Holes



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

Mounting Example



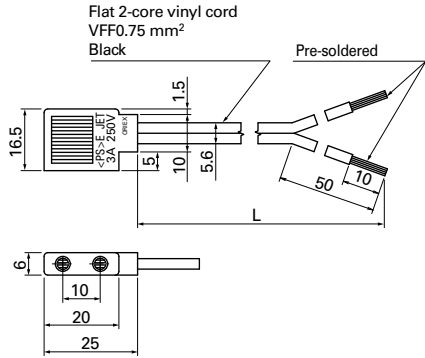
Option

Plug cord for AC fan Dimensions (unit: mm)

Products compliant with electrical appliance and material safety law

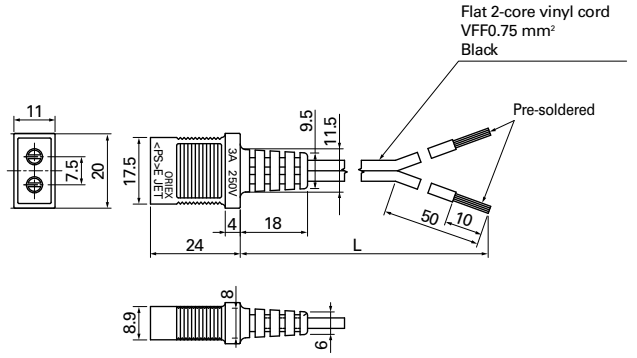
For 80×80×42 mm

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

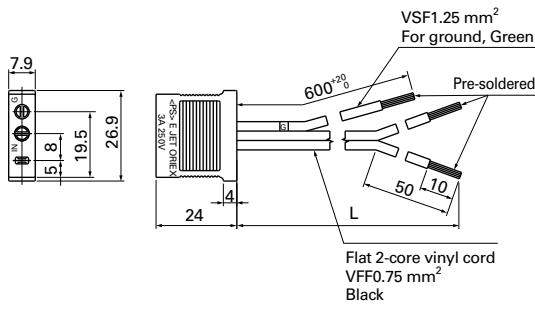
Model no.	Power cord length [L] (mm)	Mass (g)
489-016-L10	1000	34
489-016-L21	2100	64



For 120×120×38 mm (not including ACDC 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

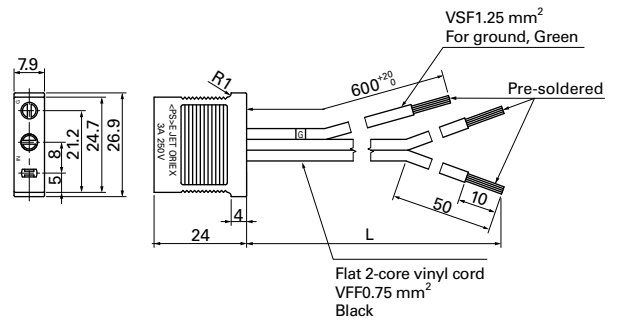
(Exclusive for fans without UL at the end of the model number.)



For 120×120×38 mm (not including ACDC fan)

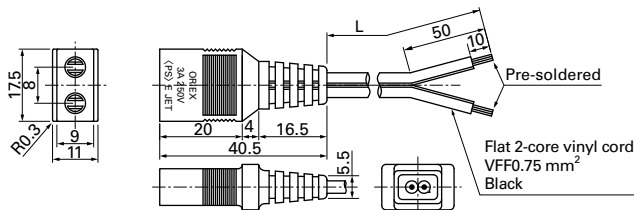
Model no.	Power cord length [L] (mm)	Mass (g)
489-037-L10	1000	46
489-037-L21	2100	76
489-037-L35	3500	114

(Exclusive for fans with UL at the end of the model number.)



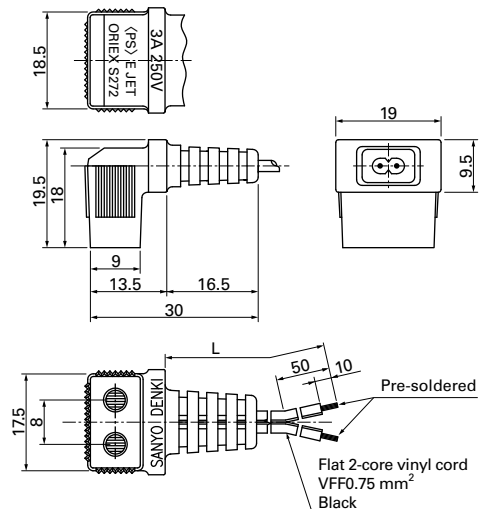
For 160×160×51 mm

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



Option

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

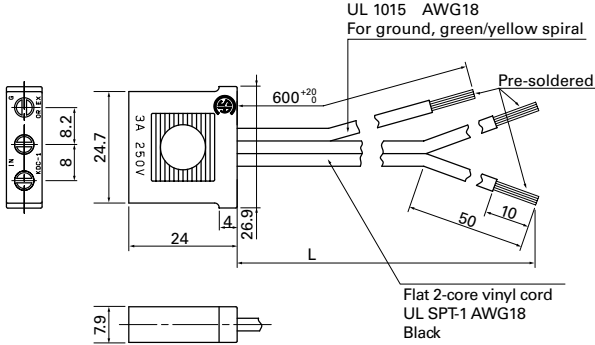
Plug cord for AC fan Dimensions (unit: mm)

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

For 120×120×38 mm (not including ACDC fan)

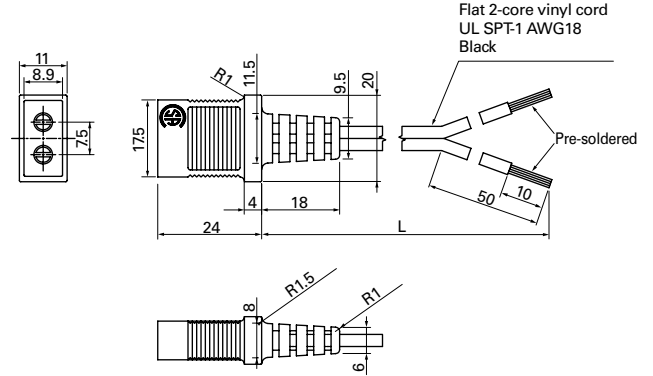
Model no.	Power cord length [L] (mm)	Mass (g)
489-007-L10	1000	48
489-007-L21	2100	80

(Exclusive for fans with UL at the end of the model number.)



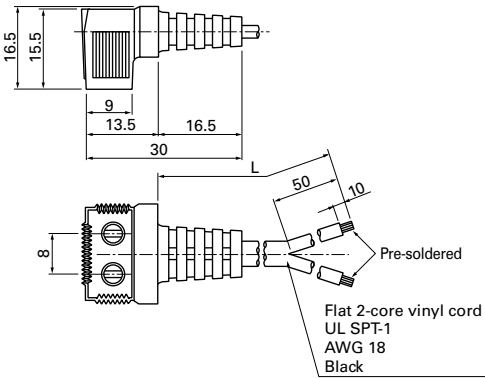
For 80×80×25 mm, 80×80×38 mm, 92×92×25 mm, 120×120×25 mm

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



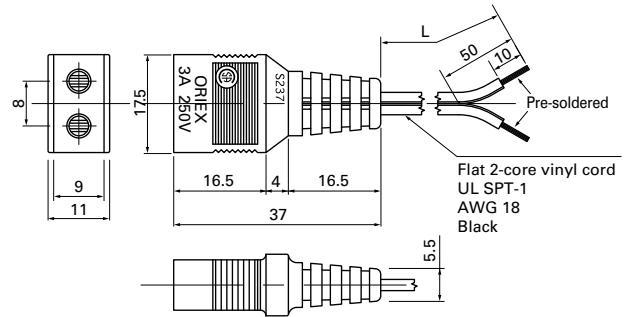
For ∅172×51 mm, ∅172×150×51 mm, 160×160×51 mm

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



For 160×160×51 mm

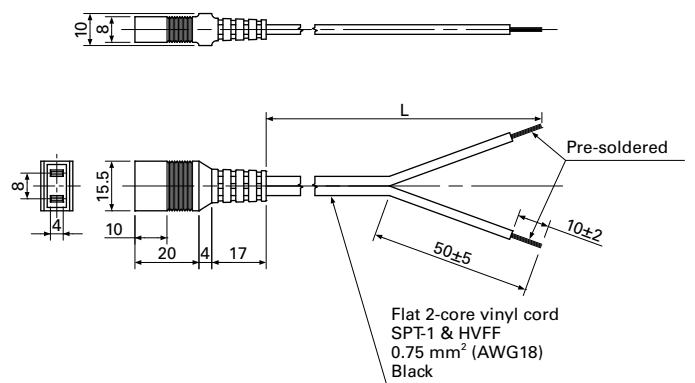
Model no.	Power cord length [L] (mm)	Mass (g)
489-086-L10	1000	37
489-086-L21	2100	70



Plug cord for ACDC fan Dimensions (unit: mm)

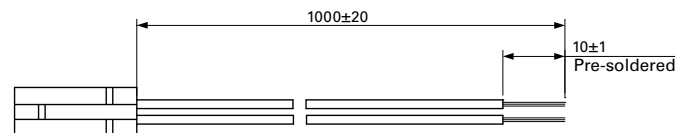
Products compliant with electrical appliance and material safety law, UL/CSA [c-UL] certified UL file no.E43202

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



Sensor extension wiring harness

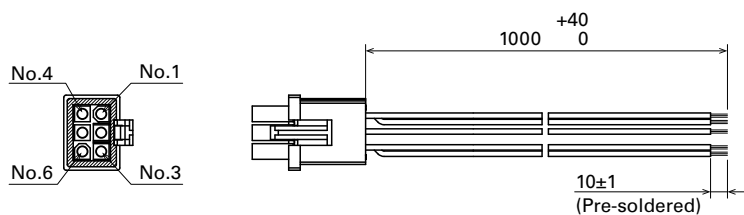
Model no.	Mass (g)
489-1636	9



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

Terminal model wiring harness Applicable models: ACDC Fan $\varnothing 172 \times 150 \times 51$ mm Dimensions (unit: mm)

Model no.	Mass (g)
489-1645	27

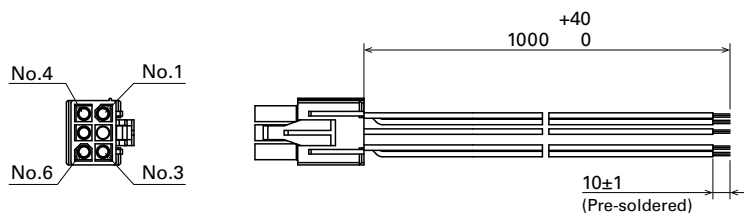


Connector Model no.: TE Connectivity: 794895-1

Power lead wire
AWG22 UL 11347

Other lead wire
AWG24 UL 3385

Model no.	Mass (g)
489-1647	27



Connector Model no.: TE Connectivity: 1-172168-9

Power lead wire
AWG22 UL 11347

Other lead wire
AWG24 UL 3385

Typical Connectors for DC Fans

Listed below are the typical contact/housing connectors with a proven track record with our products. For customization details, contact us.

Manufacturer	2 pins Housing model number	3 pins Housing model number	4 pins Housing model number	6 pins Housing model number	8 pins Housing model number	Contact model number
MOLEX	22-01-1022:P/N 5051-02*	22-01-1032:P/N 5051-03* 22-01-3037:P/N 2695-03RP*	22-01-1042:P/N 5051-04* 22-01-3047:P/N 2695-04RP 47054-1000	—	—	08-55-0130:P/N 2759-(558)B
						08-50-0113:P/N 2759-(P909)B
						08-70-0064:P/N 5159T*
						08-70-0048:P/N 5159PBT*
						39-00-0372:P/N 2759T*
						39-00-0374:P/N 2759GS
						39-00-0376:P/N 2759G
	39-00-0380:P/N 2759PBG					
	43025-0200*	—	43025-0400*	44133-0600	—	43030-0001*
						43030-0002*
						43030-0003*
						43030-0004
						43030-0005
						43030-0006
—	—	51021-0400	—	—	46235-0001	
51191-0200*	51191-0300*	51191-0400*	—	—	50079-8000	
50-37-5023:P/N 5264-02*	50-37-5033:P/N 5264-03*	50-37-5043:P/N 5264-04*	—	—	50802-9001*	
39-01-2020:P/N 5557-02R*	—	39-01-2040:P/N 5557-04R*	—	—	50802-8000	
50-37-5023:P/N 5264-02*	50-37-5033:P/N 5264-03*	50-37-5043:P/N 5264-04*	—	—	08-70-1039:P/N 5263PBT*	
39-01-2020:P/N 5557-02R*	—	39-01-2040:P/N 5557-04R*	—	—	39-00-0059:P/N 5556PBT*	
—	—	—	—	—	39-00-0038:P/N 5556T*	
TE Connectivity	171822-2*	171822-3*	171822-4*	—	—	170262-1*
	179228-2*	179228-3*	179228-4*	—	—	179227-1*
	—	—	—	—	794617-8	1-794607-1
Hirose	DF1B-2EP-2.5RC*	DF1B-3EP-2.5RC*	—	—	—	DF1B-2428PCF*
	DF3-2EP-2C* DF3AA-2EP-2C*	DF3-3EP-2C* DF3AA-3EP-2C*	DF3-4EP-2C* DF3AA-4EP-2C*	—	—	DF3-EP2428PCF*
	—	—	—	—	—	—
Japan Solderless Terminals	EHR-2*	EHR-3*	EHR-4*	—	—	SEH-001TP0.6*
	SMP-02V-BC*	SMP-03V-BC*	SMP-04V-BC*	—	—	SHF-001T0.8BS*
	SMP-02V-NC*	SMP-03V-NC*	—	—	—	
	H2P-SHF-AA*	H3P-SHF-AA*	—	—	—	
	PHR-2*	PHR-3*	PHR-4*	—	—	SPH-002TP0.5S*
	XAP-02V-1*	XAP-03V-1*	XAP-04V-1*	—	—	SPH-002TP0.5L
	XMP-02V*	XMP-03V*	—	—	—	SXA-001TP0.6*
	—	—	—	—	—	SXA-01TP0.6
	XHP-2*	XHP-3*	XHP-4*	—	—	SXH-001GU-P0.6*
	—	—	—	—	—	SXH-001TP0.6*
	—	—	—	—	—	SXH-002TP0.6
SMR-02V-B*	SMR-03V-B*	SMR-04V-B*	—	—	SYM-001TP0.6*	
SMR-02V-N*	SMR-03V-N*	SMR-04V-N*	—	—	—	
—	—	ZHR-4	—	—	SZH-002TP0.5	

* Recommended connectors

Recommended tubes and cable ties for DC fan

	Manufacturer	Representative model numbers	Specifications	UL file no.
PVC tube	YAMAICHI CHEMICAL	YET-300H	105°C 300 V VW-1	E55011
	IWASE KAGAKU KOGYO	AH-3		E56036
Thermal contraction tube	SUMITOMO ELECTRIC	SUMITUBE® F2 (Z)	125°C 600 V VW-1	E48762
	SUMI-PAC	SUMITUBE® F32		
Cable tie	ABB	TY23M	UL 94V-2	E49405
	PANDUIT	BT1M		E56854
	HellermannTyton	T18R		E64962

Note: The specifications in this table are for reference purposes only. When selecting, please check catalogs of each brand.

Model Index in Ascending Order - Options

■ Finger Guards

Model no.	Category	Matching fan size	page
109-019C	Finger Guards	120 mm sq. type	565
109-019E	Finger Guards	120 mm sq. type	565
109-019H	Finger Guards	120 mm sq. type	565
109-019K	Finger Guards	120 mm sq. type	565
109-049C	Finger Guards	80 mm sq. type	564
109-049E	Finger Guards	80 mm sq. type	564
109-049H	Finger Guards	80 mm sq. type	564
109-059	Finger Guards	40 mm sq. type	564
109-059H	Finger Guards	40 mm sq. type	564
109-099C	Finger Guards	92 mm sq. type	564
109-099E	Finger Guards	92 mm sq., \varnothing 100 mm type	564
109-099H	Finger Guards	92 mm sq., \varnothing 100 mm type	564
109-1050	Finger Guards	36 mm sq. type	564
109-1051	Finger Guards	150 mm sq. type	565
109-1052	Finger Guards	150 mm sq. type	565
109-1065	Finger Guards	38 mm sq. type	564
109-1066	Finger Guards	\varnothing 172 mm type	566
109-1068	Finger Guards	\varnothing 172 mm type	566
109-1102	Finger Guards	\varnothing 200 mm type	567
109-1102H	Finger Guards	\varnothing 200 mm type	567
109-1103	Finger Guards	\varnothing 200 mm type	567
109-1103H	Finger Guards	\varnothing 200 mm type	567
109-1104	Finger Guards	\varnothing 150 mm type	565
109-1104H	Finger Guards	\varnothing 150 mm type	565
109-1112	Finger Guards	\varnothing 133 mm type	565
109-1128	Finger Guards	70 mm sq., \varnothing 70 mm type	564
109-1137	Finger Guards	\varnothing 225 mm type	567
109-1137H	Finger Guards	\varnothing 225 mm type	567
109-1138	Finger Guards	\varnothing 221 mm type	567
109-1138H	Finger Guards	\varnothing 221 mm type	567
109-1139	Finger Guards	\varnothing 136 mm type	565
109-1146	Finger Guards	270 mm sq. type	568
109-1146H	Finger Guards	270 mm sq. type	568
109-1147	Finger Guards	\varnothing 92 mm type	564
109-1152	Finger Guards	\varnothing 250 mm type	568
109-1152H	Finger Guards	\varnothing 250 mm type	568
109-139E	Finger Guards	60 mm sq. type	564
109-139H	Finger Guards	60 mm sq. type	564
109-149	Finger Guards	52 mm sq. type	564
109-149E	Finger Guards	52 mm sq. type	564
109-319E	Finger Guards	\varnothing 172 mm type	566
109-319H	Finger Guards	\varnothing 172 mm type	566
109-319J	Finger Guards	\varnothing 172 mm type	566
109-320	Finger Guards	\varnothing 172 mm type	566
109-619E	Finger Guards	160 mm sq. type	565
109-619H	Finger Guards	160 mm sq. type	565
109-620	Finger Guards	160 mm sq. type	565
109-719	Finger Guards	140 mm sq. type	565
109-719H	Finger Guards	140 mm sq. type	565
109-720	Finger Guards	\varnothing 200 mm type	567
109-720H	Finger Guards	\varnothing 200 mm type	567
109-721	Finger Guards	\varnothing 200 mm type	567
109-721H	Finger Guards	\varnothing 200 mm type	567
109-722	Finger Guards	127 mm sq., \varnothing 175 mm, \varnothing 190 mm type	565
109-722H	Finger Guards	127 mm sq., \varnothing 175 mm, \varnothing 190 mm type	565
109-723	Finger Guards	127 mm sq. type	565

■ Resin Finger Guards/Resin Filter Kits

Model no.	Category	Matching fan size	page
109-1000F13	Resin Filter Kits	120 mm sq. type	572
109-1000F20	Resin Filter Kits	120 mm sq. type	572
109-1000F30	Resin Filter Kits	120 mm sq. type	572
109-1000F40	Resin Filter Kits	120 mm sq. type	572
109-1001F13	Resin Filter Kits	92 mm sq. type	572
109-1001F20	Resin Filter Kits	92 mm sq. type	572
109-1001F30	Resin Filter Kits	92 mm sq. type	572
109-1001F40	Resin Filter Kits	92 mm sq. type	572
109-1002F13	Resin Filter Kits	80 mm sq. type	572
109-1002F20	Resin Filter Kits	80 mm sq. type	572
109-1002F30	Resin Filter Kits	80 mm sq. type	572
109-1002F40	Resin Filter Kits	80 mm sq. type	572
109-1003F13	Resin Filter Kits	60 mm sq. type	572
109-1003F20	Resin Filter Kits	60 mm sq. type	572
109-1003F30	Resin Filter Kits	60 mm sq. type	572
109-1003F40	Resin Filter Kits	60 mm sq. type	572
109-1000G	Resin Finger Guards	120 mm sq. type	571
109-1001G	Resin Finger Guards	92 mm sq. type	571
109-1002G	Resin Finger Guards	80 mm sq. type	571
109-1003G	Resin Finger Guards	60 mm sq. type	571

■ Replacement filter

Model no.	Category	Matching fan size	page
109-1000M13	Replacement filter	120 mm sq. type	572
109-1000M20	Replacement filter	120 mm sq. type	572
109-1000M30	Replacement filter	120 mm sq. type	572
109-1000M40	Replacement filter	120 mm sq. type	572
109-1001M13	Replacement filter	92 mm sq. type	572
109-1001M20	Replacement filter	92 mm sq. type	572
109-1001M30	Replacement filter	92 mm sq. type	572
109-1001M40	Replacement filter	92 mm sq. type	572
109-1002M13	Replacement filter	80 mm sq. type	572
109-1002M20	Replacement filter	80 mm sq. type	572
109-1002M30	Replacement filter	80 mm sq. type	572
109-1002M40	Replacement filter	80 mm sq. type	572
109-1003M13	Replacement filter	60 mm sq. type	572
109-1003M20	Replacement filter	60 mm sq. type	572
109-1003M30	Replacement filter	60 mm sq. type	572
109-1003M40	Replacement filter	60 mm sq. type	572

■ EMC guards/Inlet nozzle for centrifugal fan and splash proof centrifugal fan

Model no.	Category	Matching fan size	page
109-1036	EMC guards	∅172 mm type	570
109-1037	EMC guards	120 mm sq. type	570
109-1038	EMC guards	80 mm sq. type	570
109-1039	EMC guards	80 mm sq. type	570
109-1040	EMC guards	92 mm sq. type	570
109-1069	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅133 mm type	569
109-1069H	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅133 mm type	569
109-1073	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅175 mm, ∅190 mm type	569
109-1073H	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅175 mm, ∅190 mm type	569
109-1080	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅100 mm type	569
109-1080H	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅100 mm type	569
109-1081	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅150 mm type	569
109-1081H	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅150 mm type	569
109-1106	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅70 mm type	569
109-1134	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅225 mm type	569
109-1134H	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅225 mm type	569
109-1135	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅221 mm type	569
109-1135H	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅221 mm type	569
109-1151	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅250 mm type	569
109-1151H	Inlet nozzle for centrifugal fan and splash proof centrifugal fan	∅250 mm type	569

■ Filter kits/Screen kits

Model no.	Category	Matching fan size	Note	page
109-018	Filter kits	120 × 120 × 38 mm	Not mountable on AC fans with a sensor or ACDC fans.	573
109-020	Screen kits	120 × 120 × 38 mm		573

■ Plug Cord

Model no.	UL	CSA	PSE	Applicable model	page
489-006-L10			✓	120 × 120 × 38 mm	574
489-006-L21			✓	120 × 120 × 38 mm	574
489-006-L35			✓	120 × 120 × 38 mm	574
489-007-L10	✓	✓		120 × 120 × 38 mm	575
489-007-L21	✓	✓		120 × 120 × 38 mm	575
489-008-L10			✓	80 × 80 × 42 mm	574
489-008-L21			✓	80 × 80 × 42 mm	574
489-008-L35			✓	80 × 80 × 42 mm	574
489-016-L10			✓	120 × 120 × 25 mm 92 × 92 × 25 mm 80 × 80 × 25 mm 80 × 80 × 38 mm	574
489-016-L21			✓	120 × 120 × 25 mm 92 × 92 × 25 mm 80 × 80 × 25 mm 80 × 80 × 38 mm	574
489-037-L10			✓	120 × 120 × 38 mm	574
489-037-L21			✓	120 × 120 × 38 mm	574
489-037-L35			✓	120 × 120 × 38 mm	574
489-047-L10	✓	✓		120 × 120 × 25 mm 92 × 92 × 25 mm 80 × 80 × 25 mm 80 × 80 × 38 mm	575
489-047-L21	✓	✓		120 × 120 × 25 mm 92 × 92 × 25 mm 80 × 80 × 25 mm 80 × 80 × 38 mm	575
489-084-L10	✓	✓		∅172 × 51 mm ∅172 × 150 × 51 mm 160 × 160 × 51 mm	575
489-084-L21	✓	✓		∅172 × 51 mm ∅172 × 150 × 51 mm 160 × 160 × 51 mm	575
489-086-L10	✓	✓		160 × 160 × 51 mm	575
489-086-L21	✓	✓		160 × 160 × 51 mm	575
489-1618-L10			✓	160 × 160 × 51 mm	574
489-1618-L21			✓	160 × 160 × 51 mm	574
489-1618-L28			✓	160 × 160 × 51 mm	574
489-1619-L10			✓	∅172 × 51 mm ∅172 × 150 × 51 mm 160 × 160 × 51 mm	574
489-1619-L21			✓	∅172 × 51 mm ∅172 × 150 × 51 mm 160 × 160 × 51 mm	574
489-1635-L10	✓	✓	✓	ACDC Fan (92 × 92 × 38 mm)	575
489-1635-L21	✓	✓	✓	ACDC Fan (120 × 120 × 38 mm)	575

Typical Connectors for DC Fans page 577

■ Sensor extension wiring harness

Model no.	Note	page
489-1636	Compatible with San Ace 92AD 9AD type (with sensor) and San Ace 120AD 9AD type (with sensor)	575

■ Terminal model wiring harness

Model no.	Note	page
489-1645	Compatible with San Ace 172AD 9ADW type (terminal type)	576
489-1647	Compatible with San Ace 172AD 9AD type (terminal type)	576