# **AC Free Input Axial Fans**

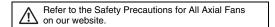
# R89F-M

CSM\_R89F-\_\_\_DS\_E\_2\_3

**71** @ P ( F

# Reducing required design work through unified power supply voltage

- Reduced time spent on replacement thanks to a longer service life.
- Selection of free voltage input 100 to 240 VAC models.
- Available in set packages (including finger guards, plug cords, and mounting screws).
- CE marking compliant, and certified compliant with various standards including UL and CSA.







For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

#### **Model Number Structure**

#### **Model Number Legend**

R89F	-M						-	_
1	2	3	4	5	6	7	8	Ī

1	Racio	Series

R89F	Plastic Blade Series
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3.	<b>Frame</b>	shai	рe
v.	I I WILL	JIIU	$\sim$

S	Square

#### 5. Frame thickness

#### 20 00

#### 7. Terminal type

Р	Terminals <b>*</b>		
* A Plug Cord (R89F-PC) is			
required for models with			
terminals.			

#### 2. Rated voltage

M	100 to 240 VAC

#### 4. Frame

09	92 × 92
12	120 × 120

#### 6. Rotational speed

Н	High speed
L	Low speed

#### 8. Delivered configuration

No marking	Standard
S1	Finger guard +
S2	Finger guard + Screw and nut set + Plug cord *

\* Refer to Set Model on page 1 and 13 for details.

**Note:** These tables show only how to read model numbers. They do not indicate which products are available. Refer to *Ratings and Ordering Information* when ordering.

#### **Ordering Information**

#### **AC Free Input Axial Fans**

Series	Size (mm)	Speed	Model	Page
	92 × 92 × t38	High	R89F-MS0938HP	2
R89F-M series	92 × 92 × t38	Low	R89F-MS0938LP	2
	120 × 120 × t38	High	R89F-MS1238HP	3

#### **Options (Order Separately)**

Name	Model	Page
Plug Cord	R89F-PC-□	4
Finger Guard	R87F-FG□	5
Filter	R87F-FL□(S)	6

Note: Mounting screws are not provided.

#### **Set Model**

Model	Set Contents
R89F-MS0938HP-S1	Fan, Finger guard × 1, M4 Screw (55 mm) × 4 and nut set × 4, Plug cord (1 m)
R89F-MS0938LP-S1	Fan, Finger guard × 1, M4 Screw (55 mm) × 4 and nut set × 4, Plug cord (1 m)
R89F-MS1238HP-S1	Fan, Finger guard × 1, M4 Screw (55 mm) × 4 and nut set × 4, Plug cord (1 m)
R89F-MS0938HP-S2	Fan, Finger guard × 2, M4 Screw (55 mm) × 4 and nut set × 4, Plug cord (1 m)
R89F-MS0938LP-S2	Fan, Finger guard × 2, M4 Screw (55 mm) × 4 and nut set × 4, Plug cord (1 m)
R89F-MS1238HP-S2	Fan, Finger guard × 2, M4 Screw (55 mm) × 4 and nut set × 4, Plug cord (1 m)

#### **Safety Precautions**

Refer to the Safety Precautions for All Axial Fans on our website.

# **R89F-MS0938** $\square$ AC Free Input Axial Fans (92 × 92 × t38 mm)

#### **Ratings and Ordering Information**

ltem Model	Rated voltage	Permitted voltage fluctuation range	Frequency [Hz]	Rated current [A] *	Rated input [W] *	Rated rotational speed [r/min <sup>-1</sup> ] *	Maximum flow rate [m³/min] *	Maximum static pressure [Pa] *	Noise [dB] *
R89F-MS0938HP	100 to 240 VAC	90 to 264 V	50/60	0.08	4.5	3850	1.5	90	40
R89F-MS0938LP	100 to 240 VAC	90 to 264 V	50/60	0.06	3.0	3100	1.18	56	33

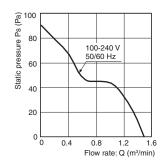
<sup>\*</sup> An asterisk (\*) indicates a nominal value.

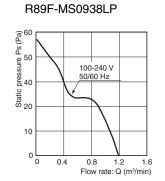
#### **Characteristics**

Motor type	1	Brushless DC motor
		Terminals
Terminal type		
Insulation	class	Class E (UL class A)
Insulation resistance		10 $\text{M}\Omega$ min. (at 500 VDC) Between lead wire conductor and frame
Insulation	withstand	1,500 VAC (1 minute)
voltage		Between input terminal and frame
Ambient o temperatur		-20 to 75°C (with no icing)
Ambient storage temperature		-30 to +75°C (no icing)
Ambient humidity		20% to 85%
Protection		Restraint burnout protection (Current blocking function)
Materials	Frame	PBT/PC alloy (UL94V-0)
Materials	Blades	PBT/PC alloy (UL94V-0)
Bearings		Ball bearings
Weight		Approx. 250 g
Compliant standards		EN/IEC60950-1 EN/IEC60335-2-80 (CE marking compliant) EAC, RCM PSE
Certified s	tandards	UL: UL507 (Recognition) CSA: C22.2 No.113

#### Flow Rate and Static Pressure Characteristics (Reference Value)

R89F-MS0938HP

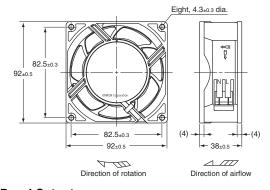




**Note:** For details on measurement conditions, refer to *Flow Rate and Static Pressure Characteristics on Safety Precautions for All Axial Fans.* 

Dimensions (Unit: mm)

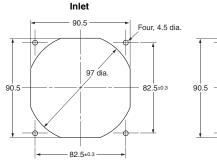


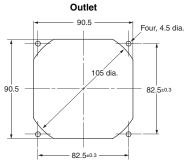


#### **Panel Cutouts**

# Options Name Model

Name	Model	Page
Plug Cord	R89F-PC-□	4
Finger Guard	R87F-FG90	5





# $R89F-MS1238 \square$ AC Free Input Axial Fans (120 $\times$ 120 $\times$ t38 mm)

#### **Ratings and Ordering Information**

Model Item	Rated voltage	Permitted voltage fluctuation range	Frequency [Hz]	Rated current [A] *	Rated input [W] *	Rated rotational speed [r/min <sup>-1</sup> ] *	Maximum flow rate [m³/min] *	Maximum static pressure [Pa] *	Noise [dB] *	
R89F-MS1238HP	100 to 240 VAC	90 to 264 V	50/60	80.0	4.4	3250	3.0	84	42	

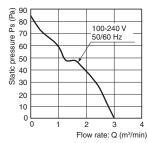
<sup>\*</sup> An asterisk (\*) indicates a nominal value.

#### **Characteristics**

Motor type		Brushless DC motor	
Terminal type		Terminals	
Insulation	class	Class E (UL class A)	
Insulation	resistance	10 M $\Omega$ min. (at 500 VDC) Between lead wire conductor and frame	
Insulation voltage	withstand	1,500 VAC (1 minute) Between input terminal and frame	
Ambient op temperatur		-20 to 75°C (with no icing)	
Ambient storage temperature		-30 to +75°C (no icing)	
Ambient hu	umidity	20% to 85%	
Protection		Restraint burnout protection (Current blocking function)	
Materials	Frame	PBT/PC alloy (UL94V-0)	
Materiais	Blades	PPHOX (UL94V-1)	
Bearings		Ball bearings	
Weight		Approx. 290 g	
Compliant standards		EN/IEC60950-1 EN/IEC60335-2-80 (CE marking compliant) EAC, RCM PSE	
Certified st	andards	UL: UL507 (Recognition) CSA: C22.2 No.113	

#### Flow Rate and Static Pressure Characteristics (Reference Value)

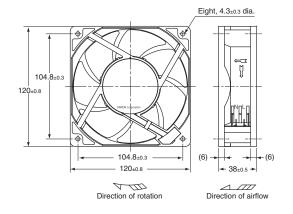
R89F-MS1238HP



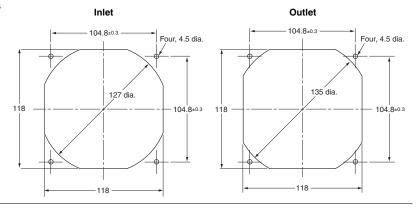
**Note:** For details on measurement conditions, refer to *Flow Rate and Static Pressure Characteristics on Safety Precautions for All Axial Fans.* 

Dimensions (Unit: mm)





#### **Panel Cutouts**



Name	Model	Page
Plug Cord	R89F-PC-□	4
Finger Guard	R87F-FG120	5
Filter	R87F-FL120(S)	6

# R89F-PC Plug Cord

#### **Ratings and Ordering Information**

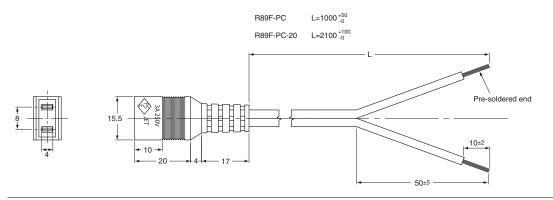
Cable length	Model	Weight
1 m	R89F-PC	Approx. 38 g
2 m	R89F-PC-20	Approx. 74 g

**R89F-PC** Rating: 3 A, 250 V



Dimensions (Unit: mm)

#### R89F-PC



Note: This Plug Cord is used for Axial Fans with terminals.

# R87F-FG Finger Guards

#### **Ratings and Ordering Information**

Size	Model number	Weight (g)
150 dia.	R87F-FG150	Approx. 58
120 × 120	R87F-FG120	Approx. 45
92 × 92	R87F-FG90	Approx. 25
80 × 80	R87F-FG80	Approx. 20

#### **Applicable Axial Fans**

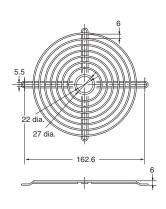
	AC Axial Fan	Finance Culand
Size	Model	Finger Guard
150 dia.	R87T-A□A0 Series	R87F-FG150
120×120	R89F-DS1225 series R89F-DS1238 series R89F-MS1238HP R87F-A Al Series R87T-A Al Series	R87F-FG120
92 × 92	R89F-MS0938□P series	R87F-FG90
92 × 92	R87F-A□A9 Series	R87F-FG90
80 × 80	R87F-A□A8 Series R87T-A□A8 Series	R87F-FG80

**Note:** Finger Guards reduce the flow rate by approximately 2% to 5%.

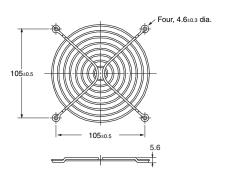
Dimensions (Unit: mm)

Material: steel, Joints: spot welded, Surface: nickel-chrome plated

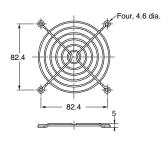
#### R87F-FG150



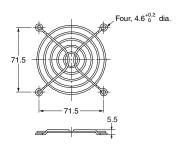
#### R87F-FG120



#### R87F-FG90



#### R87F-FG80



#### **R87F-FL** Filters

#### **Ratings and Ordering Information**

#### Filter

Size	Model number	Weight (g)
120 × 120	R87F-FL120	Approx. 43
92 × 92	R87F-FL90	Approx. 30
80 × 80	R87F-FL80	Approx. 21
120 × 120	R87F-FL120S	Approx. 19

Note: The filter contains one medium.

#### Media

Size	Model number
120 × 120	R87F-FL120-M120
92 × 92	R87F-FL90-M90
80 × 80	R87F-FL80-M80

Note: Use the following model number to order the Media only. R87F-FL□-M□ (□: 120, 90, or 80)

(One set containing five Media, weight: 5 g max.)

#### **Applicable Axial Fans**

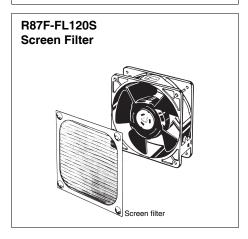
	AC Axial Fan	Filter	
Size	Model	Plastic	Aluminum
150 dia.	R87T-A□A0 Series		
	R89F-DS1225□ series		
	R89F-DS1238□ series		
$120 \times 120$	R89F-MS1238HP R87F-FL120		R87F-FL120S
	R87F-A□A1 Series		
	R87T-A□A1 Series		
92×92	R87F-A□A9 Series	R87F-FL90	
80×80	R87F-A□A8 Series	R87F-FL80	
00 × 00	R87T-A□A8 Series	11071 1 200	

Note: Filters reduce the flow rate by approximately 20% to 40%. Ensure that there is no clogging.

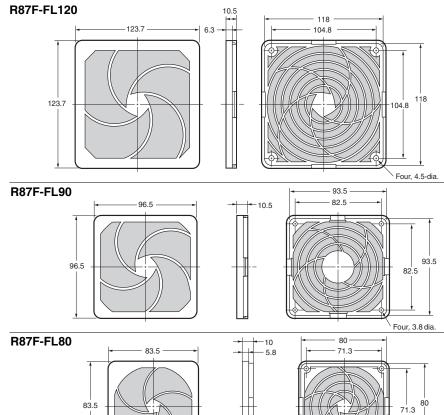
# R87F-FL Plastic Filter Guard Hedia Plastic filter

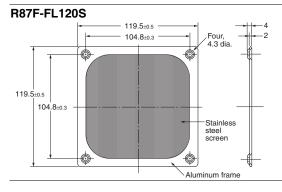
#### **Mounting Method**

- Attach the guard to the Fan using the mounting bolts. (There are no mounting bolts provided with the Plastic Filter.)
- With the media held between the retainer and the guard, hook the retainer to the guard. (The Media and retainer can be one-touch mounted/dismounted.)



#### Dimensions (Unit: mm)





- Note: 1. The Screen Filter is made using aluminium and has an <u>EMI/RFI</u> shielding effect.
  - 2. When mounting the Screen Filter, make sure that it does not come in contact with the fan blades.

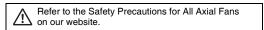
Four, 4.5-dia.

3. The screen is a  $30 \times 30$  aluminum mesh. (30 aluminum wires per inch)

# **DC Axial Fans**

### Reducing required design work through unified power supply voltage

- Reduced time spent on replacement thanks to a longer service life.
- Selection of low-voltage input 24 VDC models.
- Available in set packages (including finger guards and mounting screws).
- CE marking compliant, and certified compliant with various standards including UL and CSA.











For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

#### **Model Number Structure**

#### **Model Number Legend**



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٦.	Ва	ISIC	: se	ries

R89F	Plastic Blade Series

R89F	Plastic Blade Series

<b>D</b> 24 VDC
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					•

8	Square

4. Fram	е
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09	92 × 92
12	120 × 120

#### 5. Frame thickness

25	25
38	38

#### 6. Rotational speed

Н	High speed
L	Low speed

#### 7. Terminal type

No marking Lead wires
-----------------------

#### 8. Delivered configuration

No marking	Standard
S1	Finger guard +
S2	Screw and nut set *

\* Refer to Set Model on page 7 and 13 for details.

Note: These tables show only how to read model numbers. They do not indicate which products are available. Refer to Ratings and Ordering Information when ordering.

#### **Ordering Information**

#### **DC Axial Fans**

Series	Size (mm)	Speed	Model	Page
R89F-D series	92 × 92 × t25	High	R89F-DS0925H	8
	92 × 92 × t25	Low	R89F-DS0925L	8
	120 × 120 × t25	High	R89F-DS1225H	9
	120 × 120 × t25	Low	R89F-DS1225L	9
	120 × 120 × t38	High	R89F-DS1238H	10
	120 × 120 × t38	Low	R89F-DS1238L	10

#### **Options (Order Separately)**

	= -	
Name	Model	Page
Finger Guard	R87F-FG□	11
Filter	R87F-FL□(S)	12

Note: Mounting screws are not provided.

#### **Set Model**

Model	Set Contents
R89F-DS0925H-S1	Fan, Finger guard x 1, M4 Screw (40 mm) x 4 and nut set x 4
R89F-DS0925L-S1	Fan, Finger guard x 1, M4 Screw (40 mm) x 4 and nut set x 4
R89F-DS1225H-S1	Fan, Finger guard x 1, M4 Screw (40 mm) x 4 and nut set x 4
R89F-DS1225L-S1	Fan, Finger guard x 1, M4 Screw (40 mm) x 4 and nut set x 4
R89F-DS1238H-S1	Fan, Finger guard x 1, M4 Screw (55 mm) x 4 and nut set x 4
R89F-DS1238L-S1	Fan, Finger guard x 1, M4 Screw (55 mm) x 4 and nut set x 4
R89F-DS0925H-S2	Fan, Finger guard x 2, M4 Screw (40 mm) x 4 and nut set x 4
R89F-DS0925L-S2	Fan, Finger guard x 2, M4 Screw (40 mm) x 4 and nut set x 4
R89F-DS1225H-S2	Fan, Finger guard x 2, M4 Screw (40 mm) x 4 and nut set x 4
R89F-DS1225L-S2	Fan, Finger guard x 2, M4 Screw (40 mm) x 4 and nut set x 4
R89F-DS1238H-S2	Fan, Finger guard x 2, M4 Screw (55 mm) x 4 and nut set x 4
R89F-DS1238L-S2	Fan, Finger guard x 2, M4 Screw (55 mm) x 4 and nut set x 4

#### **Safety Precautions**

Refer to the Safety Precautions for All Axial Fans on our website.

# **R89F-DS0925** □ DC Axial Fans (92 × 92 × t25 mm)

#### **Ratings and Ordering Information**

ltem Model	Rated voltage	Permitted voltage fluctuation range	Frequency [Hz]	Rated current [A] *	Rated input [W] *	Rated rotational speed [r/min <sup>-1</sup> ] *	Maximum flow rate [m³/min] *	Maximum static pressure [Pa] *	Noise [dB] *
R89F-DS0925H	24 VDC	12 to 27.6 V		0.15	3.6	3550	1.66	56.1	39
R89F-DS0925L	24 VDC	12 to 27.6 V		0.08	1.92	2650	1.24	32.2	30

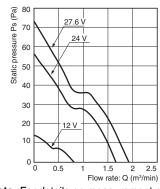
<sup>\*</sup> An asterisk (\*) indicates a nominal value.

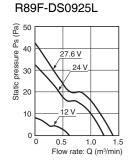
#### **Characteristics**

Motor type		Brushless DC motor			
Terminal type		Lead wires			
Insulation	class	Class E (UL class A)			
Insulation	resistance	10 MΩ min. (at 500 VDC) Between lead wire conductor and frame			
Insulation voltage	withstand	500 VAC (1 minute) Between lead wire conductor and frame			
Ambient o temperatur		-20 to +70°C (no icing)			
Ambient storage temperature		-30 to +70°C (no icing)			
Ambient humidity		20% to 85%			
Protection		Restraint burnout protection (Current blocking function) Power supply lead wire reverse polarity protection			
Materials	Frame	PBT/ABS alloy (UL94V-0)			
waterials	Blades	PBT/ABS alloy (UL94V-0)			
Bearings		Ball bearings			
Weight		Approx. 100 g			
Compliant standards		EN/IEC60950-1 EN/IEC60335-2-80 (CE marking compliant) EAC RCM			
Certified s	tandards	UL: UL507 (Recognition) CSA: C22.2 No.113			

#### Flow Rate and Static Pressure Characteristics (Reference Value)



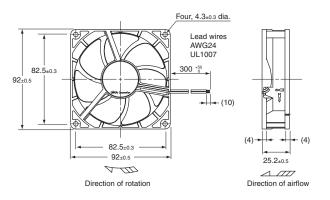




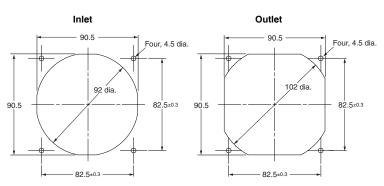
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure* on page 17.

Dimensions (Unit: mm)





#### **Panel Cutouts**



Name	Model	Page
Finger Guard	R87F-FG90	11

# **R89F-DS1225** □ DC Axial Fans (120 × 120 × t25 mm)

#### **Ratings and Ordering Information**

ltem Model	Rated voltage	Permitted voltage fluctuation range	Frequency [Hz]	Rated current [A] *	Rated input [W] *	Rated rotational speed [r/min <sup>-1</sup> ] *	Maximum flow rate [m³/min] *	Maximum static pressure [Pa] *	Noise [dB] *
R89F-DS1225H	24 VDC	20.4 to 27.6 V		0.47	11.28	4100	3.68	120	51
R89F-DS1225L	24 VDC	12 to 27.6 V		0.17	4.08	2850	2.5	64	40

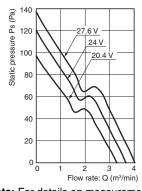
<sup>\*</sup> An asterisk (\*) indicates a nominal value.

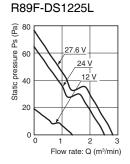
#### **Characteristics**

Characteristics					
Motor type		Brushless DC motor			
Terminal ty	/ре	Lead wires			
Insulation	class	Class E (UL class A)			
Insulation	resistance	10 MΩ min. (at 500 VDC) Between lead wire conductor and frame			
Insulation voltage	withstand	500 VAC (1 minute) Between lead wire conductor and frame			
Ambient of temperature		-20 to +70°C (no icing)			
Ambient st		-30 to +70°C (no icing)			
Ambient humidity		20% to 85%			
Protection		Restraint burnout protection (Current blocking function) Power supply lead wire reverse polarity protection			
Materials	Frame	PBT/ABS alloy (UL94V-0)			
Materiais	Blades	PPHOX (UL94V-1)			
Bearings		Ball bearings			
Weight		Approx. 280 g			
Compliant standards		EN/IEC60950-1 EN/IEC60335-2-80 (CE marking compliant) EAC RCM			
Certified st	tandards	UL: UL507 (Recognition) CSA: C22.2 No.113			

#### Flow Rate and Static Pressure Characteristics (Reference Value)



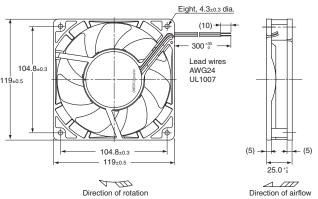




Note: For details on measurement conditions, refer to Flow Rate and Static Pressure Characteristics on Safety Precautions for All Axial Fans.

**Dimensions** (Unit: mm)

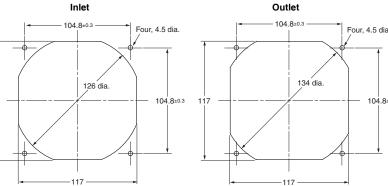




#### **Panel Cutouts**



•		
Name	Model	Page
Finger Guard	R87F-FG120	11
Filter	R87F-FL120(S)	12



# **R89F-DS1238** ☐ DC Axial Fans (120 × 120 × t38 mm)

#### **Ratings and Ordering Information**

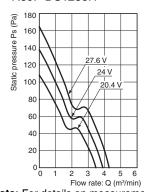
ltem Model	Rated voltage	Permitted voltage fluctuation range	Frequency [Hz]	Rated current [A] *	Rated input [W] *	Rated rotational speed [r/min <sup>-1</sup> ] *	Maximum flow rate [m³/min] *	Maximum static pressure [Pa] *	Noise [dB] *
R89F-DS1238H	24 VDC	20.4 to 27.6 V		0.5	12	3600	3.88	135	49
R89F-DS1238L	24 VDC	14 to 27.6 V		0.11	2.64	1950	2.1	39.6	32

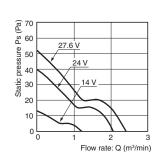
\* An asterisk (\*) indicates a nominal value.

Motor type		Brushless DC motor	
Terminal type		Lead wires	
Insulation class		Class E (UL class A)	
Insulation resistance		10 M $\Omega$ min. (at 500 VDC) Between lead wire conductor and frame	
Insulation withstand voltage		500 VAC (1 minute) Between lead wire conductor and frame	
Ambient operating temperature		-20 to +70°C (no icing)	
Ambient storage temperature		-30 to +70°C (no icing)	
Ambient humidity		20% to 85%	
Protection		Restraint burnout protection (Current blocking function) Power supply lead wire reverse polarity protection	
Frame		PBT/ABS alloy (UL94V-0)	
Materials	Blades	PPHOX (UL94V-1)	
Bearings	•	Ball bearings	
Weight		Approx. 330 g	
Compliant standards		EN/IEC60950-1 EN/IEC60335-2-80 (CE marking compliant) EAC RCM	
Certified standards		UL: UL507 (Recognition) CSA: C22.2 No.113	

#### **Characteristics**

# Flow Rate and Static Pressure Characteristics (Reference Value) R89F-DS1238H R89F-DS1238L

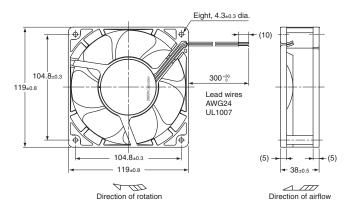




Note: For details on measurement conditions, refer to Flow Rate and Static Pressure Characteristics on Safety Precautions for All Axial Fans.

Dimensions (Unit: mm)





**Panel Cutouts** 

# Inlet Outlet 104.8±0.3 Four, 4.5 dia. 126 dia. 104.8±0.3 117 104.8±0.3

Name	Model	Page
Finger Guard	R87F-FG120	11
Filter	R87F-FL120(S)	12

# R87F-FG Finger Guards

#### **Ratings and Ordering Information**

Size	Model number	Weight (g)
150 dia.	R87F-FG150	Approx. 58
120 × 120	R87F-FG120	Approx. 45
92 × 92	R87F-FG90	Approx. 25
80 × 80	R87F-FG80	Approx. 20

#### **Applicable Axial Fans**

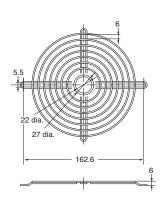
	AC Axial Fan	Finger Guard	
Size	Model		
150 dia.	R87T-A□A0 Series	R87F-FG150	
120×120	R89F-DS1225□ series R89F-DS1238□ series R89F-MS1238HP	R87F-FG120	
	R87F-A□A1 Series R87T-A□A1 Series		
92 × 92	R89F-DS0925□ series R89F-MS0938□P series R87F-A□A9 Series	R87F-FG90	
80 × 80	R87F-A□A8 Series R87T-A□A8 Series	R87F-FG80	

**Note:** Finger Guards reduce the flow rate by approximately 2% to 5%.

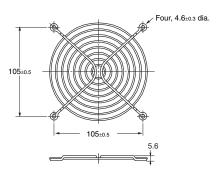
Dimensions (Unit: mm)

Material: steel, Joints: spot welded, Surface: nickel-chrome plated

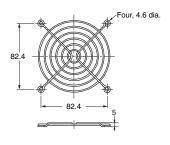
#### R87F-FG150



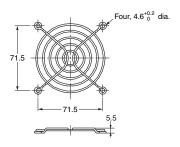
#### R87F-FG120



#### R87F-FG90



#### R87F-FG80



#### **R87F-FL** Filters

#### **Ratings and Ordering Information**

#### Filter

Size	Model number	Weight (g)
120 × 120	R87F-FL120	Approx. 43
92 × 92	R87F-FL90	Approx. 30
80 × 80	R87F-FL80	Approx. 21
120 × 120	R87F-FL120S	Approx. 19

Note: The filter contains one medium.

#### Media

Size	Model number
120 × 120	R87F-FL120-M120
92 × 92	R87F-FL90-M90
80 × 80	R87F-FL80-M80

Note: Use the following model number to order the Media only. R87F-FL□-M□ (□: 120, 90, or 80)

(One set containing five Media, weight: 5 g max.)

#### **Applicable Axial Fans**

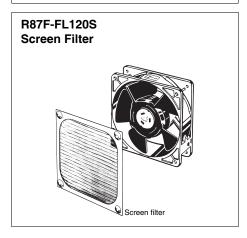
AC Axial Fan		Filter	
Size	Model	Plastic	Aluminum
150 dia.	R87T-A□A0 Series		
	R89F-DS1225□ series		R87F-FL120S
	R89F-DS1238□ series		
$120 \times 120$	R89F-MS1238HP	R87F-FL120	
	R87F-A□A1 Series		
	R87T-A□A1 Series		
92 × 92	R87F-A□A9 Series	R87F-FL90	
80×80	R87F-A□A8 Series	R87F-FL80	
	R87T-A□A8 Series	11071 -1 200	

Note: Filters reduce the flow rate by approximately 20% to 40%. Ensure that there is no clogging.

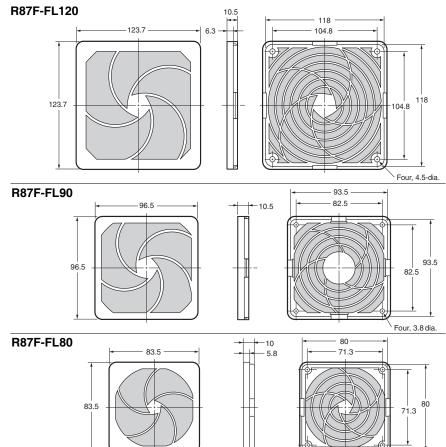
# R87F-FL Plastic Filter Guard Media Plastic filter

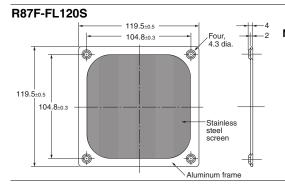
#### **Mounting Method**

- Attach the guard to the Fan using the mounting bolts. (There are no mounting bolts provided with the Plastic Filter.)
- With the media held between the retainer and the guard, hook the retainer to the guard. (The Media and retainer can be one-touch mounted/dismounted.)



#### Dimensions (Unit: mm)





- Note: 1. The Screen Filter is made using aluminium and has an <u>EMI/RFI</u> shielding effect.
  - 2. When mounting the Screen Filter, make sure that it does not come in contact with the fan blades.

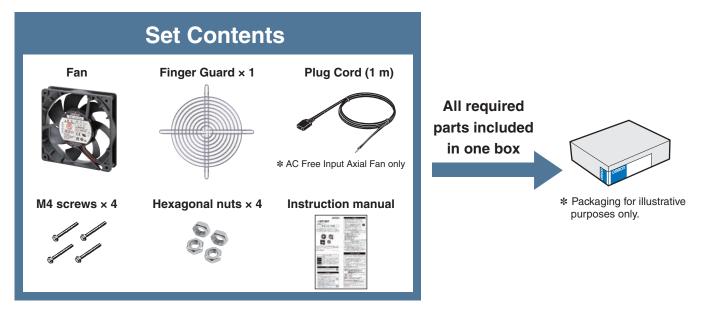
Four, 4.5-dia.

3. The screen is a  $30 \times 30$  aluminum mesh. (30 aluminum wires per inch)

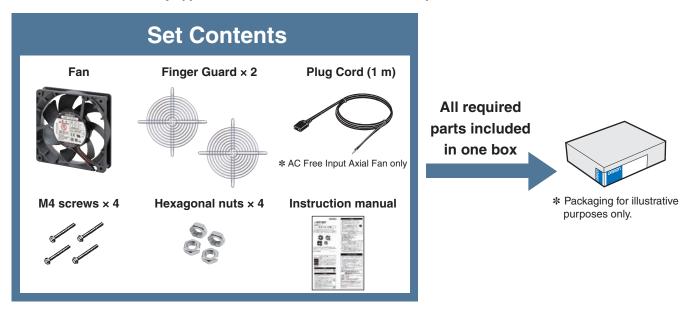
#### **Set Model**

- Select the optimum size for a variety of control panels.
- All required parts can be ordered as a set, ideal for fan replacement.
- All required maintenance parts are included in one box, requiring less space and reduced parts management work.

R89F-



R89F-



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