AC Axial Fans
R87F/R87T

CSM_R87F_R87T_DS_E_3_2

Optimum Cooling with a Comprehensive Lineup of Axial Fans

- Low noise level, long service life, and resistance to the environment.
- Shaft supported by ball bearings for highly-reliable operation.
- Plastic-bladed models (44 type) and metal-bladed models (28 type) included in series.
- R87T-A□A15H-WR Water-resistant AC Axial Fans (IP X7 degree of protection) added to series.
- CE marking compliant and certified by UL and CSA.

Note: The compliant standards and certified safety standards depend on the product. Check the information given for available models of Axial fans and the information in *Characteristics*.

⚠ Be sure to read the *Safety Precautions for All Axial Fans*.

Model Number Structure

Model Number Legend

R87□-□□ □□□□□□-□

1 2 3 4 5 6 7 8

1. Basic series
R87F: Plastic blade
R87T: Metal blade

2. Rated voltage
A1: 100 VAC
A3: 115 VAC
A4: 200 VAC
A6: 230 VAC

3. Frame material
A: Die-cast

4. Frame size
0: 150 dia.
1: 120 × 120
9: 92 × 92
8: 80 × 80

5. Frame thickness
3: 25
5: 38
7: 55

6. Rotational speed
H: High
M: Medium
L: Low

7. Terminal type
No marking: Lead wires
P: Terminals (See note 1.)

8. Type
No marking: Standard
WR: Water-resistant

Note: 1. A Plug Cord (R87F-PC) is available as an option for models with terminals.
2. These tables show only how to read product markings. They do not indicate which products are available. Refer to "*Ratings and Ordering Information*" when ordering.

Ordering Information

Available Models

AC Axial Fans

Series	Size (mm)	Model	Datasheet available
R87F (plastic blades)	120 × 120 × t38	R87F-A□A15	Refer to page 2.
	120 × 120 × t25	R87F-A□A13	Refer to page 4.
	92 × 92 × t25	R87F-A□A93	Refer to page 6.
	80 × 80 × t38	R87F-A□A85	Refer to page 8.
	80 × 80 × t25	R87F-A□A83	Refer to page 10.
R87T (metal blades)	120 × 120 × t38	R87T-A□A15H-WR	Refer to page 12.
	150-dia. × t55	R87T-A□A07	Refer to page 14.
	150-dia. × t38	R87T-A□A05	Refer to page 16.
	120 × 120 × t38	R87T-A□A15	Refer to page 18.
	80 × 80 × t38	R87T-A□A85	Refer to page 20.
	80 × 80 × t25	R87T-A□A83	Refer to page 22.

Options

Product name	Model	Datasheet available
Plug Cord	R87F-PC	Refer to page 24.
Finger Guard	R87F-FG□	Refer to page 25.
Filter	R87F-FL□(S)	Refer to page 26.

Note: Mounting screws are not provided.

Safety Precautions

Refer to the *"Safety Precautions for All Axial Fans"*.

Specifications

Ratings and Ordering Information

Note: An asterisk (✻) indicates a nominal value.

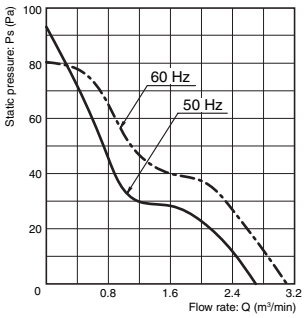
Item / Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) ✻		Rated input (W) ✻		Rated rotational speed (r/min) ✻		Maximum flow rate (m^3/min) ✻		Maximum static pressure (Pa) ✻		Noise (dB) ✻	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87F-A1A15HP	100	85% to 110% rated voltage	50/60	0.230	0.220	15	14	2,750	3,200	2.7	3.1	93.1	99.0	42	46
R87F-A3A15HP	115			0.200	0.180										
R87F-A4A15HP	200			0.110	0.100										
R87F-A6A15HP	230			0.100	0.085										
R87F-A1A15MP	100	85% to 110% rated voltage	50/60	0.210	0.180	15	14	2,450	2,700	2.2	2.5	63.7	63.7	39	42
R87F-A3A15MP	115			0.190	0.160										
R87F-A4A15MP	200			0.100	0.090										
R87F-A6A15MP	230			0.085	0.075										
R87F-A1A15LP	100	85% to 110% rated voltage	50/60	0.170	0.150	11	10	2,100	2,250	2.0	2.1	44.1	44.1	36	38
R87F-A3A15LP	115			0.150	0.130										
R87F-A4A15LP	200			0.080	0.070										
R87F-A6A15LP	230			0.072	0.064										

Characteristics

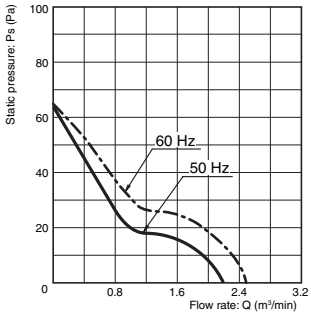
Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Terminals
Insulation class	IEC class B (130°C) UL class A (105°C) CSA class A (105°C)
Insulation resistance	100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand voltage	2,000 VAC (1 minute) between all power supply connections and uncharged metal parts.
Ambient operating temperature	–30 to 70°C (no icing)
Ambient storage temperature	–40 to 85°C (no icing)
Ambient humidity	25% to 85%
Protection	Impedance protection
Materials	Frame: Die-cast aluminum Blades: Glass polycarbonate
Bearings	Ball bearings
Weight	Approx. 540 g
Compliant standards	PSE, EN/IEC 60335 (CE marking compliant)
Certified standards	UL/CSA

Flow Rate and Static Pressure Characteristics (Reference Values)

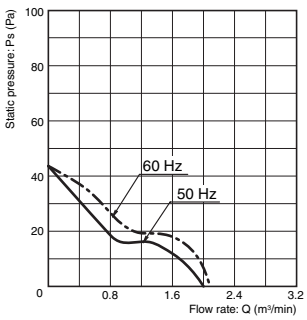
R87F-A□A15HP



R87F-A□A15MP



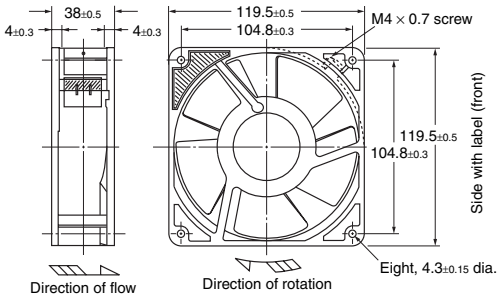
R87F-A□A15LP



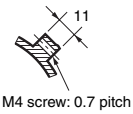
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure* on *Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)



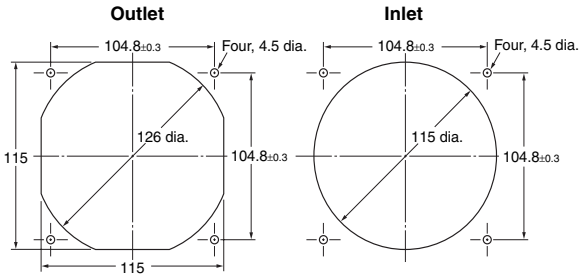
Screw hole for grounding



Terminal shape

Faston #110 terminals
(or equivalent)

Panel Cutouts



Options

Name	Model	Datasheet available
Plug Cord	R87F-PC	Refer to page 24.
Finger Guard	R87F-FG120	Refer to page 25.
Filter	R87F-FL120(S)	Refer to page 26.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.

Specifications

Ratings and Ordering Information

Note: An asterisk (✻) indicates a nominal value.

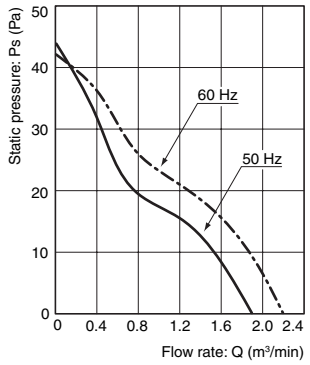
Item / Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) ✻		Rated input (W) ✻		Rated rotational speed (r/min) ✻		Maximum flow rate (m^3/min) ✻		Maximum static pressure (Pa) ✻		Noise (dB) ✻	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87F-A1A13HP	100	85% to 110% rated voltage	50/60	0.180	0.150	14	12	2,400	2,800	1.9	2.2	44.1	42.2	39	43
R87F-A3A13HP	115			0.160	0.130										
R87F-A4A13HP	200			0.096	0.078										
R87F-A6A13HP	230			0.085	0.068										
R87F-A1A13LP	100	85% to 110% rated voltage	50/60	0.140	0.110	12	10	1,700	2,000	1.3	1.5	19.6	23.5	32	34
R87F-A3A13LP	115			0.130	0.100										
R87F-A4A13LP	200			0.070	0.055										
R87F-A6A13LP	230			0.052	0.045										

Characteristics

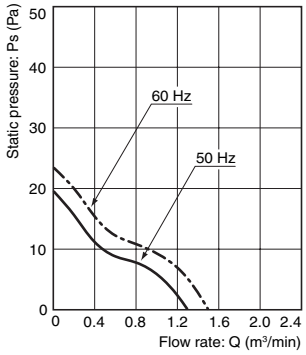
Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Terminals
Insulation class	IEC class B (130°C) UL class A (105°C) CSA class A (105°C)
Insulation resistance	100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand voltage	2,000 VAC (1 minute) between all power supply connections and uncharged metal parts.
Ambient operating temperature	–30 to 70°C (no icing)
Ambient storage temperature	–40 to 85°C (no icing)
Ambient humidity	25% to 85%
Protection	Impedance protection
Materials	Frame: Die-cast aluminum Blades: Glass polycarbonate
Bearings	Ball bearings
Weight	Approx. 350 g
Compliant standards	PSE, EN/IEC 60335 (CE marking compliant)
Certified standards	UL/CSA

Flow Rate and Static Pressure Characteristics (Reference Values)

R87F-A□A13HP



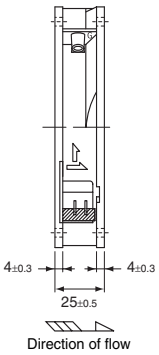
R87F-A□A13LP

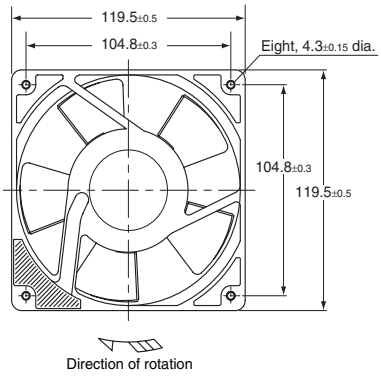


Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure* on *Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)



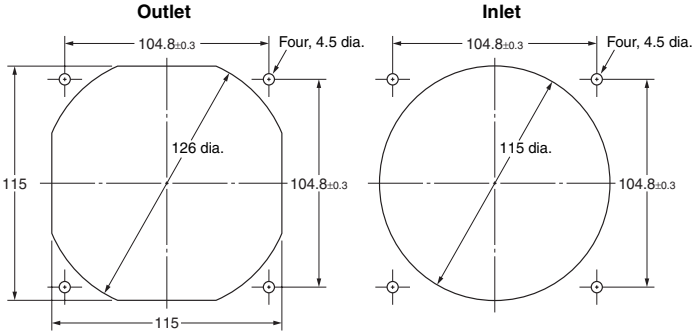


Screw hole for grounding

Terminal shape

Faston #110 terminal
(or equivalent)

Panel Cutouts



Options

Name	Model	Datasheet available
Plug Cord	R87F-PC	Refer to page 24.
Finger Guard	R87F-FG120	Refer to page 25.
Filter	R87F-FL120(S)	Refer to page 26.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.

R87F-A□A93

Specifications

Ratings and Ordering Information

Note: An asterisk (✻) indicates a nominal value.

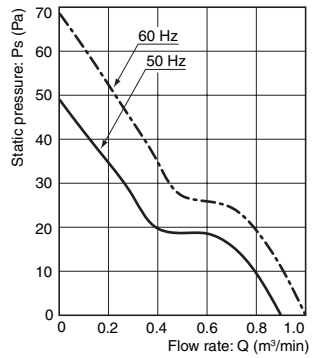
Item / Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) ✻		Rated input (W) ✻		Rated rotational speed (r/min) ✻		Maximum flow rate (m^3/min) ✻		Maximum static pressure (Pa) ✻		Noise (dB) ✻	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87F-A1A93HP	100	85% to 110% rated voltage	50/60	0.150	0.130	13	11	2,550	3,050	0.9	1.0	49.0	68.6	33	36
R87F-A3A93HP	115			0.125	0.100										
R87F-A4A93HP	200			0.070	0.060										
R87F-A6A93HP	230			0.055	0.050										
R87F-A1A93LP	100	85% to 110% rated voltage	50/60	0.100	0.085	7	6	1,900	2,200	0.7	0.8	24.5	34.3	29	32
R87F-A3A93LP	115			0.090	0.075										
R87F-A4A93LP	200			0.050	0.043										
R87F-A6A93LP	230			0.045	0.040										

Characteristics

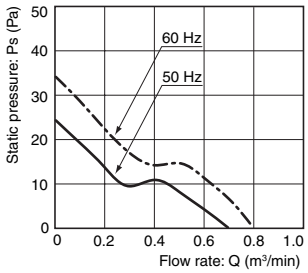
Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Terminals
Insulation class	IEC class B (130°C) UL class A (105°C) CSA class A (105°C)
Insulation resistance	100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand voltage	2,000 VAC (1 minute) between all power supply connections and uncharged metal parts.
Ambient operating temperature	–30 to 70°C (no icing)
Ambient storage temperature	–40 to 85°C (no icing)
Ambient humidity	25% to 85%
Protection	Impedance protection
Materials	Frame: Die-cast aluminum Blades: Glass polycarbonate
Bearings	Ball bearings
Weight	Approx. 300 g
Compliant standards	PSE, EN/IEC 60335 (CE marking compliant)
Certified standards	UL/CSA

Flow Rate and Static Pressure Characteristics (Reference Values)

R87F-A□A93HP



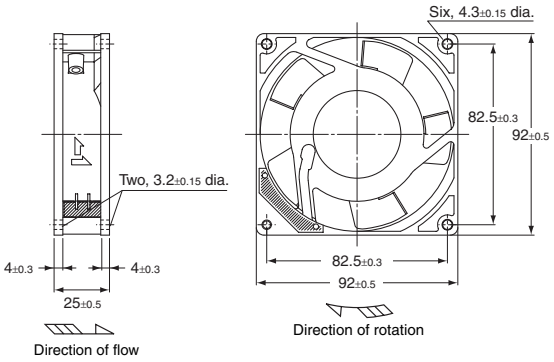
R87F-A□A93LP



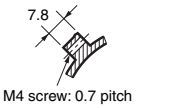
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure* on *Safety Precautions for All Axial Fans*.

Dimensions

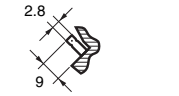
(Unit: mm)



Screw hole for grounding



Terminal shape

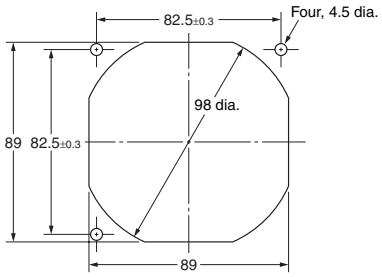


Faston #110 terminal
(or equivalent)

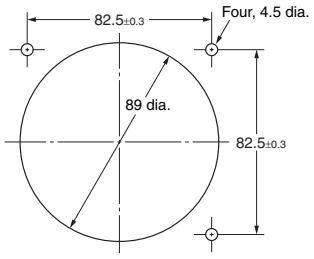
Panel Cutouts

Panel cutting reference dimensions (note 3 mounting holes)

Outlet



Inlet



Options

Name	Model	Datasheet available
Plug Cord	R87F-PC	Refer to page 24.
Finger Guard	R87F-FG90	Refer to page 25.
Filter	R87F-FL90	Refer to page 26.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.

R87F-A□A85

Specifications

Ratings and Ordering Information

Note: An asterisk (✻) indicates a nominal value.

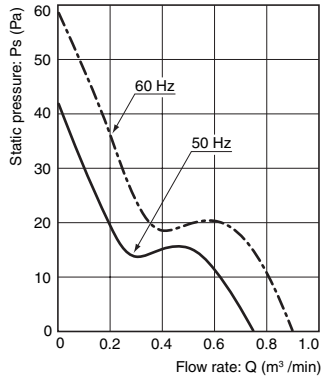
Item / Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) ✻		Rated input (W) ✻		Rated rotational speed (r/min) ✻		Maximum flow rate (m^3/min) ✻		Maximum static pressure (Pa) ✻		Noise (dB) ✻	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87F-A1A85HP	100	85% to 110% rated voltage	50/60	0.140	0.115	10	9	2,700	3,200	0.8	0.9	42.1	58.8	32	36
R87F-A3A85HP	115			0.120	0.100										
R87F-A4A85HP	200			0.080	0.060										
R87F-A6A85HP	230			0.060	0.050										
R87F-A1A85LP	100	85% to 110% rated voltage	50/60	0.090	0.080	7	6	2,200	2,500	0.6	0.7	25.0	32.0	26	29
R87F-A3A85LP	115			0.080	0.070										
R87F-A4A85LP	200			0.050	0.040										
R87F-A6A85LP	230			0.040	0.040										

Characteristics

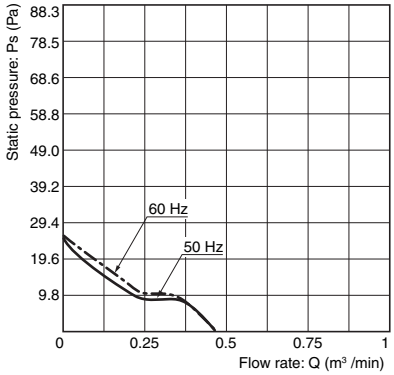
Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Terminals
Insulation class	IEC class B (130°C) UL class A (105°C) CSA class A (105°C)
Insulation resistance	100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand voltage	2,000 VAC (1 minute) between all power supply connections and uncharged metal parts.
Ambient operating temperature	−30 to 70°C (no icing)
Ambient storage temperature	−40 to 85°C (no icing)
Ambient humidity	25% to 85%
Protection	Impedance protection
Materials	Frame: Die-cast aluminum Blades: Glass polycarbonate
Bearings	Ball bearings
Weight	Approx. 280 g
Compliant standards	PSE, EN/IEC 60335 (CE marking compliant)
Certified standards	UL/CSA

Flow Rate and Static Pressure Characteristics (Reference Values)

R87F-A□A85HP



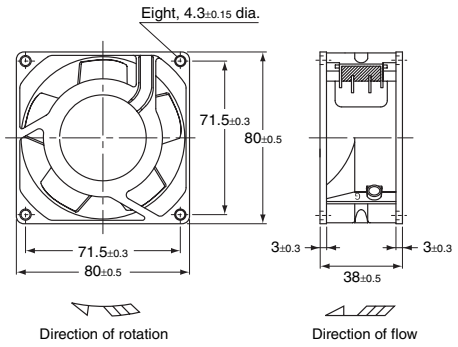
R87F-A□A85LP



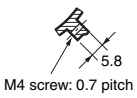
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure* on *Safety Precautions for All Axial Fans*.

Dimensions

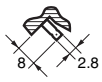
(Unit: mm)



Screw hole for grounding



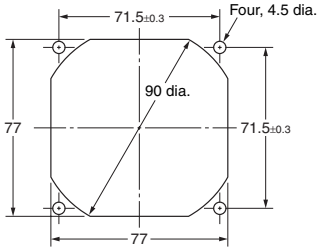
Terminal shape



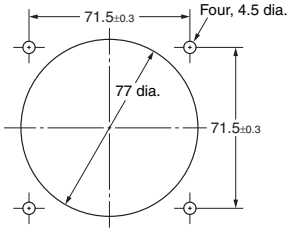
Faston #110 terminal
(or equivalent)

Panel Cutouts

Outlet



Inlet



Options

Name	Model	Datasheet available
Plug Cord	R87F-PC	Refer to page 24.
Finger Guard	R87F-FG80	Refer to page 25.
Filter	R87F-FL80	Refer to page 26.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.

R87F-A□A83

Specifications

Ratings and Ordering Information

Note: An asterisk (✻) indicates a nominal value.

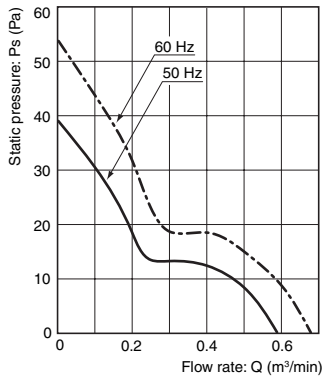
Item / Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) ✻		Rated input (W) ✻		Rated rotational speed (r/min) ✻		Maximum flow rate (m^3/min) ✻		Maximum static pressure (Pa) ✻		Noise (dB) ✻	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87F-A1A83H	100	85% to 110% rated voltage	50/60	0.097	0.080	7	6	2,600	3,000	0.6	0.7	39.2	53.9	32	36
R87F-A3A83H	115			0.085	0.070										
R87F-A4A83H	200			0.048	0.041										
R87F-A6A83H	230			0.046	0.039										
R87F-A1A83L	100	85% to 110% rated voltage	50/60	0.063	0.055	5	4	1,900	2,100	0.4	0.5	19.5	23.5	28	30
R87F-A3A83L	115			0.055	0.048										
R87F-A4A83L	200			0.033	0.030										
R87F-A6A83L	230			0.028	0.024										

Characteristics

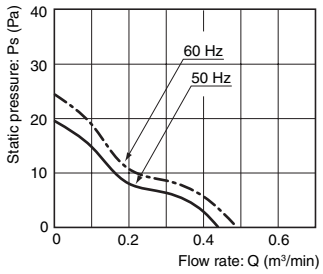
Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Lead wires
Insulation class	IEC class B (130°C) UL class A (105°C) CSA class A (105°C)
Insulation resistance	100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand voltage	2,000 VAC (1 minute) between all power supply connections and uncharged metal parts.
Ambient operating temperature	–30 to 70°C (no icing)
Ambient storage temperature	–40 to 85°C (no icing)
Ambient humidity	25% to 85%
Protection	Impedance protection
Materials	Frame: Die-cast aluminum Blades: Glass polycarbonate
Bearings	Ball bearings
Weight	Approx. 230 g
Compliant standards	EN/IEC 60335 (CE marking compliant)
Certified standards	UL/CSA

Flow Rate and Static Pressure Characteristics (Reference Values)

R87F-A□A83H



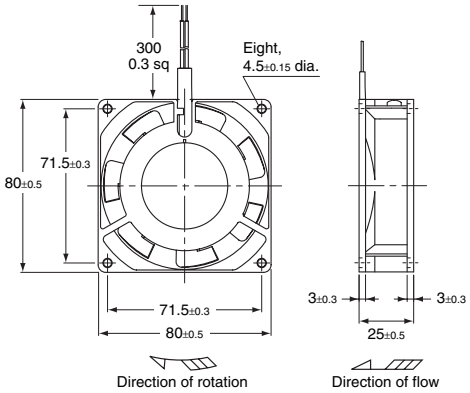
R87F-A□A83L



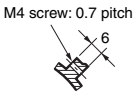
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure* on *Safety Precautions for All Axial Fans*.

Dimensions

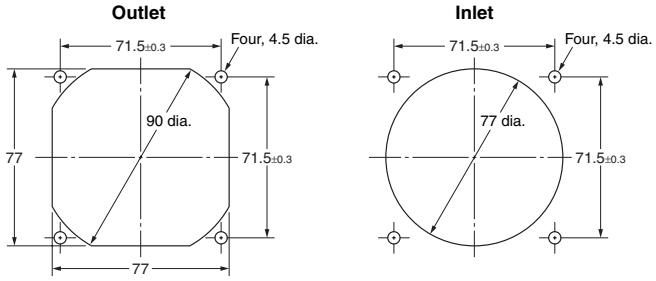
(Unit: mm)



Screw hole for grounding



Panel Cutouts



Options

Names	Model	Datasheet available
Finger Guard	R87F-FG80	Refer to page 25.
Filter	R87F-FL80	Refer to page 26.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.

R87T-A□A15H-WR

Specifications

Ratings and Ordering Information

Note: An asterisk (✻) indicates a nominal value.

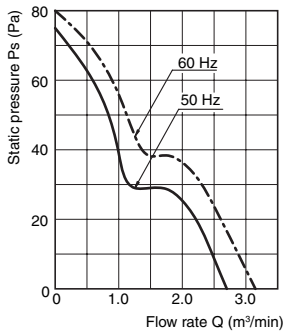
Item / Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) ✻		Rated input (W) ✻		Rated rotational speed (r/min) ✻		Maximum flow rate (m^3/min) ✻		Maximum static pressure (Pa) ✻		Noise (dB) ✻	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87T-A1A15H-WR	100	85% to 110% rated voltage	50/60	0.350	0.280	22	20	2,550	2,900	2.7	3.2	75.0	80.0	42	46
R87T-A3A15H-WR	115			0.300	0.240										
R87T-A4A15H-WR	200			0.170	0.135										
R87T-A6A15H-WR	200 to 230			0.145	0.115	15 to 22									

Characteristics

Motor type		Single-phase shading coil induction motor (2-pole, open type)
Terminal type		Lead wires
Insulation class		IEC class B (130°C) UL class A (105°C) CSA class A (105°C)
Insulation resistance		100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand voltage		2,000 VAC (1 minute) between all power supply connections and uncharged metal parts.
Degree of protection		IP X7
Ambient operating temperature		–20 to 70°C (no icing)
Ambient storage temperature		–40 to 85°C (no icing)
Ambient humidity		95% max.
Protection		Impedance protection
Materials	**Frame**	Die-cast aluminum Black coating
	Blades	Zinc die-cast
Bearings		Ball bearings
Weight		Approx. 650 g
Standards		EN/IEC 60335 (CE marking compliant)
Certified standards		cUL

Flow Rate and Static Pressure Characteristics (Reference Values)

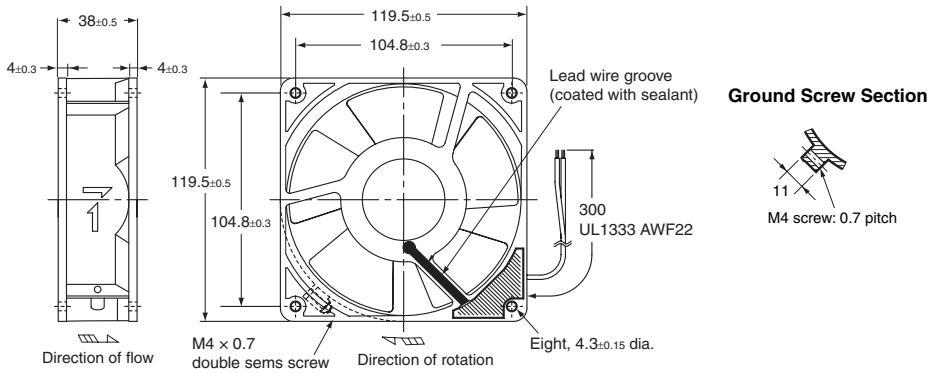
R87T-A□A15H-WR



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

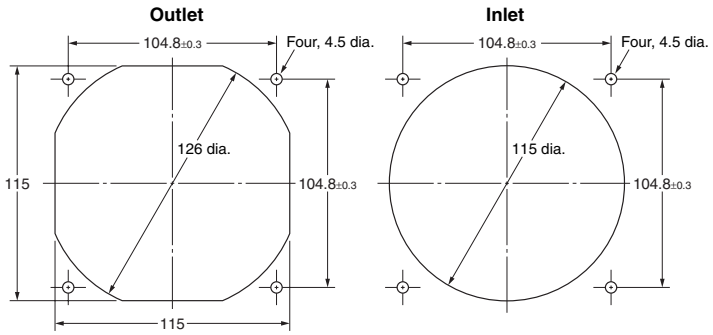
Dimensions

(Unit: mm)



Ground Screw Section

Panel Cutouts



Options

Name	Model	Page number
Finger Guard	R87F-FG120	Refer to page 25.
Filter	R87F-FL120(S)	Refer to page 26.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.

R87T-A□A07

Specifications

Ratings and Ordering Information

Note: An asterisk (✻) indicates a nominal value.

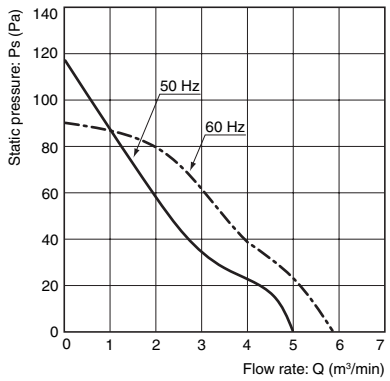
Item / Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) ✻		Rated input (W) ✻		Rated rotational speed (r/min) ✻		Maximum flow rate (m^3/min) ✻		Maximum static pressure (Pa) ✻		Noise (dB) ✻	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87T-A1A07H	100	85% to 110% rated voltage	50/60	0.480	0.420	43	40	2,800	3,250	5.0	5.8	118	88	52	56
R87T-A3A07H	115			0.420	0.370										
R87T-A4A07H	200			0.240	0.210										
R87T-A6A07H	230			0.210	0.190										

Characteristics

Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Lead wires
Insulation class	IEC class B (130°C) UL class A (105°C)
Insulation resistance	100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand voltage	2,000 VAC (1 minute) between all power supply connections and uncharged metal parts.
Ambient operating temperature	−20 to 70°C (no icing)
Ambient storage temperature	−40 to 85°C (no icing)
Ambient humidity	25% to 85%
Protection	Thermal protection
Materials	Frame: Die-cast aluminum Blades: Steel plate (black coating)
Bearings	Ball bearings
Weight	Approx. 1,200 g
Compliant standards	EN/IEC 60335 (CE marking compliant)
Certified standards	UL

Flow Rate and Static Pressure Characteristics (Reference Value)

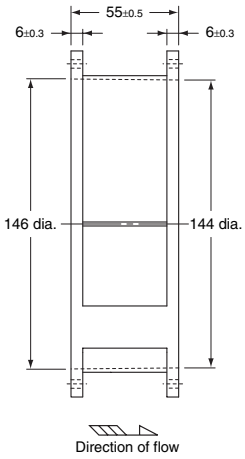
R87T-A□A07H

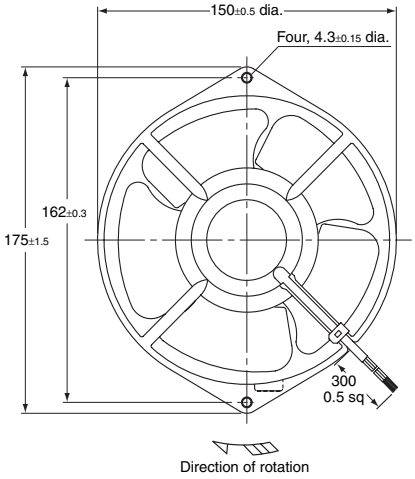


Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure* on *Safety Precautions for All Axial Fans.*

Dimensions

(Unit: mm)

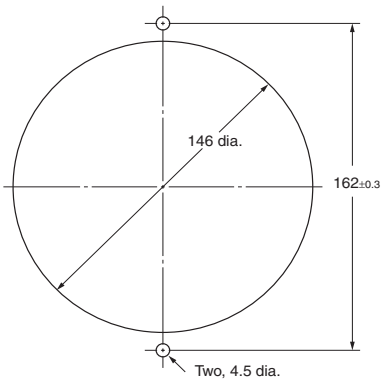




Ground Screw Section

Panel Cutouts

Outlet and Inlet



Options

Name	Model	Datasheet available
Finger Guard	R87F-FG150	Refer to page 25.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.

R87T-A□A05

Specifications

Ratings and Ordering Information

Note: An asterisk (✻) indicates a nominal value.

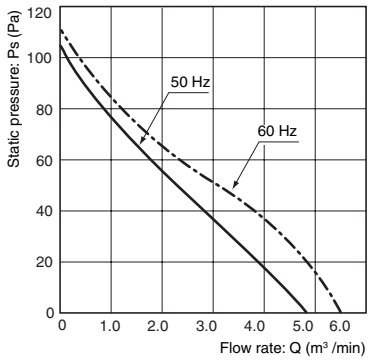
Item / Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) ✻		Rated input (W) ✻		Rated rotational speed (r/min) ✻		Maximum flow rate (m^3/min) ✻		Maximum static pressure (Pa) ✻		Noise (dB) ✻	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87T-A1A05H	100	85% to 110% rated voltage	50/60	0.550	0.460	50	48	2,650	3,100	4.8	5.7	104	107	56	58
R87T-A3A05H	115			0.470	0.390										
R87T-A4A05H	200			0.260	0.220										
R87T-A6A05H	230			0.220	0.190										

Characteristics

Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Lead wires
Insulation class	IEC class B (130°C) UL class A (105°C)
Insulation resistance	100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand voltage	2,000 VAC (1 minute) between all power supply connections and uncharged metal parts.
Ambient operating temperature	–20 to 70°C (no icing)
Ambient storage temperature	–40 to 85°C (no icing)
Ambient humidity	25% to 85%
Protection	Thermal protection
Materials	Frame: Die-cast aluminum Blades: Steel plate (mat black baked coating)
Bearings	Ball bearings
Weight	Approx. 840 g
Compliant standards	EN/IEC 60335 (CE marking compliant)
Certified standards	UL

Flow Rate and Static Pressure Characteristics (Reference Value)

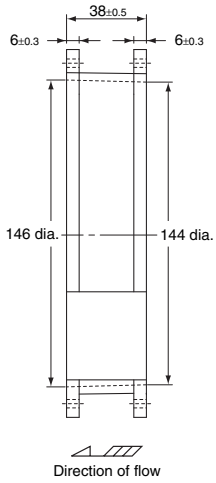
R87T-A□A05H

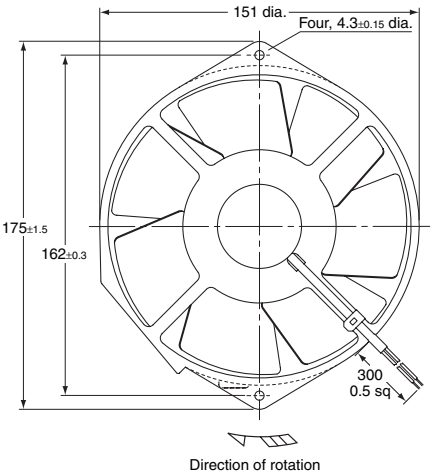


Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure* on *Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)

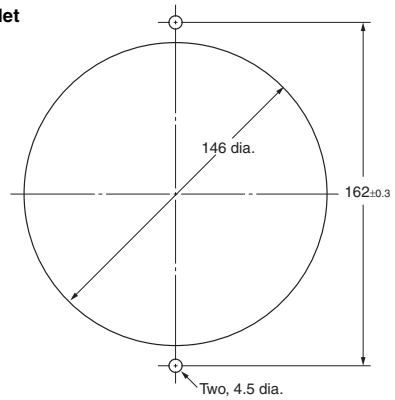




Ground Screw Section

Panel Cutouts

Outlet and Inlet



Options

Name	Model	Datasheet available
Finger Guard	R87F-FG150	Refer to page 25.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.

R87T-A□A15

Specifications

Ratings and Ordering Information

Note: An asterisk (✻) indicates a nominal value.

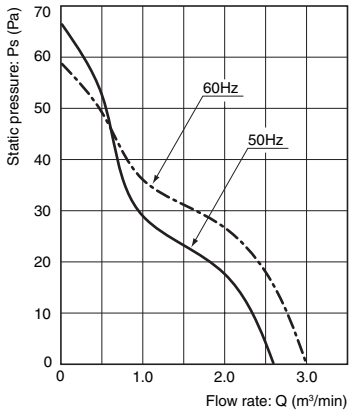
Item / Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) ✻		Rated input (W) ✻		Rated rotational speed (r/min) ✻		Maximum flow rate (m^3/min) ✻		Maximum static pressure (Pa) ✻		Noise (dB) ✻	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87T-A1A15HP	100	85% to 110% rated voltage	50/60	0.250	0.210	20	18	2,700	3,100	2.6	3.0	66.6	58.8	42	46
R87T-A3A15HP	115			0.215	0.190										
R87T-A4A15HP	200			0.130	0.110										
R87T-A6A15HP	230			0.105	0.095										
R87T-A1A15MP	100	85% to 110% rated voltage	50/60	0.220	0.190	16	14	2,350	2,750	1.7	2.0	36.7	37.3	36	40
R87T-A3A15MP	115			0.200	0.170										
R87T-A4A15MP	200			0.110	0.100										
R87T-A6A15MP	230			0.100	0.085										

Characteristics

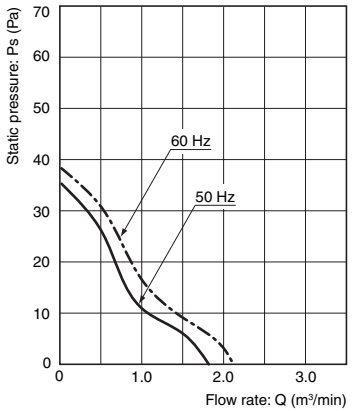
Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Terminals
Insulation class	IEC class B (130°C) UL class A (105°C)
Insulation resistance	100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand voltage	2,000 VAC (1 minute) between all power supply connections and uncharged metal parts.
Ambient operating temperature	–20 to 70°C (no icing)
Ambient storage temperature	–40 to 85°C (no icing)
Ambient humidity	25% to 85%
Protection	Impedance protection
Materials	Frame: Die-cast aluminum Blades: Steel plate (black coating)
Bearings	Ball bearings
Weight	Approx. 570 g
Compliant standards	PSE, EN/IEC 60335 (CE marking compliant)
Certified standards	UL

Flow Rate and Static Pressure Characteristics (Reference Values)

R87T-A□A15HP



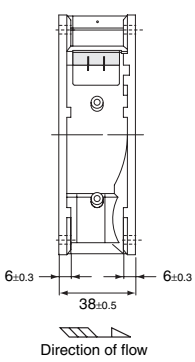
R87T-A□A15MP

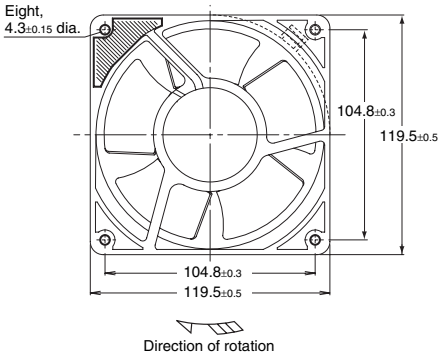


Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure* on *Safety Precautions for All Axial Fans*.

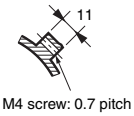
Dimensions

(Unit: mm)





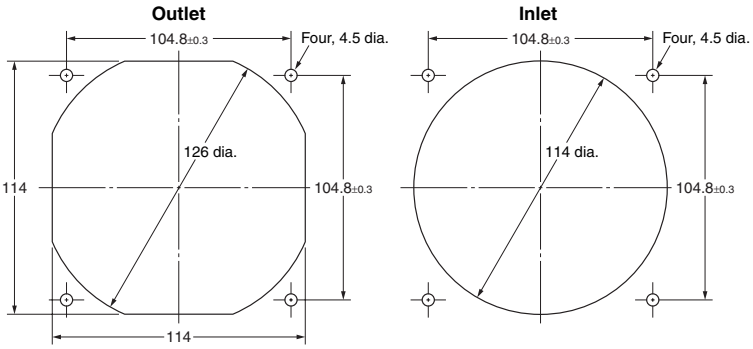
Screw hole for grounding



Terminal shape

Faston #110 terminal
(or equivalent)

Panel Cutouts



Options

Name	Model	Datasheet available
Plug Cord	R87F-PC	Refer to page 24.
Finger Guard	R87F-FG120	Refer to page 25.
Filter	R87F-FL120(S)	Refer to page 26.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.

R87T-A□A85

Specifications

Ratings and Ordering Information

Note: An asterisk (✻) indicates a nominal value.

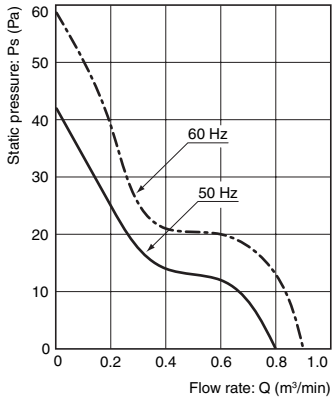
Item / Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) ✻		Rated input (W) ✻		Rated rotational speed (r/min) ✻		Maximum flow rate (m^3/min) ✻		Maximum static pressure (Pa) ✻		Noise (dB) ✻	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87T-A1A85H	100	85% to 110% rated voltage	50/60	0.180	0.160	12	10	2,800	3,300	0.80	0.90	42	58	37	40
R87T-A3A85H	115			0.155	0.135										
R87T-A4A85H	200			0.085	0.075										
R87T-A6A85H	230			0.080	0.070										

Characteristics

Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Lead wires
Insulation class	IEC class B (130°C) UL class A (105°C)
Insulation resistance	100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand voltage	2,000 VAC (1 minute) between all power supply connections and uncharged metal parts.
Ambient operating temperature	–20 to 70°C (no icing)
Ambient storage temperature	–40 to 85°C (no icing)
Ambient humidity	25% to 85%
Protection	Impedance protection
Materials	Frame: Die-cast aluminum Blades: Steel plate (black coating)
Bearings	Ball bearings
Weight	Approx. 440 g
Compliant standards	EN/IEC 60335 (CE marking compliant)
Certified standards	UL

Flow Rate and Static Pressure Characteristics (Reference Values)

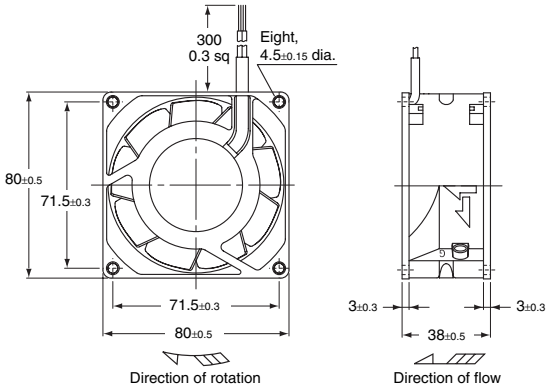
R87T-A□A85H



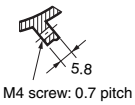
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure* on *Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)

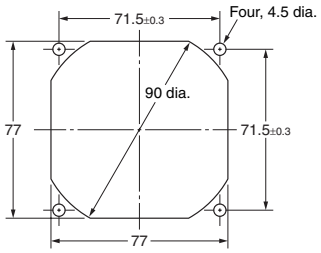


Screw hole for grounding

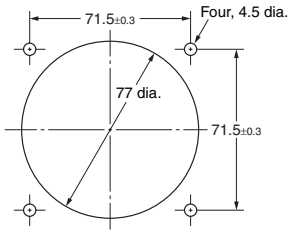


Panel Cutouts

Outlet



Inlet



Options

Name	Model	Datasheet available
Finger Guard	R87F-FG80	Refer to page 25.
Filter	R87F-FL80	Refer to page 26.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.

R87T-A□A83

Specifications

Ratings and Ordering Information

Note: An asterisk (✻) indicates a nominal value.

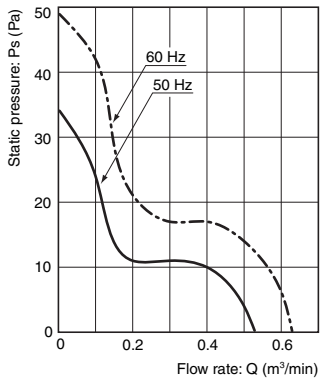
Item / Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A)*		Rated input (W)*		Rated rotational speed (r/min)*		Maximum flow rate (m^3/min)*		Maximum static pressure (Pa)*		Noise (dB)*	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87T-A1A83H	100	85% to 110% rated voltage	50/60	0.180	0.150	12	11	2,500	3,000	0.5	0.6	34.0	49.0	33	36
R87T-A3A83H	115			0.150	0.130										
R87T-A4A83H	200			0.087	0.075										
R87T-A6A83H	230			0.075	0.065										

Characteristics

Motor type		Single-phase shading coil induction motor (2-pole, open type)
Terminal type		Lead wires
Insulation class		IEC class B (130°C) UL class A (105°C)
Insulation resistance		100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand voltage		2,000 VAC (1 minute) between all power supply connections and uncharged metal parts.
Ambient operating temperature		−20 to 70°C (no icing)
Ambient storage temperature		−40 to 85°C (no icing)
Ambient humidity		25% to 85%
Protection		Impedance protection
Materials	**Frame**	Die-cast aluminum
	Blades	Steel plate (black coating)
Bearings		Ball bearings
Weight		Approx. 330 g
Standards		EN/IEC 60335 (CE marking compliant)
Certified standards		UL

Flow Rate and Static Pressure Characteristics (Reference Values)

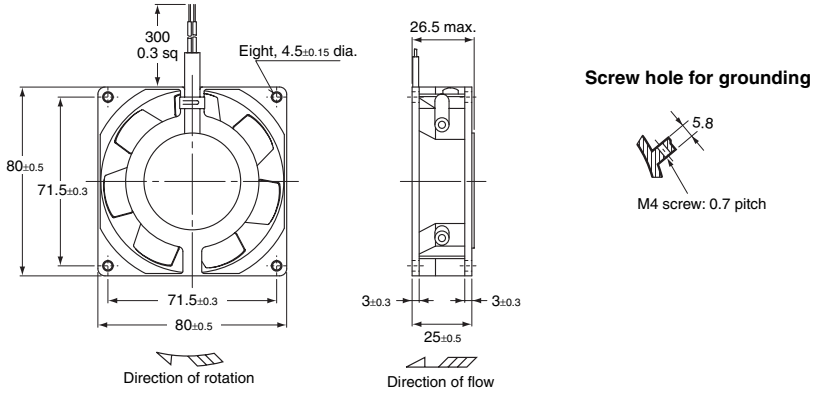
R87T-A□A83H



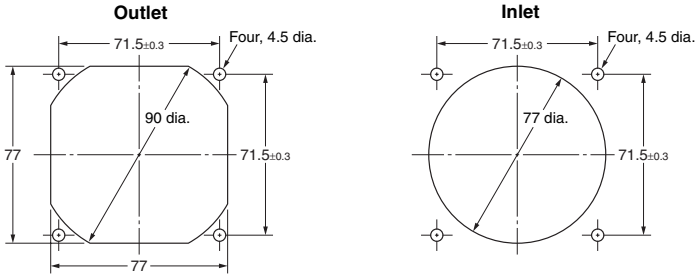
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure* on *Safety Precautions for All Axial Fans.*

Dimensions

(Unit: mm)



Panel Cutouts



Options

Name	Model	Datasheet available
Finger Guard	R87F-FG80	Refer to page 25.
Filter	R87F-FL80	Refer to page 26.

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Plug Cord
R87F-PC

Accessories (Order Separately)

Available Models

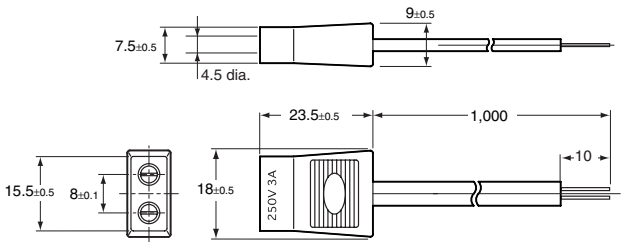
Cord length	Model number	Weight (g)
1 m	R87F-PC	39
2 m	R87F-PC-20	69

R87F-PC Rating: 250 VAC, 3 A
UL-certified Plug Cord

Dimensions

(Unit: mm)

R87F-PC



Connectable to Faston #110 terminals (or equivalent).

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

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R87F-FG

Accessories (Order Separately)

Available Models

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	R87F-A□A1 Series R87T-A□A1 Series	R87F-FG120
92 × 92	R87F-A□A9 Series	R87F-FG90
80 × 80	R87F-A□A8 Series R87T-A□A8 Series	R87F-FG80

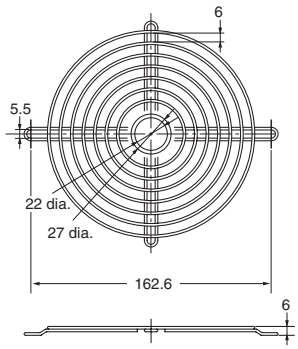
Note: Finger Guards reduce the flow rate by approximately 2% to 5%.

Dimensions

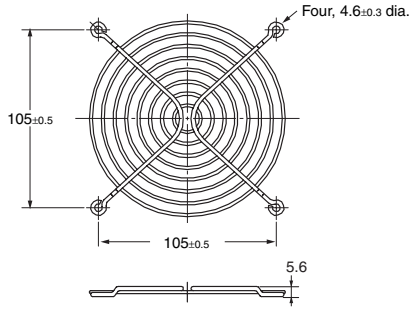
(Unit: mm)

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

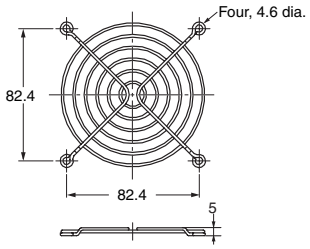
R87F-FG150



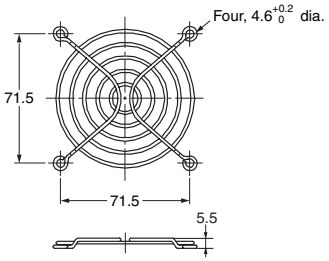
R87F-FG120



R87F-FG90



R87F-FG80



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R87F-FL

Accessories (Order Separately)

Available Models

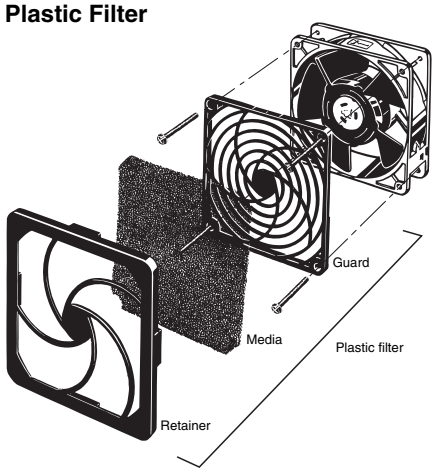
Size	Model number	Weight (g)
120 × 120	R87F-FL120	Approx. 43
92 × 92	R87F-FL90	Approx. 30
80 × 80	R87F-FL80	Approx. 21
120 × 120	R87F-FL120S	Approx. 19

Applicable Axial Fans

AC Axial Fan		Filter	
Size	Model	Plastic	Aluminum
150 dia.	R87T-A□A0 Series	---	---
120 × 120	R87F-A□A1 Series R87T-A□A1 Series	R87F-FL120	R87F-FL120S
92 × 92	R87F-A□A9 Series	R87F-FL90	---
80 × 80	R87F-A□A8 Series R87T-A□A8 Series	R87F-FL80	---

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

R87F-FL□
Plastic Filter

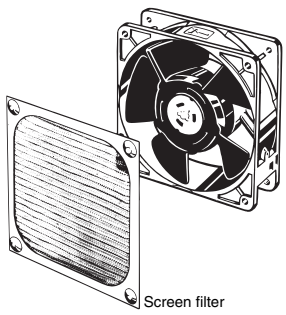


Mounting Method

1. Attach the guard to the Fan using the mounting bolts. (There are no mounting bolts provided with the Plastic Filter.)
2. 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.)

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.)

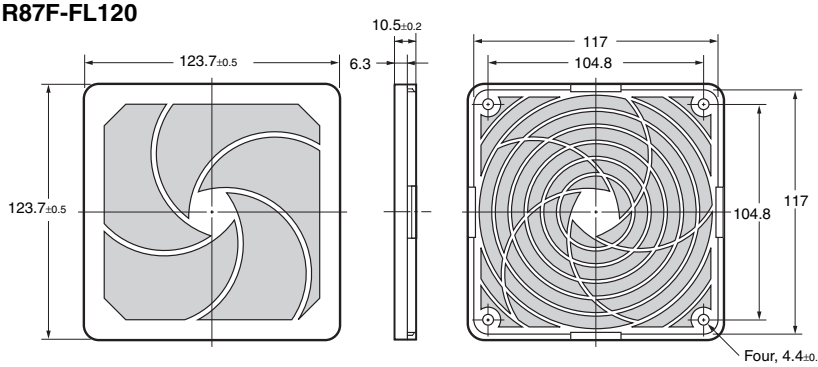
R87F-FL120S
Screen Filter



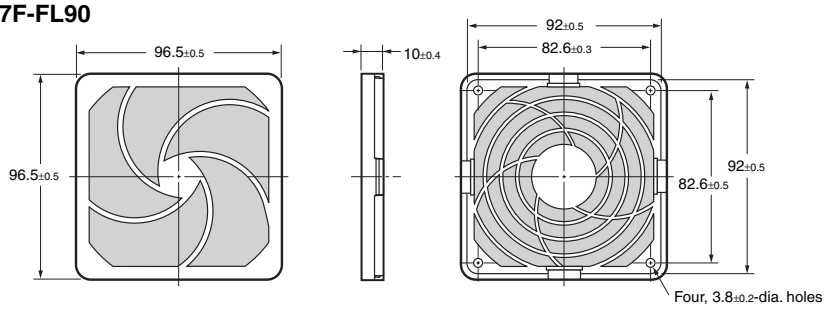
Dimensions

(Unit: mm)

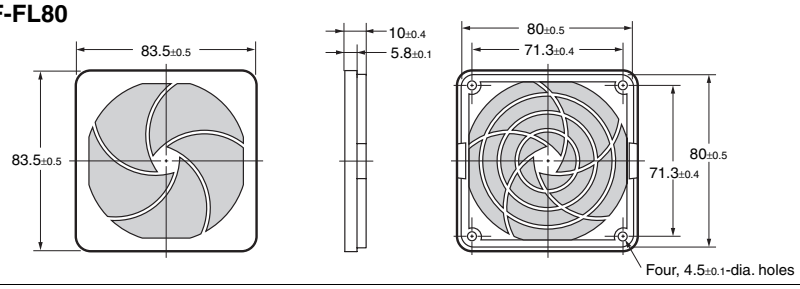
R87F-FL120



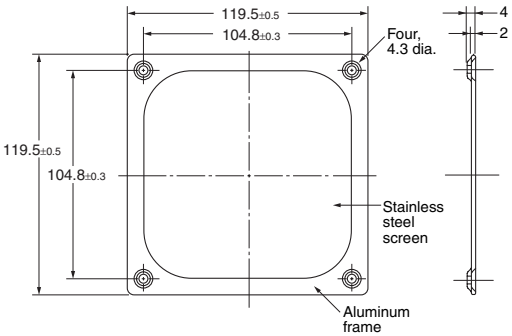
R87F-FL90



R87F-FL80



R87F-FL120S



Note: 1. The Screen Filter is made using aluminium and has an EMI/RFI shielding effect.
2. When mounting the Screen Filter, make sure that it does not come in contact with the fan blades.
3. The screen is a 30 × 30 aluminum mesh.

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2009.1

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