

AC Axial Fans

R87F/R87T

CSM_R87F_R87T_DS_E_8_6

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.

Note: The compliant standards and certified safety standards depend on the product. Check the information in *Characteristics*.



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

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

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 aluminum

4. Frame size

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

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

Options (Order Separately)

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.
Set model	R87F-SET□□□□	Refer to page 25.

Note: Mounting screws are not attached to Finger Guard.
Order the Set model when the screws are needed.

Safety Precautions

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

AC Axial Fans with Lead Wires (80 × 80 × t25 mm)

R87F-A□A83

Specifications

Ratings and Ordering Information

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

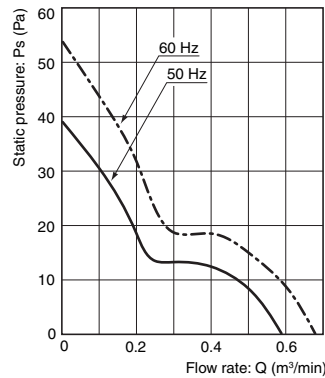
Item	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) *		Rated input (W) *		Rated rotational speed (r/min) *		Maximum flow rate (m³/min) *		Maximum static pressure (Pa) *		Noise (dB) *	
Model				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87F-A1A83H	100 VAC	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 VAC			0.085	0.070										
R87F-A4A83H	200 VAC			0.048	0.041										
R87F-A6A83H	230 VAC			0.046	0.039										
R87F-A1A83L	100 VAC	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 VAC			0.055	0.048										
R87F-A4A83L	200 VAC			0.033	0.030										
R87F-A6A83L	230 VAC			0.028	0.024										

Characteristics

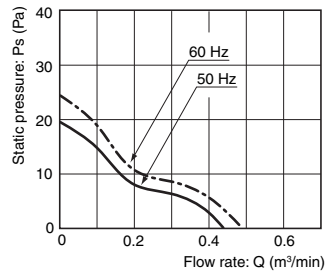
Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Lead wires
Insulation class	IEC class B (130°C) UL class A (105°C) CSA class A (105°C)
Insulation resistance	100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand 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



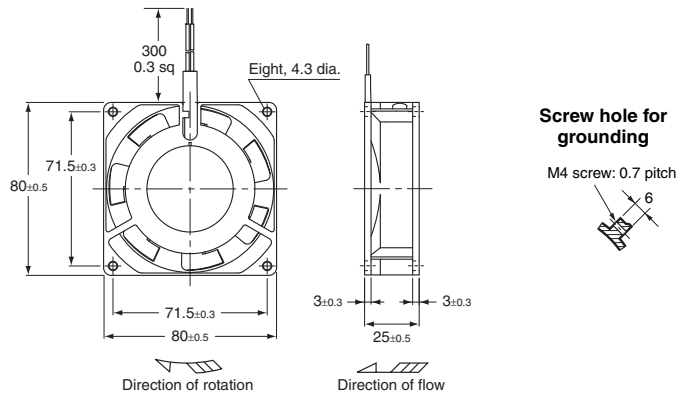
R87F-A□A83L



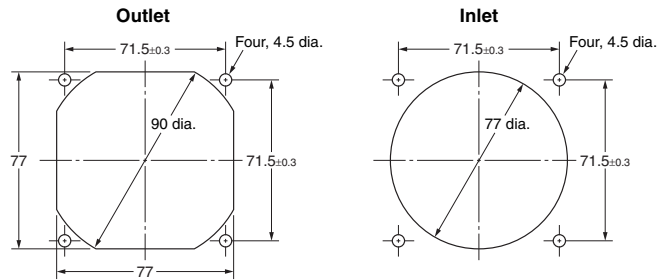
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure on Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)



Panel Cutouts



Options

Names	Model	Datasheet available
Finger Guard	R87F-FG80	Refer to page 25.
Filter	R87F-FL80	Refer to page 26.
Set model	R87F-SET8025	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.

AC Axial Fans with Terminals (80 × 80 × t38 mm)

R87F-A□A85

Specifications

Ratings and Ordering Information

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

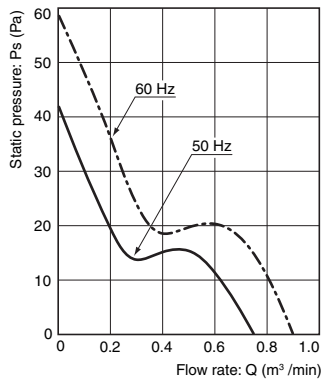
Item Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) *		Rated input (W) *		Rated rotational speed (r/min) *		Maximum flow rate (m³/min) *		Maximum static pressure (Pa) *		Noise (dB) *	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87F-A1A85HP	100 VAC	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 VAC			0.120	0.100										
R87F-A4A85HP	200 VAC			0.080	0.060										
R87F-A6A85HP	230 VAC			0.060	0.050										
R87F-A1A85LP	100 VAC	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 VAC			0.080	0.070										
R87F-A4A85LP	200 VAC			0.050	0.040										
R87F-A6A85LP	230 VAC			0.040	0.040										

Characteristics

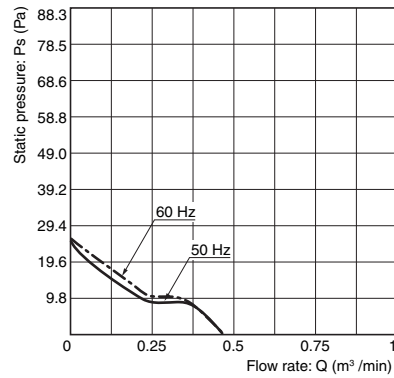
Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Terminals
Insulation class	IEC class B (130°C) UL class A (105°C) CSA class A (105°C)
Insulation resistance	100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand 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



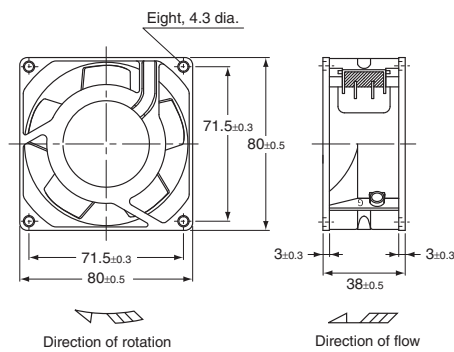
R87F-A□A85LP



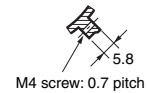
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure on Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)



Screw hole for grounding

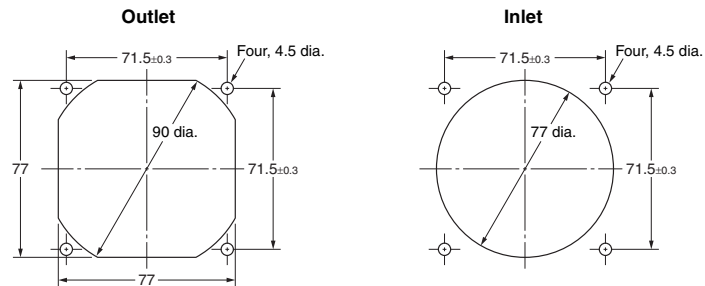


Terminal shape



Faston #110 terminal
(or equivalent)

Panel Cutouts



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.
Set model	R87F-SET8038	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.

AC Axial Fans with Terminals (92 × 92 × t25 mm)

R87F-A□A93

Specifications

Ratings and Ordering Information

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

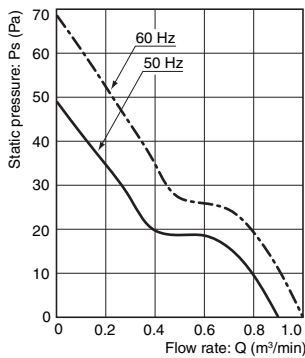
Item Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) *		Rated input (W) *		Rated rotational speed (r/min) *		Maximum flow rate (m³/min) *		Maximum static pressure (Pa) *		Noise (dB) *	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87F-A1A93HP	100 VAC	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 VAC			0.125	0.100										
R87F-A4A93HP	200 VAC			0.070	0.060										
R87F-A6A93HP	230 VAC			0.055	0.050										
R87F-A1A93LP	100 VAC	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 VAC			0.090	0.075										
R87F-A4A93LP	200 VAC			0.050	0.043										
R87F-A6A93LP	230 VAC			0.045	0.040										

Characteristics

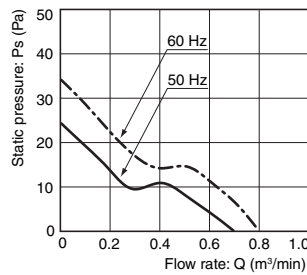
Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Terminals
Insulation class	IEC class B (130°C) UL class A (105°C) CSA class A (105°C)
Insulation resistance	100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand 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



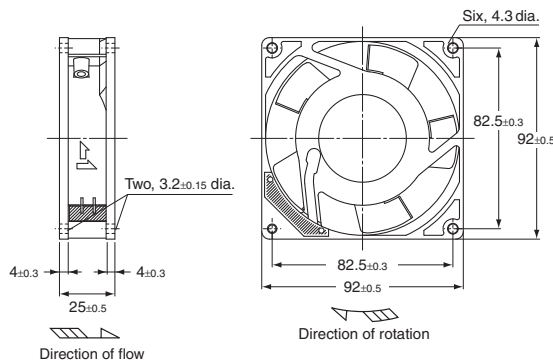
R87F-A□A93LP



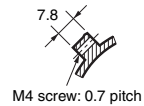
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure on Safety Precautions for All Axial Fans*.

Dimensions

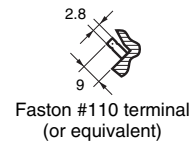
(Unit: mm)



Screw hole for grounding

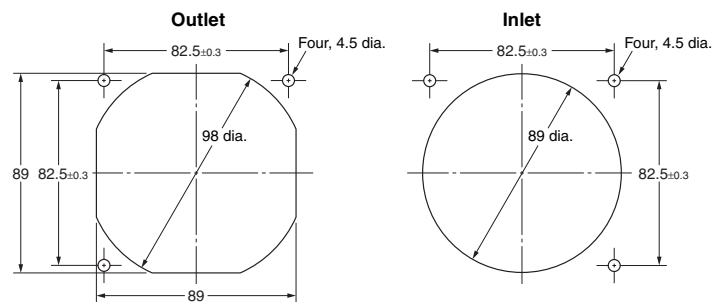


Terminal shape



Panel Cutouts

Panel cutting reference dimensions (note 3 mounting holes)



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.
Set model	R87F-SET9025	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.

AC Axial Fans with Terminals (120 × 120 × t25 mm)

R87F-A□A13

Specifications

Ratings and Ordering Information

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

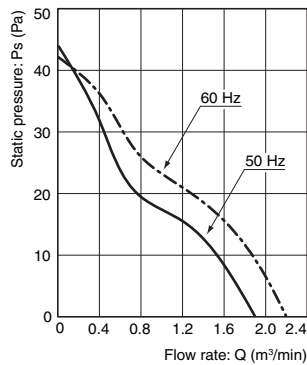
Item Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) *		Rated input (W) *		Rated rotational speed (r/min) *		Maximum flow rate (m³/min) *		Maximum static pressure (Pa) *		Noise (dB) *	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87F-A1A13HP	100 VAC	85% to 110% rated voltage	50/60	0.180	0.150	14	12	2,400	2,800	1.9	2.2	44	42	39	43
R87F-A3A13HP	115 VAC			0.160	0.130										
R87F-A4A13HP	200 VAC			0.090	0.075										
R87F-A6A13HP	230 VAC			0.080	0.070										
R87F-A1A13LP	100 VAC	85% to 110% rated voltage	50/60	0.140	0.120	12	10	1,700	2,000	1.3	1.5	20	24	32	34
R87F-A3A13LP	115 VAC			0.130	0.110										
R87F-A4A13LP	200 VAC			0.080	0.060										
R87F-A6A13LP	230 VAC			0.060	0.050										

Characteristics

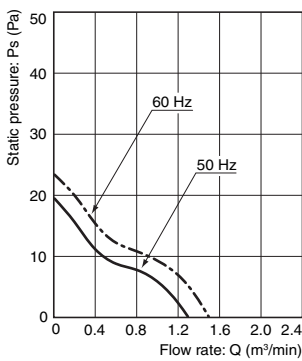
Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Terminals
Insulation class	IEC class B (130°C) cULus class B (130°C)
Insulation resistance	100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand voltage	2,000 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	cULus

Flow Rate and Static Pressure Characteristics (Reference Values)

R87F-A□A13HP



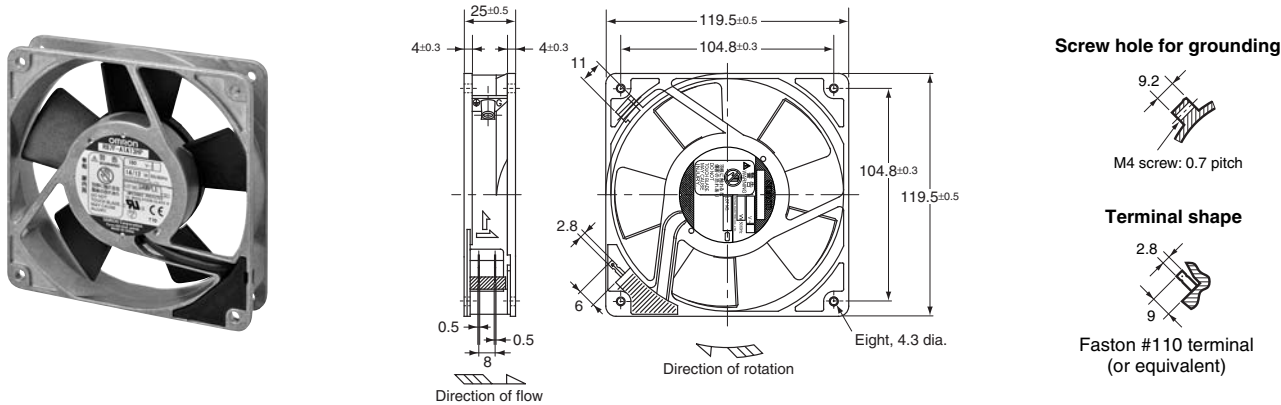
R87F-A□A13LP



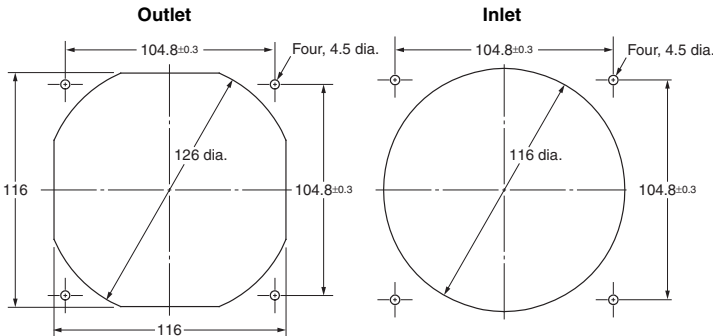
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure on Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)



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.
Set model	R87F-SET1225	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.

AC Axial Fans with Terminals (120 × 120 × t38 mm)

R87F-A□A15

Specifications

Ratings and Ordering Information

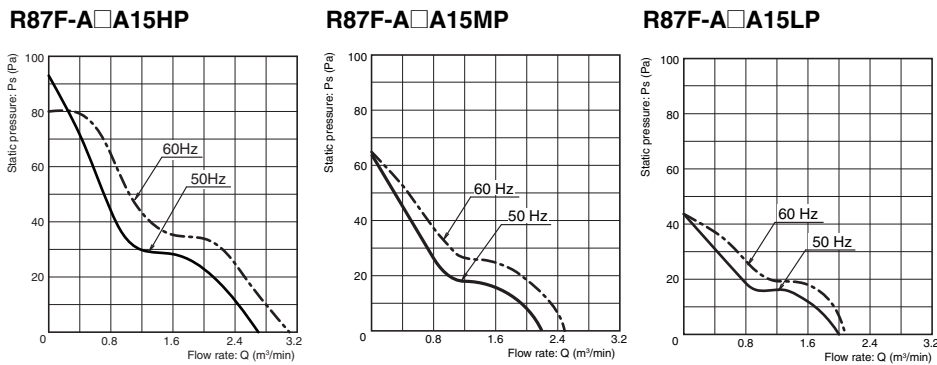
Note: An asterisk (*) indicates a nominal value.

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 (m³/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 VAC	85% to 110% rated voltage	50/60	0.230	0.200	15	14	2,750	3,200	2.7	3.1	93	80	42	46
R87F-A3A15HP	115 VAC			0.190	0.170										
R87F-A4A15HP	200 VAC			0.110	0.100										
R87F-A6A15HP	230 VAC			0.090	0.080										
R87F-A1A15MP	100 VAC	85% to 110% rated voltage	50/60	0.220	0.180	15	14	2,450	2,700	2.2	2.5	64	64	39	42
R87F-A3A15MP	115 VAC			0.180	0.160										
R87F-A4A15MP	200 VAC			0.110	0.090										
R87F-A6A15MP	230 VAC			0.090	0.080										
R87F-A1A15LP	100 VAC	85% to 110% rated voltage	50/60	0.170	0.150	11	10	2,100	2,250	2.0	2.1	44	44	36	38
R87F-A3A15LP	115 VAC			0.140	0.120										
R87F-A4A15LP	200 VAC			0.080	0.070										
R87F-A6A15LP	230 VAC			0.070	0.060										

Characteristics

Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Terminals
Insulation class	IEC class B (130°C) cULus class B (130°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	cULus

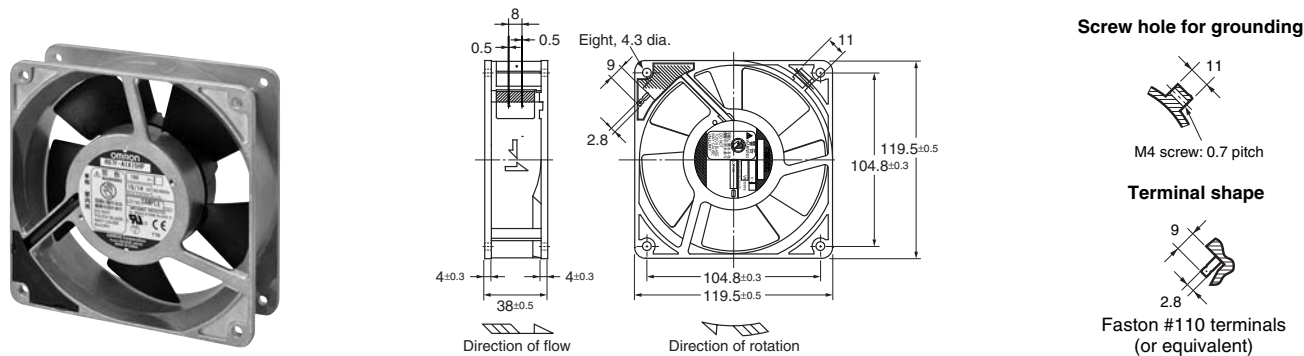
Flow Rate and Static Pressure Characteristics (Reference Values)



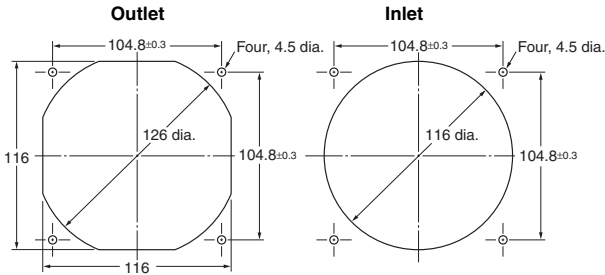
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure on Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)



Panel Cutouts



Options

Name	Model	Datasheet available
Plug Cord	R87F-PC	Refer to page 24.
Finger Guard	R87F-FG120	Refer to page 25.
Filter	R87F-FL120(S)	Refer to page 26.
Set model	R87F-SET1238	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.

AC Axial Fans with Lead Wires (80 × 80 × t25 mm)

R87T-A□A83

Specifications

Ratings and Ordering Information

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

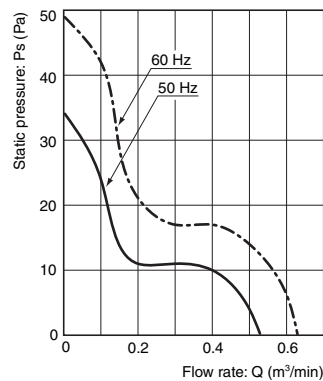
Item	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A)*		Rated input (W)*		Rated rotational speed (r/min)*		Maximum flow rate (m³/min)*		Maximum static pressure (Pa)*		Noise (dB)*	
Model				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87T-A1A83H	100 VAC	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 VAC			0.150	0.130										
R87T-A4A83H	200 VAC			0.087	0.075										
R87T-A6A83H	230 VAC			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)

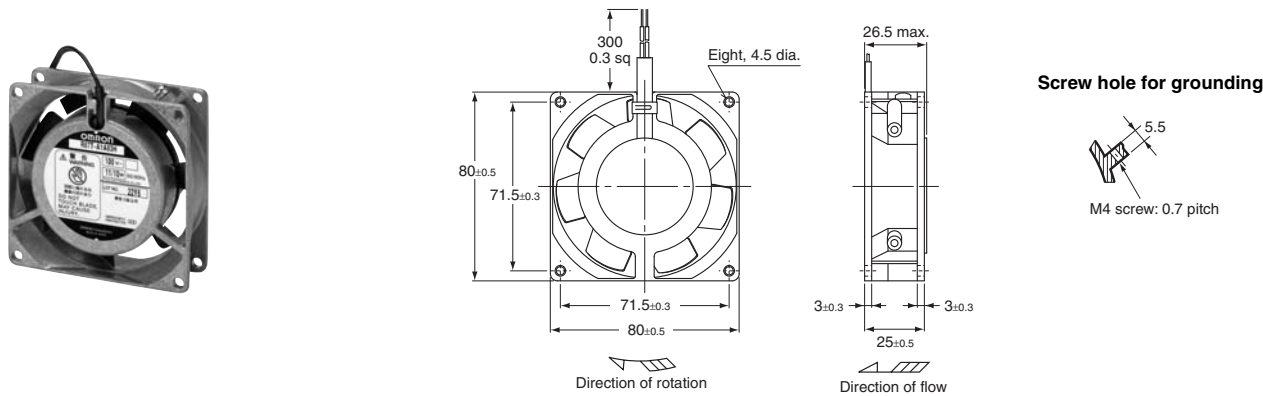
R87T-A□A83H



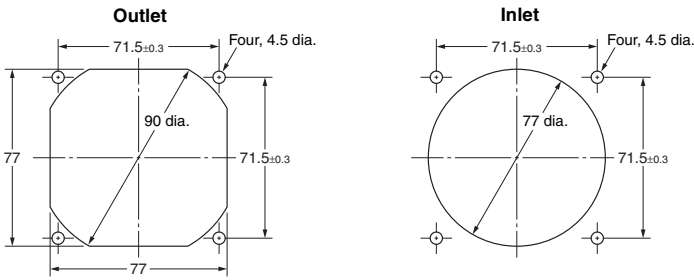
Note: For details on measurement conditions, refer to Flow Rate and Static Pressure on Safety Precautions for All Axial Fans.

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.
Set model	R87F-SET8025	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.

AC Axial Fans with Lead Wires (80 × 80 × t38 mm)

R87T-A□A85

Specifications

Ratings and Ordering Information

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

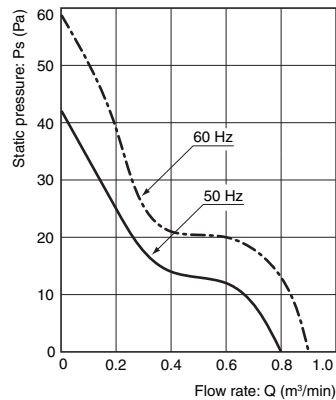
Item	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) *		Rated input (W) *		Rated rotational speed (r/min) *		Maximum flow rate (m³/min) *		Maximum static pressure (Pa) *		Noise (dB) *	
Model				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87T-A1A85H	100 VAC	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 VAC			0.155	0.135										
R87T-A4A85H	200 VAC			0.085	0.075										
R87T-A6A85H	230 VAC			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)

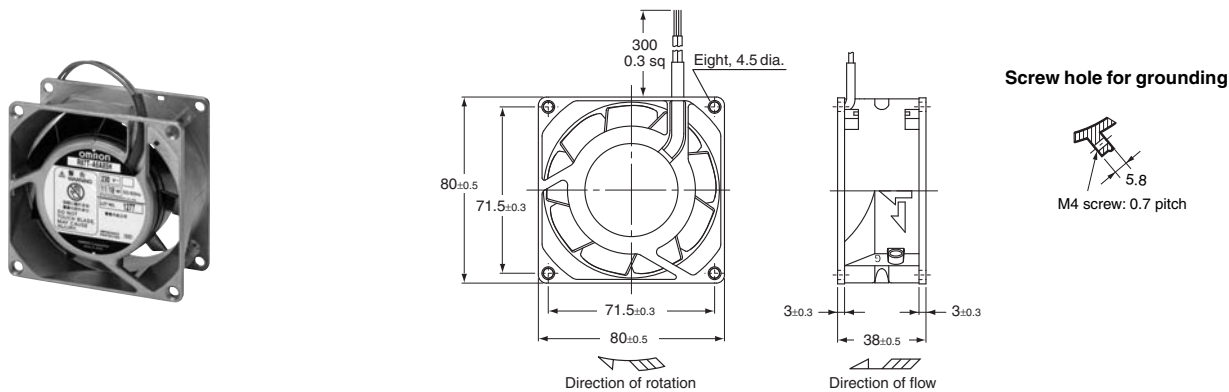
R87T-A□A85H



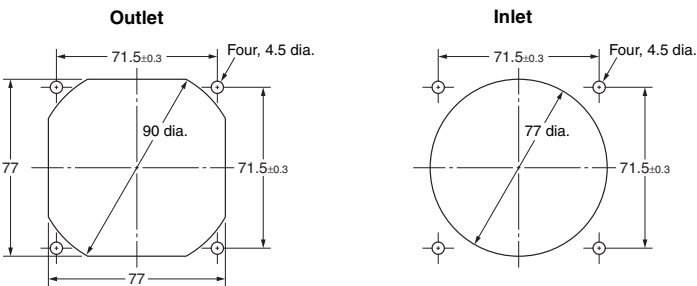
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure on Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)



Panel Cutouts



Options

Name	Model	Datasheet available
Finger Guard	R87F-FG80	Refer to page 25.
Filter	R87F-FL80	Refer to page 26.
Set model	R87F-SET8038	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.

AC Axial Fans with Terminals (120 × 120 × t38 mm)

R87T-A□A15

Specifications

Ratings and Ordering Information

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

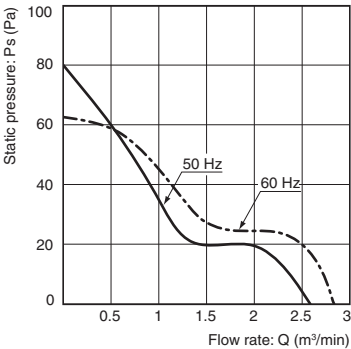
Item Model	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) *		Rated input (W) *		Rated rotational speed (r/min) *		Maximum flow rate (m³/min) *		Maximum static pressure (Pa) *		Noise (dB) *	
				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87T-A1A15HP	100 VAC	85% to 110% rated voltage	50/60	0.240	0.210	17	16	2,700	3,100	2.6	2.9	80	62	42	46
R87T-A3A15HP	115 VAC			0.210	0.180										
R87T-A4A15HP	200 VAC			0.120	0.110										
R87T-A6A15HP	230 VAC			0.110	0.090										
R87T-A1A15MP	100 VAC	85% to 110% rated voltage	50/60	0.170	0.150	12	11	2,350	2,600	1.8	2.1	42	40	36	40
R87T-A3A15MP	115 VAC			0.140	0.120										
R87T-A4A15MP	200 VAC			0.080	0.070										
R87T-A6A15MP	230 VAC			0.070	0.060										

Characteristics

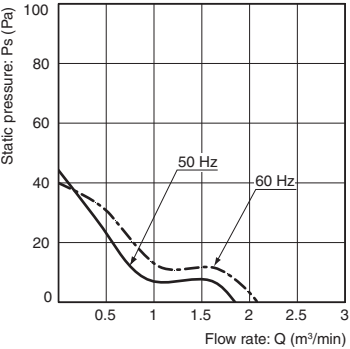
Motor type	Single-phase shading coil induction motor (2-pole, open type)
Terminal type	Terminals
Insulation class	IEC class B (130°C) cULus class B (130°C)
Insulation resistance	100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand voltage	2,000 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. 540 g
Compliant standards	PSE, EN/IEC 60335 (CE marking compliant)
Certified standards	cULus

Flow Rate and Static Pressure Characteristics (Reference Values)

R87T-A□A15HP



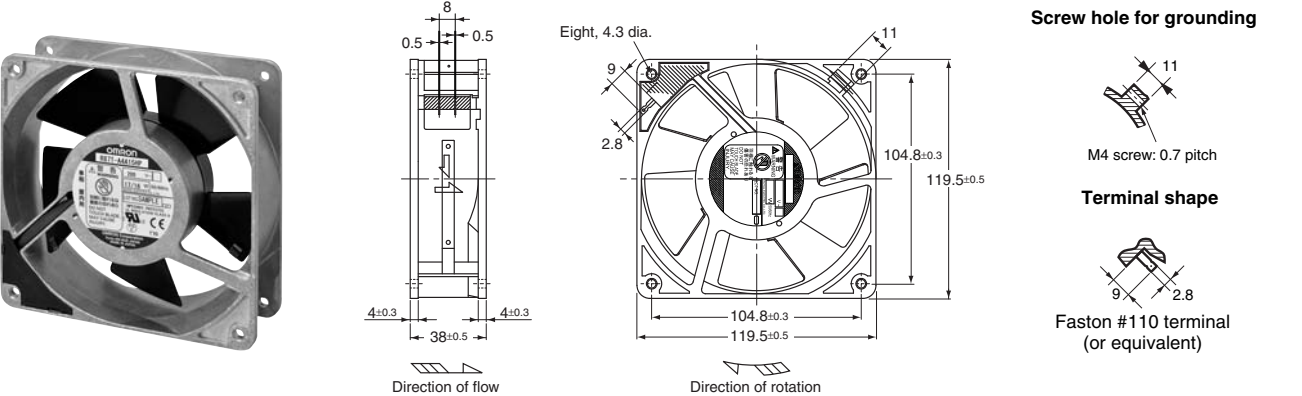
R87T-A□A15MP



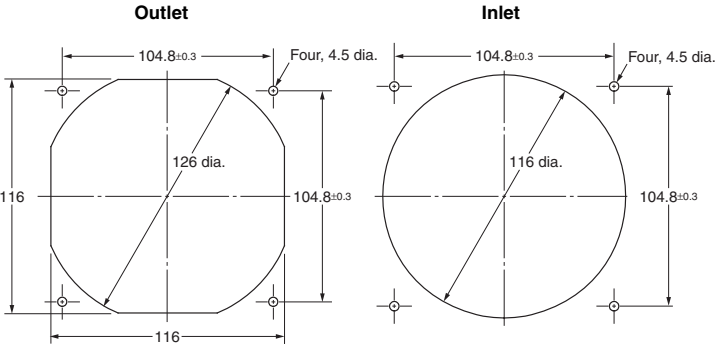
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure on Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)



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.
Set model	R87F-SET1238	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.

AC Axial Fans with Lead Wires (150-dia. × t38 mm)

R87T-A□A05

Specifications

Ratings and Ordering Information

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

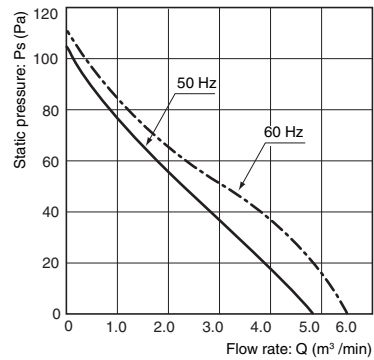
Item	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) *		Rated input (W) *		Rated rotational speed (r/min) *		Maximum flow rate (m³/min) *		Maximum static pressure (Pa) *		Noise (dB) *	
Model				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87T-A1A05H	100 VAC	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 VAC			0.470	0.390										
R87T-A4A05H	200 VAC			0.260	0.220										
R87T-A6A05H	230 VAC			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)

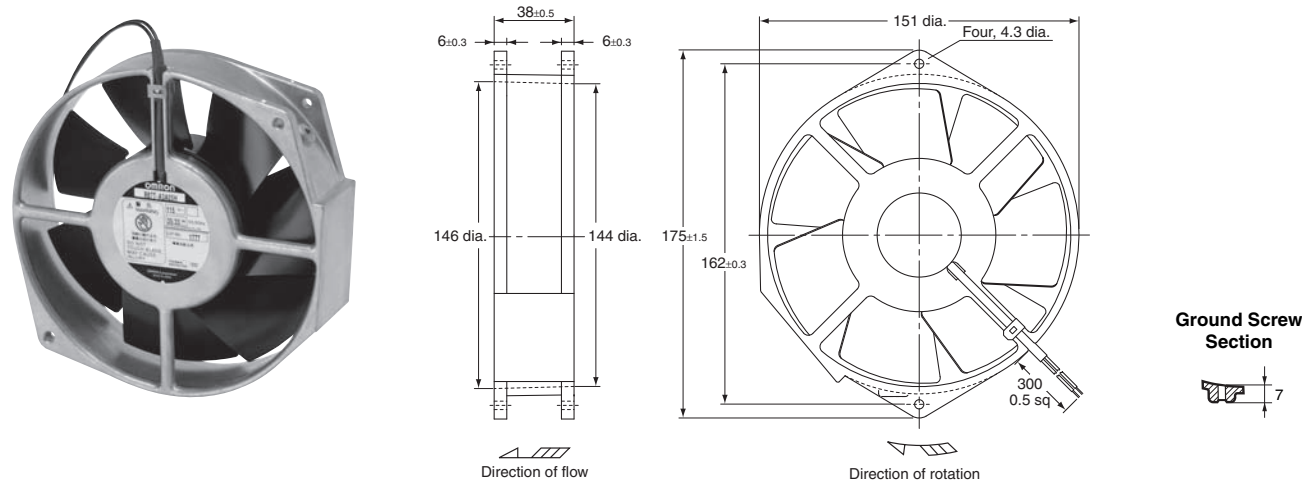
R87T-A□A05H



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

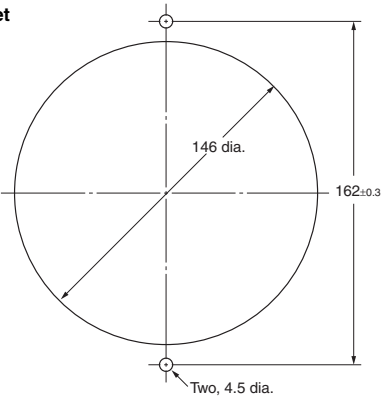
Dimensions

(Unit: mm)



Panel Cutouts

Outlet and Inlet



Options

Name	Model	Datasheet available
Finger Guard	R87F-FG150	Refer to page 25.
Set model	R87F-SET1538	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.

AC Axial Fans with Lead Wires (150-dia. × t55 mm)

R87T-A□A07

Specifications

Ratings and Ordering Information

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

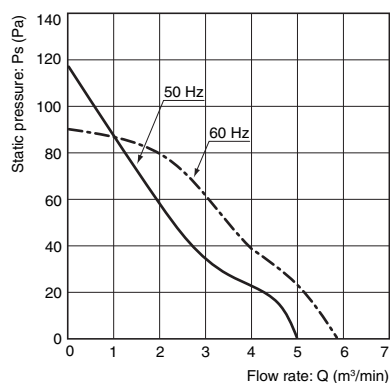
Item	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) *		Rated input (W) *		Rated rotational speed (r/min) *		Maximum flow rate (m³/min) *		Maximum static pressure (Pa) *		Noise (dB) *	
Model				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
R87T-A1A07H	100 VAC	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 VAC			0.420	0.370										
R87T-A4A07H	200 VAC			0.240	0.210										
R87T-A6A07H	230 VAC			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)

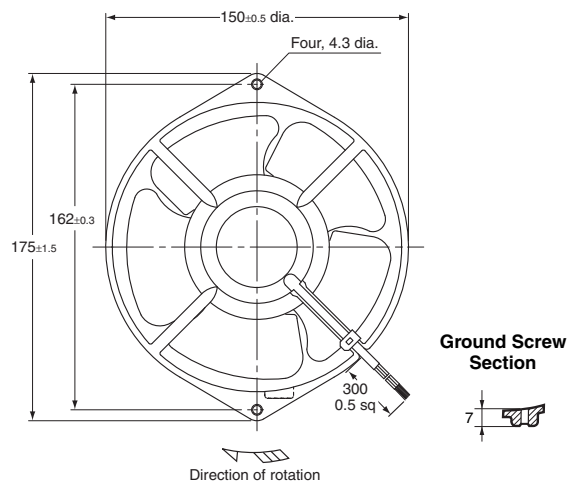
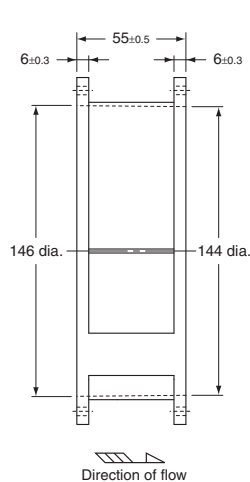
R87T-A□A07H



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

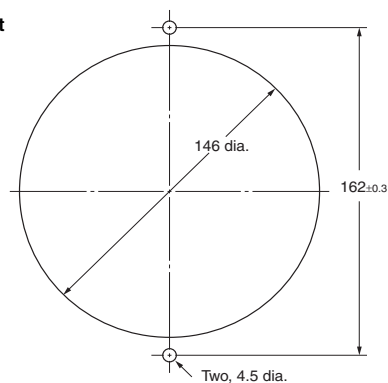
Dimensions

(Unit: mm)



Panel Cutouts

Outlet and Inlet



Options

Name	Model	Datasheet available
Finger Guard	R87F-FG150	Refer to page 25.
Set model	R87F-SET1555	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.

Water-resistant AC Axial Fans with Lead Wires (120 × 120 × t38 mm)

R87T-A□A15H-WR

Specifications

Ratings and Ordering Information

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

Item	Rated voltage (V)	Permitted voltage fluctuation range (%)	Frequency (Hz)	Rated current (A) *		Rated input (W) *		Rated rotational speed (r/min) *		Maximum flow rate (m³/min) *		Maximum static pressure (Pa) *		Noise (dB) *		
Model				50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz
R87T-A1A15H-WR	100 VAC	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 VAC			0.300	0.240											
R87T-A4A15H-WR	200 VAC			0.170	0.135	15 to 22										
R87T-A6A15H-WR	200 to 230 VAC			0.145	0.115											

Characteristics

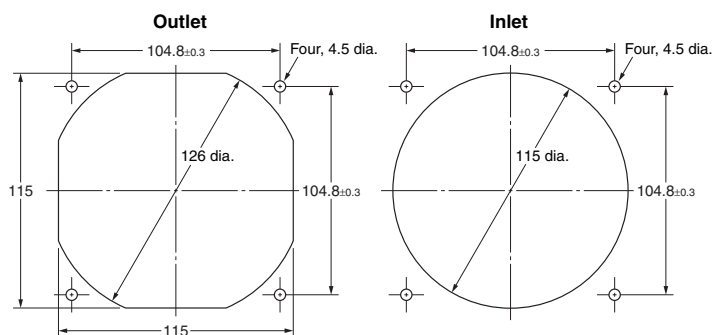
Motor type		Single-phase shading coil induction motor (2-pole, open type)
Terminal type		Lead wires
Insulation class		IEC class B (130°C) UL class A (105°C) CSA class A (105°C)
Insulation resistance		100 MΩ min. (at 500 VDC) between all power supply connections and uncharged metal parts.
Insulation withstand voltage		2,000 VAC (1 minute) between all power supply connections and uncharged metal parts.
Degree of protection		IP X7
Ambient operating temperature		−40 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

23

Figure 10 is a line graph showing the static pressure P_s (Pa) on the y-axis (ranging from 0 to 80) versus the flow rate Q (m³/min) on the x-axis (ranging from 0 to 3.0). Two curves are plotted: a solid line for the 60 Hz pump and a dashed line for the 50 Hz pump. Both curves start at approximately 75 Pa at $Q=0$. The 60 Hz curve drops sharply after $Q=1.0$ m³/min, reaching 0 Pa at $Q=3.0$ m³/min. The 50 Hz curve drops more gradually, reaching 0 Pa at $Q=3.0$ m³/min.

Flow rate Q (m³/min)	Static pressure P_s (Pa) - 60 Hz	Static pressure P_s (Pa) - 50 Hz
0.0	75	75
1.0	35	55
1.5	30	40
2.0	25	35
2.5	10	25
3.0	0	0

Dimensions



Name	Model	Page number
Finger Guard	R87F-FG120	Refer to page 25.
Filter	R87F-FL120(S)	Refer to page 26.
Set model	R87F-SET1238	Refer to page 25.

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

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

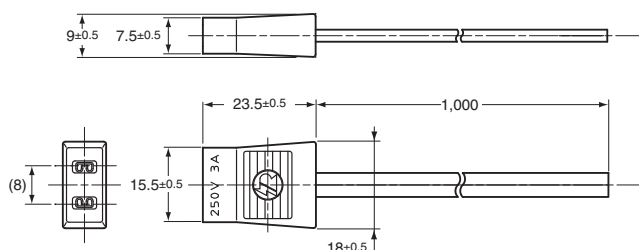
UL-certified Plug Cord



Dimensions

(Unit: mm)

R87F-PC



Connectable to Faston #110 terminals (or equivalent).

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

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.

Accessories (Order Separately)

Available Models

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

Applicable Axial Fans

Axial Fans	Model	Set model						
		Contents						
		Finger Guard		Hexagonal nuts		Screws		
		size	Qty	Model	size	Qty	size	Qty
R87F-A□A83	R87F-SET8025	80 x 80	1	R87F-FG80	M4	4	M4 x L38	4
R87T-A□A83								
R87F-A□A85	R87F-SET8038	80 x 80	1	R87F-FG80	M4	4	M4 x L50	4
R87T-A□A85								
R87F-A□A93	R87F-SET9025	92 x 92	1	R87F-FG90	M4	3	M4 x L38	3
					M3	1	M3 x L38	1
R87F-A□A13	R87F-SET1225	120 x 120	1	R87F-FG120	M4	4	M4 x L38	4
R87F-A□A15	R87F-SET1238	120 x 120	1	R87F-FG120	M4	4	M4 x L50	4
R87T-A□A15								
R87T-A□A15H-WR								
R87T-A□A05	R87F-SET1538	150 dia.	1	R87F-FG150	M4	2	M4 x L50	2
R87T-A□A07	R87F-SET1555	150 dia.	1	R87F-FG150	M4	2	M4 x L70	2

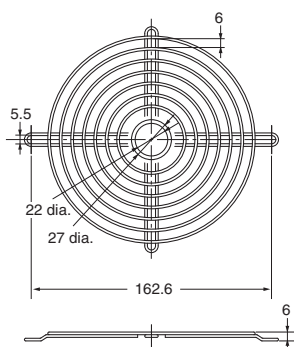
Note: Finger Guards reduce the flow rate by approximately 2% to 5%.

Dimensions

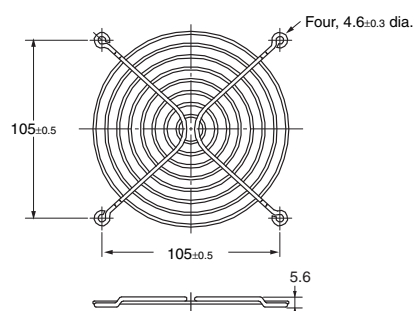
(Unit: mm)

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

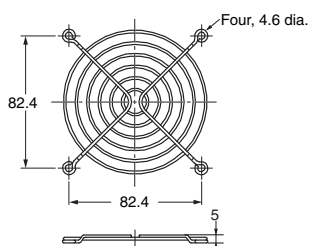
R87F-FG150



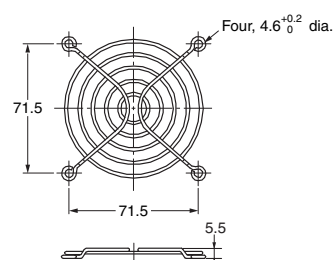
R87F-FG120



R87F-FG90



R87F-FG80



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.

Accessories (Order Separately)

Available Models

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

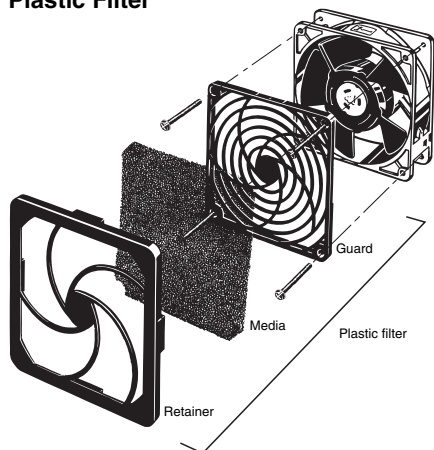
Size	Model number
120 × 120	R87F-FL120-M120
92 × 92	R87F-FL90-M90
80 × 80	R87F-FL80-M80

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.)

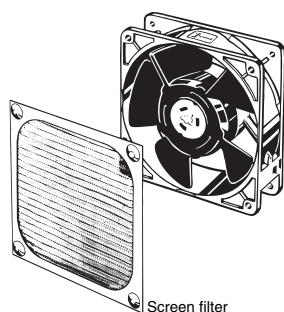
R87F-FL□ Plastic Filter



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.)

R87F-FL120S Screen Filter



Applicable Axial Fans

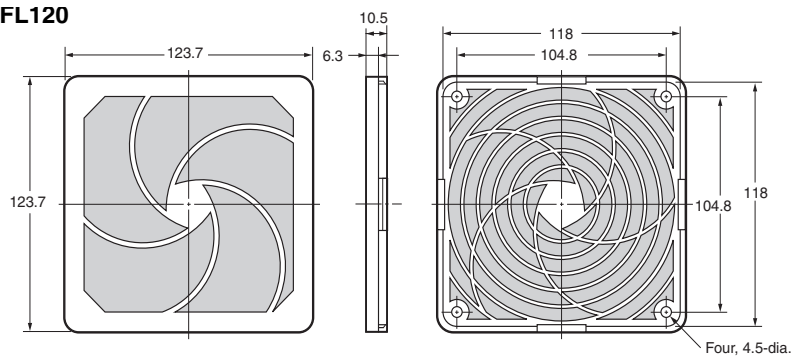
AC Axial Fan		Filter	
Size	Model	Plastic	Aluminum
150 dia.	R87T-A□A0 Series	---	---
120 × 120	R89F-DS1225□ series	R87F-FL120	R87F-FL120S
	R89F-DS1238□ series		
	R89F-MS1238HP		
	R87F-A□A1 Series		
	R87T-A□A1 Series		
92 × 92	R87F-A□A9 Series	R87F-FL90	---
80 × 80	R87F-A□A8 Series	R87F-FL80	---
	R87T-A□A8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

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

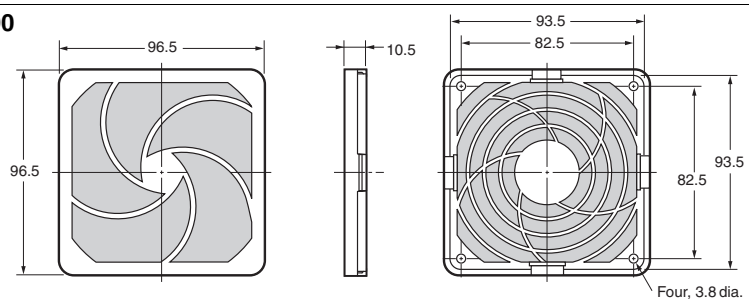
Dimensions

(Unit: mm)

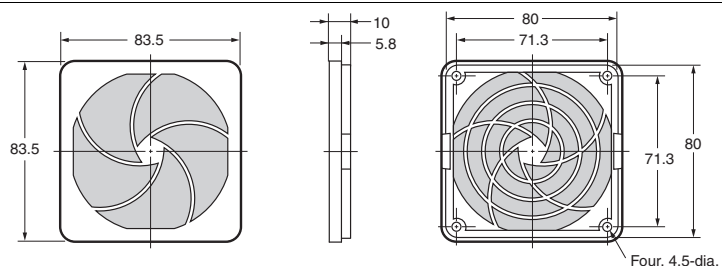
R87F-FL120



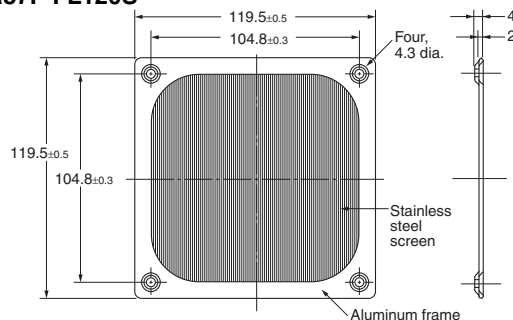
R87F-FL90



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 aluminium mesh. (30 aluminium wires per inch)

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.

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Read and understand this catalog.

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