

AC Axial Fans

R87F/R87T

CSM_R87F_R87T_DS_E_7_4

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*.

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

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 (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. |

Note: Mounting screws are not provided.

Safety Precautions

Refer to the “*Safety Precautions for All Axial Fans*”.

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

R87F-A□A15

Specifications

Ratings and Ordering Information

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

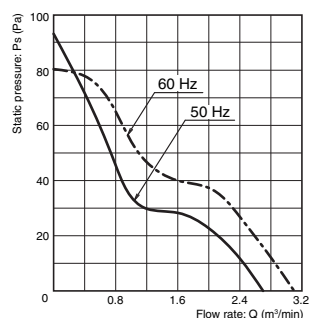
| Item Model | Rated voltage (V) | Permitted voltage fluctuation range (%) | Frequency (Hz) | Rated current (A) * | | Rated input (W) * | | Rated rotational speed (r/min) * | | Maximum flow rate (m³/min) * | | Maximum static pressure (Pa) * | | Noise (dB) * | |
|---------------|-------------------|---|----------------|---------------------|-------|-------------------|-------|----------------------------------|-------|------------------------------|-------|--------------------------------|-------|--------------|-------|
| | | | | 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 | 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

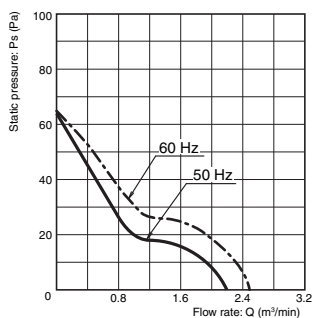
| | |
|-------------------------------|--|
| Motor type | Single-phase shading coil induction motor (2-pole, open type) |
| Terminal type | Terminals |
| Insulation class | IEC class B (130°C) UL class A (105°C) CSA class A (105°C) |
| Insulation resistance | 100 MΩ min. (at 500 VDC) between all power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

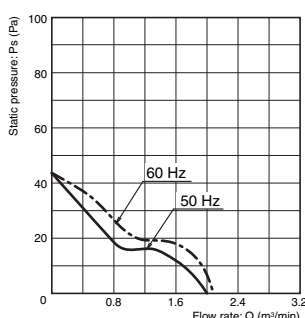
R87F-A□A15HP



R87F-A□A15MP



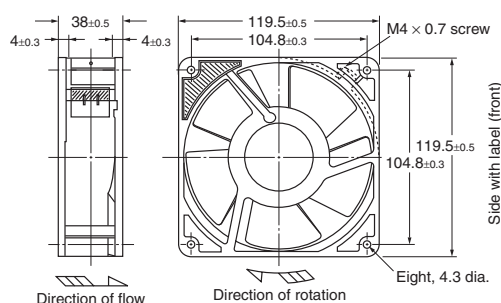
R87F-A□A15LP



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



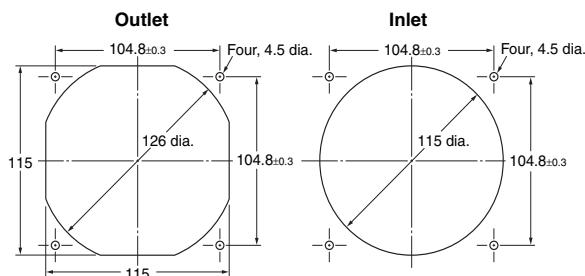
M4 screw: 0.7 pitch

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.

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

R87F-A□A13

Specifications

Ratings and Ordering Information

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

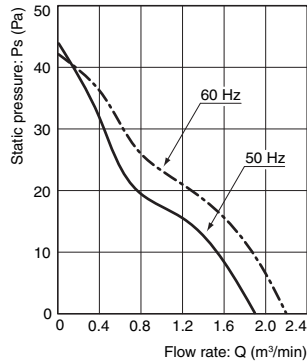
| Item Model | Rated voltage (V) | Permitted voltage fluctuation range (%) | Frequency (Hz) | Rated current (A) * | | Rated input (W) * | | Rated rotational speed (r/min) * | | Maximum flow rate (m³/min) * | | Maximum static pressure (Pa) * | | Noise (dB) * | |
|---------------|-------------------|---|----------------|---------------------|-------|-------------------|-------|----------------------------------|-------|------------------------------|-------|--------------------------------|-------|--------------|-------|
| | | | | 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 | 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

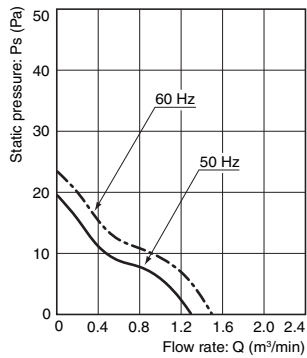
| | |
|-------------------------------|--|
| Motor type | Single-phase shading coil induction motor (2-pole, open type) |
| Terminal type | Terminals |
| Insulation class | IEC class B (130°C) UL class A (105°C) CSA class A (105°C) |
| Insulation resistance | 100 MΩ min. (at 500 VDC) between all power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



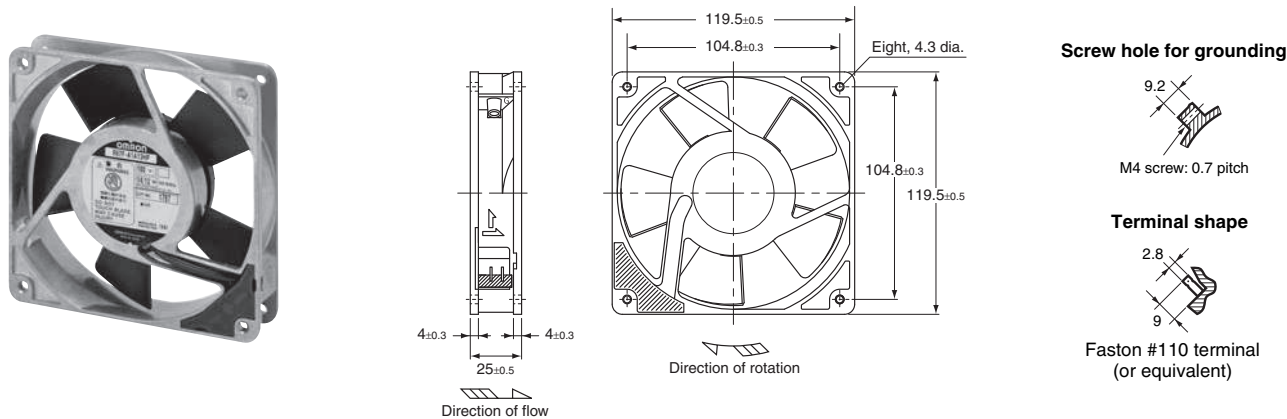
R87F-A□A13LP



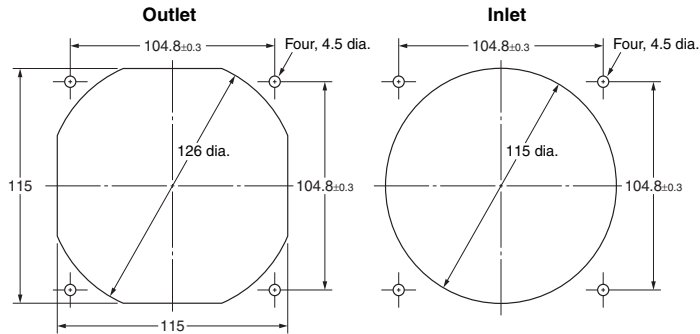
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure on Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)



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.

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

R87F-A□A93

Specifications

Ratings and Ordering Information

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

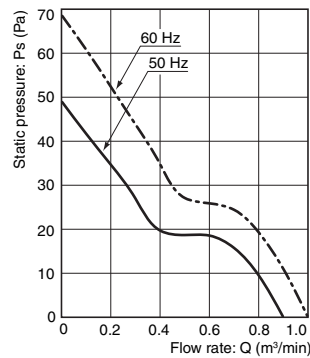
| Item Model | Rated voltage (V) | Permitted voltage fluctuation range (%) | Frequency (Hz) | Rated current (A) * | | Rated input (W) * | | Rated rotational speed (r/min) * | | Maximum flow rate (m³/min) * | | Maximum static pressure (Pa) * | | Noise (dB) * | |
|---------------|-------------------|---|----------------|---------------------|-------|-------------------|-------|----------------------------------|-------|------------------------------|-------|--------------------------------|-------|--------------|-------|
| | | | | 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 | 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

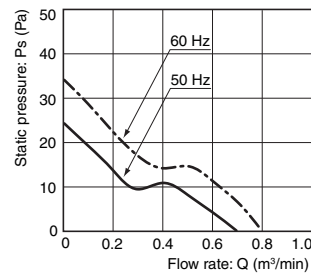
| | |
|-------------------------------|--|
| Motor type | Single-phase shading coil induction motor (2-pole, open type) |
| Terminal type | Terminals |
| Insulation class | IEC class B (130°C) UL class A (105°C) CSA class A (105°C) |
| Insulation resistance | 100 MΩ min. (at 500 VDC) between all power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



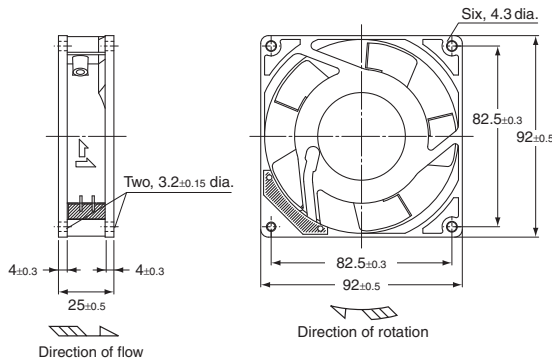
R87F-A□A93LP



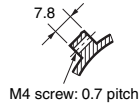
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure on Safety Precautions for All Axial Fans*.

Dimensions

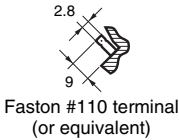
(Unit: mm)



Screw hole for grounding

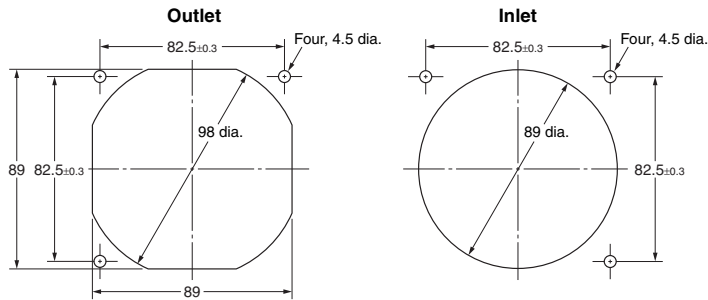


Terminal shape



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. |

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.

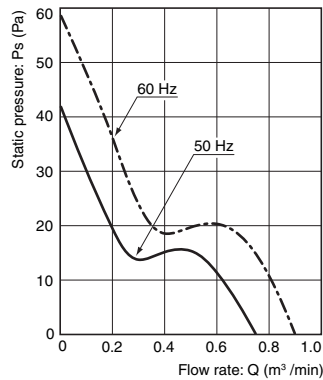
| Item Model | Rated voltage (V) | Permitted voltage fluctuation range (%) | Frequency (Hz) | Rated current (A) * | | Rated input (W) * | | Rated rotational speed (r/min) * | | Maximum flow rate (m³/min) * | | Maximum static pressure (Pa) * | | Noise (dB) * | |
|---------------|-------------------|---|----------------|---------------------|-------|-------------------|-------|----------------------------------|-------|------------------------------|-------|--------------------------------|-------|--------------|-------|
| | | | | 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 | 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

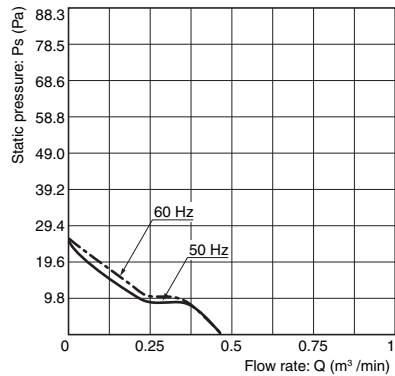
| | |
|-------------------------------|--|
| Motor type | Single-phase shading coil induction motor (2-pole, open type) |
| Terminal type | Terminals |
| Insulation class | IEC class B (130°C) UL class A (105°C) CSA class A (105°C) |
| Insulation resistance | 100 MΩ min. (at 500 VDC) between all power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



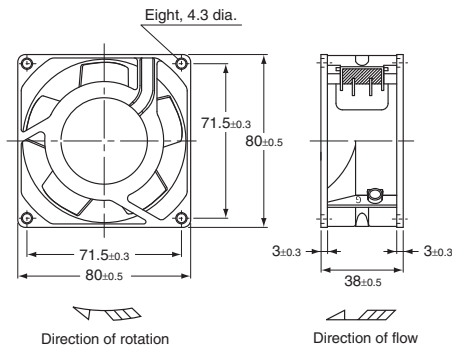
R87F-A□A85LP



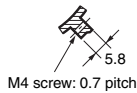
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure on Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)



Screw hole for grounding

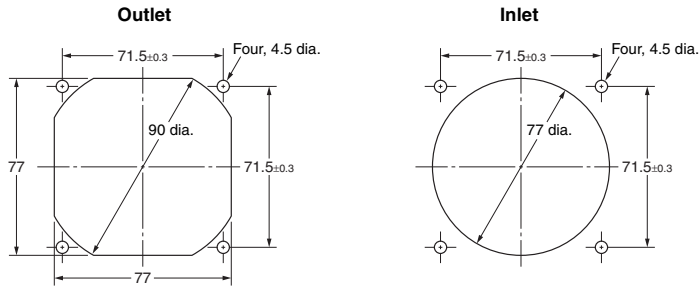


Terminal shape



Faston #110 terminal (or equivalent)

Panel Cutouts



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.

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.

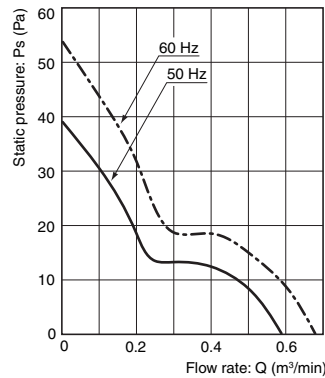
| Item Model | Rated voltage (V) | Permitted voltage fluctuation range (%) | Frequency (Hz) | Rated current (A) * | | Rated input (W) * | | Rated rotational speed (r/min) * | | Maximum flow rate (m³/min) * | | Maximum static pressure (Pa) * | | Noise (dB) * | |
|---------------|-------------------|---|----------------|---------------------|-------|-------------------|-------|----------------------------------|-------|------------------------------|-------|--------------------------------|-------|--------------|-------|
| | | | | 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-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

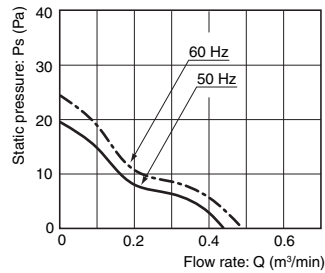
| | |
|-------------------------------|--|
| Motor type | Single-phase shading coil induction motor (2-pole, open type) |
| Terminal type | Lead wires |
| Insulation class | IEC class B (130°C) UL class A (105°C) CSA class A (105°C) |
| Insulation resistance | 100 MΩ min. (at 500 VDC) between all power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



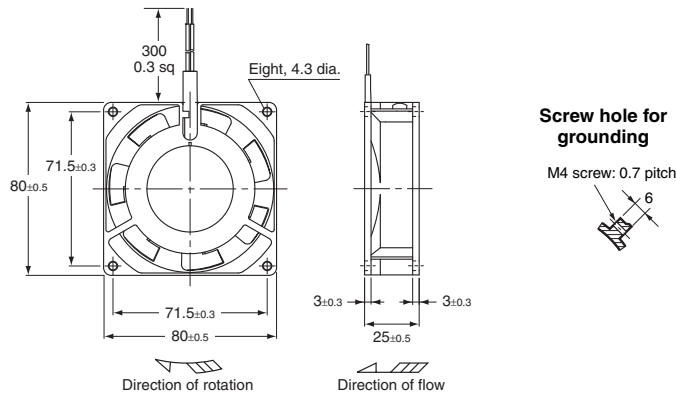
R87F-A□A83L



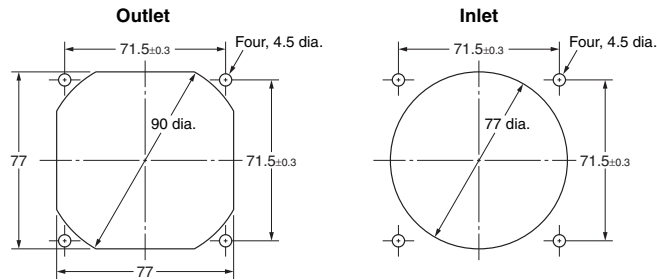
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure on Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)



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.

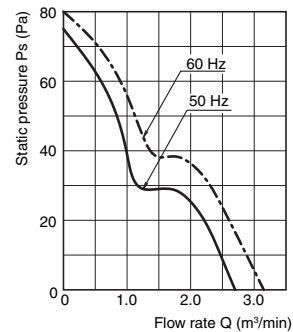
| Item | Rated voltage (V) | Permitted voltage fluctuation range (%) | Frequency (Hz) | Rated current (A) * | | Rated input (W) * | | Rated rotational speed (r/min) * | | Maximum flow rate (m³/min) * | | Maximum static pressure (Pa) * | | Noise (dB) * | |
|----------------|-------------------|---|----------------|---------------------|-------|-------------------|-------|----------------------------------|-------|------------------------------|------|--------------------------------|-------|--------------|-------|
| Model | | | | 50 Hz | 60 Hz | 50 Hz | 60 Hz | 50 Hz | 60 Hz | 50 Hz | 60Hz | 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 | | −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 |

Flow Rate and Static Pressure Characteristics (Reference Values)

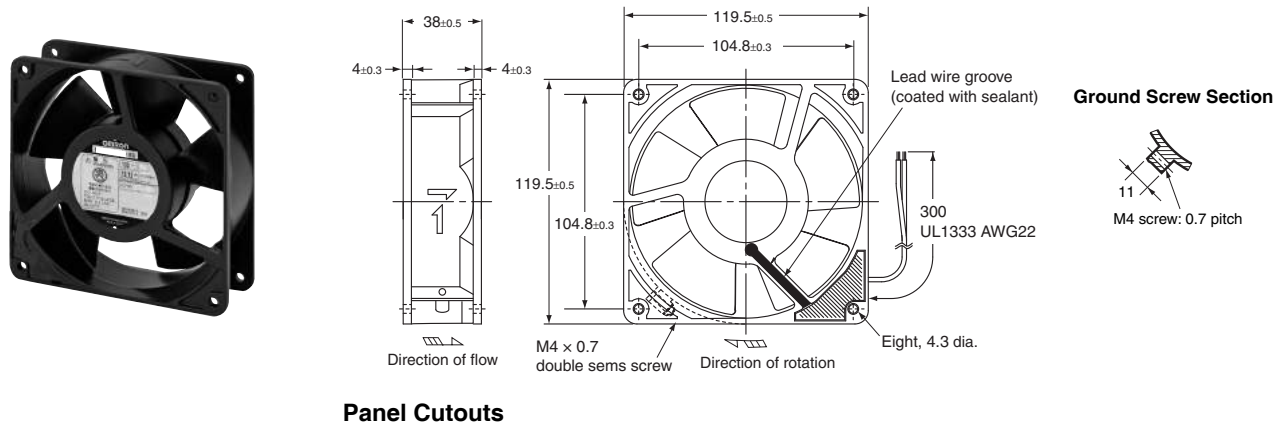
R87T-A□A15H-WR



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

Dimensions

(Unit: mm)



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.

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.

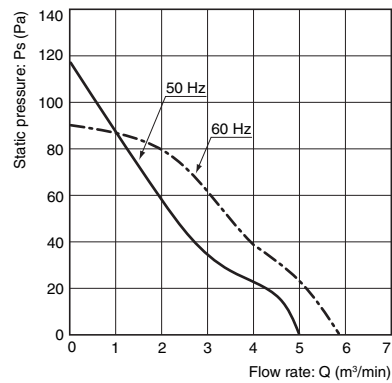
| Item Model | Rated voltage (V) | Permitted voltage fluctuation range (%) | Frequency (Hz) | Rated current (A) * | | Rated input (W) * | | Rated rotational speed (r/min) * | | Maximum flow rate (m³/min) * | | Maximum static pressure (Pa) * | | Noise (dB) * | |
|---------------|-------------------|---|----------------|---------------------|-------|-------------------|-------|----------------------------------|-------|------------------------------|-------|--------------------------------|-------|--------------|-------|
| | | | | 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-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)

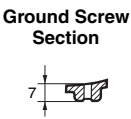
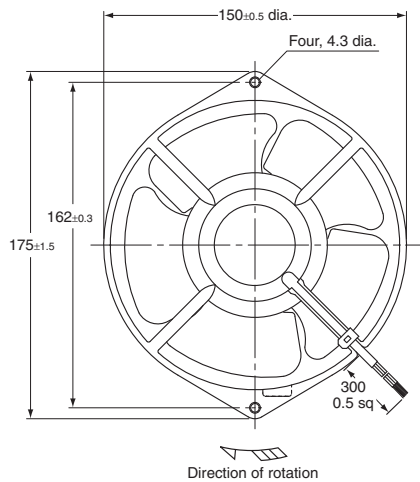
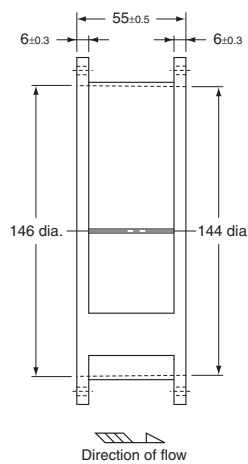
R87T-A□A07H



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

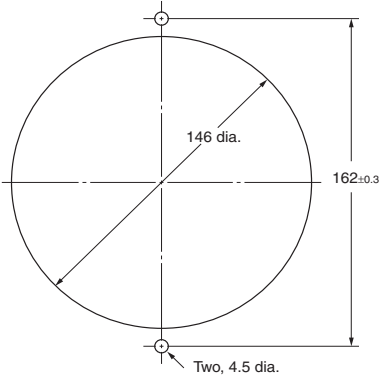
Dimensions

(Unit: mm)



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.

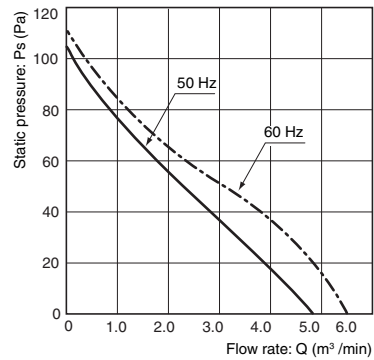
| Item | Rated voltage (V) | Permitted voltage fluctuation range (%) | Frequency (Hz) | Rated current (A) * | | Rated input (W) * | | Rated rotational speed (r/min) * | | Maximum flow rate (m³/min) * | | Maximum static pressure (Pa) * | | Noise (dB) * | |
|-------------|-------------------|---|----------------|---------------------|-------|-------------------|-------|----------------------------------|-------|------------------------------|-------|--------------------------------|-------|--------------|-------|
| 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 | 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)

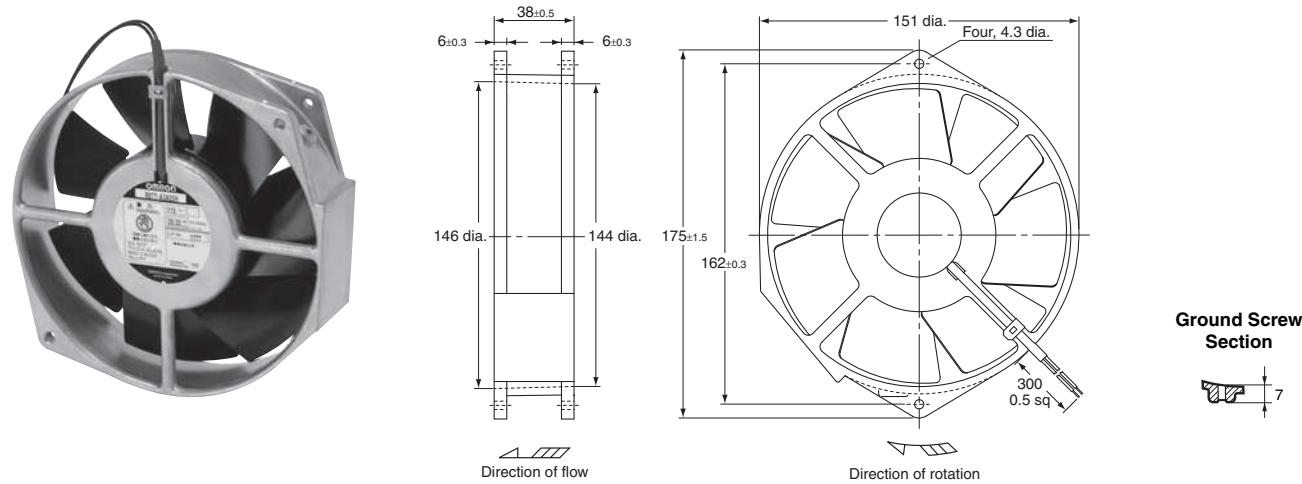
R87T-A□A05H



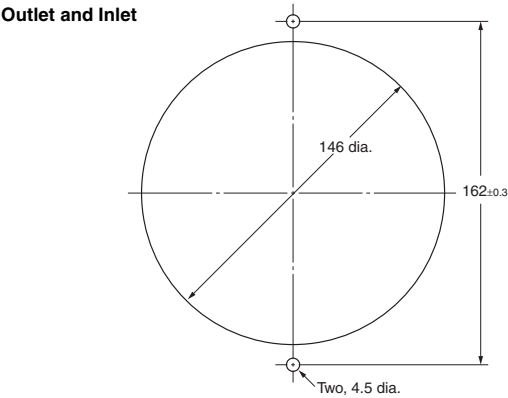
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure on Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)



Panel Cutouts



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.

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

R87T-A□A15

Specifications

Ratings and Ordering Information

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

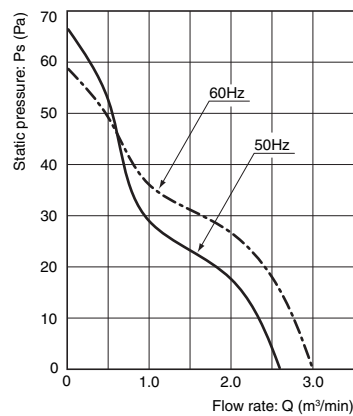
| Item Model | Rated voltage (V) | Permitted voltage fluctuation range (%) | Frequency (Hz) | Rated current (A) * | | Rated input (W) * | | Rated rotational speed (r/min) * | | Maximum flow rate (m³/min) * | | Maximum static pressure (Pa) * | | Noise (dB) * | |
|---------------|-------------------|---|----------------|---------------------|-------|-------------------|-------|----------------------------------|-------|------------------------------|-------|--------------------------------|-------|--------------|-------|
| | | | | 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 | 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

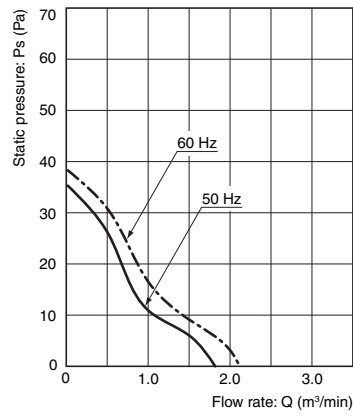
| | |
|-------------------------------|--|
| Motor type | Single-phase shading coil induction motor (2-pole, open type) |
| Terminal type | Terminals |
| Insulation class | IEC class B (130°C) UL class A (105°C) |
| Insulation resistance | 100 MΩ min. (at 500 VDC) between all power supply connections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



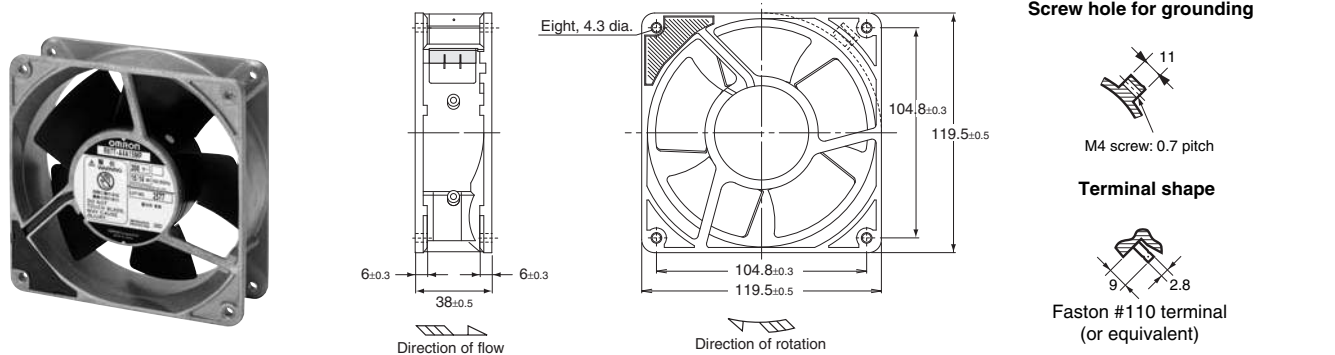
R87T-A□A15MP



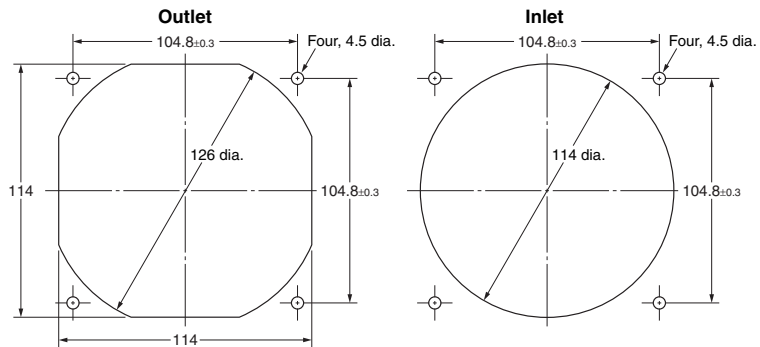
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure on Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)



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.

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.

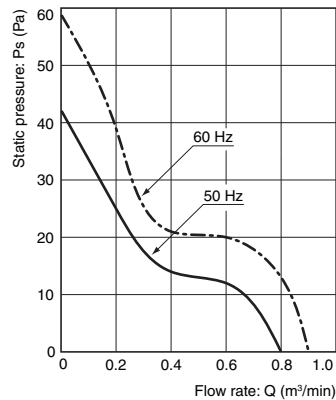
| Item Model | Rated voltage (V) | Permitted voltage fluctuation range (%) | Frequency (Hz) | Rated current (A) * | | Rated input (W) * | | Rated rotational speed (r/min) * | | Maximum flow rate (m³/min) * | | Maximum static pressure (Pa) * | | Noise (dB) * | |
|---------------|-------------------|---|----------------|---------------------|-------|-------------------|-------|----------------------------------|-------|------------------------------|-------|--------------------------------|-------|--------------|-------|
| | | | | 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-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)

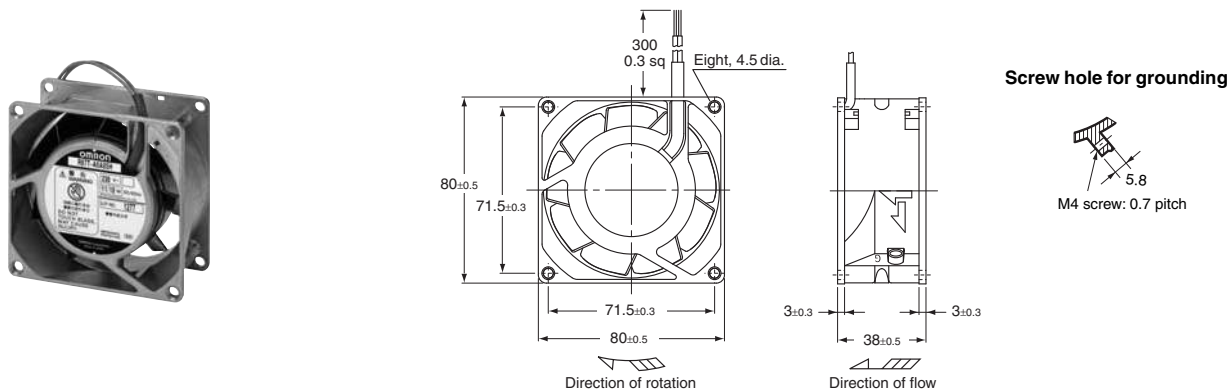
R87T-A□A85H



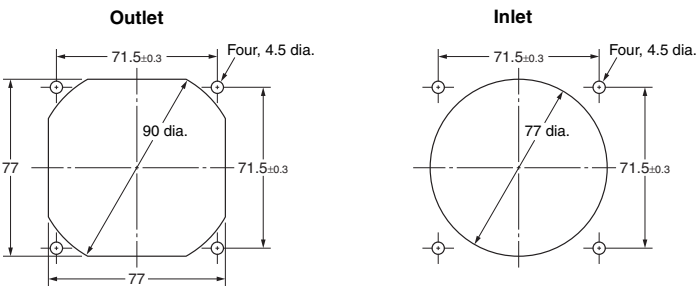
Note: For details on measurement conditions, refer to *Flow Rate and Static Pressure on Safety Precautions for All Axial Fans*.

Dimensions

(Unit: mm)



Panel Cutouts



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.

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.

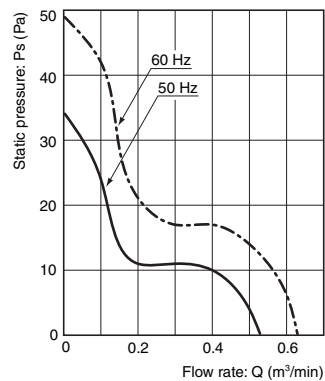
| Item | Rated voltage (V) | Permitted voltage fluctuation range (%) | Frequency (Hz) | Rated current (A)* | | Rated input (W)* | | Rated rotational speed (r/min)* | | Maximum flow rate (m³/min)* | | Maximum static pressure (Pa)* | | Noise (dB)* | |
|-------------|-------------------|---|----------------|--------------------|-------|------------------|-------|---------------------------------|-------|-----------------------------|-------|-------------------------------|-------|-------------|-------|
| 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 | 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)

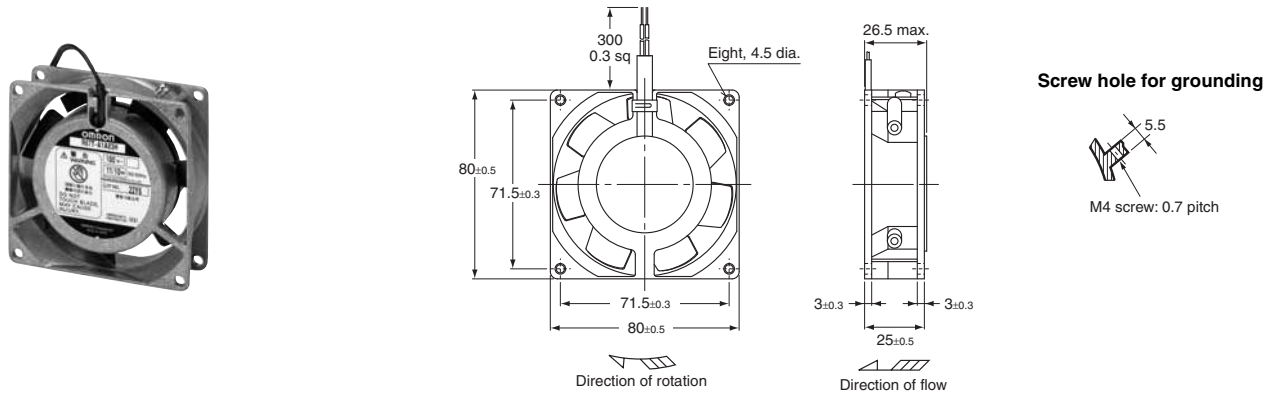
R87T-A□A83H



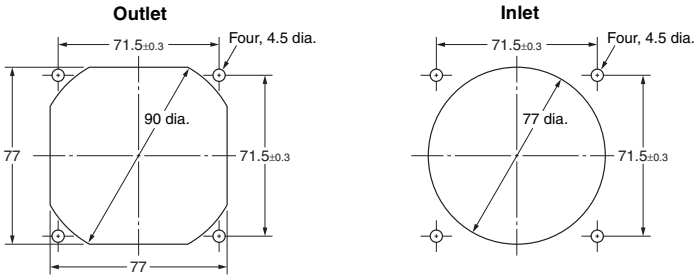
Note: For details on measurement conditions, refer to Flow Rate and Static Pressure on Safety Precautions for All Axial Fans.

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. |

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.

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 |

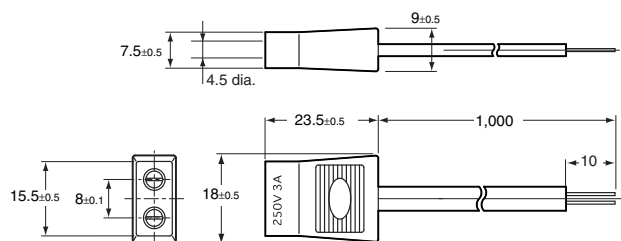
R87F-PC Rating: 250 VAC, 3 A
UL-certified Plug Cord



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 × 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 |

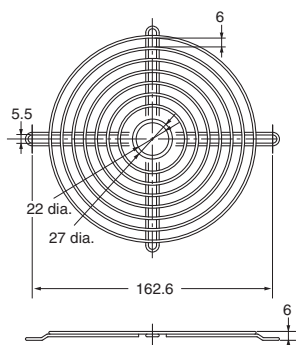
Note: Finger Guards reduce the flow rate by approximately 2% to 5%.

Dimensions

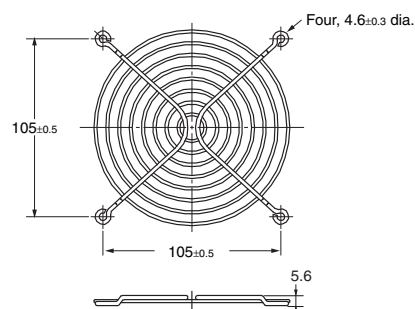
(Unit: mm)

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

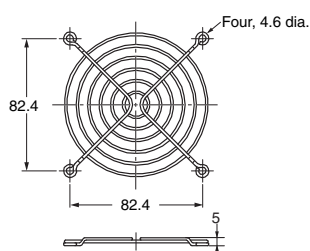
R87F-FG150



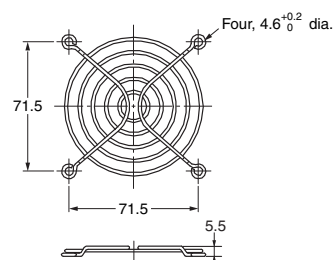
R87F-FG120



R87F-FG90



R87F-FG80



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

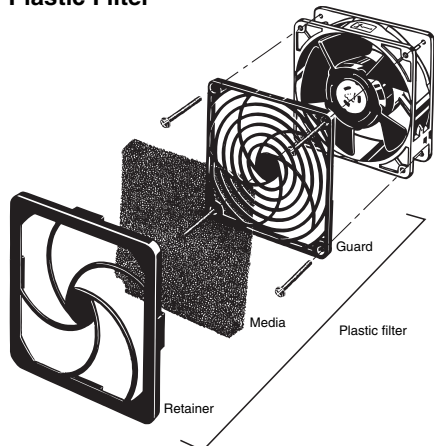
| Size | Model number |
|-----------|-----------------|
| 120 × 120 | R87F-FL120-M120 |
| 92 × 92 | R87F-FL90-M90 |
| 80 × 80 | R87F-FL80-M80 |

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.)

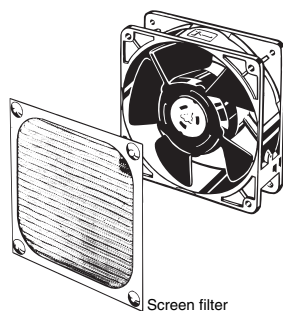
R87F-FL□ Plastic Filter



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

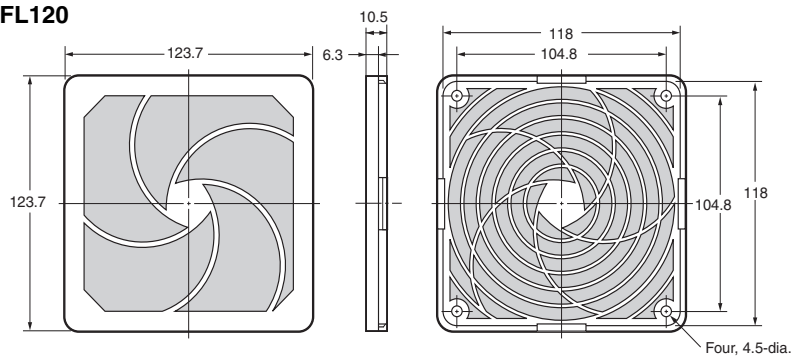
| AC Axial Fan | | Filter | |
|--------------|------------------|------------|-------------|
| Size | Model | Plastic | Aluminum |
| 150 dia. | R87T-A□A0 Series | --- | --- |
| 120 × 120 | R87F-A□A1 Series | R87F-FL120 | R87F-FL120S |
| 92 × 92 | R87T-A□A1 Series | R87F-FL90 | --- |
| 80 × 80 | R87F-A□A9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

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

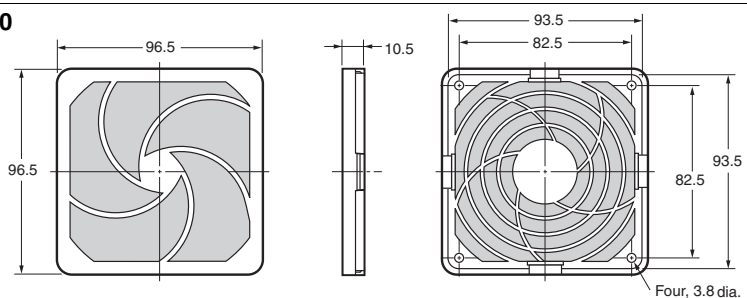
Dimensions

(Unit: mm)

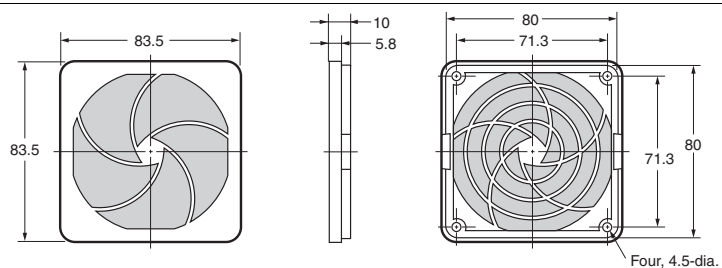
R87F-FL120



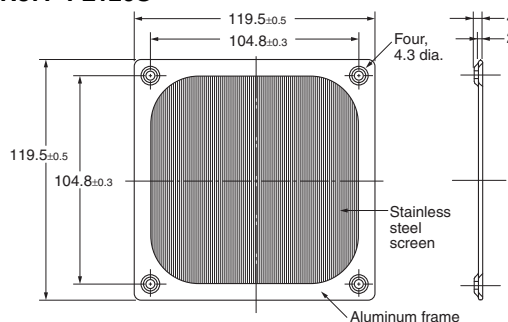
R87F-FL90



R87F-FL80



R87F-FL120S



- Note:**
1. The Screen Filter is made using aluminium and has an EMI/REI 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)

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