

# 80×80×20 mm

San Ace 80



## General Specifications

- Material ..... Frame: Aluminum, Impeller: Plastic (Flammability: UL 94V-1)
- Expected life ..... See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage)  
Expected life at 40°C is for reference only.
- Motor structure ..... Shaded coil motor
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection  
For details, please refer to p. 616.
- Dielectric strength ..... 50/60 Hz, 1500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ min. at 500 VDC
- Sound pressure level (SPL) ..... A-weighted sound pressure level (SPL) at 1 m away from the air inlet.
- Operating voltage range ..... Voltage of each model ±10%
- Storage temperature ..... -30 to +70°C (Non-condensing)
- Lead wire ..... Black, 2 pcs
- Mass ..... 180 g

## Specifications

| Model no. | Rated voltage [V] | Frequency [Hz] | Input [W] | Current [A] | Locked rotor current [A] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] | Max. static pressure [Pa] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h]       |
|-----------|-------------------|----------------|-----------|-------------|--------------------------|----------------------------------|------------------------------------|---------------------------|--------------|----------------------------|-------------------------|
| 109-210   | 100               | 50/60          | 6/5       | 0.07/0.06   | 0.07/0.06                | 2500/3000                        | 0.44/0.53 15.5/18.7                | 23.5/31.4 0.094/0.126     | 26/31        | -30 to +60                 | 25000/60°C (56000/40°C) |
| 109-213   | 115               |                |           | 0.06/0.05   | 0.06/0.05                |                                  |                                    |                           |              |                            |                         |

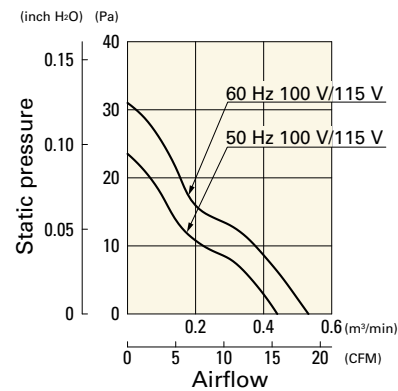
## Set Models

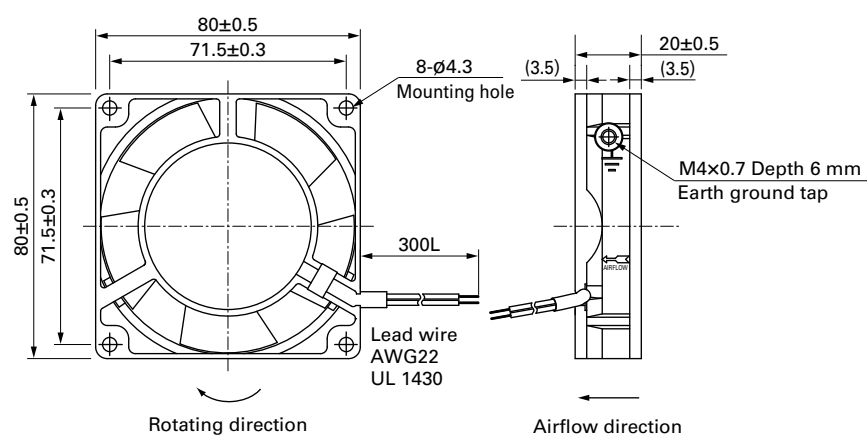
Fan, finger guard, plug cord, screws, etc. can be purchased in one package. For details, please refer to p. 674.

| Order no.   | Set items  |         |                  |                                                                  |                     |                                |
|-------------|------------|---------|------------------|------------------------------------------------------------------|---------------------|--------------------------------|
|             | Fan (1 pc) | Voltage | Low-speed sensor | Plug cord (1 pc)                                                 | Finger guard (1 pc) | Screws with hex nuts (4 pairs) |
| ST1-109-210 | 109-210    | 100 V   |                  | Plug cord is not included because of the exposed-lead structure. | 109-049E            | M4×40 mm                       |
| ST1-109-213 | 109-213    | 115 V   |                  |                                                                  | 109-049E            |                                |

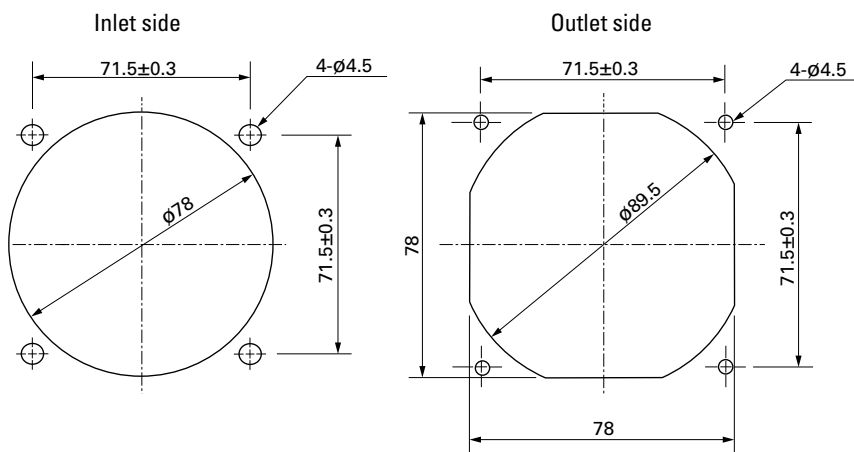
## Airflow - Static Pressure Characteristics

### 109-210, 109-213

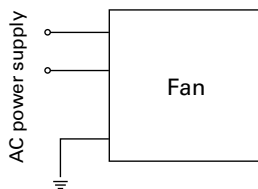




## Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



## Connection Schematic



## Options

### Finger guards

page: p. 598

Model no.: 109-049E, 109-049H

### Resin finger guards

page: p. 605

Model no.: 109-1002G

### Resin filter kits

page: p. 606

Model no.: 109-1002F13 (13PPI), 109-1002F20 (20PPI),  
109-1002F30 (30PPI), 109-1002F40 (40PPI)

# 80×80×25 mm

San Ace 80 



## General Specifications

- Material ..... Frame: Aluminum, Impeller: Plastic (Flammability: UL 94V-1)
- Expected life ..... See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage)  
Expected life at 40°C is for reference only.
- Motor structure ..... Shaded coil motor
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection  
For details, please refer to p. 616.
- Dielectric strength ..... 50/60 Hz, 1500 VAC, for 1 minute (between input terminal and frame)
- Insulation resistance ..... 10 MΩ min. at 500 VDC
- Sound pressure level (SPL) ..... A-weighted sound pressure level (SPL) at 1 m away from the air inlet.
- Operating voltage range ..... Voltage of each model ±10%
- Storage temperature ..... -30 to +70°C (Non-condensing)
- Mass ..... 270 g

## Specifications

| Model no. | Rated voltage<br>[V] | Frequency<br>[Hz] | Input<br>[W] | Current<br>[A] | Locked rotor current<br>[A] | Rated speed<br>[min <sup>-1</sup> ] | Max. airflow<br>[m³/min]    [CFM] |           | Max. static pressure<br>[Pa]        [inchH <sub>2</sub> O] |             | SPL<br>[dB (A)] | Operating temperature<br>[°C] | Expected life<br>[h]       |
|-----------|----------------------|-------------------|--------------|----------------|-----------------------------|-------------------------------------|-----------------------------------|-----------|------------------------------------------------------------|-------------|-----------------|-------------------------------|----------------------------|
| 109S050   | 100                  | 50/60             | 9/7          | 0.12/0.1       | 0.13/0.11                   | 2650/3100                           | 0.63/0.76                         | 22.3/26.9 | 27.5/38.3                                                  | 0.11 /0.154 | 30/33           | -30 to +60                    | 25000/60°C<br>(56000/40°C) |
| 109S053   | 115                  |                   |              | 0.1 /0.08      | 0.11/0.09                   |                                     |                                   |           |                                                            |             |                 |                               |                            |
| 109S051   | 200                  |                   |              | 0.06/0.05      | 0.06/0.05                   |                                     |                                   |           |                                                            |             |                 |                               |                            |
| 109S054   | 230                  |                   |              | 0.05/0.04      | 0.05/0.04                   |                                     |                                   |           |                                                            |             |                 |                               |                            |
| 109S030   | 100                  |                   |              | 0.12/0.1       | 0.13/0.11                   | 2350/2700                           | 0.55/0.63                         | 19.4/22.3 | 21.6/28.4                                                  | 0.087/0.114 | 28/30           |                               |                            |
| 109S033   | 115                  |                   |              | 0.1 /0.08      | 0.11/0.09                   |                                     |                                   |           |                                                            |             |                 |                               |                            |
| 109S031   | 200                  |                   |              | 0.06/0.05      | 0.06/0.05                   |                                     |                                   |           |                                                            |             |                 |                               |                            |
| 109S034   | 230                  |                   |              | 0.05/0.04      | 0.05/0.04                   |                                     |                                   |           |                                                            |             |                 |                               |                            |

## Set Models PSE (Japanese safety standard) compatible

A set of a fan, finger guard, plug cord (PSE compatible), and screws. For details, please refer to p. 674.

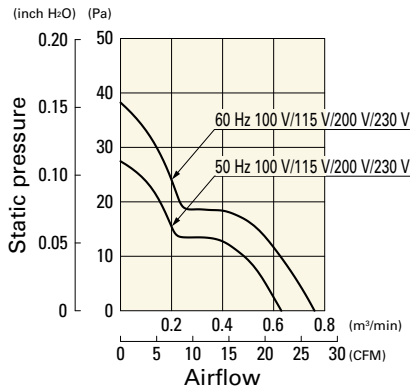
| Order no.   | Set items  |         |                  |                            |                     |                                               |
|-------------|------------|---------|------------------|----------------------------|---------------------|-----------------------------------------------|
|             | Fan (1 pc) | Voltage | Low-speed sensor | Plug cord (1 pc)           | Finger guard (1 pc) | Screws with hex nuts (4 pairs) <sup>(2)</sup> |
| ST1-109S050 | 109S050    | 100 V   |                  | 489-016-L10 <sup>(1)</sup> | 109-049E            | M4×40 mm                                      |
| ST1-109S053 | 109S053    | 115 V   |                  | 489-016-L10 <sup>(1)</sup> | 109-049E            |                                               |
| ST1-109S051 | 109S051    | 200 V   |                  | 489-016-L10 <sup>(1)</sup> | 109-049E            |                                               |
| ST1-109S054 | 109S054    | 230 V   |                  | 489-016-L10 <sup>(1)</sup> | 109-049E            |                                               |
| ST1-109S030 | 109S030    | 100 V   |                  | 489-016-L10 <sup>(1)</sup> | 109-049E            |                                               |
| ST1-109S033 | 109S033    | 115 V   |                  | 489-016-L10 <sup>(1)</sup> | 109-049E            |                                               |
| ST1-109S031 | 109S031    | 200 V   |                  | 489-016-L10 <sup>(1)</sup> | 109-049E            |                                               |
| ST1-109S034 | 109S034    | 230 V   |                  | 489-016-L10 <sup>(1)</sup> | 109-049E            |                                               |

(1) PSE compatible, but not UL compatible.

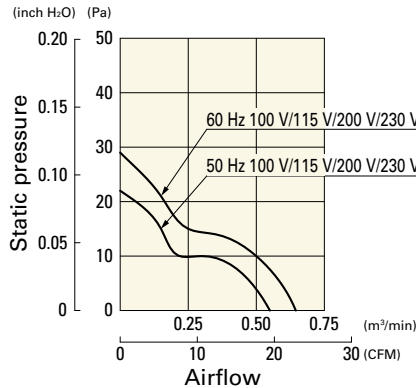
(2) Though these are 2-hole or 3-hole frame mount types, 4 screws are included for extra.

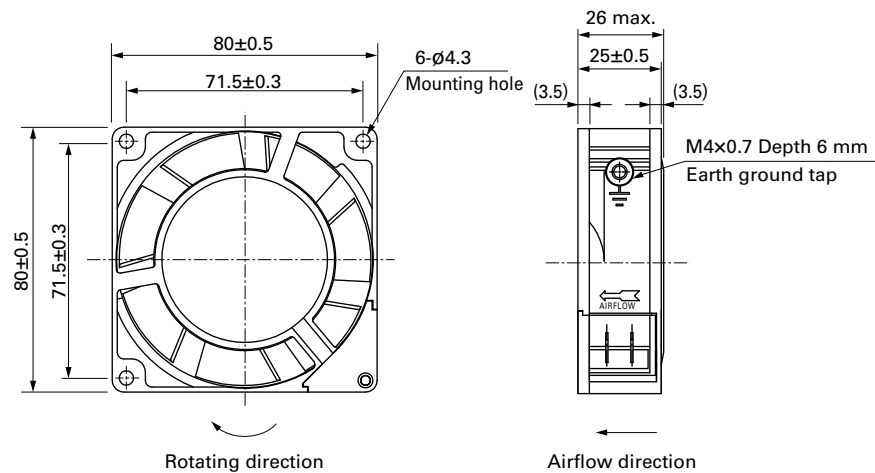
## Airflow - Static Pressure Characteristics

109S050, 109S053, 109S051, 109S054

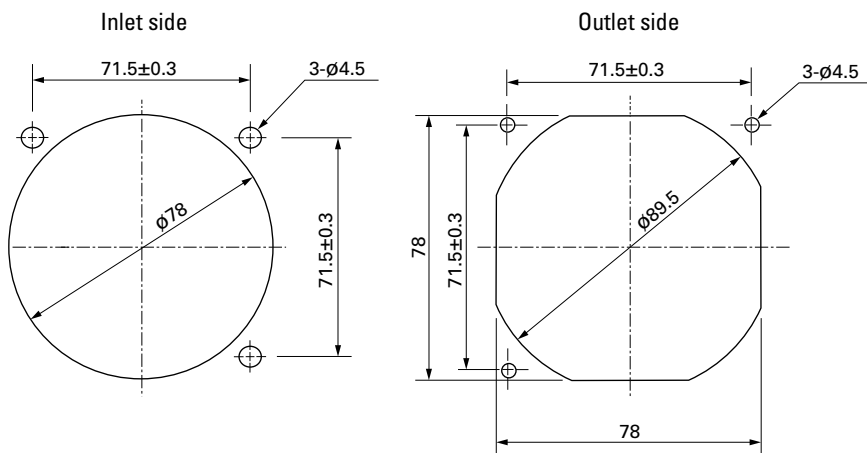


109S030, 109S033, 109S031, 109S034

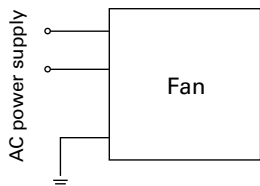




## Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



## Connection Schematic



## Options

### Finger guards

page: p. 598

Model no.: 109-049E, 109-049H

### Resin finger guards

page: p. 605

Model no.: 109-1002G

### Resin filter kits

page: p. 606

Model no.: 109-1002F13 (13PPI), 109-1002F20 (20PPI),  
109-1002F30 (30PPI), 109-1002F40 (40PPI)

### Plug cord

page: p. 609 to 610

PSE compatible models

Model no.: 489-016-L10, 489-016-L21

UL/CSA certified models

Model no.: 489-047-L10, 489-047-L21

AC

AC Fan 80 mm sq.

# 80×80×38 mm

San Ace 80 



## General Specifications

- Material ..... Frame: Aluminum, Impeller: Plastic (Flammability: UL 94V-1)
- Expected life ..... See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage)  
Expected life at 40°C is for reference only.
- Motor structure ..... Shaded coil motor
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection  
For details, please refer to p. 616.
- Dielectric strength ..... 50/60 Hz, 1500 VAC, for 1 minute (between input terminal and frame)
- Insulation resistance ..... 10 MΩ min. at 500 VDC
- Sound pressure level (SPL) ..... A-weighted sound pressure level (SPL) at 1 m away from the air inlet.
- Operating voltage range ..... Voltage of each model ±10%
- Storage temperature ..... -30 to +70°C (Non-condensing)
- Mass ..... 400 g

## Specifications

| Model no. | Rated voltage [V] | Frequency [Hz] | Input [W] | Current [A] | Locked rotor current [A] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h]       |
|-----------|-------------------|----------------|-----------|-------------|--------------------------|----------------------------------|------------------------------------------|--------------------------------------------------|--------------|----------------------------|-------------------------|
| 109-150   | 100               | 50/60          | 9/8       | 0.13/0.11   | 0.17/0.15                | 2700/3150                        | 0.9/1.05 31.8/37.1                       | 31.4/44.1 0.126/0.177                            | 35/39        | -30 to +60                 | 25000/60°C (56000/40°C) |
| 109-153   | 115               |                |           | 0.11/0.1    | 0.14/0.12                |                                  |                                          |                                                  |              |                            |                         |
| 109-151   | 200               |                |           | 0.07/0.06   | 0.09/0.08                |                                  |                                          |                                                  |              |                            |                         |
| 109-154   | 230               |                |           | 0.06/0.05   | 0.08/0.07                |                                  |                                          |                                                  |              |                            |                         |

## Set Models PSE (Japanese safety standard) compatible

A set of a fan, finger guard, plug cord (PSE compatible), and screws. For details, please refer to p. 674.

| Order no.   | Set items  |         |                  |                            |                     |                                               |
|-------------|------------|---------|------------------|----------------------------|---------------------|-----------------------------------------------|
|             | Fan (1 pc) | Voltage | Low-speed sensor | Plug cord (1 pc)           | Finger guard (1 pc) | Screws with hex nuts (4 pairs) <sup>(2)</sup> |
| ST1-109-150 | 109-150    | 100 V   |                  | 489-016-L10 <sup>(1)</sup> | 109-049E            | M4×55 mm                                      |
| ST1-109-153 | 109-153    | 115 V   |                  | 489-016-L10 <sup>(1)</sup> | 109-049E            |                                               |
| ST1-109-151 | 109-151    | 200 V   |                  | 489-016-L10 <sup>(1)</sup> | 109-049E            |                                               |
| ST1-109-154 | 109-154    | 230 V   |                  | 489-016-L10 <sup>(1)</sup> | 109-049E            |                                               |

- (1) PSE compatible, but not UL compatible.  
(2) Though these are 2-hole or 3-hole frame mount types, 4 screws are included for extra.

## Airflow - Static Pressure Characteristics

109-150, 109-153, 109-151, 109-154

