

# Ø172×51 mm

**San Ace 172**



Only standard fans (without sensors) have acquired CSA certification.

Round type

## 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)
- Motor structure ..... Capacitor motor
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection  
For details, please refer to p. 547.
- Dielectric strength ..... 50/60 Hz, 1500 VAC, for 1 minute (between input terminal and frame)
- Dielectric strength (with sensor) ..... 50/60 Hz 1500 VAC 1 minute (between AC input terminal and frame)  
50/60 Hz 1000 VAC 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger
- 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)
- Sensor-Purpose lead wire ..... ⊕Brown ⊖Black (Sensor) Yellow
- Mass ..... 1000 g

## Specifications

### Standard

| 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] |
|-----------|-------------------|----------------|-----------|-------------|--------------------------|----------------------------------|------------------------------------------|--------------------------------------------------|--------------|----------------------------|-------------------|
| 109-311   | 100               | 50/60          | 27/25     | 0.33/0.25   | 0.65/0.64                | 2900/3500                        | 5.3/6.4 187.3/226.1                      | 147/196 0.59/0.787                               | 47/51        | -30 to +60                 | 25000/60°C        |
| 109-314   | 115               |                |           | 0.29/0.22   | 0.55/0.54                |                                  |                                          |                                                  |              |                            |                   |
| 109-312   | 200               |                |           | 0.16/0.13   | 0.33/0.32                |                                  |                                          |                                                  |              |                            |                   |
| 109-313   | 230               |                |           | 0.14/0.11   | 0.28/0.27                |                                  |                                          |                                                  |              |                            |                   |

### with Sensor

For sensor specifications, please refer to p. 550. Sensor specification differs depending on the fan's speed specification.

For a 5 V sensor power supply (ITEM-20), please append "-20" to the end of model number. E.g. 109-371-20

For a 12 V sensor power supply (ITEM-30), please append "-30" to the end of model number. E.g. 109-371-30

| 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] |
|-----------|-------------------|----------------|-----------|-------------|--------------------------|----------------------------------|------------------------------------------|--------------------------------------------------|--------------|----------------------------|-------------------|
| 109-371   | 100               | 50/60          | 27/25     | 0.33/0.25   | 0.65/0.64                | 2900/3500                        | 5.3/6.4 187.3/226.1                      | 147/196 0.59/0.787                               | 47/51        | -10 to +60                 | 25000/60°C        |
| 109-374   | 115               |                |           | 0.29/0.22   | 0.55/0.54                |                                  |                                          |                                                  |              |                            |                   |
| 109-372   | 200               |                |           | 0.16/0.13   | 0.33/0.32                |                                  |                                          |                                                  |              |                            |                   |
| 109-373   | 230               |                |           | 0.14/0.11   | 0.28/0.27                |                                  |                                          |                                                  |              |                            |                   |

## Set Models

Fan, finger guard, plug cord, screws, etc. can be purchased in one package. For details, please refer to p. 594.

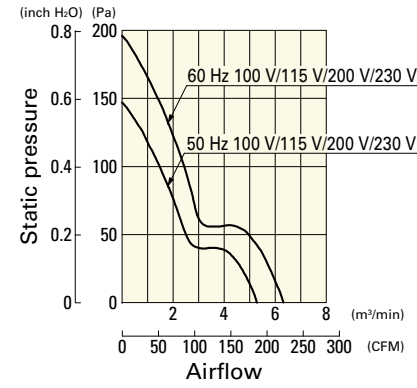
| Order no.      | Set items  |         |                  |              |               |                     |
|----------------|------------|---------|------------------|--------------|---------------|---------------------|
|                | Fan        | Voltage | Low-speed sensor | Plug cord*   | Finger guards | Mounting screws     |
| ST1-109-311    | 109-311    | 100 V   |                  | 489-1619-L10 | 109-319E      | M4×25 mm (4 screws) |
| ST1-109-314    | 109-314    | 115 V   |                  | 489-1619-L10 | 109-319E      |                     |
| ST1-109-312    | 109-312    | 200 V   |                  | 489-1619-L10 | 109-319E      |                     |
| ST1-109-313    | 109-313    | 230 V   |                  | 489-1619-L10 | 109-319E      |                     |
| ST1-109-371-20 | 109-371-20 | 100 V   | ○ (5 V)          | 489-1619-L10 | 109-319E      |                     |
| ST1-109-371-30 | 109-371-30 |         | ○ (12 V)         | 489-1619-L10 | 109-319E      |                     |
| ST1-109-374-20 | 109-374-20 | 115 V   | ○ (5 V)          | 489-1619-L10 | 109-319E      |                     |
| ST1-109-374-30 | 109-374-30 |         | ○ (12 V)         | 489-1619-L10 | 109-319E      |                     |
| ST1-109-372-20 | 109-372-20 | 200 V   | ○ (5 V)          | 489-1619-L10 | 109-319E      |                     |
| ST1-109-372-30 | 109-372-30 |         | ○ (12 V)         | 489-1619-L10 | 109-319E      |                     |
| ST1-109-373-20 | 109-373-20 | 230 V   | ○ (5 V)          | 489-1619-L10 | 109-319E      |                     |
| ST1-109-373-30 | 109-373-30 |         | ○ (12 V)         | 489-1619-L10 | 109-319E      |                     |

\* PSE compatible.

**Airflow - Static Pressure Characteristics**

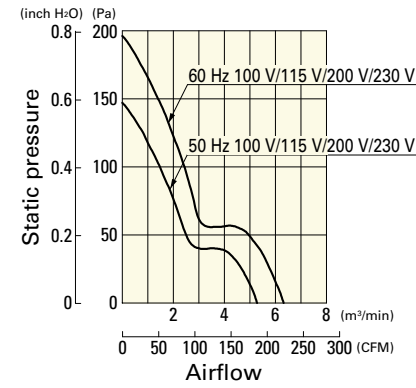
**Standard**

109-311, 109-314, 109-312, 109-313



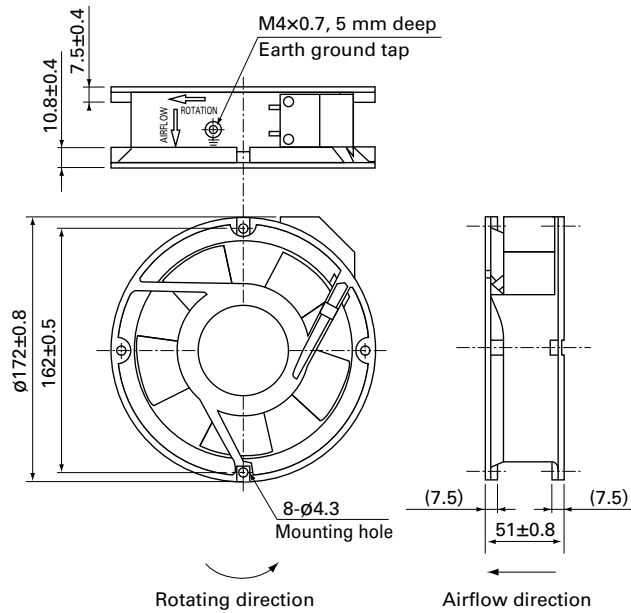
**with Sensor**

109-371, 109-374, 109-372, 109-373

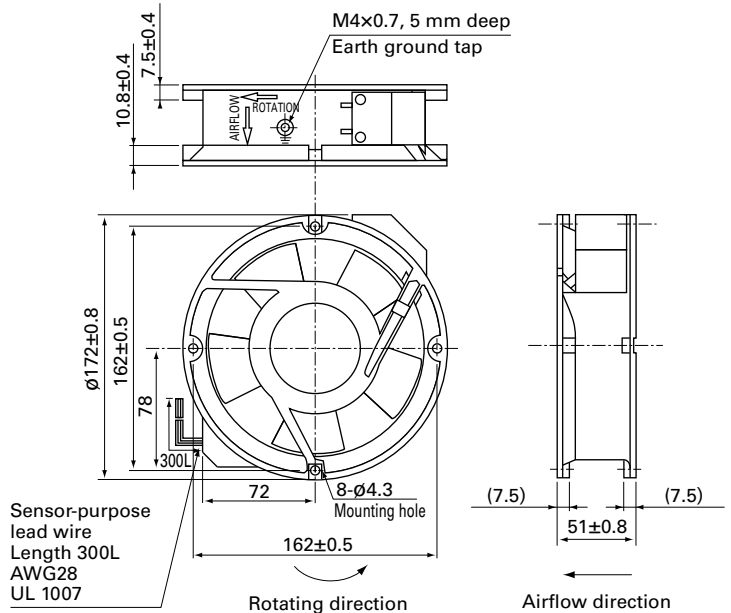


**Dimensions (unit: mm)**

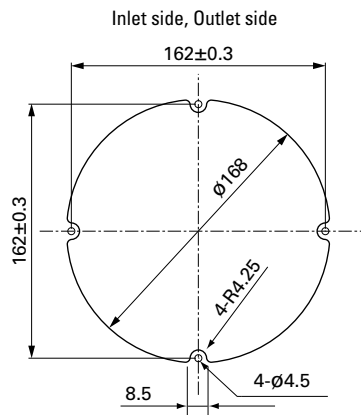
**Standard**



**with Sensor**



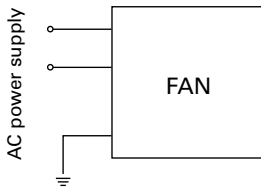
**Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)**



AC  
AC Fan  $\phi 172$  mm

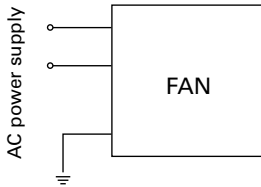
## Wiring Diagram

### Standard

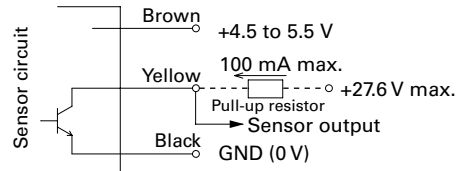


### with Sensor

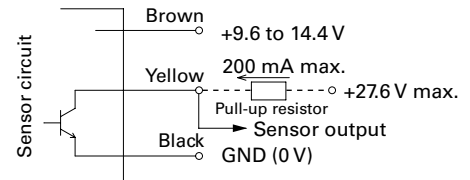
For fan power supply



For sensor circuit  
5 V (ITEM-20)



12 V (ITEM-30)



GND (Black) should be shared in case that power supply for sensor circuit (Brown) and that for sensor pull-up (Yellow) are separated.

## Options

### Finger guards

page: p. 534

Model no.: 109-319E, 109-319H, 109-320, 109-1066,  
109-1068

### Plug cord

page: pp. 542 to 543

Model no.: 489-1619-L10, 489-1619-L21, 489-084-L10,  
489-084-L21