



# 60x60x76 mm

San Ace 60 9CRA type

## General Specifications

- Material ..... Frame: Plastic (Flammability: UL 94V-0), Impeller: Plastic (Flammability: UL 94V-0)
- 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 protection function ..... Locked rotor burnout protection, Reverse polarity protection For details, please refer to p. 599.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- Sound pressure level (SPL) ..... At 1 m away from the air inlet
- Storage temperature ..... -30 to +70°C (Non-condensing)
- Lead wire ..... Inlet ⊕Red ⊖Black (Sensor) Yellow (Control) Brown  
Outlet ⊕Orange ⊖Gray (Sensor) Purple (Control) White
- Mass ..... 270 g

## Specifications

The models listed below **have pulse sensors with PWM control function.**

| Model no.      | Rated voltage [V] | Operating voltage range [V] | PWM duty cycle [%] | Rated current [A] | Rated input [W] | 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]          |
|----------------|-------------------|-----------------------------|--------------------|-------------------|-----------------|----------------------------------|--------|--|--------|--|--------|--------------|----------------------------|----------------------------|
|                |                   |                             |                    |                   |                 | Inlet                            | Outlet | Inlet                                    | Outlet | Inlet  | Outlet |              |                            |                            |
| 9CRA0612P0G001 | 12                | 10.8 to 13.2                | 100                | 2.3               | 27.6            | 16500                            | 13000  | 2.0                                      | 70.6   | 1000   | 4.0    | 66           | -20 to +70                 | 40000/60°C<br>(70000/40°C) |
|                |                   |                             | 0                  | 0.22              | 2.7             | 3600                             | 2800   | 0.43                                     | 15.1   | 47.6   | 0.19   | 32           |                            |                            |
| 100            |                   |                             | 1.5                | 18.0              | 14000           | 11000                            | 1.7    | 60.0                                     | 720    | 2.89   | 63     |              |                            |                            |
| 0              |                   |                             | 0.17               | 2.1               | 3200            | 2500                             | 0.38   | 13.4                                     | 37.6   | 0.15   | 29     |              |                            |                            |

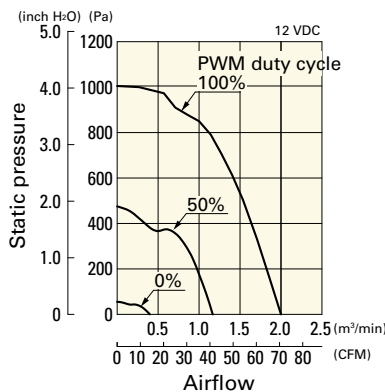
\* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

Note: The mark indicates Short LeadTime Service applicable models. See p. 654 for details.

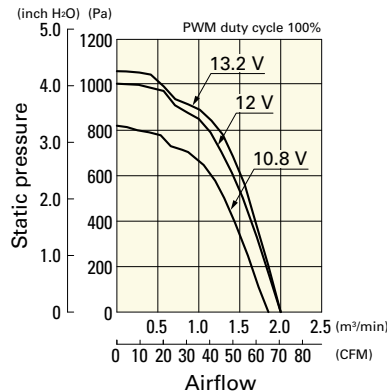
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

**9CRA0612P0G001** With pulse sensor with PWM control function

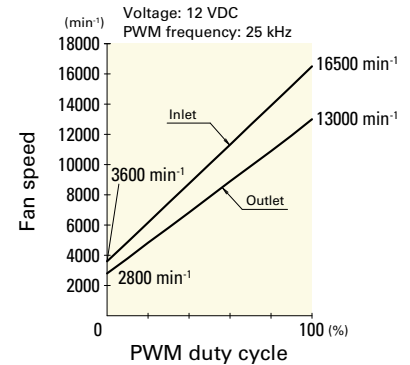
PWM duty cycle



Operating voltage range



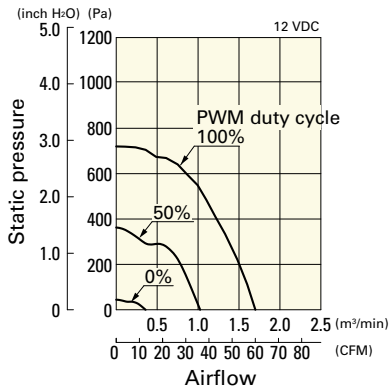
PWM duty - Speed characteristics example



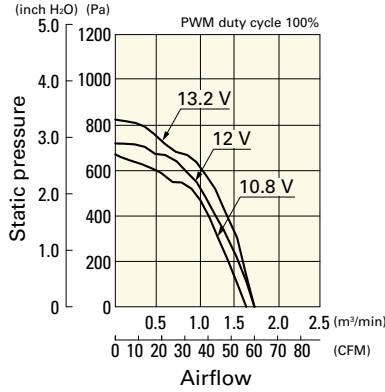
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

**9CRA0612P0S001** With pulse sensor with PWM control function

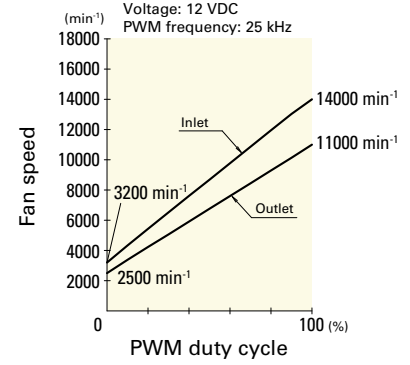
PWM duty cycle



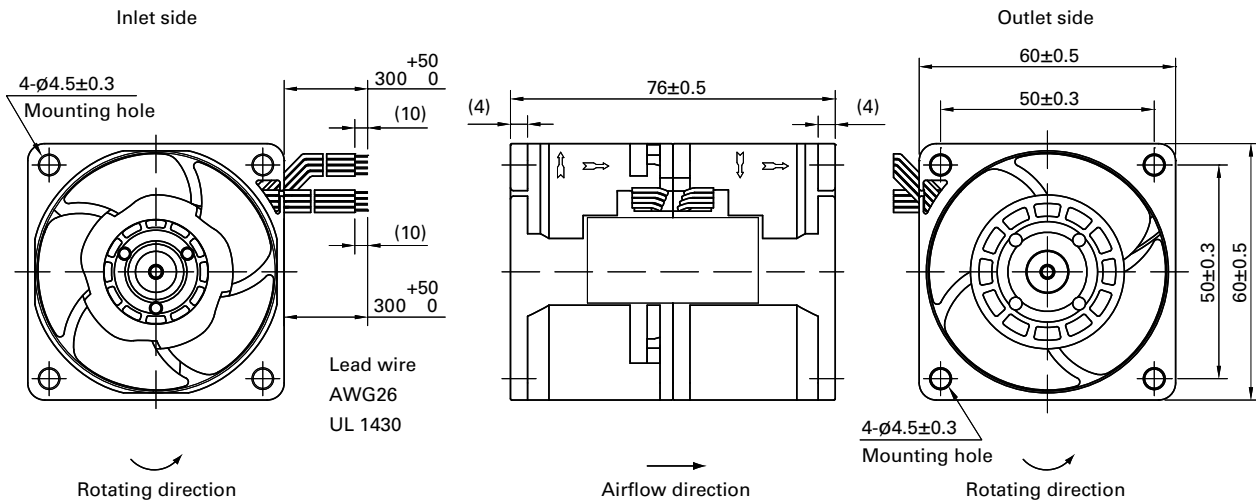
Operating voltage range



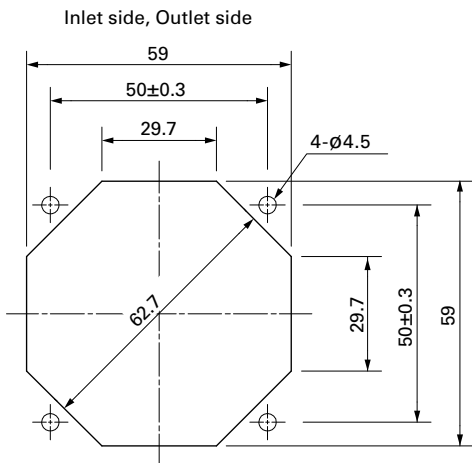
PWM duty - Speed characteristics example



## Dimensions (unit: mm)



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



## Options

Finger guards

page: p. 584

Model no.: 109-139E, 109-139H

Resin finger guards

page: p. 591

Model no.: 109-1003G

Resin filter kits

page: p. 592

Model no.: 109-1003F13 (13PPI), 109-1003F20 (20PPI),  
109-1003F30 (30PPI), 109-1003F40 (40PPI)