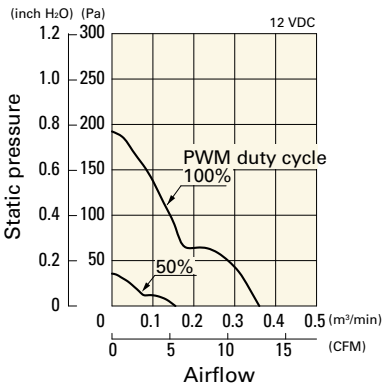
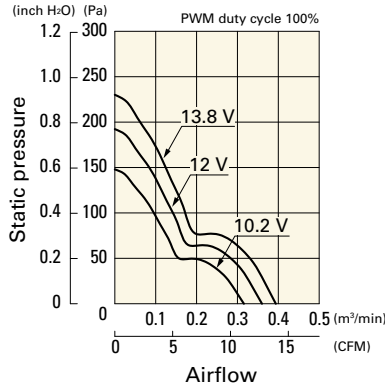


9GA0412P7G001 With pulse sensor with PWM control

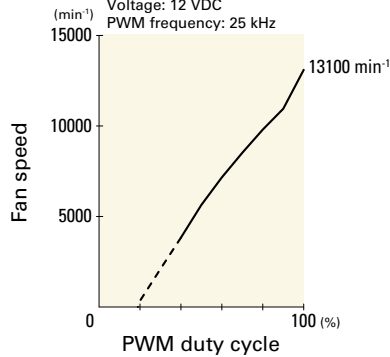
PWM duty cycle



Operating voltage range



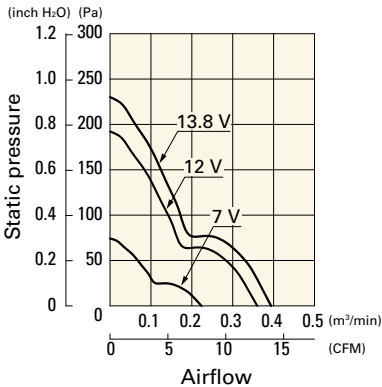
PWM duty - Speed characteristics example



Airflow - Static Pressure Characteristics

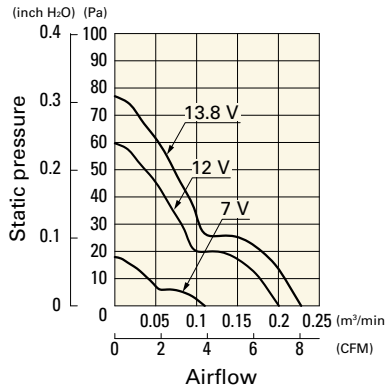
9GA0412G7001 With pulse sensor

Operating voltage range



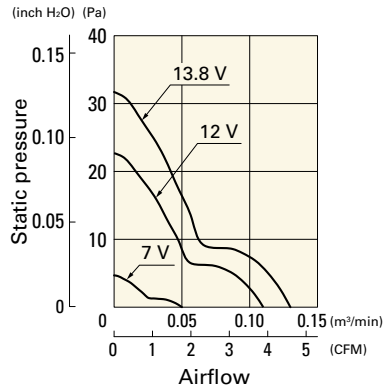
9GA0412H7001 With pulse sensor

Operating voltage range

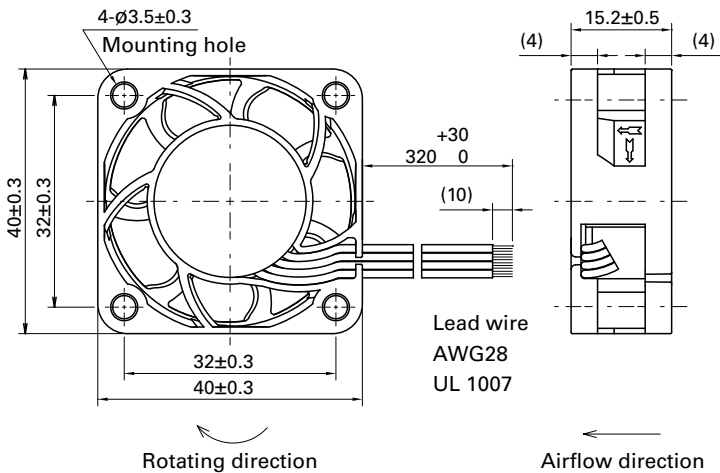


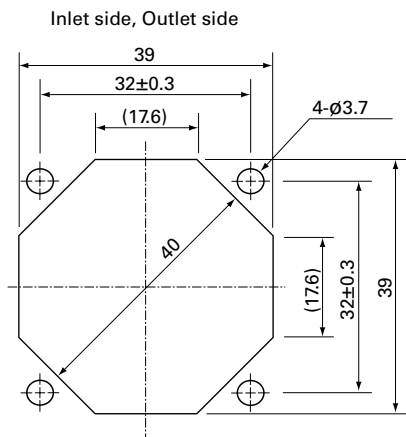
9GA0412L7001 With pulse sensor

Operating voltage range



Dimensions (unit: mm) (With pulse sensor with PWM control)





## Options

Finger guards

page: p. 598

Model no.: 109-059, 109-059H

# 40×40×15 mm

San Ace 40 9P<sub>type</sub>   



## General Specifications

- Material ..... Frame: Plastic (Flammability: UL 94V-0), 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 protection function ..... Locked rotor burnout protection, Reverse polarity protection  
For details, please refer to p. 616.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ min. at 500 VDC (between lead wire conductors and frame)
- Sound pressure level (SPL) ..... A-weighted sound pressure level (SPL) at 1 m away from the air inlet.
- Storage temperature ..... -30 to +70°C (Non-condensing)
- Lead wire ..... ⊕Red ⊖Black or Blue Sensor Yellow
- Mass ..... 32 g

## Specifications

The models listed below **have ribs and a pulse sensor**.

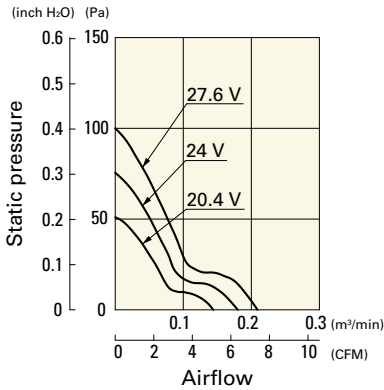
| Model no.    | Rated voltage<br>[V] | Operating voltage range<br>[V] | Rated current<br>[A] | Rated input<br>[W] | Rated speed<br>[min <sup>-1</sup> ] | Max. airflow<br>[m <sup>3</sup> /min] [CFM] | Max. static pressure<br>[Pa] [inchH <sub>2</sub> O] | SPL<br>[dB (A)] | Operating temperature<br>[°C] | Expected life<br>[h]       |
|--------------|----------------------|--------------------------------|----------------------|--------------------|-------------------------------------|---------------------------------------------|-----------------------------------------------------|-----------------|-------------------------------|----------------------------|
| 109P0424H701 | 24                   | 20.4 to 27.6                   | 0.08                 | 1.92               | 7700                                | 0.18 6.4                                    | 75.5 0.303                                          | 28              | -20 to +70                    | 60000/60°C<br>(90000/40°C) |

Note: Sensor and control options are available for selection. Refer to the table on p. 645.

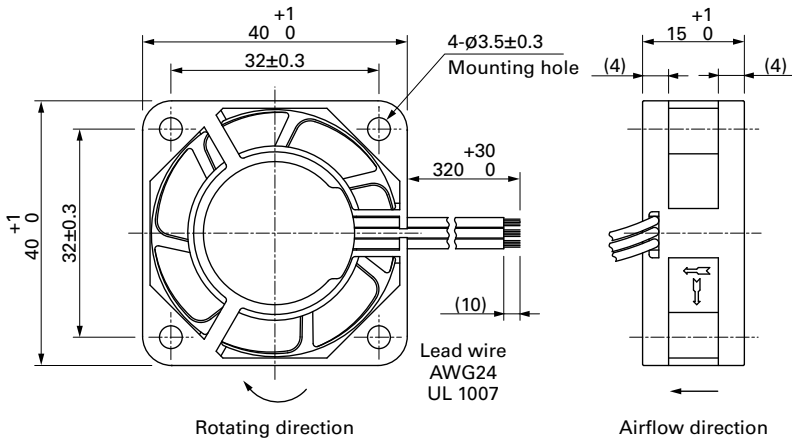
## Airflow - Static Pressure Characteristics

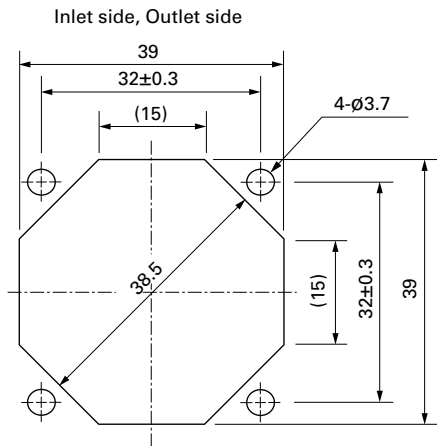
### 109P0424H701 With pulse sensor

Operating voltage range



## Dimensions (unit: mm)





## Options

Finger guards

page: p. 598

Model no.: 109-059, 109-059H

# 40×40×20 mm

San Ace 40 9GA type Low Power Consumption Fan



## 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. 616.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ min. at 500 VDC (between lead wire conductors and frame)
- Sound pressure level (SPL) ..... A-weighted sound pressure level (SPL) at 1 m away from the air inlet.
- Storage temperature ..... -30 to +70°C (Non-condensing)
- Lead wire ..... ⊕Red ⊖Black ☐Sensor ☐Yellow ☐Control ☐Brown
- Mass ..... 35 g

## Specifications

The models listed below have ribs and a pulse sensor with PWM control.

| 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]       |
|---------------|-------------------|-----------------------------|---------------------|-------------------|-----------------|----------------------------------|------------------------------------------|--------------------------------------------------|--------------|----------------------------|-------------------------|
| 9GA0405P6H001 | 5                 | 4.5 to 5.5                  | 100                 | 0.35              | 1.75            | 12400                            | 0.33 11.7                                | 191 0.77                                         | 40           | -20 to +70                 | 60000/60°C (90000/40°C) |
| 9GA0405P6F001 |                   |                             | 100                 | 0.18              | 0.9             | 8000                             | 0.21 7.4                                 | 79.5 0.32                                        | 28           |                            |                         |
| 9GA0412P6G001 | 12                | 10.2 to 13.8                | 100                 | 0.23              | 2.76            | 16000                            | 0.42 14.8                                | 318 1.28                                         | 47           |                            | 40000/60°C (70000/40°C) |
|               |                   |                             | 0                   | 0.04              | 0.48            | 3800                             | 0.1 3.5                                  | 17.9 0.07                                        | 14           |                            |                         |
| 9GA0412P6H001 |                   |                             | 100                 | 0.14              | 1.68            | 12400                            | 0.33 11.7                                | 191 0.77                                         | 40           |                            | 60000/60°C (90000/40°C) |
|               |                   |                             | 0                   | 0.04              | 0.48            | 3800                             | 0.1 3.5                                  | 17.9 0.07                                        | 14           |                            |                         |
| 9GA0412P6F001 |                   |                             | 100                 | 0.08              | 0.96            | 8000                             | 0.21 7.4                                 | 79.5 0.32                                        | 28           |                            |                         |
|               |                   |                             | 0                   | 0.03              | 0.36            | 2200                             | 0.06 2.1                                 | 6.0 0.02                                         | 10           |                            |                         |
| 9GA0424P6G001 | 24                | 20.4 to 27.6                | 100                 | 0.13              | 3.12            | 16000                            | 0.42 14.8                                | 318 1.28                                         | 47           |                            | 40000/60°C (70000/40°C) |
| 9GA0424P6H001 |                   |                             | 100                 | 0.08              | 1.92            | 12400                            | 0.33 11.7                                | 191 0.77                                         | 40           |                            | 60000/60°C (90000/40°C) |
| 9GA0424P6F001 |                   |                             | 100                 | 0.04              | 0.96            | 8000                             | 0.21 7.4                                 | 79.5 0.32                                        | 28           |                            |                         |

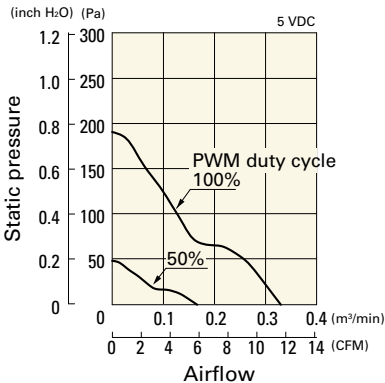
\* PWM frequency is 25 kHz. Models without ratings for 0% PWM duty cycle have zero speed at 0%. When control terminal is open, speed is the same as at 100% duty cycle.

Note: Sensor and control options are available for selection. Refer to the table on p. 647 to 648.

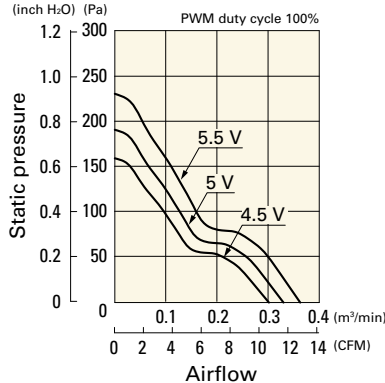
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GA0405P6H001 With pulse sensor with PWM control

PWM duty cycle



Operating voltage range



PWM duty - Speed characteristics example

