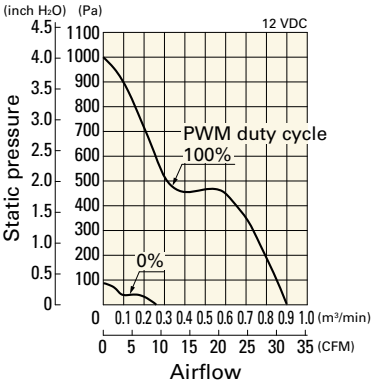
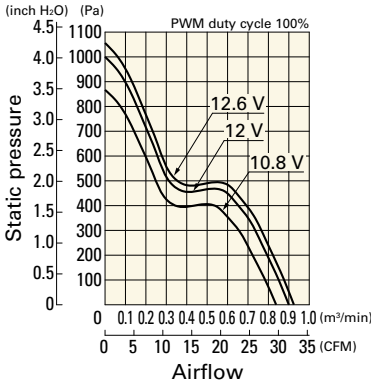


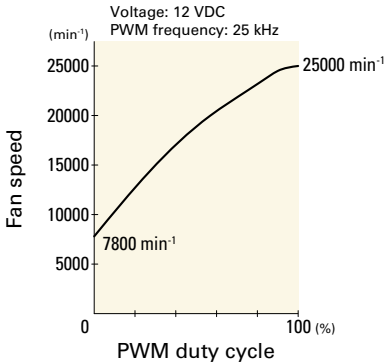
PWM duty cycle



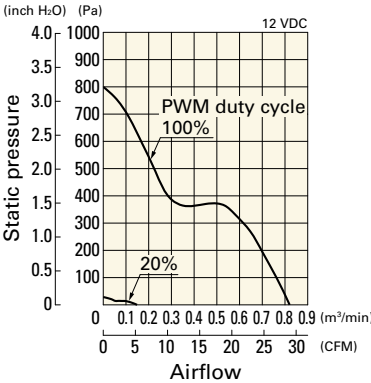
Operating voltage range



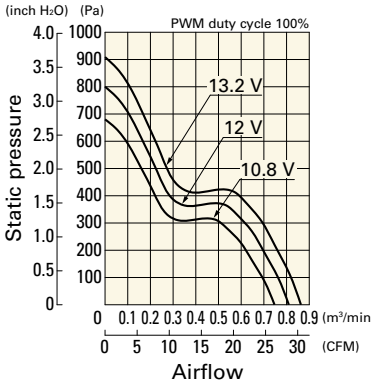
PWM duty - Speed characteristics example



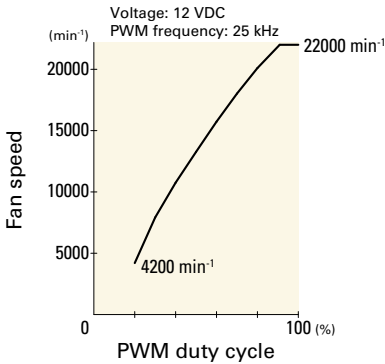
PWM duty cycle



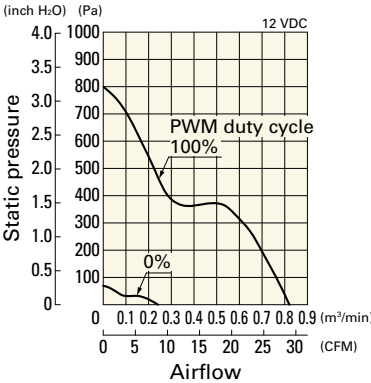
Operating voltage range



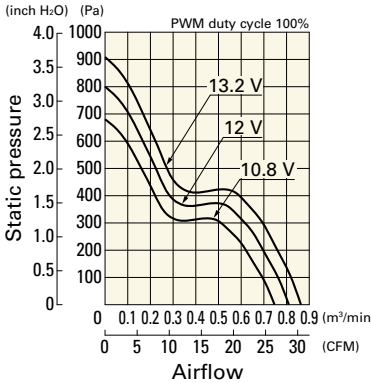
PWM duty - Speed characteristics example



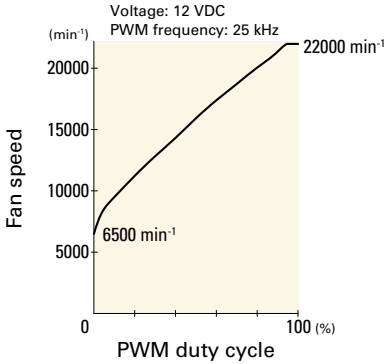
PWM duty cycle

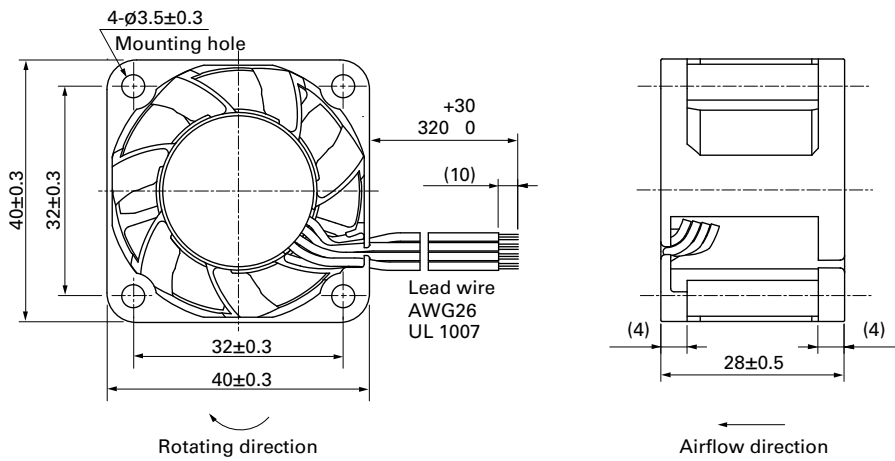


Operating voltage range

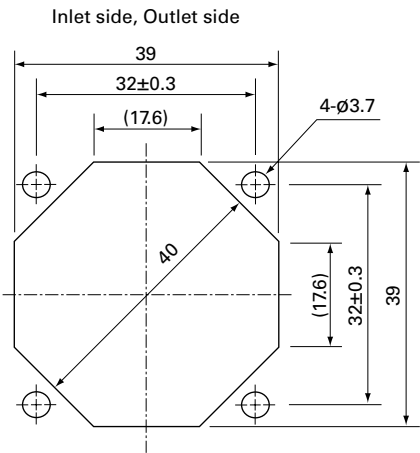


PWM duty - Speed characteristics example





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



Options

Finger guards page: p. 598

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

# 40x40x28 mm

San Ace 40 9GA type Low Power Consumption Fan 



DC Fan 40 mm sq.

## 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  
(For models without PWM control, there is no speed control wiring.)
- Mass ..... 53 g

## Specifications

The models listed below **have ribs and a pulse sensor with PWM control**. For models without ribs, append "1" to the end of model numbers.

| 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]          |
|---------------|-------------------|-----------------------------|---------------------|-------------------|-----------------|----------------------------------|------------------------------------------|--------------------------------------------------|--------------|----------------------------|----------------------------|
| 9GA0412P3J01  | 12                | 10.8 to 13.2                | 100                 | 0.49              | 5.88            | 18000                            | 0.67 23.7                                | 535 2.15                                         | 54           | -20 to +70                 | 40000/60°C<br>(70000/40°C) |
|               |                   |                             | 0                   | 0.05              | 0.6             | 4500                             | 0.16 5.7                                 | 33 0.13                                          | 22           |                            |                            |
| 9GA0412P3G01  |                   |                             | 100                 | 0.39              | 4.68            | 16500                            | 0.61 21.5                                | 450 1.81                                         | 53           |                            |                            |
|               |                   |                             | 0                   | 0.05              | 0.6             | 4500                             | 0.16 5.7                                 | 33 0.13                                          | 22           |                            |                            |
| 9GA0412P3H01  |                   |                             | 100                 | 0.28              | 3.36            | 14500                            | 0.54 19.1                                | 347 1.39                                         | 50           |                            |                            |
|               |                   |                             | 0                   | 0.04              | 0.48            | 3500                             | 0.13 4.6                                 | 20 0.08                                          | 17           |                            |                            |
| 9GA0412P3M01  |                   |                             | 100                 | 0.21              | 2.52            | 12500                            | 0.46 16.2                                | 258 1.04                                         | 47           |                            |                            |
|               |                   |                             | 0                   | 0.04              | 0.48            | 3500                             | 0.13 4.6                                 | 20 0.08                                          | 17           |                            |                            |
| 9GA0424P3J001 | 24                | 21.6 to 26.4                | 100                 | 0.27              | 6.48            | 18000                            | 0.67 23.7                                | 535 2.15                                         | 54           |                            |                            |
| 9GA0424P3G001 |                   |                             | 100                 | 0.22              | 5.28            | 16500                            | 0.61 21.5                                | 450 1.81                                         | 53           |                            |                            |
| 9GA0424P3H001 |                   |                             | 100                 | 0.16              | 3.84            | 14500                            | 0.54 19.1                                | 347 1.39                                         | 50           |                            |                            |
| 9GA0424P3M001 |                   |                             | 100                 | 0.11              | 2.64            | 12500                            | 0.46 16.2                                | 258 1.04                                         | 47           |                            |                            |

\* 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.

The models listed below **have ribs and a pulse sensor**. For models without ribs, append "1" to the end of model numbers.

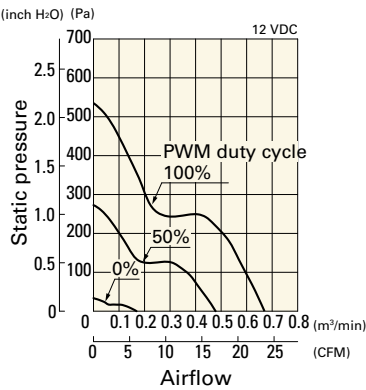
| Model no.   | Rated voltage [V] | Operating voltage range [V] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h]          |
|-------------|-------------------|-----------------------------|-------------------|-----------------|----------------------------------|------------------------------------------|--------------------------------------------------|--------------|----------------------------|----------------------------|
| 9GA0412A301 | 12                | 10.8 to 13.2                | 0.13              | 1.56            | 10500                            | 0.38 13.4                                | 182 0.73                                         | 43           | -10 to +70                 | 40000/60°C<br>(70000/40°C) |

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

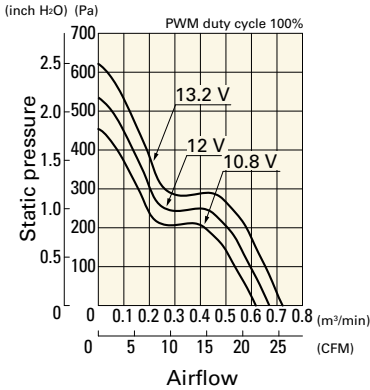
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GA0412P3J01 With pulse sensor with PWM control

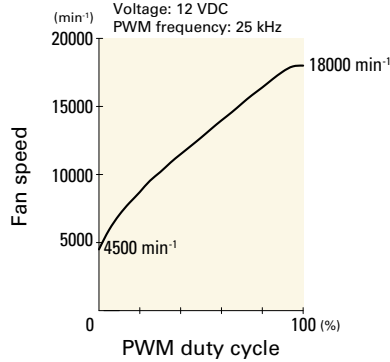
PWM duty cycle



Operating voltage range

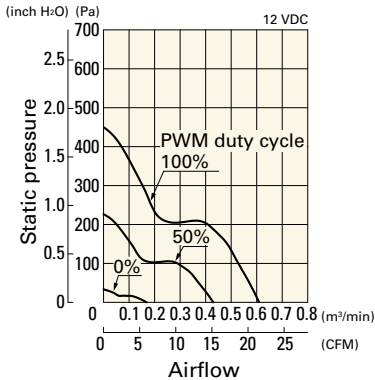


PWM duty - Speed characteristics example

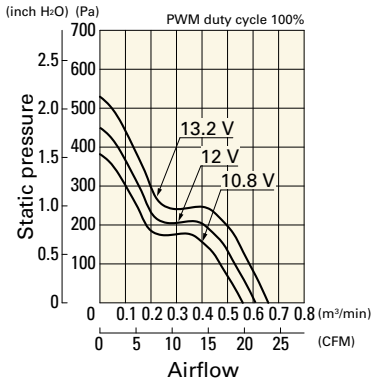


9GA0412P3G01 With pulse sensor with PWM control

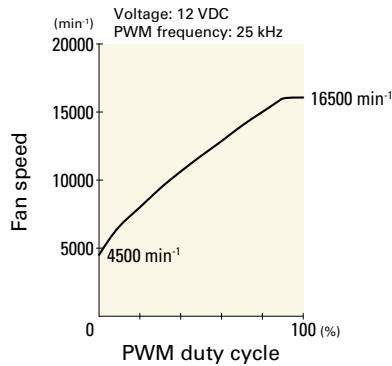
PWM duty cycle



Operating voltage range

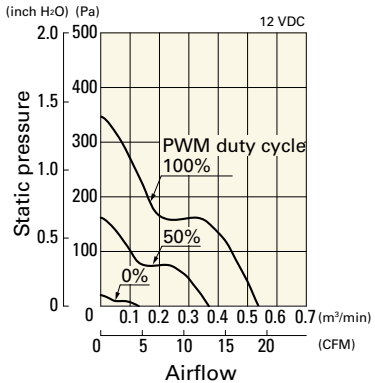


PWM duty - Speed characteristics example

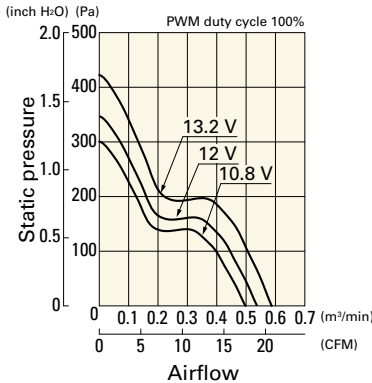


9GA0412P3H01 With pulse sensor with PWM control

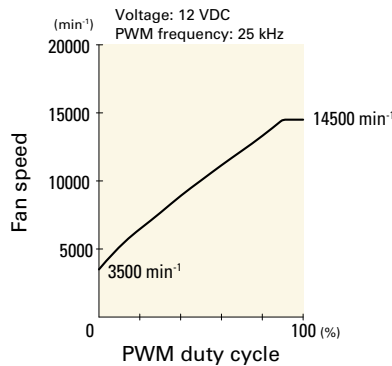
PWM duty cycle



Operating voltage range

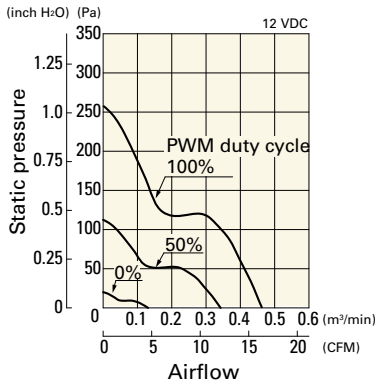


PWM duty - Speed characteristics example

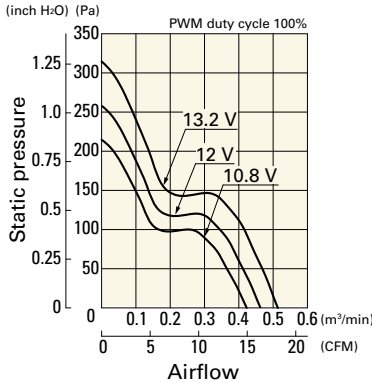


9GA0412P3M01 With pulse sensor with PWM control

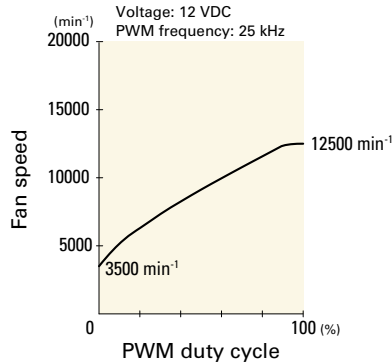
PWM duty cycle



Operating voltage range

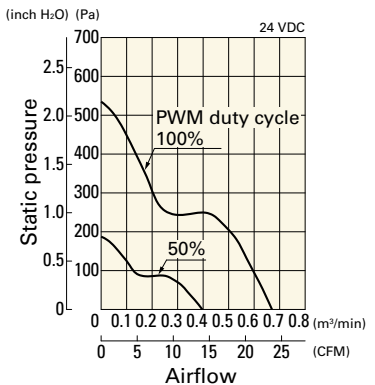


PWM duty - Speed characteristics example

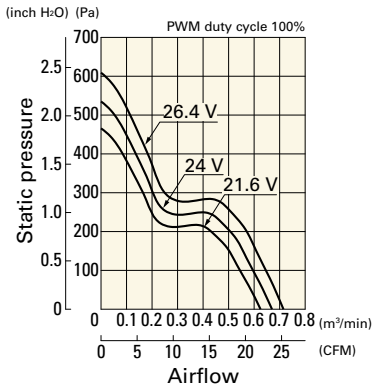


9GA0424P3J001 With pulse sensor with PWM control

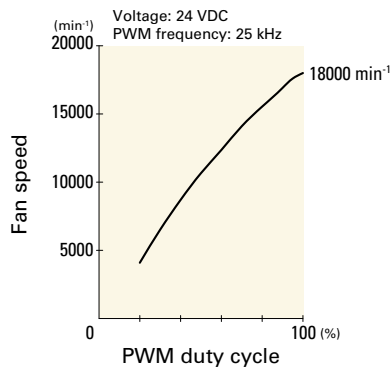
PWM duty cycle



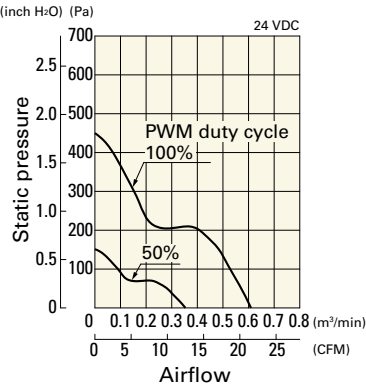
Operating voltage range



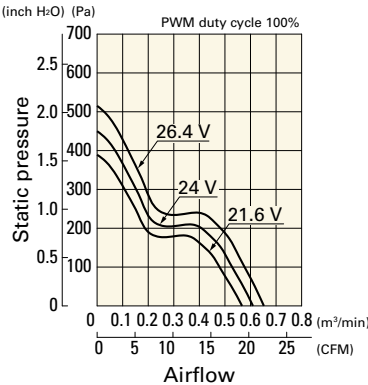
PWM duty - Speed characteristics example



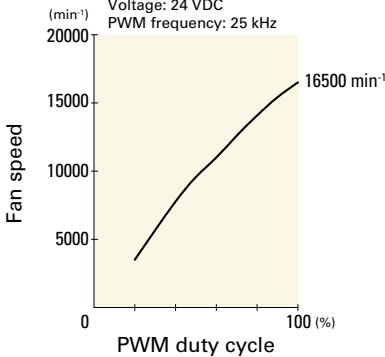
PWM duty cycle



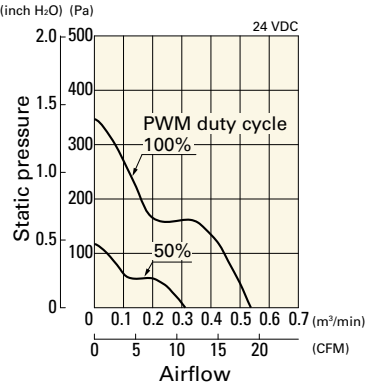
Operating voltage range



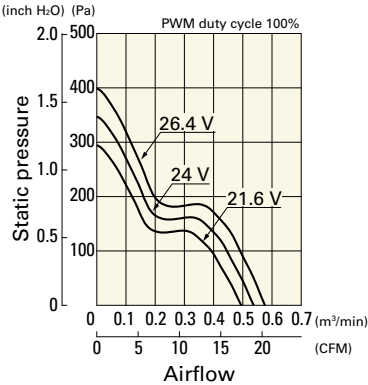
PWM duty - Speed characteristics example



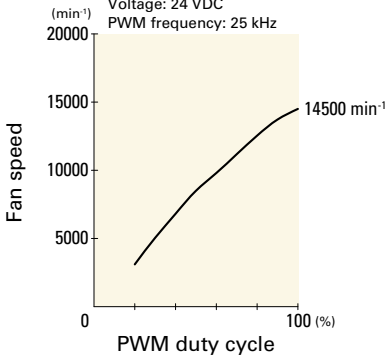
PWM duty cycle



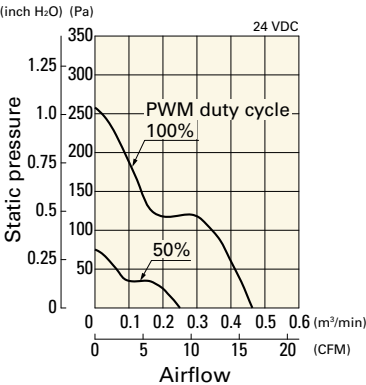
Operating voltage range



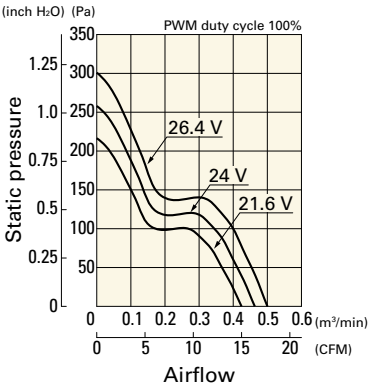
PWM duty - Speed characteristics example



PWM duty cycle



Operating voltage range



PWM duty - Speed characteristics example

