# 60×60×38 mm

## San Ace 60 9HV 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. 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 ..... 135 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.

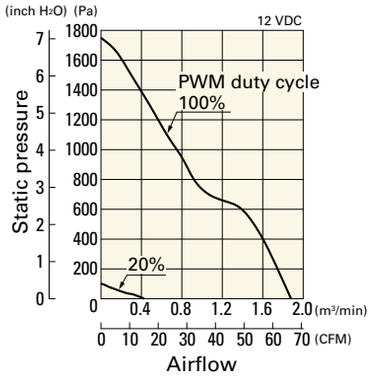
| Model no. | Rated voltage [V] | Operating voltage range [V] | PWM duty cycle* [%] | Rated current [A] | Rated input [W] | Rated speed [min⁻¹] | Max. airflow [m³/min] | Max. airflow [CFM] | Max. static pressure [Pa] | Max. static pressure [inchH₂O] | SPL [dB (A)] | Operating temperature [˚C] | Expected life [h] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **9HV0612P1J001** | 12 | 10.8 to 12.6 | 100 | 2.7 | 32.4 | 21700 | 1.88 | 66.4 | 1750 | 7.0 | 68 | -20 to +70 | 40000/60˚C (70000/40˚C) |
| | | | 20 | 0.17 | 2.04 | 5300 | 0.43 | 15.2 | 102 | 0.41 | 34 | | |

* 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.

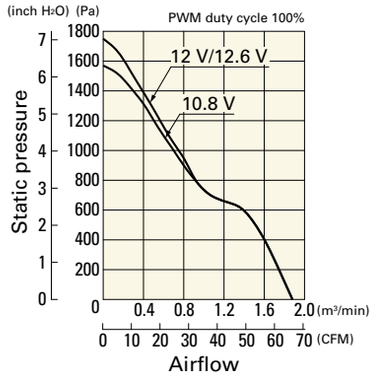
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

**9HV0612P1J001** With pulse sensor with PWM control

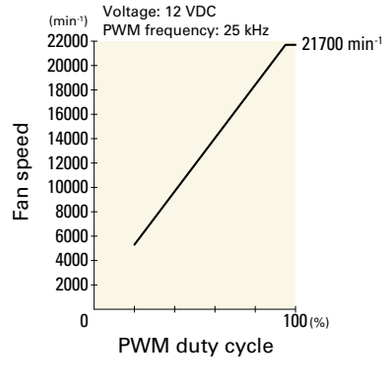
PWM duty cycle



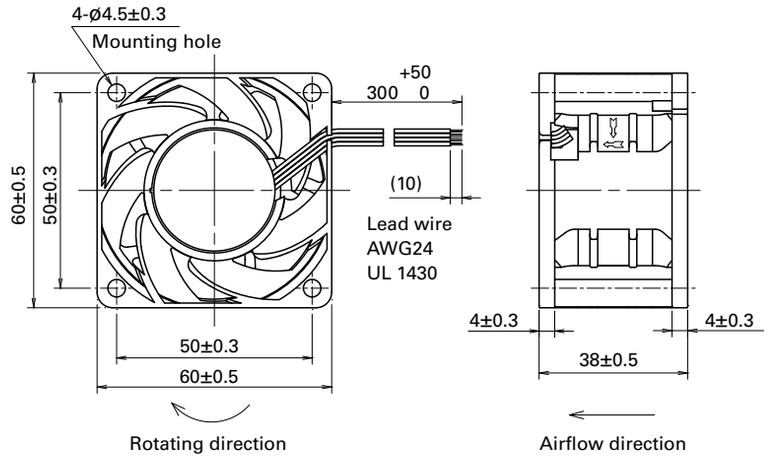

Operating voltage range




PWM duty - Speed characteristics example



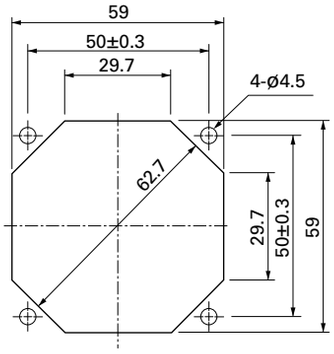

## Dimensions (unit: mm) (With ribs)






Beijing Hengrui Mechanical and Electrical Equipment Co,Ltd
+86 10-62547612 zhangyu@bjhengrui.cn en.bjhengrui.com

Inlet side, Outlet side




## Options

**Finger guards** page: p. 598

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

**Resin filter kits** page: p. 606

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

**Resin finger guards** page: p. 605

Model no.: 109-1003G



Beijing Hengrui Mechanical and Electrical Equipment Co,Ltd
+86 10-62547612 zhangyu@bjhengrui.cn en.bjhengrui.com

# 60×60×38 mm

## San Ace 60 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 ..... 130 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⁻¹] | Max. airflow [m³/min] | Max. airflow [CFM] | Max. static pressure [Pa] | Max. static pressure [inchH₂O] | SPL [dB (A)] | Operating temperature [˚C] | Expected life [h] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9GA0612P1J03 | 12 | 10.8 to 12.6 | 100 | 1.5 | 18.0 | 17500 | 1.75 | 62 | 820 | 3.3 | 63 | -20 to +60 | 40000/60˚C (70000/40˚C) |
| | | | 20 | 0.1 | 1.2 | 4000 | 0.4 | 14 | 43 | 0.17 | 24 | | |
| 9GA0612P1K03 | | 10.8 to 13.2 | 100 | 0.95 | 11.4 | 14800 | 1.5 | 53 | 600 | 2.4 | 59 | -20 to +70 | |
| | | | 20 | 0.1 | 1.2 | 4000 | 0.4 | 14 | 43 | 0.17 | 24 | | |
| 9GA0612P1K60 | | | 100 | 0.95 | 11.4 | 14800 | 1.5 | 53 | 675 | 2.7 | 59 | -20 to +60 | |
| | | | 0 | 0.05 | 0.6 | 1480 | 0.134 | 4.7 | 8.3 | 0.03 | 16 | | |
| 9GA0612P1H03 | | | 100 | 0.55 | 6.6 | 11500 | 1.15 | 40 | 375 | 1.5 | 52 | -20 to +70 | |
| | | | 20 | 0.06 | 0.72 | 2600 | 0.27 | 9.5 | 20 | 0.08 | 19 | | |
| 9GA0624P1J03 | 24 | 21.6 to 25.2 | 100 | 0.75 | 18.0 | 17500 | 1.75 | 62 | 820 | 3.3 | 63 | -20 to +60 | |
| | | | 20 | 0.1 | 2.4 | 6200 | 0.63 | 22 | 104 | 0.42 | 35 | | |
| 9GA0624P1K03 | | 21.6 to 26.4 | 100 | 0.5 | 12 | 14800 | 1.5 | 53.0 | 600 | 2.4 | 59 | -20 to +70 | |
| | | | 20 | 0.06 | 1.44 | 5000 | 0.5 | 17.7 | 70 | 0.28 | 28 | | |
| 9GA0648P1K03 | 48 | 43.2 to 52.8 | 100 | 0.24 | 11.52 | 14800 | 1.5 | 53 | 600 | 2.4 | 59 | -10 to +70 | |
| | | | 20 | 0.03 | 1.44 | 4000 | 0.4 | 14 | 43 | 0.17 | 24 | | |

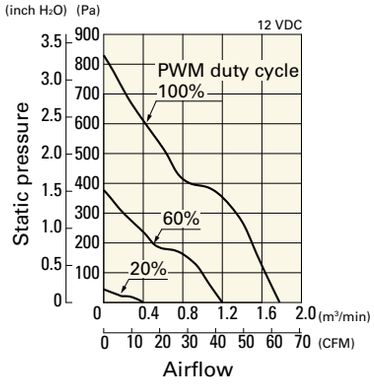
* PWM frequency is 25 kHz. Models without ratings for 0% PWM duty cycle have zero speed at 0%. When control terminal is open, speed is the same as at 100% duty cycle.

Note: Sensor and control options are available for selection. Refer to the table on p. 648 to 649.

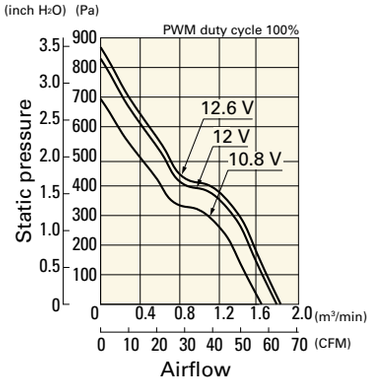
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

**9GA0612P1J03** With pulse sensor with PWM control

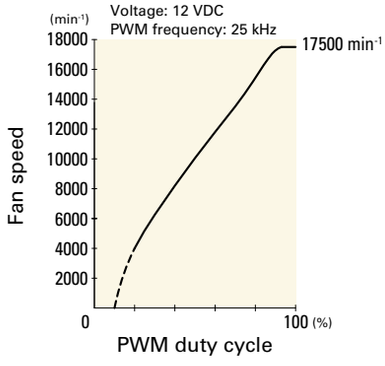
PWM duty cycle




Operating voltage range




PWM duty - Speed characteristics example

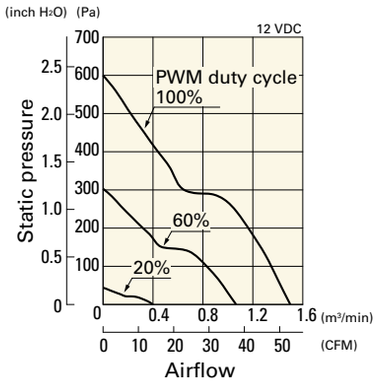




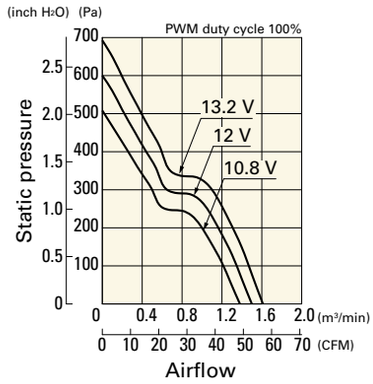

Beijing Hengrui Mechanical and Electrical Equipment Co,Ltd
+86 10-62547612 zhangyu@bjhengrui.cn en.bjhengrui.com

## 9GA0612P1K03 With pulse sensor with PWM control

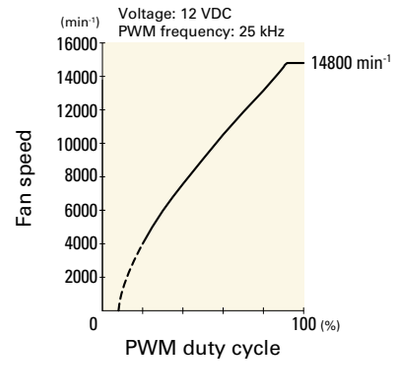
PWM duty cycle




Operating voltage range

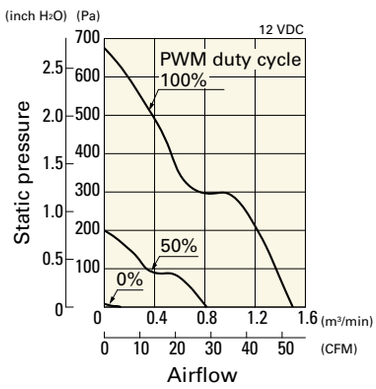



PWM duty - Speed characteristics example

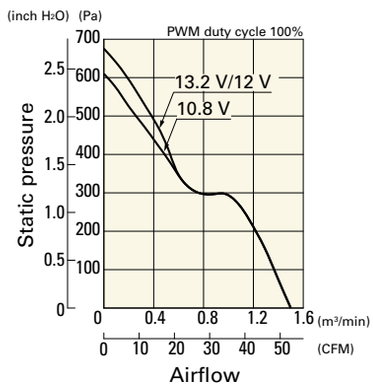



## 9GA0612P1K60 With pulse sensor with PWM control

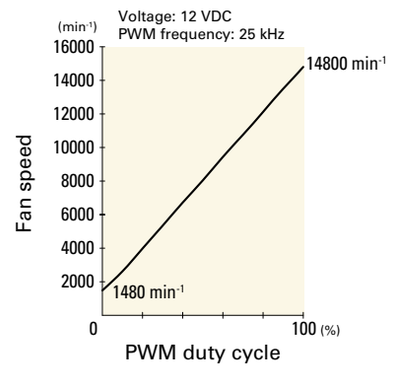
PWM duty cycle




Operating voltage range

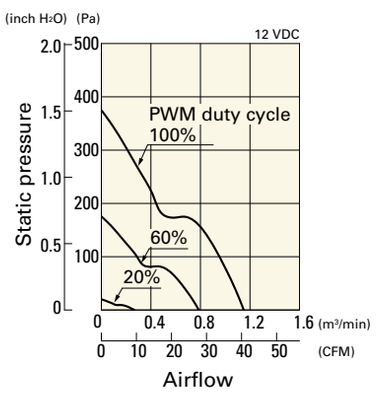



PWM duty - Speed characteristics example

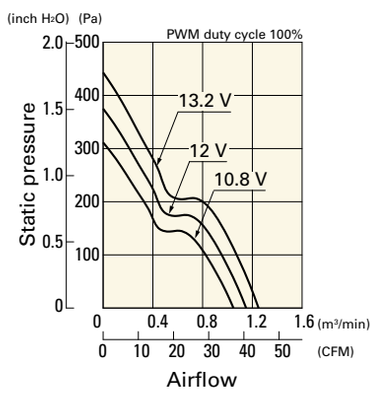



## 9GA0612P1H03 With pulse sensor with PWM control

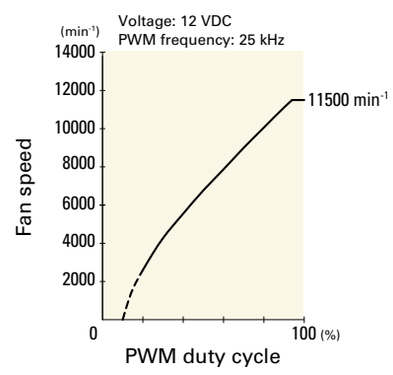
PWM duty cycle




Operating voltage range

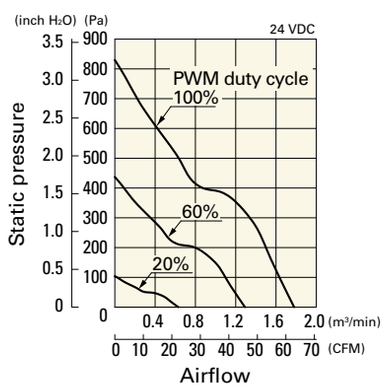



PWM duty - Speed characteristics example

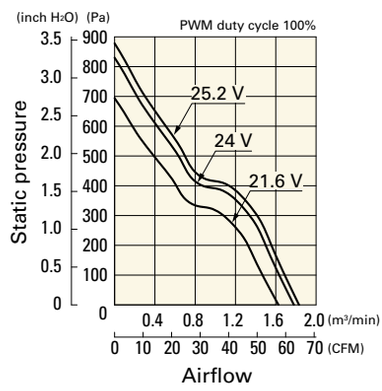



## 9GA0624P1J03 With pulse sensor with PWM control

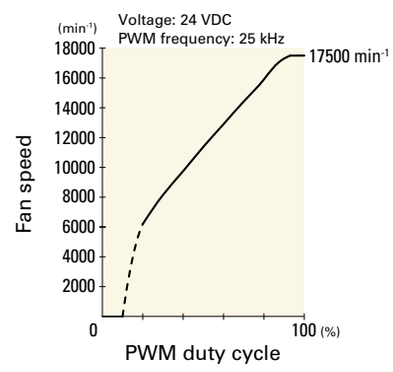
PWM duty cycle




Operating voltage range




PWM duty - Speed characteristics example

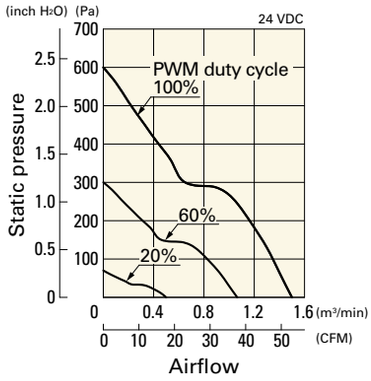




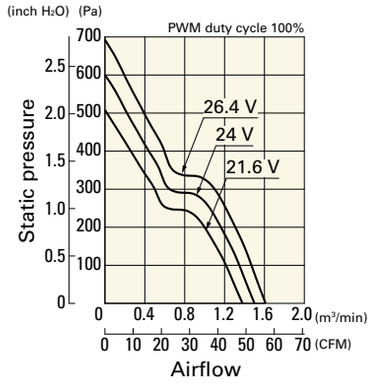

Beijing Hengrui Mechanical and Electrical Equipment Co,Ltd
+86 10-62547612 zhangyu@bjhengrui.cn en.bjhengrui.com

## 9GA0624P1K03 With pulse sensor with PWM control

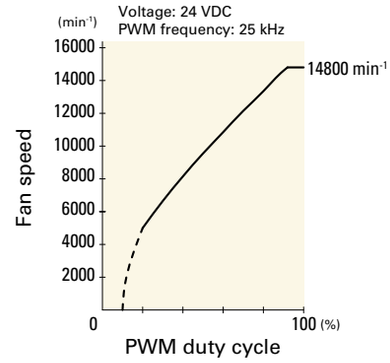
PWM duty cycle




Operating voltage range

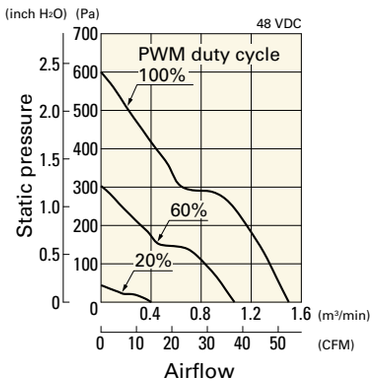



PWM duty - Speed characteristics example

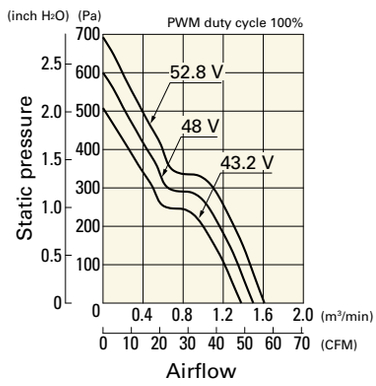



## 9GA0648P1K03 With pulse sensor with PWM control

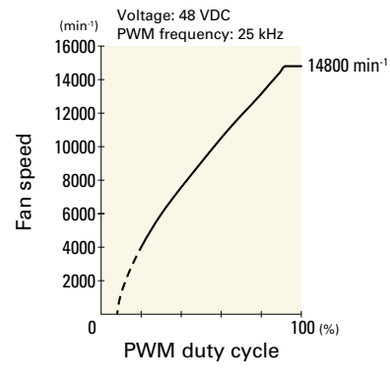
PWM duty cycle



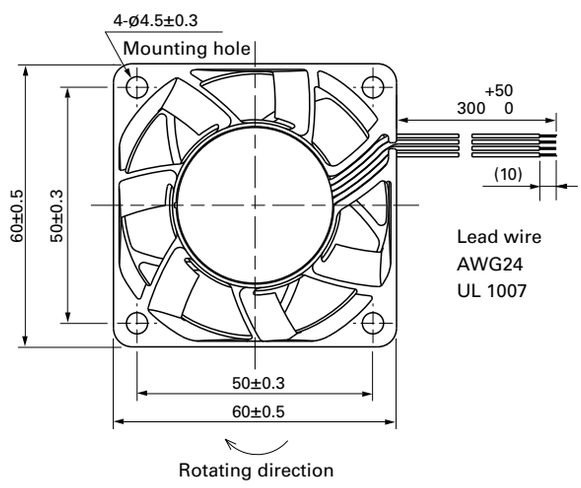

Operating voltage range

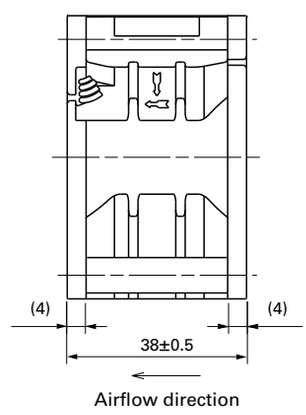



PWM duty - Speed characteristics example




## Dimensions (unit: mm) (With ribs)






Beijing Hengrui Mechanical and Electrical Equipment Co,Ltd
+86 10-62547612 zhangyu@bjhengrui.cn en.bjhengrui.com