



# 60×60×25 mm

San Ace 60W 9WL type   US

## General Specifications

- Material ..... Frame: Aluminum (Black coating), Impeller: Plastic (Flammability: UL 94V-1)
- Expected life ..... See the table below. (L10 life: 90% survival rate for continuous operation in indoor free air at 60°C, rated voltage)
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection  
For details, please refer to p. 547.
- 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 ..... ⊕Red ⊖Black Sensor Yellow Control Brown
- Mass ..... 120 g
- Ingress protection ..... IP68

## 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] |
|---------------|-------------------|-----------------------------|---------------------|-------------------|-----------------|----------------------------------|------------------------------------------|--------------------------------------------------|--------------|----------------------------|-------------------|
| 9WL0612P4S001 | 12                | 10.8 to 13.2                | 100                 | 0.67              | 8.04            | 11000                            | 1.4 49.4                                 | 300 1.204                                        | 53           | -20 to +70                 | 180000/60°C       |
|               |                   |                             | 20                  | 0.06              | 0.72            | 2900                             | 0.36 12.7                                | 20.8 0.083                                       | 20           |                            |                   |
| 9WL0612P4J001 |                   |                             | 100                 | 0.39              | 4.68            | 8650                             | 1.1 38.8                                 | 182 0.73                                         | 47           |                            |                   |
|               |                   |                             | 20                  | 0.03              | 0.36            | 1150                             | 0.13 4.8                                 | 3.3 0.013                                        | 14           |                            |                   |
| 9WL0612P4H001 |                   |                             | 100                 | 0.17              | 2.04            | 6150                             | 0.78 27.5                                | 97 0.389                                         | 36           |                            |                   |
|               |                   |                             | 20                  | 0.03              | 0.36            | 1350                             | 0.17 6.0                                 | 4.7 0.018                                        | 14           |                            |                   |
| 9WL0624P4S001 | 24                | 21.6 to 26.4                | 100                 | 0.34              | 8.16            | 11000                            | 1.4 49.4                                 | 300 1.204                                        | 53           |                            |                   |
|               |                   |                             | 20                  | 0.03              | 0.72            | 2900                             | 0.36 12.7                                | 20.8 0.083                                       | 20           |                            |                   |
| 9WL0624P4J001 |                   |                             | 100                 | 0.19              | 4.56            | 8650                             | 1.1 38.8                                 | 182 0.73                                         | 47           |                            |                   |
|               |                   |                             | 20                  | 0.02              | 0.48            | 2200                             | 0.28 9.8                                 | 12.0 0.048                                       | 17           |                            |                   |
| 9WL0624P4H001 |                   |                             | 100                 | 0.08              | 1.92            | 6150                             | 0.78 27.5                                | 97 0.389                                         | 36           |                            |                   |
|               |                   |                             | 20                  | 0.02              | 0.48            | 1300                             | 0.16 5.6                                 | 4.3 0.017                                        | 14           |                            |                   |

\* PWM frequency: 25 kHz. Fan does not rotate when PWM duty cycle is 0%.

The following sensor and control options are available for selection.

Differs according to the model. Refer to the table on p. 579. Without sensor Pulse sensor Lock sensor

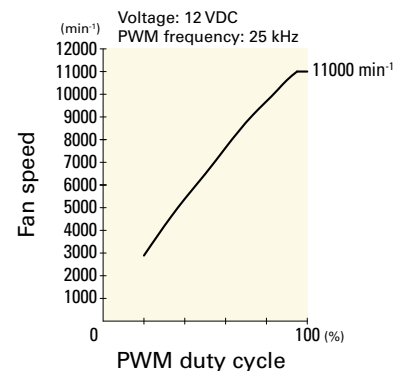
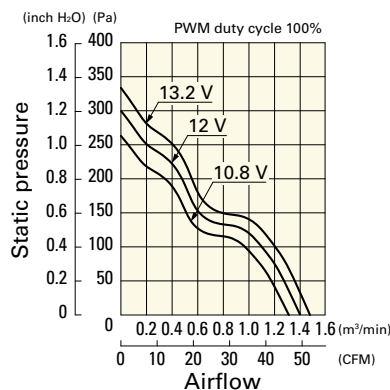
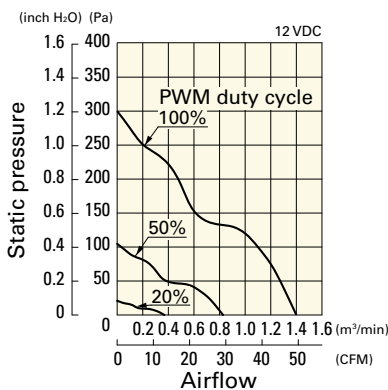
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

**9WL0612P4S001** With pulse sensor with PWM control function

PWM duty cycle

Operating voltage range

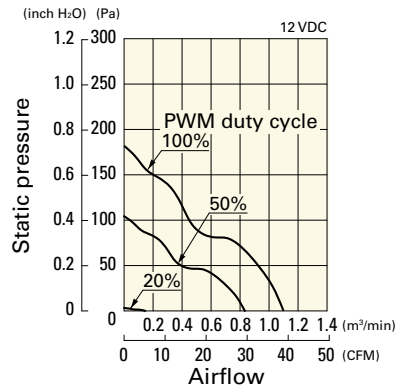
PWM duty - Speed characteristics example



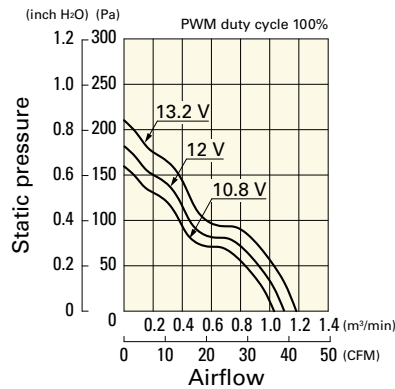
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

**9WL0612P4J001** With pulse sensor with PWM control function

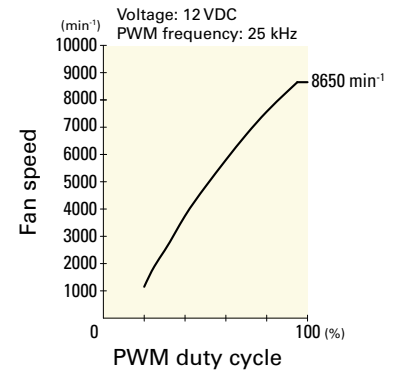
PWM duty cycle



Operating voltage range

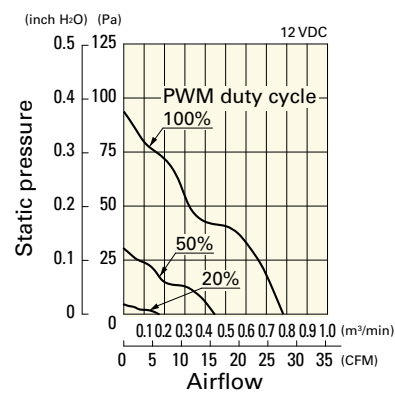


PWM duty - Speed characteristics example

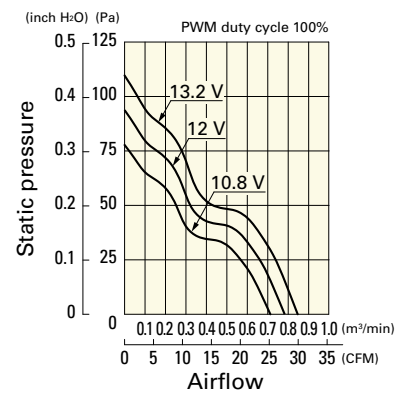


**9WL0612P4H001** With pulse sensor with PWM control function

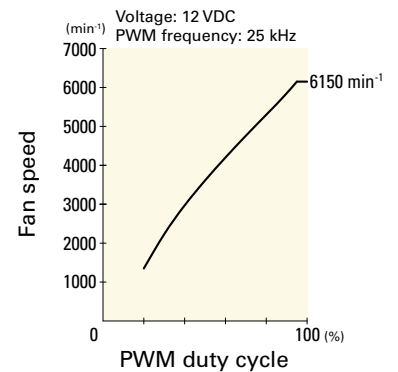
PWM duty cycle



Operating voltage range

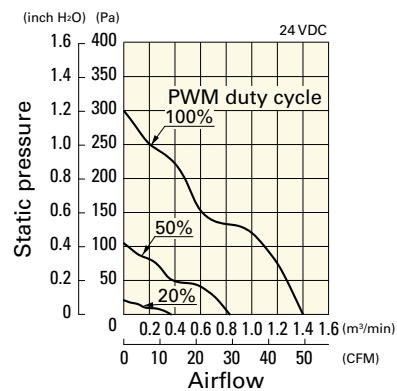


PWM duty - Speed characteristics example

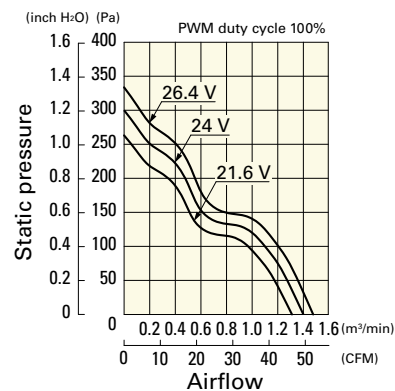


**9WL0624P4S001** With pulse sensor with PWM control function

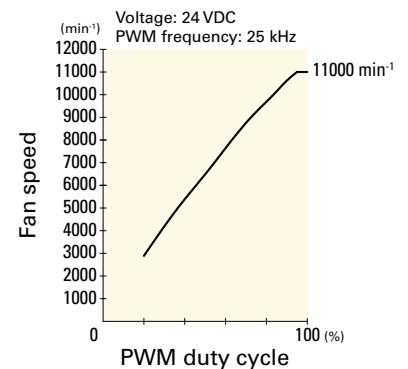
PWM duty cycle



Operating voltage range

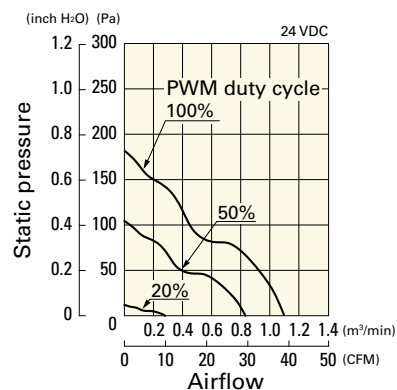


PWM duty - Speed characteristics example

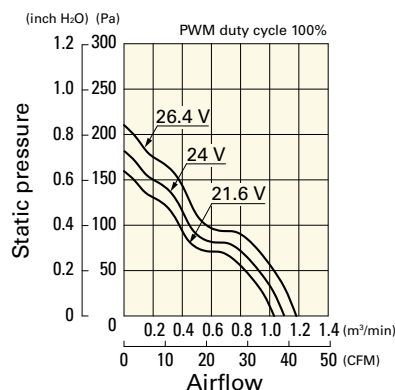


**9WL0624P4J001** With pulse sensor with PWM control function

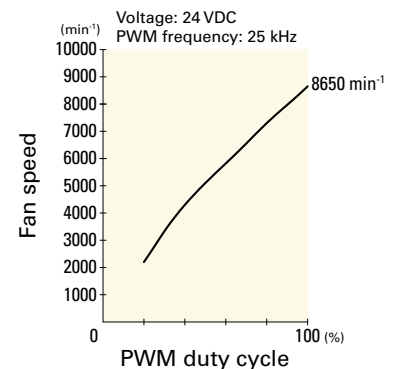
PWM duty cycle



Operating voltage range



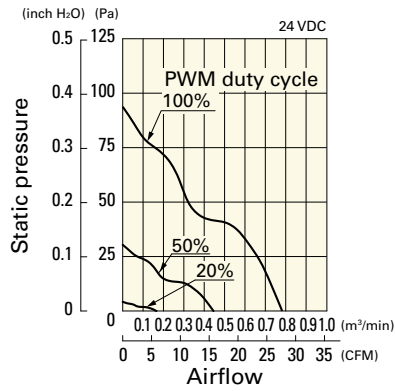
PWM duty - Speed characteristics example



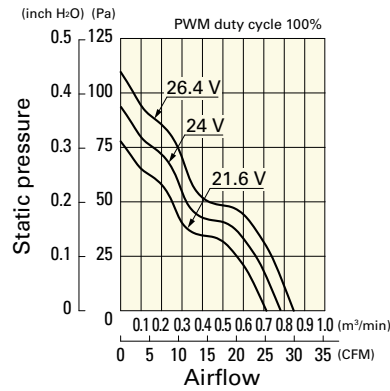
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

**9WL0624P4H001** With pulse sensor with PWM control function

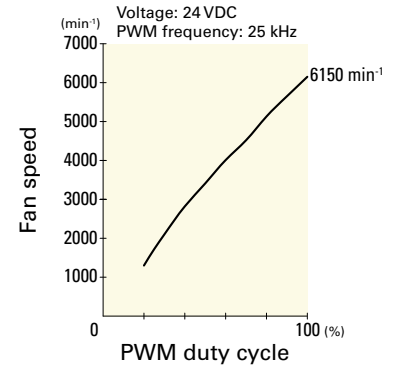
PWM duty cycle



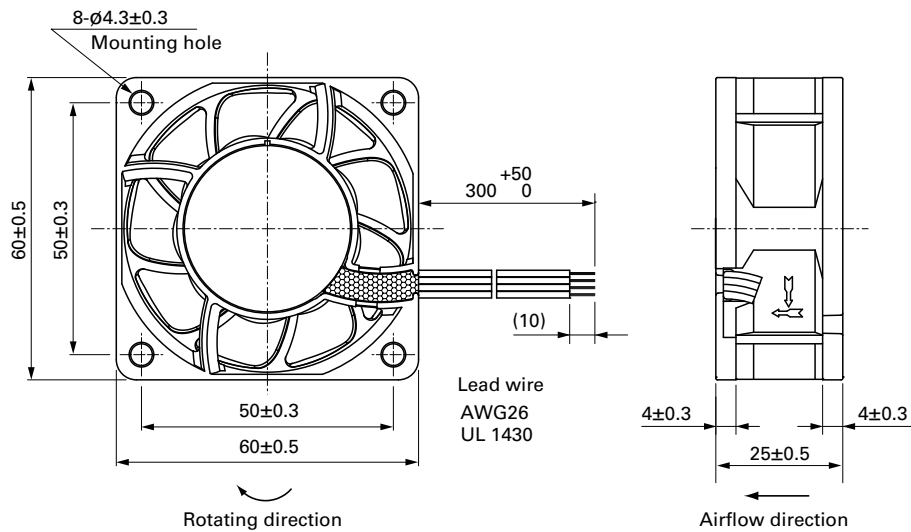
Operating voltage range



PWM duty - Speed characteristics example

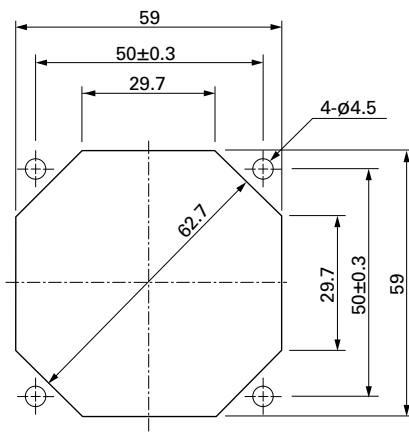


## Dimensions (unit: mm)



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

Inlet side, Outlet side



## Options

### Finger guards

page: p. 532

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

### Resin finger guards

page: p. 539

Model no.: 109-1003G

DC

Splash Proof Fan 60 mm sq.