# 80×80×25 mm

## San Ace 80W 9WL type

IP68





## 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) 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. 573.
- 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 (For models without PWM control function, there is no speed control wiring.)
- Mass ..... 150 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⁻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] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **9WL0812P4J001** | 12 | 10.8 to 13.2 | 100 | 0.6 | 7.2 | 7400 | 2.07 | 73.0 | 177 | 0.71 | 49 | -20 to +70 | 180000/60°C (215000/40°C) |
| | | | 20 | 0.06 | 0.72 | 1800 | 0.5 | 17.6 | 10.4 | 0.04 | 16 | | |
| **9WL0812P4G001** | | | 100 | 0.3 | 3.6 | 5500 | 1.54 | 54.3 | 98 | 0.39 | 43 | | |
| | | | 25 | 0.05 | 0.6 | 1400 | 0.39 | 13.7 | 6.3 | 0.02 | 14 | | |
| **9WL0812P4H001** | | | 100 | 0.12 | 1.44 | 3700 | 1.03 | 36.3 | 44 | 0.17 | 31 | | |
| | | | 25 | 0.04 | 0.48 | 1100 | 0.3 | 10.5 | 3.9 | 0.01 | 13 | | |
| **9WL0824P4J001** | 24 | 21.6 to 26.4 | 100 | 0.28 | 6.72 | 7400 | 2.07 | 73.0 | 177 | 0.71 | 49 | | |
| | | | 20 | 0.05 | 1.2 | 2400 | 0.67 | 23.6 | 18.6 | 0.07 | 22 | | |
| **9WL0824P4G001** | | | 100 | 0.14 | 3.36 | 5500 | 1.54 | 54.3 | 98 | 0.39 | 43 | | |
| | | | 20 | 0.02 | 0.48 | 1200 | 0.33 | 11.6 | 4.6 | 0.01 | 13 | | |
| **9WL0824P4H001** | | | 100 | 0.05 | 1.2 | 3700 | 1.03 | 36.3 | 44 | 0.17 | 31 | | |
| | | | 30 | 0.02 | 0.48 | 1100 | 0.3 | 10.5 | 3.9 | 0.01 | 13 | | |

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

The following sensor and control options are available for selection.

Differs according to the model. Refer to the table on p. 611. Without sensor | Pulse sensor | Lock sensor

The models listed below **have pulse sensors.**

| Model no. | Rated voltage [V] | Operating voltage range [V] | 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] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **9WL0812L4001** | 12 | 8 to 13.2 | 0.06 | 0.72 | 2300 | 0.64 | 22.6 | 17 | 0.068 | 22 | -20 to +70 | 180000/60°C (215000/40°C) |
| **9WL0824F4001** | 24 | 12 to 26.4 | 0.045 | 1.08 | 3300 | 0.92 | 32.5 | 35 | 0.14 | 29 | | |

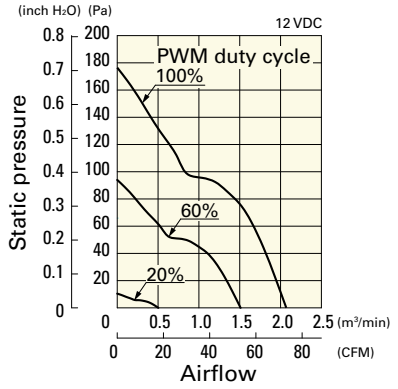
The following sensor and control options are available for selection.

Available for all models. Without sensor

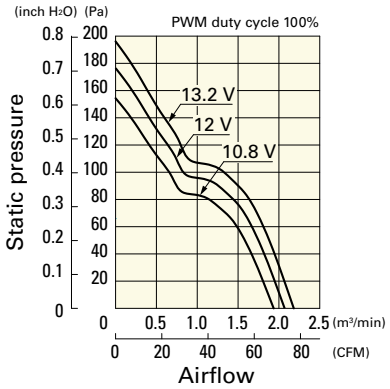
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

### 9WL0812P4J001 With pulse sensor with PWM control function

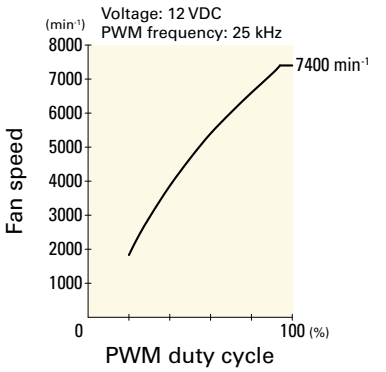
PWM duty cycle




Operating voltage range

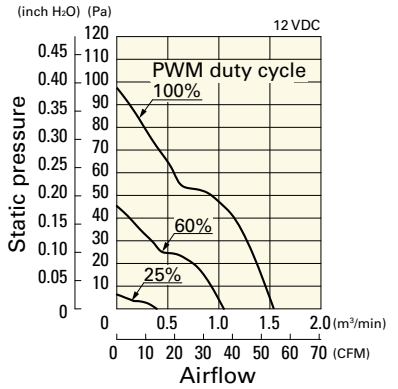



PWM duty - Speed characteristics example

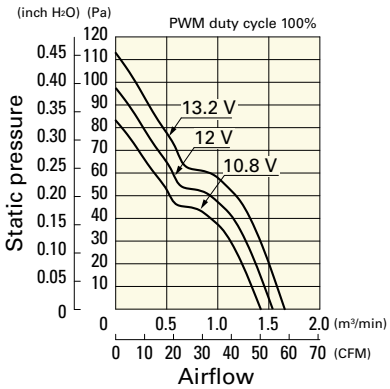



### 9WL0812P4G001 With pulse sensor with PWM control function

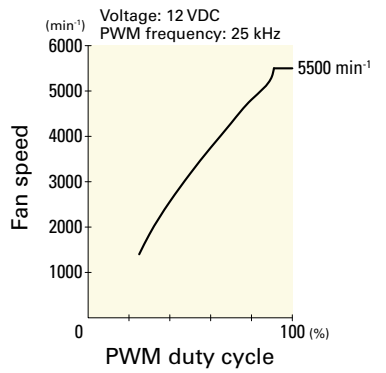
PWM duty cycle




Operating voltage range

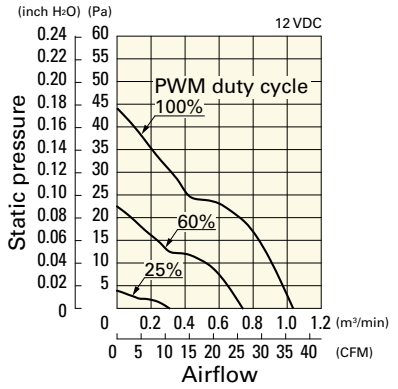



PWM duty - Speed characteristics example

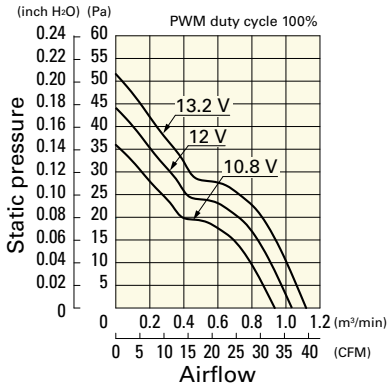



### 9WL0812P4H001 With pulse sensor with PWM control function

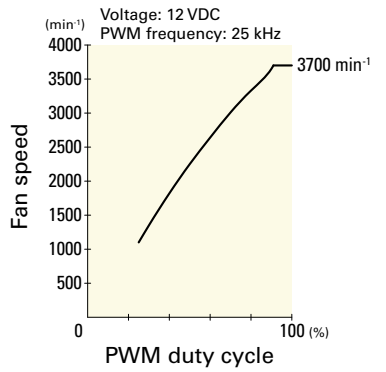
PWM duty cycle




Operating voltage range

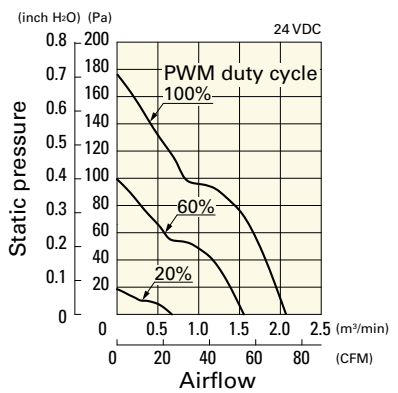



PWM duty - Speed characteristics example

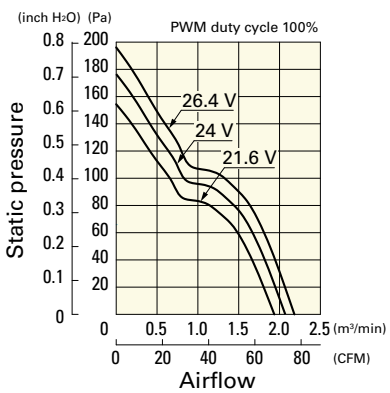



### 9WL0824P4J001 With pulse sensor with PWM control function

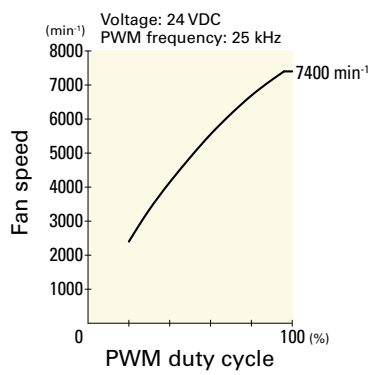
PWM duty cycle




Operating voltage range



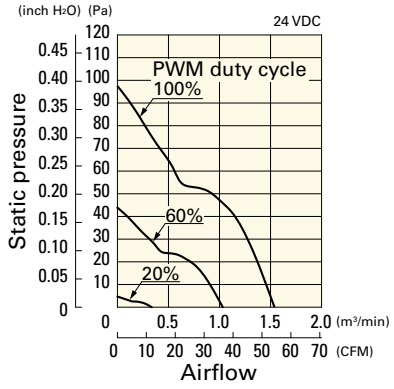

PWM duty - Speed characteristics example



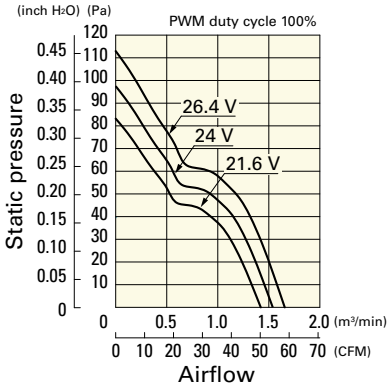
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

### 9WL0824P4G001 With pulse sensor with PWM control function

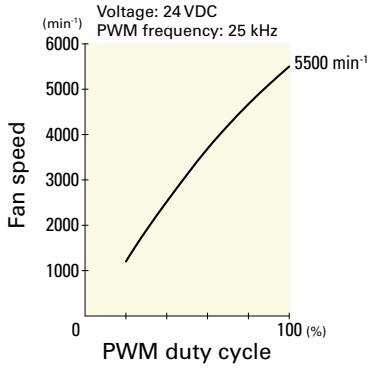
PWM duty cycle




Operating voltage range

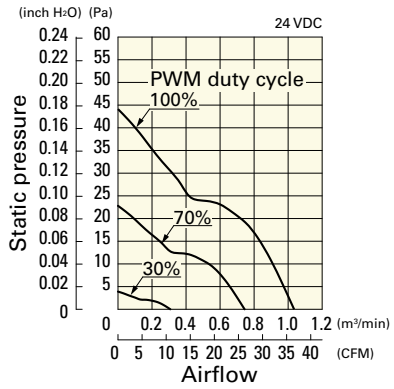



PWM duty - Speed characteristics example

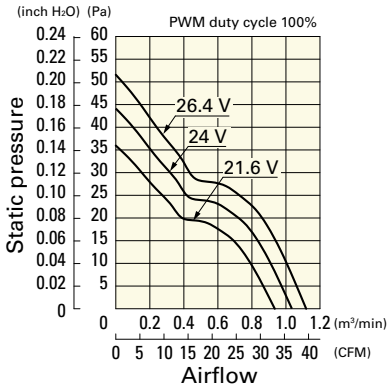



### 9WL0824P4H001 With pulse sensor with PWM control function

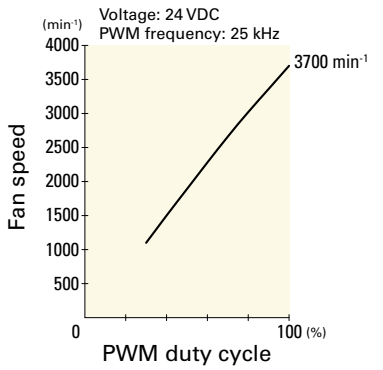
PWM duty cycle




Operating voltage range



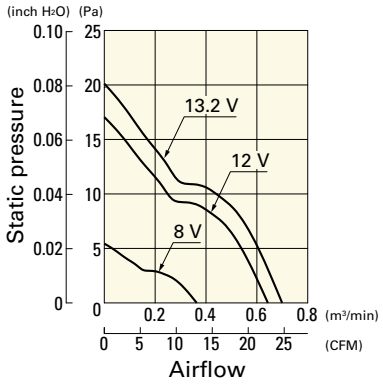

PWM duty - Speed characteristics example




## Airflow - Static Pressure Characteristics

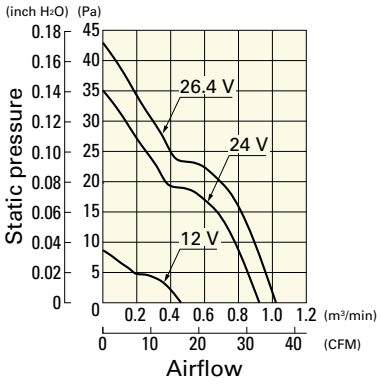
### 9WL0812L4001 With pulse sensor

Operating voltage range

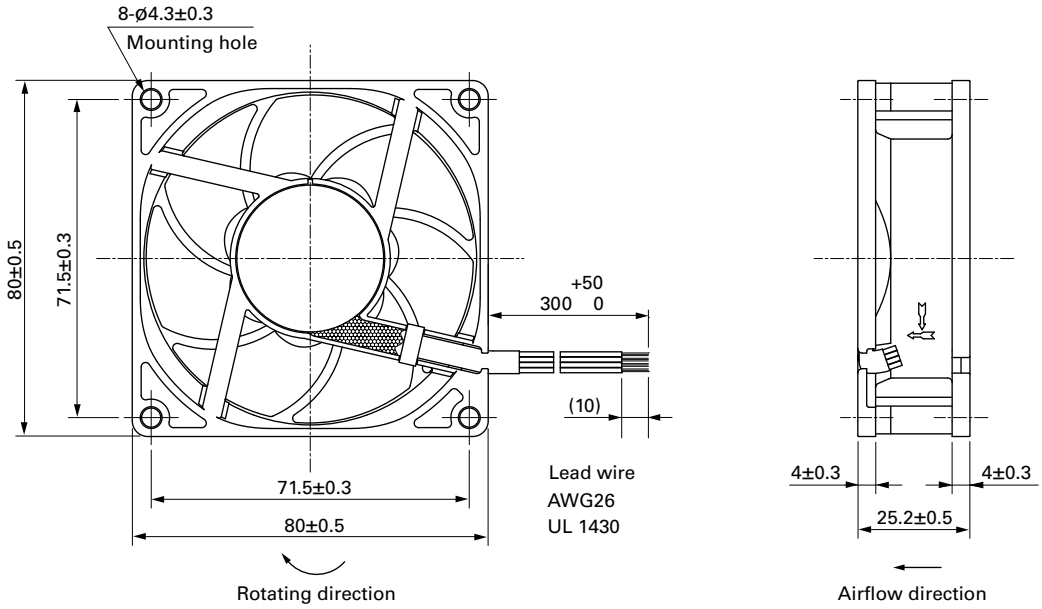



### 9WL0824F4001 With pulse sensor

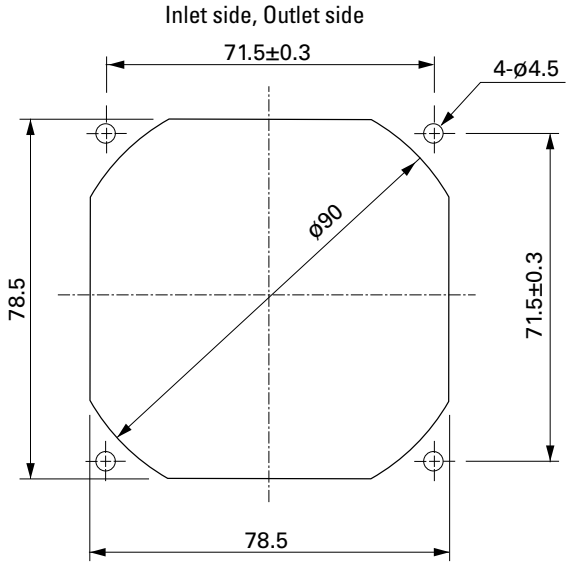
Operating voltage range



## Dimensions (unit: mm)




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




## Options

| Finger guards | page: p. 558 |
|---|---|

Model no.: 109-049E, 109-049H, 109-049C

| Resin finger guards | page: p. 565 |
|---|---|

Model no.: 109-1002G