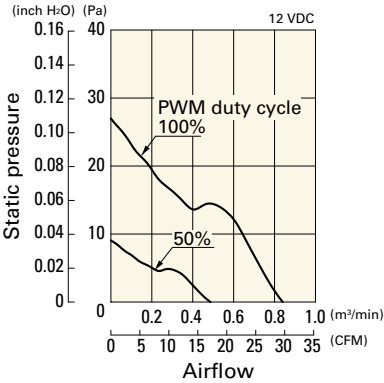
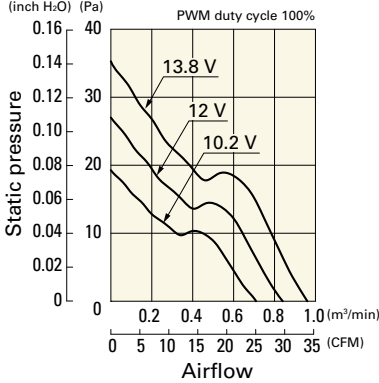


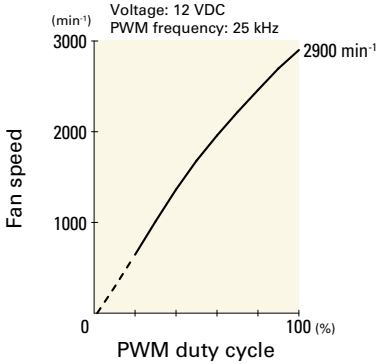
PWM duty cycle



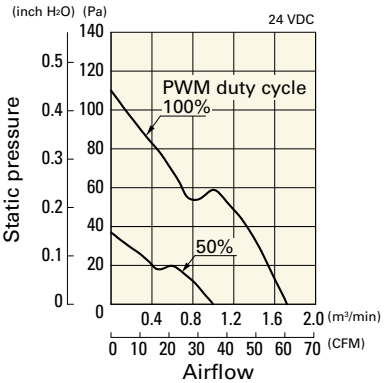
Operating voltage range



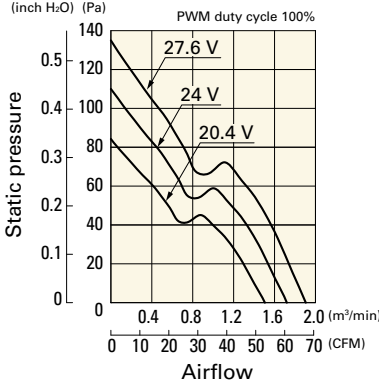
PWM duty - Speed characteristics example



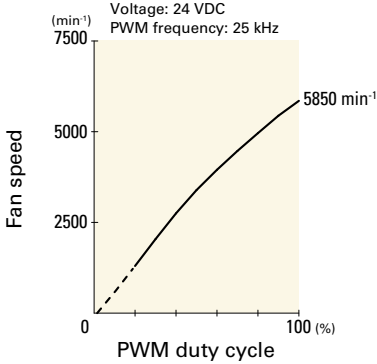
PWM duty cycle



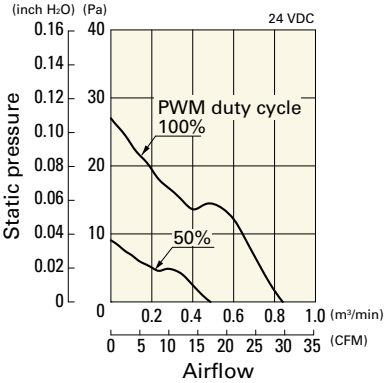
Operating voltage range



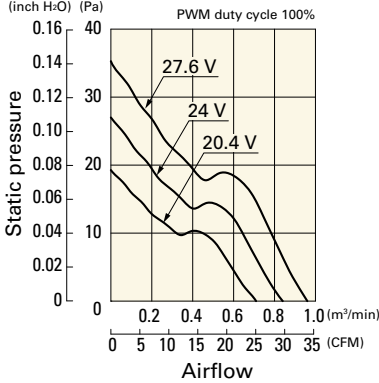
PWM duty - Speed characteristics example



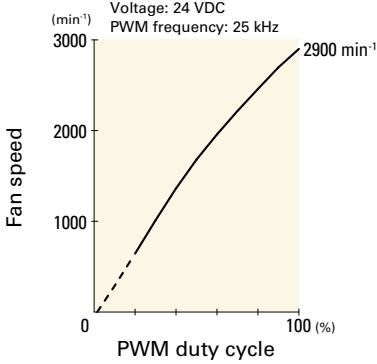
PWM duty cycle

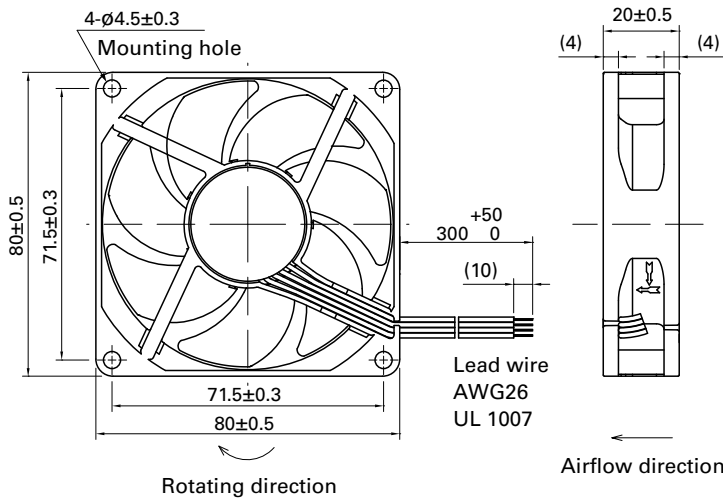


Operating voltage range

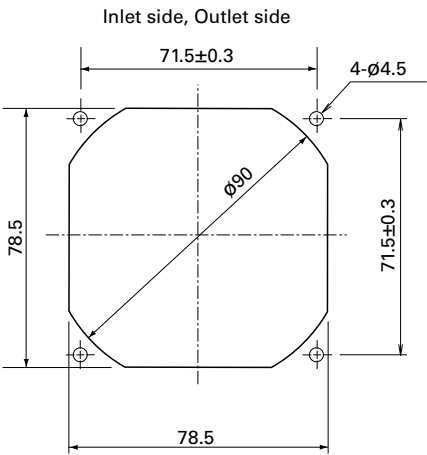


PWM duty - Speed characteristics example





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



Options

Finger guards page: p. 598  
Model no.: 109-049E, 109-049H

Resin finger guards page: p. 605  
Model no.: 109-1002G

Resin filter kits page: p. 606  
Model no.: 109-1002F13 (13PPI), 109-1002F20 (20PPI),  
109-1002F30 (30PPI), 109-1002F40 (40PPI)

# 80×80×25 mm

San Ace 80 9GA type Low Power Consumption Fan 



DC Fan 80 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
- Mass ..... 110 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]       |
|---------------|-------------------|-----------------------------|--------------------|-------------------|-----------------|----------------------------------|------------------------------------------|--------------------------------------------------|--------------|----------------------------|-------------------------|
| 9GA0812P4J001 | 12                | 10.8 to 13.2                | 100                | 0.6               | 7.2             | 7400                             | 2.07 73.0                                | 177.6 0.7                                        | 48           | -20 to +70                 | 60000/60°C (90000/40°C) |
|               |                   |                             | 25                 | 0.08              | 0.96            | 2500                             | 0.69 24.3                                | 20.2 0.08                                        | 21           |                            |                         |
| 9GA0812P4G001 |                   |                             | 100                | 0.48              | 5.76            | 6800                             | 1.91 67.4                                | 150 0.6                                          | 45           |                            |                         |
|               |                   |                             | 25                 | 0.06              | 0.72            | 1500                             | 0.42 14.8                                | 7.2 0.02                                         | 17           |                            |                         |
| 9GA0824P4J001 | 24                | 21.6 to 26.4                | 100                | 0.28              | 6.72            | 7400                             | 2.07 73.0                                | 177.6 0.7                                        | 48           |                            |                         |
|               |                   |                             | 25                 | 0.06              | 1.44            | 2800                             | 0.78 27.5                                | 25.4 0.1                                         | 23           |                            |                         |
| 9GA0824P4G001 |                   |                             | 100                | 0.21              | 5.04            | 6800                             | 1.91 67.4                                | 150 0.6                                          | 45           |                            |                         |
|               |                   |                             | 25                 | 0.04              | 0.96            | 2100                             | 0.58 20.4                                | 14.3 0.05                                        | 19           |                            |                         |

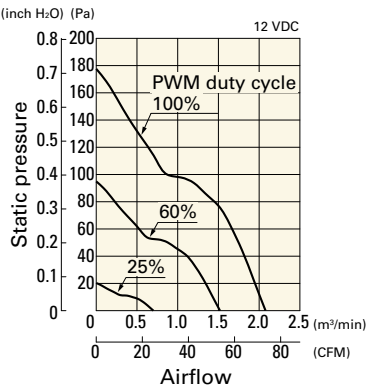
\* PWM frequency is 25 kHz. Models without ratings for 0% PWM duty cycle have zero speed at 0%. When control terminal is open, speed is the same as at 100% duty cycle.

Note: Sensor and control options are available for selection. Refer to the table on p. 649 to 650.

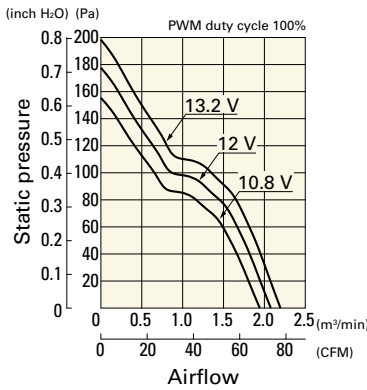
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

**9GA0812P4J001** With pulse sensor with PWM control

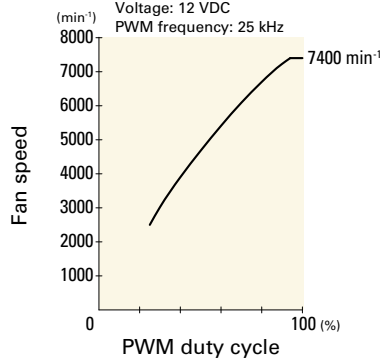
PWM duty cycle



Operating voltage range

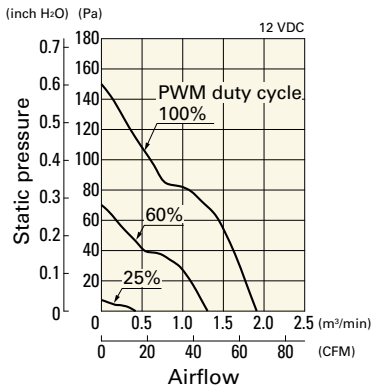


PWM duty - Speed characteristics example

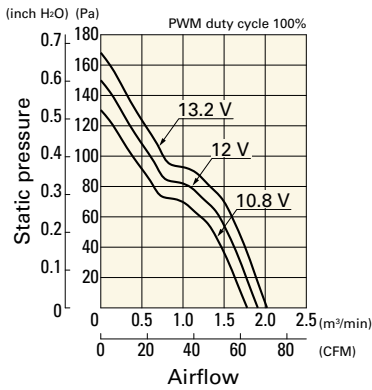


9GA0812P4G001 With pulse sensor with PWM control

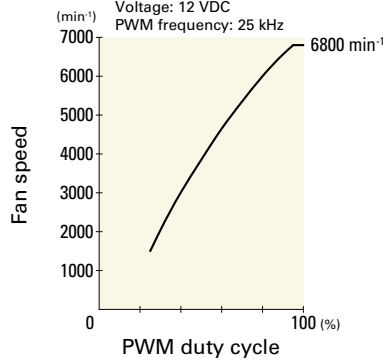
PWM duty cycle



Operating voltage range

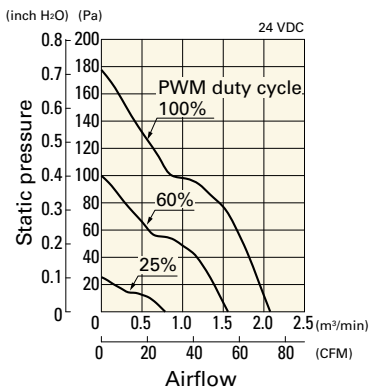


PWM duty - Speed characteristics example

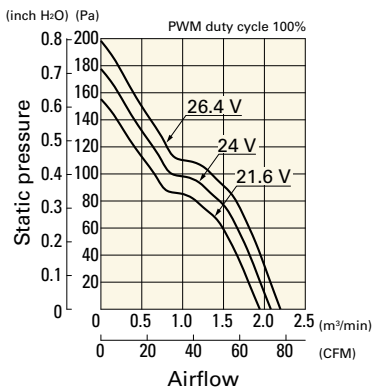


9GA0824P4J001 With pulse sensor with PWM control

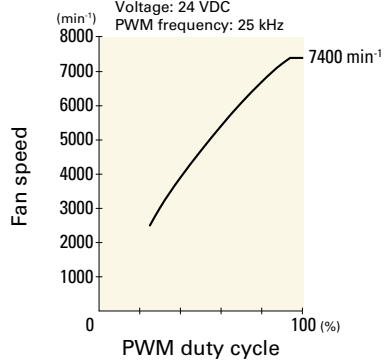
PWM duty cycle



Operating voltage range

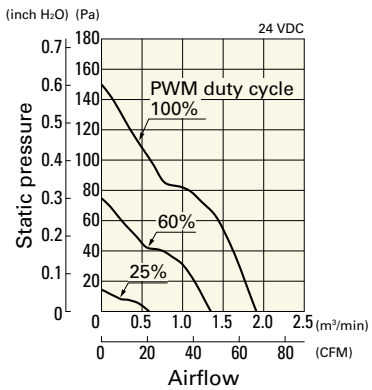


PWM duty - Speed characteristics example

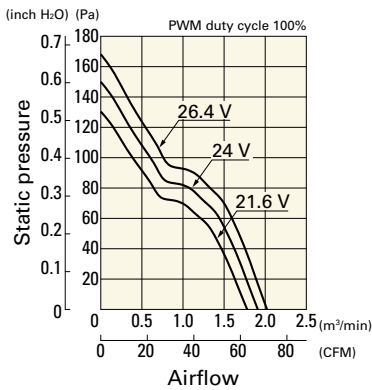


9GA0824P4G001 With pulse sensor with PWM control

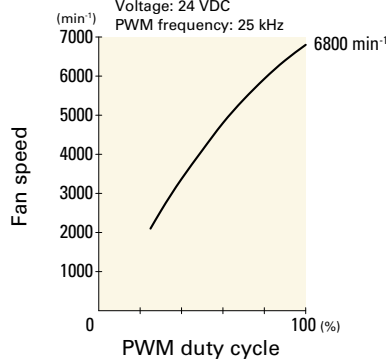
PWM duty cycle

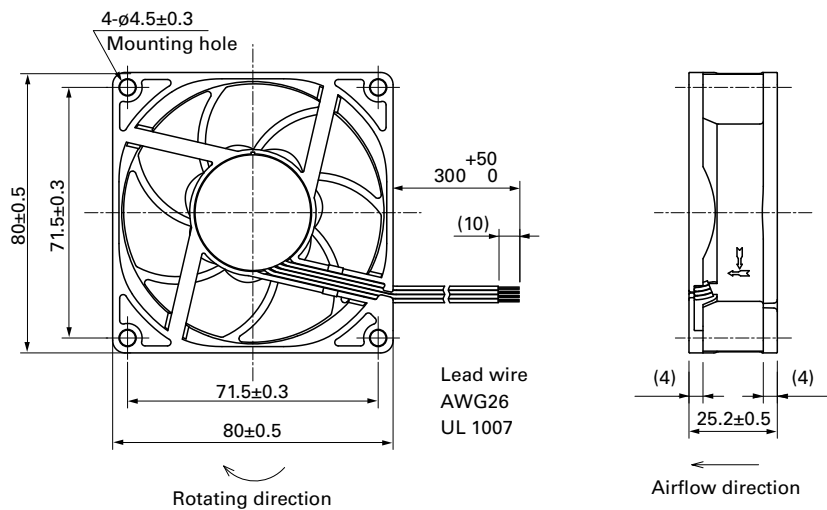


Operating voltage range

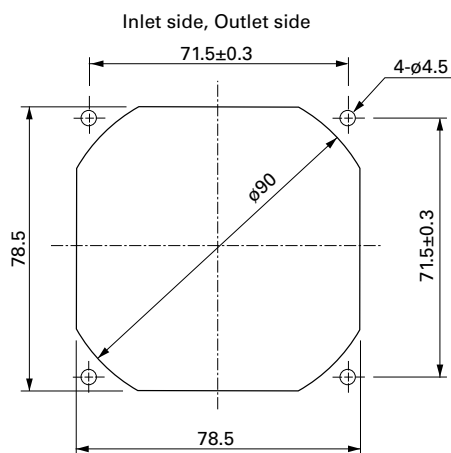


PWM duty - Speed characteristics example





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



## Options

### Finger guards

page: p. 598

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

### Resin finger guards

page: p. 605

Model no.: 109-1002G

### Resin filter kits

page: p. 606

Model no.: 109-1002F13 (13PPI), 109-1002F20 (20PPI),  
109-1002F30 (30PPI), 109-1002F40 (40PPI)