



92x92x25 mm

San Ace 92 9RA type

General Specifications

- Material Frame: Plastic (Flammability: UL 94V-0), Impeller: Plastic (Flammability: UL 94V-1)
- 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. 580.
- 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 function, there is no speed control wiring.)
- Mass 130 g

Specifications

The models listed below **have ribs and pulse sensors with PWM control function**. 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 [m ³ /min] [CFM] | Max. static pressure [Pa] [inchH ₂ O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h] |
|---------------|-------------------|-----------------------------|--------------------|-------------------|-----------------|----------------------------------|--|--|--------------|----------------------------|----------------------------|
| 9RA0912P4G001 | 12 | 10.8 to 13.2 | 100 | 0.22 | 2.64 | 4200 | 1.8 63.5 | 73.5 0.29 | 37 | -20 to +70 | 60000/60°C (90000/40°C) |
| | | | 30 | 0.03 | 0.36 | 1000 | 0.42 14.8 | 4.1 0.016 | 11 | | |
| 9RA0924P4G001 | 24 | 21.6 to 26.4 | 100 | 0.13 | 3.12 | 4200 | 1.8 63.5 | 73.5 0.29 | 37 | | |
| | | | 20 | 0.03 | 0.72 | 1000 | 0.42 14.8 | 4.1 0.016 | 11 | | |
| 9RA0948P4G001 | 48 | 43.2 to 52.8 | 100 | 0.07 | 3.36 | 4200 | 1.8 63.5 | 73.5 0.29 | 37 | | |
| | | | 20 | 0.03 | 1.44 | 1400 | 0.6 21.2 | 8.1 0.033 | 14 | | |

* 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 pulse sensors**. 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 ⁻¹] | Max. airflow [m ³ /min] [CFM] | Max. static pressure [Pa] [inchH ₂ O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h] |
|--------------|-------------------|-----------------------------|-------------------|-----------------|----------------------------------|--|--|--------------|----------------------------|----------------------------|
| 9RA0912G4001 | 12 | 7 to 13.8 | 0.22 | 2.64 | 4200 | 1.8 63.5 | 73.5 0.29 | 37 | -20 to +70 | 60000/60°C (90000/40°C) |
| 9RA0912S4001 | | | 0.2 | 2.4 | 3850 | 1.65 58.3 | 61.7 0.25 | 35 | | |
| 9RA0912H4001 | | | 0.14 | 1.68 | 3400 | 1.46 51.6 | 48.1 0.19 | 31 | | |
| 9RA0912F4001 | | | 0.1 | 1.2 | 2850 | 1.22 43.1 | 33.8 0.14 | 27 | | |
| 9RA0912M4001 | | | 0.07 | 0.84 | 2450 | 1.05 37.1 | 25 0.1 | 23 | | |
| 9RA0924G4001 | 24 | 14 to 27.6 | 0.13 | 3.12 | 4200 | 1.8 63.5 | 73.5 0.29 | 37 | | |
| 9RA0924S4001 | | | 0.1 | 2.4 | 3850 | 1.65 58.3 | 61.7 0.25 | 35 | | |
| 9RA0924H4001 | | | 0.08 | 1.92 | 3400 | 1.46 51.6 | 48.1 0.19 | 31 | | |
| 9RA0924F4001 | | | 0.06 | 1.44 | 2850 | 1.22 43.1 | 33.8 0.14 | 27 | | |
| 9RA0924M4001 | | | 0.04 | 0.96 | 2450 | 1.05 37.1 | 25 0.1 | 23 | | |
| 9RA0948G4001 | 48 | 36 to 55.2 | 0.07 | 3.36 | 4200 | 1.8 63.5 | 73.5 0.29 | 37 | | |
| 9RA0948S4001 | | | 0.06 | 2.88 | 3850 | 1.65 58.3 | 61.7 0.25 | 35 | | |
| 9RA0948H4001 | | | 0.05 | 2.4 | 3400 | 1.46 51.6 | 48.1 0.19 | 31 | | |

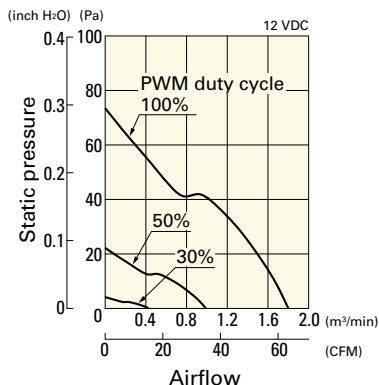
Note 1: Sensor and control options are available for selection. Refer to the table on p. 615.

Note 2: The  mark indicates Short Lead Time Service applicable models. See p. 630 for details.

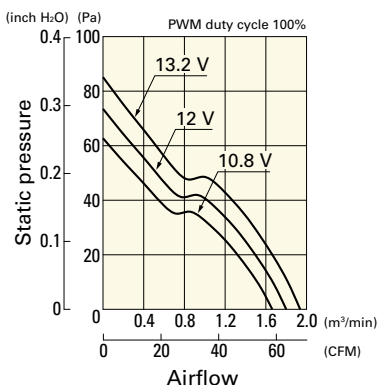
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9RA0912P4G001 With pulse sensor with PWM control function

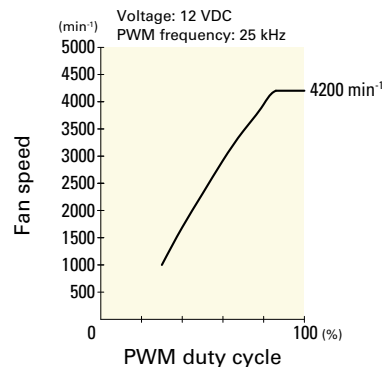
PWM duty cycle



Operating voltage range

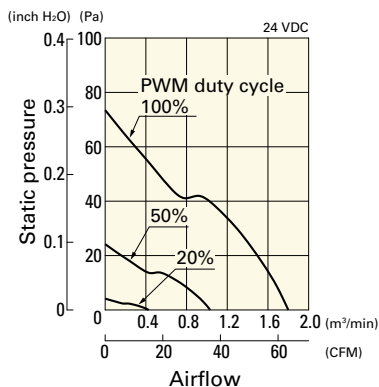


PWM duty - Speed characteristics example

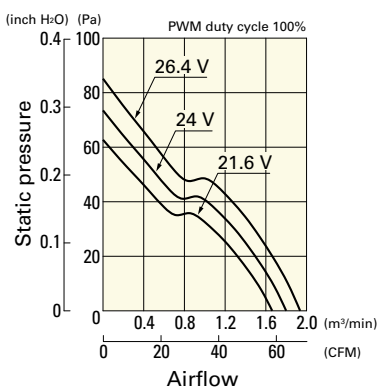


9RA0924P4G001 With pulse sensor with PWM control function

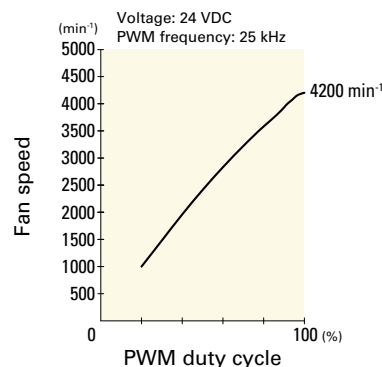
PWM duty cycle



Operating voltage range

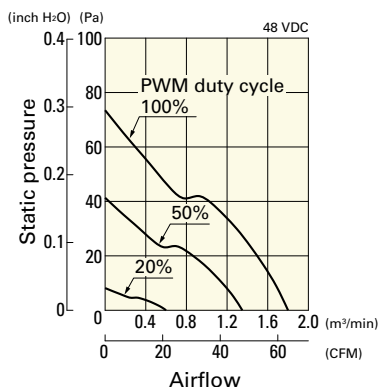


PWM duty - Speed characteristics example

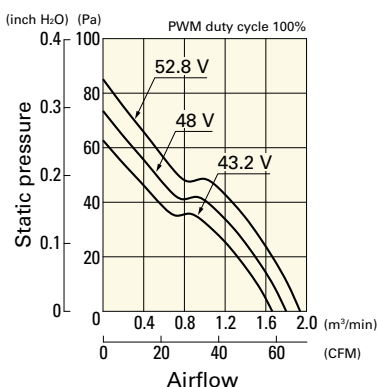


9RA0948P4G001 With pulse sensor with PWM control function

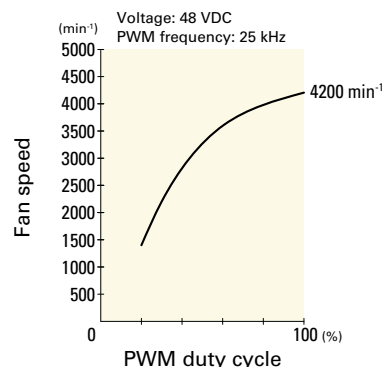
PWM duty cycle



Operating voltage range



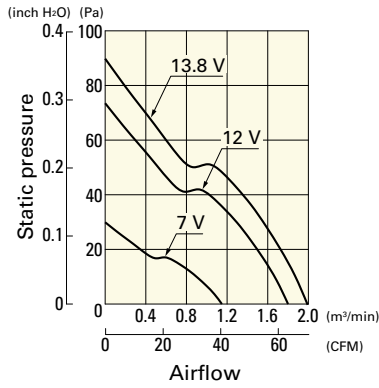
PWM duty - Speed characteristics example



Airflow - Static Pressure Characteristics

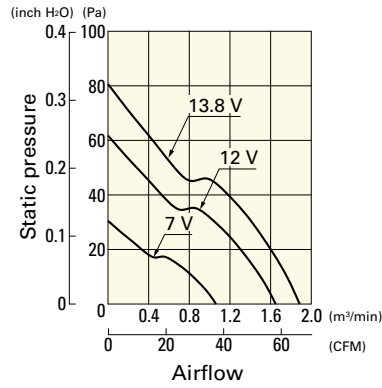
9RA0912G4001 With pulse sensor

Operating voltage range



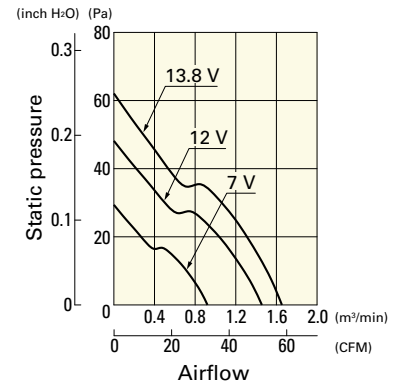
9RA0912S4001 With pulse sensor

Operating voltage range



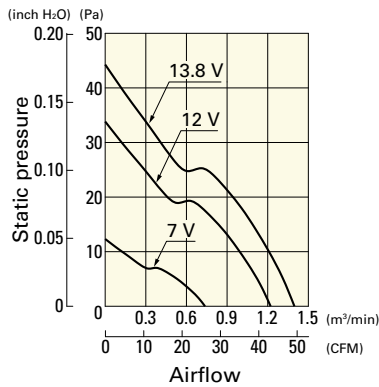
9RA0912H4001 With pulse sensor

Operating voltage range



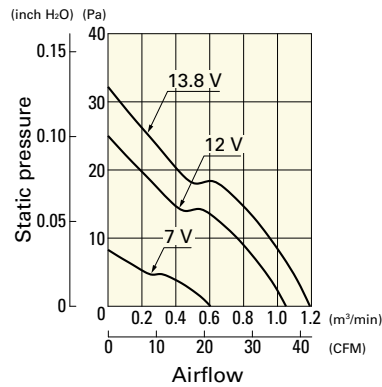
9RA0912F4001 With pulse sensor

Operating voltage range



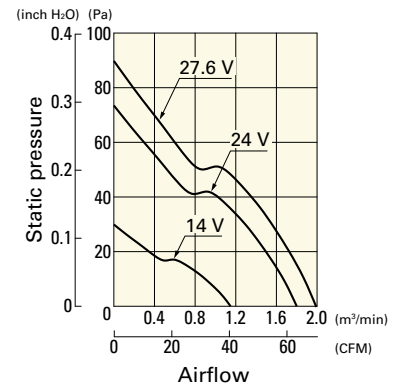
9RA0912M4001 With pulse sensor

Operating voltage range



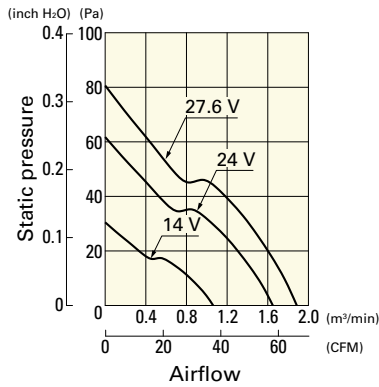
9RA0924G4001 With pulse sensor

Operating voltage range



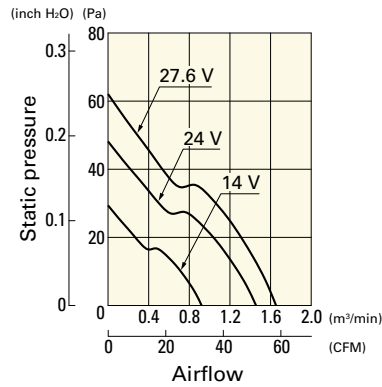
9RA0924S4001 With pulse sensor

Operating voltage range



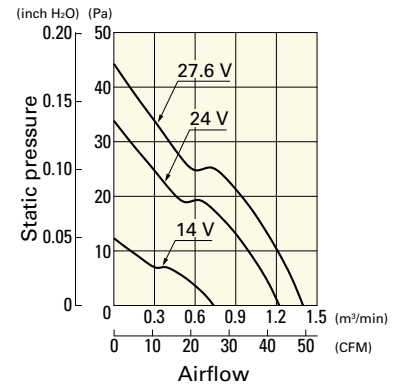
9RA0924H4001 With pulse sensor

Operating voltage range



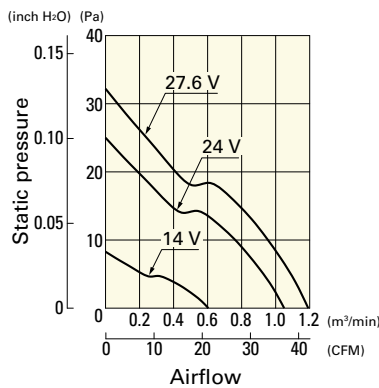
9RA0924F4001 With pulse sensor

Operating voltage range



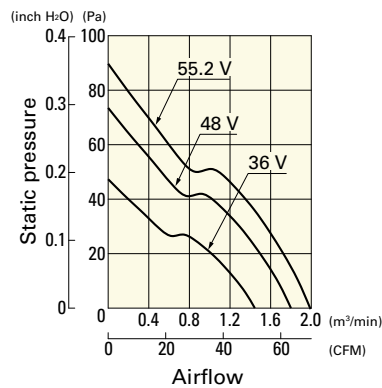
9RA0924M4001 With pulse sensor

Operating voltage range



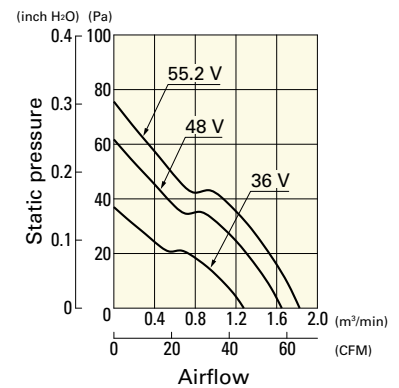
9RA0948G4001 With pulse sensor

Operating voltage range



9RA0948S4001 With pulse sensor

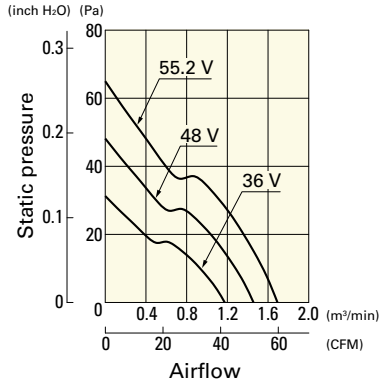
Operating voltage range



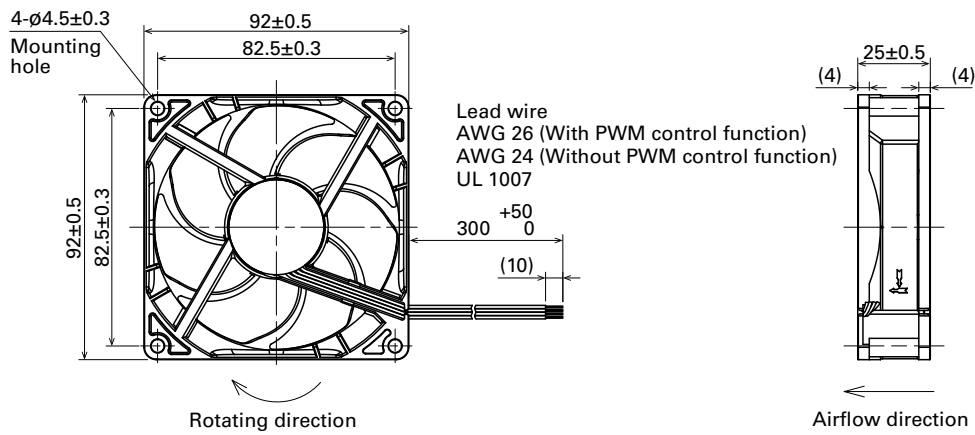
Airflow - Static Pressure Characteristics

9RA0948H4001 With pulse sensor

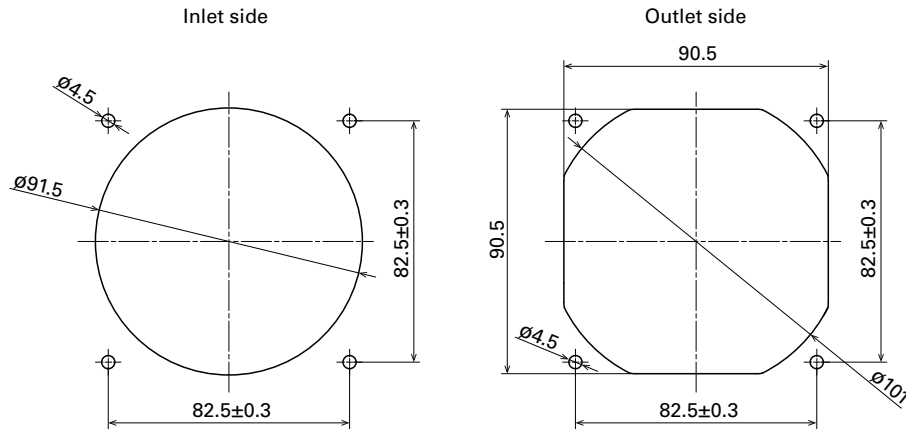
Operating voltage range



Dimensions (unit: mm) (Ribbed frame with pulse sensor with PWM control function)



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



Options

Finger guards

page: p. 564

Model no.: 109-099E, 109-099H, 109-099C

Resin finger guards

page: p. 571

Model no.: 109-1001G

Resin filter kits

page: p. 572

Model no.: 109-1001F13 (13PPI), 109-1001F20 (20PPI),
109-1001F30 (30PPI), 109-1001F40 (40PPI)