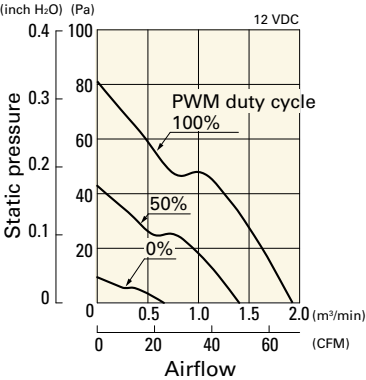
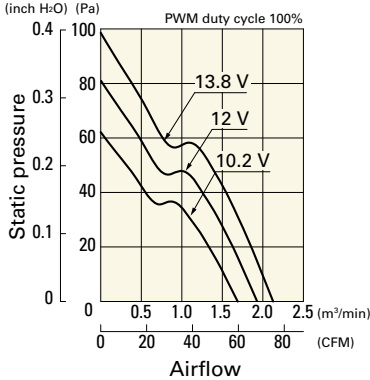


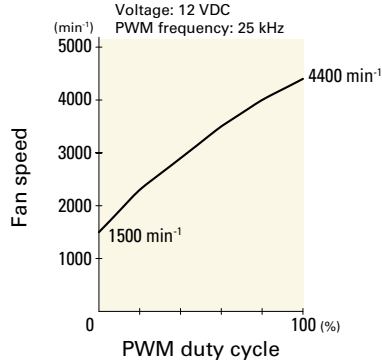
PWM duty cycle



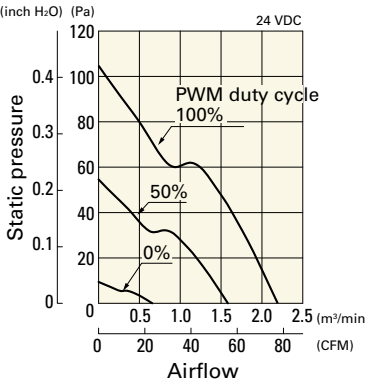
Operating voltage range



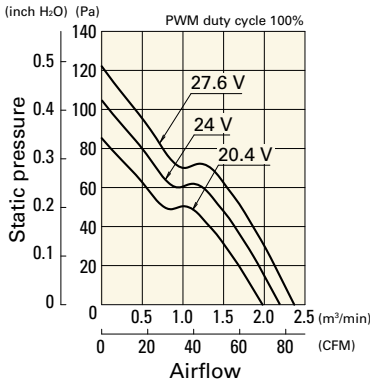
PWM duty - Speed characteristics example



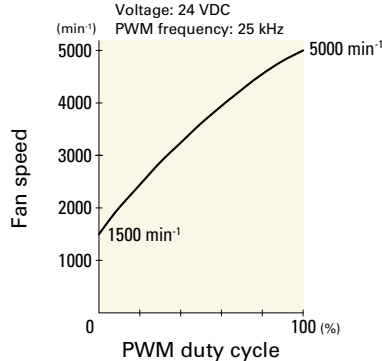
PWM duty cycle



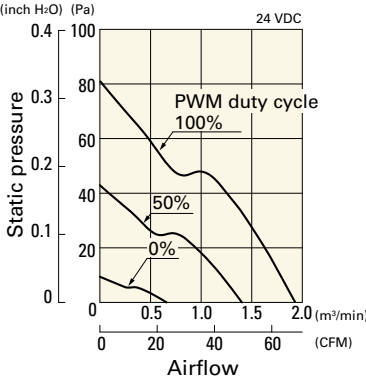
Operating voltage range



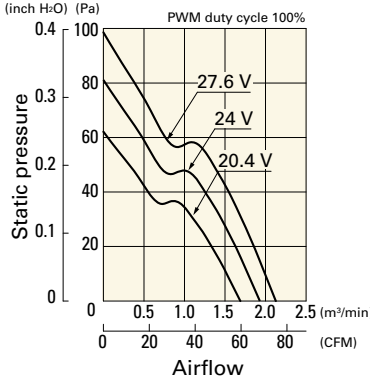
PWM duty - Speed characteristics example



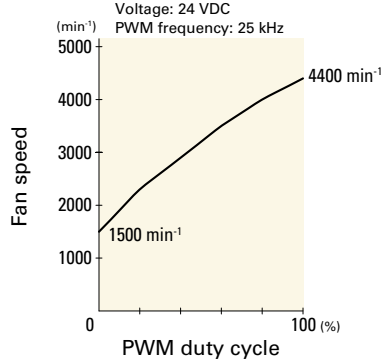
PWM duty cycle



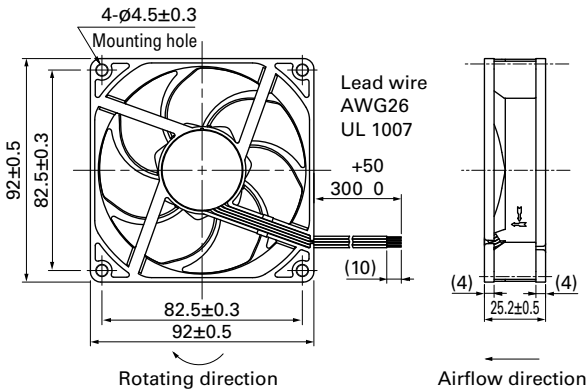
Operating voltage range

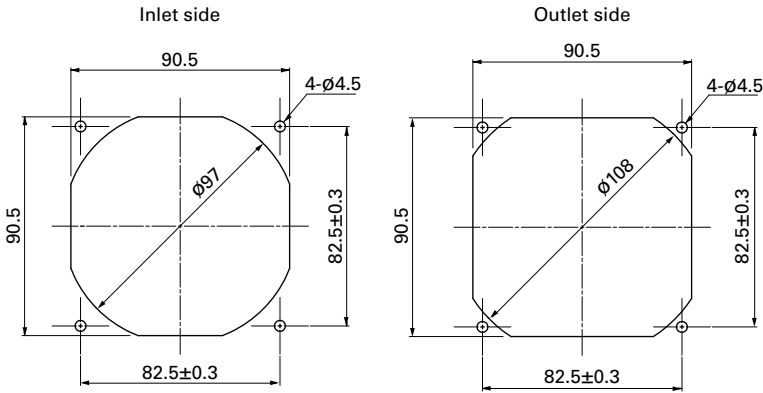


PWM duty - Speed characteristics example



Dimensions (unit: mm) (With ribs)





Options

Finger guards page: p. 598

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

Resin finger guards page: p. 605

Model no.: 109-1001G

Resin filter kits page: p. 606

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

92x92x25 mm

San Ace 92 9RA type  



DC Fan 92 mm sq. D

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. 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
(For models without PWM control, there is no speed control wiring.)
- 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] [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.

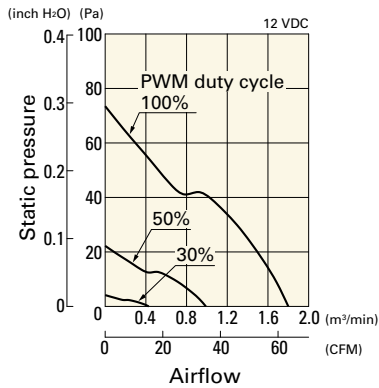
The models listed below **have ribs and a pulse sensor**. For models without ribs, append "1" to the end of model numbers.

Model no.	Rated voltage [V]	Operating voltage range [V]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m³/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		

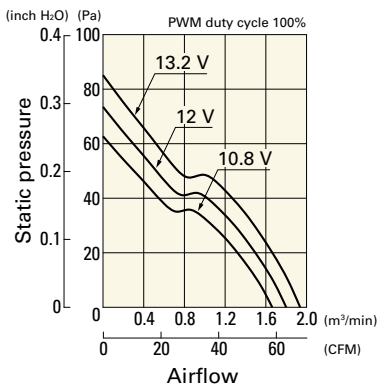
Note: Sensor and control options are available for selection. Refer to the table on p. 656 to 657.

9RA0912P4G001 With pulse sensor with PWM control

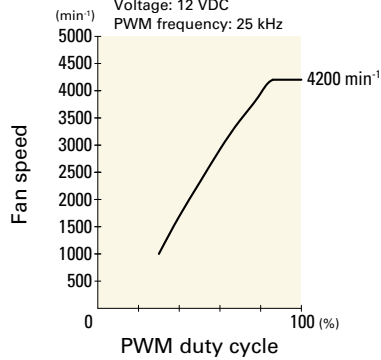
PWM duty cycle



Operating voltage range

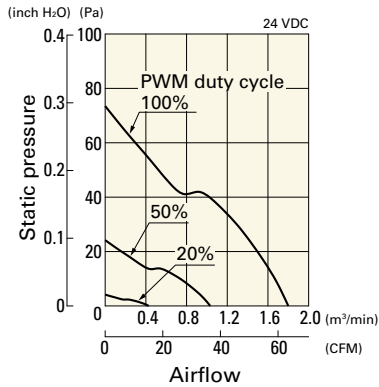


PWM duty - Speed characteristics example

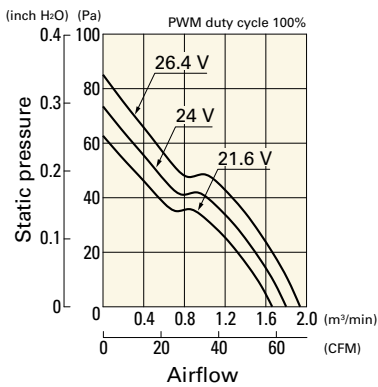


9RA0924P4G001 With pulse sensor with PWM control

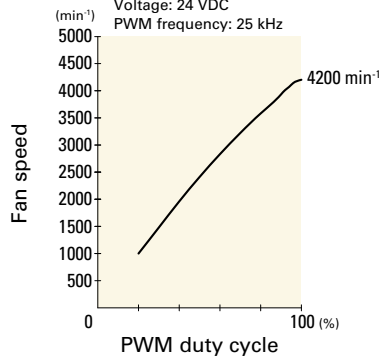
PWM duty cycle



Operating voltage range

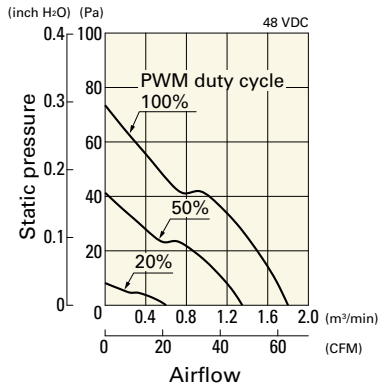


PWM duty - Speed characteristics example

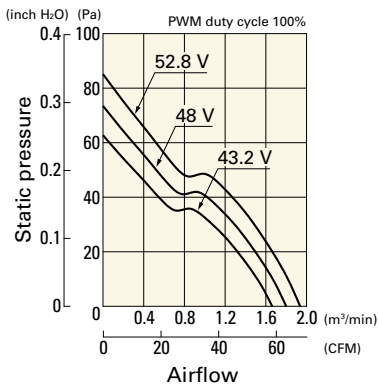


9RA0948P4G001 With pulse sensor with PWM control

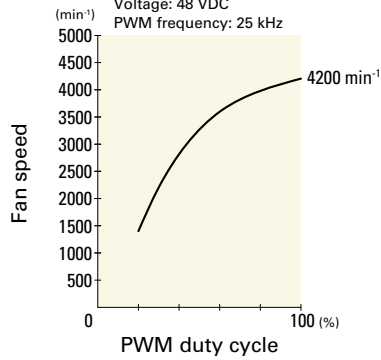
PWM duty cycle



Operating voltage range

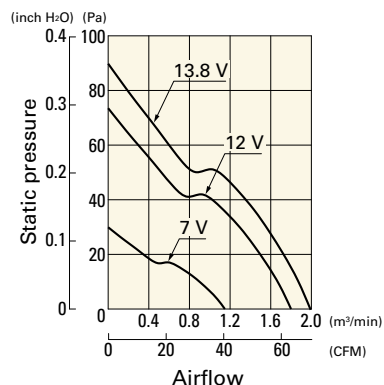


PWM duty - Speed characteristics example



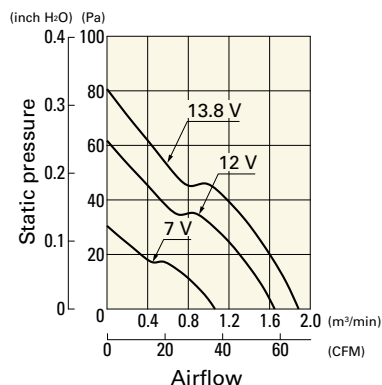
9RA0912G4001 With pulse sensor

Operating voltage range



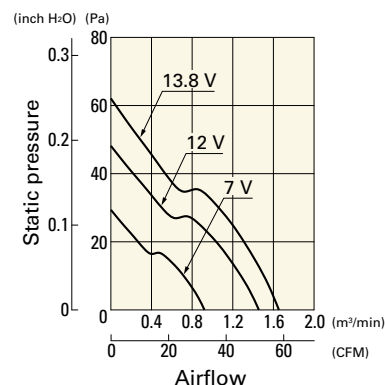
9RA0912S4001 With pulse sensor

Operating voltage range



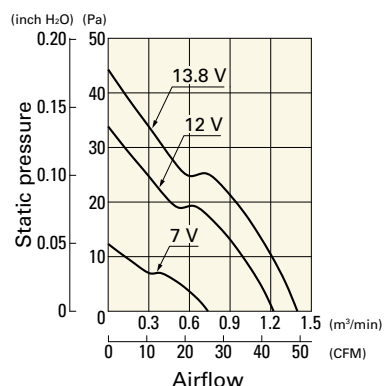
9RA0912H4001 With pulse sensor

Operating voltage range



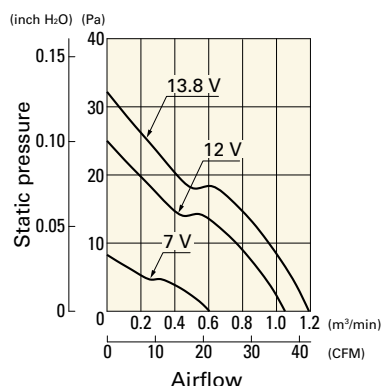
9RA0912F4001 With pulse sensor

Operating voltage range



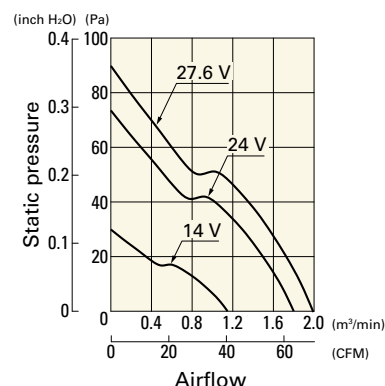
9RA0912M4001 With pulse sensor

Operating voltage range



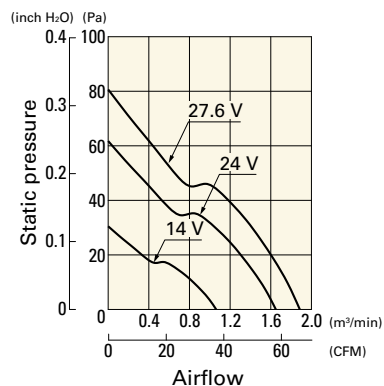
9RA0924G4001 With pulse sensor

Operating voltage range



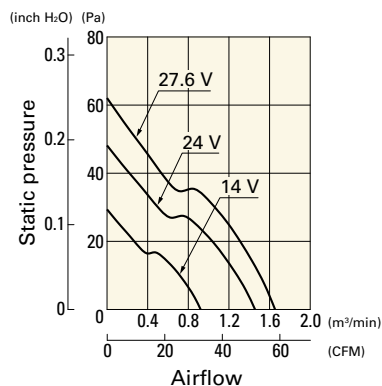
9RA0924S4001 With pulse sensor

Operating voltage range



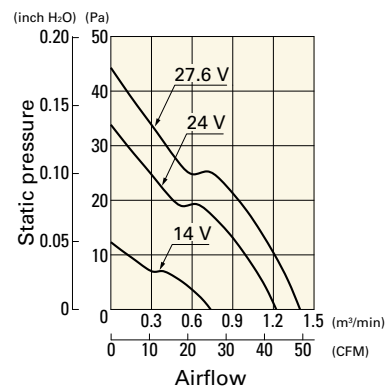
9RA0924H4001 With pulse sensor

Operating voltage range



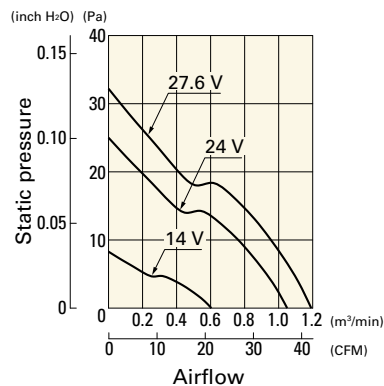
9RA0924F4001 With pulse sensor

Operating voltage range



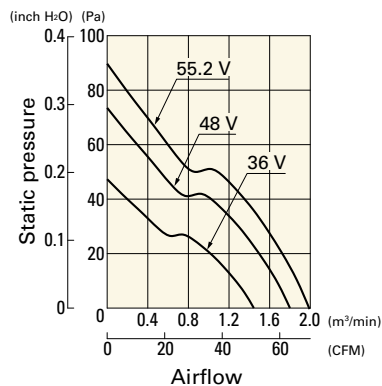
9RA0924M4001 With pulse sensor

Operating voltage range



9RA0948G4001 With pulse sensor

Operating voltage range



9RA0948S4001 With pulse sensor

Operating voltage range

