DC Fan

80×80×38 mm

San Ace 80 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. 614.
- 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 ..... 170 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]	Max. airflow [CFM]	Max. static pressure [Pa]	Max. static pressure [inchH₂O]	SPL [dB (A)]	Operating temperature [˚C]	Expected life [h]
9RA0812P1K001	12	10.8 to 13.2	100	1.52	18.24	8250	2.96	104.5	307	1.23	53	-20 to +70	40000/60˚C (70000/40˚C)
			20	0.13	1.56	2500	0.90	31.8	27.7	0.11	21		
9RA0812P1G001			100	0.82	9.84	6750	2.42	85.5	206	0.83	48		
			20	0.08	0.96	1800	0.65	22.9	14.6	0.06	15		
9RA0812P1H001			100	0.66	7.92	6100	2.19	77.3	168	0.67	46		
			20	0.08	0.96	1500	0.54	19.0	10.2	0.04	13		
9RA0824P1G001	24	21.6 to 26.4	100	0.41	9.84	6750	2.42	85.5	206	0.83	48		
			20	0.08	1.92	2800	1.00	35.3	35.4	0.14	24		
9RA0848P1G001	48	43.2 to 52.8	100	0.22	10.56	6750	2.42	85.5	206	0.83	48		
			20	0.05	2.40	3000	1.07	37.8	40.7	0.16	26		

* 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.

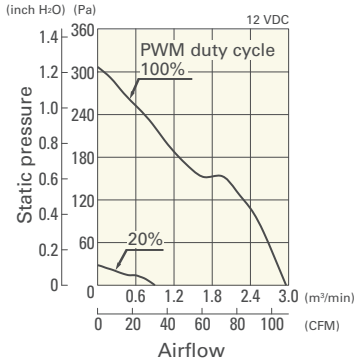
Model no.	Rated voltage [V]	Operating voltage range [V]	Rated current [A]	Rated input [W]	Rated speed [min⁻¹]	Max. airflow [m³/min]	Max. airflow [CFM]	Max. static pressure [Pa]	Max. static pressure [inchH₂O]	SPL [dB (A)]	Operating temperature [˚C]	Expected life [h]
9RA0812K1001	12	7 to 13.2	1.52	18.24	8250	2.96	104.5	307	1.23	53	-20 to +70	40000/60˚C (70000/40˚C)
9RA0812G1001		7 to 13.8	0.82	9.84	6750	2.42	85.5	206	0.83	48		
9RA0812H1001			0.66	7.92	6100	2.19	77.3	168	0.67	46		
9RA0824G1001	24	14 to 27.6	0.41	9.84	6750	2.42	85.5	206	0.83	48		
9RA0824H1001			0.33	7.92	6100	2.19	77.3	168	0.67	46		
9RA0848G1001	48	36 to 55.2	0.22	10.56	6750	2.42	85.5	206	0.83	48		
9RA0848H1001			0.18	8.64	6100	2.19	77.3	168	0.67	46		

Note 1: Sensor and control options are available for selection. Refer to the table on p. 650.
Note 2: The ⟫ mark indicates Short LeadTime Service applicable models. See p. 668 for details.

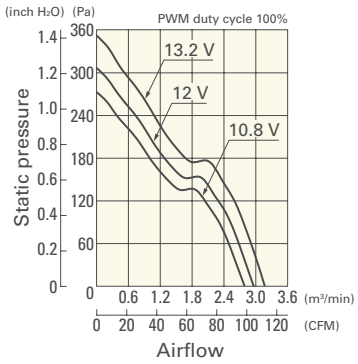
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9RA0812P1K001 With pulse sensor with PWM control

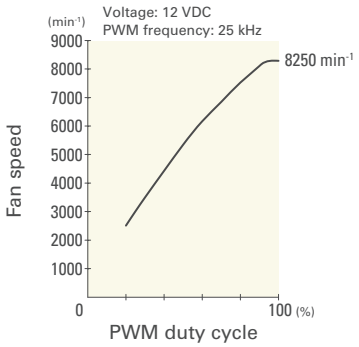
PWM duty cycle



Operating voltage range

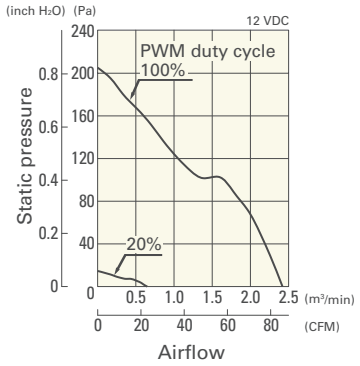


PWM duty - Speed characteristics example

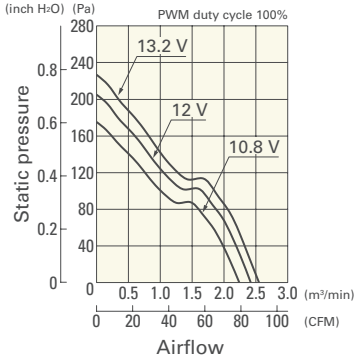


9RA0812P1G001 With pulse sensor with PWM control

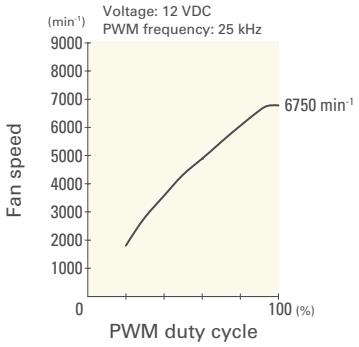
PWM duty cycle



Operating voltage range

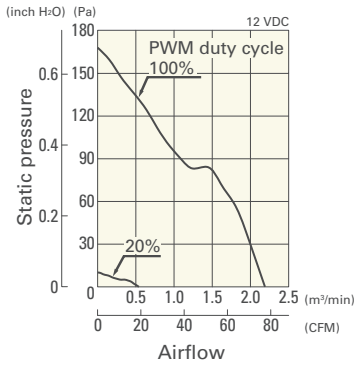


PWM duty - Speed characteristics example

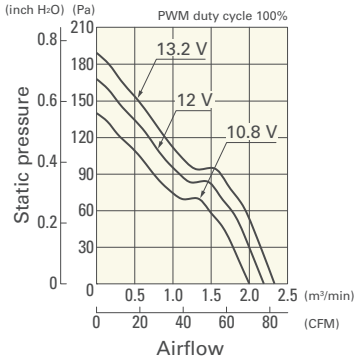


9RA0812P1H001 With pulse sensor with PWM control

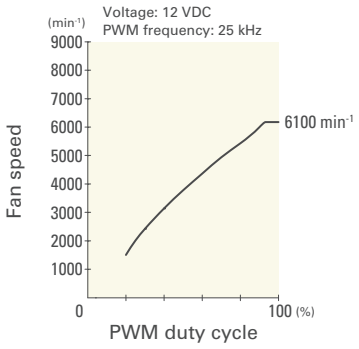
PWM duty cycle



Operating voltage range

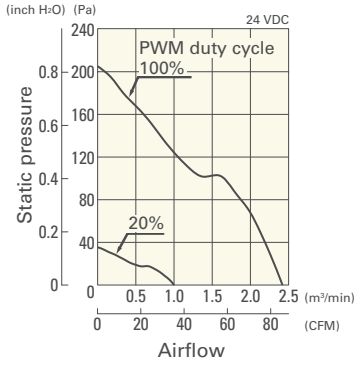


PWM duty - Speed characteristics example

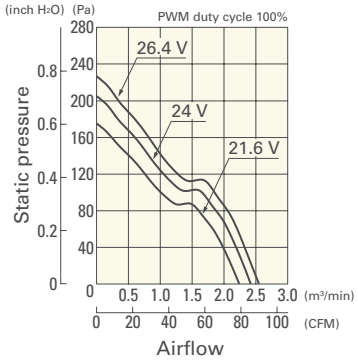


9RA0824P1G001 With pulse sensor with PWM control

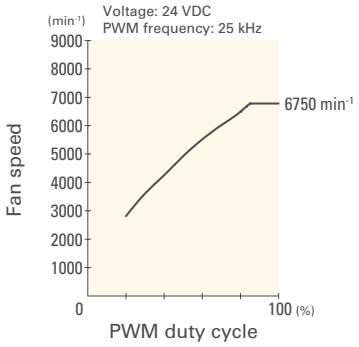
PWM duty cycle



Operating voltage range



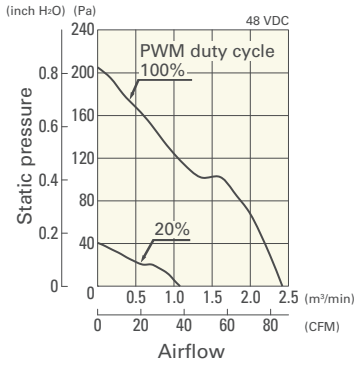
PWM duty - Speed characteristics example



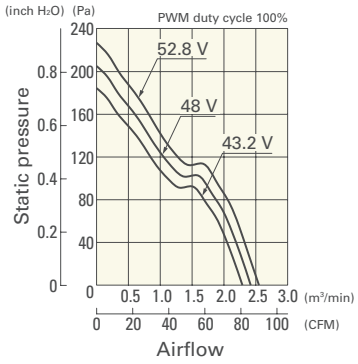
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9RA0848P1G001 With pulse sensor with PWM control

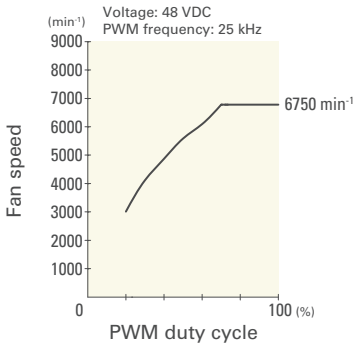
PWM duty cycle



Operating voltage range



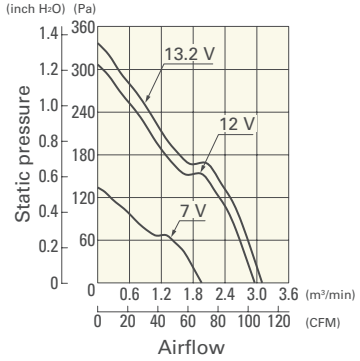
PWM duty - Speed characteristics example



Airflow - Static Pressure Characteristics

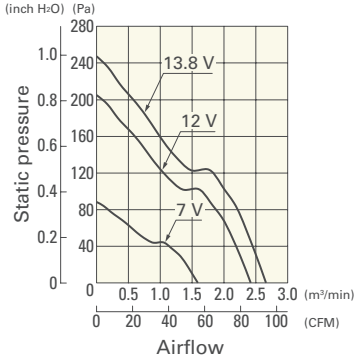
9RA0812K1001 With pulse sensor

Operating voltage range



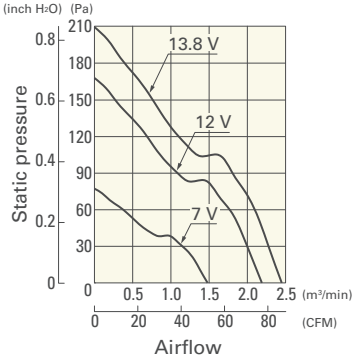
9RA0812G1001 With pulse sensor

Operating voltage range



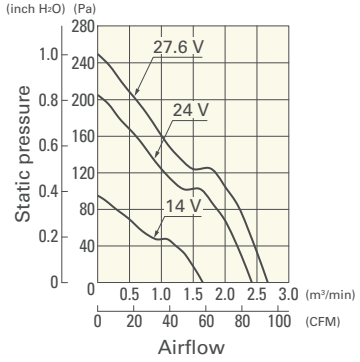
9RA0812H1001 With pulse sensor

Operating voltage range



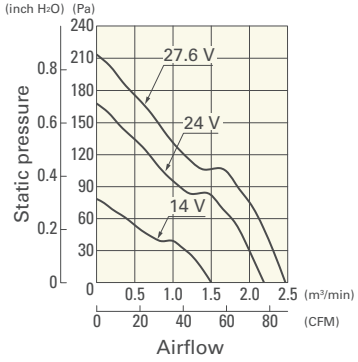
9RA0824G1001 With pulse sensor

Operating voltage range



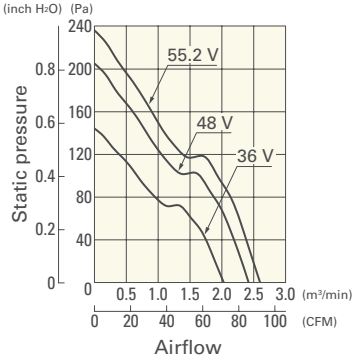
9RA0824H1001 With pulse sensor

Operating voltage range



9RA0848G1001 With pulse sensor

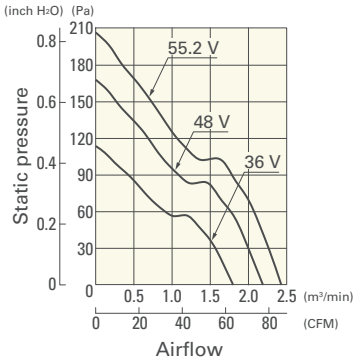
Operating voltage range



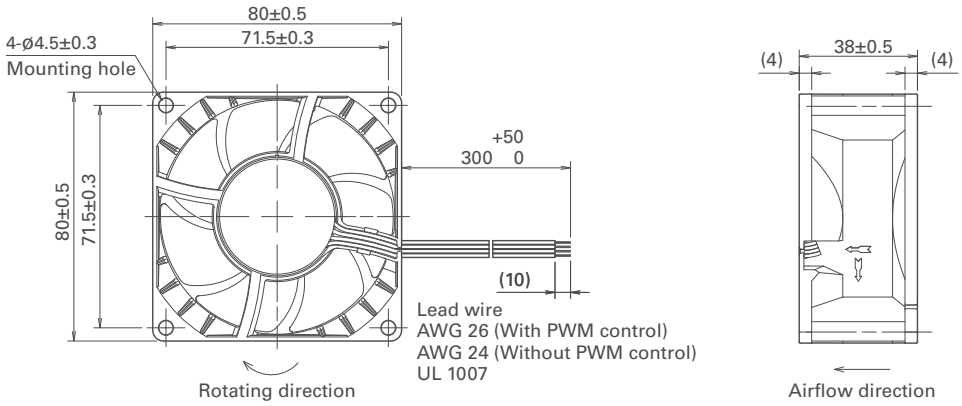
Airflow - Static Pressure Characteristics

9RA0848H1001 With pulse sensor

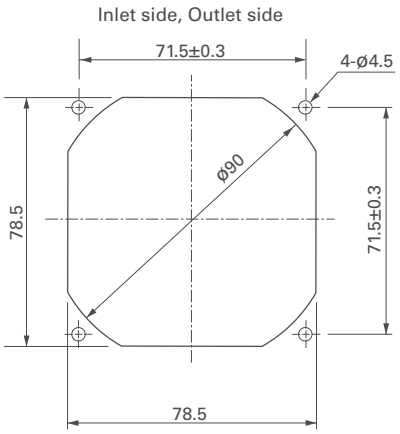
Operating voltage range



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



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)