



140×140×38 mm

San Ace 140 9RA type  

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. 608.
- 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 360 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 [m ³ /min] [CFM]		Max. static pressure [Pa] [inchH ₂ O]		SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9RA1412P1G001	12	10.8 to 13.2	100	1.10	13.2	4250	6.0	212	160	0.64	52	-20 to +70	40000/60°C (70000/40°C)
			20	0.09	1.1	1250	1.81	64.0	16.3	0.065	19		
9RA1424P1G001	24	21.6 to 26.4	100	0.53	12.7	4250	6.0	212	160	0.64	52		
			20	0.05	1.2	1400	2.17	76.7	21.5	0.086	22		
9RA1448P1G001	48	43.2 to 52.8	100	0.28	13.4	4250	6.0	212	160	0.64	52		
			30	0.04	1.9	1600	2.32	82.0	29.5	0.118	25		

* 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 [m ³ /min] [CFM]		Max. static pressure [Pa] [inchH ₂ O]		SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9RA1412S1001	12	7 to 13.8	0.75	9.0	3750	5.3	187	130	0.52	49	-20 to +70	40000/60°C (70000/40°C)
9RA1412H1001			0.43	5.2	3050	4.3	152	92	0.37	43		
9RA1412M1001			0.19	2.3	2250	3.2	113	54	0.22	35		
9RA1424S1001	24	14 to 27.6	0.37	8.9	3750	5.3	187	130	0.52	49		
9RA1424H1001			0.22	5.3	3050	4.3	152	92	0.37	43		
9RA1424M1001			0.10	2.4	2250	3.2	113	54	0.22	35		
9RA1448S1001	48	40.8 to 55.2	0.21	10.1	3750	5.3	187	130	0.52	49		
9RA1448H1001			0.13	6.2	3050	4.3	152	92	0.37	43		
9RA1448M1001			0.06	2.9	2250	3.2	113	54	0.22	35		

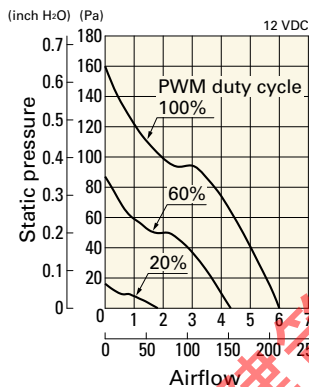
Note 1: Sensor and control options are available for selection. Refer to the table on p. 648.

Note 2: The  mark indicates Short Lead Time Service applicable models. See p. 664 for details.

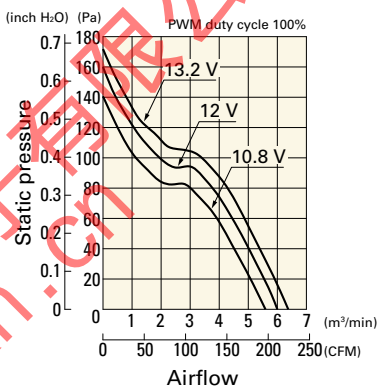
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9RA1412P1G001 With pulse sensor with PWM control

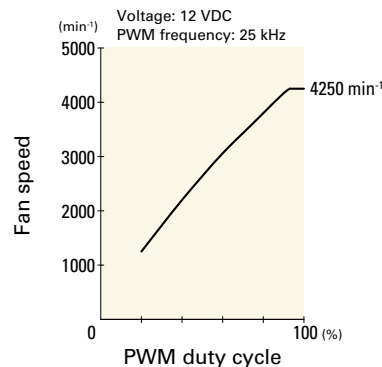
PWM duty cycle



Operating voltage range

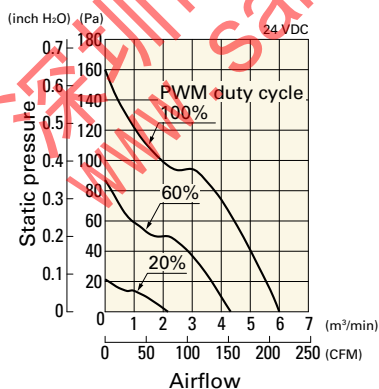


PWM duty - Speed characteristics example

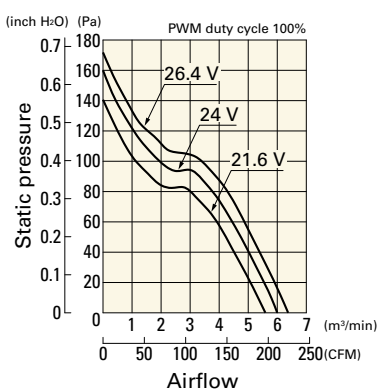


9RA1424P1G001 With pulse sensor with PWM control

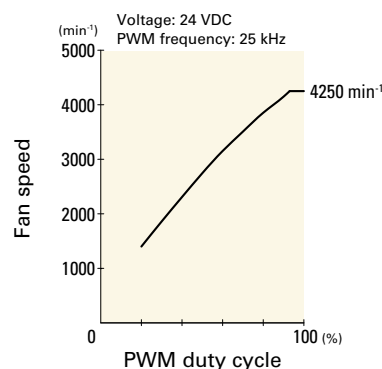
PWM duty cycle



Operating voltage range

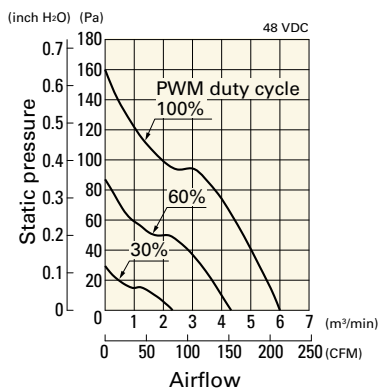


PWM duty - Speed characteristics example

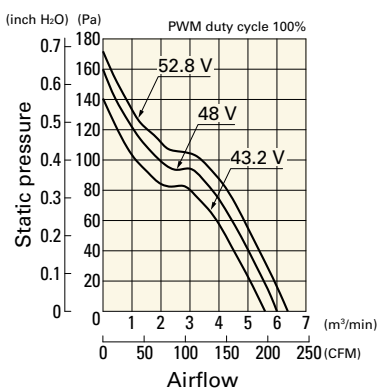


9RA1448P1G001 With pulse sensor with PWM control

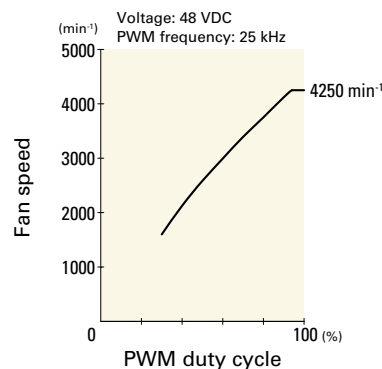
PWM duty cycle



Operating voltage range



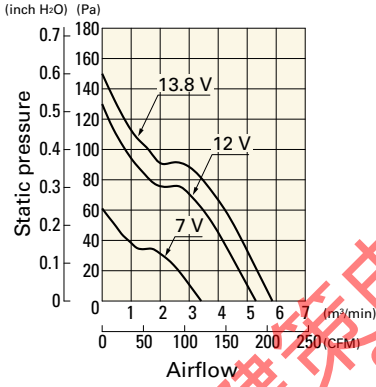
PWM duty - Speed characteristics example



Airflow - Static Pressure Characteristics

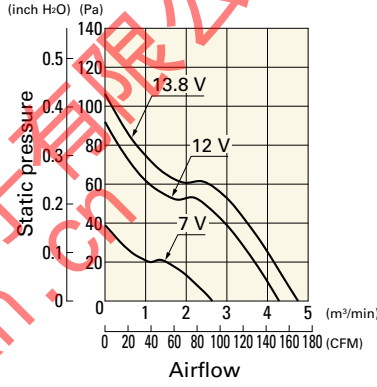
9RA1412S1001 With pulse sensor

Operating voltage range



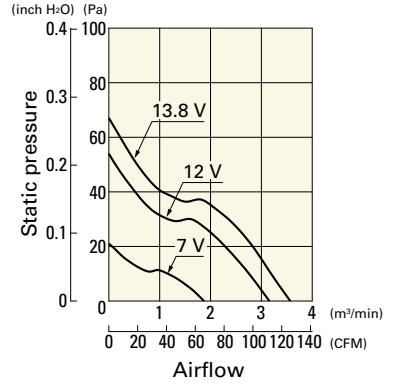
9RA1412H1001 With pulse sensor

Operating voltage range



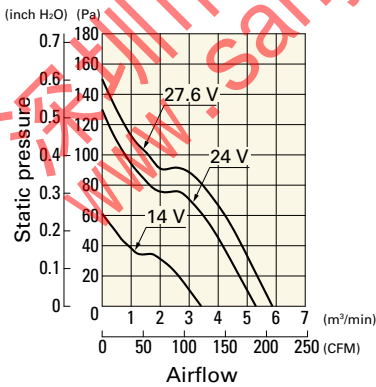
9RA1412M1001 With pulse sensor

Operating voltage range



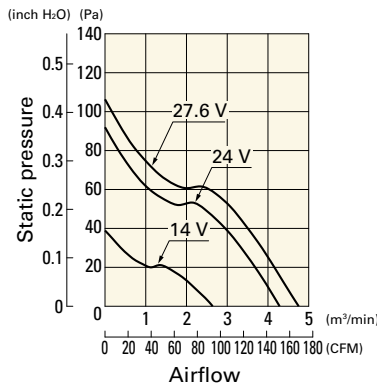
9RA1424S1001 With pulse sensor

Operating voltage range



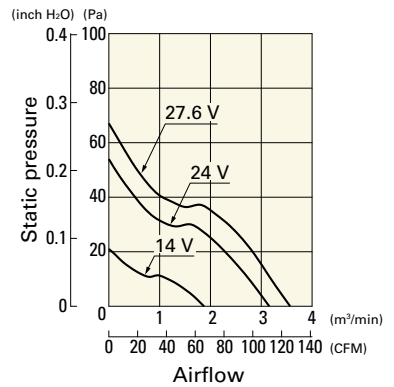
9RA1424H1001 With pulse sensor

Operating voltage range



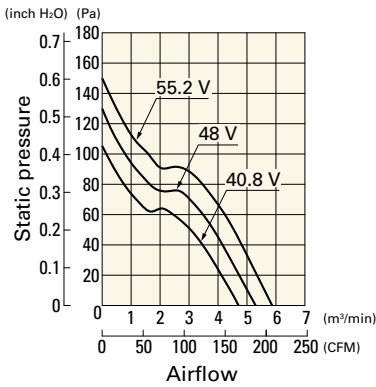
9RA1424M1001 With pulse sensor

Operating voltage range



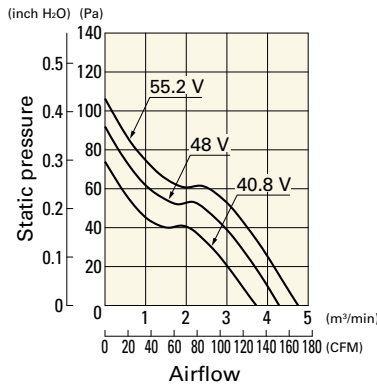
9RA1448S1001 With pulse sensor

Operating voltage range



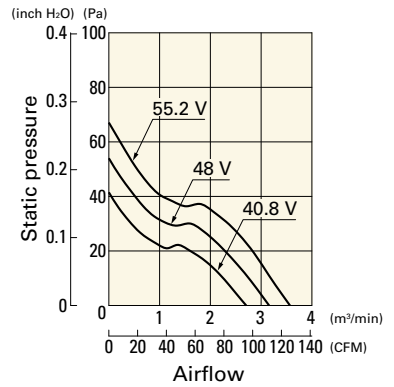
9RA1448H1001 With pulse sensor

Operating voltage range

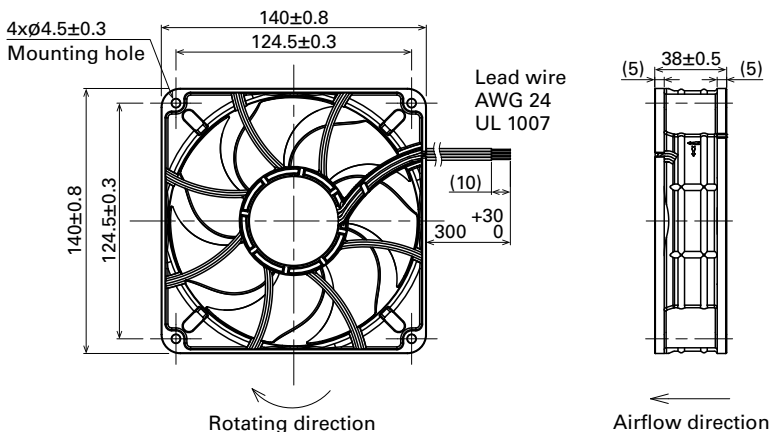


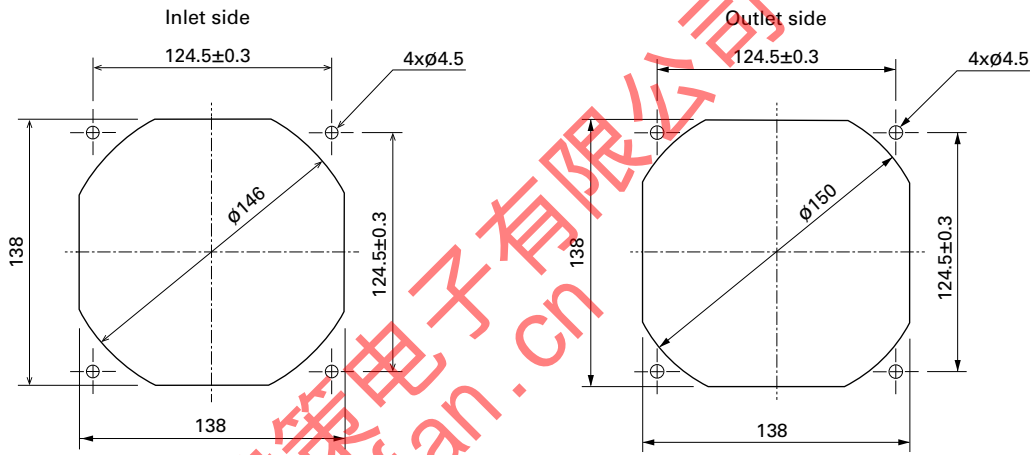
9RA1448M1001 With pulse sensor

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. 591

Model no.: 109-719, 109-719H