



# 80×80×32 mm

## San Ace 80 9GA type Low Power Consumption Fan

### 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. 599.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- 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 <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]		
» 9GA0812P2S001	12	10.2 to 13.8	100	0.83	9.96	9700	2.45	86.5	360	1.45	57	-20 to +70	40000/60°C (70000/40°C)		
» 9GA0812P2H001			0	0.08	0.96	2800	0.71	25.1	30	0.12	24				
» 9GA0812P2M001			100	0.59	7.08	8700	2.2	77.7	294	1.18	54				
» 9GA0812P2M001			0	0.05	0.6	2600	0.66	23.3	26	0.105	21				
» 9GA0824P2S001	24	20.4 to 27.6	100	0.35	4.2	6700	1.69	59.6	171	0.68	47	-20 to +55		40000/60°C (70000/40°C)	
» 9GA0824P2S001			0	0.04	0.48	1400	0.35	12.3	7.5	0.03	10				
» 9GA0848P2S001	48	40.8 to 55.2	100	0.42	10.1	9700	2.45	86.5	360	1.45	57	-20 to +70			40000/60°C (70000/40°C)
» 9GA0848P2S001			0	0.05	1.2	2800	0.71	25.1	30	0.12	24				
» 9GA0848P2S001	48	40.8 to 55.2	100	0.22	10.56	9700	2.45	86.5	360	1.45	57	-10 to +70	40000/60°C (70000/40°C)		
» 9GA0848P2S001			0	0.04	1.92	2800	0.71	25.1	30	0.12	24				

\* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

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 <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]	
» 9GA0812A2001	12	6 to 13.2	0.31	3.72	6000	1.51	53.4	137.7	0.55	44	-20 to +70	40000/60°C (70000/40°C)	
» 9GA0812B2001		6 to 13.8	0.13	1.56	4000	1.01	35.7	61.2	0.25	33			
» 9GA0812L2001		7 to 13.8	0.08	0.96	2600	0.66	23.3	26	0.1	21			
» 9GA0824A2001	24	12 to 26.4	0.15	3.6	6000	1.51	53.4	137.7	0.55	44	-20 to +70		40000/60°C (70000/40°C)
» 9GA0824B2001		12 to 27.6	0.08	1.92	4000	1.01	35.7	61.2	0.25	33			
» 9GA0824L2001		14 to 27.6	0.05	1.2	2600	0.66	23.3	26	0.1	21			

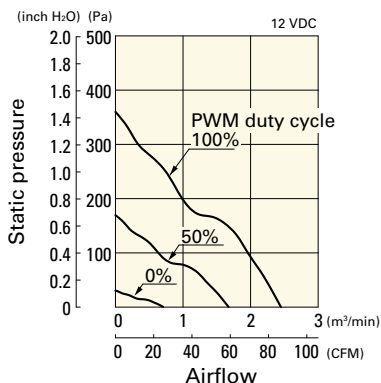
Note 1: Sensor and control options are available for selection. Refer to the table on pp. 629 to 630.

Note 2: The » mark indicates Short Lead Time Service applicable models. See p. 654 for details.

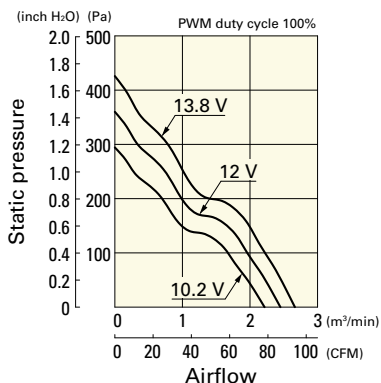
**Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example**

**9GA0812P2S001** With pulse sensor with PWM control function

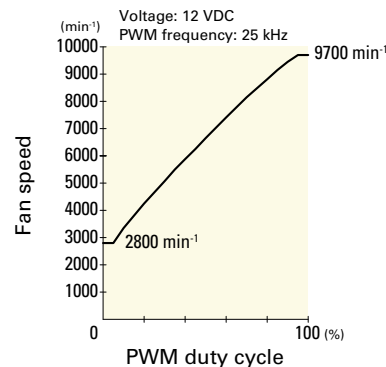
PWM duty cycle



Operating voltage range

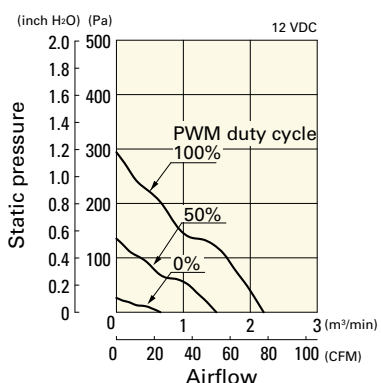


PWM duty - Speed characteristics example

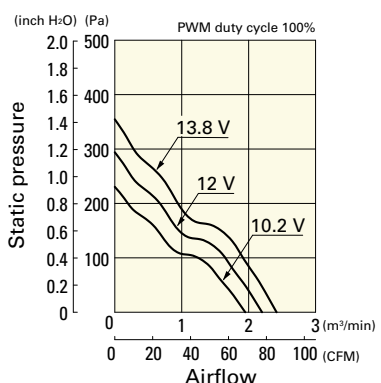


**9GA0812P2H001** With pulse sensor with PWM control function

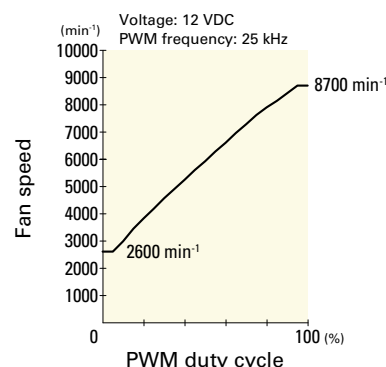
PWM duty cycle



Operating voltage range

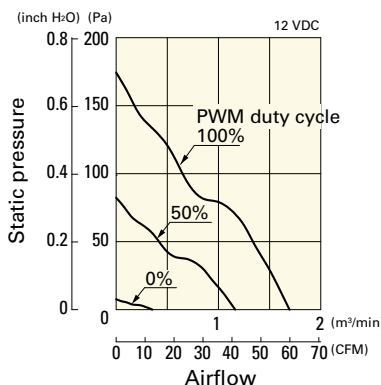


PWM duty - Speed characteristics example

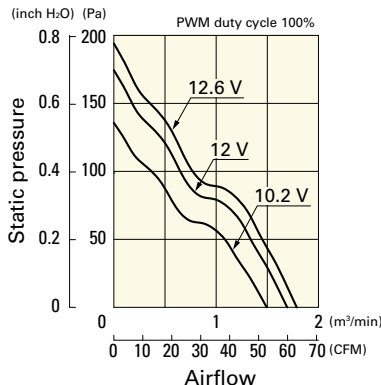


**9GA0812P2M001** With pulse sensor with PWM control function

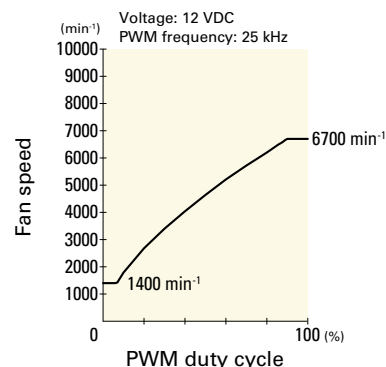
PWM duty cycle



Operating voltage range

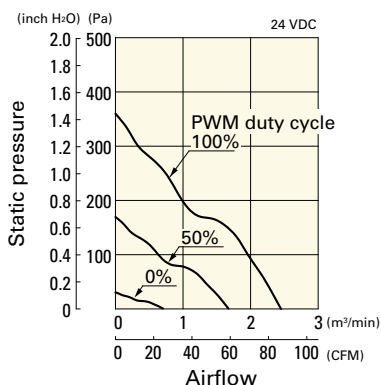


PWM duty - Speed characteristics example

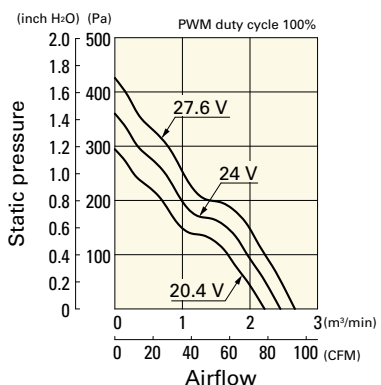


**9GA0824P2S001** With pulse sensor with PWM control function

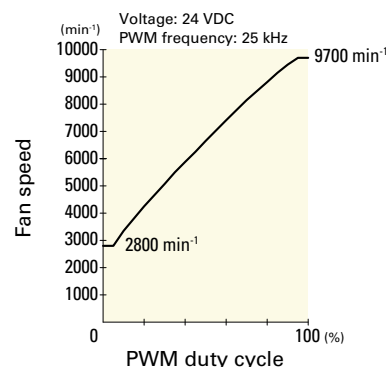
PWM duty cycle



Operating voltage range



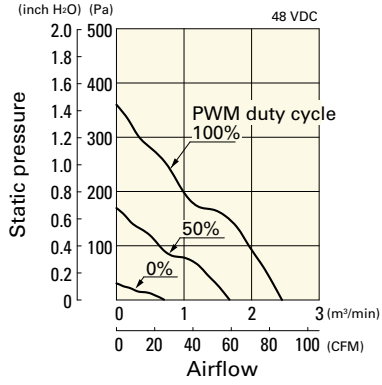
PWM duty - Speed characteristics example



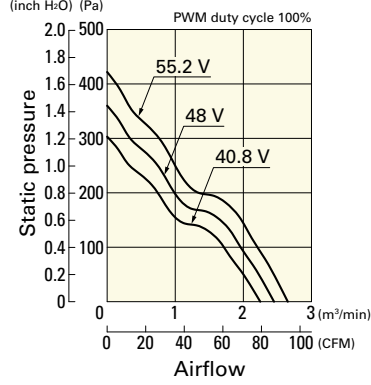
**Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example**

**9GA0848P2S001** With pulse sensor with PWM control function

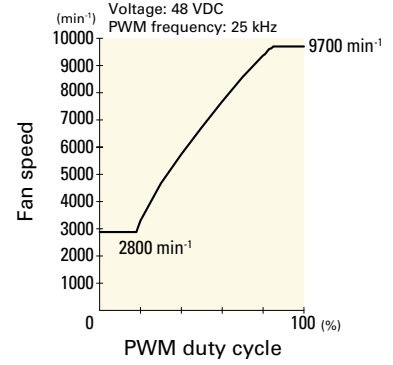
PWM duty cycle



Operating voltage range



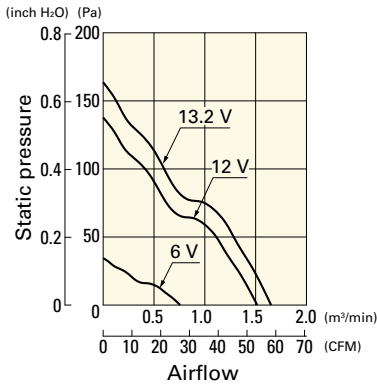
PWM duty - Speed characteristics example



**Airflow - Static Pressure Characteristics**

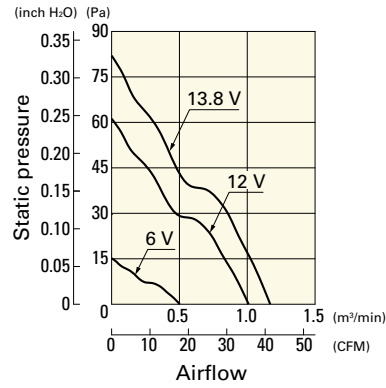
**9GA0812A2001** With pulse sensor

Operating voltage range



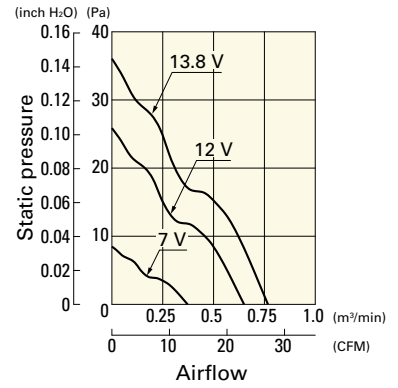
**9GA0812B2001** With pulse sensor

Operating voltage range



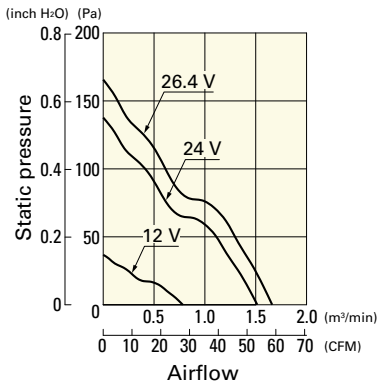
**9GA0812L2001** With pulse sensor

Operating voltage range



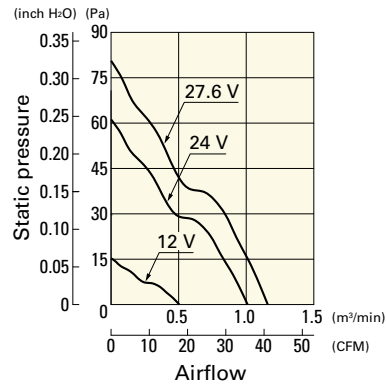
**9GA0824A2001** With pulse sensor

Operating voltage range



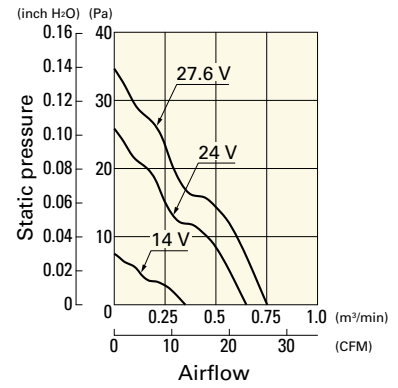
**9GA0824B2001** With pulse sensor

Operating voltage range

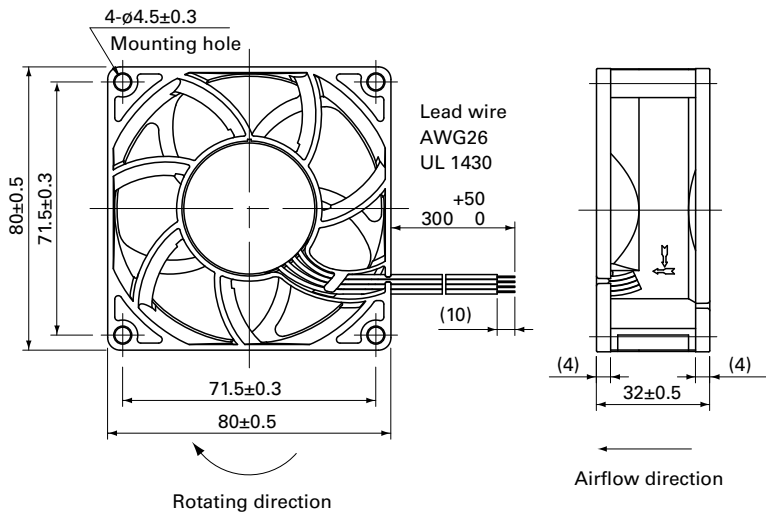


**9GA0824L2001** With pulse sensor

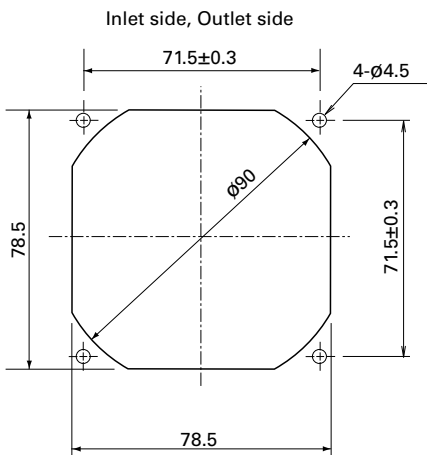
Operating voltage range



**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. 584

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

**Resin finger guards** page: p. 591

Model no.: 109-1002G

**Resin filter kits** page: p. 592

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