

# San Ace 92 GA type

## Features

### Large air flow and high static pressure

Maximum airflow : increased by approx. 25%  
 Maximum static pressure : increased by approx. 58 % compared with our conventional product\*.

### Energy-saving

Power consumption is reduced by approx. 17 % with airflow performance that is identical to our conventional product\*.

### Low noise

Sound pressure level is reduced by approx. 8 % with airflow performance that is identical to our conventional product\*.

\* Our conventional product is the DC cooling fan :  
 92 x 92 x 25 mm thick fan "San Ace 92" (9AH0912P4G03)



DC Fan 92mm

**92×92×25mm**

## Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle*[%]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Air Flow [m <sup>3</sup> /min] [CFM]	Static Pressure [Pa] [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Life Expectancy [h]		
9GA0912P4J03 (031)	12	10.2 to 13.8	100	0.39	4.68	5,000	2.20 77.7	105 0.42	43	-10 to +70	60,000		
			0	0.06	0.72	1,500	0.66 23.3	9.5 0.04	14				
9GA0912P4G03 (031)			100	0.28	3.36	4,400	1.93 68.2	81 0.33	39				
			0	0.06	0.72	1,500	0.66 23.3	9.5 0.04	14				
9GA0912P4S03 (031)			100	0.2	2.4	3,800	1.67 59.0	60.6 0.24	35				
			0	0.06	0.72	1,500	0.66 23.3	9.5 0.04	14				
9GA0924P4J03 (031)			24	20.4 to 27.6	100	0.2	4.80	5,000	2.20 77.7			105 0.42	43
					0	0.04	0.96	1,500	0.66 23.3			9.5 0.04	14
9GA0924P4G03 (031)	100	0.15			3.60	4,400	1.93 68.2	81 0.33	39				
	0	0.04			0.96	1,500	0.66 23.3	9.5 0.04	14				
9GA0924P4S03 (031)	100	0.12			2.88	3,800	1.67 59.0	60.6 0.24	35				
	0	0.04			0.96	1,500	0.66 23.3	9.5 0.04	14				

The numbers in ( ) represent ribless models.

※PWM Frequency:25kHz

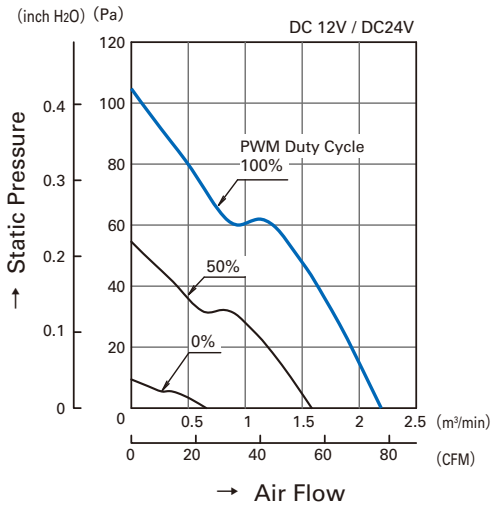
## Common Specifications

- Material ..... Frame: Plastics (Flammability: UL94V-0) , Impeller: Plastics (Flammability: Min.UL94V-1)
- Life Expectancy ..... Varies for each model  
 (L10: Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
- Motor Protection System ..... Current blocking function and Reverse polarity protection
- Dielectric Strength ..... 50/60 Hz, 500VAC, 1 minute (between lead conductor and frame)
- Sound Pressure Level (SPL) ..... Expressed as the value at 1m from air inlet side
- Operating Temperature ..... Varies for each model (Non-condensing)
- Storage Temperature ..... -30°C to +70°C (Non-Condensing)
- Lead Wire ..... ⊕red ⊖black Sensor: yellow Control: brown
- Mass ..... 125g

92mm

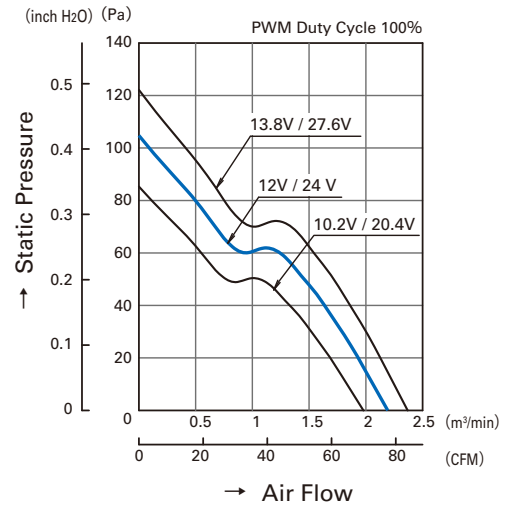
## Air Flow and Static Pressure Characteristics

### • PWM Duty Cycle

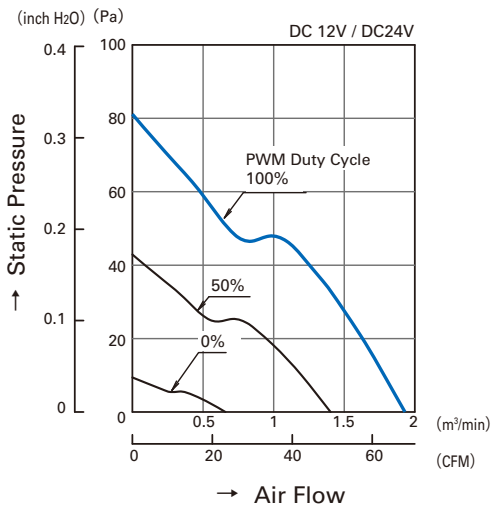


**9GA0912P4J03 (031)**  
**9GA0924P4J03 (031)**

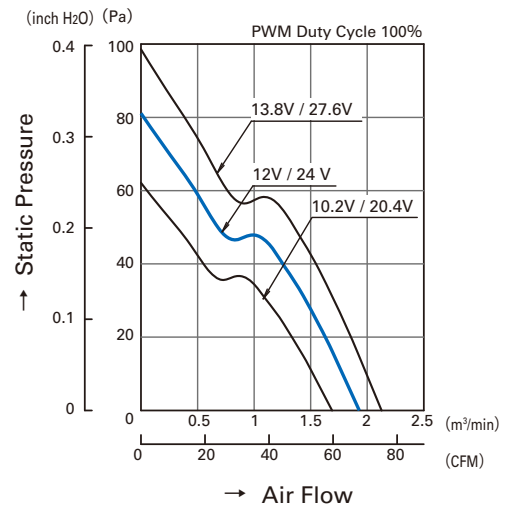
### • Operating Voltage Range



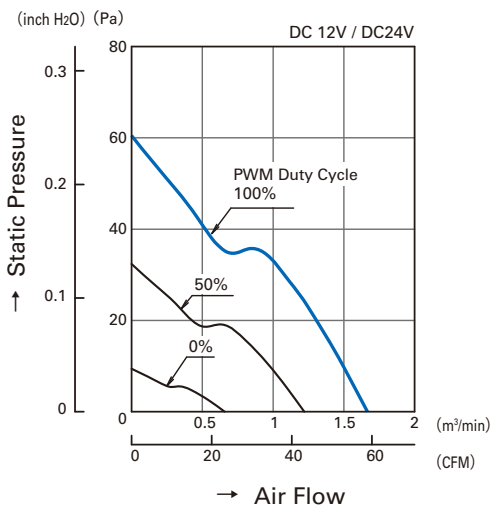
**9GA0912P4J03 (031)**  
**9GA0924P4J03 (031)**



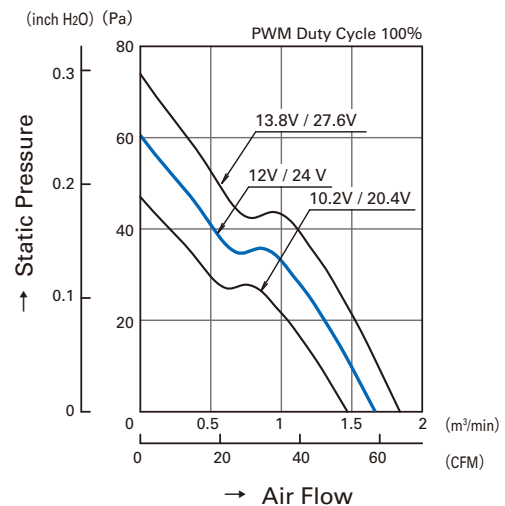
**9GA0912P4G03 (031)**  
**9GA0924P4G03 (031)**



**9GA0912P4G03 (031)**  
**9GA0924P4G03 (031)**

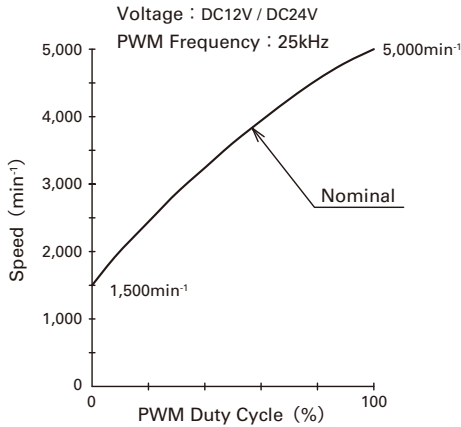


**9GA0912P4S03 (031)**  
**9GA0924P4S03 (031)**

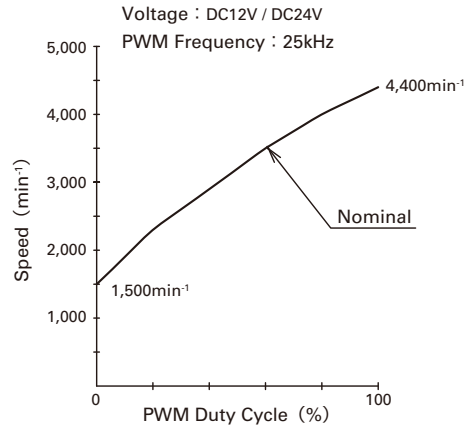


**9GA0912P4S03 (031)**  
**9GA0924P4S03 (031)**

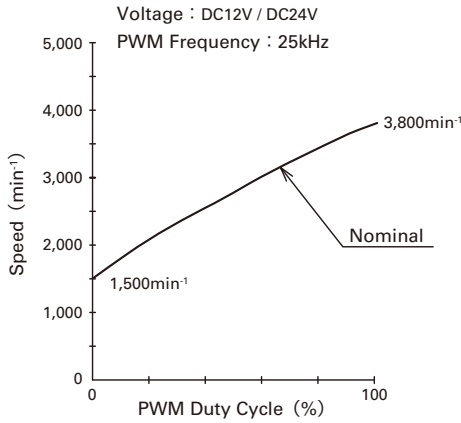
**PWM Duty - Speed Characteristics Example**



**9GA0912P4J03 (031)**  
**9GA0924P4J03 (031)**



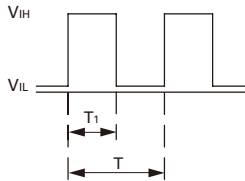
**9GA0912P4G03 (031)**  
**9GA0924P4G03 (031)**



**9GA0912P4S03 (031)**  
**9GA0924P4S03 (031)**

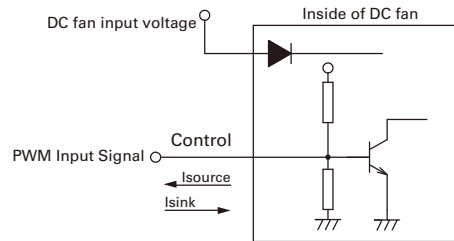
**PWM Input Signal Example**

**Input Signal Wave Form**



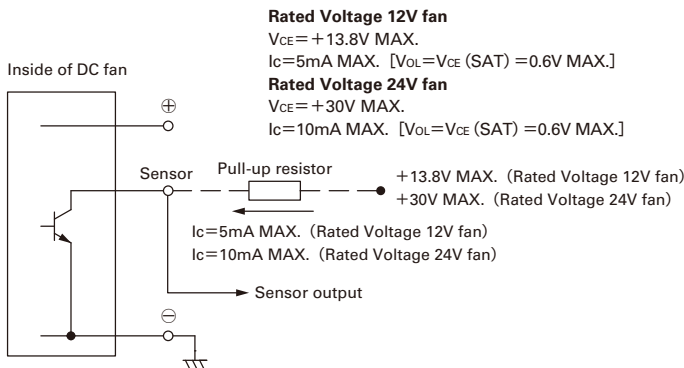
V<sub>IH</sub>=4.75V to 5.25V  
V<sub>IL</sub>=0V to 0.4V  
PWM Duty Cycle (%) =  $\frac{T_1}{T} \times 100$   
PWM Frequency 25 (kHz) =  $\frac{1}{T}$   
Source Current : 1mA Max. at control voltage 0V  
Sink Current : 1mA Max. at control voltage 5.25V  
Control Terminal Voltage : 5.25V Max. (Open Circuit)  
When the control lead wire is no connecting, the speed is the same speed as at 100% of PWM cycle.  
This fan speed should be controlled by PWM input signal of either TTL input or open collector, drain input.

**Connection Schematic**

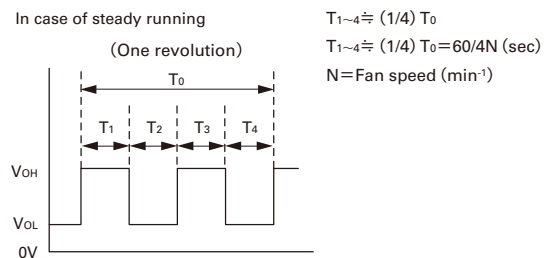


**Specifications for Pulse Sensors**

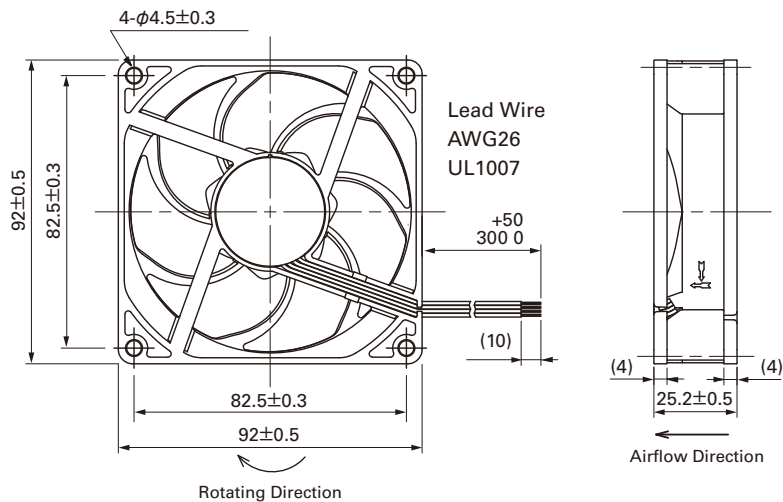
Output circuit : Open collector



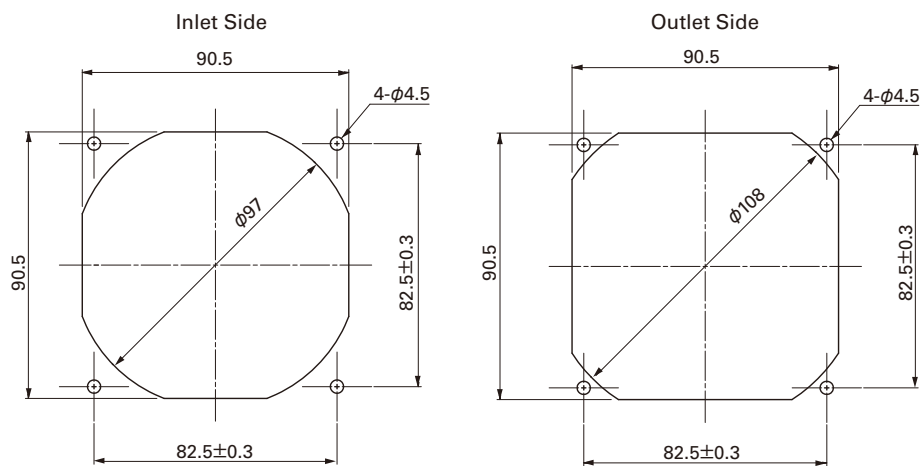
Output waveform (Need pull-up resistor)



■ Dimensions (unit : mm) (With ribs)



■ Reference dimension of mounting holes and vent opening (unit : mm)



**Notice**

- The products shown in the catalog are subject to Japanese Export Control Law. Diversion contrary to the law of exporting country is prohibited.
- To protect against electrolytic corrosion that may occur in locations with strong electromagnetic noise, we provide fans that are unaffected by electrolytic corrosion.

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