

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 × 92 × 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 ⁻¹]	Air Flow [m ³ /min] [CFM]		Static Pressure [Pa] [inchH ₂ 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.

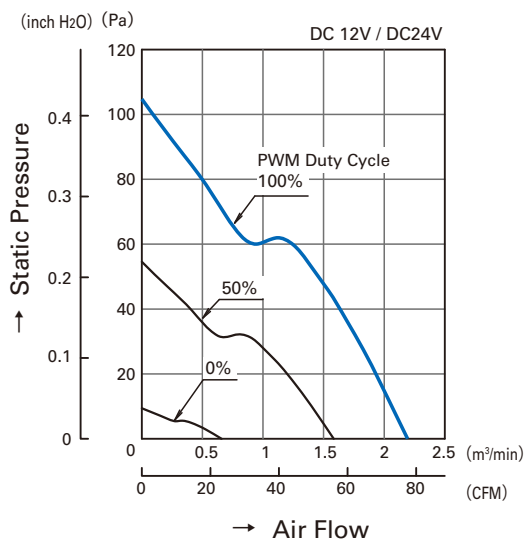
※PWM Frequency:25kHz

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

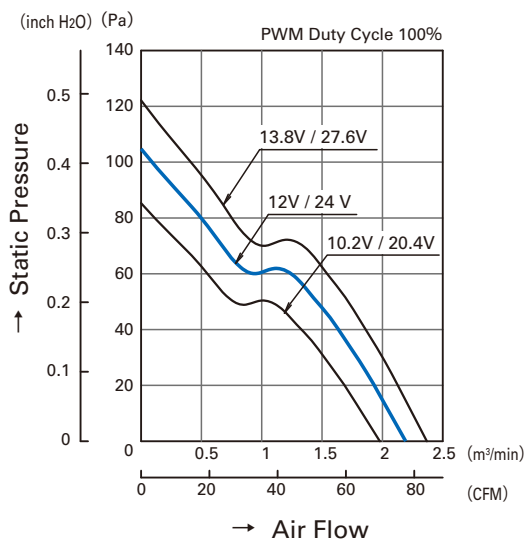
Air Flow and Static Pressure Characteristics

• PWM Duty Cycle

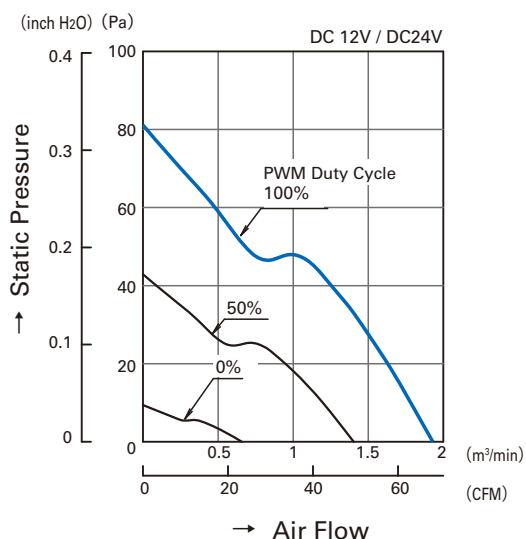


9GA0912P4J03 (031)
9GA0924P4J03 (031)

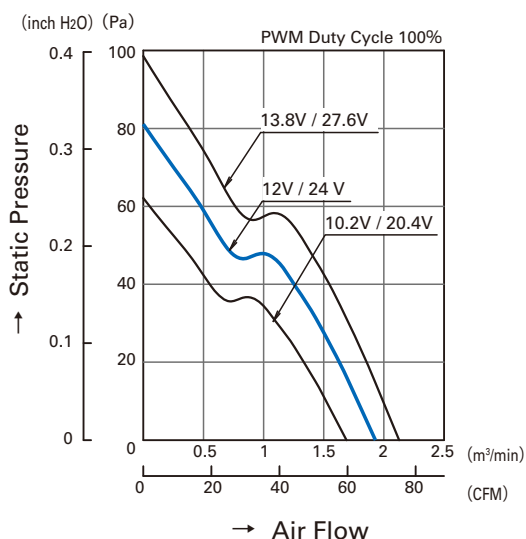
• Operating Voltage Range



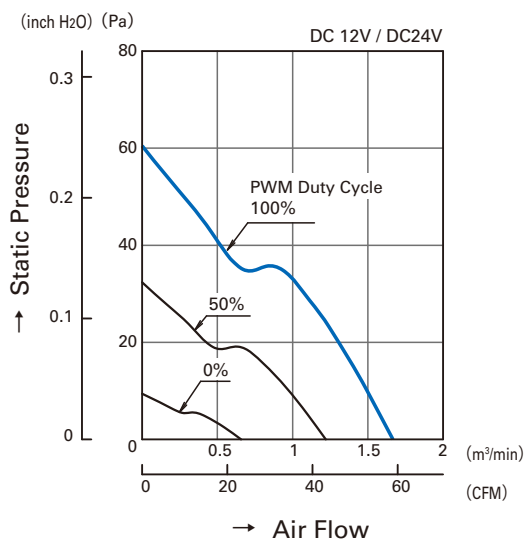
9GA0912P4J03 (031)
9GA0924P4J03 (031)



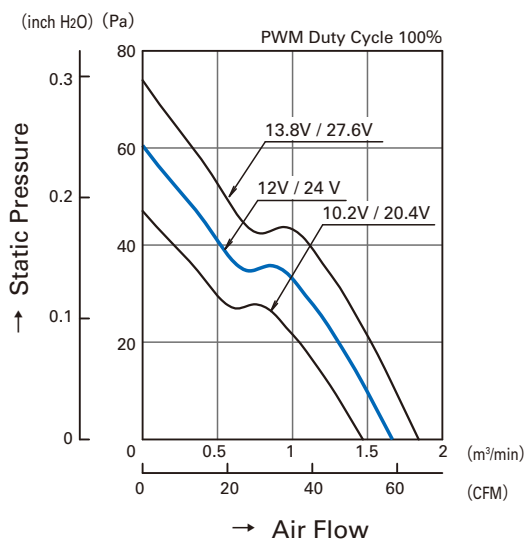
9GA0912P4G03 (031)
9GA0924P4G03 (031)



9GA0912P4G03 (031)
9GA0924P4G03 (031)

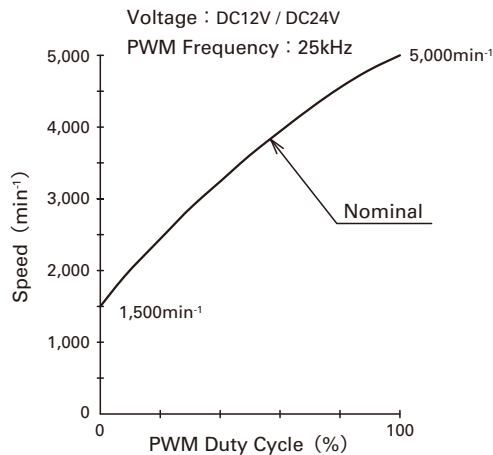


9GA0912P4S03 (031)
9GA0924P4S03 (031)

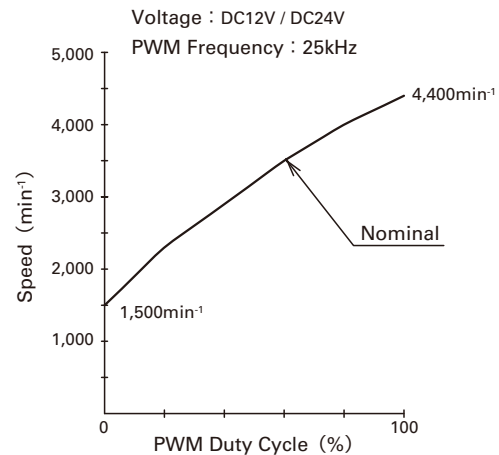


9GA0912P4S03 (031)
9GA0924P4S03 (031)

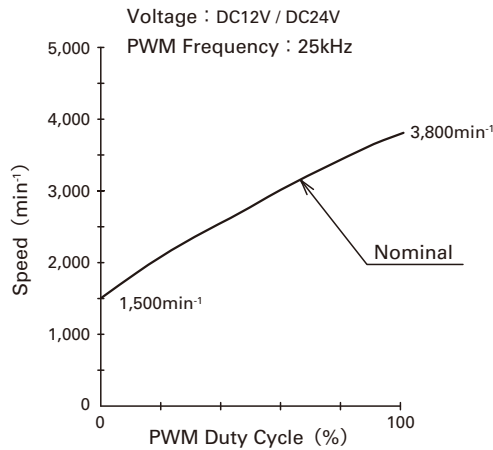
PWM Duty - Speed Characteristics Example



9GA0912P4J03 (031)
9GA0924P4J03 (031)



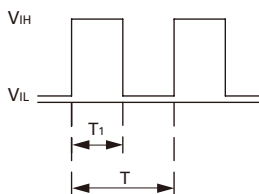
9GA0912P4G03 (031)
9GA0924P4G03 (031)



9GA0912P4S03 (031)
9GA0924P4S03 (031)

PWM Input Signal Example

Input Signal Wave Form



$V_{IH}=4.75V$ to $5.25V$

$V_{IL}=0V$ to $0.4V$

$$\text{PWM Duty Cycle (\%)} = \frac{T_1}{T} \times 100$$

$$\text{PWM Frequency 25 (kHz)} = \frac{1}{T}$$

Source Current : 1mA Max. at control voltage 0V

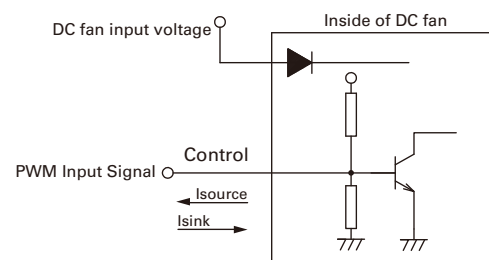
Sink Current : 1mA Max. at control voltage 5.25V

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

Rated Voltage 12V fan

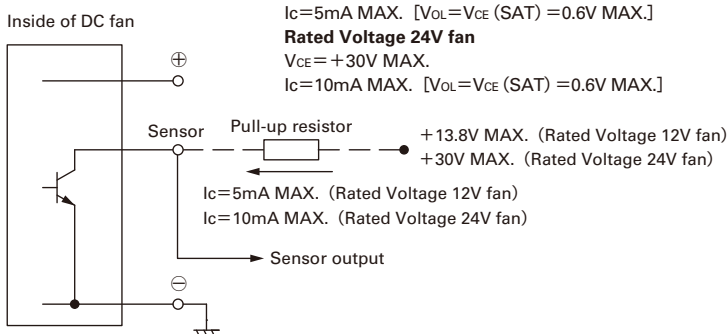
$V_{CE}=+13.8V$ MAX.

$I_C=5mA$ MAX. [$V_{OL}=V_{CE}(\text{SAT})=0.6V$ MAX.]

Rated Voltage 24V fan

$V_{CE}=+30V$ MAX.

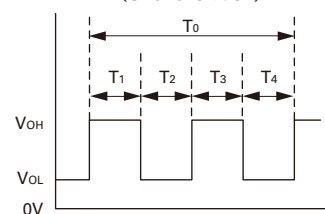
$I_C=10mA$ MAX. [$V_{OL}=V_{CE}(\text{SAT})=0.6V$ MAX.]



Output waveform (Need pull-up resistor)

In case of steady running

(One revolution)

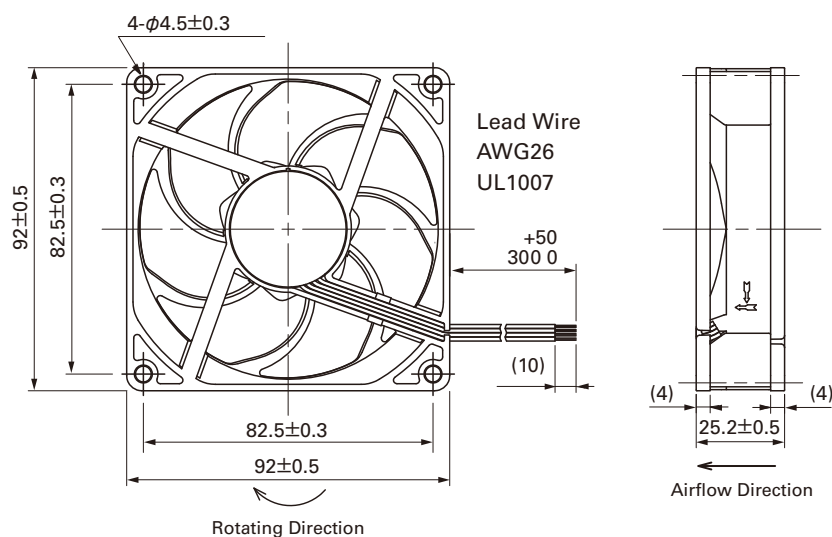


$$T_1 \sim 4 \div (1/4) T_0$$

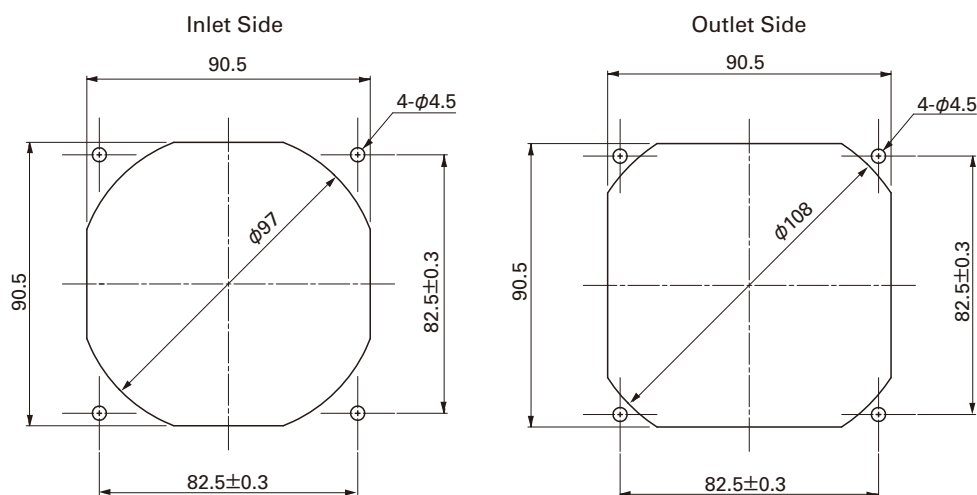
$$T_1 \sim 4 \div (1/4) T_0 = 60/4N \text{ (sec)}$$

$$N = \text{Fan speed (min}^{-1}\text{)}$$

■ 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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