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)

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 [m³/min]	Air Flow [CFM]	Static Pressure [Pa]	Static Pressure [inchH2O]	SPL [dB(A)]	Operating Temperature [℃]	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.

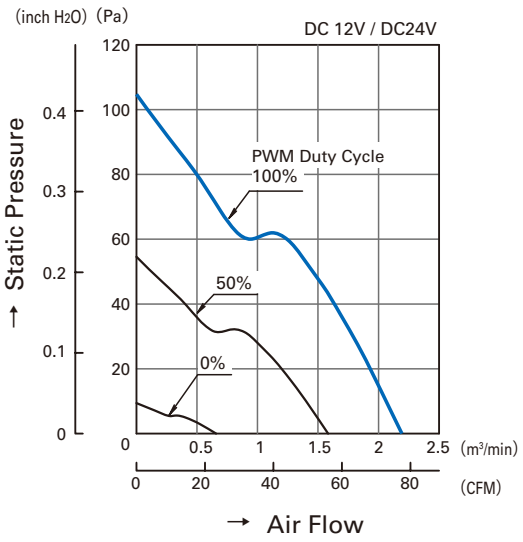
※PWM Frequency:25kHz

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℃, 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℃ to +70℃ (Non-Condensing)
- ☐ Lead Wire ····· ⊕red ⊖black Sensor: yellow Control: brown
- ☐ Mass ····· 125g

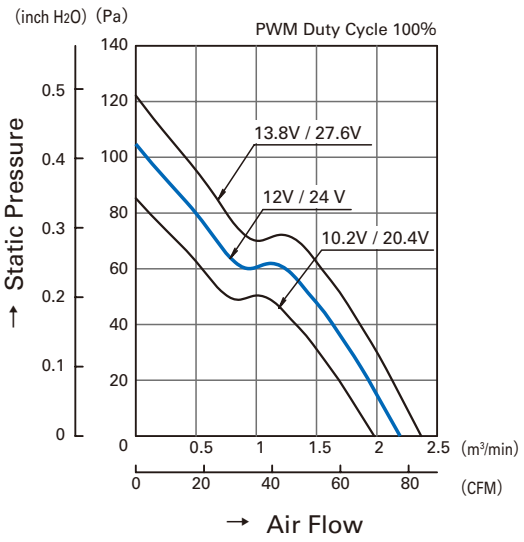
Air Flow and Static Pressure Characteristics

- PWM Duty Cycle

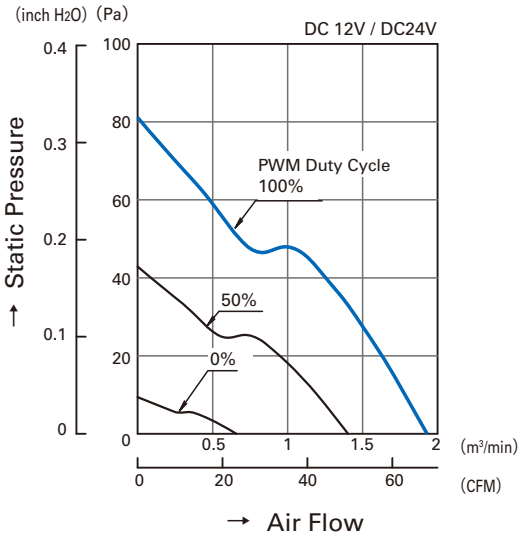


9GA0912P4J03 (031)
9GA0924P4J03 (031)

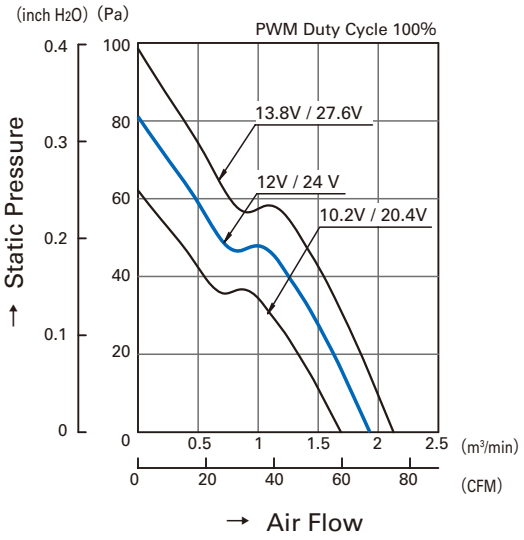
- Operating Voltage Range



9GA0912P4J03 (031)
9GA0924P4J03 (031)



9GA0912P4G03 (031)
9GA0924P4G03 (031)



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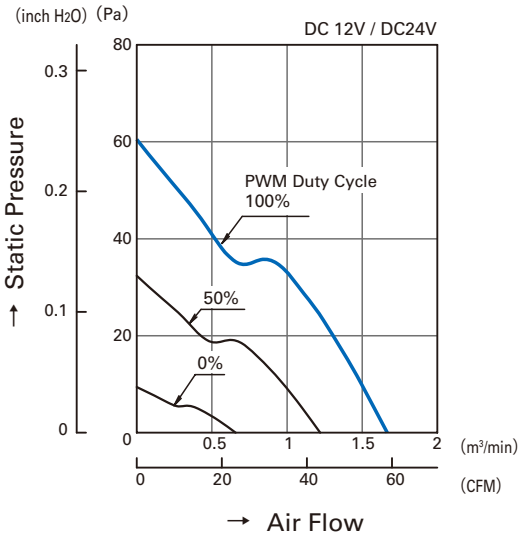
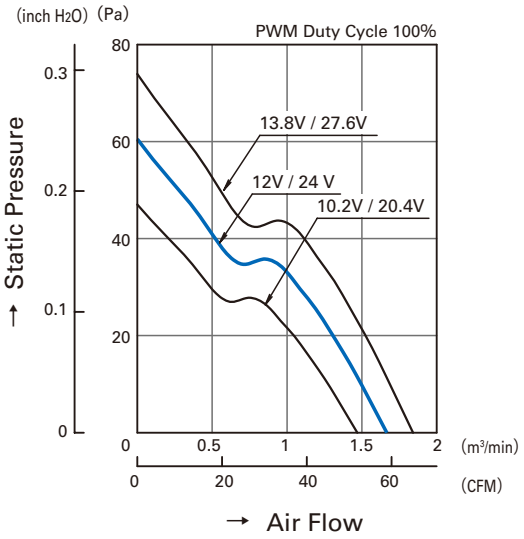
9GA0924P4G03 (031)

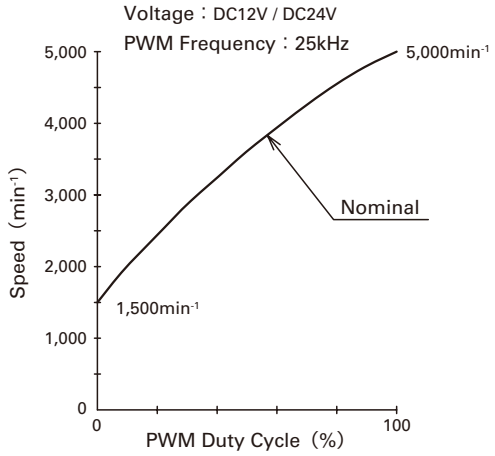


9GA0912P4S03 (031)
9GA0924P4S03 (031)

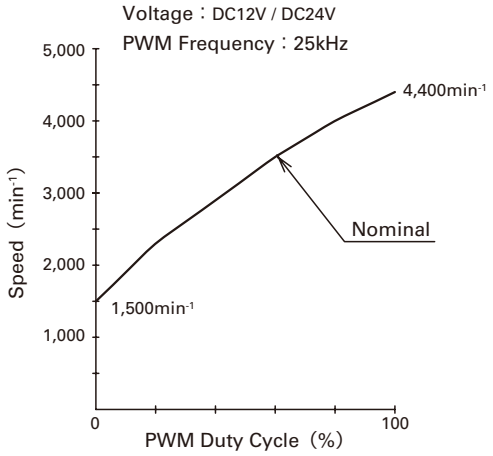


9GA0912P4S03 (031)
9GA0924P4S03 (031)

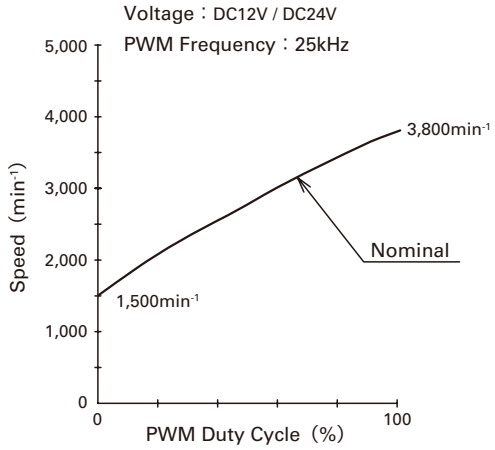
PWM Duty - Speed Characteristics Example



9GA0912P4J03 (031)
9GA0924P4J03 (031)



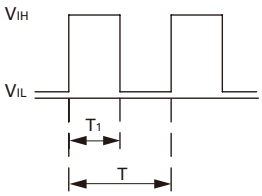
9GA0912P4G03 (031)
9GA0924P4G03 (031)



9GA0912P4S03 (031)
9GA0924P4S03 (031)

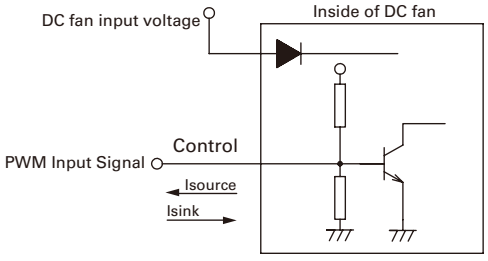
PWM Input Signal Example

Input Signal Wave Form



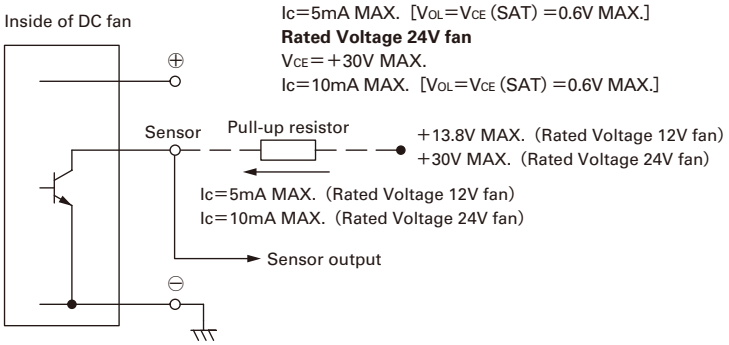
V_{IH}=4.75V to 5.25V
V_{IL}=0V to 0.4V
PWM Duty Cycle（%）= $\frac{T1}{T} \times 100$
PWM Frequency 25（kHz）= $\frac{1}{T}$
Source Current : 1mA Max. at control voltage 0V
Sink Current : 1mA Max. at control voltage 5.25V
Control Terminal Voltage : 5.25V Max. (Open Circuit)
When the control lead wire is 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

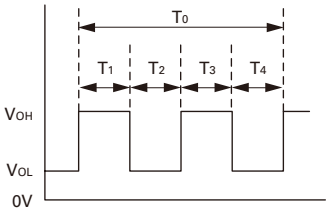
Output circuit : Open collector



Rated Voltage 12V fan
V_{CE}=+13.8V MAX.
Ic=5mA MAX. [V_{OL}=V_{CE} (SAT) =0.6V MAX.]
Rated Voltage 24V fan
V_{CE}=+30V MAX.
Ic=10mA MAX. [V_{OL}=V_{CE} (SAT) =0.6V MAX.]

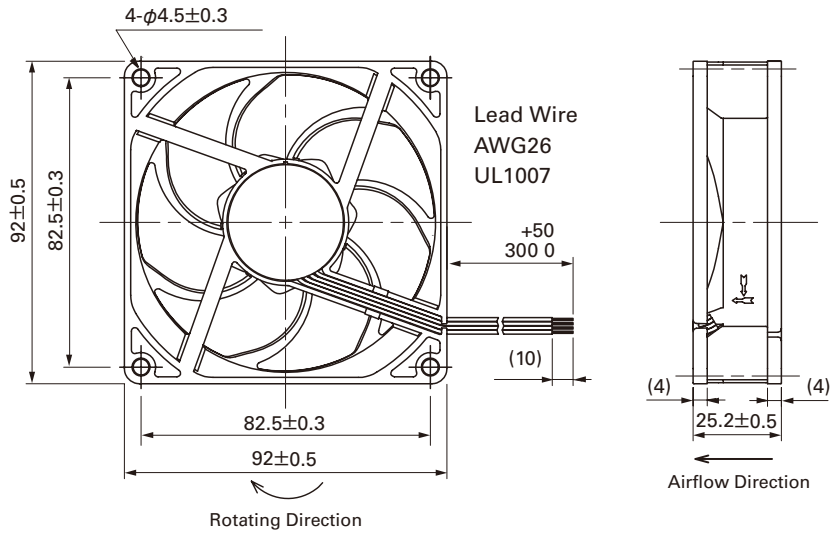
Output waveform （Need pull-up resistor）

In case of steady running
(One revolution)

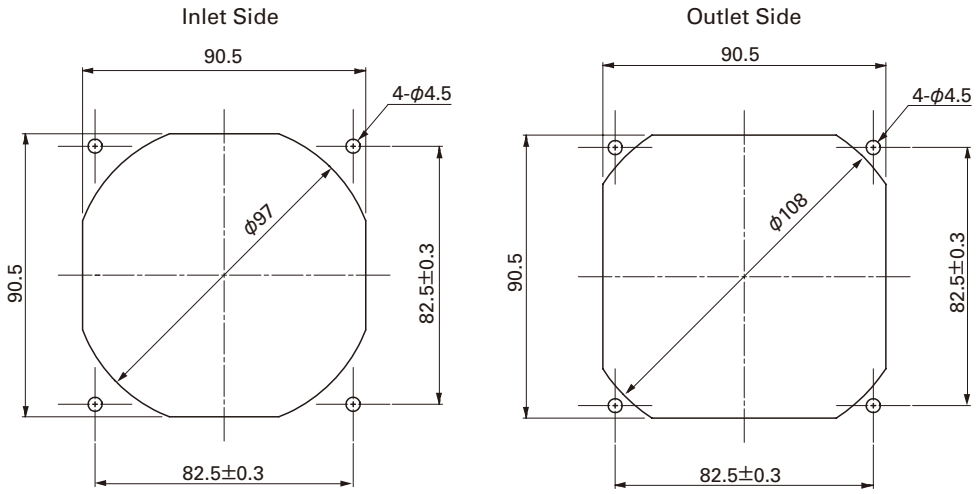


$T_{1\sim4} \fallingdotseq (1/4)\ T_0$
$T_{1\sim4} \fallingdotseq (1/4)\ T_0 = 60/4N$ (sec)
N=Fan speed (min-1)

Dimensions (unit : mm) (With ribs)



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



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