

San Ace 60 GA type

Low power consumption fan

Features

Energy-saving

Power consumption is reduced by approx. 50 % compared with our conventional fan*.

Low sound pressure level

Sound pressure level is reduced by approx. 7dB(A) compared with our conventional fan*.

Large air flow and high static pressure

- Maximum airflow : increased by approx. 80 %
- Maximum static pressure : increased by approx. 180 % compared with our conventional product*.

* Our conventional product is the DC cooling fan 60 × 60 × 20 mm fan "San Ace 60" (Model No: 109P0612S601)
When air flow and static pressure is almost identical.



60×60×20mm

Specifications

With PWM speed control function • With pulse sensor

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] [CFM]	Static Pressure [Pa] [inchH2O]	SPL [dB(A)]	Operating Temperature [°C]	Life Expectancy [h]
9GA0612P6G001	12	10.8 to 13.2	100	0.26	3.12	6,850	0.88 31.1	125 0.50	43	-10 to +70	40,000
9GA0612P6S001			100	0.15	1.80	5,500	0.70 24.7	81 0.33	36		
9GA0624P6G001			100	0.12	2.88	6,850	0.88 31.1	125 0.50	43		
9GA0624P6S001			100	0.07	1.68	5,500	0.70 24.7	81 0.33	36		

Note : Does not rotate when PWM duty cycle is 0%.

※ PWM Frequency:25kHz

With pulse sensor

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Air Flow [m³/min] [CFM]	Static Pressure [Pa] [inchH2O]	SPL [dB(A)]	Operating Temperature [°C]	Life Expectancy [h]
9GA0612H6001	12	10.8 to 13.2	0.09	1.08	4,100	0.52 18.4	45 0.18	29	-10 to +70	60,000
9GA0612M6001			0.05	0.60	2,700	0.34 12.0	20 0.08	18		
9GA0624H6001			0.04	0.96	4,100	0.52 18.4	45 0.18	29		
9GA0624M6001			0.03	0.72	2,700	0.34 12.0	20 0.08	18		

Common Specifications

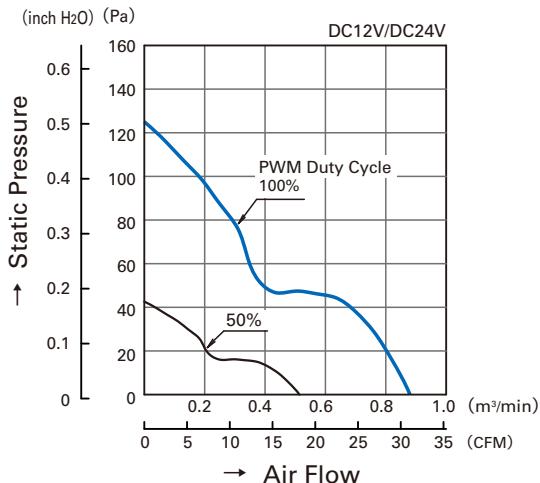
- Material Frame, Impeller: Plastics (Flammability: UL94V-0)
- Life Expectancy Varies for each model
(L10: Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
- Motor Protection System Current blocking function and Reverse polarity protection
- Dielectric Strength 50/60 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(With PWM speed control function • With pulse sensor) : brown
- Mass Approx. 70 g

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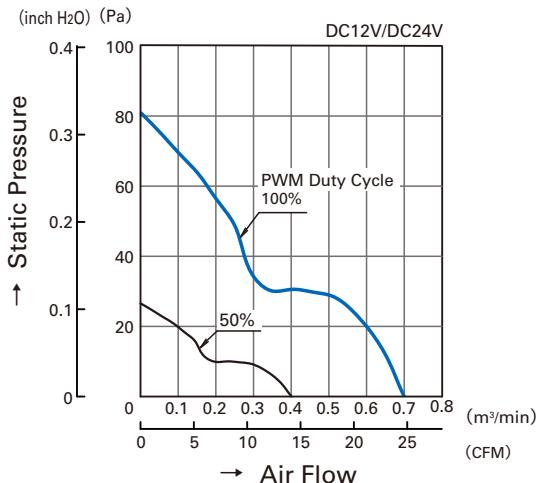
Air Flow - Static Pressure Characteristics

With PWM speed control function • With pulse sensor

- PWM Duty Cycle

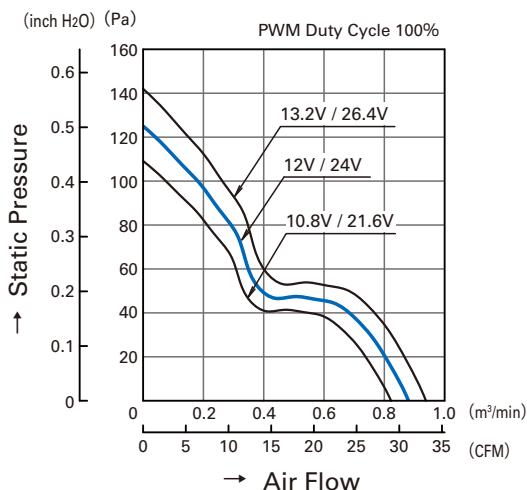


9GA0612P6G001
9GA0624P6G001

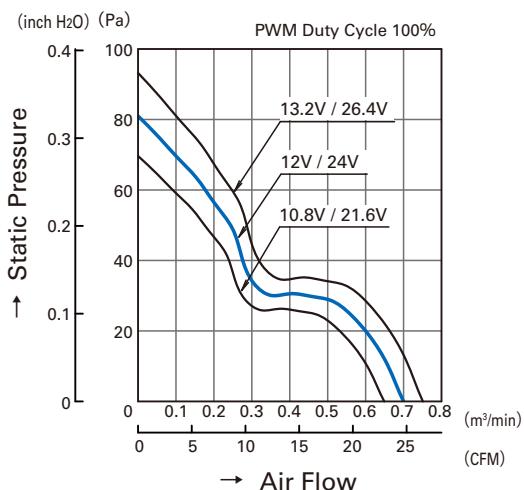


9GA0612P6S001
9GA0624P6S001

- Operating Voltage Range



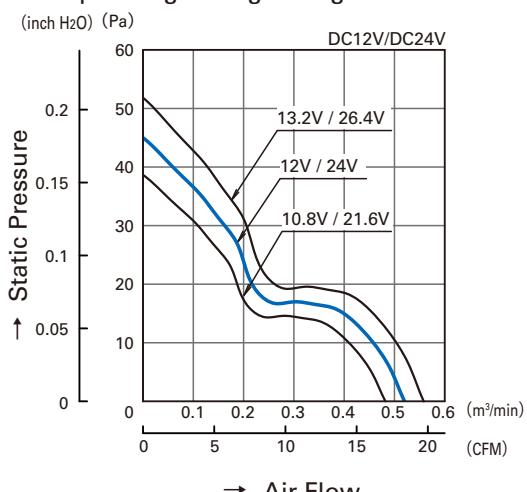
9GA0612P6G001
9GA0624P6G001



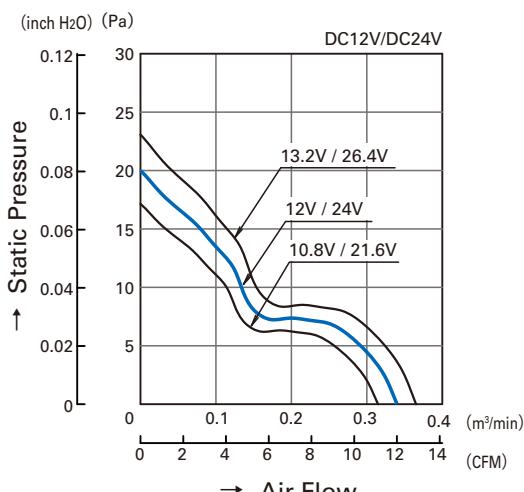
9GA0612P6S001
9GA0624P6S001

With pulse sensor

- Operating Voltage Range

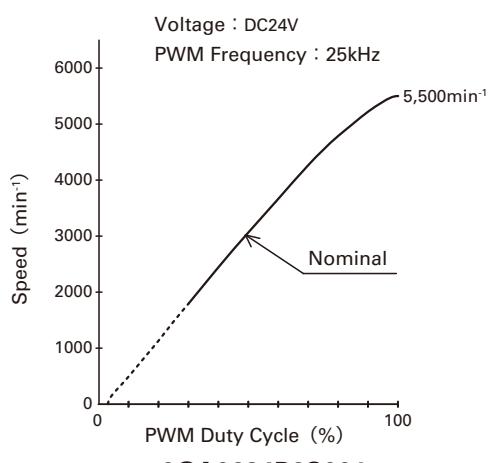
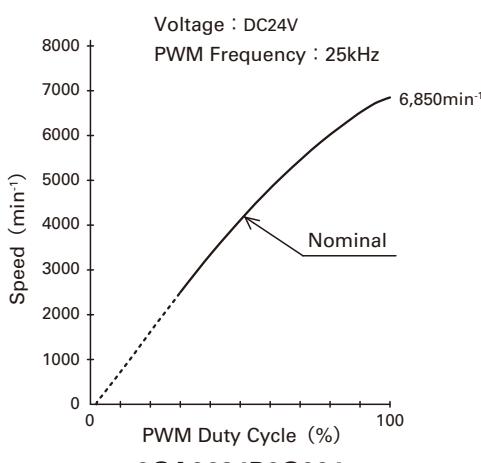
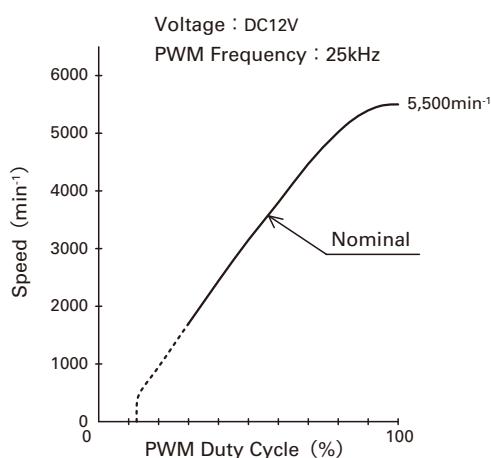
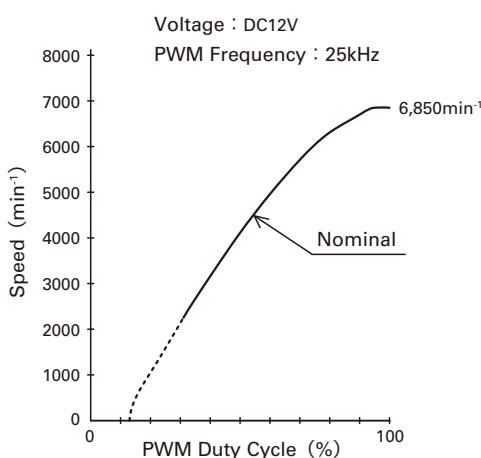


9GA0612H6001
9GA0624H6001



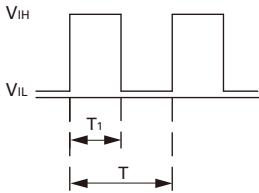
9GA0612M6001
9GA0624M6001

PWM Duty - Speed Characteristics Example



PWM Input Signal Example

Input Signal Wave Form



V_{IH}=4.75V to 5.25V

V_{IL}=0V to 0.4V

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

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

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

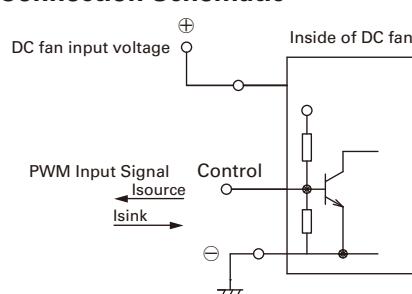
Sink Current : 1mA Max. at control voltage 5.25V

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.

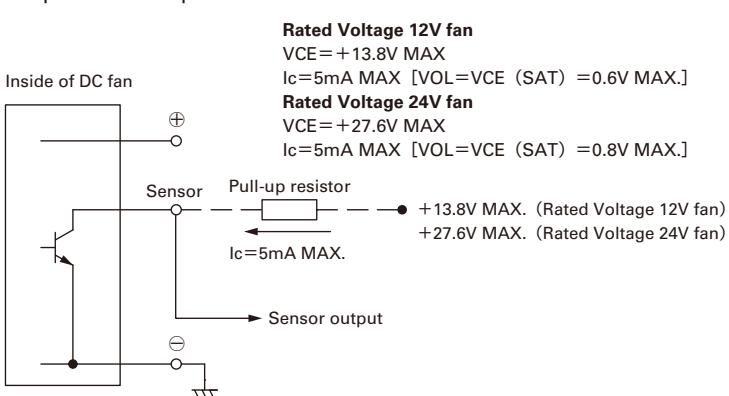
This fan speed should be controlled by PWM input signal
of either TTL input or open collector, drain input.

Connection Schematic



Specification for Pulse Sensor

Output circuit : Open collector



Output waveform (Need pull-up resistor)

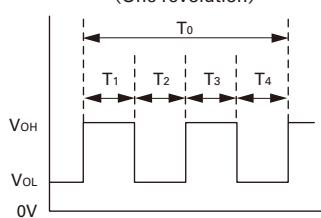
In case of steady running

(One revolution)

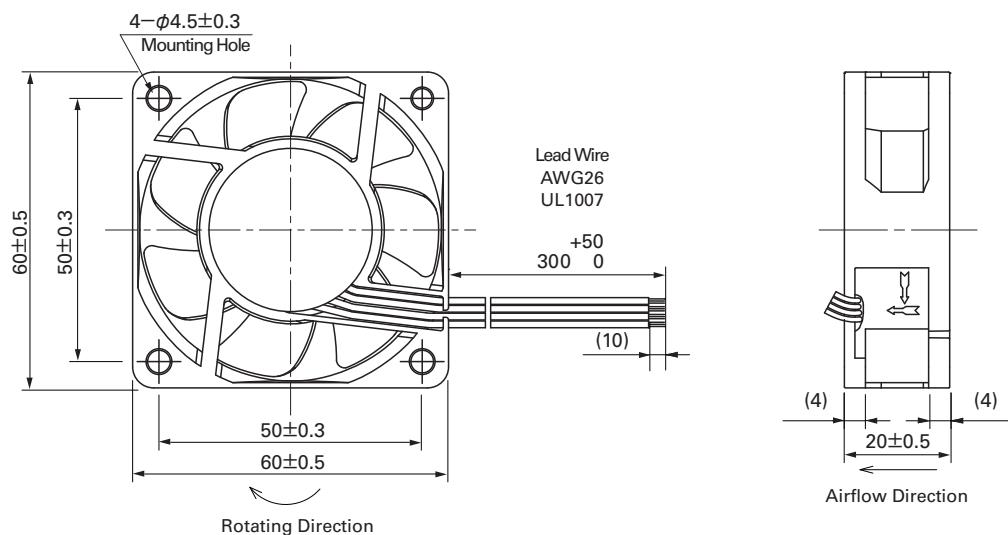
$$T_{1-4} \doteq (1/4) T_0$$

$$T_{1-4} \doteq (1/4) T_0 = 60/4N \text{ (sec)}$$

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

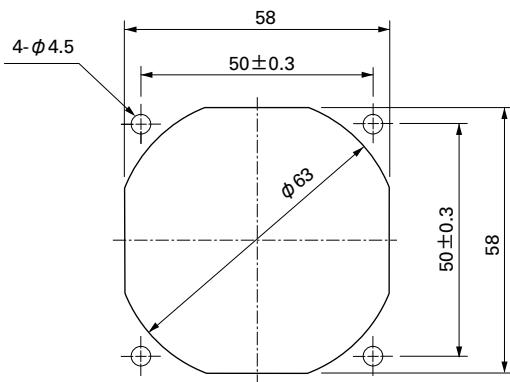


Dimensions (unit : mm) (With PWM speed control function · With pulse sensor)



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

Inlet Side,Outlet Side



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.