

San Ace 70 9GA type

Low Power Consumption Fan

■ Features

Low Power Consumption

Realizes a low power consumption of 31.2 W.*

High Static Pressure and High Air Flow

Achieves a maximum static pressure of 860 Pa, and a maximum air flow of 2.65 m³/min.*

Suitable for 2U Devices

Measuring 70 mm square, this new fan is ideal for 2U sized equipment.

* : Specification of Model No. 9GA0712P1G001. When PWM duty cycle is 100%.



70×70×38mm

■ Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM Duty Cycle <small>Note1</small> [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Air Flow [m ³ /min] [CFM]	MAX. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life <small>Note2</small> [h]
9GA0712P1G001(0011)	12	10.8 to 13.2	100	2.6	31.2	16,500	2.65 93.6	860 3.45	65	-20 to +70	40,000/60°C (70,000/40°C)
			0	0.16	1.92	4,400	0.70 24.7	61 0.24	30		
9GA0712P1H001(0011)			100	1.1	13.2	12,000	1.92 67.8	455 1.83	57		
			0	0.07	0.84	2,500	0.40 14.1	20 0.08	19		

The numbers in () represent ribless models

Note1 : PWM Frequency : 25kHz

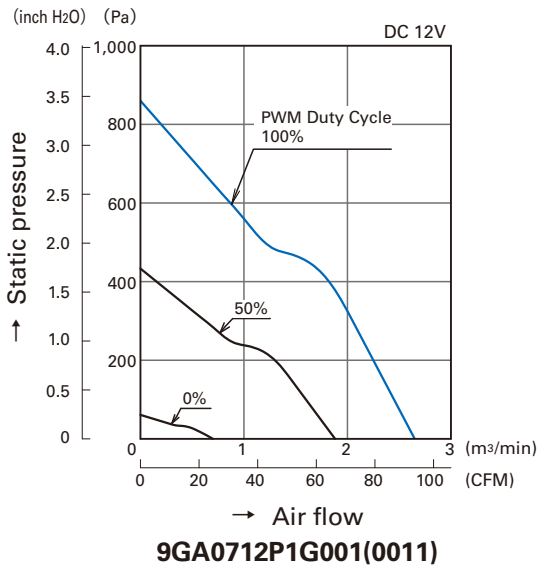
Note2 : Expected life at 40 degreeC ambient is just reference value.

■ Common Specifications

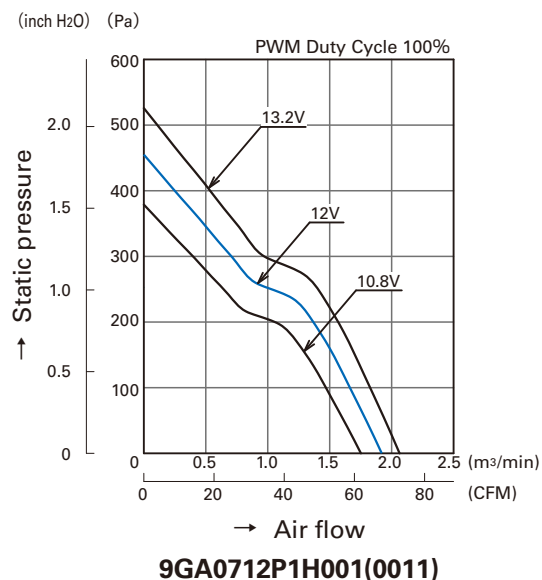
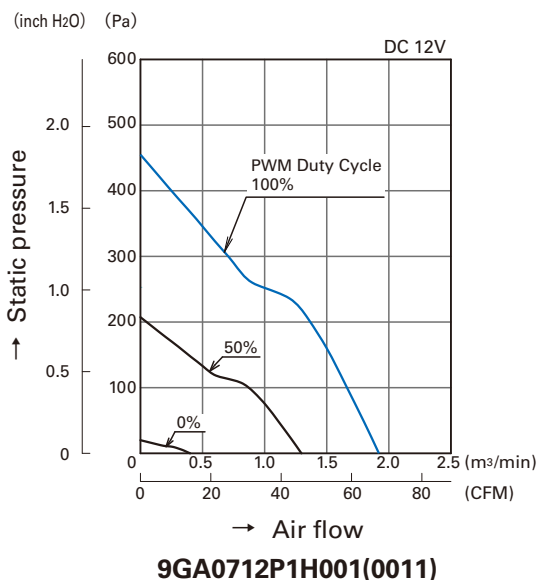
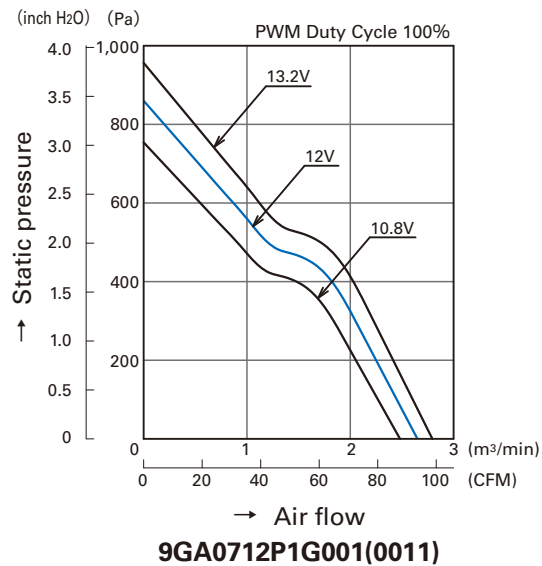
- Material Frame, Impeller : Plastics (Flammability: UL94V-0)
- Expected Life Varies for each model
(L10: Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
- Motor Protection System Current blocking function and Reverse polarity protection
- Dielectric Strength 50/60 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 Approx. 170g

Air Flow - Static Pressure Characteristics

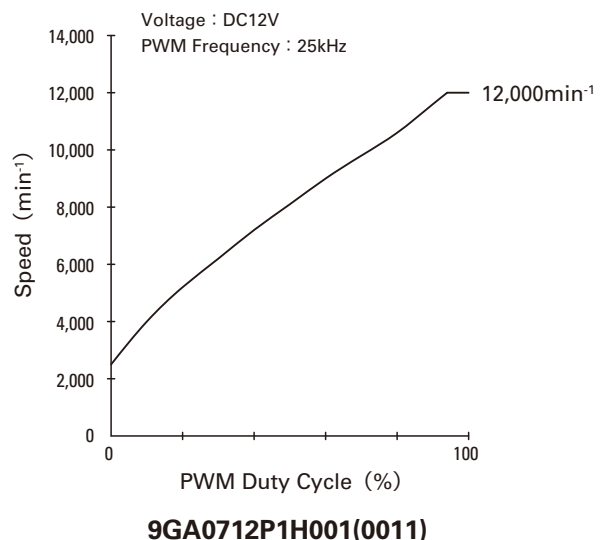
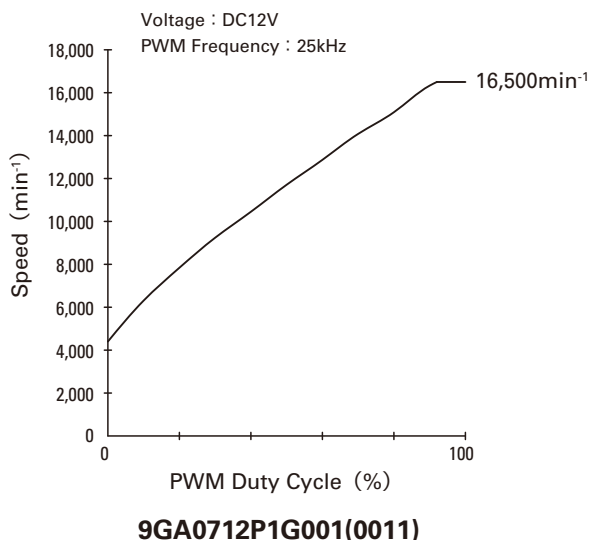
• PWM Duty Cycle



• Operating Voltage Range

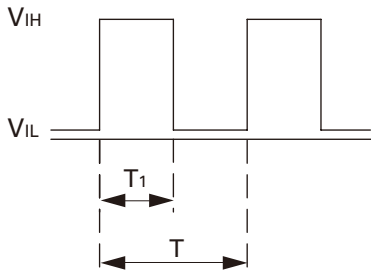


PWM Duty - Speed Characteristics Example



PWM Input Signal Example

Input Signal Waveform



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

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

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

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

Source Current (I_{source}) : 1mA Max. at control voltage 0V

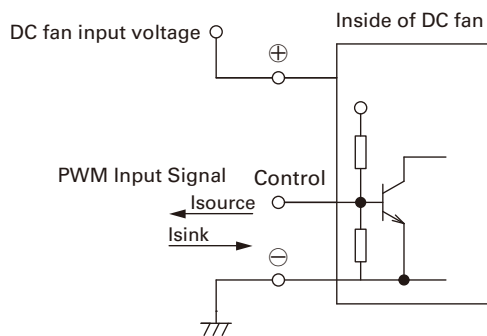
Sink Current (I_{sink}) : 1mA Max. at control voltage 5.25V

Control Terminal Voltage : 5.25V Max. (Open Circuit)

When the control lead wire is open, speed is same as one at 100% PWM duty cycle.

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

Example of Connection Schematic

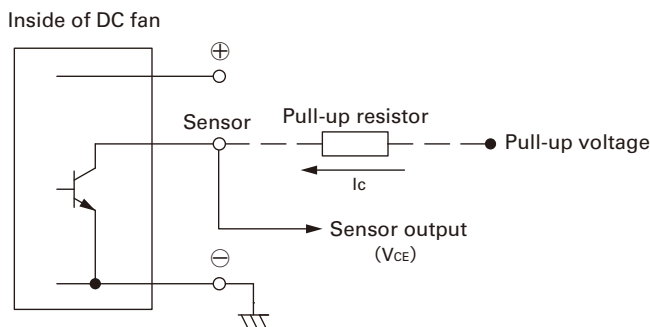


Specifications for Pulse Sensors

Output circuit : Open collector

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

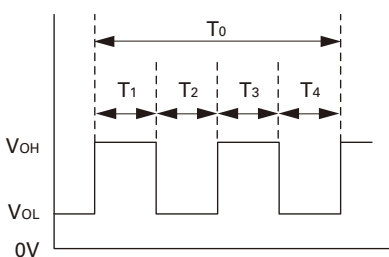
$I_c = 5mA$ MAX. [$V_{CE(SAT)} = 0.6V$ MAX.]



Output Waveform (Need pull-up resistor)

In case of steady running

(One revolution)

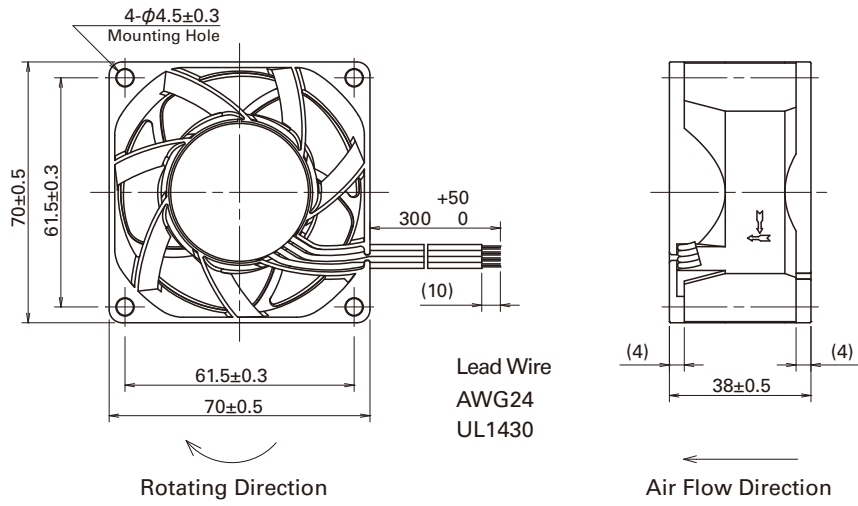


$T_{1\sim4} \doteq (1/4) T_0$

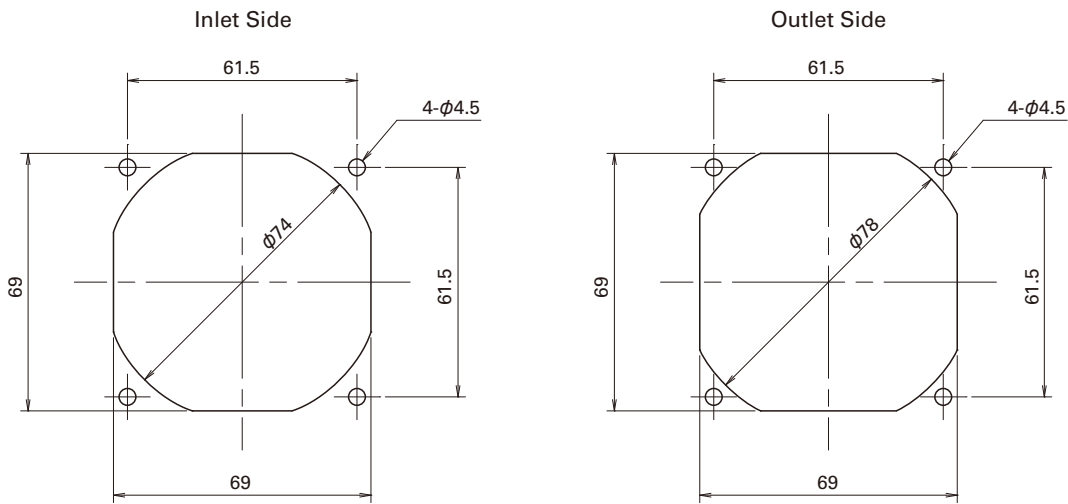
$T_{1\sim4} \doteq (1/4) T_0 = 60/4N$ (sec)

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

Dimensions (unit : mm) (With ribs)

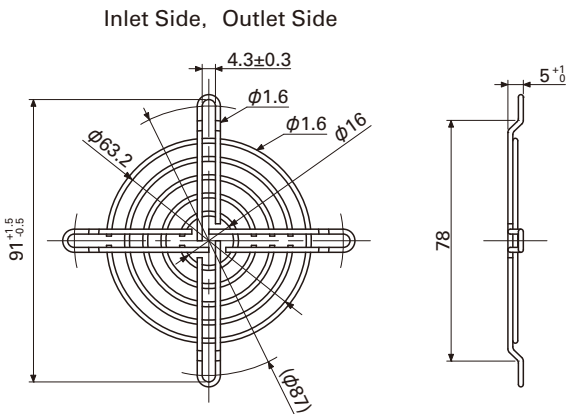


Reference Dimension of Mounting Holes and Vent Opening (unit : mm)



Option

Finger guards
Model : 109-1128 Surface treatment : Nickel-chrome plating Color (silver)



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●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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