

San Ace 40 GA type

High air flow and low power consumption fan

High air flow and low power consumption fan 40mm

Features

Energy-saving

Power consumption is reduced to approx. 46 % compared with our conventional fan*1.

High static pressure and High air flow

Max. static pressure: increased to approx. 2 times
Max. air flow: increased to approx. 1.8 times compared with our conventional product*2.

Low sound pressure level

Sound pressure level is ideal while achieved air flow is increased compared with our conventional product *1.



*1: Specification of Model No. 9GA0412H7001. our conventional product is 40sq.x15mm thick. San Ace 40, Model No. 109P0412H701.

*2: Specification of Model No. 9GA0412P7G001. our conventional product is 40sq.x15mm thick. San Ace 40, Model No. 109P0412S701.

40×40×15mm

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 [m ³ /min] [CFM]		Static Pressure [Pa] [inchH ₂ O]		SPL [dB(A)]	Operating Temperature [°C]	Life Expectancy [h]
9GA0412P7G001	12	10.2 to 13.8	100	0.17	2.04	13,100	0.36	12.7	192	0.77	42	-10 to +70	40,000/60°C (70,000/40°C)

Note : Does not rotate when PWM duty cycle is 0%.
Expected life at 40 degreeC ambient is just reference value.

※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 [m ³ /min] [CFM]		Static Pressure [Pa] [inchH ₂ O]		SPL [dB(A)]	Operating Temperature [°C]	Life Expectancy [h]
9GA0412G7001	12	7 to 13.8	0.17	2.04	13,100	0.36	12.7	192	0.77	42	-10 to +70	40,000/60°C (70,000/40°C)
9GA0412H7001			0.06	0.72	7,300	0.2	7.1	59.6	0.24	28		

Expected life at 40 degreeC ambient is just reference value.

Common Specifications

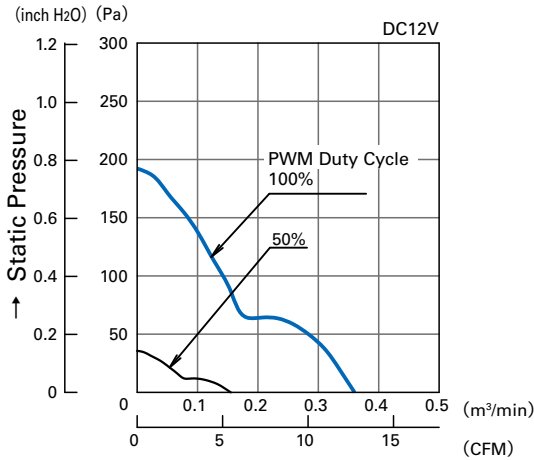
- Material Frame, Impeller: Plastics (Flammability: UL94V-0)
- Life Expectancy Varies for each model
(L10: Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
- Motor Protection System Current blocking function and Reverse polarity protection
- Dielectric Strength 50/60 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) : brown
- Mass Approx. 28g

40mm

Air Flow - Static Pressure Characteristics

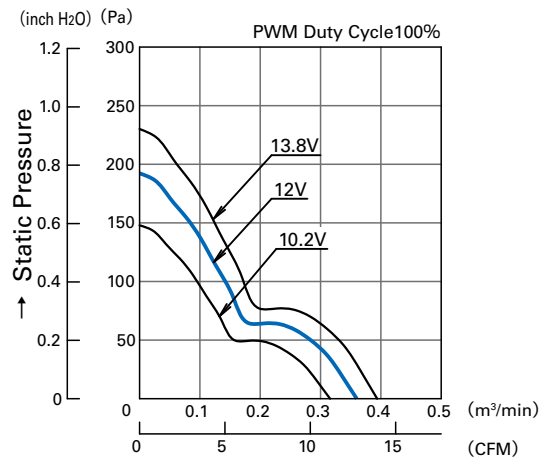
With PWM speed control function · With a pulse sensor

- PWM Duty Cycle



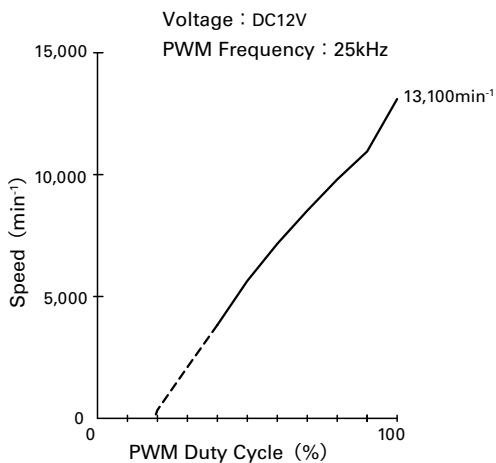
→ Air Flow
9GA0412P7G001

- Operating Voltage Range



→ Air Flow
9GA0412P7G001

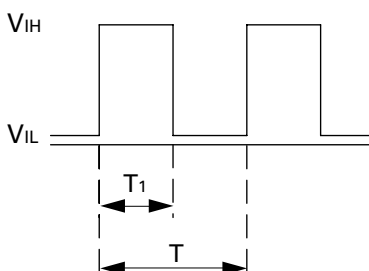
PWM Duty - Speed Characteristics Example



9GA0412P7G001

PWM Input Signal Example

Input Signal Wave Form



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

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

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

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)

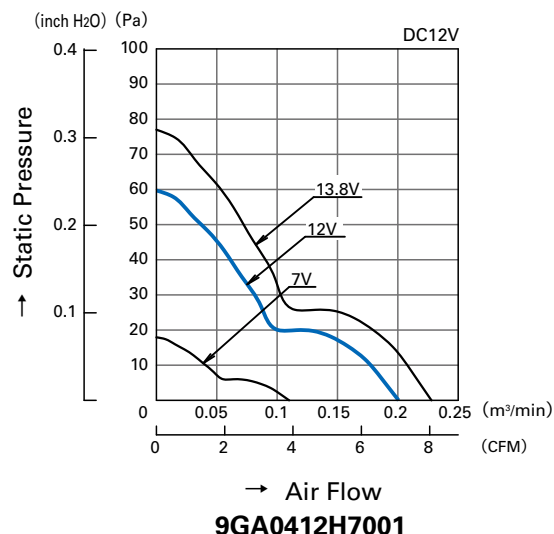
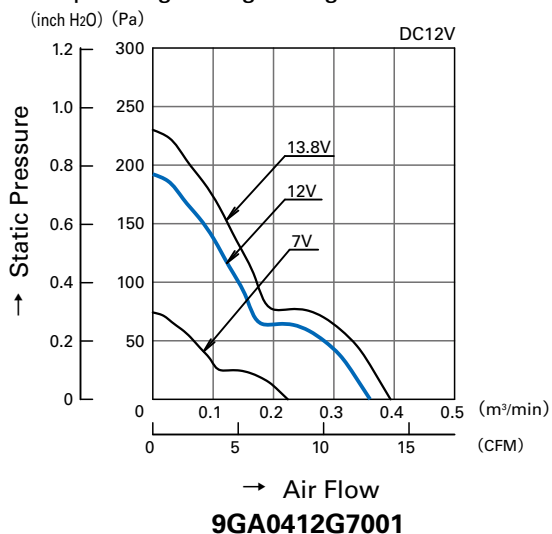
When the control lead wire is open, speed is same as one at 100% PWM duty cycle.

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

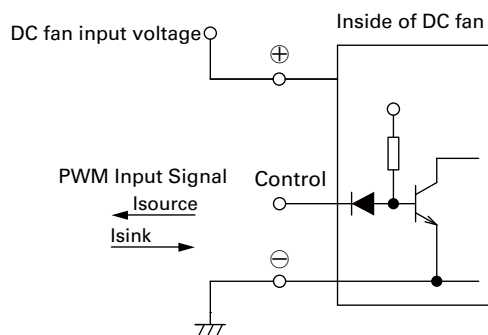
Air Flow - Static Pressure Characteristics

With a pulse sensor

- Operating Voltage Range



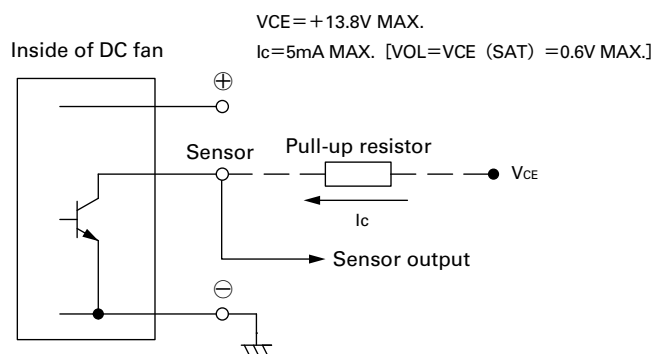
Connection Schematic



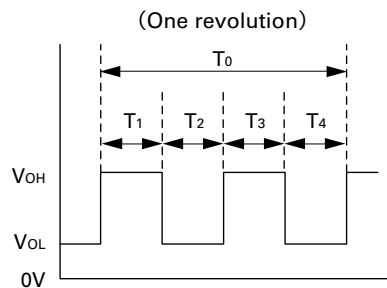
Specifications for Pulse Sensors

Output circuit : Open collector

Output waveform (Need pull-up resistor)



In case of steady running

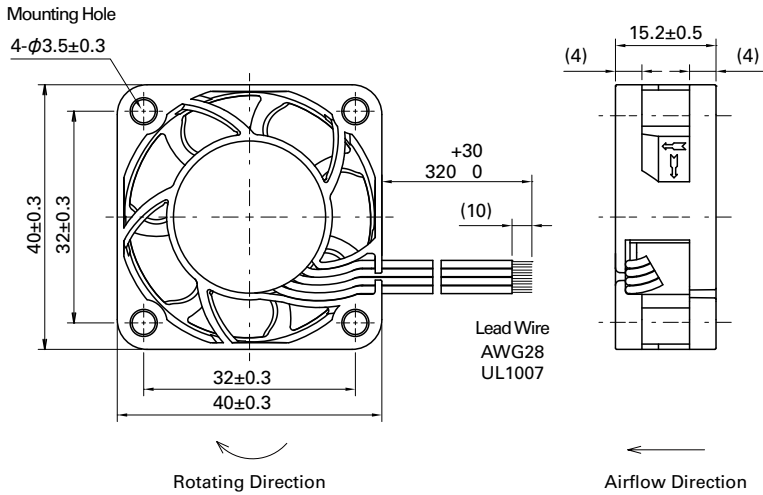


$$T_{1\sim 4} \doteq (1/4) T_0$$

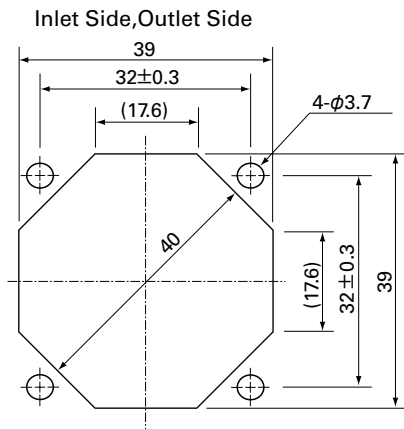
$$T_{1\sim 4} \doteq (1/4) T_0 = 60/4N \text{ (sec)}$$

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

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



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



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.