San Ace 40 GA type

Large air flow and low power consumption fan

Features

Large air flow and high static pressure

Maximum air flow : increased by approx. 20%
Maximum static pressure : increased by approx. 107 %
compared with our conventional fan*1, 2.

Energy-saving

Power consumption is reduced by approx. 50 %
compared with our conventional fan*1, 3.

Low noise

Sound pressure level is reduced by approx. 4dB(A)
compared with our conventional fan*1, 3.

*1 Our conventional product is the DC cooling fan
40 × 40 × 20 mm fan "San Ace 40" (Model No: 109P0412G601)
*2 When model No. 9GA0412P6G001 is used.
*3 When model No. 9GA0412P6H001 is used.
When air flow and static pressure is almost identical.

ECO PRODUCTS

40×40×20mm

Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM Duty Cycle [%] Note)	Rated Current [A]	Rated Input [W]	Rated Speed [min-1]	Air Flow [m3/min]	[CFM]	Static Pressure [Pa]	[inchH2O]	SPL [dB(A)]	Operating Temperature [℃]	Life Expectancy [h]
9GA0412P6G001	12	10.2 to 13.8	100	0.23	2.76	16,000	0.42	14.8	318	1.28	47	−10 to +70	40,000
			0	0.04	0.48	3,800	0.10	3.5	17.9	0.07	14		
9GA0412P6H001			100	0.14	1.68	12,400	0.33	11.7	191	0.77	40		
			0	0.04	0.48	3,800	0.10	3.5	17.9	0.07	14		

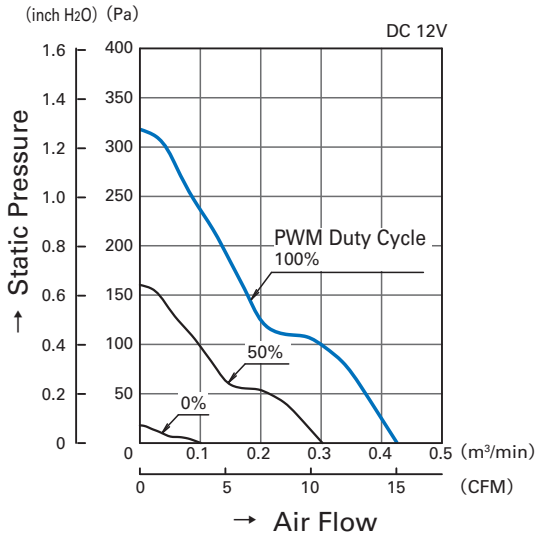
Note : PWM Frequency : 25kHz

Common Specifications

- ☐ Material ····· Frame, Impeller : Plastics (Flammability: UL94V-0)
- ☐ 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 ····· Approx. 35g

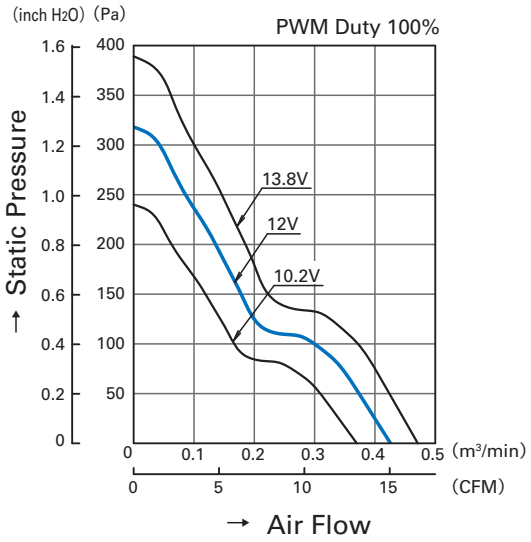
Air Flow - Static Pressure Characteristics

• PWM Duty Cycle

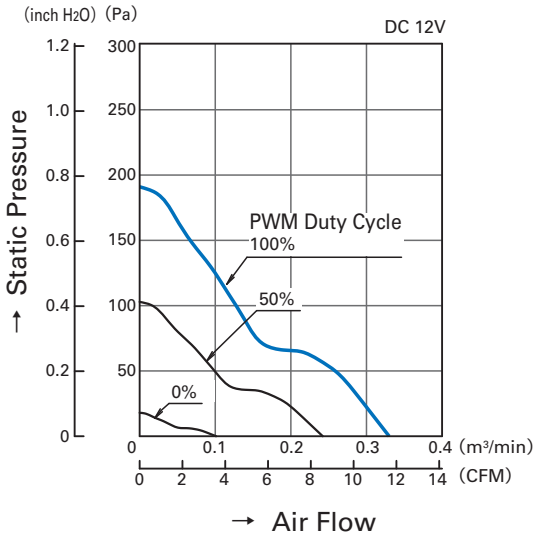


9GA0412P6G001

• Operating Voltage Range



9GA0412P6G001



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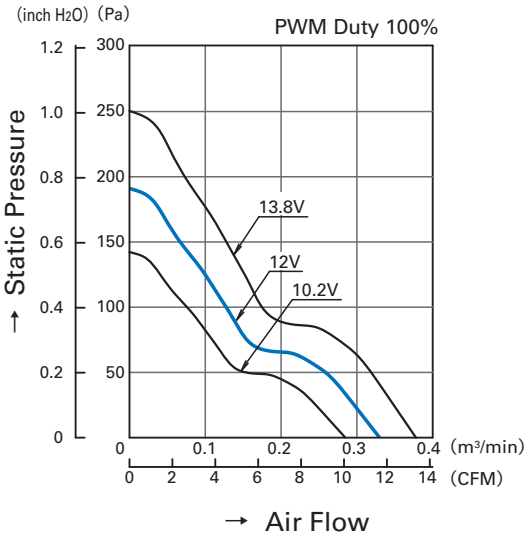
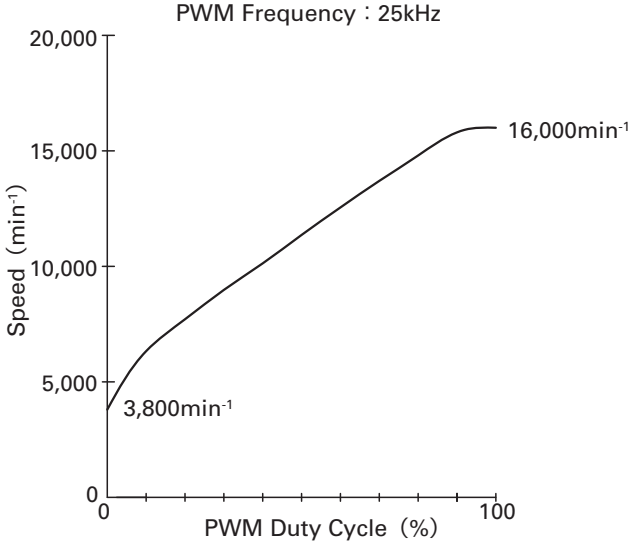


9GA0412P6H001

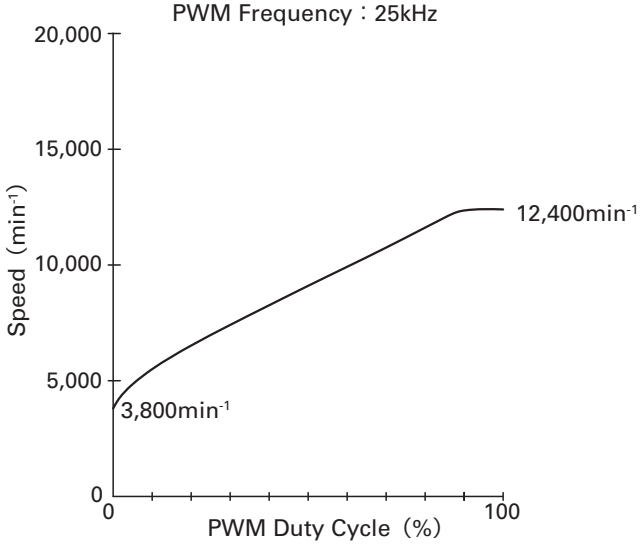
PWM Duty - Speed Characteristics Example

Voltage : DC12V
PWM Frequency : 25kHz



9GA0412P6G001

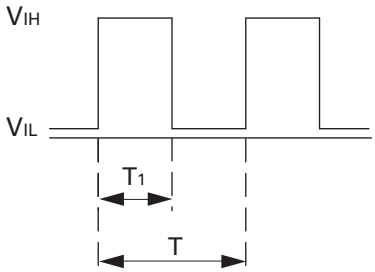
Voltage : DC12V
PWM Frequency : 25kHz



9GA0412P6H001

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

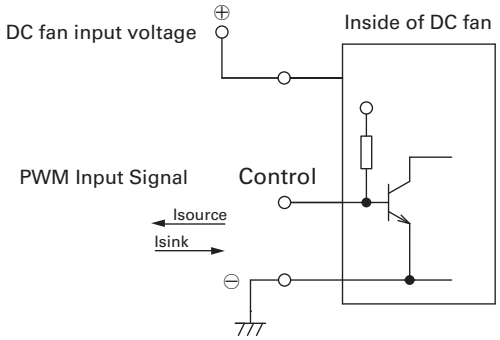
Sink Current : 1mA Max. at control voltage 5.25V

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.

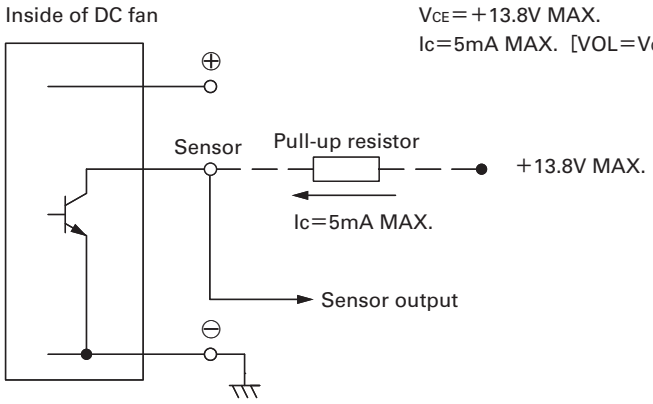
This fan speed should be controlled by PWM input signal
of either TTL input or open collector, drain input.

Connection Schematic



Specifications for Pulse Sensors

Output circuit : Open collector

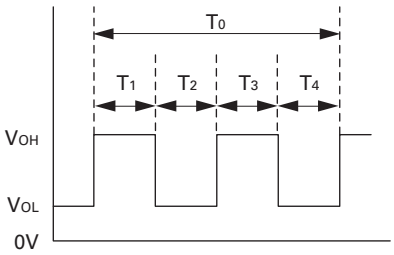


V_{CE} = +13.8V MAX.
Ic=5mA MAX. [VOL=V_{CE} (SAT) =0.6V MAX.]

Output waveform (Need pull-up resistor)

In case of steady running

(One revolution)

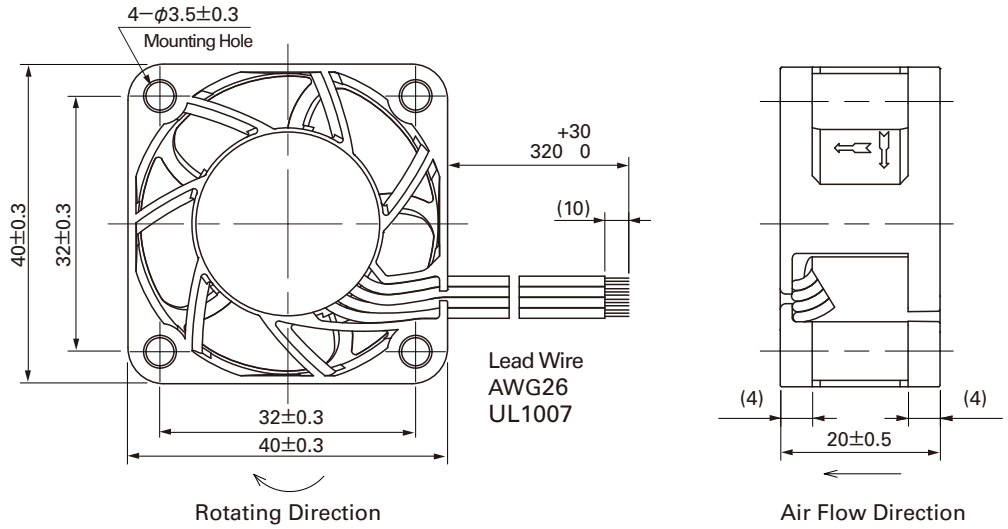


$T_{1\sim4} \fallingdotseq (1/4)\ T_0$

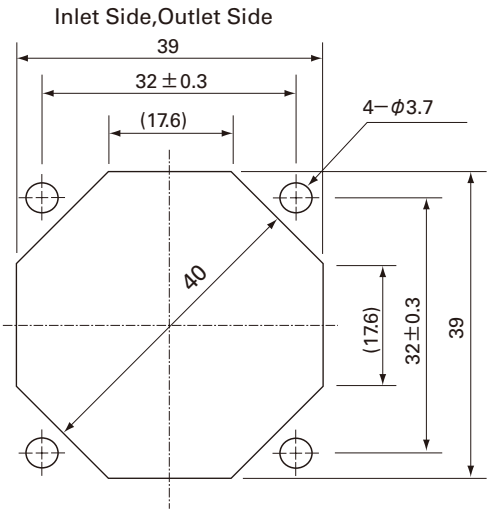
$T_{1\sim4} \fallingdotseq (1/4)\ T_0 = 60/4N$ (sec)

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

Dimensions (unit : mm)



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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