San Ace 120 GV type

Features

Large air flow and high static pressure

・Maximum air flow : increased by approx. 31%
・Maximum static pressure : increased by approx. 87% compared with our conventional product*.

Energy-saving design

・Power consumption : reduced by approx. 12% with airflow performance that is identical to our conventional product*.

* Our conventional product is the DC cooling fan : 120×120×25 mm thick fan "San Ace 120" G type (9G1212G401)

120×120×25mm

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 Range (℃)	Life Expectancy (h)
9GV1212P4G01 (011)	12	10.2 to 13.8	100	1.68	20.16	5,100	4.83	171	224	0.90	58	−10 to +70	40,000
			0	0.18	2.16	1,650	1.56	55.1	23.5	0.09	30		
9GV1248P4G01 (011)	48	40.8 to 60.0	100	0.42	20.16	5,100	4.83	171	224	0.90	58		
			0	0.07	3.36	1,650	1.56	55.1	23.5	0.09	30		
9GV1248P4H01 (011)			100	0.33	15.84	4,600	4.35	154	182	0.73	55		
			0	0.07	3.36	1,650	1.56	55.1	23.5	0.09	30		

The numbers in( )represent ribless models.

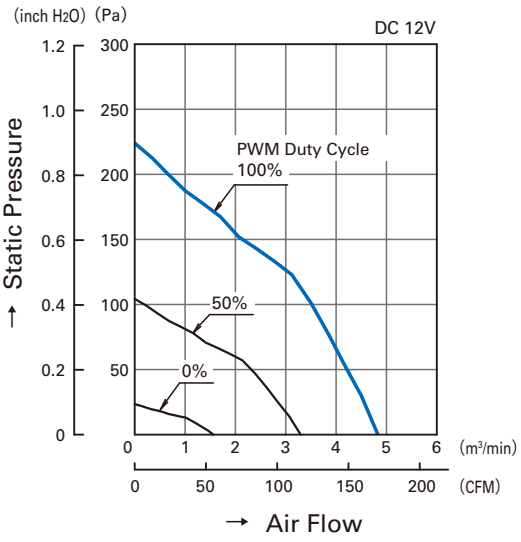
※PWM Frequency : 25kHz

Common Specifications

☐Material ····· Frame: Plastics (Flammability: UL94V-0) , Impeller: Plastics (Flammability: 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 Range ····· Varies for each model (Non-condensing)
☐Lead Wire ····· ⊕red ⊖black Sensor: yellow Control: brown
☐Mass ····· 260g

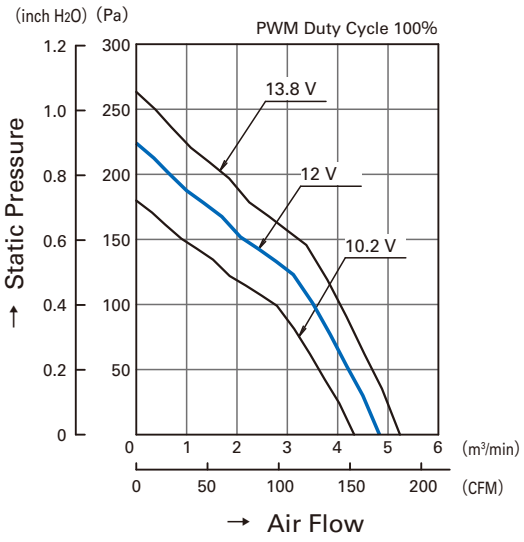
Air Flow and Static Pressure Characteristics

• PWM Duty Cycle



9GV1212P4G01 (011)

• Operating Voltage Range



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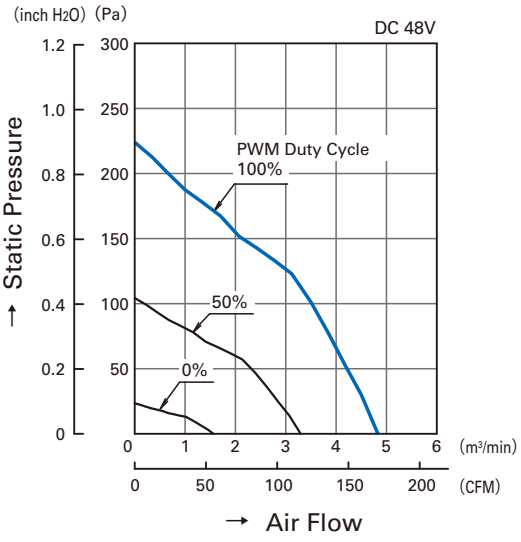

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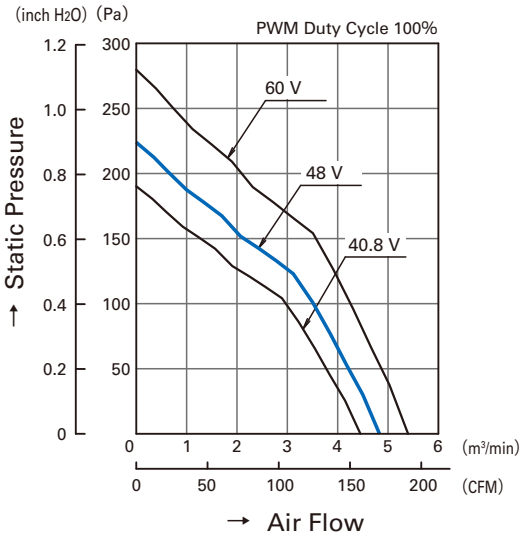

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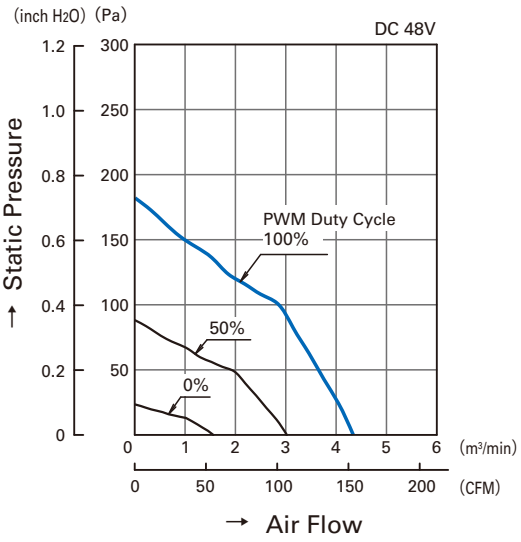

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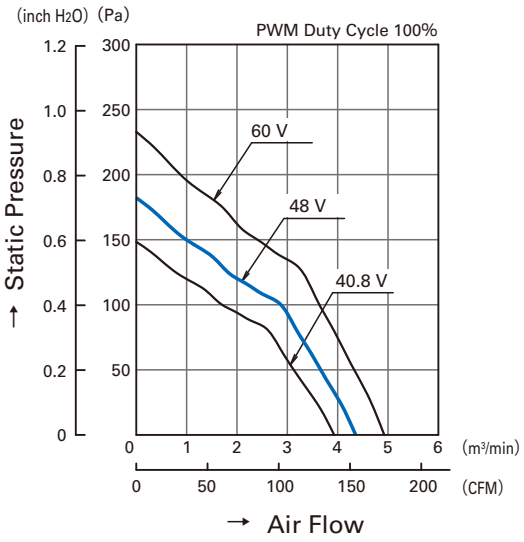
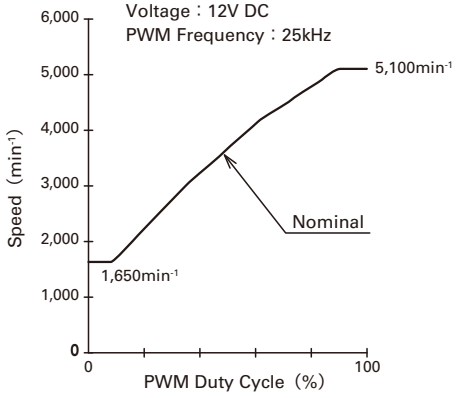


9GV1248P4H01 (011)

PWM Duty - Speed Characteristics Example



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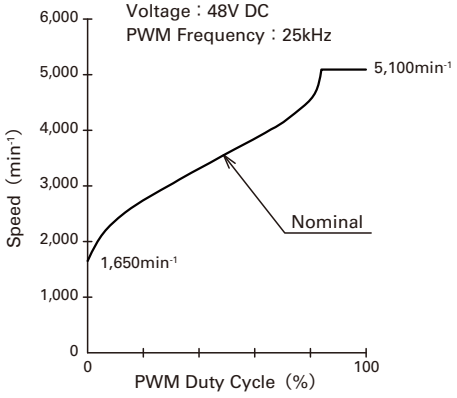

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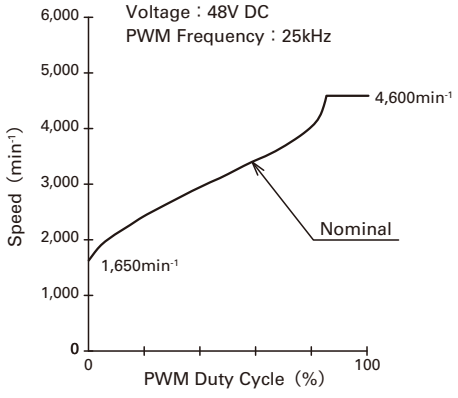
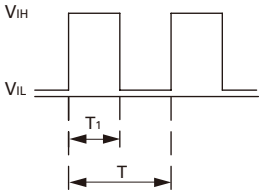


9GV1248P4H01 (011)

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（Isource）: 1mA Max. at control voltage 0V

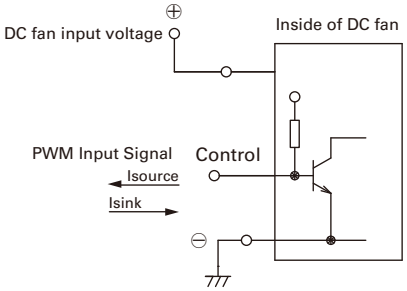
Sink Current（Isink）: 1mA Max. at control voltage 5.25V

Control Terminal Voltage : 5.25V Max. (Rated voltage 12V fan)
8.0V Max. (Rated voltage 48V fan)
(Open Circuit)

When the control lead wire is no connecting,
the speed is the same speed as at 100% of PWM cycle.

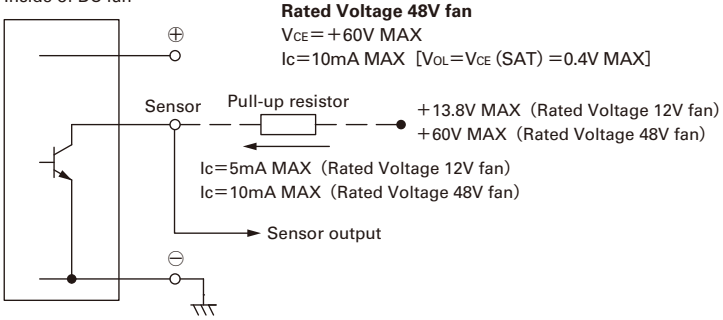
This fan speed should be controlled by PWM input signal
of either TTL input or open collector, drain input.

Connection Schematic



Specifications for Pulse Sensors

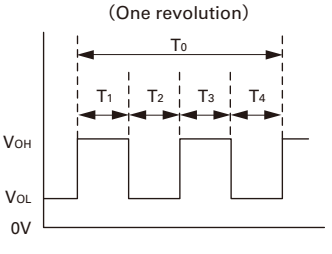
Output circuit : Open collector



Rated Voltage 12V fan
V_{CE}=+13.8V MAX
Ic=5mA MAX [V_{OL}=V_{CE} (SAT) =0.6V MAX]
Rated Voltage 48V fan
V_{CE}=+60V MAX
Ic=10mA MAX [V_{OL}=V_{CE} (SAT) =0.4V MAX]

Output waveform （Need pull-up resistor）

In case of steady running

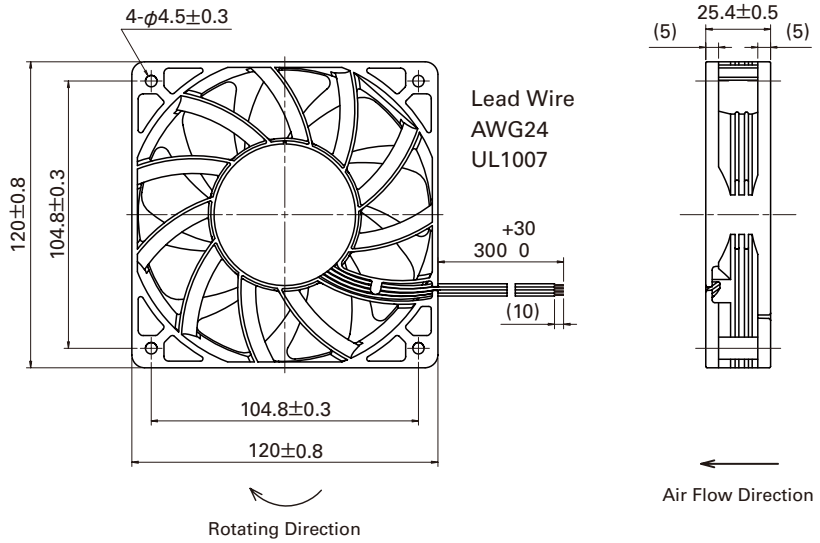


$T_{1\sim4} \fallingdotseq (1/4)\ T_0$

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

N=Fan speed (min-1)

Dimensions (unit : mm)



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