San Ace 60 GA type
Low power consumption fan

Features

Energy-saving
Power consumption is reduced by approx. 15 % compared with our conventional fan*.

Low sound pressure level
Sound pressure level is reduced by 3dB(A) compared with our conventional fan*.

* Model No: 9GA0612P1K60.
When air flow is almost identical.
Our conventional model : 60 × 60 ×38 mm fan “San Ace 60” GV type.

ECO PRODUCTS

60×60×38mm

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 [℃]	Life Expectancy [h]
9GA0612P1J03(031)	12	10.8 to 12.6	100	1.50	18.00	17,500	1.75	62	820	3.3	63	−10 to +60	30,000
			20	0.10	1.20	4,000	0.40	14	43	0.17	24		
9GA0612P1K03(031)		10.8 to 13.2	100	0.95	11.40	14,800	1.50	53	600	2.4	59	−10 to +70	40,000
			20	0.10	1.20	4,000	0.40	14	43	0.17	24		
9GA0612P1H03(031)			100	0.55	6.60	11,500	1.15	40	375	1.5	52		
			20	0.06	0.72	2,600	0.27	9.5	20	0.08	19		
9GA0612P1K60(601)			100	0.95	11.40	14,800	1.50	53	675	2.7	59	−10 to +60	
			0	0.05	0.60	1,480	0.134	4.7	8.3	0.03	16		

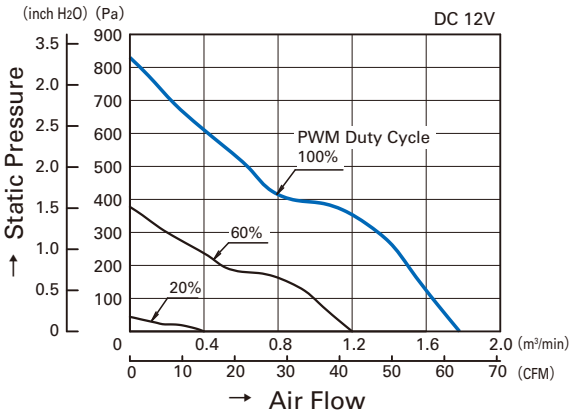
The numbers in ( ) represent ribless models.
※PWM Frequency:25kHz
Note : 9GA0612P1J03(031), 9GA0612P1K03(031),9GA0612P1H03(031) does not rotate when PWM duty cycle is 0%.

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. 130 g

Air Flow - Static Pressure Characteristics

- PWM Duty Cycle



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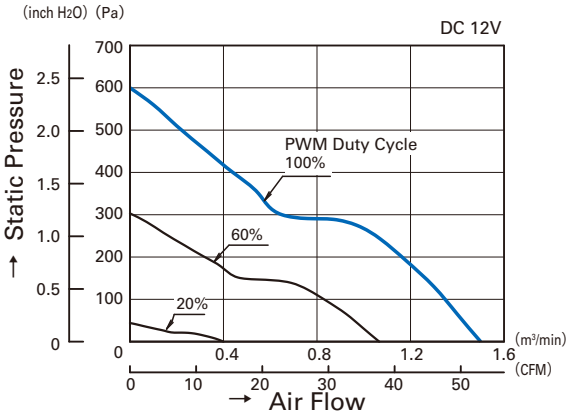

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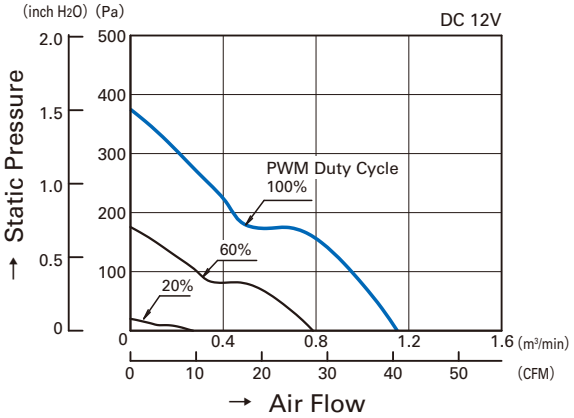

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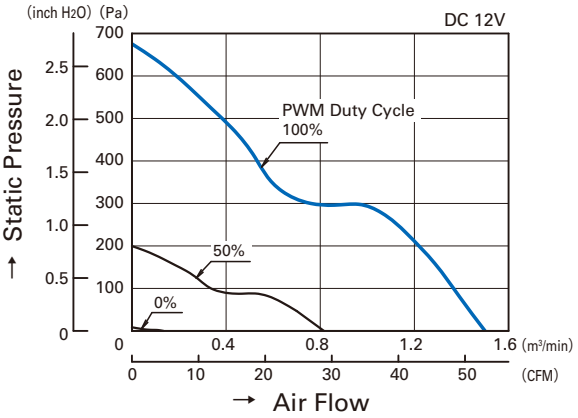
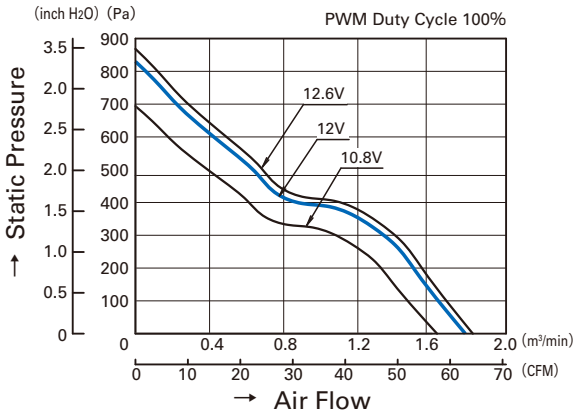


9GA0612P1K60(601)

- Operating Voltage Range



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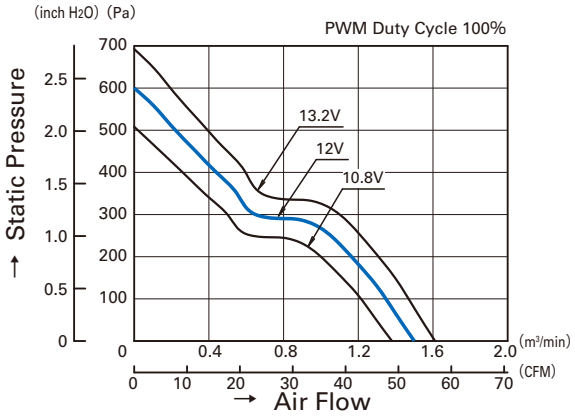

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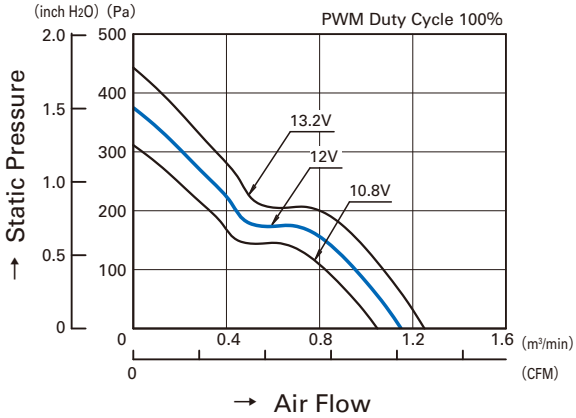

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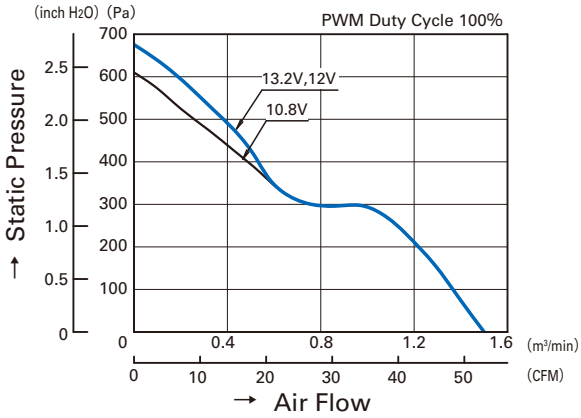
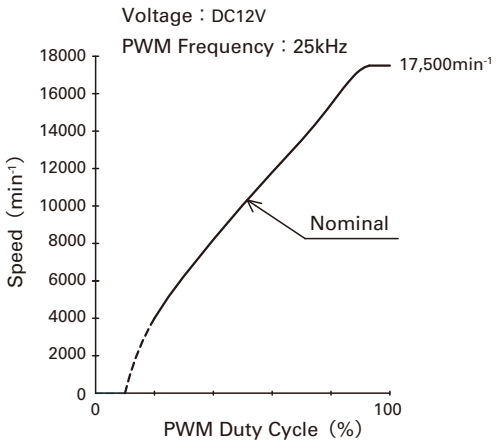


9GA0612P1K60(601)

PWM Duty - Speed Characteristics Example



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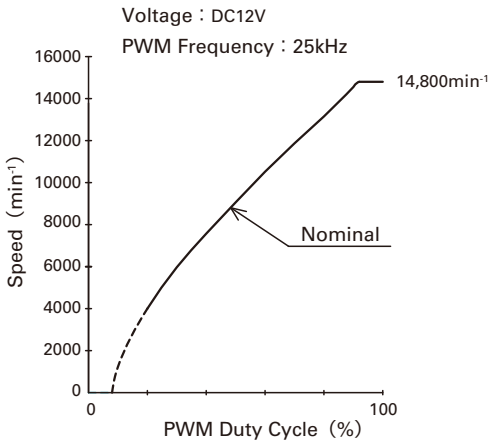

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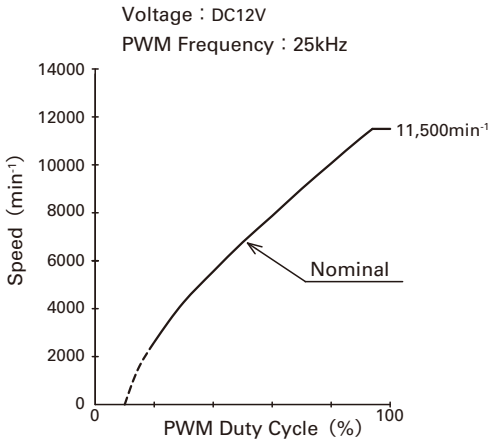

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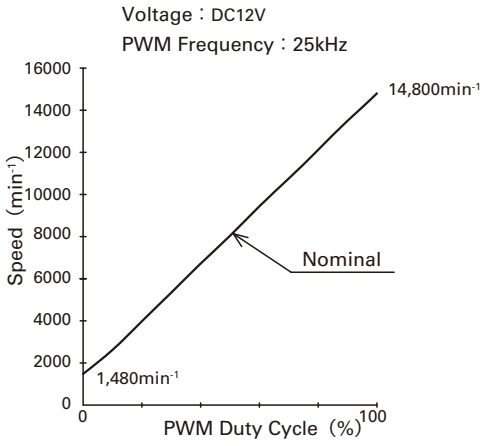
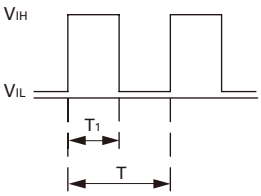


9GA0612P1K60(601)

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 : 5mA Max. at control voltage 0V

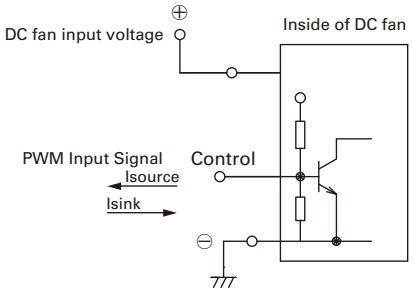
Sink Current : 5mA Max. at control voltage 5.25V

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.

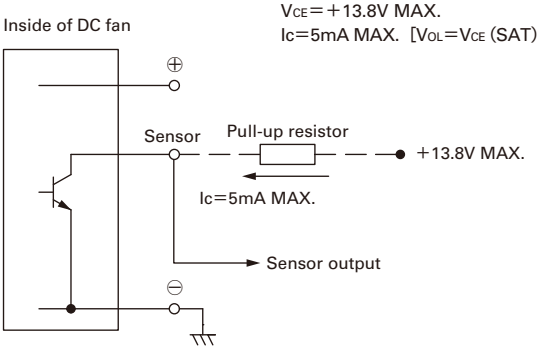
This fan speed should be controlled by PWM input signal
of either TTL input or open collector, drain input.

Connection Schematic



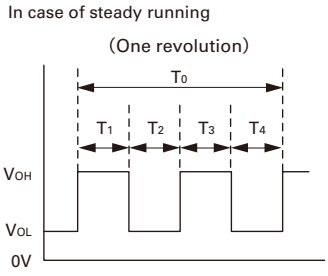
Pulse Sensor Specification

Output circuit : Open collector



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

Output waveform (Need pull-up resistor)

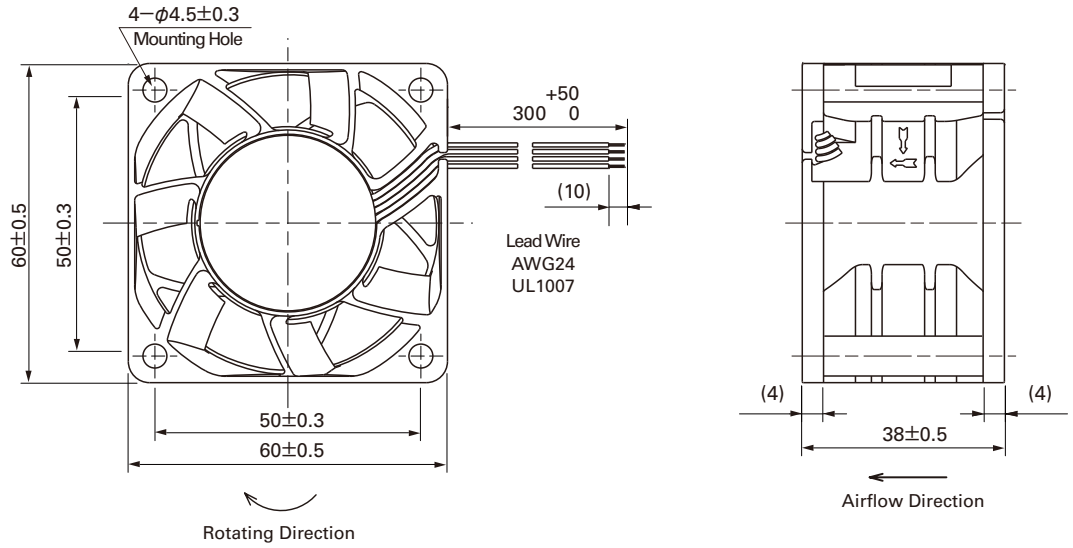


$T_{1\sim4} \fallingdotseq (1/4)\ T_0$

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

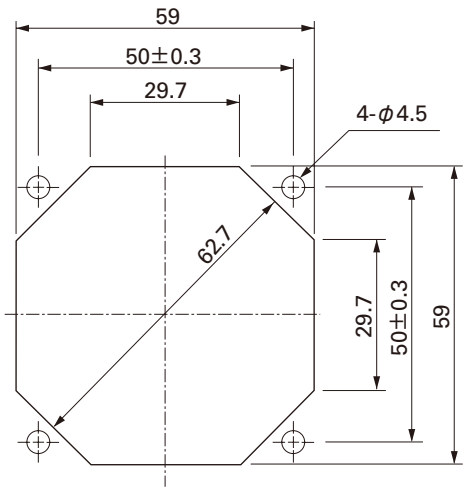
N=Fan speed (min-1)

Dimensions (unit : mm) (With ribs)



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.

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