

San Ace B97 Blower

Blower 97mm

Features

Large air flow and high static pressure

- Maximum airflow : increased by approx. 18 %
- Maximum static pressure : increased by approx. 68 % compared with our conventional product*1.

Energy-Saving Design

- Power consumption: 38.88 W *2

*1: 97x33mm thick. San Ace B97, Model No. 9BAM12GC2.

*2: Specification of Model No. 9BMB24P2K01.



97mm × 33mm

Specifications

With PWM speed control function · With a pulse sensor

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle [%] ^{Note1)}	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]
9BMB12P2K01	12	10.8 to 13.2	100	3.4	40.8	6,850	1.61 56.9	1,280 5.14	66	-10 to +70	40,000
9BMB24P2K01	24	21.6 to 26.4	100	1.62	38.88	6,850	1.61 56.9	1,280 5.14	66		

Note1: PWM Frequency : 25kHz

Note2: Fan does not rotate when PWM duty cycle is 0%.

With a 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]
9BMB12G201	12	7 to 13.8	1.80	21.6	5,750	1.34 47.3	760 3.052	61	-10 to +70	40,000
9BMB12S201			1.40	16.8	5,250	1.22 43.1	610 2.450	59		
9BMB12H201			1.10	13.2	4,850	1.11 39.2	490 1.968	57		
9BMB12F201			0.90	10.8	4,500	1.04 36.7	410 1.647	56		
9BMB24G201	24	12 to 26.4	0.83	19.9	5,750	1.34 47.3	760 3.052	61		
9BMB24S201			0.70	16.8	5,250	1.22 43.1	610 2.450	59		
9BMB24H201			0.55	13.2	4,850	1.11 39.2	490 1.968	57		
9BMB24F201			0.45	10.8	4,500	1.04 36.7	410 1.647	56		

Common Specifications

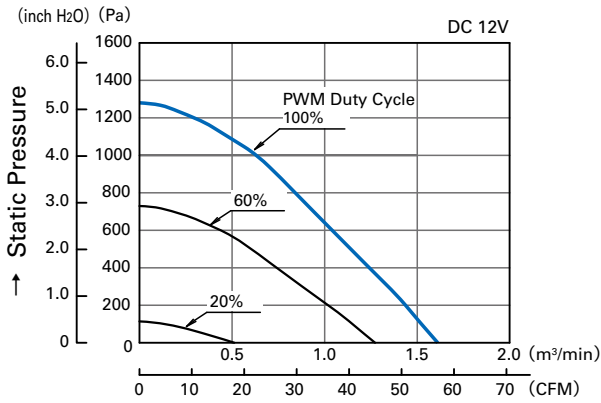
- Material Frame: Plastics (Flammability: UL94V-0) , Impeller: Plastics (Flammability: UL94V-0)
- Life Expectancy Varies for each model
(L10: Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
- Motor Protection System Current blocking function and Reverse polarity protection
- 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 · With pulse sensor): brown
- Mass 190g

97mm

Air Flow and Static Pressure Characteristics

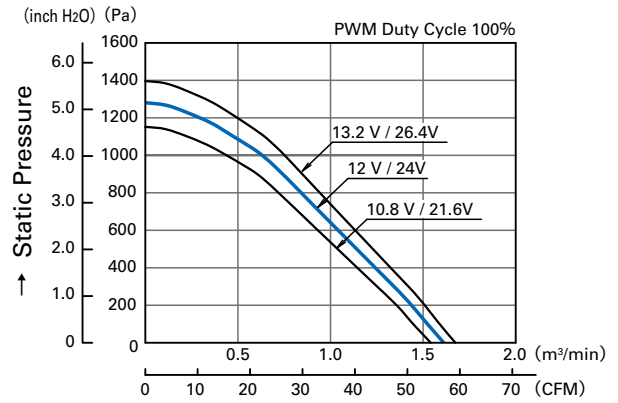
With PWM speed control function · With a pulse sensor

• PWM Duty Cycle

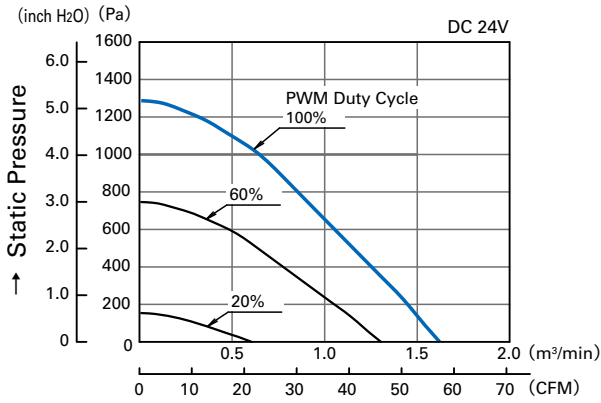


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• Operating Voltage Range

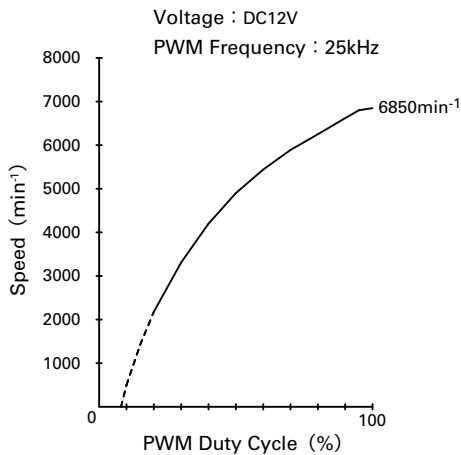


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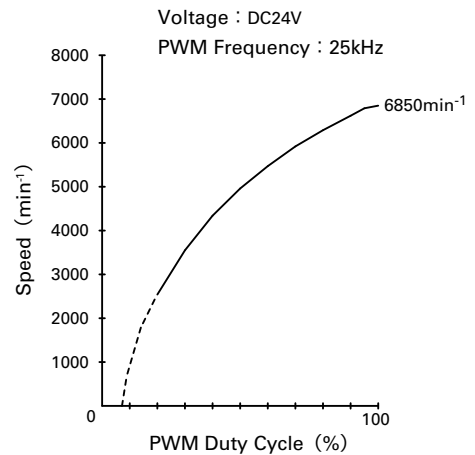


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PWM Duty - Speed Characteristics Example



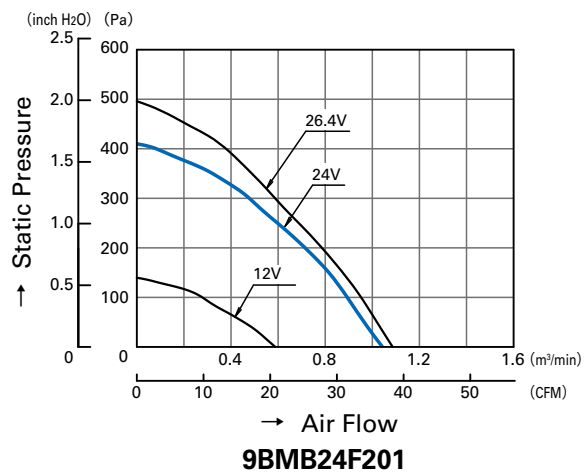
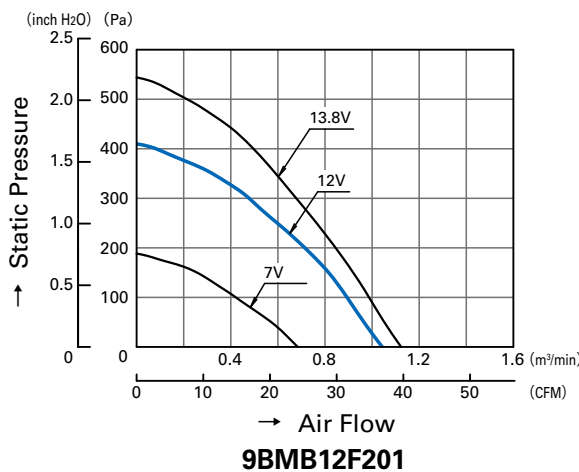
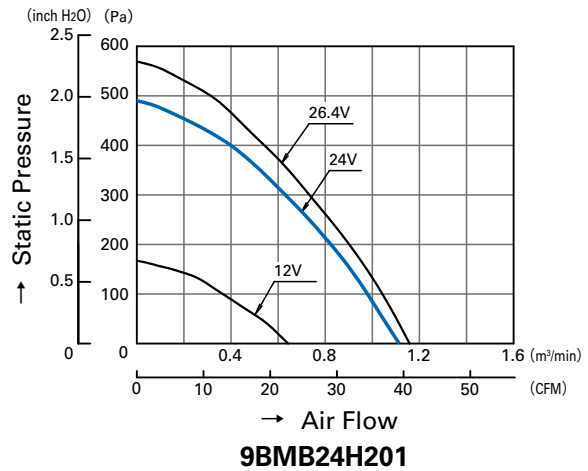
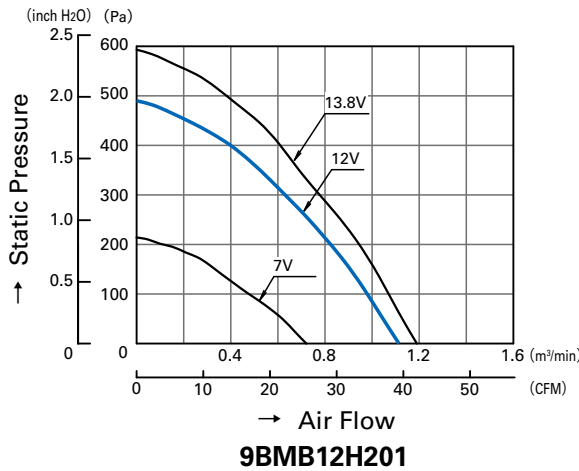
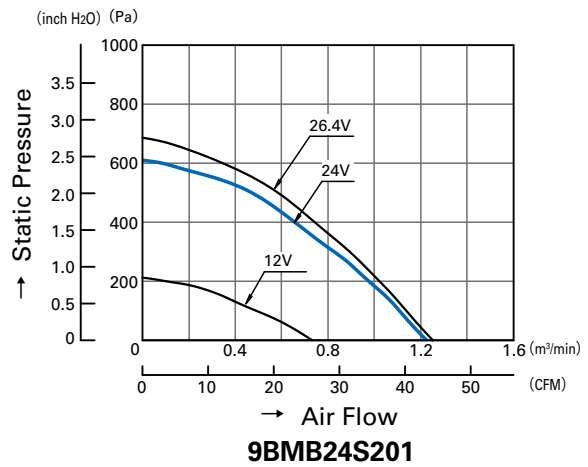
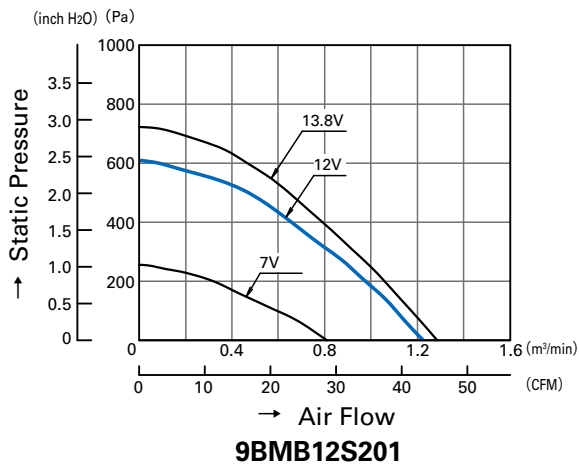
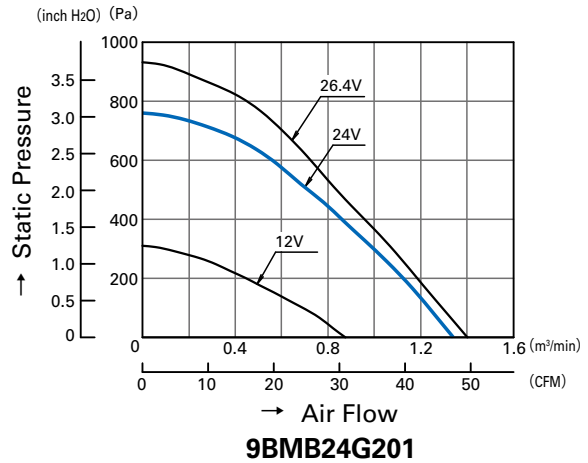
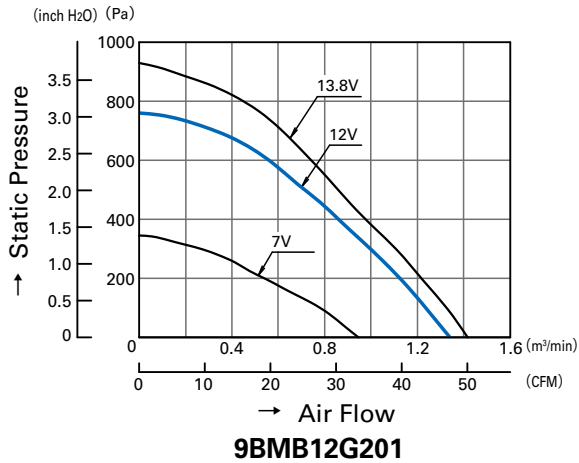
9BMB12P2K01



9BMB24P2K01

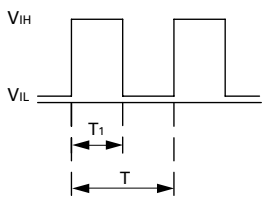
Air Flow and Static Pressure Characteristics

With a pulse sensor



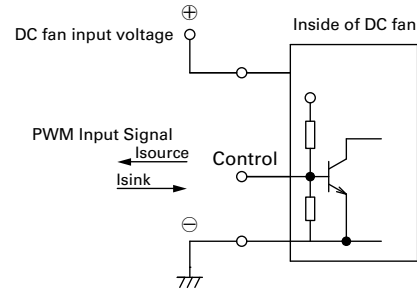
PWM Input Signal Example

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.
 Fan speed could be controlled by PWM input signal of either TTL input or open collector, drain input.

Connection Schematic

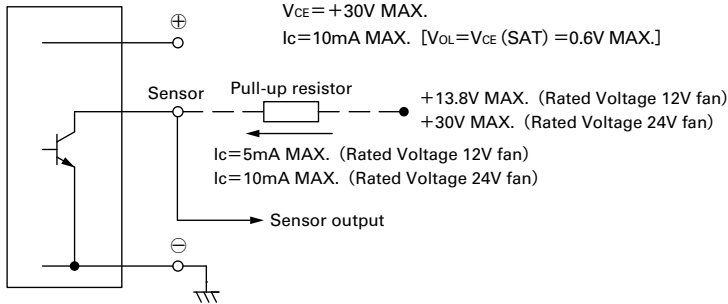


Pulse Sensor Specification

Output circuit : Open collector

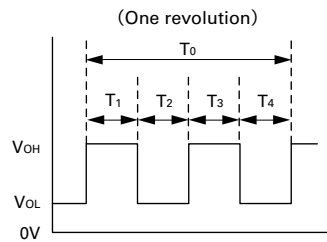
Rated Voltage 12V fan
 $V_{CE} = +13.8V$ MAX.
 $I_C = 5mA$ MAX. [$V_{OL} = V_{CE} (SAT) = 0.6V$ MAX.]
Rated Voltage 24V fan
 $V_{CE} = +30V$ MAX.
 $I_C = 10mA$ MAX. [$V_{OL} = V_{CE} (SAT) = 0.6V$ MAX.]

Inside of DC fan



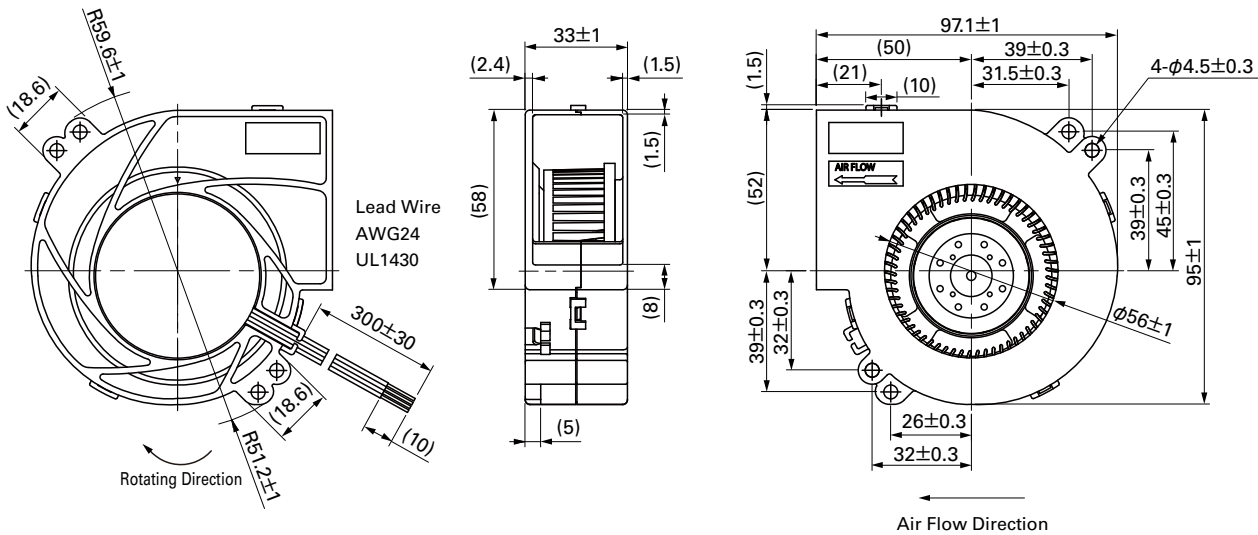
Output waveform (Need pull-up resistor)

In case of steady running



$T_{1-4} \div (1/4) T_0$
 $T_{1-4} \div (1/4) T_0 = 60/4N$ (sec)
 $N = \text{Fan speed (min}^{-1}\text{)}$

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



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.