San Ace C270 9B1TS type

Bracket-mounted Centrifugal Fans

Features

Maximizes Strengths of the Centrifugal Fan

To maximize fan performance, an air inlet needs to be precisely mounted to the fan.
Bracket-mounted centrifugal fan has an air inlet and a mounting bracket integrated in one unit. The precise assembly at factory ensures the optimized balance, helping the fan perform at its maximum potential.

Easy Installation

Centrifugal fan comes equipped with an air inlet and a mounting bracket, making your installation work easy.

270 × 270 × 119 mm

Specifications

The following nos. have **PWM controls and pulse sensors**.

Model no.	Rated voltage [V]	Operating voltage range [V]	PWM duty cycle (Note1, 2) [%]	Rated current [A]	Rated input [W]	Rated speed [min⁻¹]	Max. airflow [m³/min]	Max. airflow [CFM]	Max. static pressure [Pa]	Max. static pressure [inchH2O]	SPL [dB(A)]	Operating temperature [℃]	Expected life [h]
9B1TS48P0G001	48	36 to 72	100	3.65	175.2	3,550	28.1	992	861	3.46	74.5	-20 to +60	40,000 / 60 ℃ (70,000 / 40 ℃)
			15	0.24	11.5	1,000	7.85	277	68.5	0.28	52.0		
9B1TS48P0H001			100	2.08	99.8	2,900	22.7	802	590	2.37	70.5	-20 to +70	
			15	0.24	11.5	1,000	7.85	277	68.5	0.28	52.0		

Note 1 PWM frequency: 25 kHz
Note 2 Fans do not rotate when PWM duty cycle is 0%.
Note 3 Max input of 9B1TS48P0G001: 380 W, 9B1TS48P0H001: 200 W at rated voltage.

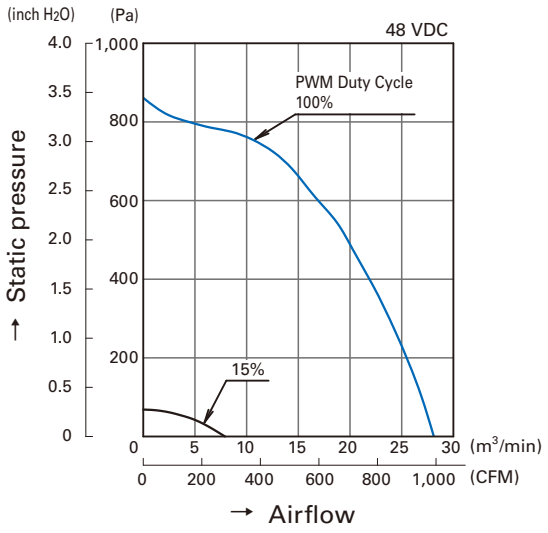
Models with the following sensor specifications are also available as options: Without Sensor

Common Specifications

- ☐ Material ····· Motor case: Aluminum, Impeller: Plastics (Flammability: UL94V-0), Bracket: Aluminum, Plastics (Flammability: UL94V-0)
- ☐ Expected life ····· Refer to specifications (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, 500 VAC, 1 minute (between lead conductor and bracket)
- ☐ Sound pressure level (SPL) ····· Expressed as the value at 1 m from air inlet side
- ☐ Operating temperature ····· Refer to specifications (Non-condensing)
- ☐ Storage temperature ····· -30 ℃ to +70 ℃ (Non-condensing)
- ☐ Lead wire ····· ⊕Red ⊖Black Sensor: Yellow Control: Brown
- ☐ Mass ····· Approx. 1,920 g

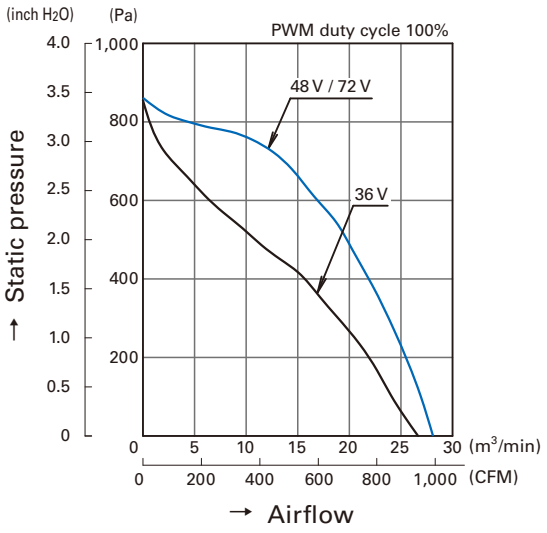
Airflow - Static Pressure Characteristics

- PWM duty cycle



9B1TS48P0G001

- Operating voltage range



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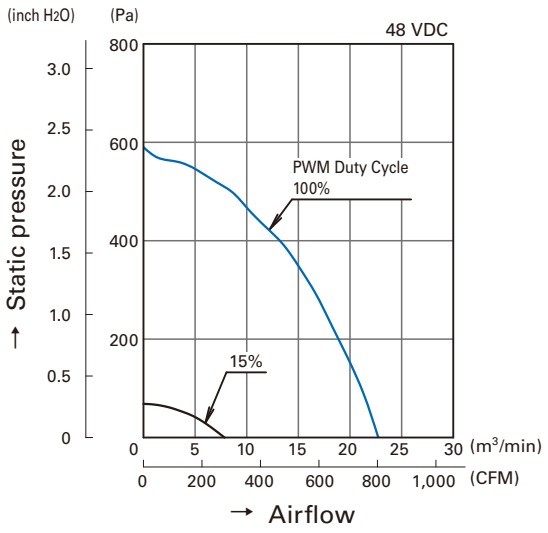

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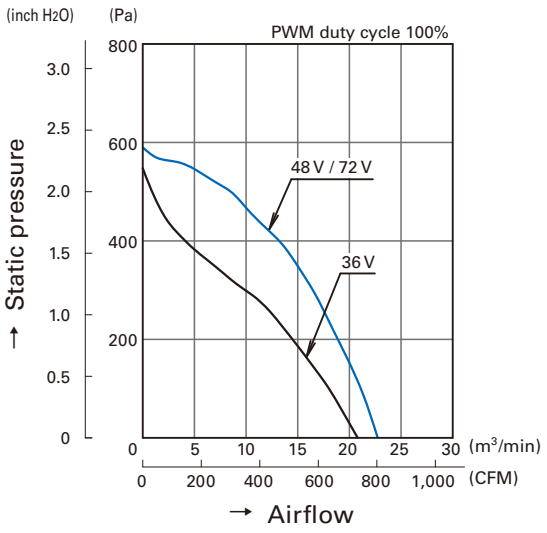

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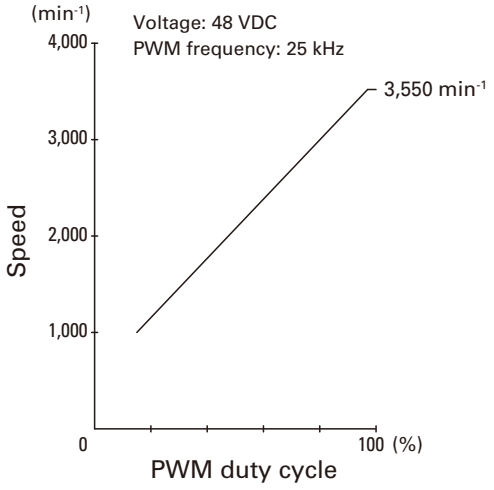
PWM Duty - Speed Characteristics Example



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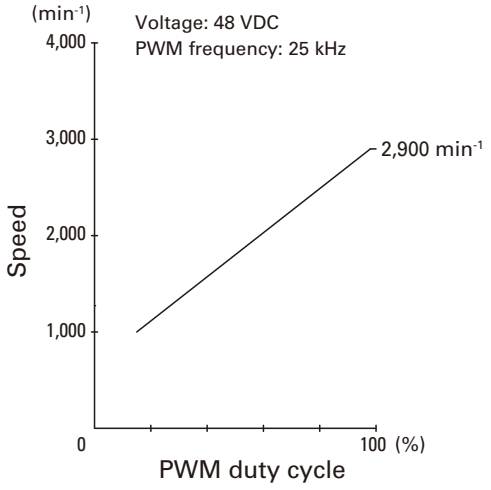

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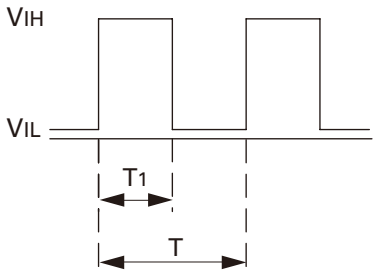
PWM Input Signal Example

Input signal waveform



V_{IH}=4.75 V to 5.25 V

V_{IL}0 V to 0.4 V

PWM duty cycle (%) = $\frac{T1}{T} \times 100$

PWM frequency 25 (kHz) = $\frac{1}{T}$

Source current (Isource) : 1 mA max. at control voltage 0 V

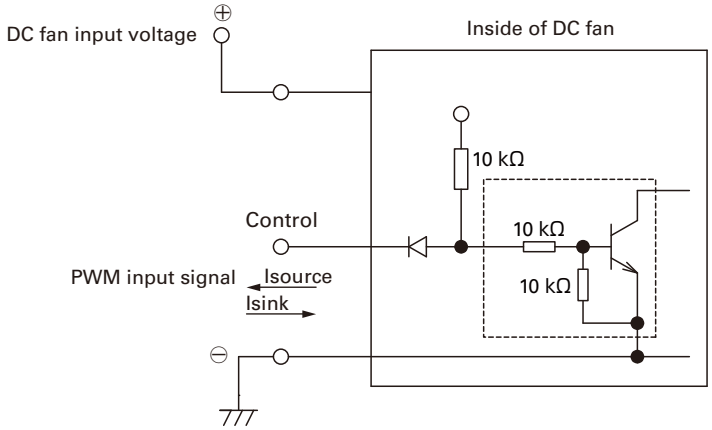
Sink current (Isink) : 1 mA max. at control voltage 5.25 V

Control terminal voltage: 5.25 V max. (Open circuit)

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

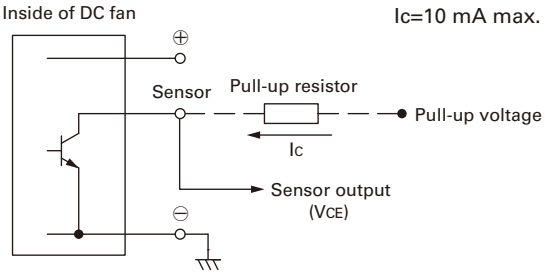
Either TTL input, open collector or open drain can be used for
PWM control input signal.

Example of Connection Schematic



Specifications for Pulse Sensors

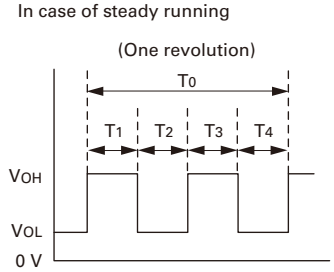
Output circuit: Open collector



V_{CE}=+72 VDC max.

I_C=10 mA max. [V_{CE} (SAT) =1 V max.]

Output waveform (Need pull-up resistor)



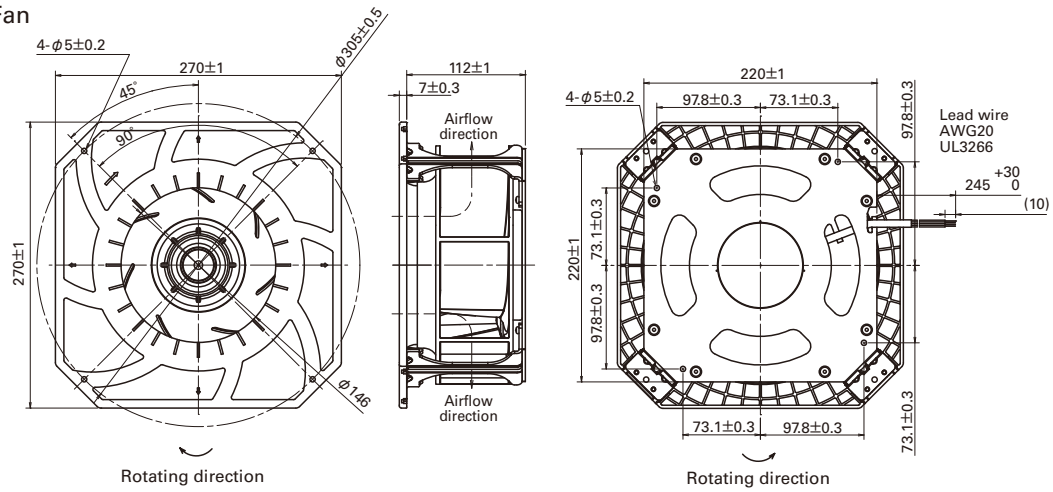
$T_{1 \text{ to } 4} \fallingdotseq (1/4)\ T_0$

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

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

Dimensions (unit: mm)

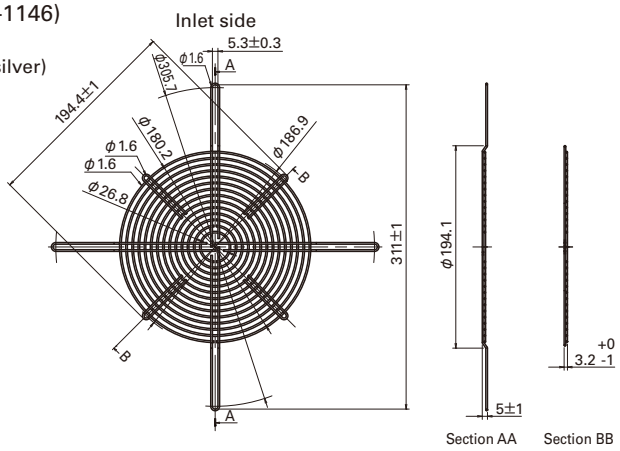
Fan



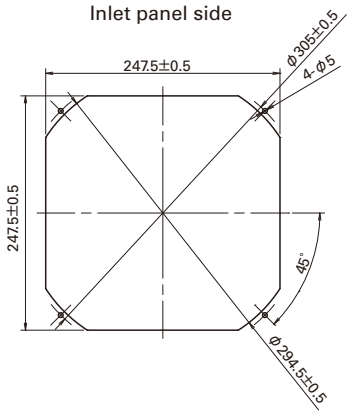
Finger guard (Model: 109-1146)

Surface treatment:
Nickel-chrome plating (Color: silver)

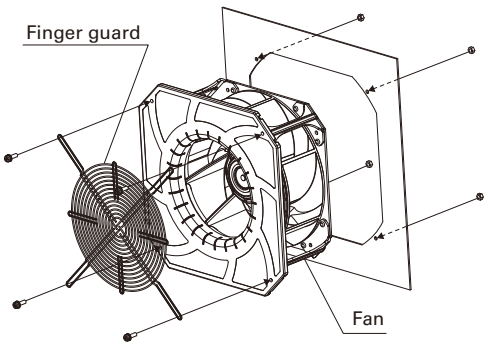
Mass: 106 g



Reference Dimensions of Mounting Holes and Opening (unit: mm)



Referance Diagram for Mounting



Notice

- Please read the "Safety Precautions" on our website before using the product.
- The products shown in this catalog are subject to Japanese Export Control Law. Diversion contrary to the law of exporting country is prohibited.
- For protecting fan bearings against electrolytic corrosion near strong electromagnetic noise sources, we provide effective countermeasures such as Electrolytic Corrosion Proof Fans and EMC guards. Contact us for details.

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