

San Ace 225AD

9ADB1W1TS type

ACDC Fan

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.

No DC Power Supply Needed

With an embedded AC-DC converter, these fans can be driven by an AC power supply. This eliminates the need for a high-capacity DC power supply, reducing the overall costs.

Water and Dust Resistance

Its IP56-rated* water and dust protection ensures stable fan operation even in harsh environments.

* The degree of protection (IP code) is defined by IEC 60529 (International Electrotechnical Commission).
 IP56:
 - Protection against a level of dust that could hinder operation or impair safety
 - Protection against high pressure water jets



270×270×119 mm

Specifications

The models listed below **have pulse sensors with PWM control function.**

| Model no. | Rated voltage [V] | Operating voltage range [V] | PWM duty cycle* [%] | Rated current [A] | Rated input [W] | Rated speed [min ⁻¹] | Max. airflow [m ³ /min] [CFM] | Max. static pressure [Pa] [inchH ₂ O] | SPL [dB(A)] | Operating temperature [°C] | Expected life [h] |
|-------------------|-------------------|-----------------------------|---------------------|-------------------|-----------------|----------------------------------|--|--|-------------|----------------------------|-------------------|
| 9ADB1W1TS11P0H001 | 115 | 90 to 132 | 100 | 2.9 | 140 | 3100 | 22.3 787 | 760 3.05 | 73 | -20 to +60 | 40000/40°C |
| | | | 20 | 0.3 | 11 | 1000 | 7.1 252 | 80 0.32 | 50 | | |
| 9ADB1W1TS11P0M001 | | | 100 | 1.4 | 61 | 2350 | 16.9 597 | 440 1.77 | 67 | | |
| | | | 20 | 0.3 | 11 | 1000 | 7.1 252 | 80 0.32 | 50 | | |
| 9ADB1W1TS23P0H001 | 230 | 180 to 264 | 100 | 1.9 | 140 | 3100 | 22.3 787 | 760 3.05 | 73 | | |
| | | | 20 | 0.2 | 11 | 1000 | 7.1 252 | 80 0.32 | 50 | | |
| 9ADB1W1TS23P0M001 | | | 100 | 0.8 | 61 | 2350 | 16.9 597 | 440 1.77 | 67 | | |
| | | | 20 | 0.2 | 11 | 1000 | 7.1 252 | 80 0.32 | 50 | | |

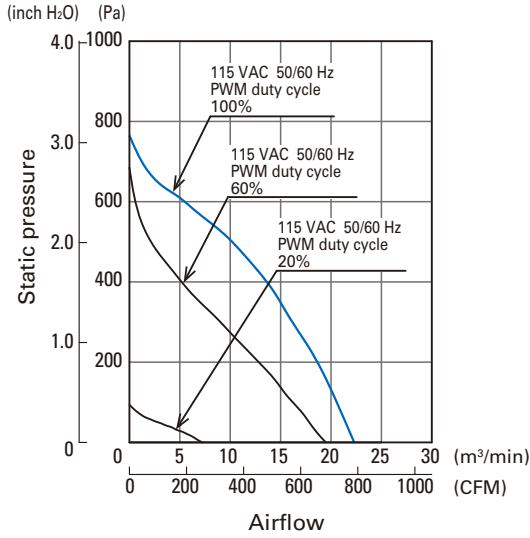
* PWM input frequency is 1 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

Common Specifications

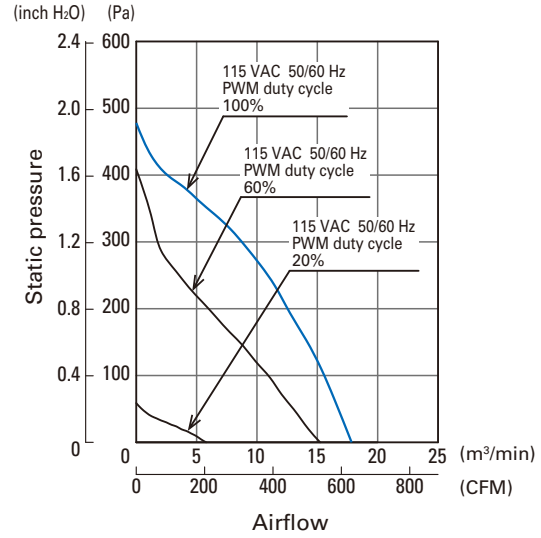
- Material Motor case: Aluminum (Black coating), Impeller: Plastic (Flammability: UL 94V-0)
 Bracket: Aluminum (Black coating), Plastic (Flammability: UL94V-0)
- Expected life Refer to specifications
 (L10 life: 90% survival rate for continuous operation in indoor free air at 40°C, rated voltage)
- Motor protection function Locked rotor burnout protection
- Dielectric strength 50/60 Hz, 1,500 VAC, for 1 minute (between lead wire conductors and bracket)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and bracket)
- Sound pressure level (SPL) At 1 m away from the air inlet
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire **AC power input** L: Orange N: Gray **Ground** Yellow / Green
+10 VDC output Red ⊖ Black **Sensor** Yellow **Control** Brown
- Mass 2600 g
- Ingress protection IP56

Airflow - Static Pressure Characteristics

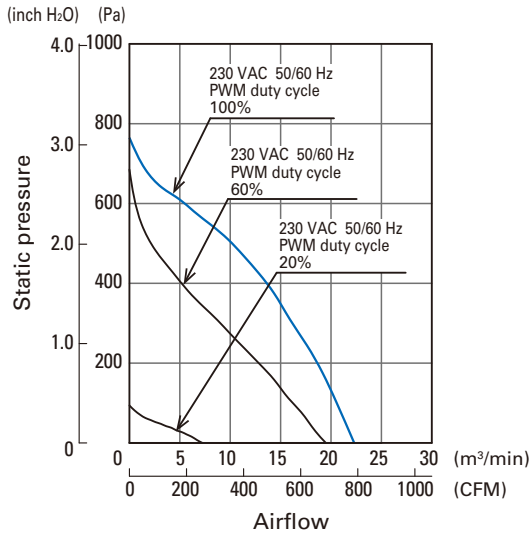
• PWM duty cycle



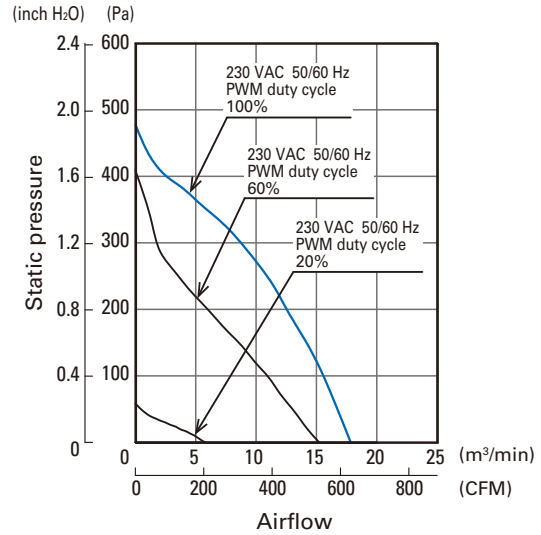
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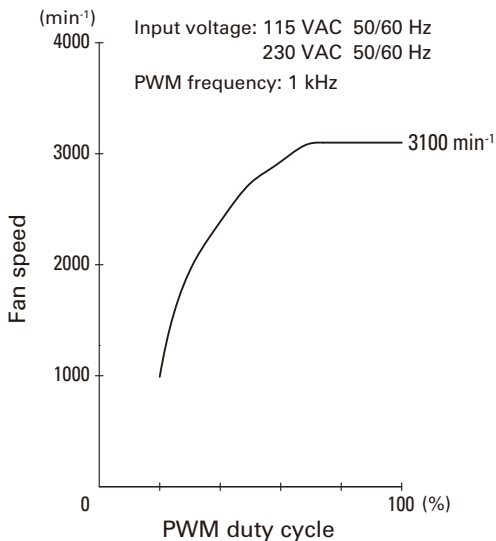


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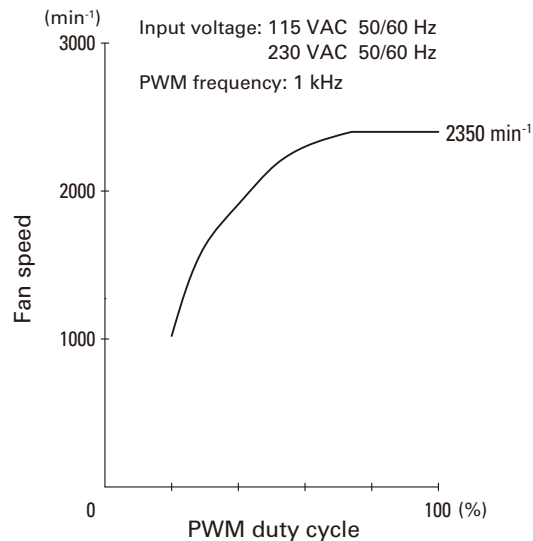


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PWM Duty - Speed Characteristics Example



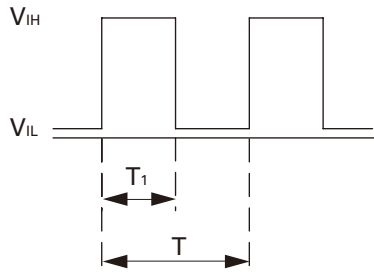
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9ADB1W1TS23P0H001



9ADB1W1TS11P0M001
9ADB1W1TS23P0M001

PWM Input Signal Example

Input signal waveform



$V_{IH} = 2.8 \text{ to } 10.5 \text{ V}$ $V_{IL} = 0 \text{ to } 0.5 \text{ V}$

PWM duty cycle (%) = $\frac{T_1}{T} \times 100$ PWM frequency 1 (kHz) = $\frac{1}{T}$

Current source (I_{source}) = 5 mA max. (when control voltage is 0 V)

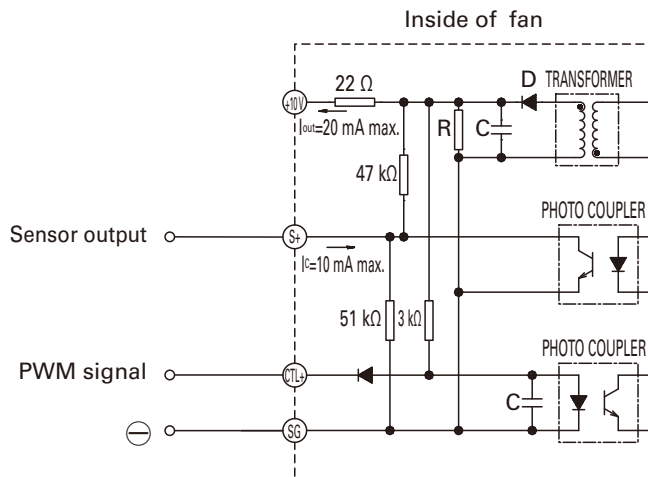
Current sink (I_{sink}) = 0.1 mA max. (when control voltage is 10 V)

Control terminal voltage = 11.5 V max. (when control terminal is open)

When the control terminal is open, fan speed is the same as when PWM duty cycle is 100%.

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

Wiring example

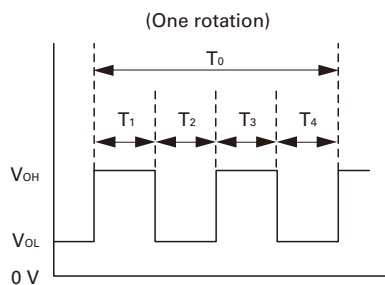


Specifications for Pulse Sensors

Output circuit: Open collector, Internal pulled up to 5 V

Output waveform

In case of steady running

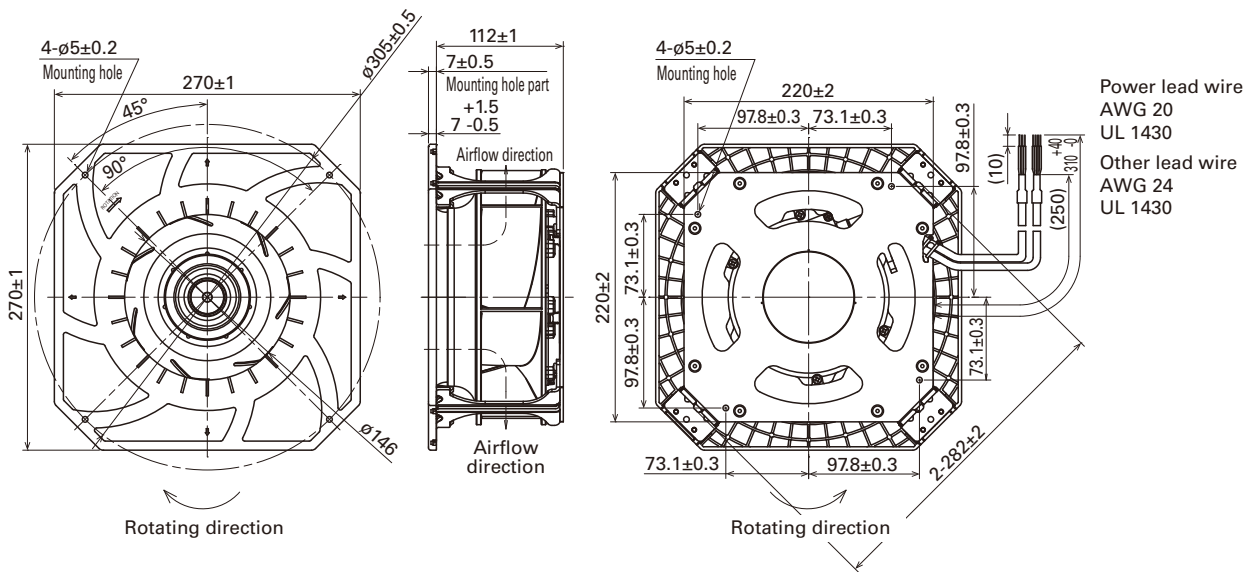


$$T_{1to4} \doteq (1/4) T_0$$

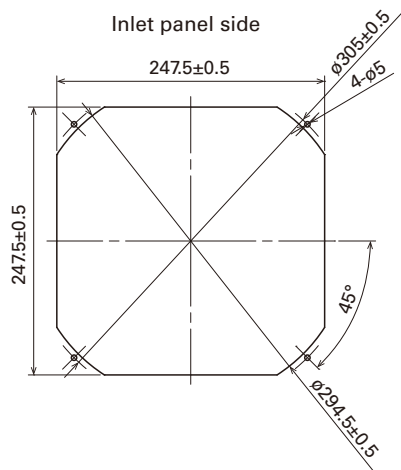
$$T_{1to4} \doteq (1/4) T_0 = 60/4N \text{ (s)}$$

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

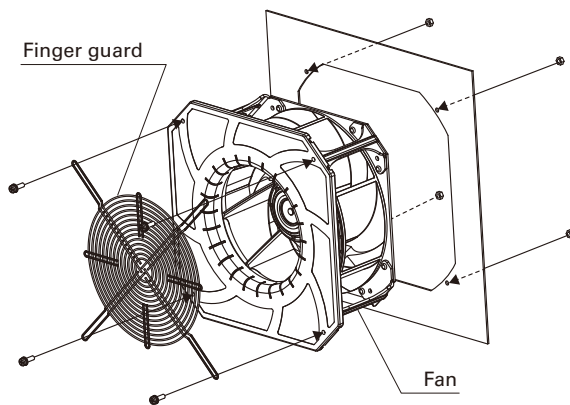
Dimensions (unit: mm)



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



Reference 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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