

San Ace 225AD 9AD type

ACDC Fan

Features

High Airflow and High Static Pressure

These fans deliver a maximum airflow of 23 m³/min and a maximum static pressure of 815 Pa, both of which are leading in the industry.*
Compared with the current model,** the maximum airflow has increased approximately 3.6 times and maximum static pressure has increased approximately 4 times.

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.

High Energy Efficiency and Low Noise

The PWM control function enables the external control of fan speed, contributing to lowering noise and improving energy efficiency of devices.

* Specification of model no. 9ADTS11P0G001, 9ADTS23P0G001.

** Current model: San Ace 172 ϕ 172 x 51 mm axial AC fan (model no. 109-314).



ϕ 225 x 99 mm

Specifications When the optional inlet nozzle (109-1134) is mounted.

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]
9ADTS11P0G001	115	90 to 132	100	3.6	155	3200	23.0 812	815 3.27	74	-20 to +60	40000/40°C
			20	0.3	10	1000	7.1 252	80 0.32	50		
9ADTS11P0F001			100	1.6	70	2450	17.6 621	480 1.93	68		
			20	0.3	10	1000	7.1 252	80 0.32	50		
9ADTS23P0G001	230	180 to 264	100	2.0	155	3200	23.0 812	815 3.27	74		
			20	0.2	10	1000	7.1 252	80 0.32	50		
9ADTS23P0F001			100	0.9	70	2450	17.6 621	480 1.93	68		
			20	0.2	10	1000	7.1 252	80 0.32	50		

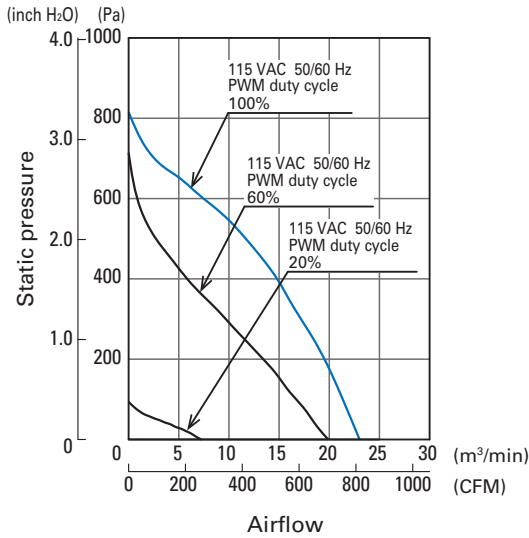
* PWM frequency: 1 kHz. Fan does not rotate when PWM duty cycle is 0%.

Common Specifications

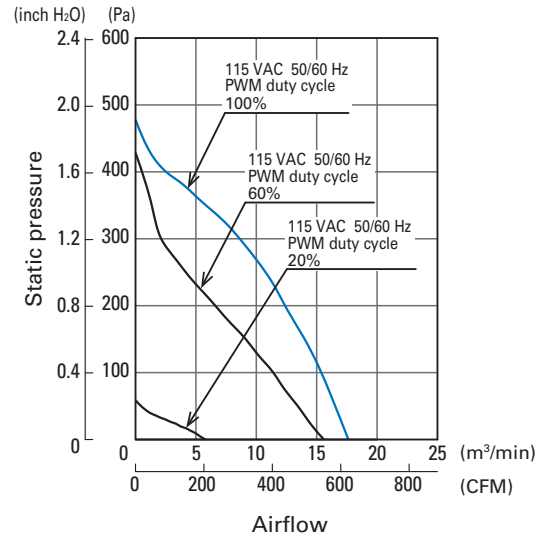
- Material Motor case: Aluminum (Black coating), Impeller: Plastic (Flammability: UL 94V-0)
- Expected life Refer to specifications
(L10 life: 90% survival rate for continuous operation in free air at 40°C, rated voltage)
- Motor protection function Burnout protection function at locked rotor condition
- Dielectric strength 50/60 Hz, 1,500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 M Ω or more with a 500 VDC megger (between lead wire conductors and motor case)
- Sound pressure level (SPL) At 1 m away from the air inlet
- Operating temperature Refer to specifications (Non-condensing)
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire AC power input L: Orange N: Gray Ground Yellow / Green
+10 VDC output Red \ominus Black Sensor Yellow Control Brown
- Mass Approx. 1800 g

Airflow - Static Pressure Characteristics

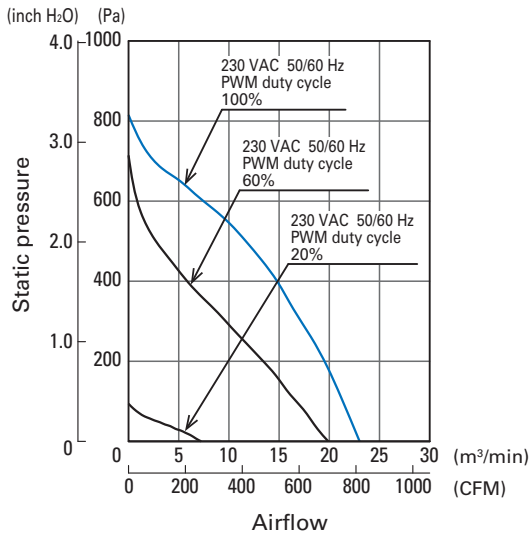
- PWM duty cycle



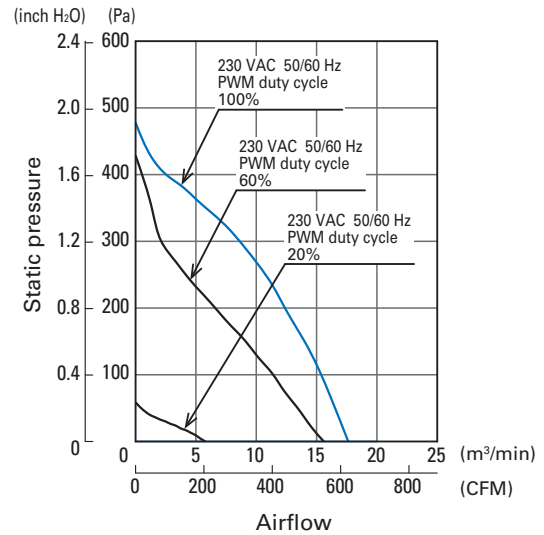
9ADTS11P0G001



9ADTS11P0F001

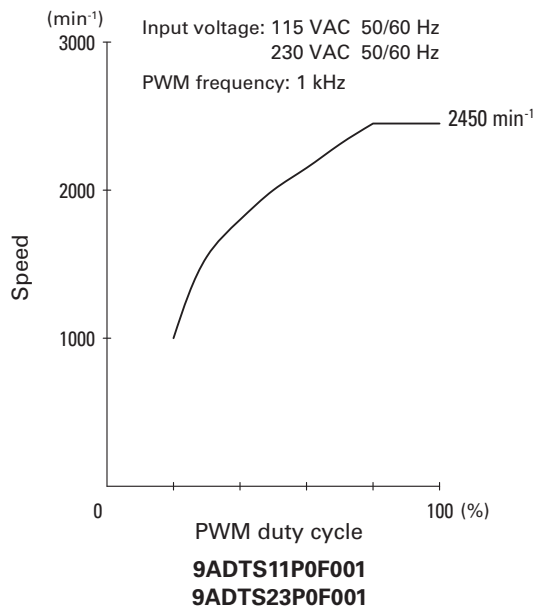
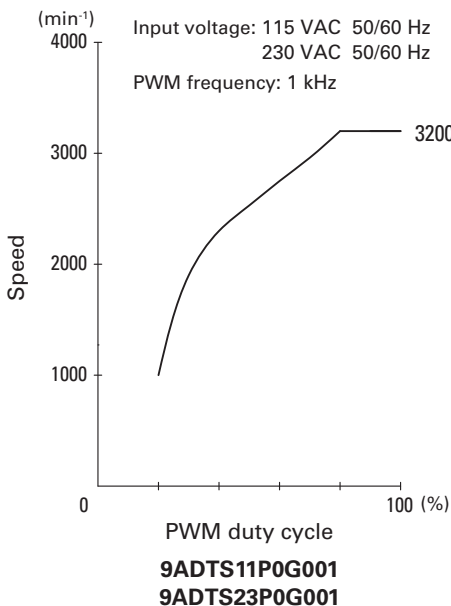


9ADTS23P0G001



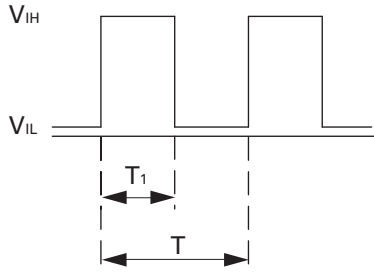
9ADTS23P0F001

PWM Duty - Speed Characteristics Example



PWM Input Signal Example

Input signal waveform



$V_{IH} = 9.5 \text{ to } 10.5 \text{ V}$ $V_{IL} = 0 \text{ to } 0.5 \text{ V}$

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

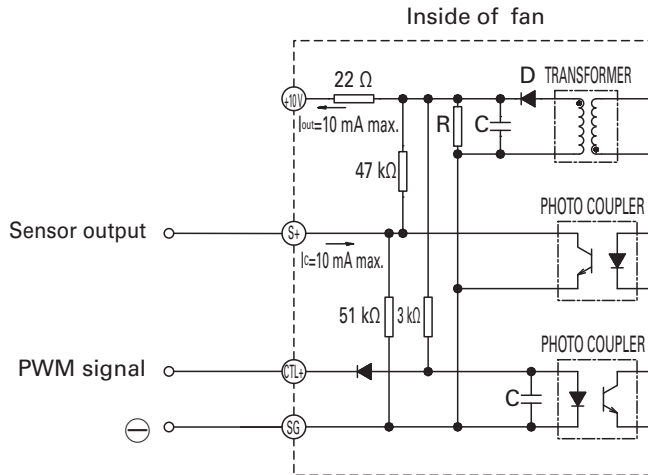
Current source (I_{source}) = 5 mA max. (when control voltage is 0 V)

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



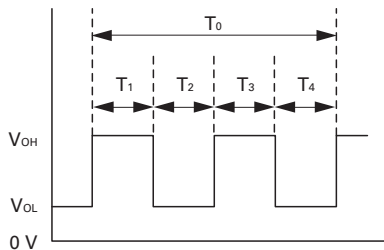
Specifications for Pulse Sensors

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

Output waveform

In case of steady running

(One revolution)

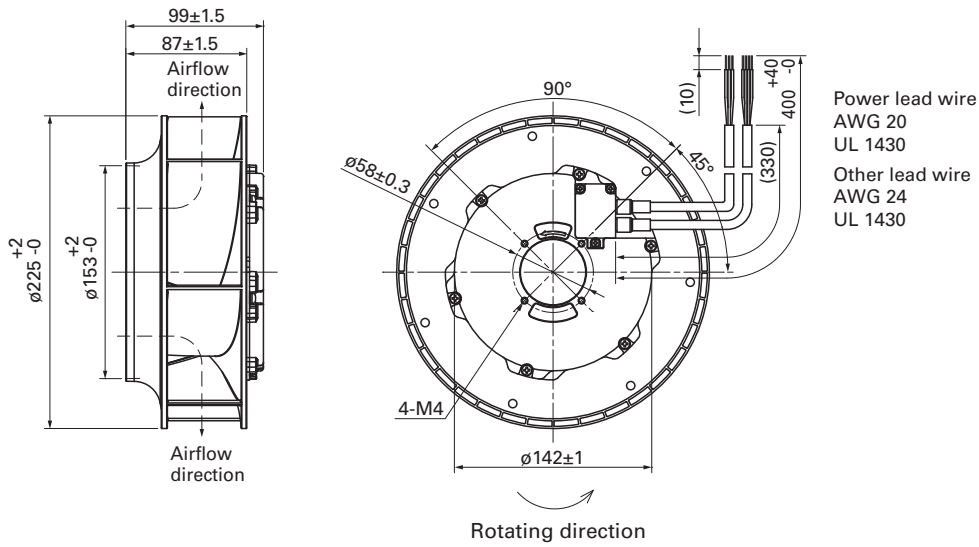


$T_{1to4} \doteq (1/4) T_0$

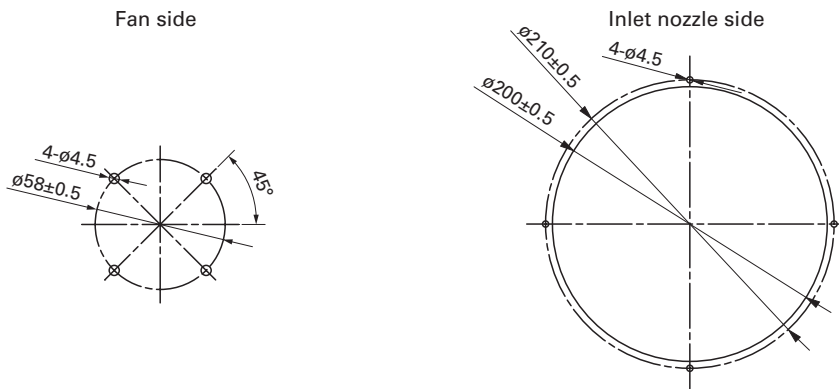
$T_{1to4} \doteq (1/4) T_0 = 60/4N \text{ (s)}$

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

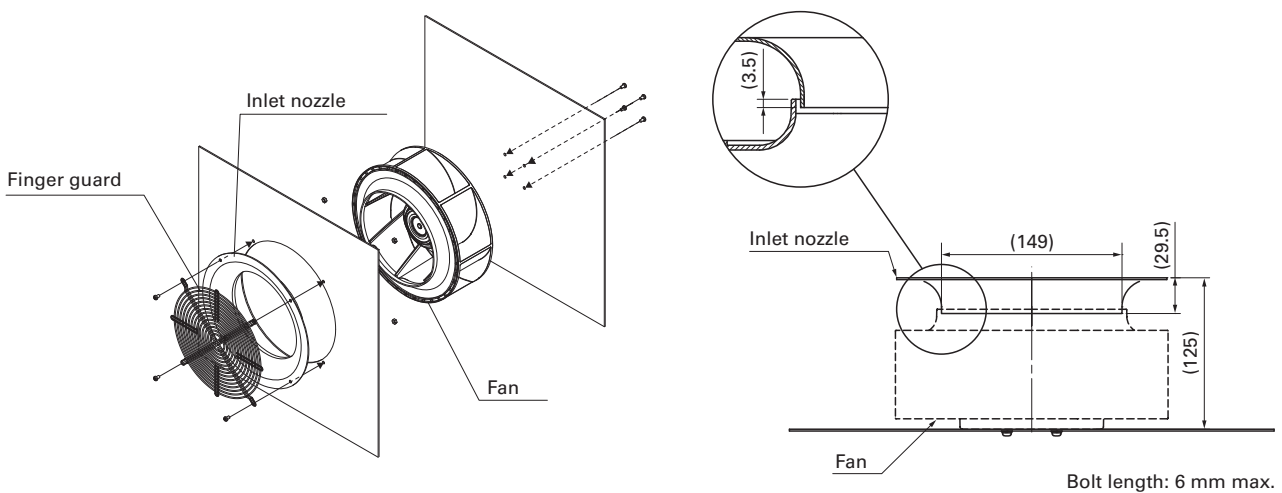
Dimensions (unit: mm)



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.

SANYO DENKI CO., LTD. 3-33-1 Minami-Otsuka, Toshima-ku, Tokyo 170-8451, Japan TEL: +81 3 5927 1020

<https://www.sanyodenki.com>

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