

San Ace 120AD

ACDC Fan

9ADA type

Features

High Airflow and High Static Pressure

This fan delivers a maximum airflow of 3.9 m³/min and maximum static pressure of 170 Pa,⁽¹⁾ which are approximately 1.3 times and 2 times higher than our current model,⁽²⁾ respectively.

Wide Operating Voltage Range

This fan has an input voltage range of 100 to 240 VAC, supporting both 100 and 200 VAC systems.

(1) For a model 9ADA1201P1G001

(2) Current model: 120 × 120 × 38 mm *San Ace 120AD* 9AD type ACDC Fan (model: 9AD1201H12).



120 × 120 × 38mm

Specifications

The models listed below **have ribs and pulse sensors with PWM control function**. For models without ribs, append "1" to the end of model numbers.

Model no.	Rated voltage [V]	Operating voltage range [V]	Frequency [Hz]	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]
9ADA1201P1G001	100 to 240	90 to 264	50/60	100	0.17	9.0	4400	3.9 138	170 0.683	52	-20 to +70	40000/60°C (70000/40°C)
				20	0.04	1.4	1050	0.93 32.8	15 0.06	25		

* PWM frequency is 25 kHz. Models without ratings for 0% PWM duty cycle have zero speed at 0%. When control terminal is open, speed is the same as at 0% duty cycle.

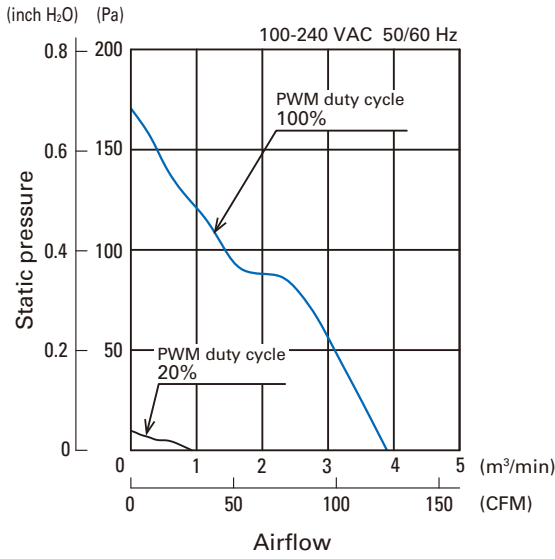
The models listed below **have ribs and no sensors**. For models without ribs, append "1" to the end of model numbers.

Model no.	Rated voltage [V]	Operating voltage range [V]	Frequency [Hz]	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]
9ADA1201G1002	100 to 240	90 to 264	50/60	0.17	9.0	4400	3.9 138	170 0.683	52	-20 to +70	40000/60°C (70000/40°C)
9ADA1201H1002				0.13	6.6	3800	3.36 119	128 0.514	48		60000/60°C (90000/40°C)

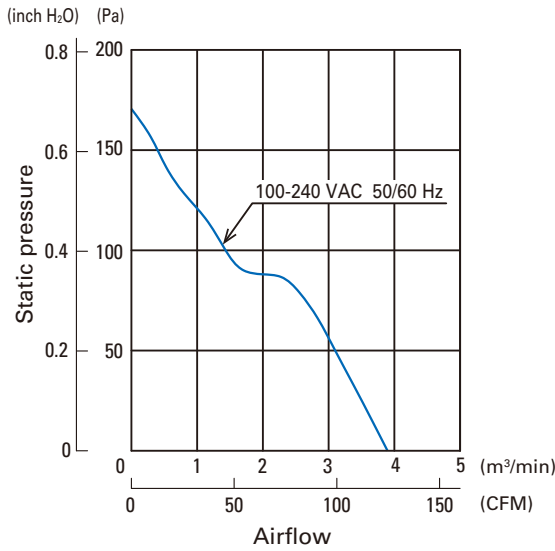
Common Specifications

- Material Frame: Plastic (Flammability: UL 94V-0), Impeller: Plastic (Flammability: UL 94V-0)
- Expected life Refer to specifications
(L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage)
Expected life at 40°C is for reference only.
- Motor protection function Locked rotor burnout protection
- Dielectric strength 50/60 Hz, 2500 VAC, for 1 second (between lead wire conductors and frame)
- Insulation resistance 10 MΩ min. at 500 VDC (between lead wire conductors and frame)
- Sound pressure level (SPL) A-weighted 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
Sensor Yellow **Control** Brown **GND** Black
(For models without sensors, there is no sensor or control wiring.)
- Mass 340 g

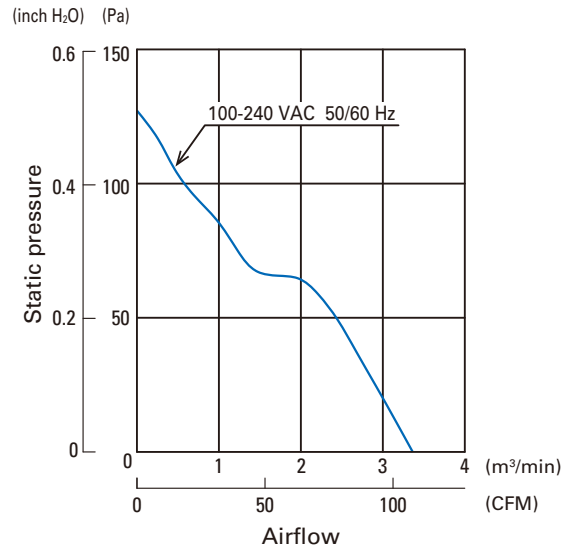
Airflow - Static Pressure Characteristics



9ADA1201P1G001

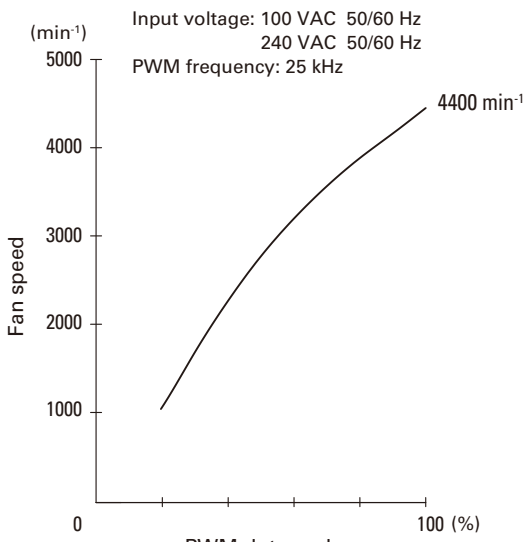


9ADA1201G1002



9ADA1201H1002

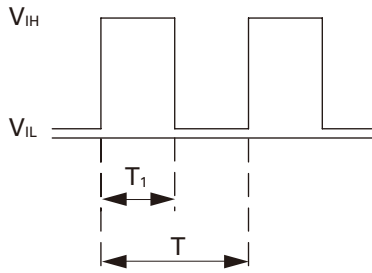
PWM Duty - Speed Characteristics Example



9ADA1201P1G001

PWM Input Signal Example

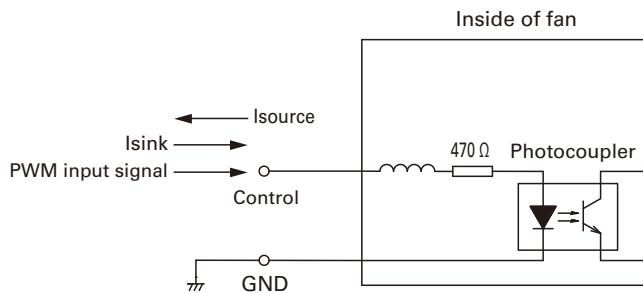
Input signal waveform



$V_{IH} = 4.75 \text{ to } 5.25 \text{ V}$ $V_{IL} = 0 \text{ to } 0.4 \text{ V}$
 PWM duty cycle (%) = $\frac{T_1}{T} \times 100$ PWM frequency 25 (kHz) = $\frac{1}{T}$
 Current source (I_{source}) = 1.0 mA max. (when control voltage is 0 V)
 Current sink (I_{sink}) = 10 mA max. (when control voltage is 5.25 V)

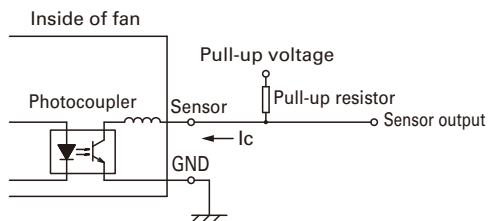
When the PWM control terminal is open, the fan speed is the same as the speed at 0% PWM duty cycle. A TTL input can be used for the PWM input signal.

Example of Connection Schematic



Specifications for Pulse Sensors

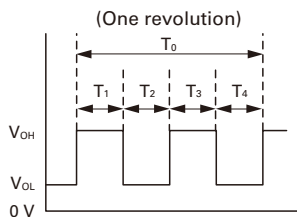
Output circuit: Open collector



$V_{CE} = +60 \text{ V max.}$
 $I_c = 10 \text{ mA max. [} V_{OL} = V_{CE} \text{ (SAT)} = 1.2 \text{ V max.]}$

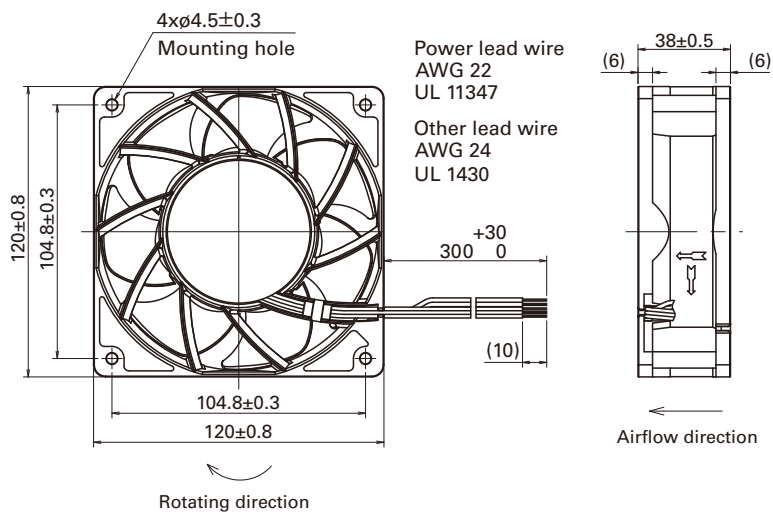
Output waveform (Need pull-up resistor)

In case of steady running

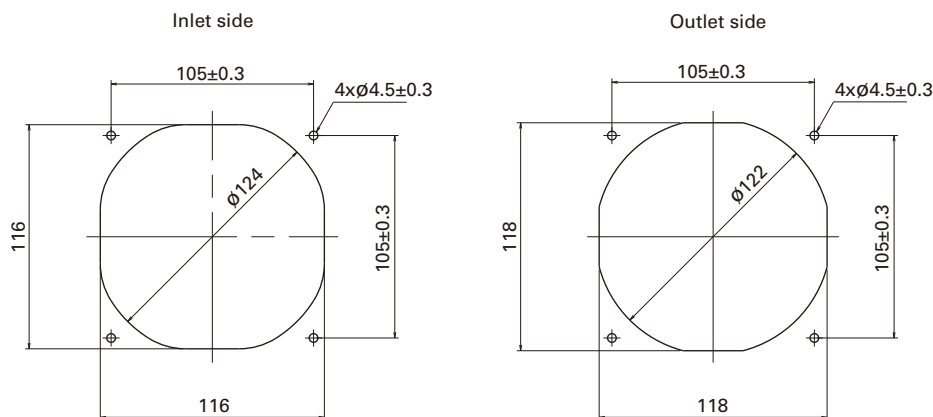


$T_{1 \text{ to } 4} \doteq (1/4) T_0$
 $T_{1 \text{ to } 4} \doteq (1/4) T_0 = 60/4N \text{ (s)}$
 $N = \text{Fan speed (min}^{-1}\text{)}$

Dimensions (unit: mm) (Ribbed frame with pulse sensor with PWM control function)



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



Options

Finger guards

Model no.: 109-019E, 109-019K, 109-019C, 109-019H

Resin finger guards

Model no.: 109-1000G

Resin filter kits

Model no.: 109-1000F13 (13PPI), 109-1000F20 (20PPI)
109-1000F30 (30PPI), 109-1000F-40 (40PPI)

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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CATALOG No. C1133B001 '22.8