120×120×38 mm

San Ace 120AD 9AD type

General Specifications

- Material ..... Frame: Plastic (Flammability: UL 94V-0), Impeller: Plastic (Flammability: UL 94V-1)
- Expected life ..... See the table below. (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 structure ..... Brushless DC motor
- Motor protection function ..... Locked rotor burnout protection For details, please refer to p. 599.
- Dielectric strength ..... 50/60 Hz, 1500 VAC, for 1 minute (between input terminal and frame, and between sensor output and frame)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- Sound pressure level (SPL) ..... At 1 m away from the air inlet
- Storage temperature ..... -30 to +75˚C (Non-condensing)
- Mass ..... 290 g

Do not solder wires directly to AC input terminals.

Specifications

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 [m³/min]	Max. airflow [CFM]	Max. static pressure [Pa]	Max. static pressure [inchH₂O]	SPL [dB (A)]	Operating temperature [˚C]	Expected life [h]
9AD1201H12	100 to 240	90 to 264	50/60	0.08	4.4	3250	3.0	106	84	0.34	42	-20 to +75	60000/60˚C (90000/40˚C)

The models listed below **have ribs and low-speed 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 [m³/min]	Max. airflow [CFM]	Max. static pressure [Pa]	Max. static pressure [inchH₂O]	SPL [dB (A)]	Operating temperature [˚C]	Expected life [h]
9AD1201H1H	100 to 240	90 to 264	50/60	0.08	4.4	3250	3.0	106	84	0.34	42	-20 to +75	60000/60˚C (90000/40˚C)

Note 1: Sensor and control options are available for selection. Refer to the table on p. 641.
Note 2: The mark indicates Short LeadTime Service applicable models. See p. 654 for details.

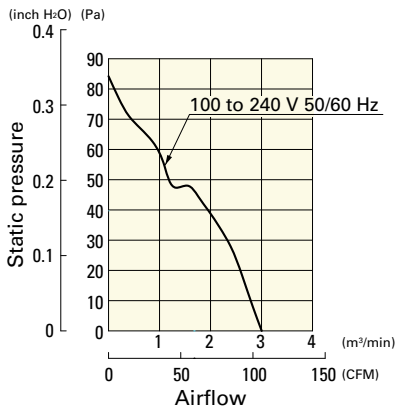
Set Models

Fan, finger guard, plug cord, screws, etc. can be purchased in one package. For details, please refer to p. 655.

Order no.	Set items					
	Fan	Voltage	Low-speed sensor	Plug cord	Finger guards	Mounting screws
ST1-9AD1201H12	9AD1201H12	100 to 240 V		489-1635-L10	109-019E	M4×55 mm (4 screws)
ST1-9AD1201H1H	9AD1201H1H		◯	489-1635-L10	109-019E	

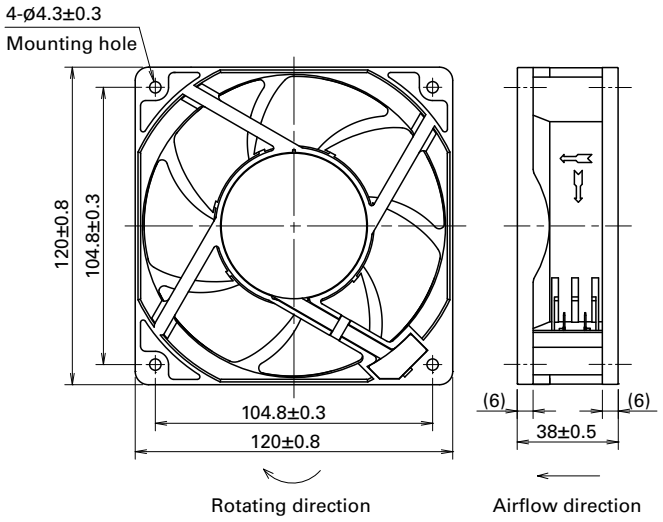
Airflow - Static Pressure Characteristics

9AD1201H12, 9AD1201H1H

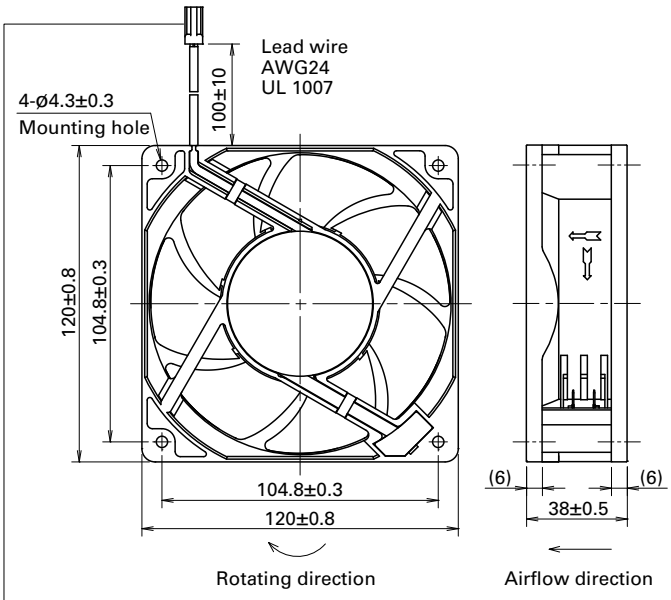


Dimensions (unit: mm) (With ribs)

without Sensor



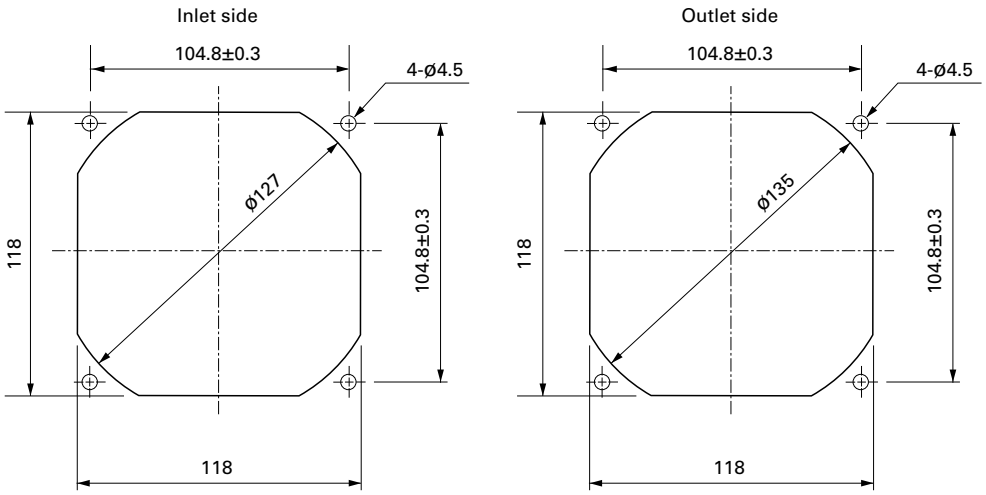
with Low-speed sensor



Connector: TE Connectivity 171822-2
(Pin1 Sensor output: Yellow Pin2 -: Black)
Contact: TE Connectivity 170262-1

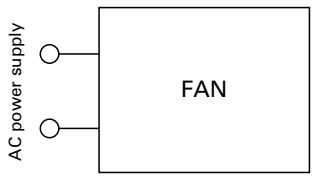
Note: Recommended connectors and contacts are listed below.
Connector: TE Connectivity 172211-2
Contact: TE Connectivity 170376-1

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

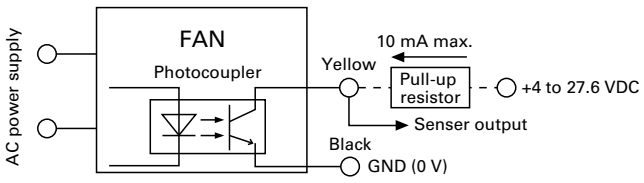


Wiring Diagram

without Sensor



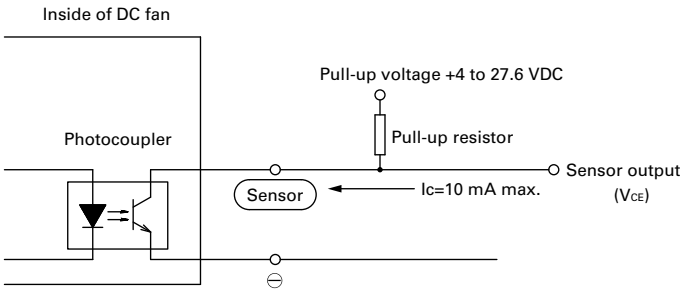
with Low-speed sensor



Specifications for Low-speed Sensors

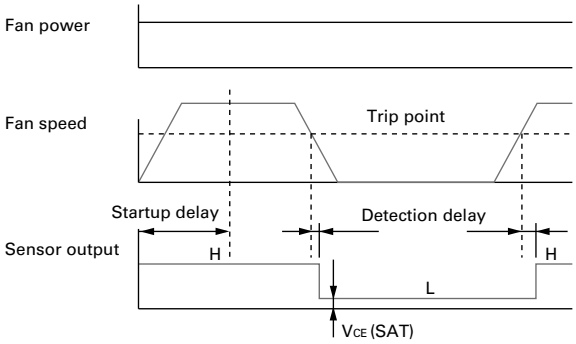
Model No.: 9AD1201H1H
Output circuit: Open collector

V_{CE}=+27.6 VDC max.
Ic=10 mA max. [V_{CE} (SAT)=1.0 V max.]

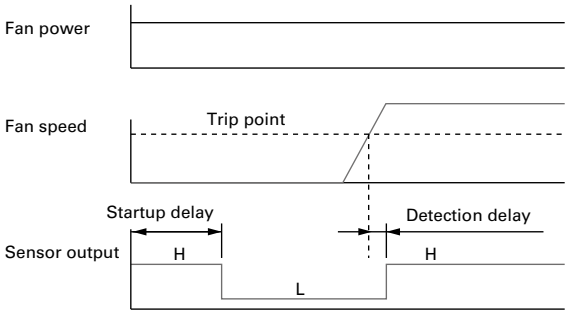


Sensor scheme

Example 1: when steady running



Example 2: when the rotor is locked when the fan motor is turned on and released after the start-up delay time.



Startup delay: 18±3 s
Detection delay: 3 s max.
Trip point: 1700 min^{-1}

Options

Finger guards page: p. 585
Model no.: 109-019C, 109-019H, 109-019E, 109-019K

Resin filter kits page: p. 592
Model no.: 109-1000F13 (13PPI), 109-1000F20 (20PPI), 109-1000F30 (30PPI), 109-1000F40 (40PPI)

Wiring harness for sensor page: p. 595
Model no.: 489-1636

Resin finger guards page: p. 591
Model no.: 109-1000G

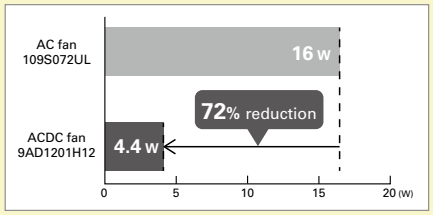
Plug cord page: p. 595
Model no.: 489-1635-L10, 489-1635-L21

Features of the San Ace 120AD 9AD type ACDC Fan

Low power consumption | Long life | Wide voltage range (Compared with our existing AC fan with equal size.)

With AC input, the same level of energy saving and long life as a DC fan can be achieved.
The maintenance effort can be reduced too.

Power consumption comparison



Expected life comparison