



160×160×51 mm

San Ace 160    Only standard fans (without sensors) have acquired CSA certification.

General Specifications

- Material Frame: Aluminum, 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 Capacitor motor
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 573.
- Dielectric strength 50/60 Hz, 1500 VAC, for 1 minute (between input terminal and frame)
- Dielectric strength (with sensor) 50/60 Hz 1500 VAC 1 minute (between AC input terminal and frame)
50/60 Hz 1000 VAC 1 minute (between lead wire conductors and frame)
- Insulation resistance 10 MΩ or more with a 500 VDC megger
- Sound pressure level (SPL) At 1 m away from the air inlet
- Operating voltage range Voltage of each model ±10%
- Storage temperature -30 to +70°C (Non-condensing)
- Sensor-Purpose lead wire ⊕Brown ⊖Black Sensor Yellow
- Mass 1100 g

Specifications

Standard

Model no.	Rated voltage [V]	Frequency [Hz]	Input [W]	Current [A]	Locked rotor current [A]	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]
109-601	100	50/60	37.5/33	0.43/0.35	0.72/0.7	2850/3350	7.2/8.5 254.4/300.4	156.8/166.6 0.63/0.669	56/60	-30 to +60	25000/60°C (56000/40°C)
109-604	115			0.39/0.31	0.62/0.61						
109-602	200			0.23/0.18	0.36/0.35						
109-603	230			0.21/0.16	0.32/0.31						

with Sensor

For sensor specifications, please refer to p. 576. Sensor specification differs depending on the fan's speed specification.

For a 5 V sensor power supply (ITEM-20), please append "-20" to the end of model number. E.g. 109-641-20

For a 12 V sensor power supply (ITEM-30), please append "-30" to the end of model number. E.g. 109-641-30

Model no.	Rated voltage [V]	Frequency [Hz]	Input [W]	Current [A]	Locked rotor current [A]	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]
109-641	100	50/60	37.5/33	0.43/0.35	0.72/0.7	2850/3350	7.2/8.5 254.4/300.4	156.8/166.6 0.63/0.669	56/60	-10 to +60	25000/60°C (56000/40°C)
109-644	115			0.39/0.31	0.62/0.61						
109-642	200			0.23/0.18	0.36/0.35						
109-643	230			0.21/0.16	0.32/0.31						

These are Short LeadTime Service applicable models. Contact your point of sale for stock availability. For more information on the service, see p. 626.

Set Models

Fan, finger guard, plug cord, screws, etc. can be purchased in one package. For details, please refer to p. 627.

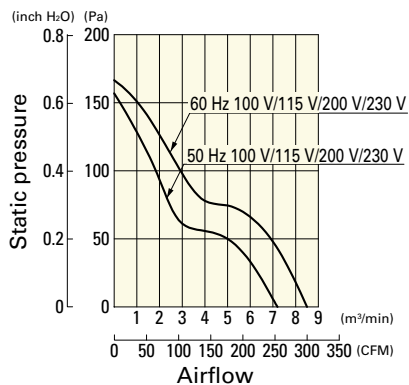
Order no.	Set items					
	Fan	Voltage	Low-speed sensor	Plug cord*	Finger guards	Mounting screws
ST1-109-601	109-601	100 V		489-1618-L10	109-619E	M5×20 mm (4 screws)
ST1-109-604	109-604	115 V		489-1618-L10	109-619E	
ST1-109-602	109-602	200 V		489-1618-L10	109-619E	
ST1-109-603	109-603	230 V		489-1618-L10	109-619E	
ST1-109-641-20	109-641-20	100 V	○ (5 V)	489-1618-L10	109-619E	
ST1-109-641-30	109-641-30		○ (12 V)	489-1618-L10	109-619E	
ST1-109-644-20	109-644-20	115 V	○ (5 V)	489-1618-L10	109-619E	
ST1-109-644-30	109-644-30		○ (12 V)	489-1618-L10	109-619E	
ST1-109-642-20	109-642-20	200 V	○ (5 V)	489-1618-L10	109-619E	
ST1-109-642-30	109-642-30		○ (12 V)	489-1618-L10	109-619E	
ST1-109-643-20	109-643-20	230 V	○ (5 V)	489-1618-L10	109-619E	
ST1-109-643-30	109-643-30		○ (12 V)	489-1618-L10	109-619E	

* PSE compatible.

Airflow - Static Pressure Characteristics

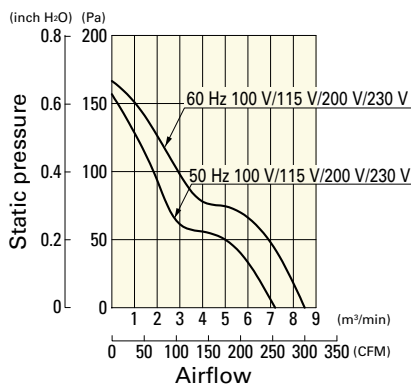
Standard

109-601, 109-604, 109-602, 109-603



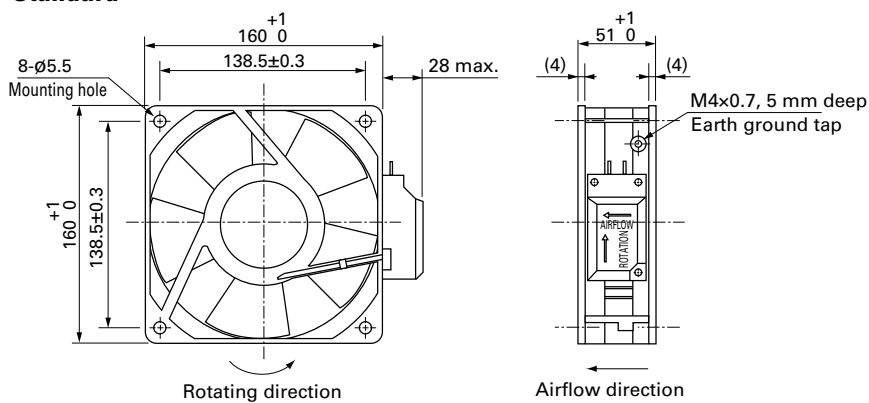
with Sensor

109-641, 109-644, 109-642, 109-643

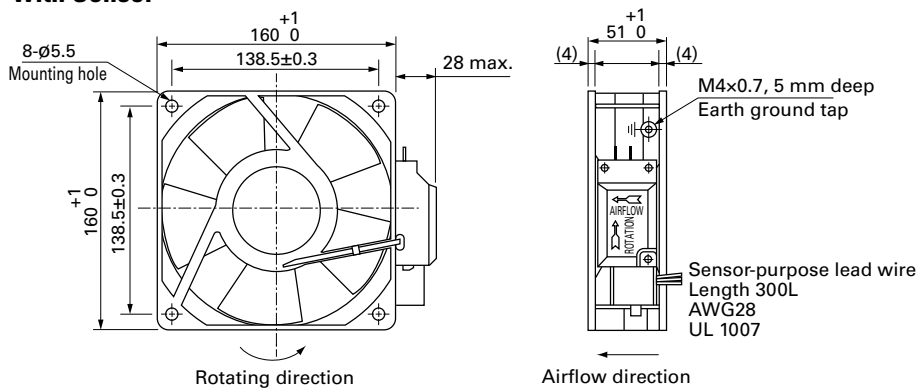


Dimensions (unit: mm)

Standard

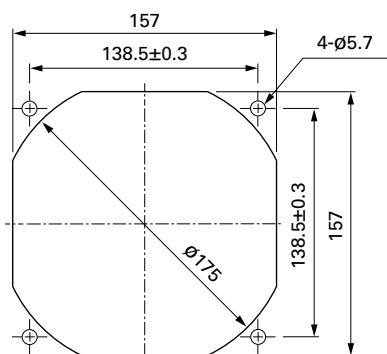


with Sensor



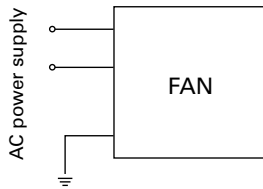
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side



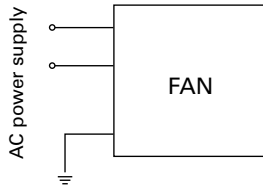
Wiring Diagram

Standard

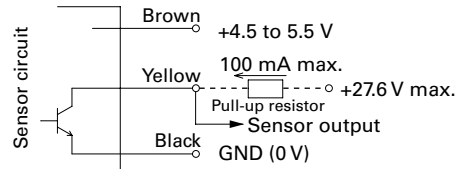


with Sensor

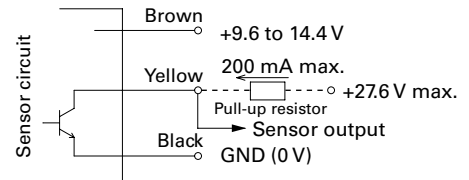
For fan power supply



For sensor circuit
5 V (ITEM-20)



12 V (ITEM-30)



GND (Black) should be shared in case that power supply for sensor circuit (Brown) and that for sensor pull-up (Yellow) are separated.

Options

Finger guards

page: p. 559

Model no.: 109-619E, 109-619H, 109-620

Plug cord

page: pp. 568 to 569

Model no.: 489-084-L10, 489-084-L21, 489-086-L10,
489-086-L21, 489-1618-L10, 489-1618-L21,
489-1618-L28, 489-1619-L10, 489-1619-L21

AC

AC Fan 160 mm sq.