

80×80×38 mm

San Ace 80 



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 Shaded coil motor
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 616.
- Dielectric strength 50/60 Hz, 1500 VAC, for 1 minute (between input terminal and frame)
- Insulation resistance 10 MΩ min. at 500 VDC
- Sound pressure level (SPL) A-weighted 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)
- Mass 400 g

Specifications

Model no.	Rated voltage [V]	Frequency [Hz]	Input [W]	Current [A]	Locked rotor current [A]	Rated speed [min ⁻¹]	Max. airflow [m³/min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
109-150	100	50/60	9/8	0.13/0.11	0.17/0.15	2700/3150	0.9/1.05 31.8/37.1	31.4/44.1 0.126/0.177	35/39	-30 to +60	25000/60°C (56000/40°C)
109-153	115			0.11/0.1	0.14/0.12						
109-151	200			0.07/0.06	0.09/0.08						
109-154	230			0.06/0.05	0.08/0.07						

Set Models PSE (Japanese safety standard) compatible

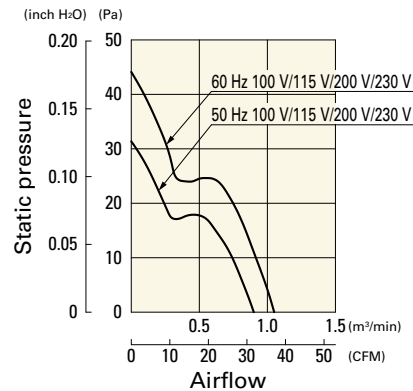
A set of a fan, finger guard, plug cord (PSE compatible), and screws. For details, please refer to p. 674.

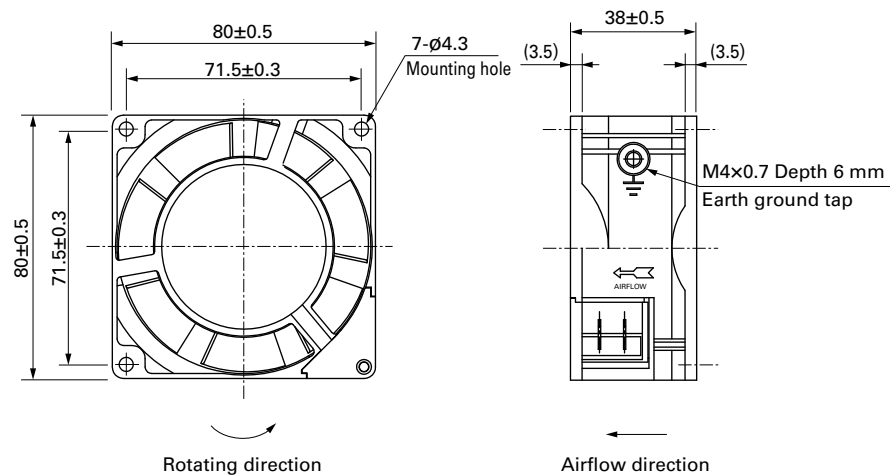
Order no.	Set items					
	Fan (1 pc)	Voltage	Low-speed sensor	Plug cord (1 pc)	Finger guard (1 pc)	Screws with hex nuts (4 pairs) ⁽²⁾
ST1-109-150	109-150	100 V		489-016-L10 ⁽¹⁾	109-049E	M4×55 mm
ST1-109-153	109-153	115 V		489-016-L10 ⁽¹⁾	109-049E	
ST1-109-151	109-151	200 V		489-016-L10 ⁽¹⁾	109-049E	
ST1-109-154	109-154	230 V		489-016-L10 ⁽¹⁾	109-049E	

- (1) PSE compatible, but not UL compatible.
(2) Though these are 2-hole or 3-hole frame mount types, 4 screws are included for extra.

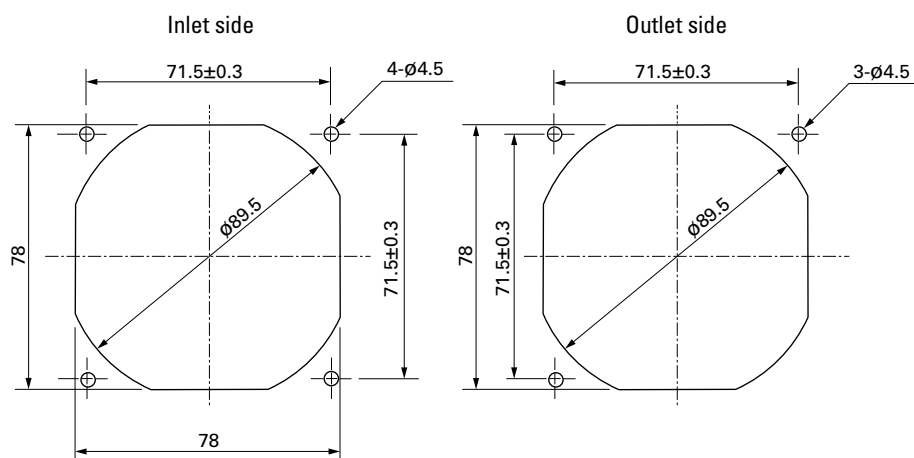
Airflow - Static Pressure Characteristics

109-150, 109-153, 109-151, 109-154

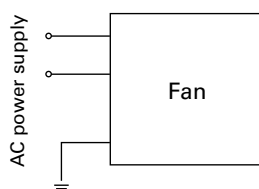




Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Connection Schematic



Options

Finger guards

page: p. 598

Model no.: 109-049E, 109-049H

Resin finger guards

page: p. 605

Model no.: 109-1002G

Resin filter kits

page: p. 606

Model no.: 109-1002F13 (13PPI), 109-1002F20 (20PPI),
109-1002F30 (30PPI), 109-1002F40 (40PPI)

Plug cord

page: p. 609 to 610

PSE compatible models
Model no.: 489-016-L10, 489-016-L21
UL/CSA certified models
Model no.: 489-047-L10, 489-047-L21

80×80×42 mm

San Ace 80 



General Specifications

- Material Frame: Aluminum (Black coating), 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 Shaded coil motor
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 616.
- Dielectric strength 50/60 Hz, 1500 VAC, for 1 minute (between input terminal and frame)
- Insulation resistance 10 MΩ min. at 500 VDC
- Sound pressure level (SPL) A-weighted 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)
- Mass 410 g

Specifications

Model no.	Rated voltage [V]	Frequency [Hz]	Input [W]	Current [A]	Locked rotor current [A]	Rated speed [min ⁻¹]	Max. airflow [m³/min]	Max. static pressure [Pa]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
109-040UL	100	50/60	10/9	0.13/0.11	0.16/0.14	2650/3100	0.85/1.0 30.0/35.3	24.5/35.3 0.098/0.142	40/44	-30 to +60	25000/60°C (56000/40°C)
109-043UL	115			0.11/0.1	0.14/0.12						
109-041UL	200			0.07/0.06	0.08/0.07						
109-044UL	230			0.06/0.05	0.07/0.06						
109-047UL *	100		4/3.5	0.05/0.05	0.05/0.05	1500/1500	0.43/0.43 15.2/15.2	8.8/ 8.8 0.035/0.035	24/24		
109-033UL *	115			0.04/0.04	0.04/0.04						

* These are low-speed models.

Set Models PSE (Japanese safety standard) compatible

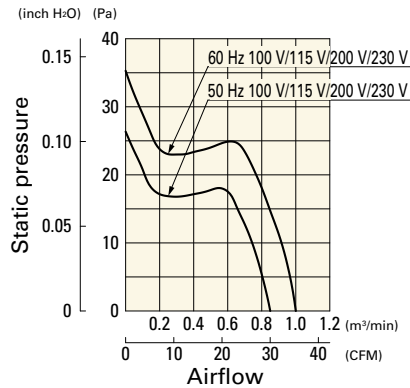
A set of a fan, finger guard, plug cord (PSE compatible), and screws. For details, please refer to p. 674.

Order no.	Set items					
	Fan (1 pc)	Voltage	Low-speed sensor	Plug cord (1 pc)	Finger guard (1 pc)	Screws with hex nuts (4 pairs)
ST1-109-040UL	109-040UL	100 V		489-008-L10*	109-049E	M4×55 mm
ST1-109-043UL	109-043UL	115 V		489-008-L10*	109-049E	
ST1-109-041UL	109-041UL	200 V		489-008-L10*	109-049E	
ST1-109-044UL	109-044UL	230 V		489-008-L10*	109-049E	
ST1-109-047UL	109-047UL	100 V		489-008-L10*	109-049E	
ST1-109-033UL	109-033UL	115 V		489-008-L10*	109-049E	

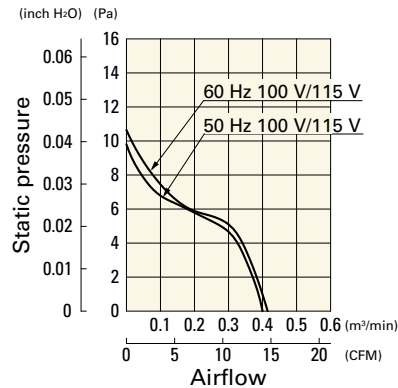
* PSE compatible, but not UL compatible.

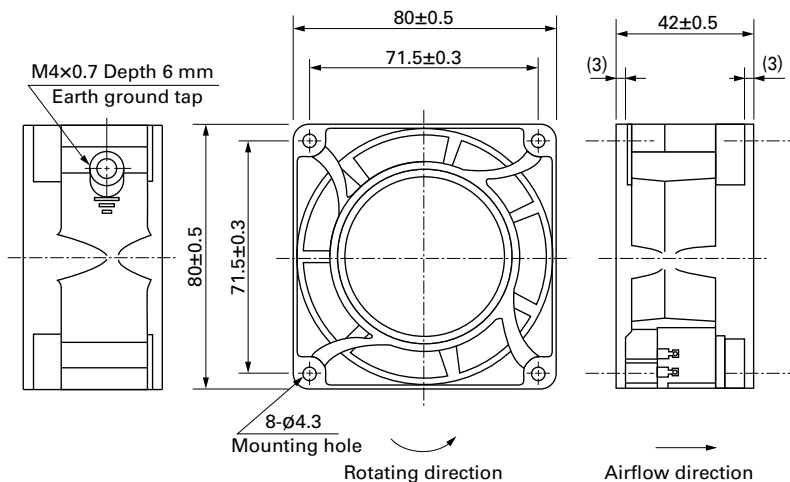
Airflow - Static Pressure Characteristics

109-040UL, 109-043UL, 109-041UL, 109-044UL

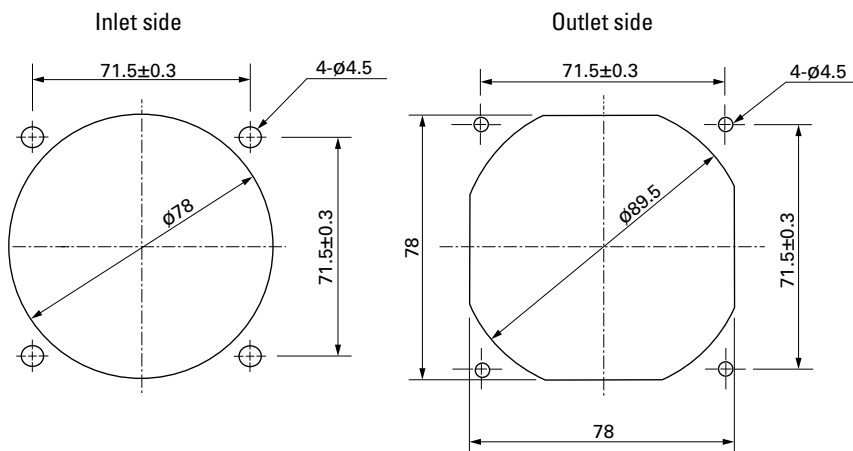


109-047UL, 109-033UL

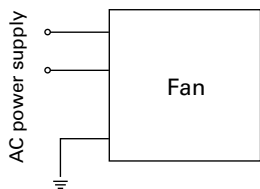




Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Connection Schematic



Options

Finger guards

page: p. 598

Model no.: 109-049E, 109-049H

Resin finger guards

page: p. 605

Model no.: 109-1002G

Resin filter kits

page: p. 606

Model no.: 109-1002F13 (13PPI), 109-1002F20 (20PPI),
109-1002F30 (30PPI), 109-1002F40 (40PPI)

Plug cord

page: p. 609

PSE compatible models
Model no.: 489-008-L10, 489-008-L21, 489-008-L35

92×92×25 mm

San Ace 92  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 Shaded coil motor
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 616.
- 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 min. at 500 VDC
- Sound pressure level (SPL) A-weighted 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 290 g/310 g (with Sensor)

Specifications

Standard

Model no.	Rated voltage [V]	Frequency [Hz]	Input [W]	Current [A]	Locked rotor current [A]	Rated speed [min ⁻¹]	Max. airflow [m³/min] [CFM]		Max. static pressure [Pa] [inchH ₂ O]		SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
109S091	100	50/60	8/7	0.1 /0.09	0.13/0.12	2700/3100	0.95/1.1	33.6/38.9	39.2/49.0	0.157/0.197	35/38	-30 to +60	25000/60°C (56000/40°C)
109S093	115			0.09/0.08	0.11/0.1								
109S092	200		11/10	0.07/0.06	0.08/0.08								
109S094	230		10/9	0.06/0.05	0.07/0.07								
109S095	100		8/7	0.1 /0.09	0.11/0.1	2400/2800	0.84/0.98	29.7/34.6	31.4/40.2	0.126/0.161	32/35		
109S096*	100		7/6	0.09/0.08	0.09/0.08	1500/1700	0.55/0.65	19.4/23	12.5/16.3	0.05 /0.065	24/27		
109S193*	115			0.08/0.07	0.08/0.07								
109S192*	200		8/7	0.06/0.05	0.06/0.05								
109S194*	230	0.05/0.04		0.05/0.04									

*These are low-speed models.

with Sensor

For sensor specifications, please refer to p. 622. 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. 109S491-20

For a 12 V sensor power supply (ITEM-30), please append "-30" to the end of model number. E.g. 109S491-30

Model no.	Rated voltage [V]	Frequency [Hz]	Input [W]	Current [A]	Locked rotor current [A]	Rated speed [min ⁻¹]	Max. airflow [m³/min] [CFM]		Max. static pressure [Pa] [inchH ₂ O]		SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
109S491	100	50/60	8/7	0.1 /0.09	0.13/0.12	2700/3100	0.95/1.1	33.6/38.9	39.2/49.0	0.157/0.197	35/38	-10 to +60	25000/60°C (56000/40°C)
109S493	115				0.09/0.08								
109S492	200		11/10	0.07/0.06	0.08/0.08								
109S494	230		10/9	0.06/0.05	0.07/0.07								
109S495	100		8/7	0.1 /0.09	0.11/0.1	2400/2800	0.84/0.98	29.7/34.6	31.4/40.2	0.126/0.161	32/35		
109S496*			7/6	0.09/0.08	0.09/0.08	1500/1700	0.55/0.65	19.4/23	12.5/16.3	0.05 /0.065	24/27		

*These are low-speed models.