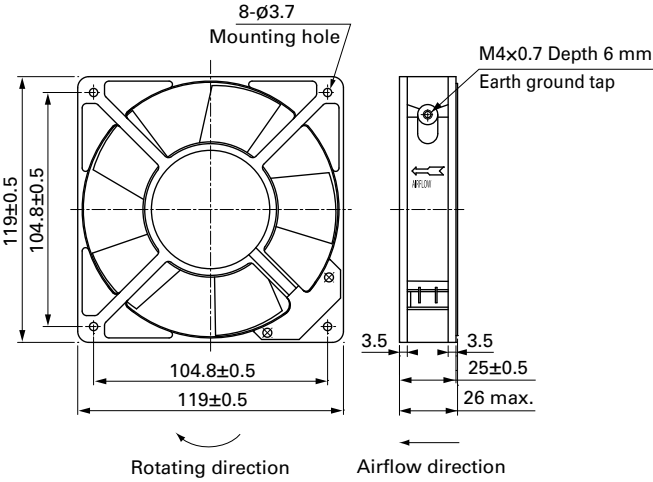
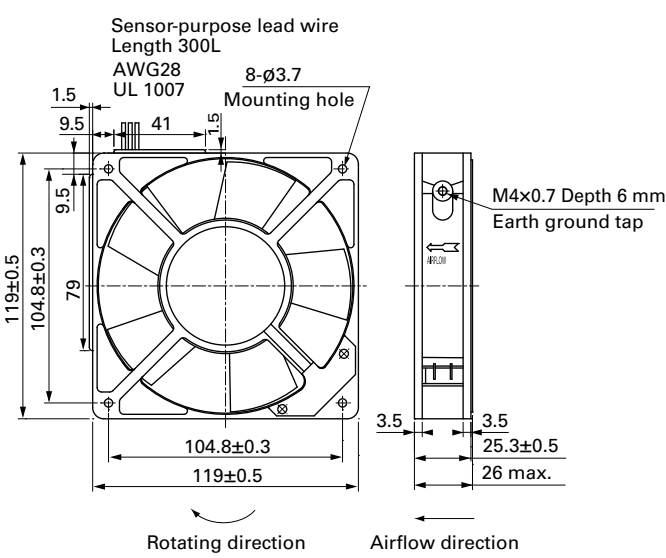


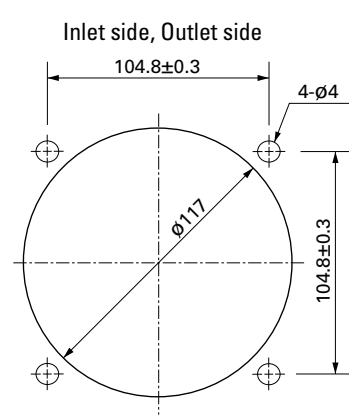
Standard



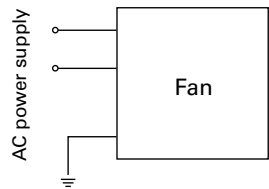
with Sensor When mounting the model with a sensor, please screw-mount through both flanges as it has a sensor box.



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

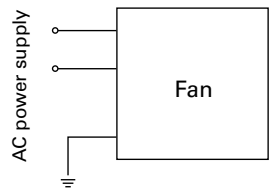


Standard

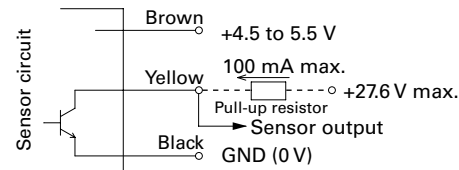


with Sensor

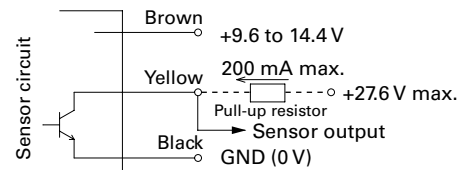
For fan power supply



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. 599

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

Resin finger guards page: p. 605

Model no.: 109-1000G

Resin filter kits page: p. 606

Model no.: 109-1000F13 (13PPI), 109-1000F20 (20PPI),
109-1000F30 (30PPI), 109-1000F40 (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

120×120×38 mm

San Ace 120



Certifications vary by model no. See the Specifications below.



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 G terminal)
- Dielectric strength (with sensor) 50/60 Hz 1500 VAC 1 minute (between AC input terminal and G terminal)
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 550 g/580 g (with Sensor)

Specifications

Standard

Standard conformity: UL, CSA, TÜV, CE, UKCA, and PSE

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]	
109S075UL	100	50/60	18/16	0.24/0.21	0.32/0.28	2700/3100	2.5 /2.9 88.3/102.5	57.9/68.7 0.233/0.276	42/45	-30 to +60	25000/60°C (56000/40°C)	
109S074UL	115			0.21/0.18	0.27/0.24							
109S078UL	200			0.12/0.1	0.16/0.14							
109S072UL	230			0.11/0.09	0.14/0.13							
109S005UL	100		14/12	0.18/0.16	0.25/0.22	2700/3100	2.35/2.7 83 / 95.4	55.9/65.7 0.224/0.264	40/43			
109S024UL	115			0.16/0.14	0.21/0.18							
109S008UL	200			0.09/0.08	0.13/0.11							
109S025UL	230			0.08/0.07	0.11/0.09							
109S029UL	100		14/12	0.18/0.16	0.23/0.21	2450/2700	2.15/2.35 76 / 83	44.1/49.0 0.177/0.197	38/40			
109S013UL			13/11	0.16/0.14	0.16/0.15	1800/2000	1.55/1.75 54.8/ 60.8	23.5/26.4 0.094/0.106	30/32			
109S006UL *			7/7	0.1 /0.09	0.1 /0.09	1650/1700	1.45/1.5 51.2/ 53	17.6/17.6 0.071/0.071	28/28			
			115	10/10	0.13/0.11	0.13/0.11	1800/1900	1.56/1.64 55 / 57.9	20 /20.6 0.08 /0.083			30/31
109S010UL *			200	7/7	0.05/0.04	0.05/0.04	1650/1700	1.45/1.5 51.2/ 53	17.6/17.6 0.071/0.071			28/28
			240	11/11	0.06/0.05	0.06/0.05	1800/1950	1.58/1.68 55.8/ 59.3	20.6/21.6 0.083/0.087			30/32

* These are low-speed models.

Standard conformity: PSE

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]
109S005	100	50/60	14/12	0.18/0.16	0.25/0.22	2700/3100	2.35/2.7 83 / 95.4	55.9/65.7 0.224/0.264	40/43	-30 to +60	25000/60°C (56000/40°C)
109S024	120			0.16/0.14	0.21/0.18						
109S008	200			0.09/0.08	0.13/0.11						
109S025	230			0.08/0.07	0.11/0.09						
109S013	100		13/11	0.16/0.14	0.16/0.15	1800/2000	1.55/1.75 54.8/ 60.8	23.5/26.4 0.094/0.106	30/32		
109S006*			7/7	0.1 /0.09	0.1 /0.09	1650/1700	1.45/1.5 51.2/ 53	17.6/17.6 0.071/0.071	28/28		
109S010*	200			0.05/0.04	0.05/0.04						

* These are low-speed models.

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. 109S405UL-20
For a 12 V sensor power supply (ITEM-30), please append "-30" to the end of model number. E.g. 109S405UL-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]
109S405UL	100	50/60	14/12	0.18/0.16	0.25/0.22	2700/3100	2.35/2.7 83 / 95.4	55.9/65.7 0.224/0.264	40/43	-10 to +60	25000/60°C (56000/40°C)
109S424UL	115			0.16/0.14	0.21/0.18						
109S408UL	200			0.09/0.08	0.13/0.11						
109S425UL	230			0.08/0.07	0.11/0.09						
109S429UL	100			0.18/0.16	0.23/0.21						
109S406UL *			7/6	0.09/0.08	0.1 /0.09	1650/1700	1.45/1.5 51 / 53	17.7/17.7 0.071/0.071	28/28		
109S475UL	100		18/16	0.24/0.21	0.32/0.28	2700/3100	2.5 /2.9 88.3/102.4	57.9/68.7 0.233/0.276	42/45		
109S474UL	115			0.21/0.18	0.27/0.24						
109S478UL	200			0.12/0.1	0.16/0.14						
109S472UL	230			0.11/0.09	0.14/0.13						

* 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.

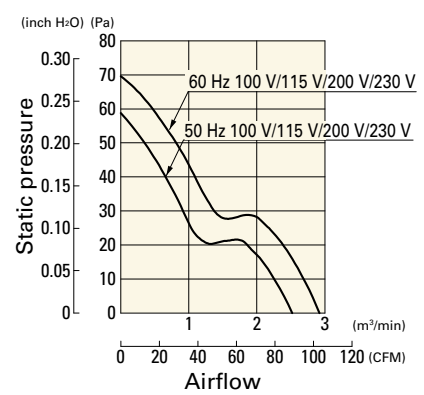
Order no.	Set items					
	Fan (1 pc)	Voltage	Low-speed sensor	Plug cord (1 pc)	Finger guard (1 pc)	Screws with hex nuts (4 pairs)
ST1-109S075UL	109S075UL	100 V		489-037-L10*	109-019E	M3×55 mm
ST1-109S074UL	109S074UL	115 V		489-037-L10*	109-019E	
ST1-109S078UL	109S078UL	200 V		489-037-L10*	109-019E	
ST1-109S072UL	109S072UL	230 V		489-037-L10*	109-019E	
ST1-109S005	109S005	100 V		489-006-L10*	109-019E	
ST1-109S005UL	109S005UL			489-037-L10*	109-019E	
ST1-109S024	109S024	120 V		489-006-L10*	109-019E	
ST1-109S024UL	109S024UL	115 V		489-037-L10*	109-019E	
ST1-109S008	109S008	200 V		489-006-L10*	109-019E	
ST1-109S008UL	109S008UL			489-037-L10*	109-019E	
ST1-109S025	109S025	230 V		489-006-L10*	109-019E	
ST1-109S025UL	109S025UL			489-037-L10*	109-019E	
ST1-109S029UL	109S029UL	100 V		489-037-L10*	109-019E	
ST1-109S013	109S013			489-006-L10*	109-019E	
ST1-109S013UL	109S013UL			489-037-L10*	109-019E	
ST1-109S006	109S006			489-006-L10*	109-019E	
ST1-109S006UL	109S006UL	100 V 115 V		489-037-L10*	109-019E	
ST1-109S010	109S010	200 V		489-006-L10*	109-019E	
ST1-109S010UL	109S010UL	200 V 240 V		489-037-L10*	109-019E	
ST1-109S405UL-20	109S405UL-20	100 V	○ (5 V)	489-037-L10*	109-019E	
ST1-109S405UL-30	109S405UL-30		○ (12 V)	489-037-L10*	109-019E	
ST1-109S424UL-20	109S424UL-20	115 V	○ (5 V)	489-037-L10*	109-019E	
ST1-109S424UL-30	109S424UL-30		○ (12 V)	489-037-L10*	109-019E	
ST1-109S408UL-20	109S408UL-20	200 V	○ (5 V)	489-037-L10*	109-019E	
ST1-109S408UL-30	109S408UL-30		○ (12 V)	489-037-L10*	109-019E	
ST1-109S425UL-20	109S425UL-20	230 V	○ (5 V)	489-037-L10*	109-019E	
ST1-109S425UL-30	109S425UL-30		○ (12 V)	489-037-L10*	109-019E	
ST1-109S429UL-20	109S429UL-20	100 V	○ (5 V)	489-037-L10*	109-019E	
ST1-109S429UL-30	109S429UL-30		○ (12 V)	489-037-L10*	109-019E	
ST1-109S406UL-20	109S406UL-20	100 V	○ (5 V)	489-037-L10*	109-019E	
ST1-109S406UL-30	109S406UL-30		○ (12 V)	489-037-L10*	109-019E	
ST1-109S475UL-20	109S475UL-20	100 V	○ (5 V)	489-037-L10*	109-019E	
ST1-109S475UL-30	109S475UL-30		○ (12 V)	489-037-L10*	109-019E	
ST1-109S474UL-20	109S474UL-20	115 V	○ (5 V)	489-037-L10*	109-019E	
ST1-109S474UL-30	109S474UL-30		○ (12 V)	489-037-L10*	109-019E	
ST1-109S478UL-20	109S478UL-20	200 V	○ (5 V)	489-037-L10*	109-019E	
ST1-109S478UL-30	109S478UL-30		○ (12 V)	489-037-L10*	109-019E	
ST1-109S472UL-20	109S472UL-20	230 V	○ (5 V)	489-037-L10*	109-019E	
ST1-109S472UL-30	109S472UL-30		○ (12 V)	489-037-L10*	109-019E	

* PSE compatible, but not UL compatible.

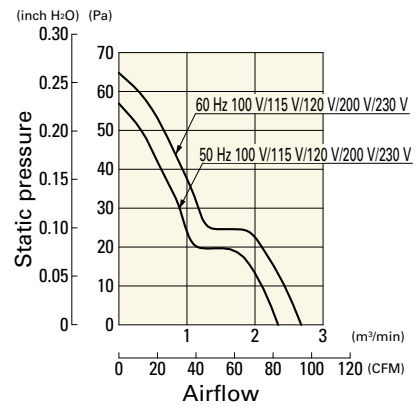
AC
AC Fan 120 mm sq.

Standard

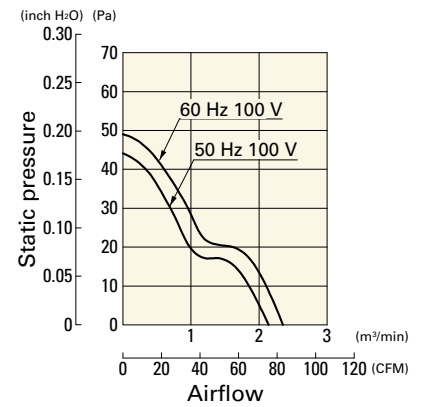
109S075UL, 109S074UL, 109S078UL, 109S072UL



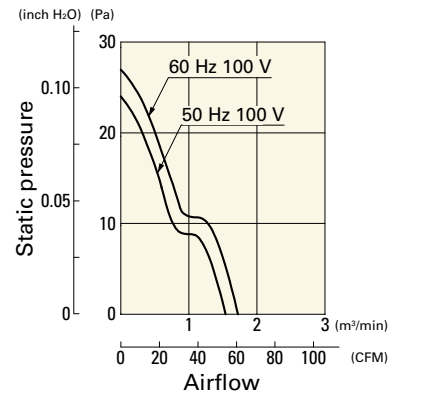
109S005, 109S005UL, 109S024, 109S024UL, 109S008, 109S008UL, 109S025, 109S025UL



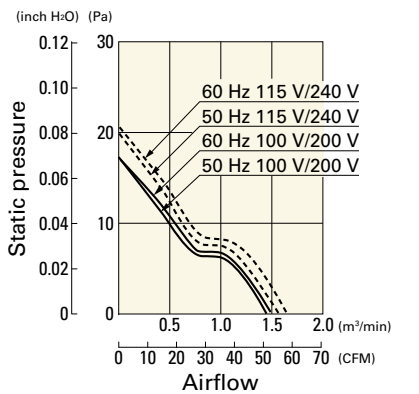
109S029UL



109S013, 109S013UL

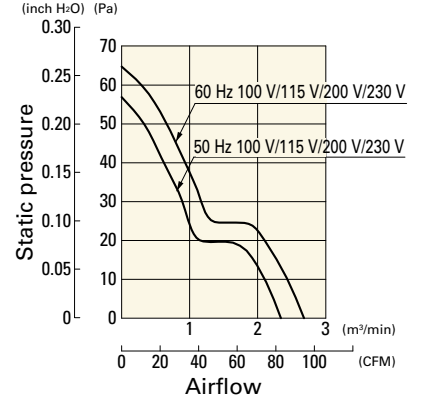


109S006, 109S006UL, 109S010, 109S010UL

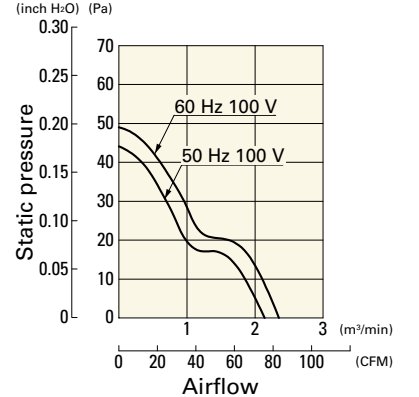


with Sensor

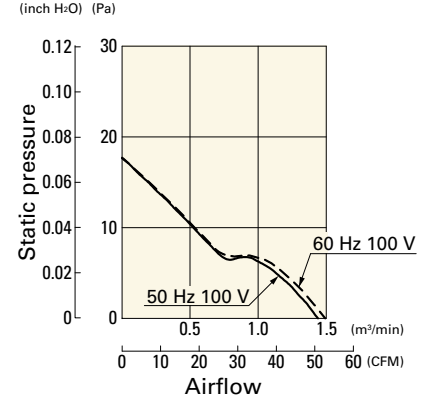
109S405UL, 109S424UL, 109S408UL, 109S425UL



109S429UL



109S406UL



109S475UL, 109S474UL, 109S478UL, 109S472UL

