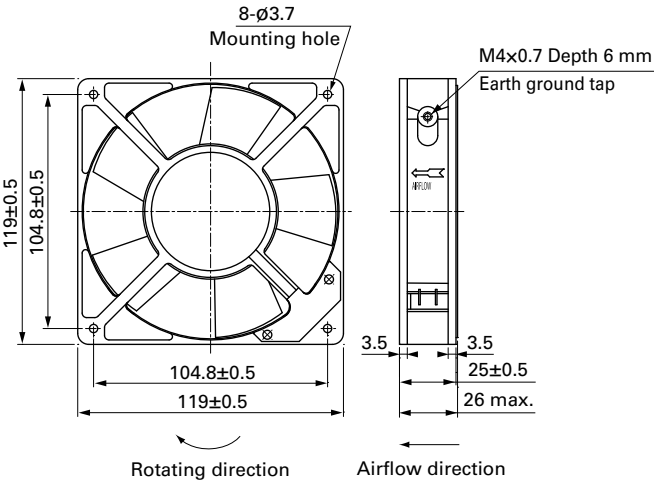
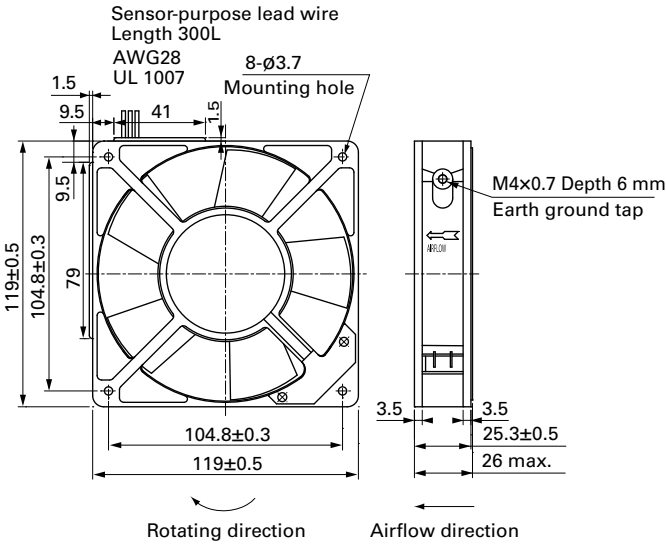


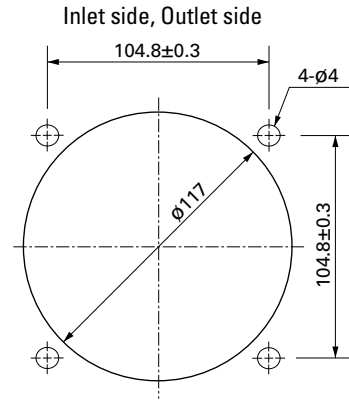
Standard



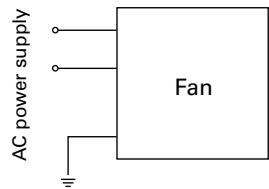
with Sensor When mounting the model with a sensor, please screw-mount through both flanges as it has a sensor box.



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

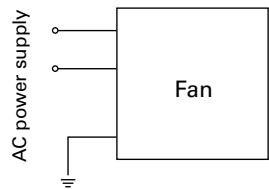


Standard

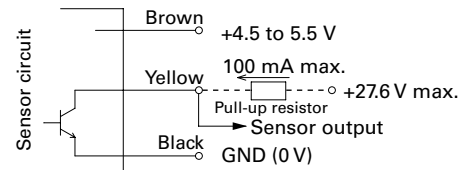


with Sensor

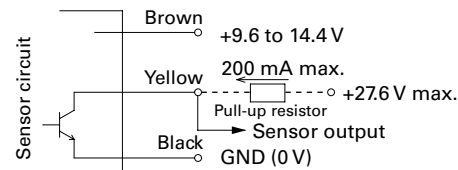
For fan power supply



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

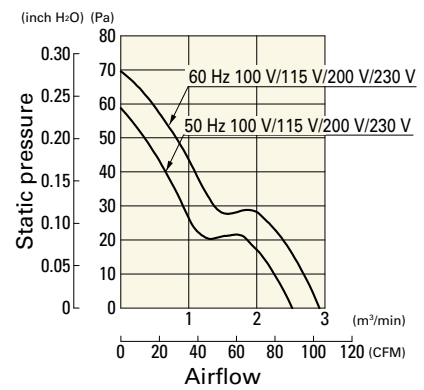
A set of a fan, finger guard, plug cord (PSE compatible), and screws. For details, please refer to p. 674.

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	

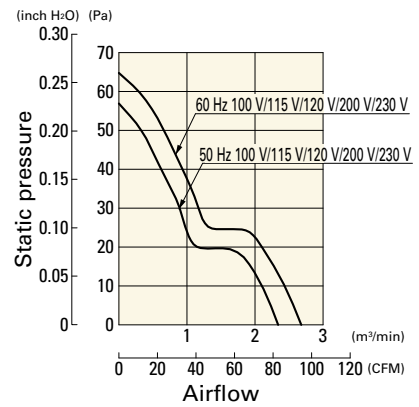
* PSE compatible, but not UL compatible.

Standard

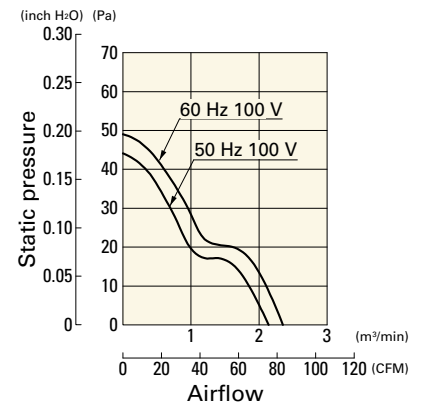
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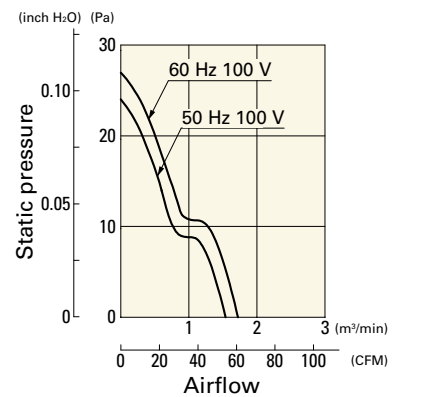
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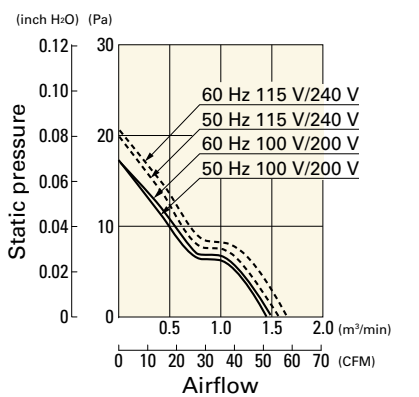
109S029UL



109S013, 109S013UL

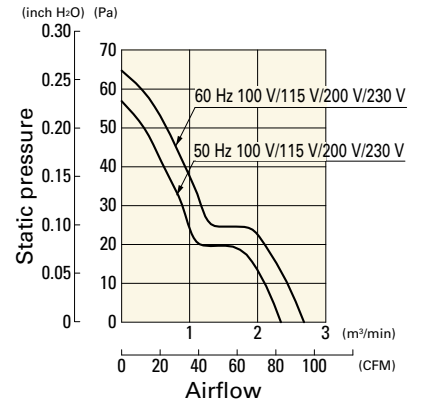


109S006, 109S006UL, 109S010, 109S010UL

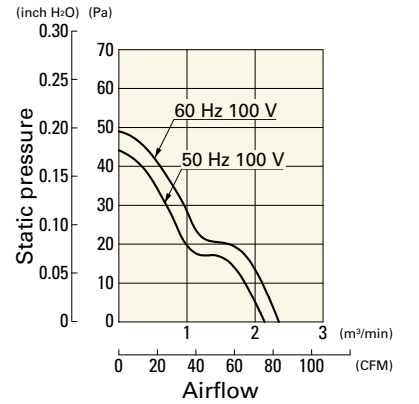


with Sensor

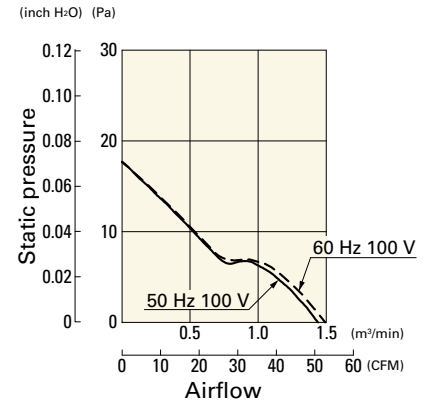
109S405UL, 109S424UL, 109S408UL, 109S425UL



109S429UL



109S406UL



109S475UL, 109S474UL, 109S478UL, 109S472UL

