



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. 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 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 [m ³ /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. 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. 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 [m ³ /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	0.11/0.1						
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.

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

For the San Ace 92AD 9AD type 92×92×38 mm fan, please refer to p. 494.

This fan works while internally converting AC power into DC power, providing the superior performance of a DC fan with the flexibility of AC input.

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
ST1-109S091	109S091	100 V		489-016-L10	109-099E	M3×40 mm (4 screws)**
ST1-109S093	109S093	115 V		489-016-L10	109-099E	
ST1-109S092	109S092	200 V		489-016-L10	109-099E	
ST1-109S094	109S094	230 V		489-016-L10	109-099E	
ST1-109S095	109S095	100 V		489-016-L10	109-099E	
ST1-109S096	109S096	100 V		489-016-L10	109-099E	
ST1-109S193	109S193	115 V		489-016-L10	109-099E	
ST1-109S192	109S192	200 V		489-016-L10	109-099E	
ST1-109S194	109S194	230 V		489-016-L10	109-099E	
ST1-109S491-20	109S491-20	100 V	○ (5 V)	489-016-L10	109-099E	
ST1-109S491-30	109S491-30		○ (12 V)	489-016-L10	109-099E	
ST1-109S493-20	109S493-20	115 V	○ (5 V)	489-016-L10	109-099E	
ST1-109S493-30	109S493-30		○ (12 V)	489-016-L10	109-099E	
ST1-109S492-20	109S492-20	200 V	○ (5 V)	489-016-L10	109-099E	
ST1-109S492-30	109S492-30		○ (12 V)	489-016-L10	109-099E	
ST1-109S494-20	109S494-20	230 V	○ (5 V)	489-016-L10	109-099E	
ST1-109S494-30	109S494-30		○ (12 V)	489-016-L10	109-099E	
ST1-109S495-20	109S495-20	100 V	○ (5 V)	489-016-L10	109-099E	
ST1-109S495-30	109S495-30		○ (12 V)	489-016-L10	109-099E	
ST1-109S496-20	109S496-20		○ (5 V)	489-016-L10	109-099E	
ST1-109S496-30	109S496-30		○ (12 V)	489-016-L10	109-099E	

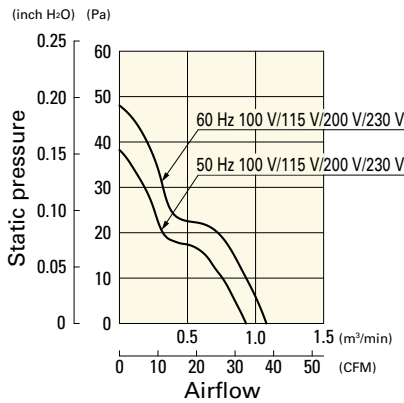
* PSE compatible.

** Though these are 2-hole or 3-hole frame mount types, 4 screws are included for extra.

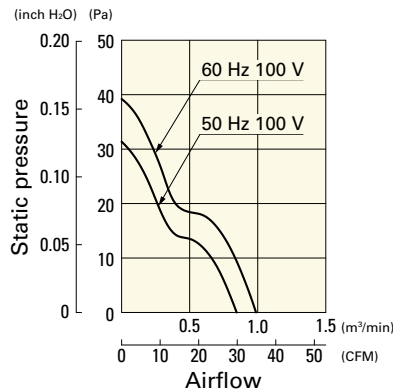
Airflow - Static Pressure Characteristics

Standard

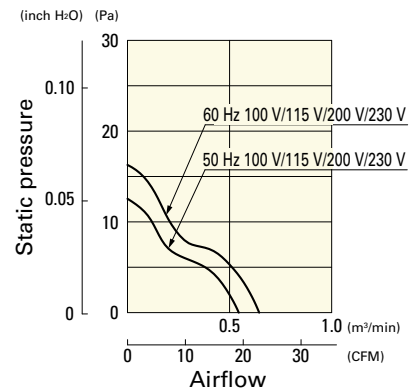
109S091, 109S093, 109S092, 109S094



109S095

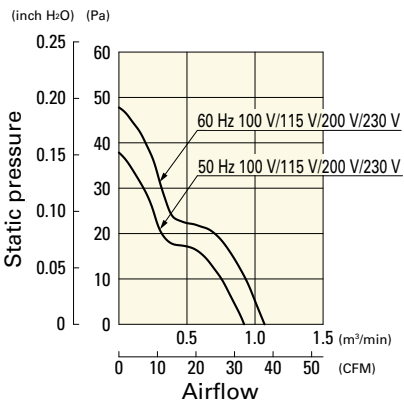


109S096, 109S193, 109S192, 109S194

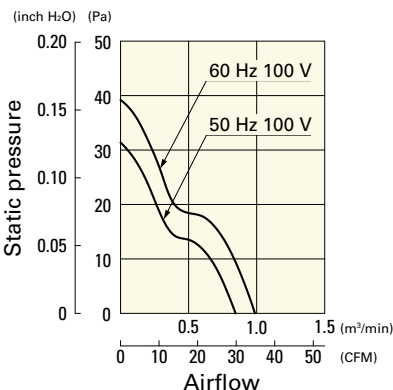


with Sensor

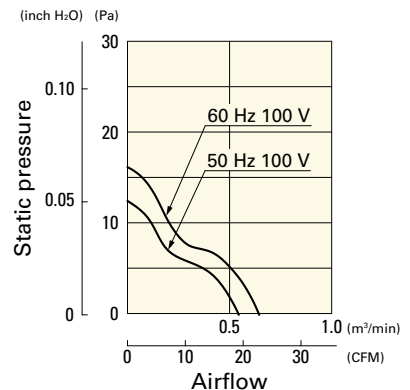
109S491, 109S493, 109S492, 109S494



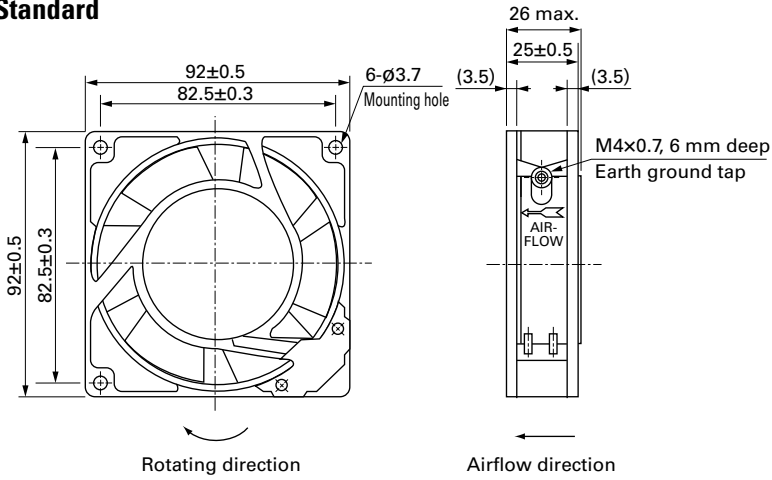
109S495



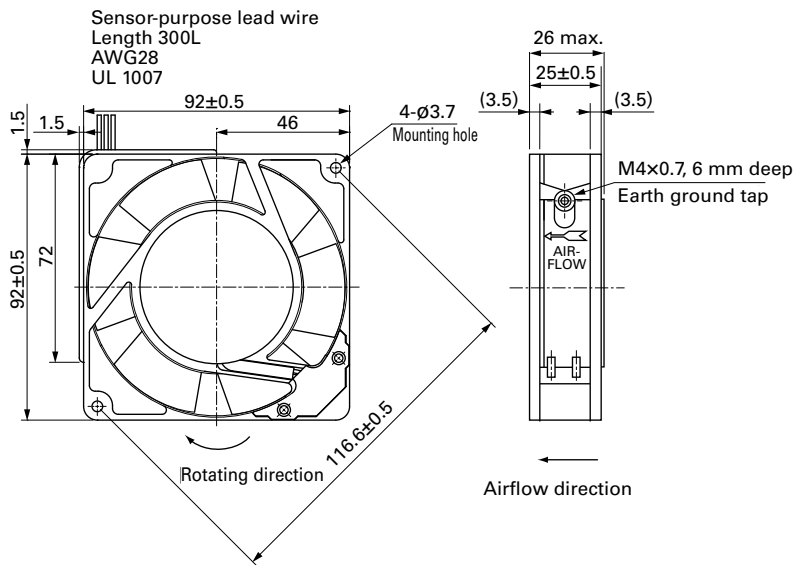
109S496



Standard



with Sensor

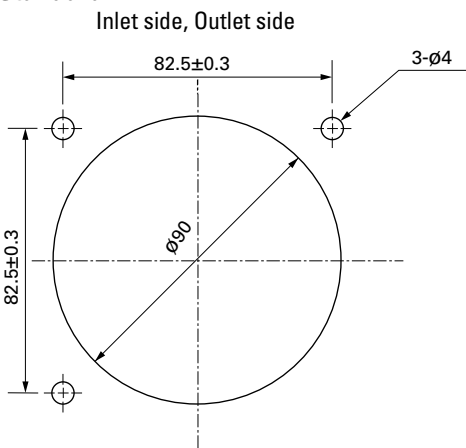


AC

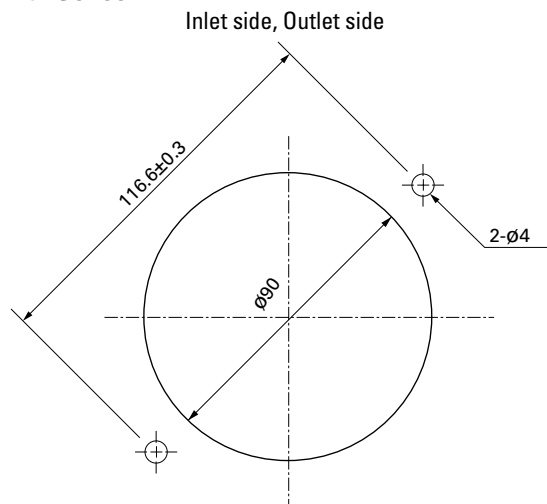
AC Fan 92 mm sq.

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

Standard



with Sensor



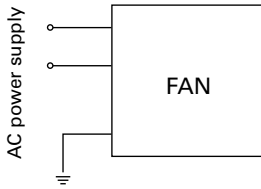
Wiring Diagram

Standard

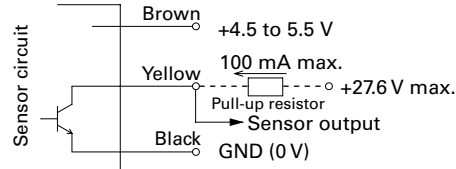


with Sensor

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. 558

Model no.: 109-099E, 109-099H, 109-099C

Resin finger guards

page: p. 565

Model no.: 109-1001G

Resin filter kits

page: p. 566

Model no.: 109-1001F13 (13PPI), 109-1001F20 (20PPI),
109-1001F30 (30PPI), 109-1001F40 (40PPI)

Plug cord

page: pp. 568 to 569

Model no.: 489-016-L10, 489-016-L21, 489-047-L10,
489-047-L21