

**120**mm sq.**San Ace 120**

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

**General Specifications**

- Material ..... Frame: Aluminum,  
Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ..... Refer to specifications (L10:Survival rate: 90% at 60°C ,  
rated voltage,and continuously run in a free air state)
- Dielectric Strength ..... 50/60Hz 1,500VAC 1minute (between input terminal and frame)
- Dielectric Strength (With Sensor) ... Between AC input and DC input(Sensor output)  
: 50/60Hz 1,000VAC 1minute  
Between AC input and G  
: 50/60Hz 1,500VAC 1minute,  
Between G and DC input(Sensor output)  
: 50/60Hz 1,000VAC 1minute
- Sensor-Purpose Lead Wire ... ⊕ brown ⊖ black (Sensor) yellow
- Storage Temperature ..... -30°C to+70°C (Non-condensing)
- Operating Voltage Range ... Voltage of each model ±10%

**120×120×25mm** [Mass : 370g /390g (with Sensor)]

**Specifications Standard** ※ represents low-speed.

Model No.	Voltage [V]	Frequency [Hz]	Input [W]	Current [A]	Locked Rotor Current [A]	Rated Speed [min <sup>-1</sup> ]	Max. Airflow [m <sup>3</sup> /min] [CFM]	Max. Static Pressure [Pa] [inchHzO]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
109S085	100	50/60	13.5/12	0.16/0.14	0.19/0.17	2,500/2,900	1.95/2.3 68.9/81.3	48 /51.9 0.193/0.216	38/41	-30 to +60	25,000/60°C
109S084	115			0.14/0.12	0.16/0.15						
109S088	200			0.08/0.07	0.1 /0.09						
109S087	230			0.07/0.06	0.08/0.07						
109S081	100			0.11	0.11/0.1						
109S083	115	9.5/8.5	0.1	0.1 /0.09	2,200/2,350	1.7 /1.8 60.1/63.6	29.4/26.5 0.118/0.106	34/35			
109S082	200			0.07					0.07/0.06		
109S089	230			0.06					0.06/0.05		
109S086 ※	100			12/10					0.14/0.12	0.15/0.13	1,400/1,600

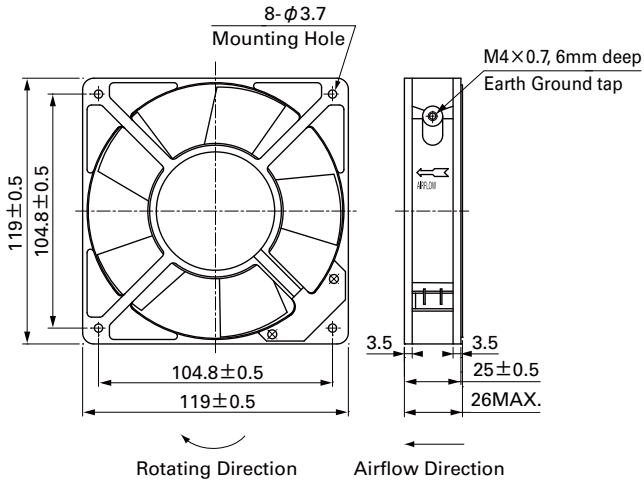
**with Sensor** ※ represents low-speed.

Model No.	Voltage [V]	Frequency [Hz]	Input [W]	Current [A]	Locked Rotor Current [A]	Rated Speed [min <sup>-1</sup> ]	Max. Airflow [m <sup>3</sup> /min] [CFM]	Max. Static Pressure [Pa] [inchHzO]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
109S485	100	50/60	13.5/12	0.16/0.14	0.19/0.17	2,500/2,900	1.95/2.3 68.9/81.3	48 /51.9 0.193/0.216	38/41	-10 to +60	25,000/60°C
109S484	115			0.14/0.12	0.16/0.15						
109S488	200			0.08/0.07	0.1 /0.09						
109S487	230			0.07/0.06	0.08/0.07						
109S486 ※	100			12/10	0.14/0.12						

Two types of power supplies, 5V (ITEM-20) and 12V (ITEM-30), are available in fans with sensor attached.

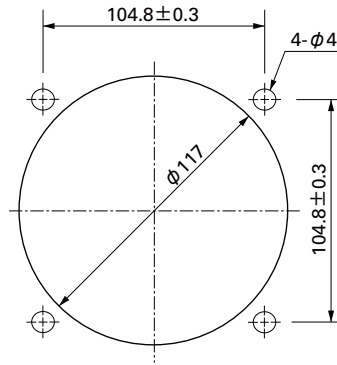
## ■ Dimensions (unit: mm)

### Standard

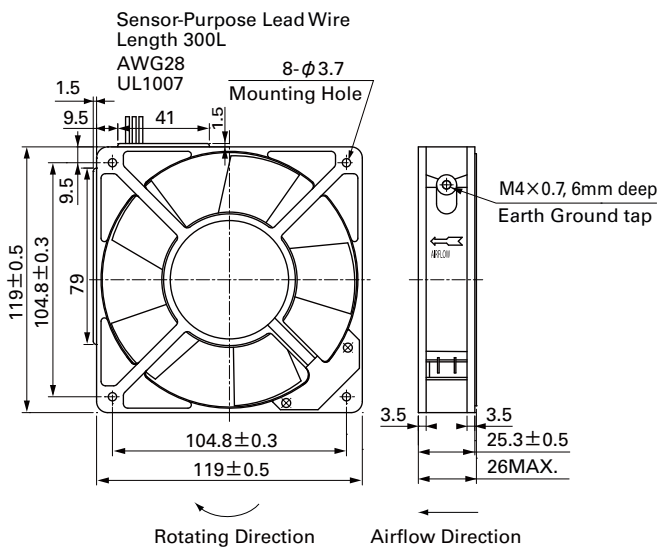


## ■ Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

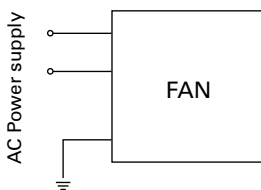


### with Sensor



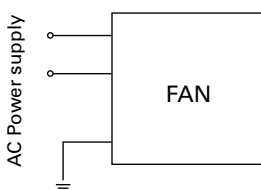
## ■ Wiring Diagram

### Standard

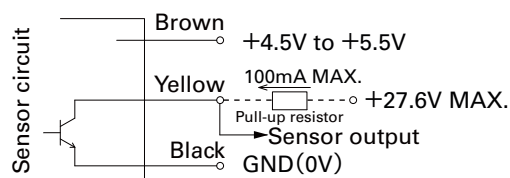


### with Sensor

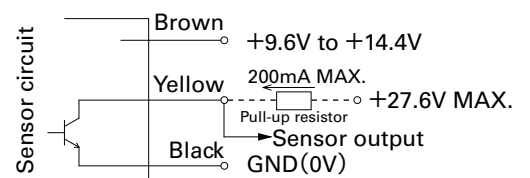
(For fan power supply)



### 5V (ITEM-20)



### 12V (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.

**120** mm sq.

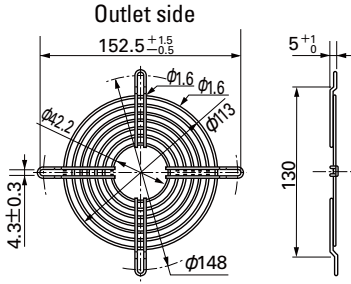
# San Ace 120

**120×120×25** mm (Mass : 370g / 390g (with Sensor))

## Options (unit: mm)

### Finger Guards

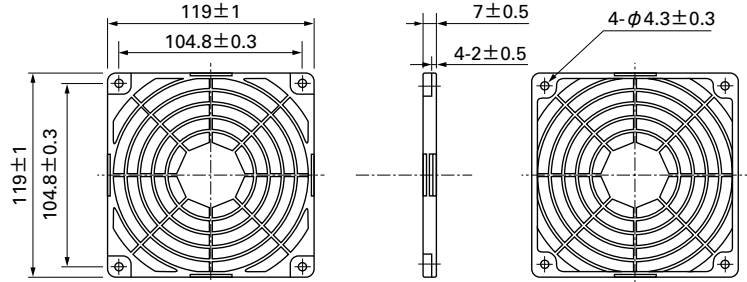
Model : 109-019C Surface treatment : Nickel-chrome plating (silver) Color  
 : 109-019H : Cation electropainting (black)



Mass : 32g

### Resin Finger Guards

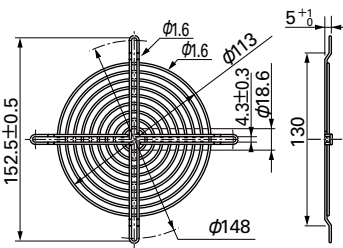
Model : 109-1000G



Mass : 23g

Model : 109-019E Surface treatment : Nickel-chrome plating (silver) Color  
 : 109-019K : Cation electropainting (black)

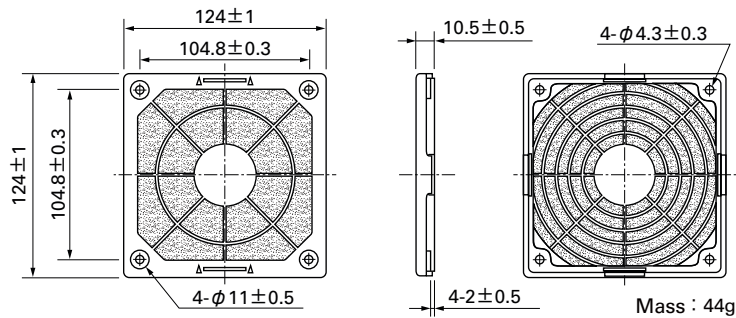
### Inlet side, Outlet side



Mass : 42g

### Resin Filter Kits

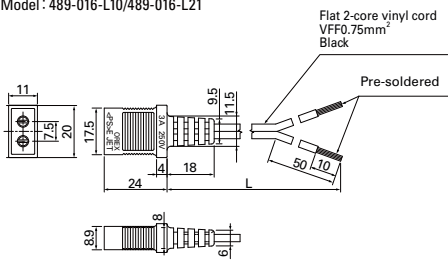
Model : 109-1000F13 (13PPI), 109-1000F20 (20PPI)  
 : 109-1000F30 (30PPI), 109-1000F40 (40PPI)



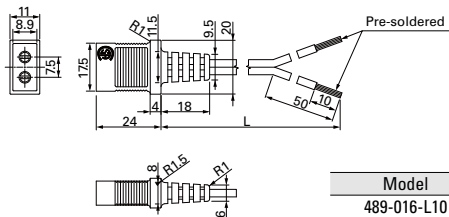
Mass : 44g

### Plug Cord

(Products compliant with Electrical Appliance and Material Safety Law)  
 Model : 489-016-L10/489-016-L21



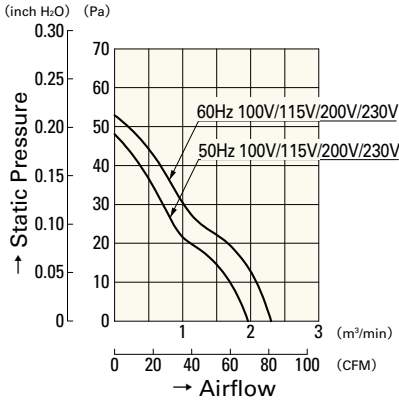
(UL/CSA CERTIFIED)  
 UL FILE No.E50197 CSA FILE No.LR67048  
 Model : 489-047-L10/489-047-L21



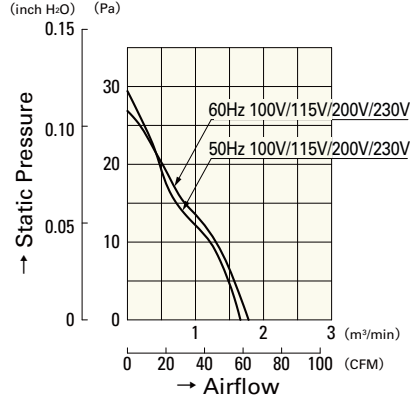
Model	Power cord length (L) (mm)	Mass [g]
489-016-L10	1,000	34
489-016-L21	2,100	64
489-047-L10	1,000	38
489-047-L21	2,100	71

**Airflow - Static Pressure Characteristics**

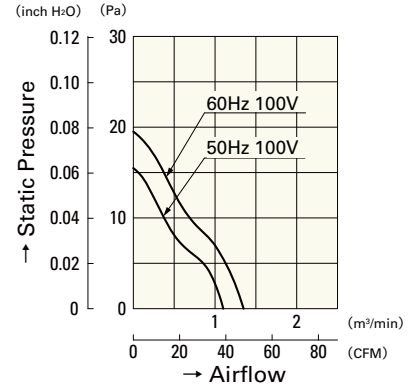
**Standard**



- 109S085**
- 109S084**
- 109S088**
- 109S087**

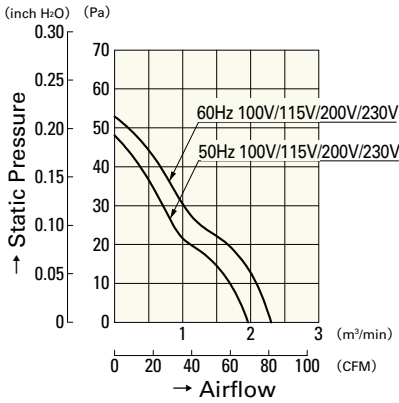


- 109S081**
- 109S083**
- 109S082**
- 109S089**

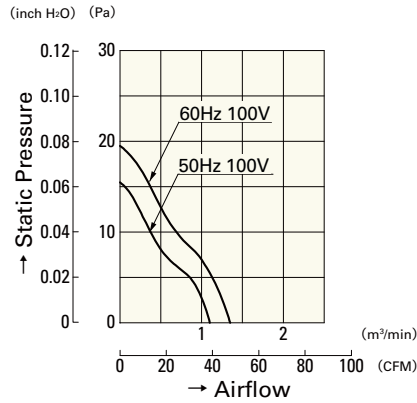


- 109S086**

**with Sensor**



- 109S485**
- 109S484**
- 109S488**
- 109S487**



- 109S486**

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