# 120mm sq.

# San Ace 120

25mm thick, **38mm thick**
**with an external thermistor/**
**with a built-in thermistor**


## General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller:Plastics (Flammability: UL94V-1)
- Life Expectancy ····· Varies for each model (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Control) brown (Only for external thermistor type)
- Fail-safe ····· The motor becomes high speed when the thermistor is unable to detect the temperature in case of open or short circuit etc.
- Storage Temperature −30℃ to +70℃ (Non-condensing)

## 120×120×38mm 〔Mass：260g〕

### Specifications with an external thermistor

The numbers in ( ) represent ribless models.

| Model No. | Rated Voltage [V] | Operating Voltage Range [V] | Rated Current [A] | Rated Input [W] | Rated Speed [min⁻¹] | Air Flow [m³/min] | Air Flow [CFM] | Static Pressure [Pa] | Static Pressure [inchH₂O] | SPL [dB(A)] | Operating Temperature [℃] | Life Expectancy [h] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **109R1212T1H12(121)** | 12 | 10.2 to 13.8 | 0.48 | 5.75 | 2,600 | 2.9 | 102.4 | 64.7 | 0.260 | 39 | −10 to +60 | 40,000 |
| | | | 0.23 | 2.76 | 1,300 | 1.4 | 49.4 | 16.2 | 0.065 | 24 | | |

Note: The top row gives characteristics shown when the thermistor temperature is 35℃, while the bottom row gives characteristics shown when the thermistor temperature is 28℃.

### with a built-in thermistor

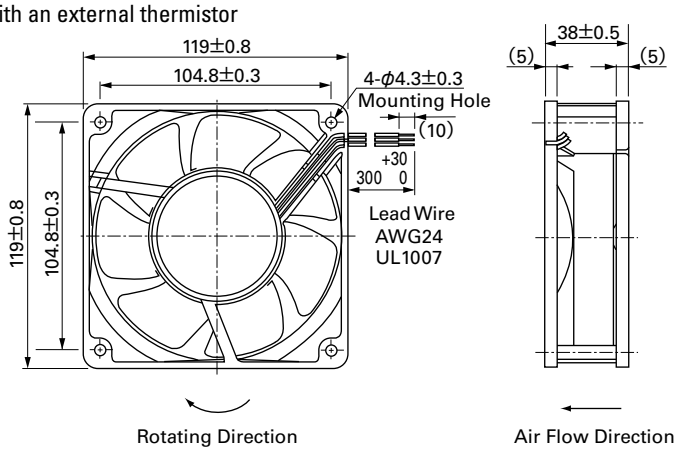
The numbers in ( ) represent ribless models.

| Model No. | Rated Voltage [V] | Operating Voltage Range [V] | Rated Current [A] | Rated Input [W] | Rated Speed [min⁻¹] | Air Flow [m³/min] | Air Flow [CFM] | Static Pressure [Pa] | Static Pressure [inchH₂O] | SPL [dB(A)] | Operating Temperature [℃] | Life Expectancy [h] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **109R1212T1H122(123)** | 12 | 10.2 to 13.8 | 0.48 | 5.75 | 2,600 | 2.9 | 102.4 | 64.7 | 0.260 | 39 | −10 to +60 | 40,000 |
| | | | 0.23 | 2.76 | 1,300 | 1.4 | 49.4 | 16.2 | 0.065 | 24 | | |

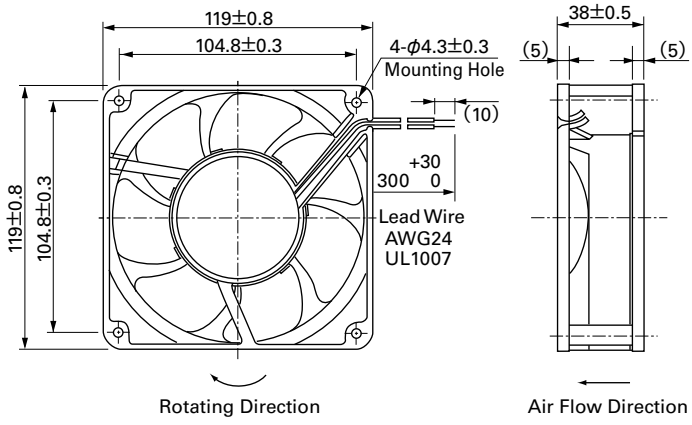
Note: The top row gives characteristics shown when the emperature is 40℃, while the bottom row gives characteristics shown when the temperature is 30℃.

## Dimensions (Unit : mm) (With ribs)

with an external thermistor

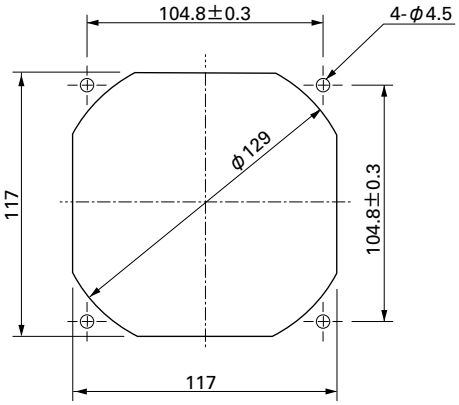



with a built-in thermistor

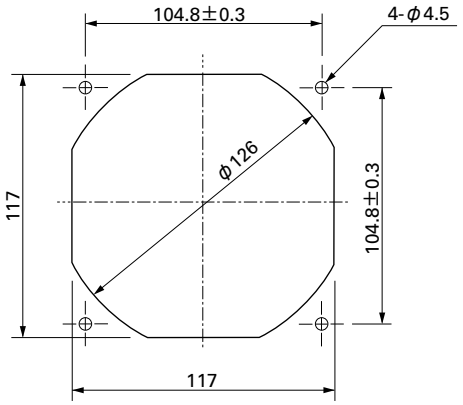



## Reference dimension of mounting holes and vent opening (Unit : mm)

Outlet side




Inlet side

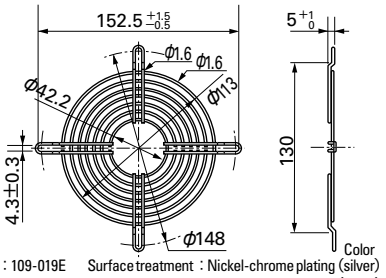


## Options (Unit : mm)

### Finger guards

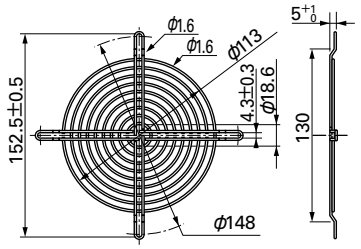
Model : 109-019C　Surface treatment : Nickel-chrome plating (silver)　Color
: 109-019H　: Cation electropainting (black)

Outlet side



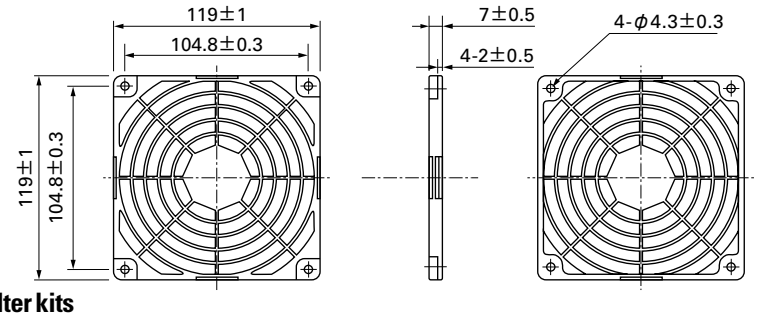

Model : 109-019E　Surface treatment : Nickel-chrome plating (silver)
: 109-019K　: Cation electropainting (black)

Inlet side, Outlet side



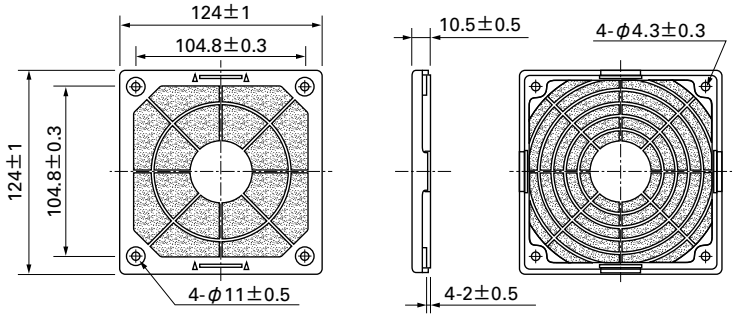

### Resin finger guards

Model : 109-1000G



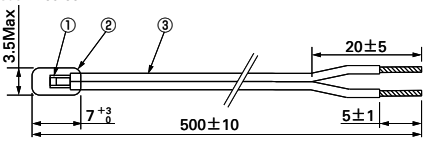

### Resin filter kits

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




### Thermistor

Model : 169-002



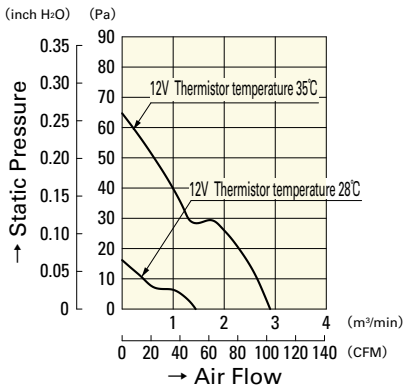

| Number | Name | Standards,materials, etc. |
|---|---|---|
| ① | Thermistor | Chip |
| ② | Insulated cord | Epoxy resin |
| ③ | Lead | UL2555 CSA TR-64 AWG#28 (blue) |

| Item | | Spec |
|---|---|---|
| 2-1 | Resistance | R25　6.8KΩ±3% |
| 2-2 | B constant | B25/50　3950K±2% |
| 2-3 | Maximum rated power | 188mW (25℃ under still air) |
| 2-4 | Insulation resistance | 100MΩ or more (DC500V megger) |
| 2-5 | Dielectric strength | No problem (AC1500V 1 minute) |
| 2-6 | Operating temperature range | −30℃ to +80℃ |
| 2-7 | Storage temperature range | −40℃ to +100℃ |

Manufactured by OHIZUMI MGF CO.,LTD.

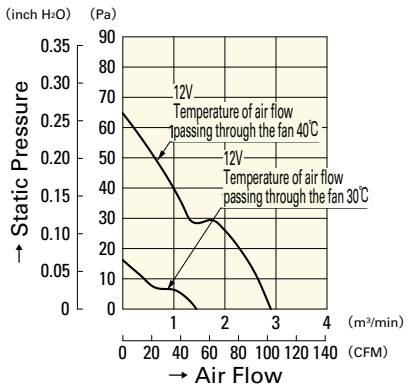
## Air Flow and Static Pressure Characteristics

with an external thermistor




**109R1212T1H12(121)**

with a built-in thermistor

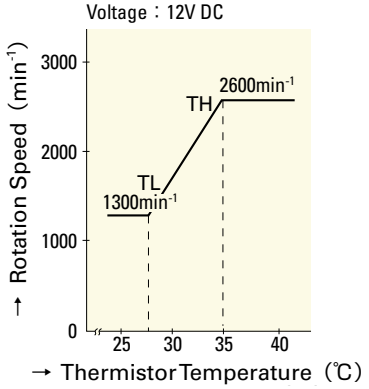



**109R1212T1H122(123)**

## Temperature-Rotation Speed Chracteritics

with an external thermistor

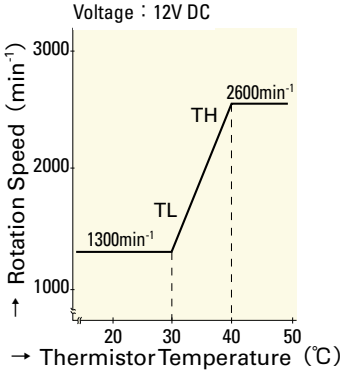
■ Characteristics of Thermistor-detected Temperature vs Speed




**109R1212T1H12(121)**

with a built-in thermistor

■ Typical characteristics of temperature of air flowing through the fan versus rotation speed




**109R1212T1H122(123)**