### **Thermal Speed Controlled Fan**

# 92<sub>mm sq.</sub>

# San Ace 92

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

# General Specifications

· Material ····· Frame: Plastics (Flammability: UL94V-0),

Impeller:Plastics (Flammability: UL94V-1)

 $\cdot$  Life Expectancy  $\,\,\cdots\cdots\,\,$  Varies for each model (L10:Survival rate:90% at 60°C ,

rated voltage, and continuously run in a free air state)

 $\cdot \ \mathsf{Lead} \ \mathsf{Wire} \ \cdots \cdots \cdots \cdots \oplus \mathsf{red} \ \bigcirc \mathsf{black} \ \overline{\mathsf{Control}} \ \mathsf{brown} \ \mathsf{(Only for external thermistor type)}$ 

 $\cdot$  Fail-safe  $\cdots\cdots$  The motor becomes high speed when the thermistor is unable

to detect the temperature in case of open or short circuit etc.

(Models equipped with a pulse sensor are excluded.)

· StorageTemperature··· -30°C to +70°C (Non-condensing)

92×92×25mm (Mass: 150g)

# **Specifications with an external thermistor** The numbers in () represent ribless models.

Model No.	Rated Voltage	Operating Voltage Range	Rated Current	Rated Input	Rated Speed	Air F	Flow	Static	Pressure	SPL	Operating Temperature	Life Expectancy
	[V]	[V]	[A]	[W]	[min <sup>-1</sup> ]	[m³/min]	[CFM]	[Pa]	[inchH <sub>2</sub> 0]	[dB(A)]	[°C]	[h]
109P0912T4H12(121)	12	10.2 to 13.8	0.2	2.4	2,850	1.45	51.2	45.1	0.181	33	-10 to +60	40,000
			0.1	1.2	1,400	0.71	25.0	11.3	0.045	18		

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

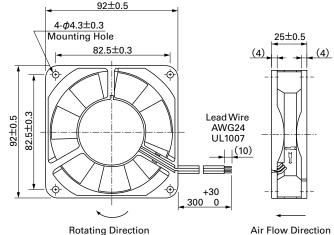
#### with a built-in thermistor The numbers in () represent ribless models.

	Model No.	Rated Voltage	Operating Voltage Range	Rated Current	Rated Input	Rated Speed	Air F	low	Static	Pressure	SPL	Operating Temperature	Life Expectancy
wiodei ivo.	[V]	[V]	[A]	[W]	[min <sup>-1</sup> ]	[m³/min]	[CFM]	[Pa]	[inchH2O]	[dB(A)]	[°C]	[h]	
	109P0912T4H122(123)	12	10.2 to 13.8	0.2	2.4	3,000	1.52	53.7	50.0	0.201	35	10 to +60	40,000
				0.1	1.2	1,400	0.71	25.0	11.3	0.045	18		

Note: The top row gives characteristics shown when the emperature is  $40^\circ\mathrm{C}$ , while the bottom row gives characteristics shown when the temperature is  $30^\circ\mathrm{C}$ .

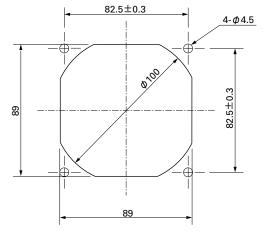
# **Dimensions (Unit : mm)** (With ribs)

# with an external thermistor

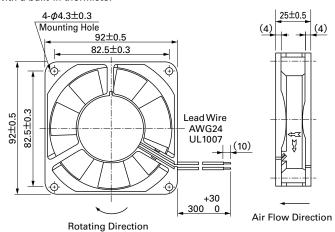


# Reference dimension of mounting holes and vent opening (Unit:mm)

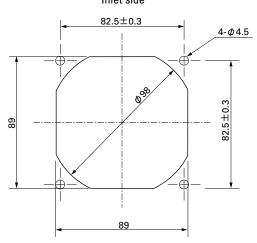
# Outlet side



# with a built-in thermistor



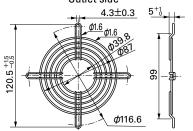
# Inlet side



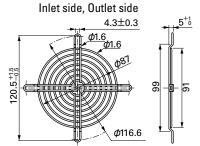
# Options (Unit:mm)

# **Finger guards**

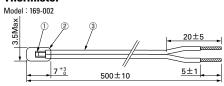
Color treatment: Nickel-chrome plating (silver) Outlet side



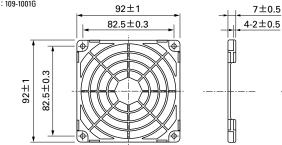
Model: 109-099E : 109-099H Surface treatment: Nickel-chrome plating (silver) : Cation electropainting (black)



#### **Thermistor**

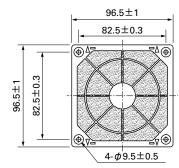


# **Resin finger guards**

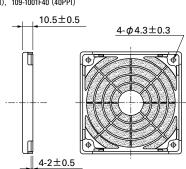


# **Resin filter kits**

Model: 109-1001F13 (13PPI), 109-1001F20 (20PPI), 109-1001F30 (30PPI), 109-1001F40 (40PPI)



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

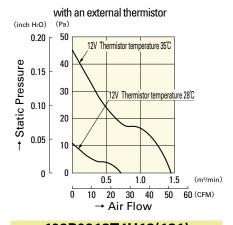


 $4-\phi 4.3\pm 0.3$ 

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

Manufactured by OHIZUMI MGF CO.,LTD.

#### **Air Flow and Static Pressure Characteristics**



# 109P0912T4H12(121)

#### (inch H<sub>2</sub>O) (Pa) 0.20 Static Pressure Temperature of air flow passing through the fan 40°C 0.15 Temperature of air flow passing through the fan 30°C 0.10 20 0.05 0 0.5 1.0 2.0 (m³/min) Ō 10 20 30 40 50 60 → Air Flow

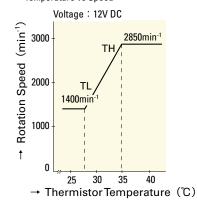
with a built-in thermistor

# 109P0912T4H122(123)

# **Temperature-Rotation Speed Chracteritics**

with an external thermistor

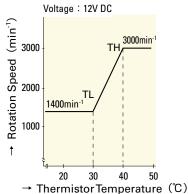
■ Characteristics of Thermistor-detected Temperature vs Speed



109P0912T4H12(121)

#### with a built-in thermistor

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



109P0912T4H122(123)