

**120** mm sq.

# San Ace 120

25mm thick (GV type), 25mm thick (G type)  
 38mm thick (GV type), 38mm thick (G type)  
 38mm thick (SG type)



**General Specifications** With a pulse sensor Specifications for pulse sensors ⇔ Refer to Page 307

With PWM speed control function

- Material ..... Frame: Plastics (Flammability: UL94V-0),  
 Impeller: Plastics (Flammability: UL94V-1)
- Life Expectancy ..... Varies for each model (L10: Survival rate: 90% at 60°C ,  
 rated voltage, and continuously run in a free air state)
- Lead Wire ..... ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ..... -30°C to +70°C (Non-condensing)

**120×120×25mm** (Mass : 260g) GV type

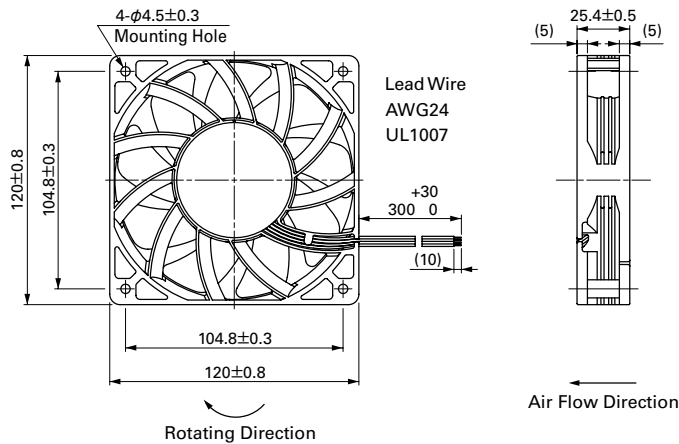
**Specifications** The numbers in ( ) represent ribless models.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Air Flow [m <sup>3</sup> /min] [CFM]	Static Pressure [Pa] [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Life Expectancy [h]
9GV1212P4G01(011)	12	10.2 to 13.8	100	1.68	20.16	5,100	4.83 171	224 0.90	58	-10 to +70	40,000
			0	0.18	2.16	1,650	1.56 55.1	23.5 0.09	30		
9GV1224P4G01	24	20.4 to 27.6	100	0.84	20.16	5100	4.83 171	224 0.90	58		
			0	0.13	3.12	1650	1.56 55.1	23.5 0.09	30		
9GV1248P4G01(011)	48	40.8 to 60.0	100	0.42	20.16	5,100	4.83 171	224 0.90	58		
			0	0.07	3.36	1,650	1.56 55.1	23.5 0.09	30		
9GV1248P4H01(011)			100	0.33	15.84	4,600	4.35 154	182 0.73	55		
			0	0.07	3.36	1,650	1.56 55.1	23.5 0.09	30		

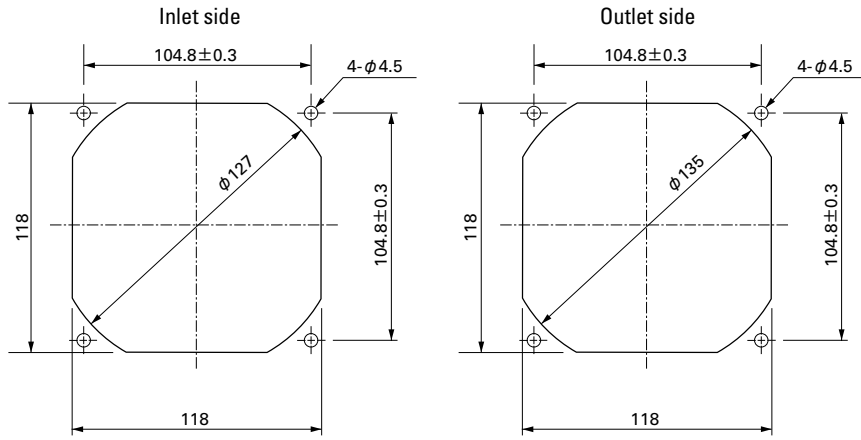
※PWM Frequency : 25kHz

Without Sensor Pulse Sensor PWM Control Available in all models.

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



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

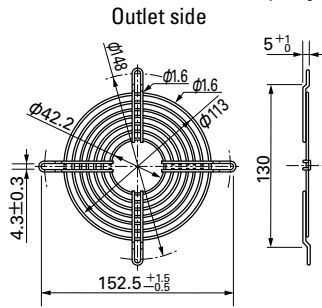


Options (Unit : mm)

Finger guards

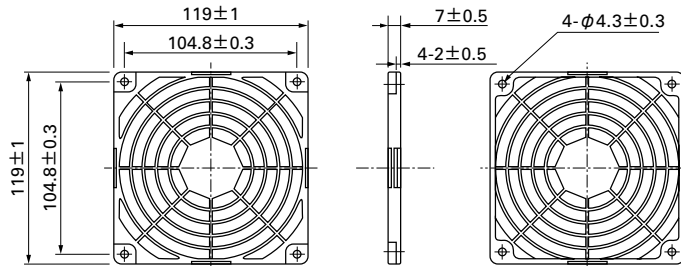
Model : 109-019C Surface treatment : Nickel-chrome plating (silver)  
 : 109-019H : Cation electropainting (black)

Color



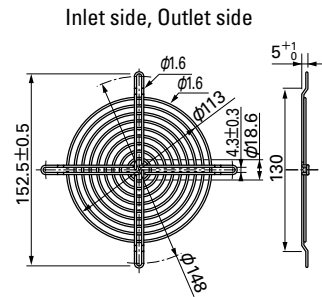
Resin finger guards

Model : 109-1000G



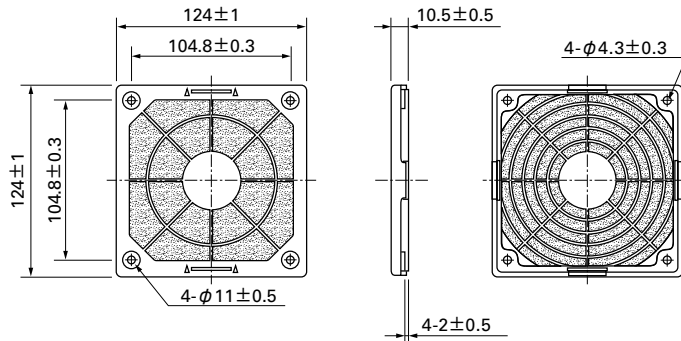
Model : 109-019E Surface treatment : Nickel-chrome plating (silver)  
 : 109-019K : Cation electropainting (black)

Color



Resin filter kits

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



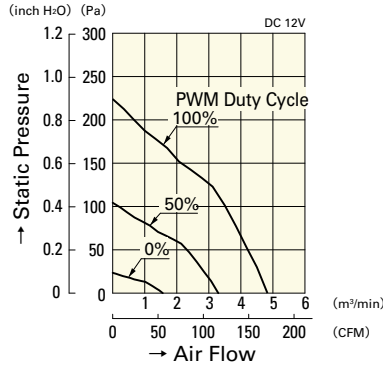
**120** mm sq.

**San Ace 120**

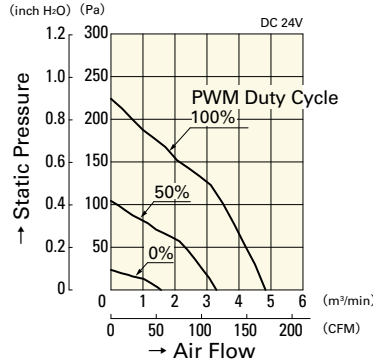
**120×120×25** mm [Mass : 260g]

**Air Flow and Static Pressure Characteristics**

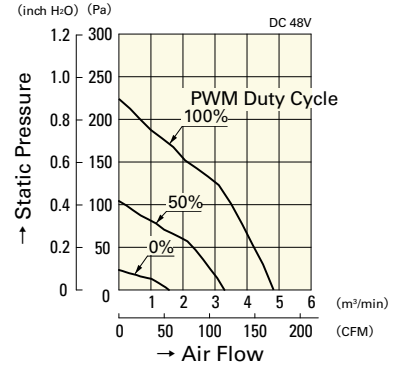
**PWM Duty Cycle**



**9GV1212P4G01(011)**

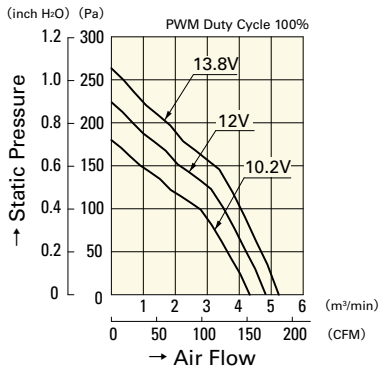


**9GV1224P4G01**

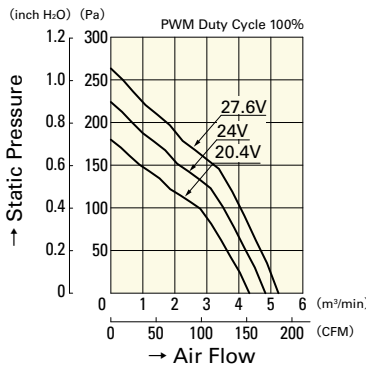


**9GV1248P4G01(011)**

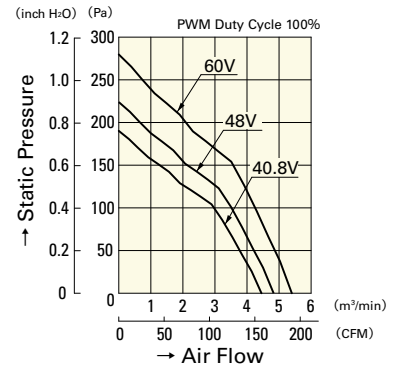
**Operating Voltage Range**



**9GV1212P4G01(011)**

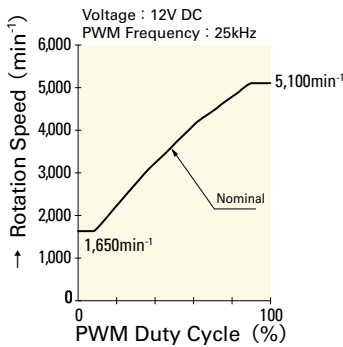


**9GV1224P4G01**

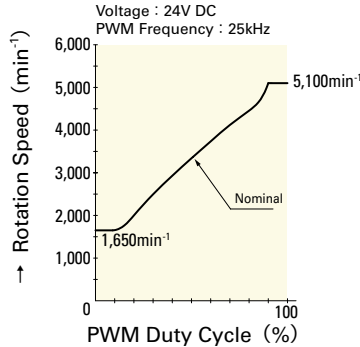


**9GV1248P4G01(011)**

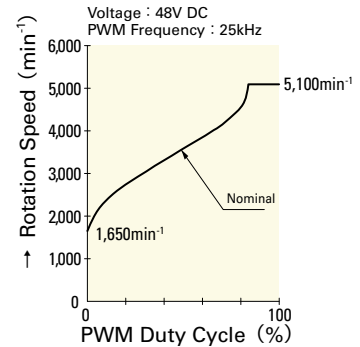
**PWM Duty - Speed Characteristics Example**



**9GV1212P4G01(011)**

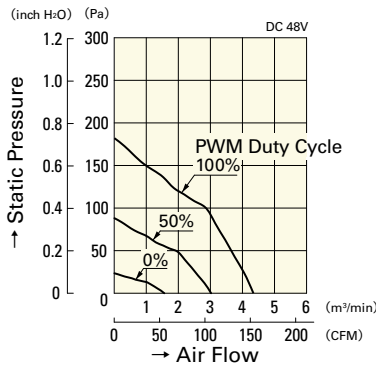


**9GV1224P4G01**



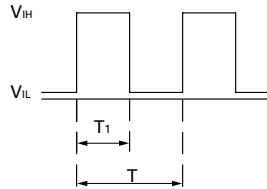
**9GV1248P4G01(011)**

### PWM Input Signal Example



9GV1248P4H01(011)

#### Input Signal Wave Form



$V_{IH}=4.75V$  to  $5.25V$

$V_{IL}=0V$  to  $0.4V$

$$\text{PWM Duty Cycle (\%)} = \frac{T_1}{T} \times 100$$

$$\text{PWM Frequency 25 (kHz)} = \frac{1}{T}$$

Source Current ( $I_{source}$ ) : 1mA Max. at control voltage 0V

Sink Current ( $I_{sink}$ ) : 1mA Max. at control voltage 5.25V

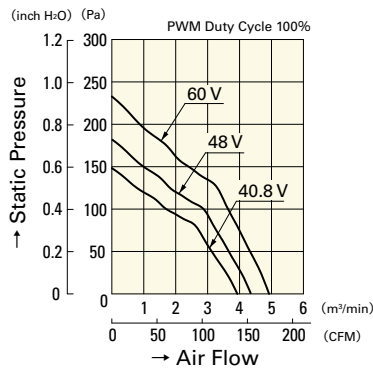
Control Terminal Voltage : 5.25V Max. (Rated voltage 12V fan)

: 8.0V Max. (Rated voltage 48V fan)

(Open Circuit)

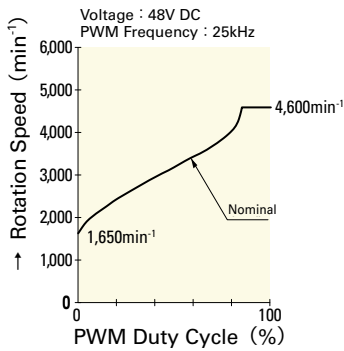
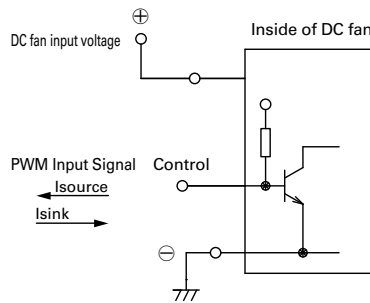
When the control lead wire is no connecting, the speed is the same speed as at 100% of PWM cycle.

This fan speed should be controlled by PWM input signal of either TTL input or open collector, drain input.



9GV1248P4H01(011)

### Connection Schematic



9GV1248P4H01(011)

120mm