

**Counter Rotating Fan**

**120mm**

**San Ace 120**

76mm thick (CR type)



**General Specifications** With a pulse sensor Specifications for pulse sensors ⇨ Refer to Page 239

With PWM speed control function

\*Please inquire about other specifications.

- 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 ..... Inlet ⊕ red ⊖ black (Sensor) yellow (Control) brown  
Outlet ⊕ orange ⊖ gray (Sensor) purple (Control) white
- Storage Temperature ... -30°C to +70°C (Non-condensing)

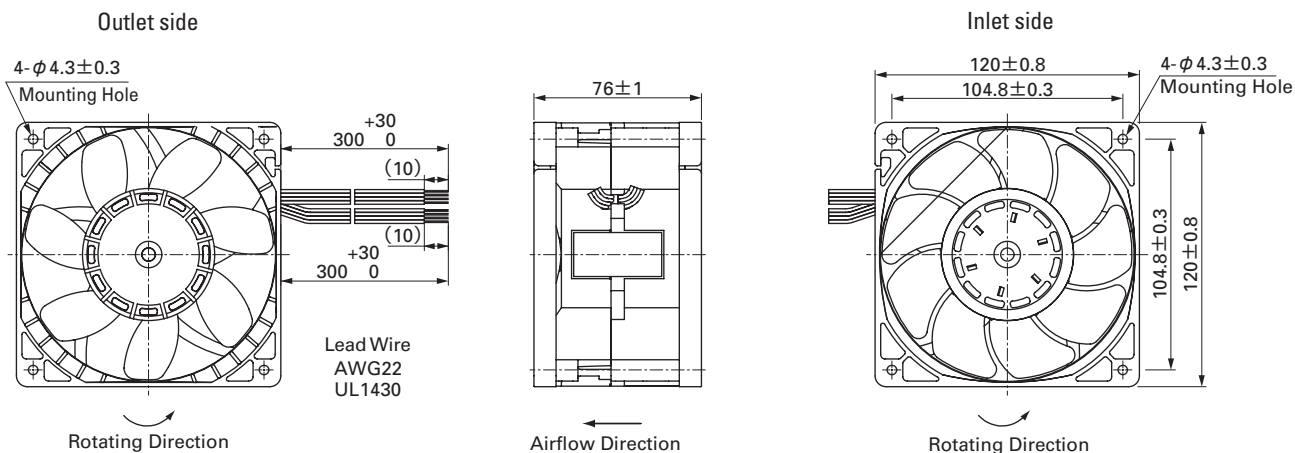
**120mm × 76mm thick** (Mass : 670g) CR type

**Specifications**

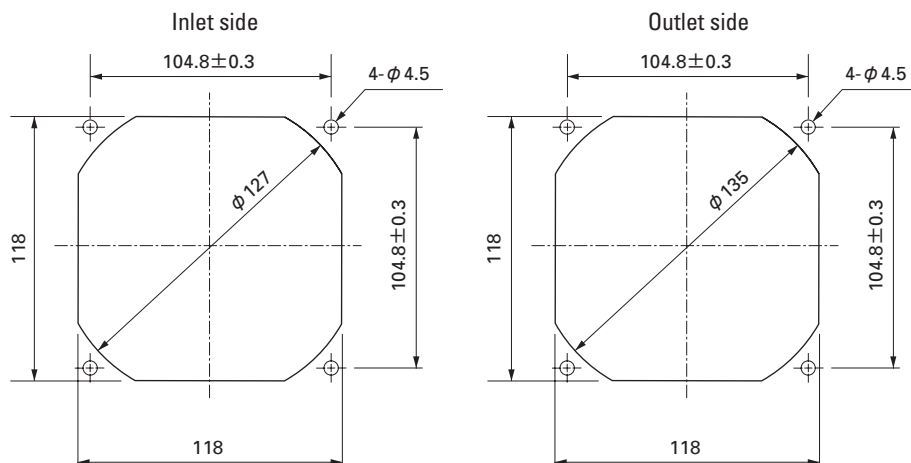
Model No.	Rated Voltage (V)	Operating Voltage Range (V)	PWM duty cycle※ (%)	Rated Current (A)	Rated Input (W)	Rated Speed (min <sup>-1</sup> )		Air Flow (m <sup>3</sup> /min (CFM))		Static Pressure (Pa (inchH <sub>2</sub> O))		SPL (dB(A))	Operating Temperature Range (°C)	Life Expectancy (h)
						Inlet	Outlet							
<b>9CR1212P0G03</b>	12	10.8 to 13.2	100	7.2	86.4	6,200	3,800	8.5	300	480	1.93	70	-10 to +60	40,000
			0	1.1	13.2	2,700	1,800	3.8	134	95	0.38	51		

※PWM Frequency : 25kHz

**Dimensions (Unit : mm)**



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

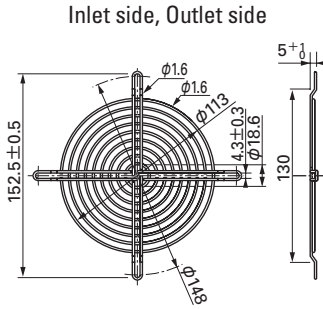
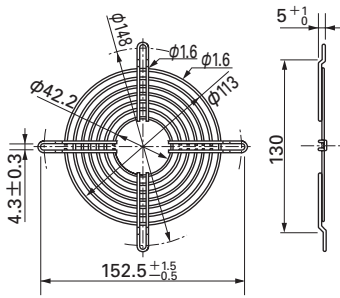


## Options (Unit : mm)

### Finger guards

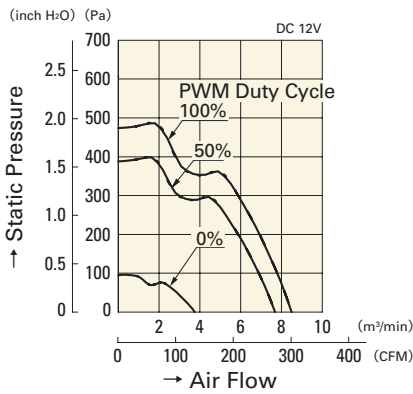
Model : 109-019C Surface treatment : Nickel-chrome plating (silver) Color : 109-019H : Cation electropainting (black)

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



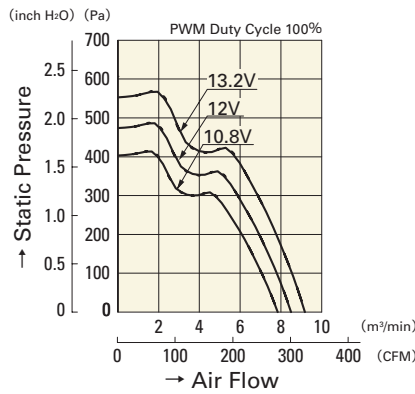
## Air Flow and Static Pressure Characteristics

### PWM Duty Cycle



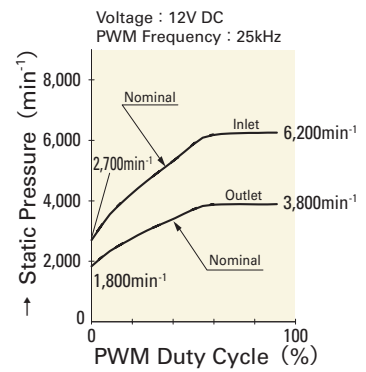
9CR1212P0G03

### Operating Voltage Range



9CR1212P0G03

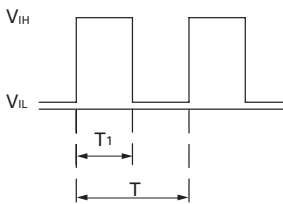
## PWM Duty Speed Characteristics Example



9CR1212P0G03

## PWM Input Signal Example

### 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. (Open Circuit)

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

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

## Connection Schematic

