

60mm sq.

San Ace 60

15mm thick, 20mm thick, 25mm thick
 25mm thick (San Cooler), 38mm thick (GV type)
 38mm thick (G 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)

60×60×38mm (Mass : 130g)



Specifications The numbers in () represent ribless models.

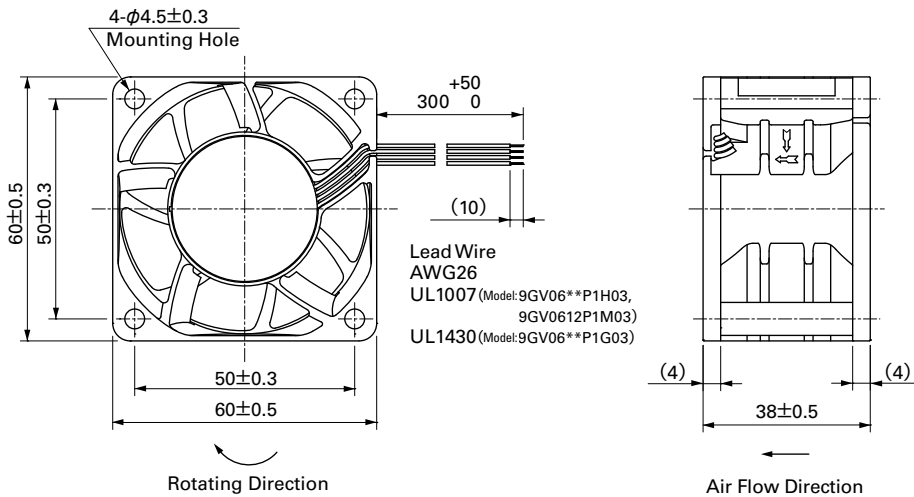
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Air Flow [m ³ /min] [CFM]	Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature Range [°C]	Life Expectancy [h]
9GV0612P1G03(031)	12	8.0 to 13.8	100	2.8	33.6	16,000	2.37 84	751 3.02	66	-10 to +70	40,000
			0	0.12	1.5	3,100	0.44 15	26 0.10	25		
9GV0612P1H03(031)			100	2.0	24.0	14,500	2.15 76	617 2.48	63		
			0	0.1	1.2	2,700	0.40 14	21 0.09	22		
9GV0612P1M03(031)			100	1.5	18.0	13,000	1.93 68	496 1.99	60		
			0	0.08	1.0	2,500	0.38 13	18 0.07	19		
9GV0624P1G03(031)	24	20.4 to 27.6	100	1.4	33.6	16,000	2.37 84	751 3.02	66	-10 to +70	40,000
0	0.12	2.88	6,000	0.89 31	105 0.42	38					
9GV0648P1H03(031)	48	38 to 57	100	0.5	24	14,500	2.15 76	617 2.48	63		
			0	0.08	3.84	6,000	0.89 31	105 0.42	38		

※PWM Frequency : 25kHz

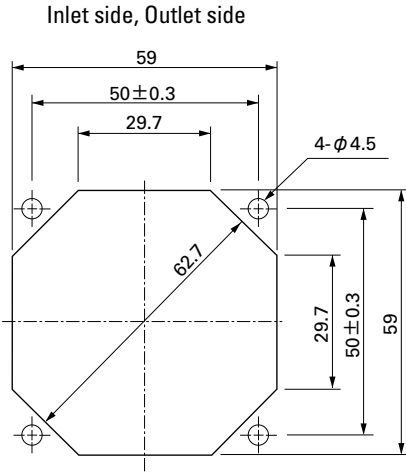
Without Sensor Pulse Sensor PWM Control Available in all models.

Lock Sensor Please inquire as the availability of these functions depend on the model.

Dimensions (Unit : mm) (With ribs)



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

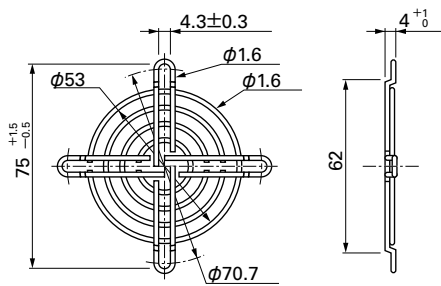


Options (Unit : mm)

Finger guards

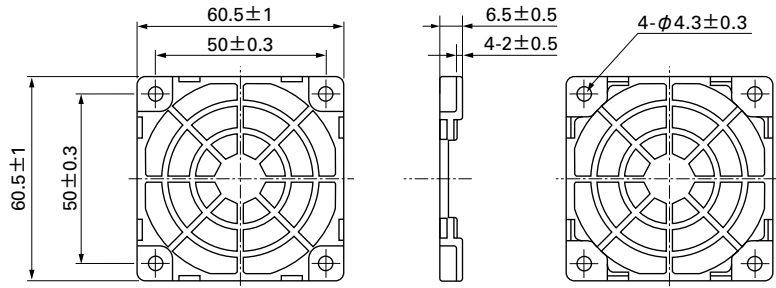
Model : 109-139E Surface treatment : Nickel-chrome plating (silver) Color : 109-139H Cation electropainting (black)

Inlet side, Outlet side



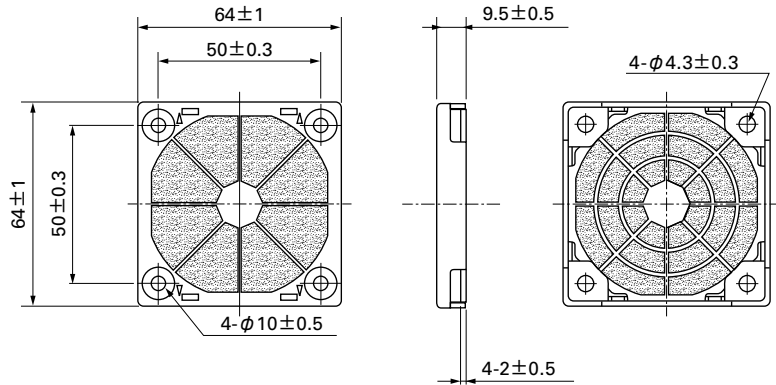
Resin finger guards

Model : 109-1003G



Resin filter kits

Model : 109-1003F13 (13PPI), 109-1003F20 (20PPI)
: 109-1003F30 (30PPI), 109-1003F40 (40PPI)



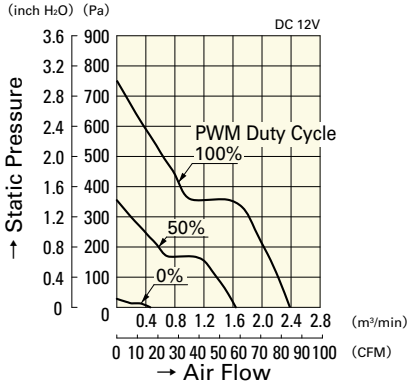
60mm sq.

San Ace 60

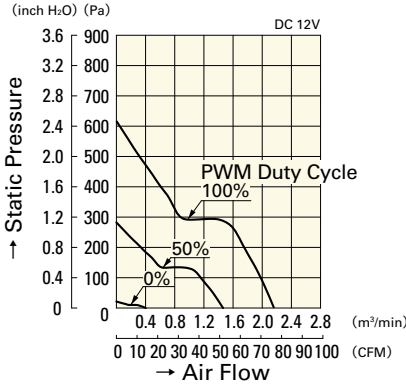
60×60×38mm [Mass : 130g]

Air Flow and Static Pressure Characteristics

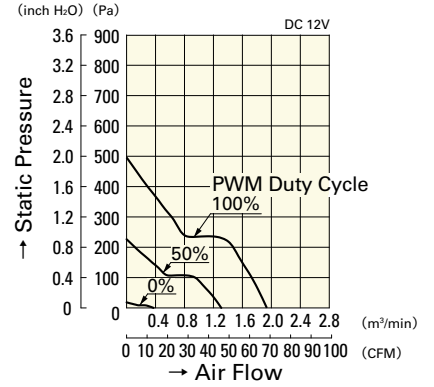
PWM Duty Cycle



9GV0612P1G03(031)

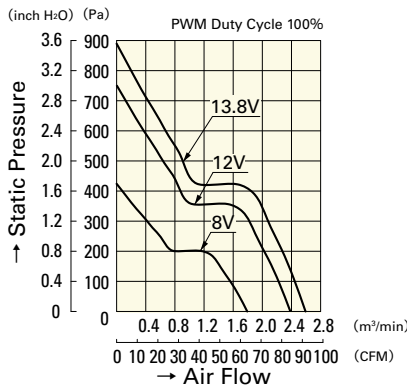


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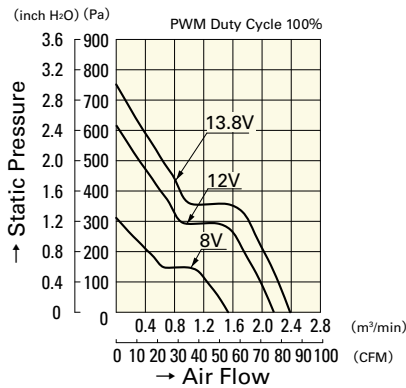


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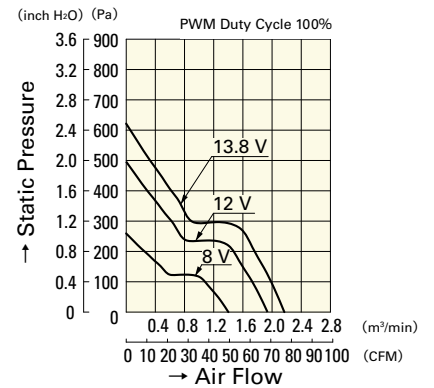
Operating Voltage Range



9GV0612P1G03(031)

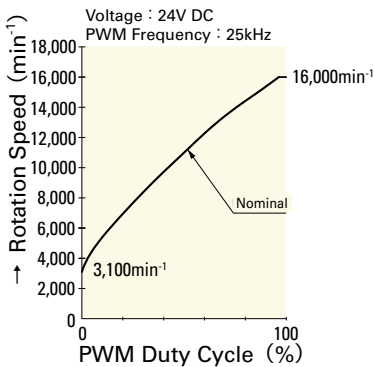


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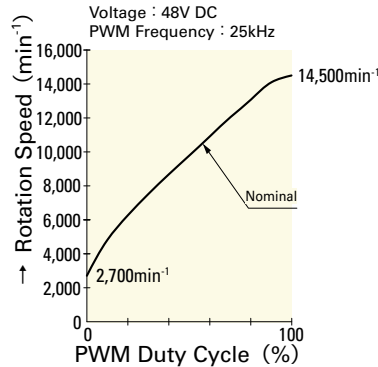


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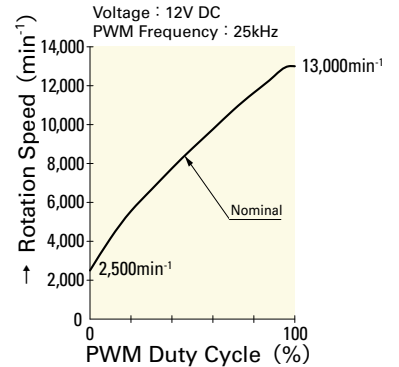
PWM Duty - Speed Characteristics Example



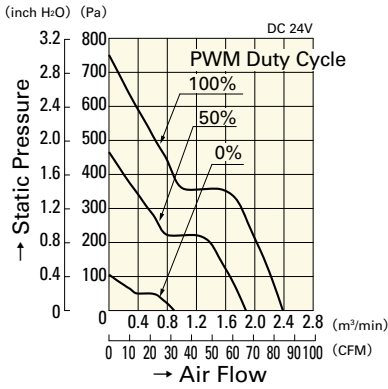
9GV0612P1G03(031)



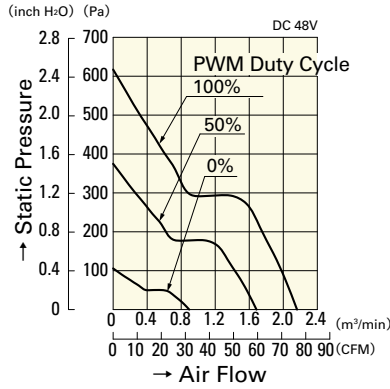
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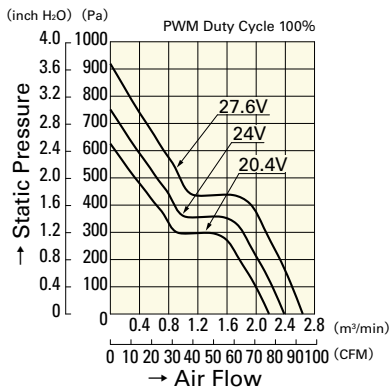
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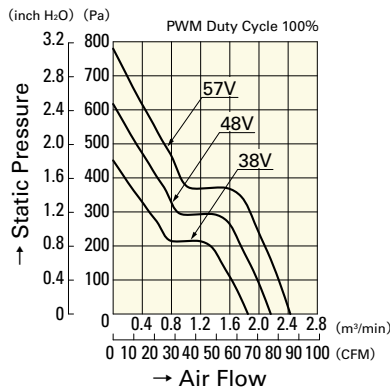
9GV0624P1G03(031)



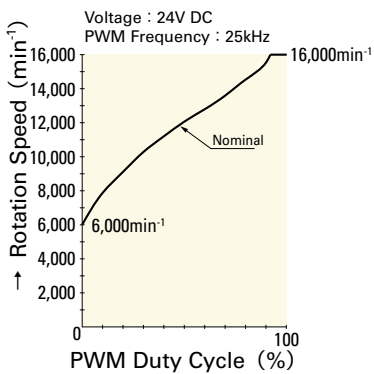
9GV0648P1H03(031)



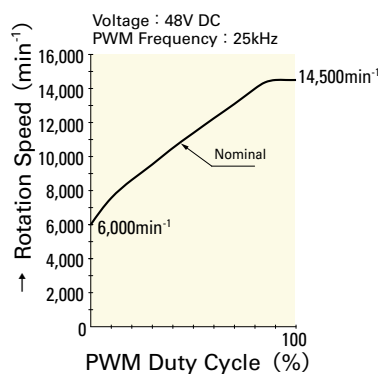
9GV0624P1G03(031)



9GV0648P1H03(031)



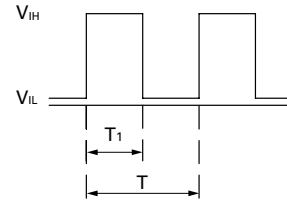
9GV0624P1G03(031)



9GV0648P1H03(031)

PWM Input Signal Example

Input Signal Wave Form



V_{IH} =4.75V to 5.25V

V_{IL} =0V to 0.4V

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

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

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 cycle.

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

Connection Schematic

