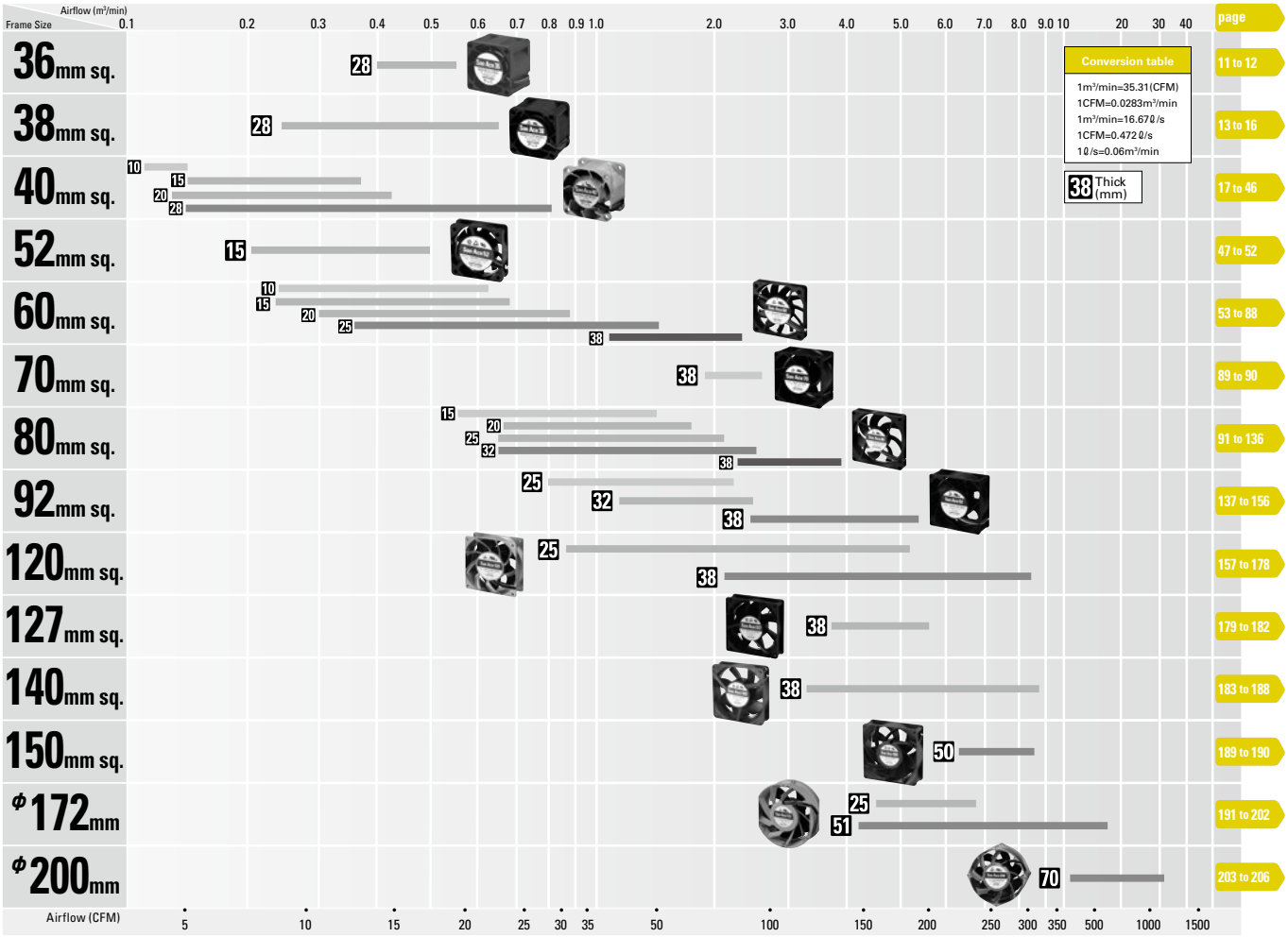
DC Fan

Wide lineup including low power consumption fans (9GA type), silent fans (9S type), and high airflow and high static pressure fans.

Domain Diagram



Model Numbering System

Not every combination of the following codes or characters is available. Contact us for an available combination.

9GV	12	12	J	1	01	1

Type name / frame material
109P ／ Plastics
109R ／ Plastics
9GA ／ Plastics
9S ／ Plastics
9GV ／ Plastics
Aluminum
9GE ／ Aluminum
9G ／ Plastics
9A ／ Plastics
9SG ／ Aluminum
109E ／ Aluminum
9EC ／ Aluminum
9GX ／ Plastics
9GAX ／ Plastics
9HV ／ Plastics
Aluminum
9HVA ／ Plastics

Frame size
36： 36×36mm
03： 38×38mm
04： 40×40mm
05： 52×52mm
06： 60×60mm
08： 80×80mm
09： 92×92mm
12： 120×120mm
13： 127×127mm
14： 140×140mm
15： 150×150mm
17： ϕ172mm
47： ϕ172mm×147mm (sidecut)
57： ϕ172mm×150mm (sidecut)
20： ϕ200mm

Voltage
05 : 5V
12 : 12V
24 : 24V
48 : 48V
etc

Speed code
A,B,C,D,E,F,G,H,J,K,
L,M,S,W etc

Frame thickness
0： 70mm thick
1： 38mm thick
2： 32mm thick
3： 28mm thick
4： 25mm thick
5： 50mm thick
51mm thick
6： 20mm thick
7： 15mm thick
9： 10mm thick

Sensor specifications
01 or 001 :
With a pulse sensor
02 or 002 :
Without a sensor
D01 or D001 :
With a lock sensor

Frame form
Nil： Plastics frame: Ribbed frame
Aluminum frame: Ribless frame
1： Plastics frame: Ribless frame
3： 40×40×28mm for 1U applications
Plastics frame: Ribbed frame

Fans with PWM control function

Example :

9GV	12	12	P	4	G	01	

Type name / frame material
9GV ／ Plastics
Aluminum

Frame size
12 : 120×120mm

Voltage
12 : 12V

PWM control function

Frame thickness

Speed code

Individual customer's spec
2 to 4 digits

Frame form
Nil： Plastics frame:
Ribbed frame
Aluminum frame:
Ribless frame

How to Read Specifications

DC Fan DC

	①	②	③	④	⑤	⑥		⑦		⑧	⑨	⑩
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	[CFM]	Max. Static Pressure [Pa]	[inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0412G7001	12	7 to 13.8	0.17	2.04	13,100	0.36	12.7	192	0.77	42	−20 to +70	40,000/60℃ (70,000/40℃)

①Rated Voltage ····· This is the necessary voltage to drive the fan. 12VDC, 24VDC and 48VDC are available.
②Operating Voltage Range ··· The voltage range over which fan operation is guaranteed
③Rated Current ····· The current value during the fan's rated operation without load
④Rated Input ····· The input value during the fan's rated operation without load
⑤Rated Speed ····· The rotating speed during the fan's rated operation without load
⑥Max. Airflow ····· The maximum air volume that the fan can output during rated operation (according to the company's dual-chamber device).
The volume of air generated by the fan in a given time period
⑦Max. Static Pressure ····· The maximum static pressure value that the fan can output during rated operation (according to the company's dual-chamber device). The static pressure is the fan's force to propel air by overcoming the resistance of the device that uses the fan when it propels air.
⑧SPL ····· "SPL" is Sound Pressure Level. The noise level during the fan's rated operation.
Please refer to the technical material section for the method used to measure the noise level.
⑨Operating Temperature ····· The temperature range over which fan operation is guaranteed (Non- condensing)
⑩Expected Life ····· The fan's expected operating life when the fan operates continuously at the rated voltage at a temperature of 60˚C and at relative humidity of 90%. Expected life at 40℃ ambient is just reference value.
Please refer to the technical material section for the expected operating life.

DC Fan Common Specifications

Material ····· Frame,Impeller:Plastics / Frame:Aluminum,Impeller:Plastics
* For details, refer to the appropriate page.

Expected Life ····· Varies for each model (L10:Survival rate:90% at 60℃ ,rated voltage, and continuously run in a free air state)
* Splash proof fan: Varies for each model (Indoor, L10:Survival rate:90% at 60℃ ,rated voltage, and continuously run in a free air state)

Motor Protection ····· Burnout protection at locked rotor condition and Reverse polarity protection

Dielectric Strength ····· AC50/60Hz 500VAC 1minute(between lead conductor and frame)

Insulation Resistance ····· 10M Ω or more at 500VDC megger (between lead conductor and frame)

Sound Pressure Level(SPL) ·· Expressed as the value at 1m from air inlet side

Lead Wire ····· For details, refer to the appropriate page.

Overheating protection function

Protection Functions:
If the fan blades are restricted, an overcurrent occurs and leads to a rise in the fan coil temperature. This can result in reduced performance, damage, or a fire. To prevent this from occurring, SANYO DENKI's fans incorporate an overheating protection function. Refer to the catalog for the types of protection functions.

Burnout protection function at locked rotor condition

● Current cutoff system
If the fan blades are restricted, the coil current is cut off at regular cycles to prevent overheating of the coil. When the hindrance is removed, the fan restarts automatically.

Reverse polarity protection function

No problem about fan even if positive & negative lead are connected in reverse.
However, when wiring fans with sensors or PWM speed control function, connecting positive and negative leads in reverse may damage the fans.

36mm sq. San Ace 36



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃ , rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black Sensor yellow Control brown
  (For models without PWM control function, there is no speed control wiring.)
- Storage Temperature ···−20℃ to +70℃ (Non-condensing)

36×36×28mm (Mass：46g) 9GX type 9GV type

Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GX3612P3K001	12	10.8 to 13.2	100	1.3	15.6	24,000	0.69	24.4	838	3.367	66	−10 to +60	40,000/60℃ (70,000/40℃)
			0	0.07	0.84	3,200	0.09	3.2	14.0	0.056	32		

※PWM Frequency：25kHz

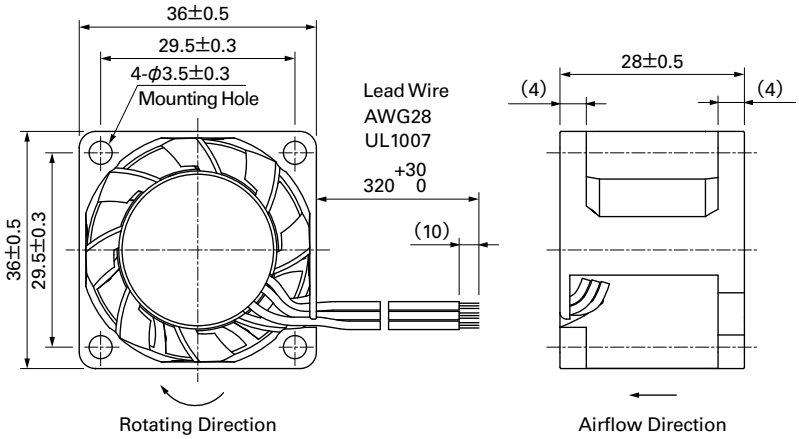
Specifications

The following nos. **have pulse sensors and ribs.**

Other sensor specifications are available as options. Please refer to the index (p. 508).

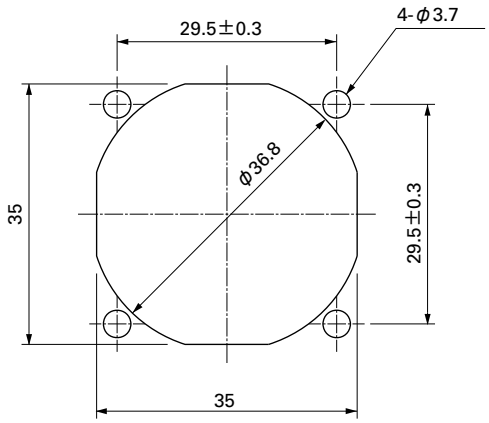
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GV3612J301	12	7.0 to 13.2	0.75	9.0	19,000	0.55	19.4	525	2.108	58.5	−20 to +60	40,000/60℃
9GV3612G301			0.34	4.08	14,000	0.40	14.1	275	1.104	52.0		

Dimensions (unit: mm) (With pulse sensor)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

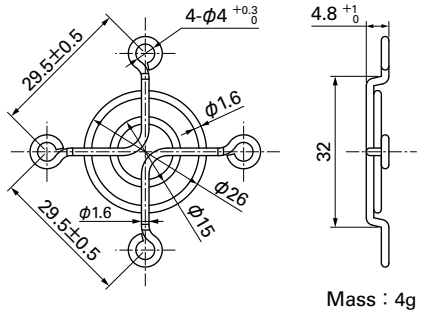


Options (unit: mm)

Finger Guards

Color
Model：109-1050　Surface treatment：Nickel-chrome plating (silver)

Inlet side, Outlet side

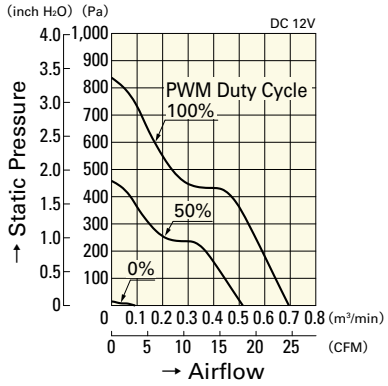


Mass：4g

Airflow - Static Pressure Characteristics

PWM Duty Cycle

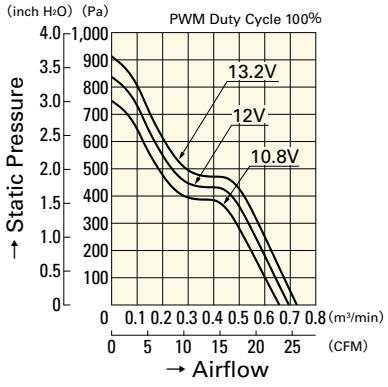
With PWM control function・With pulse sensor



9GX3612P3K001

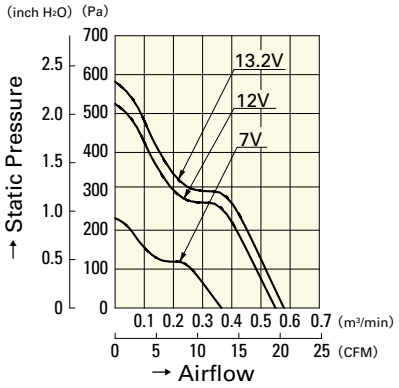
Operating Voltage Range

With PWM control function・With pulse sensor



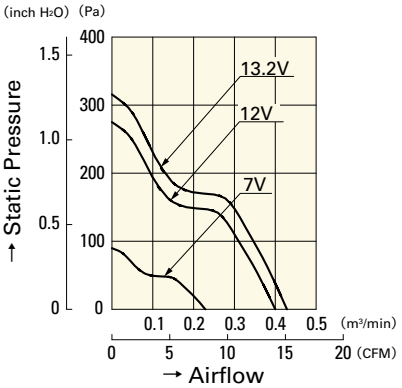
9GX3612P3K001

J speed



9GV3612J301

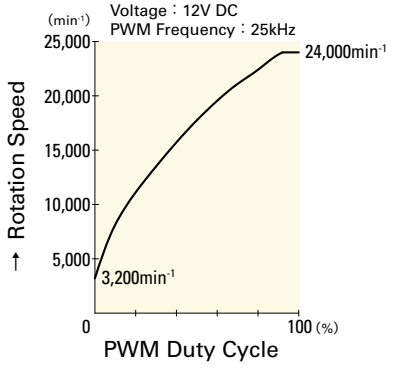
G speed



9GV3612G301

PWM Duty - Speed Characteristics Example

With PWM control function・With pulse sensor



9GX3612P3K001

38 mm sq. San Ace 38



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃ , rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ··· −30℃ to +70℃ (Non-condensing)

38×38×28mm (Mass : 52g) 9GA type Low Power Consumption Fan

Specifications

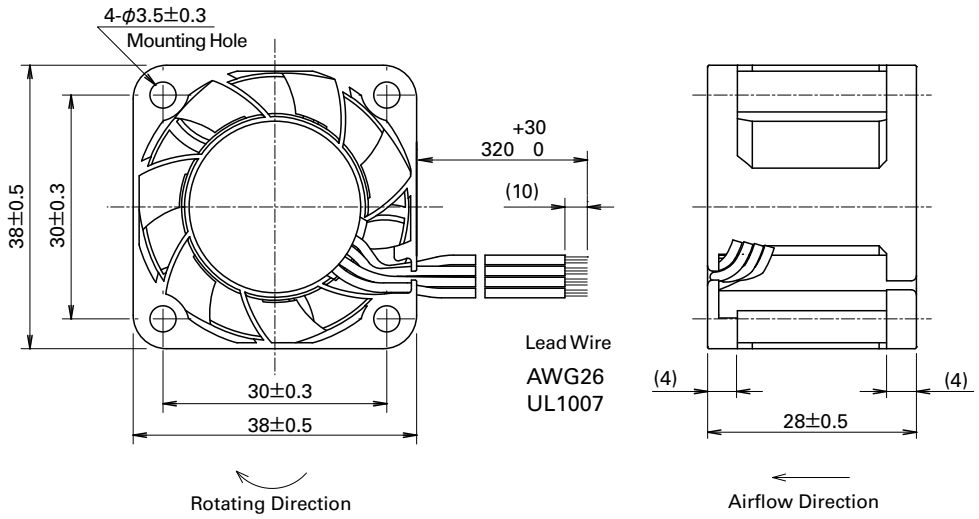
The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0312P3K001	12	10.8 to 13.2	100	0.62	7.4	25,000	0.60	21.2	800	3.21	59.0	−20 to +70	40,000/60℃ (70,000/40℃)
			0	0.06	0.7	3,000	0.07	2.5	11	0.04	15.0		
9GA0312P3J001			100	0.52	6.2	23,500	0.57	20.1	720	2.89	57.5		
			0	0.06	0.7	3,000	0.07	2.5	11	0.04	15.0		
9GA0312P3G001			100	0.33	4.0	19,000	0.45	15.9	460	1.85	53.0		
			0	0.06	0.7	3,000	0.07	2.5	11	0.04	15.0		

※PWM Frequency : 25kHz

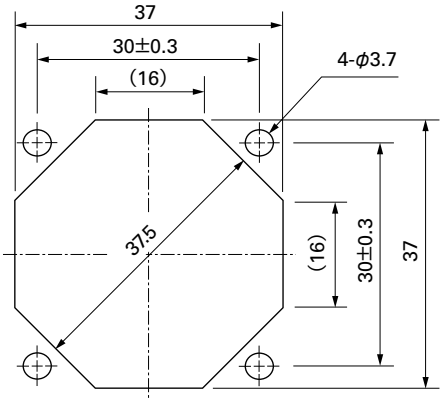
Other sensor specifications are available as options. Please refer to the index (p. 504).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

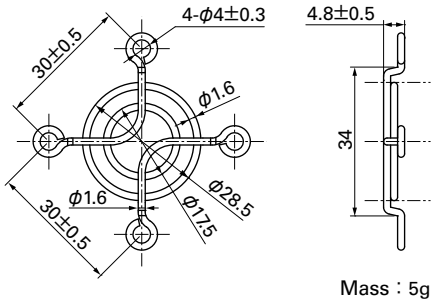


Options (unit: mm)

Finger Guards

Model : 109-1065 Surface treatment : Nickel-chrome plating (silver) Color

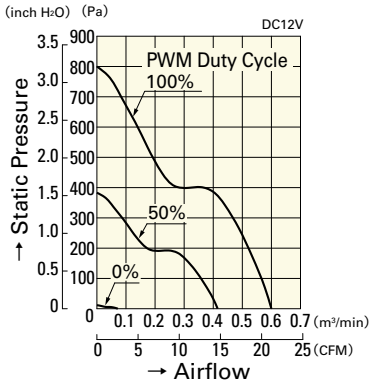
Inlet side, Outlet side



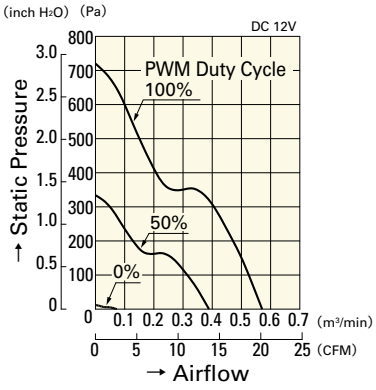
Mass : 5g

Airflow - Static Pressure Characteristics

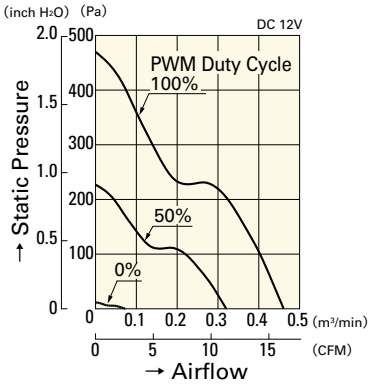
PWM Duty Cycle



9GA0312P3K001

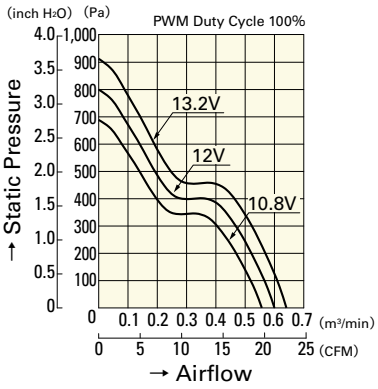


9GA0312P3J001

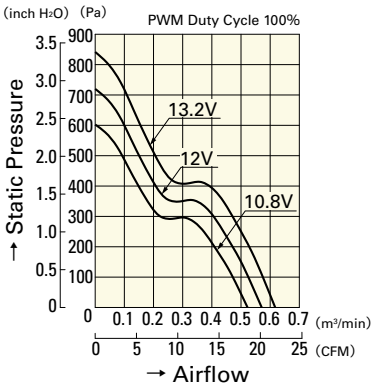


9GA0312P3G001

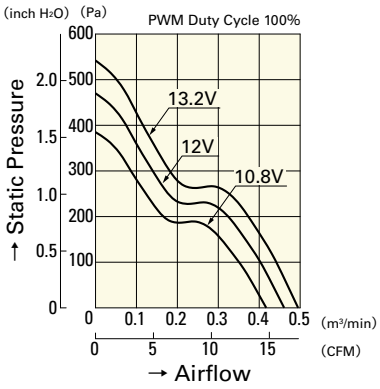
Operating Voltage Range



9GA0312P3K001

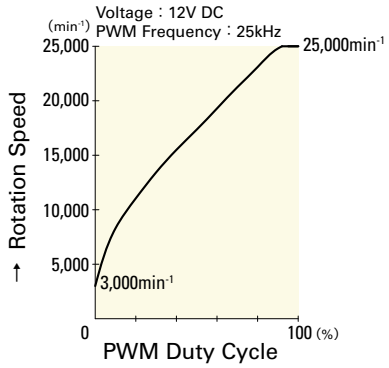


9GA0312P3J001

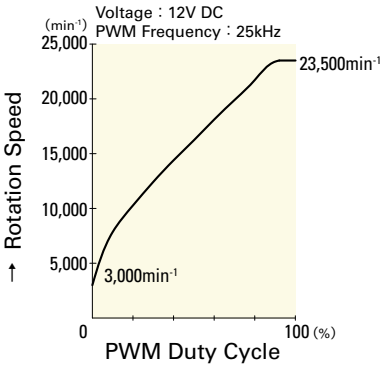


9GA0312P3G001

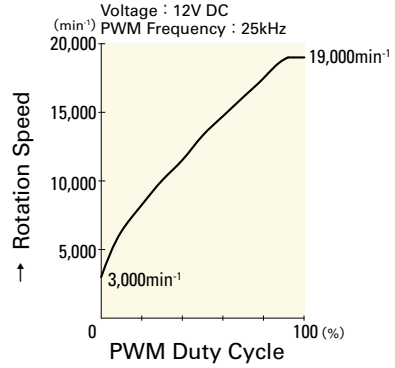
PWM Duty - Speed Characteristics Example



9GA0312P3K001



9GA0312P3J001



9GA0312P3G001

38 mm sq. San Ace 38



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow
- Storage Temperature ···· −20℃ to +70℃ (Non-condensing)

38×38×28mm (Mass : 50g) 9GV type

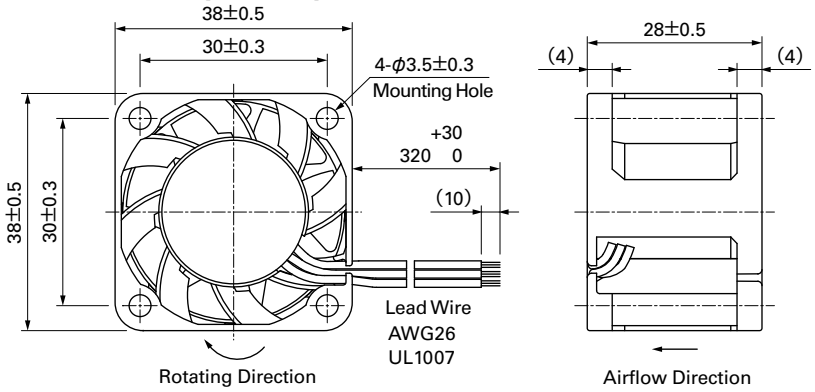
Specifications

The following nos. **have pulse sensors and ribs. For ribless, append "1" to the model no.**

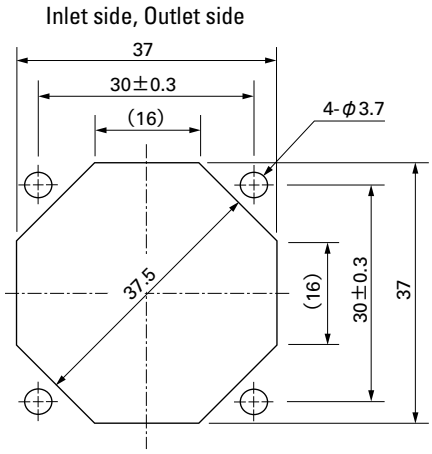
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GV0312K301	12	7 to 13.2	0.79	9.48	18,200	0.65	23	425	1.707	59	−20 to +60	40,000/60℃
9GV0312J301			0.6	7.2	15,900	0.57	20	315	1.265	54		
9GV0312G301			0.4	4.8	13,500	0.48	17	220	0.924	50		
9GV0312E301		4.5 to 13.2	0.21	2.52	10,500	0.37	13.1	130	0.522	43		
9GV0312H301			0.16	1.92	7,000	0.24	8.5	60	0.241	34		

Other sensor specifications are available as options. Please refer to the index (p. 507).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

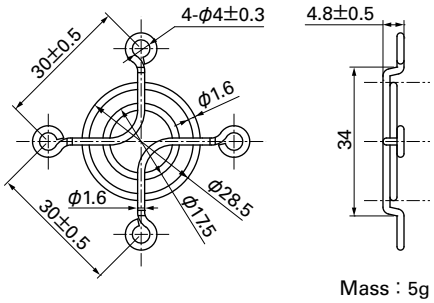


Options (unit: mm)

Finger Guards

Model：109-1065　Surface treatment：Nickel-chrome plating (silver)　Color

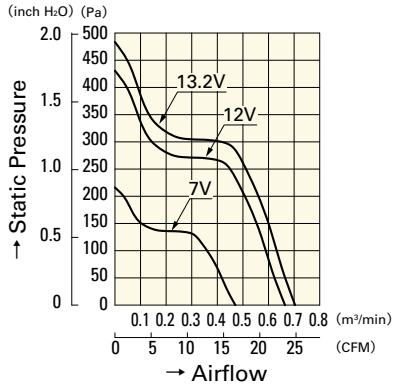
Inlet side, Outlet side



Mass：5g

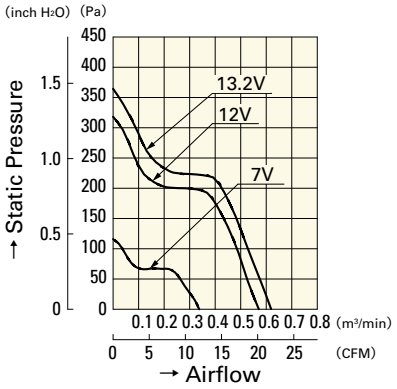
Airflow - Static Pressure Characteristics

K speed



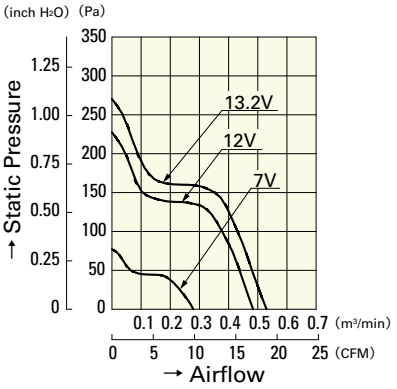
9GV0312K301

J speed



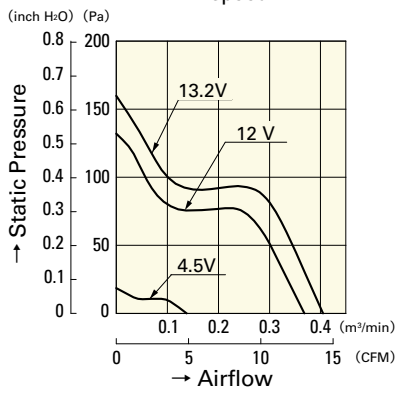
9GV0312J301

G speed



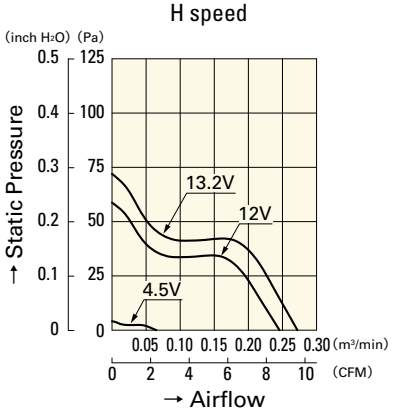
9GV0312G301

E speed



9GV0312E301

H speed



9GV0312H301

40 mm sq. San Ace 40



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

40×40×10mm (Mass : 19g) 9P type

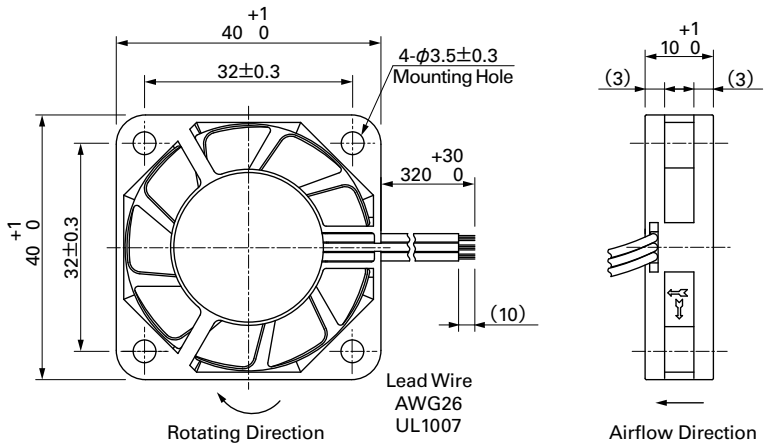
Specifications

The following nos. **have pulse sensors and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109P0405H901	5	4.5 to 5.5	0.16	0.8	6,200	0.15	5.3	41.2	0.165	25	−10 to +60	40,000/60℃
109P0405M901			0.11	0.55	5,000	0.12	4.2	27	0.108	21		
109P0412H901	12	7 to 13.8	0.07	0.84	6,200	0.15	5.3	41.2	0.165	25		
109P0412M901			0.06	0.72	5,000	0.12	4.2	27	0.108	21		

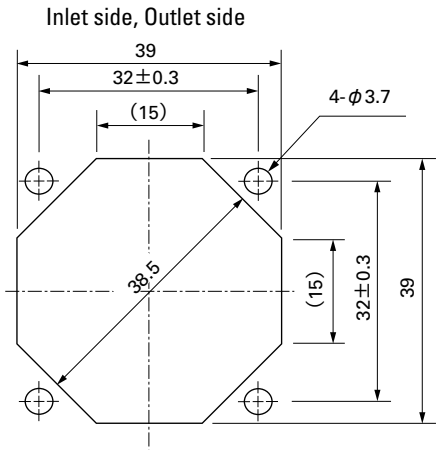
Other sensor specifications are available as options. Please refer to the index (pp. 496 to 497).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

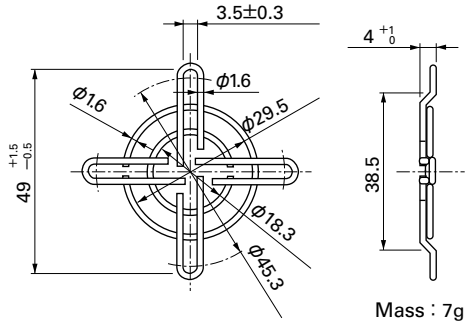


Options (unit: mm)

Finger Guards

Model : 109-059 Surface treatment : Nickel-chrome plating (silver) Color
: 109-059H : Cation electropainting (black)

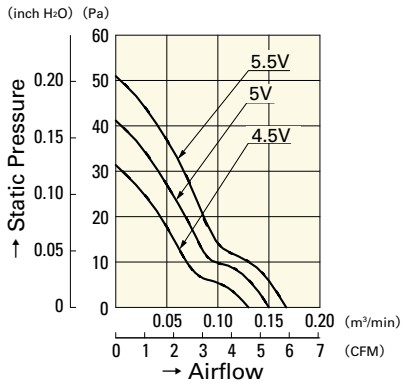
Inlet side, Outlet side



Mass : 7g

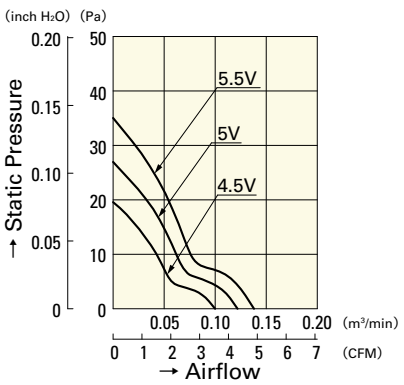
Airflow - Static Pressure Characteristics

H speed



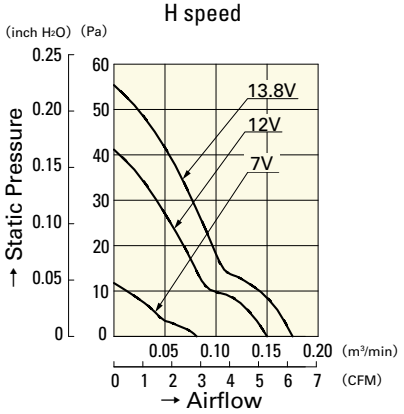
109P0405H901

M speed



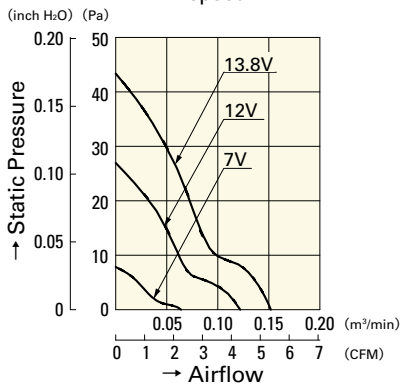
109P0405M901

H speed



109P0412H901

M speed



109P0412M901

40mm sq. San Ace 40



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
  (For models without PWM control function, there is no speed control wiring.)
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

40×40×15mm (Mass : 28g) 9GA type High Airflow Low Power Consumption Fan

Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle Note※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0412P7G001	12	10.2 to 13.8	100	0.17	2.04	13,100	0.36	12.7	192	0.77	42	−20 to +70	40,000/60℃ (70,000/40℃)

Note: Fan does not rotate when PWM duty cycle is 0%.

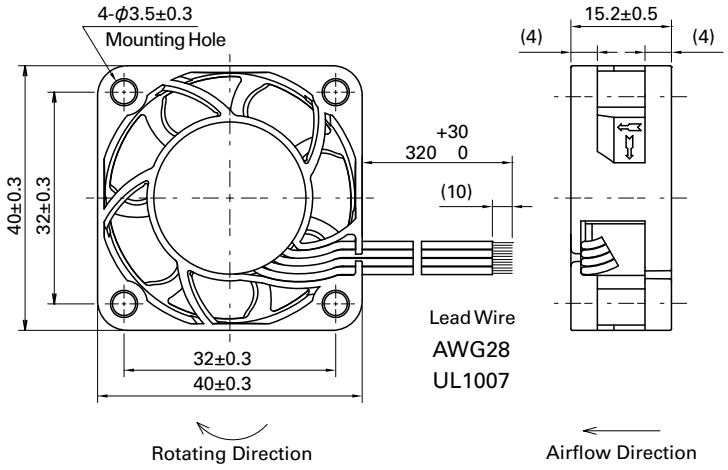
※PWM Frequency : 25kHz

The following nos. **have pulse sensors and ribs.**

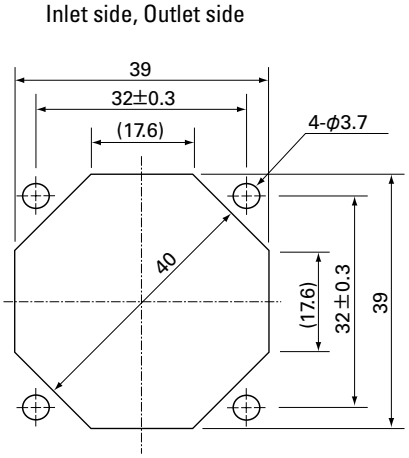
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0412G7001	12	7 to 13.8	0.17	2.04	13,100	0.36	12.7	192	0.77	42	−20 to +70	40,000/60℃ (70,000/40℃)
9GA0412H7001			0.06	0.72	7,300	0.2	7.1	59.6	0.24	28		

Other sensor specifications are available as options. Please refer to the index (p. 504).

Dimensions (unit: mm) (With PWM control function · With pulse sensor)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

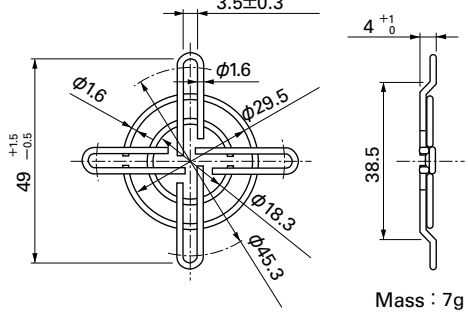


Options (unit: mm)

Finger Guards

Model : 109-059 Surface treatment : Nickel-chrome plating (silver) Color
: 109-059H : Cation electropainting (black)

Inlet side, Outlet side

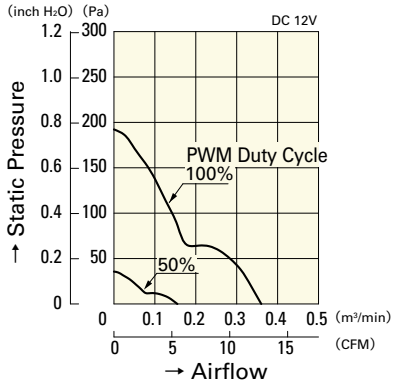


Mass : 7g

Airflow - Static Pressure Characteristics

PWM Duty Cycle

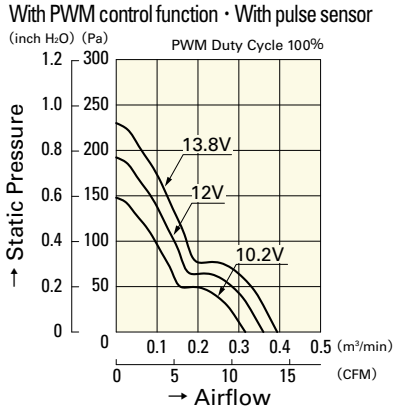
With PWM control function・With pulse sensor



9GA0412P7G001

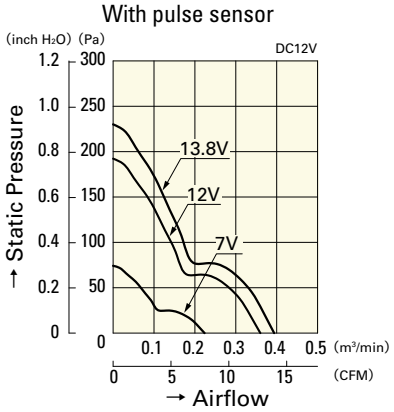
Operating Voltage Range

With PWM control function・With pulse sensor



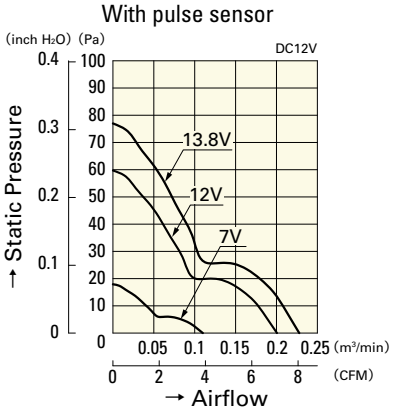
9GA0412P7G001

With pulse sensor



9GA0412G7001

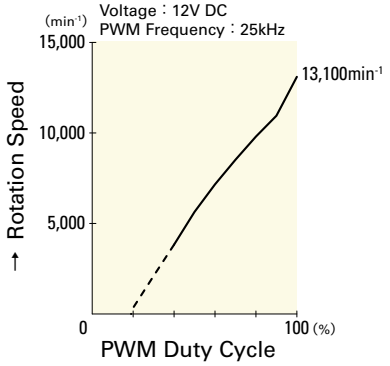
With pulse sensor



9GA0412H7001

PWM Duty - Speed Characteristics Example

With PWM control function・With pulse sensor



9GA0412P7G001

40 mm sq. San Ace 40



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

40×40×15mm (Mass : 32g) 9P type

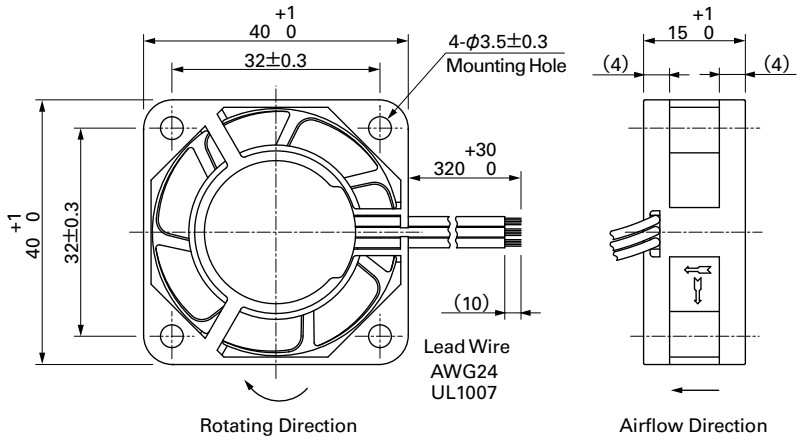
Specifications

The following nos. **have pulse sensors and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109P0405H701	5	4.5 to 5.5	0.28	1.4	7,700	0.18	6.4	75.5	0.303	28	−20 to +60	60,000/60℃
109P0405M701			0.21	1.05	6,500	0.15	5.3	53	0.213	24	−20 to +70	
109P0412R701	12	7 to 13.8	0.13	1.56	9,700	0.227	8.0	111.9	0.449	34		40,000/60℃
109P0412S701		10.2 to 13.8	0.18	2.16	8,600	0.2	7.06	92.1	0.369	32		60,000/60℃
109P0412H701			0.13	1.56	7,700	0.18	6.4	75.5	0.303	28		
109P0412M701			0.095	1.14	6,500	0.15	5.3	53	0.213	24		
109P0424H701	24	20.4 to 27.6	0.08	1.92	7,700	0.18	6.4	75.5	0.303	28		

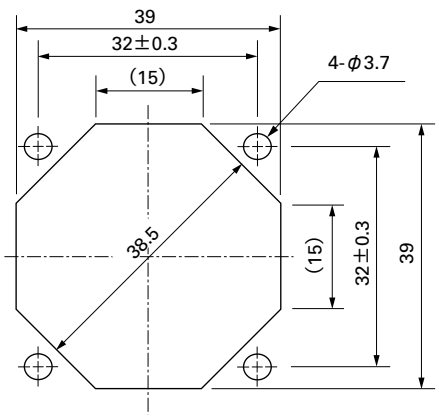
Other sensor specifications are available as options. Please refer to the index (pp. 496 to 497).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

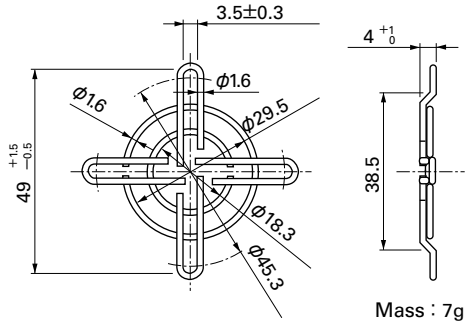


Options (unit: mm)

Finger Guards

Model : 109-059 Surface treatment : Nickel-chrome plating (silver) Color
: 109-059H : Cation electropainting (black)

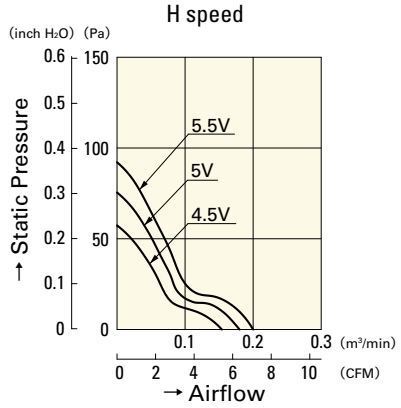
Inlet side, Outlet side



Mass : 7g

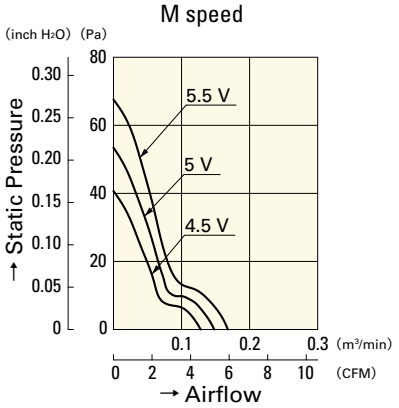
Airflow - Static Pressure Characteristics

H speed



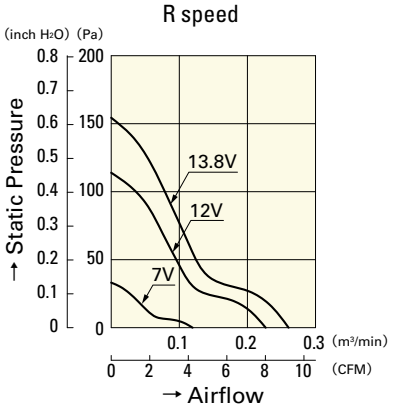
109P0405H701

M speed



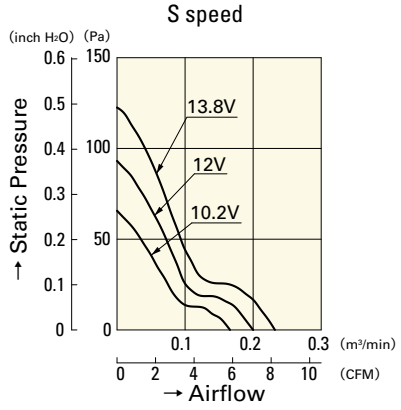
109P0405M701

R speed



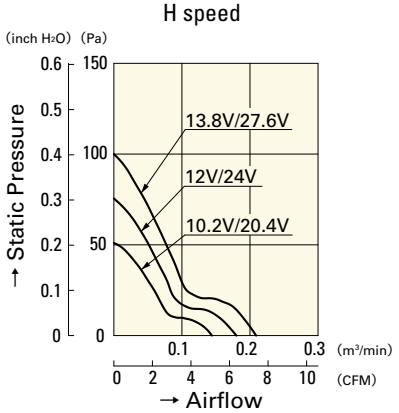
109P0412R701

S speed



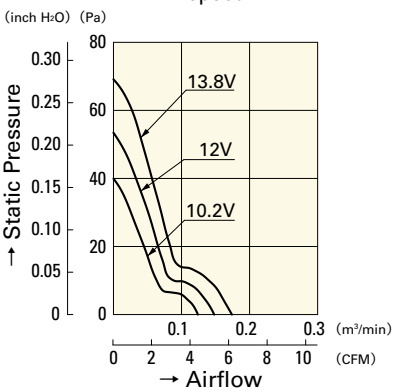
109P0412S701

H speed



109P0412H701
109P0424H701

M speed



109P0412M701

40 mm sq. San Ace 40



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

40×40×20mm (Mass : 35g) 9GA type High Airflow Low Power Consumption Fan

Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.**

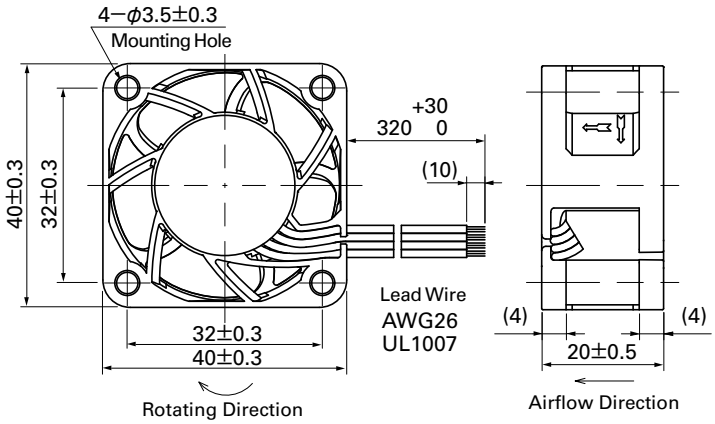
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0405P6H001 Note)	5	4.5 to 5.5	100	0.35	1.75	12,400	0.33	11.7	191	0.77	40	−20 to +70	40,000/60℃
9GA0405P6F001 Note)			100	0.18	0.9	8,000	0.21	7.4	79.5	0.32	28		60,000/60℃
9GA0412P6G001	12	10.2 to 13.8	100	0.23	2.76	16,000	0.42	14.8	318	1.28	47		40,000/60℃
			0	0.04	0.48	3,800	0.10	3.5	17.9	0.07	14		
9GA0412P6H001			100	0.14	1.68	12,400	0.33	11.7	191	0.77	40		60,000/60℃
			0	0.04	0.48	3,800	0.10	3.5	17.9	0.07	14		
9GA0412P6F001			100	0.08	0.96	8,000	0.21	7.4	79.5	0.32	28		
			0	0.03	0.36	2,200	0.06	2.1	6.0	0.02	10		
9GA0424P6G001 Note)	24	20.4 to 27.6	100	0.13	3.12	16,000	0.42	14.8	318	1.28	47		40,000/60℃
9GA0424P6H001 Note)			100	0.08	1.92	12,400	0.33	11.7	191	0.77	40		60,000/60℃
9GA0424P6F001 Note)			100	0.04	0.96	8,000	0.21	7.4	79.5	0.32	28		

Note: Rated voltage 5V and 24V fans do not rotate when PWM duty cycle is 0%.

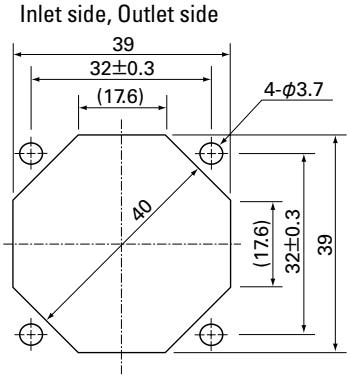
※PWM Frequency : 25kHz

Other sensor specifications are available as options. Please refer to the index (p. 504).

Dimensions (unit: mm)



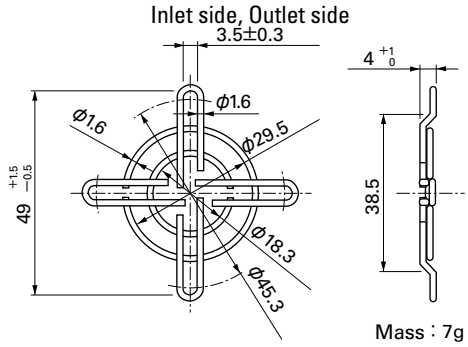
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

Finger Guards

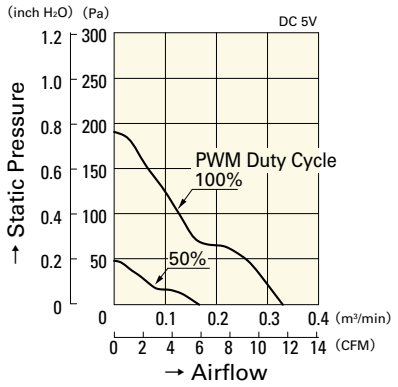
Model : 109-059 Surface treatment : Nickel-chrome plating (silver) Color
: 109-059H : Cation electropainting (black)



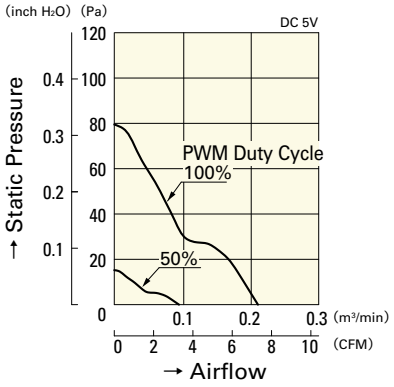
Mass : 7g

Airflow - Static Pressure Characteristics

PWM Duty Cycle

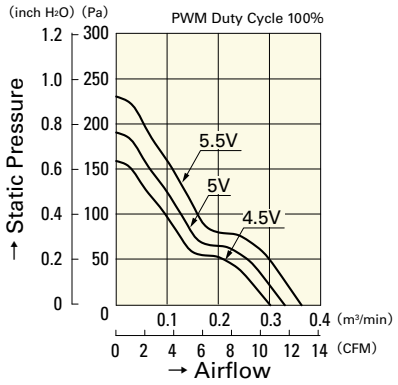


9GA0405P6H001

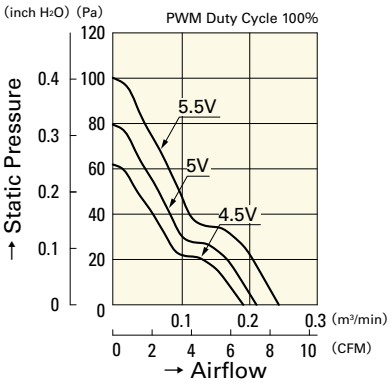


9GA0405P6F001

Operating Voltage Range

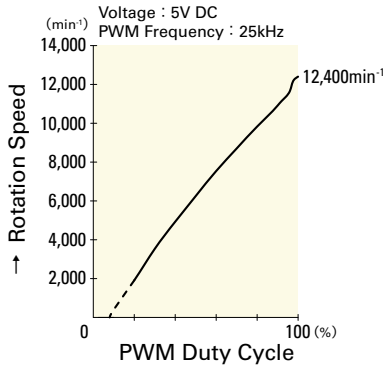


9GA0405P6H001

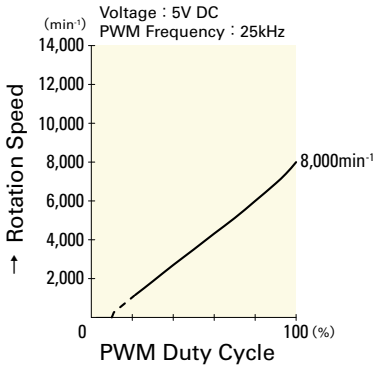


9GA0405P6F001

PWM Duty - Speed Characteristics Example



9GA0405P6H001



9GA0405P6F001

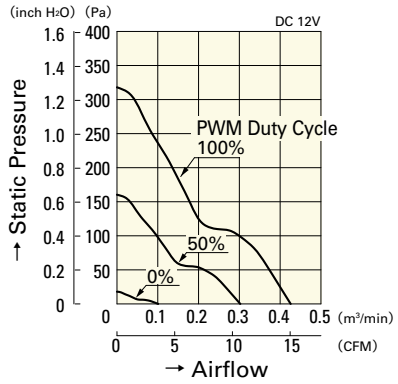
40mm sq.

San Ace 40

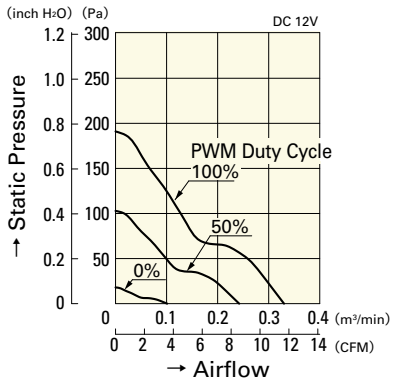
40×40×20mm 〔Mass：35g〕

Airflow - Static Pressure Characteristics

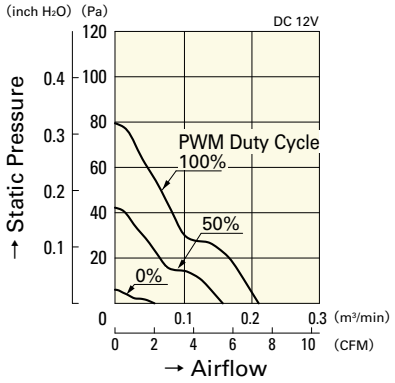
PWM Duty Cycle



9GA0412P6G001

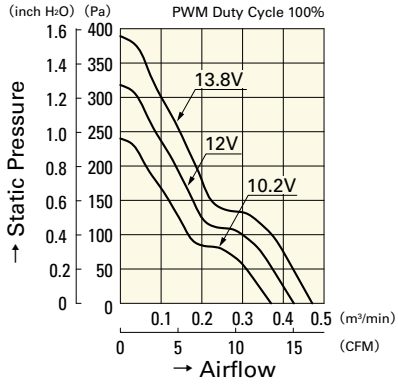


9GA0412P6H001

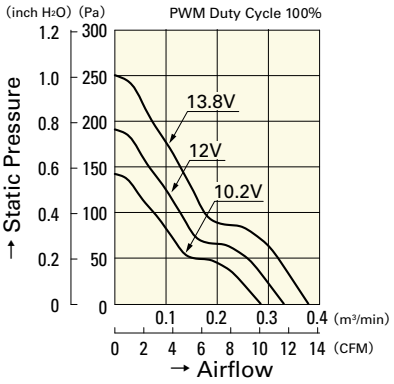


9GA0412P6F001

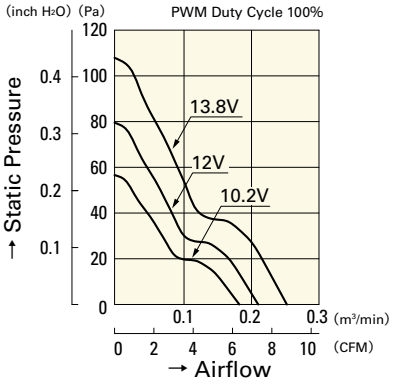
Operating Voltage Range



9GA0412P6G001

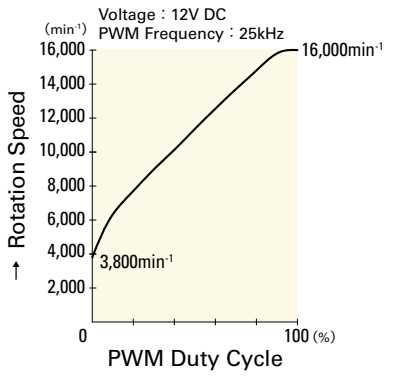


9GA0412P6H001

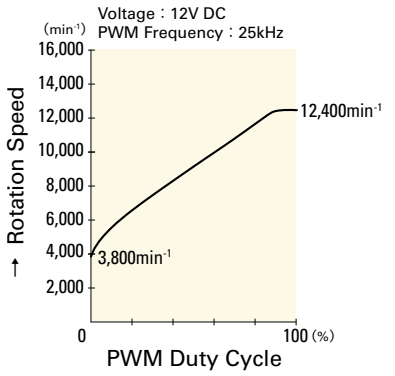


9GA0412P6F001

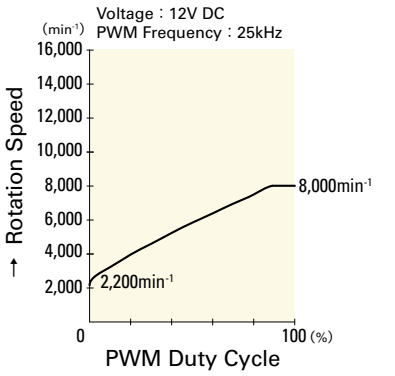
PWM Duty - Speed Characteristics Example



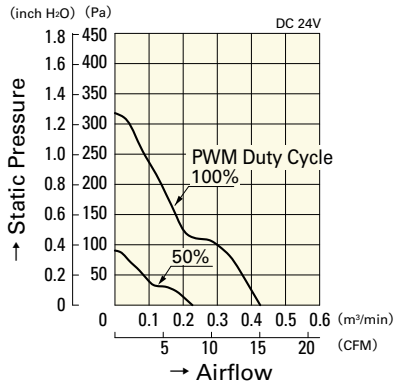
9GA0412P6G001



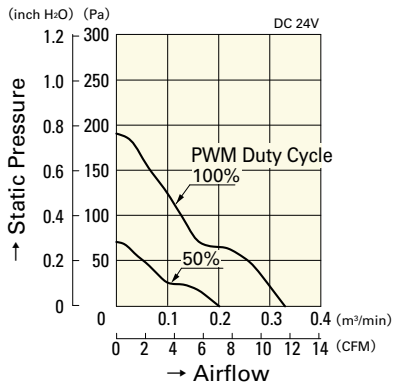
9GA0412P6H001



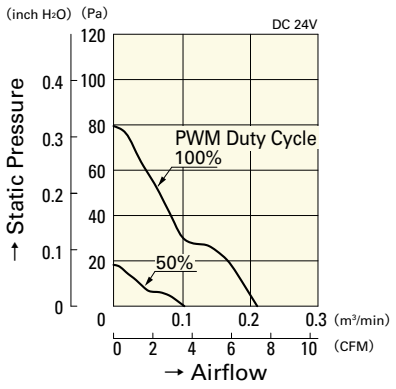
9GA0412P6F001



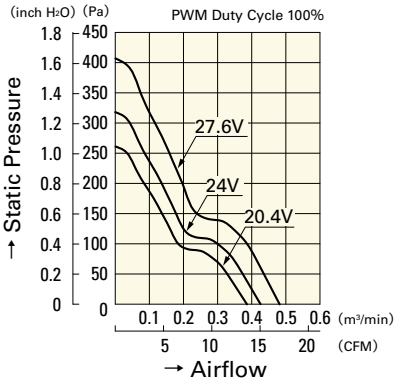
9GA0424P6G001



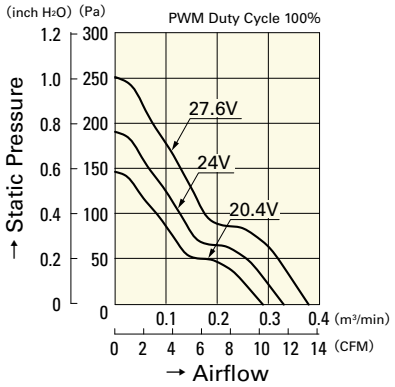
9GA0424P6H001



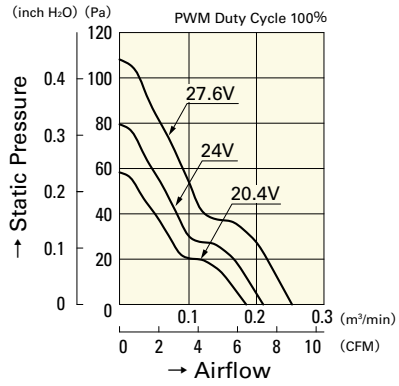
9GA0424P6F001



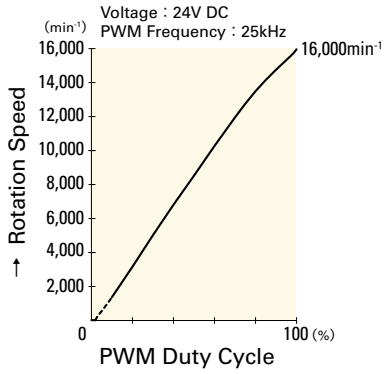
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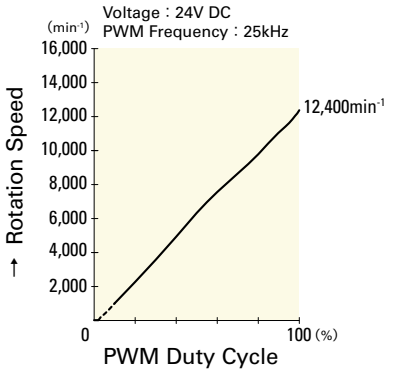
9GA0424P6H001



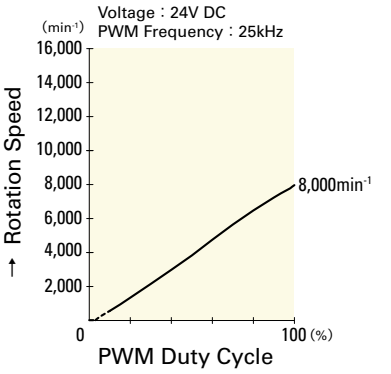
9GA0424P6F001



9GA0424P6G001



9GA0424P6H001



9GA0424P6F001

40 mm sq. San Ace 40



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

40×40×20mm (Mass : 45g) 9P type

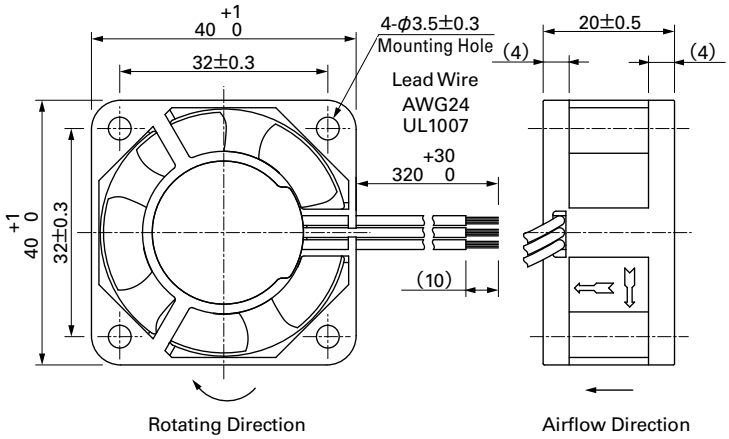
Specifications

The following nos. **have pulse sensors and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	[CFM]	Max. Static Pressure [Pa]	[inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109P0405J601	5	4.5 to 5.5	0.46	2.3	9,800	0.28	9.9	98.5	0.396	39	−20 to +70	40,000/60℃
109P0405H601			0.32	1.6	8,000	0.225	8.0	65.7	0.264	33		
109P0405F601			0.25	1.25	6,500	0.183	6.5	45.1	0.181	28		60,000/60℃
109P0405M601			0.12	0.60	5,000	0.136	4.8	26.5	0.106	24		
109P0412G601	12	7 to 13.8	0.28	3.36	12,500	0.35	12.4	153.8	0.618	44	−20 to +60	40,000/60℃
109P0412D601			0.18	2.16	11,000	0.31	10.9	124	0.498	42		60,000/60℃
109P0412E601			0.13	1.8	9,200	0.26	9.2	87.3	0.351	37	−20 to +70	
109P0412H601			0.11	1.32	8,000	0.225	8.0	65.7	0.264	33		
109P0412F601			0.09	1.08	6,500	0.183	6.5	45.1	0.181	28		
109P0412M601		8 to 13.8	0.06	0.72	5,000	0.136	4.8	26.5	0.106	24		
109P0424G601	24	12 to 27.6	0.15	3.6	12,500	0.35	12.4	153.8	0.618	44	−20 to +60	40,000/60℃
109P0424D601		12 to 27.6	0.13	3.12	11,000	0.31	10.9	124	0.498	42		
109P0424H601		12 to 27.6	0.07	1.68	8,300	0.233	8.2	69.6	0.280	35	−20 to +70	60,000/60℃
109P0424F601		14 to 27.6	0.06	1.44	6,500	0.183	6.5	45.1	0.181	28		
109P0424B601		20.4 to 27.6	0.06	1.44	5,200	0.14	4.9	28.3	0.114	25		

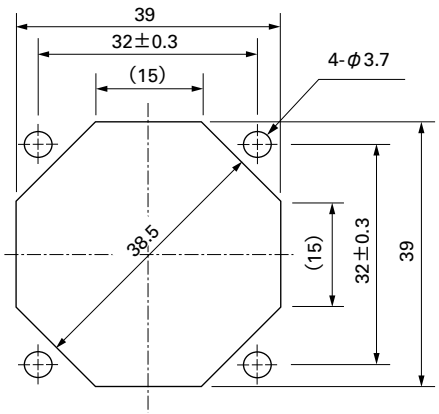
Other sensor specifications are available as options. Please refer to the index (pp. 496 to 497).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

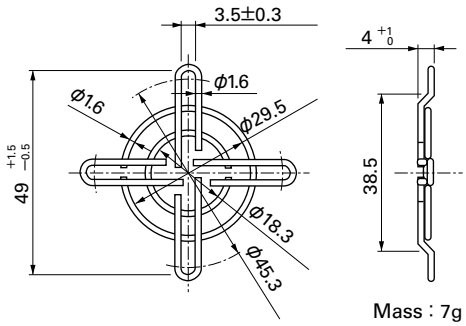


Options (unit: mm)

Finger Guards

Model : 109-059 Surface treatment : Nickel-chrome plating (silver) Color
: 109-059H : Cation electropainting (black)

Inlet side, Outlet side



Mass : 7g

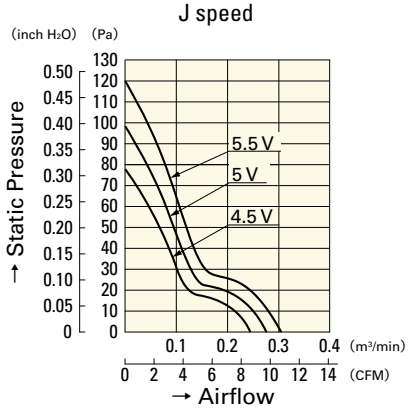
40 mm sq.

San Ace 40

40×40×20mm 〔Mass：45g〕

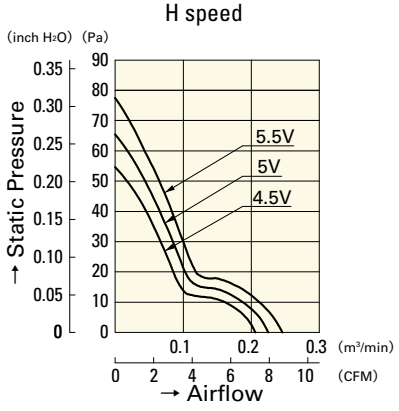
Airflow - Static Pressure Characteristics

J speed



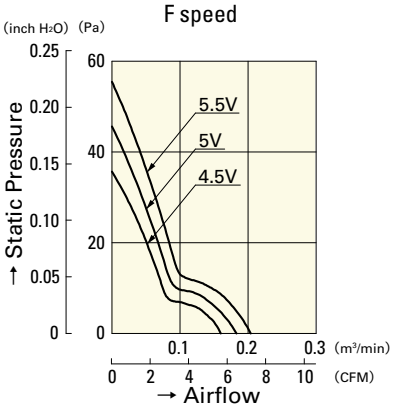
109P0405J601

H speed



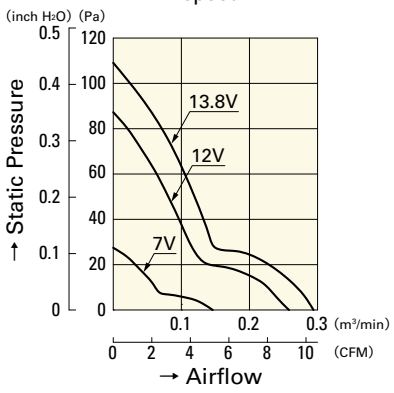
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F speed



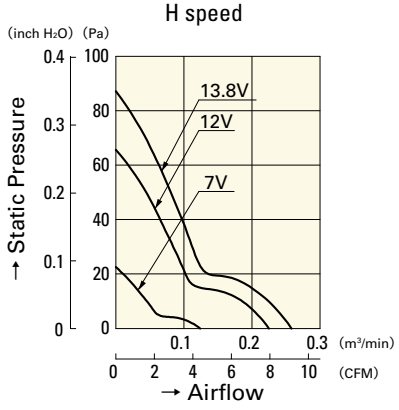
109P0405F601

E speed



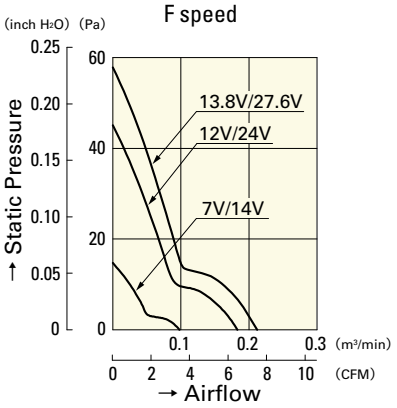
109P0412E601

H speed



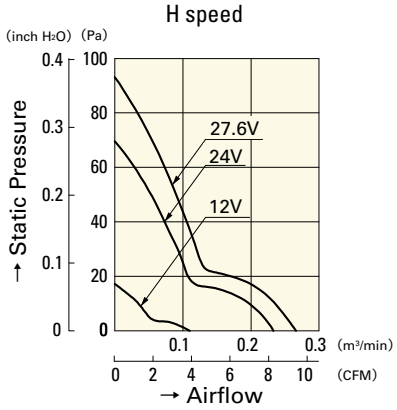
109P0412H601

F speed



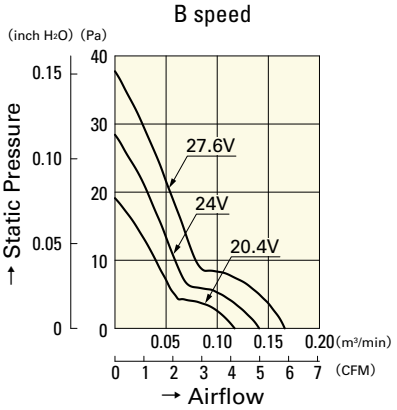
109P0412F601
109P0424F601

H speed



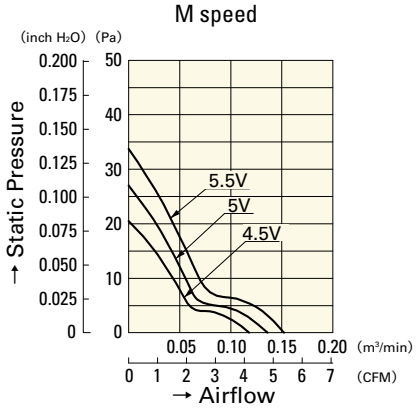
109P0424H601

B speed



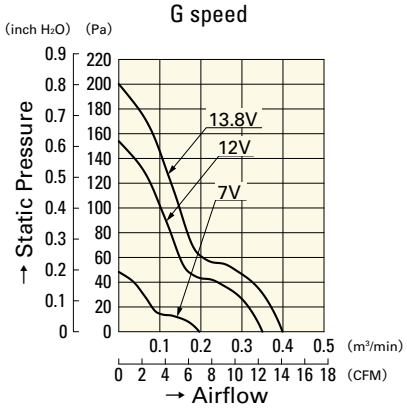
109P0424B601

M speed



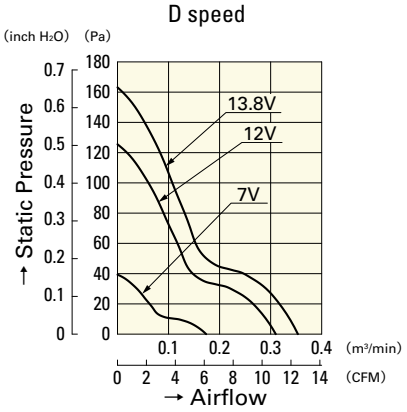
109P0405M601

G speed



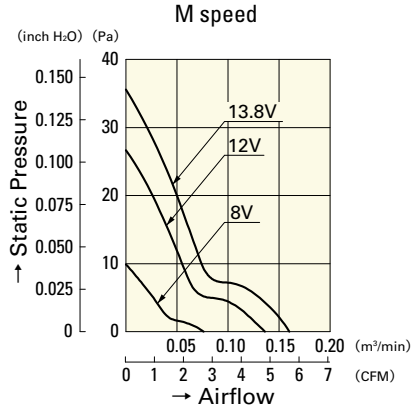
109P0412G601

D speed



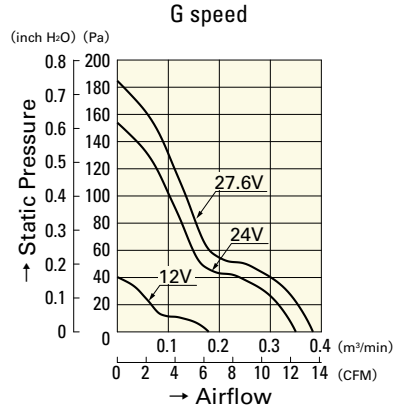
109P0412D601

M speed



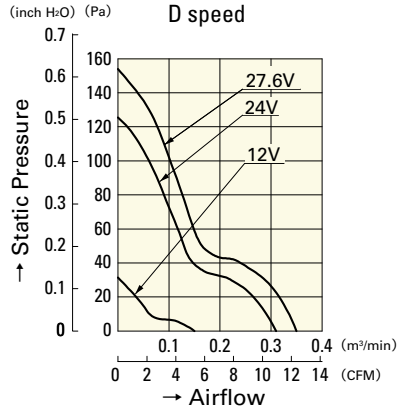
109P0412M601

G speed



109P0424G601

D speed



109P0424D601

40mm sq. San Ace 40



General Specifications

- Material ····· Frame: Aluminum,Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃ , rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···−30℃ to +70℃ (Non-condensing)

40×40×28mm (Mass：60g) 9HV type

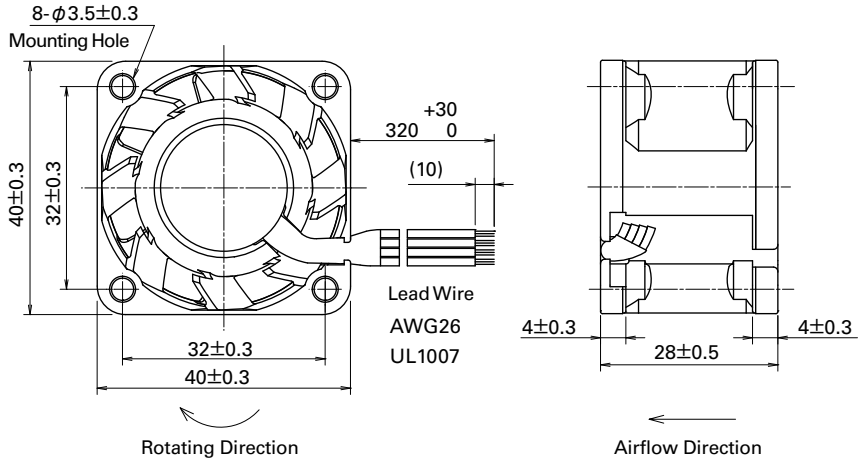
Specifications

The following nos. **have PWM controls and pulse sensors.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9HV0412P3K001	12	10.8 to 12.6	100	1.52	18.3	25,000	0.83	29.3	1,100	4.42	65	−20 to +60	40,000/60℃
			0	0.2	2.4	7,500	0.25	8.8	99	0.40	37		

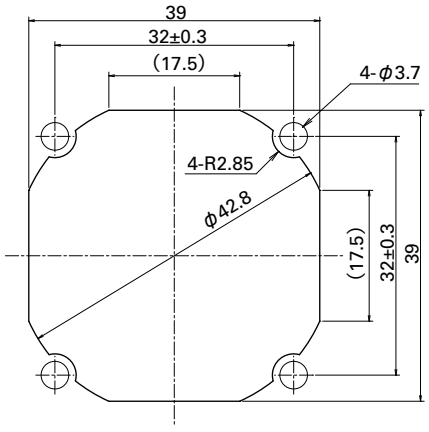
※PWM Frequency：25kHz

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

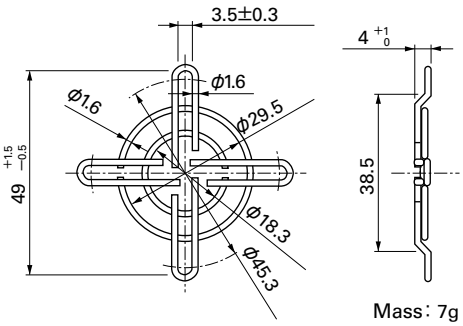


Options (unit: mm)

Finger Guards

Model：109-059 Surface treatment：Nickel-chrome plating (silver) Color
：109-059H ：Cation electropainting (black)

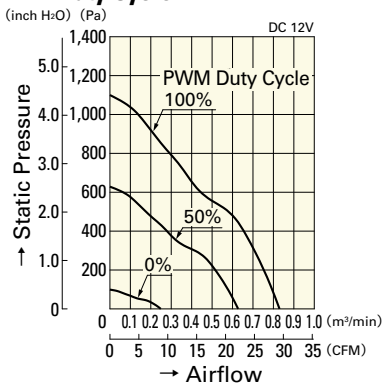
Inlet side, Outlet side



Mass：7g

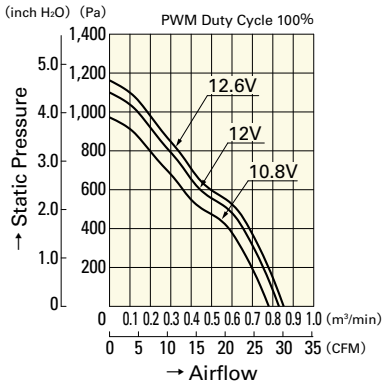
Airflow - Static Pressure Characteristics

PWM Duty Cycle



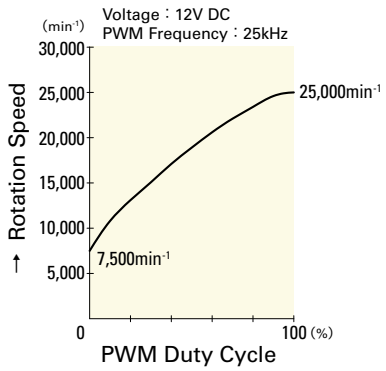
9HV0412P3K001

Operating Voltage Range



9HV0412P3K001

PWM Duty - Speed Characteristics Example



9HV0412P3K001

40 mm sq. San Ace 40



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black Sensor yellow Control brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

40×40×28mm (Mass: 53g) 9GAX type Low Power Consumption Fan

Specifications

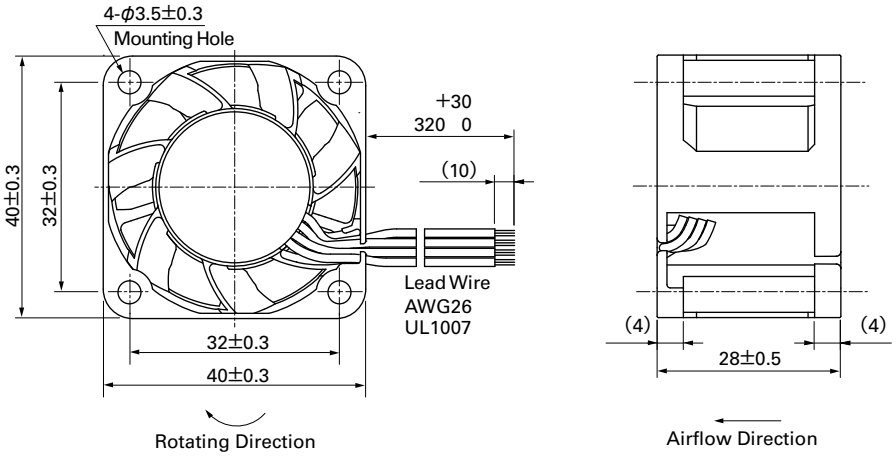
The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle Note)※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GAX0412P3S001	12	10.8 to 12.6	100	1.30	15.60	25,000	0.90	31.8	1,000	4.02	64	−20 to +60	30,000/60℃
			20	0.07	0.84	4,400	0.155	5.5	32	0.125	21.5		
9GAX0412P3S003			100	1.30	15.60	25,000	0.90	31.8	1,000	4.02	64		
			0	0.11	1.32	7,800	0.26	9.2	87	0.35	38		
9GAX0412P3K001		10.8 to 13.2	100	0.92	11.04	22,000	0.81	28.6	800	3.21	61		
			20	0.07	0.84	4,200	0.15	5.3	28	0.11	21		
9GAX0412P3K003			100	0.92	11.04	22,000	0.81	28.6	800	3.21	61		
			0	0.10	1.20	6,500	0.24	8.5	70	0.28	32		

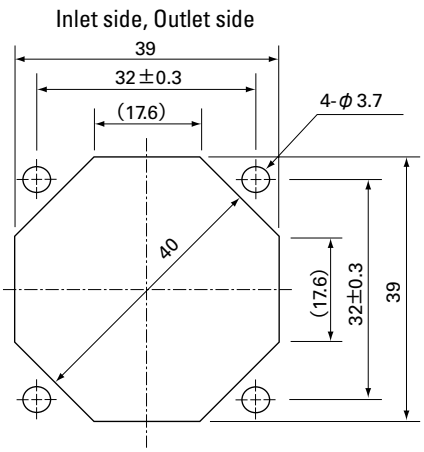
Note: 9GAX0412P3S001, 9GAX0412P3K001 does not rotate when PWM duty cycle is 0%.

※PWM Frequency: 25kHz

Dimensions (unit: mm) (With ribs)



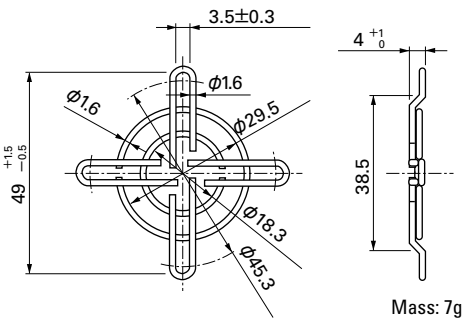
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

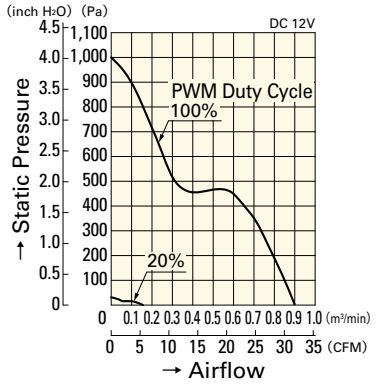
Finger Guards

Model : 109-059 Surface treatment : Nickel-chrome plating (silver) Color
: 109-059H : Cation electropainting (black)



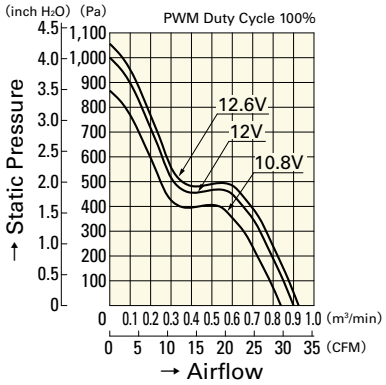
Airflow - Static Pressure Characteristics

PWM Duty Cycle



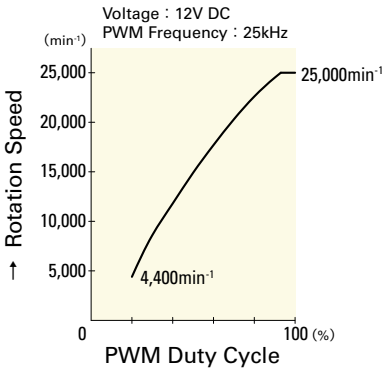
9GAX0412P3S001

Operating Voltage Range

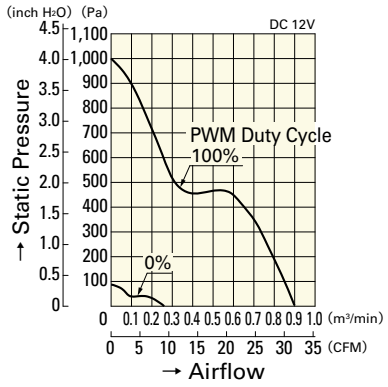


9GAX0412P3S001

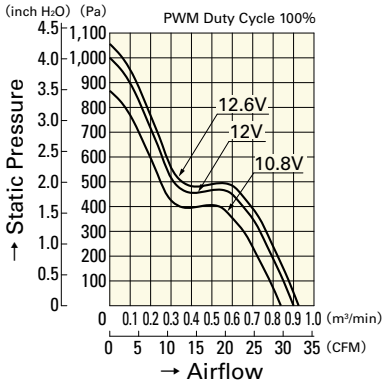
PWM Duty - Speed Characteristics Example



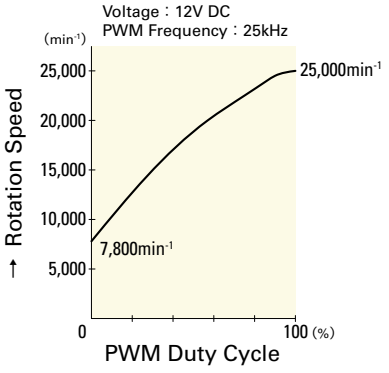
9GAX0412P3S001



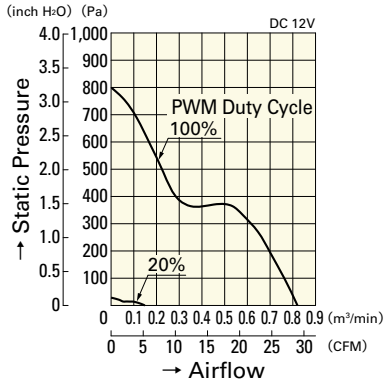
9GAX0412P3S003



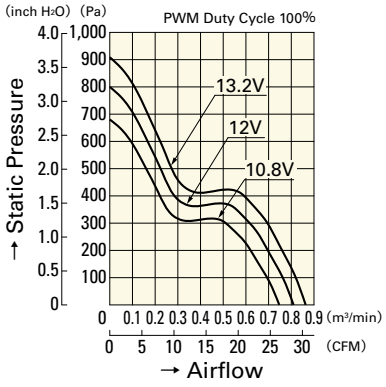
9GAX0412P3S003



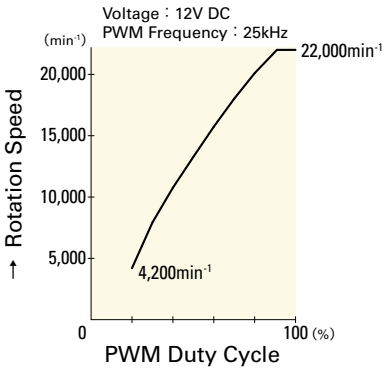
9GAX0412P3S003



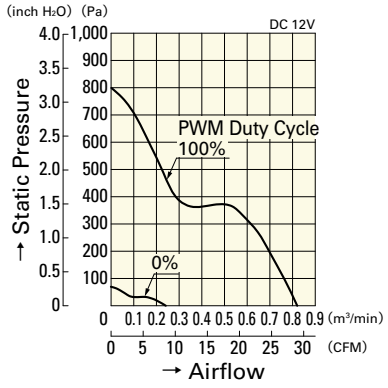
9GAX0412P3K001



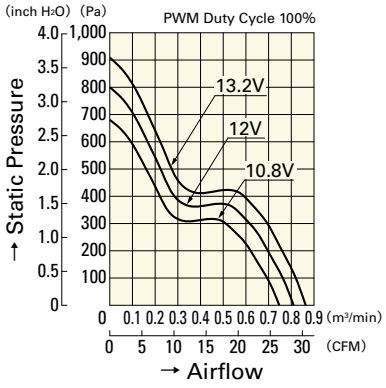
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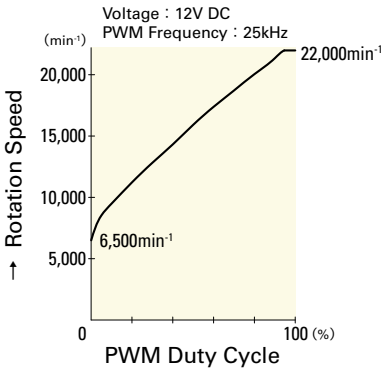
9GAX0412P3K001



9GAX0412P3K003



9GAX0412P3K003



9GAX0412P3K003

40 mm sq. San Ace 40



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

40×40×28mm (Mass：53g) 9GA type Low Power Consumption Fan

Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

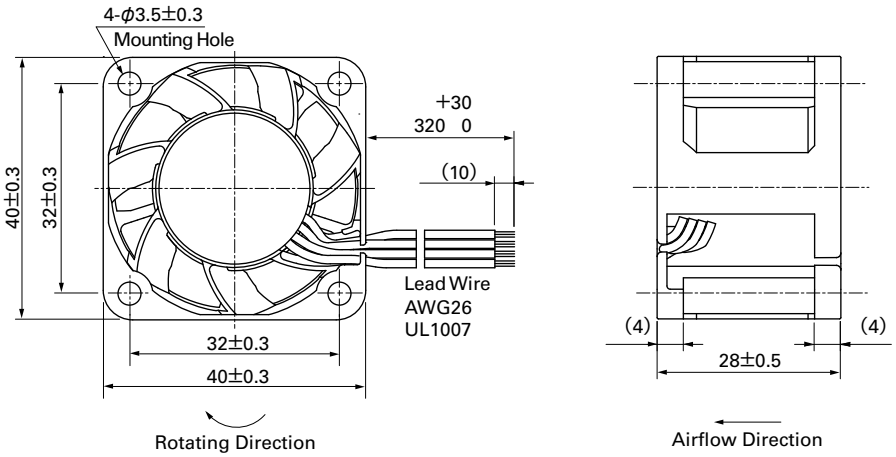
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0412P3K01	12	10.8 to 13.2	100	0.92	11.04	22,000	0.81	28.6	799	3.21	61	−20 to +60	30,000/60℃
			0	0.10	1.2	6,500	0.23	8.12	68	0.27	32		
9GA0412P3J01			100	0.49	5.88	18,000	0.67	23.7	535	2.15	54	−20 to +70	40,000/60℃
			0	0.05	0.6	4,500	0.16	5.7	33	0.13	22		
9GA0412P3G01			100	0.39	4.68	16,500	0.61	21.5	450	1.81	53		
			0	0.05	0.6	4,500	0.16	5.7	33	0.13	22		
9GA0412P3H01			100	0.28	3.36	14,500	0.54	19.1	347	1.39	50		
			0	0.04	0.48	3,500	0.13	4.6	20	0.08	17		
9GA0412P3M01			100	0.21	2.52	12,500	0.46	16.2	258	1.04	47		
			0	0.04	0.48	3,500	0.13	4.6	20	0.08	17		
9GA0424P3J001 Note)	24	21.6 to 26.4	100	0.27	6.48	18,000	0.67	23.7	535	2.15	54		
9GA0424P3G001 Note)			100	0.22	5.28	16,500	0.61	21.5	450	1.81	53		
9GA0424P3H001 Note)			100	0.16	3.84	14,500	0.54	19.1	347	1.39	50		
9GA0424P3M001 Note)			100	0.11	2.64	12,500	0.46	16.2	258	1.04	47		

Note: Rated voltage 24V fans do not rotate when PWM duty cycle is 0%.

※PWM Frequency：25kHz

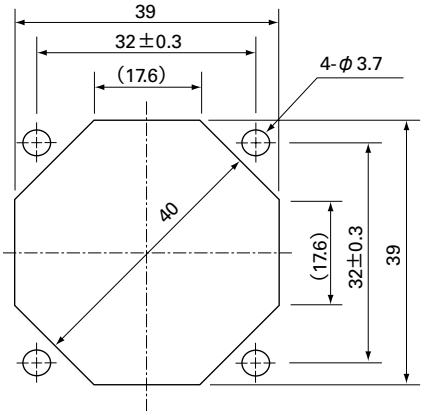
Other sensor specifications are available as options. Please refer to the index (p. 504).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

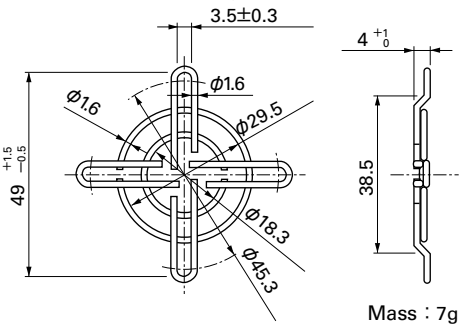


Options (unit: mm)

Finger Guards

Model : 109-059 Color
Surface treatment : Nickel-chrome plating (silver)
: 109-059H : Cation electropainting (black)

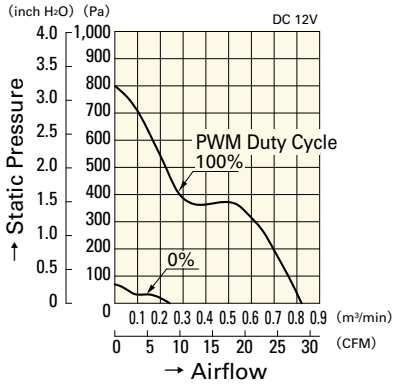
Inlet side, Outlet side



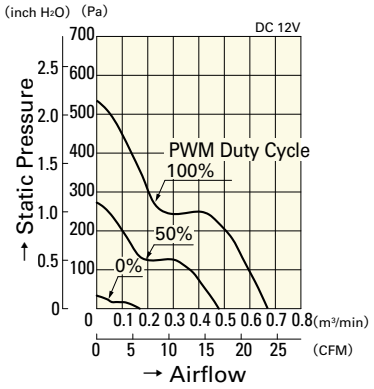
Mass : 7g

Airflow - Static Pressure Characteristics

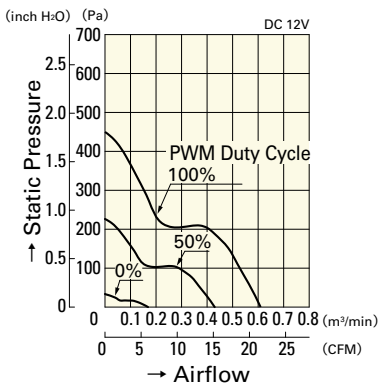
PWM Duty Cycle



9GA0412P3K01

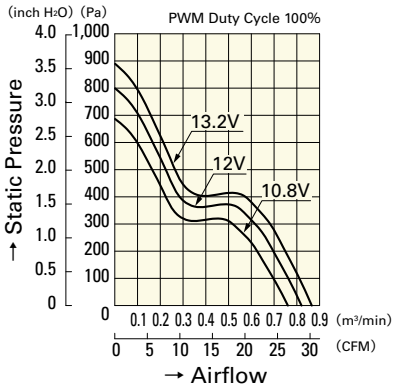


9GA0412P3J01

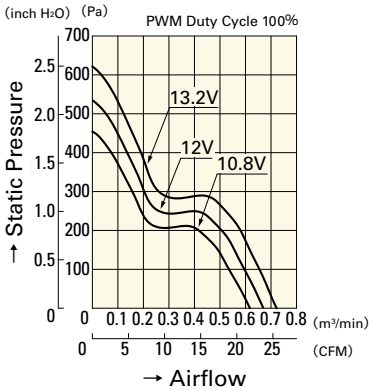


9GA0412P3G01

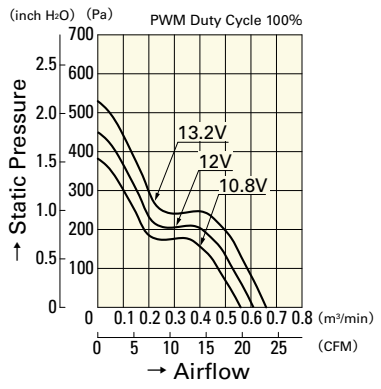
Operating Voltage Range



9GA0412P3K01

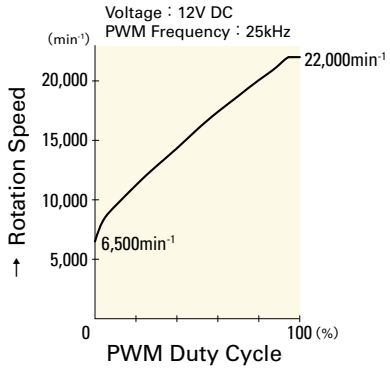


9GA0412P3J01

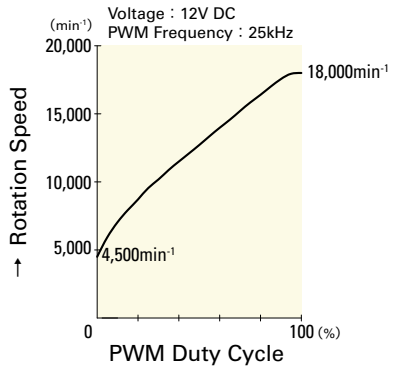


9GA0412P3G01

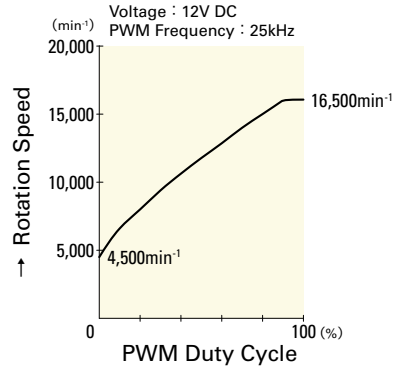
PWM Duty - Speed Characteristics Example



9GA0412P3K01



9GA0412P3J01



9GA0412P3G01

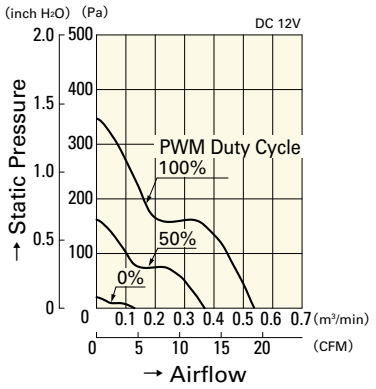
40 mm sq.

San Ace 40

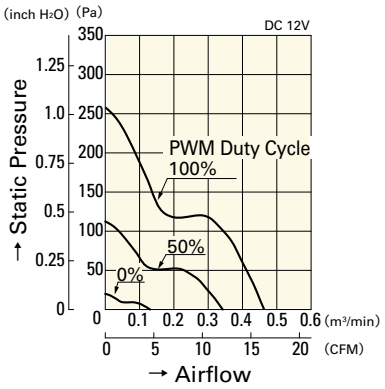
40×40×28mm 〔Mass：53g〕

Airflow - Static Pressure Characteristics

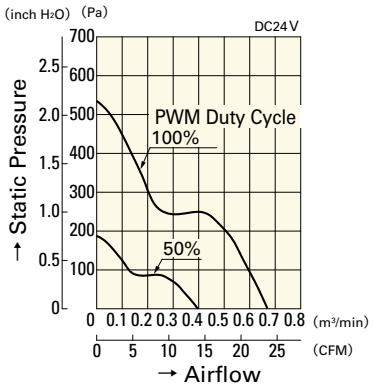
PWM Duty Cycle



9GA0412P3H01

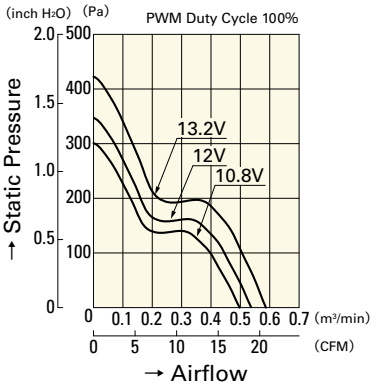


9GA0412P3M01

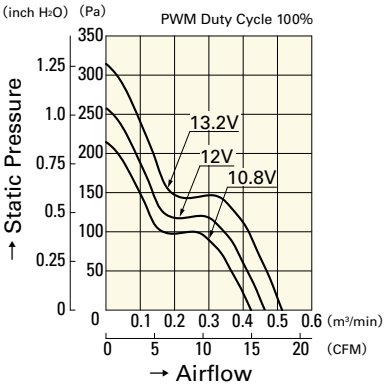


9GA0424P3J001

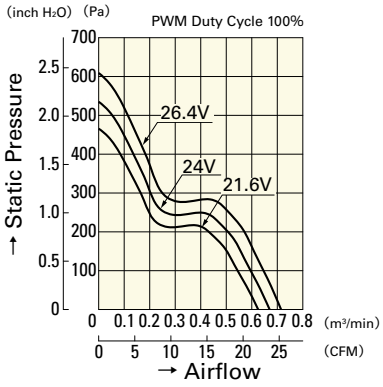
Operating Voltage Range



9GA0412P3H01

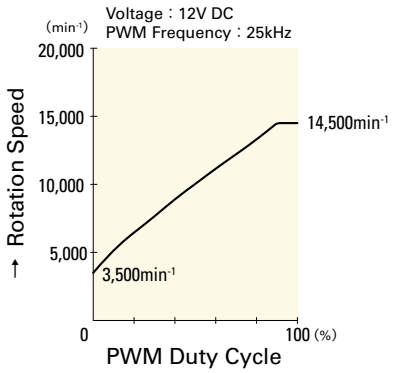


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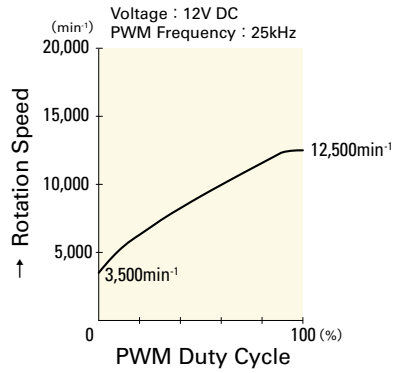


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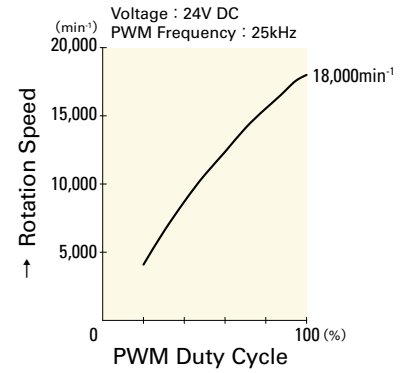
PWM Duty - Speed Characteristics Example



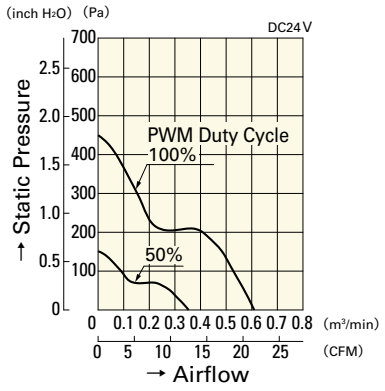
9GA0412P3H01



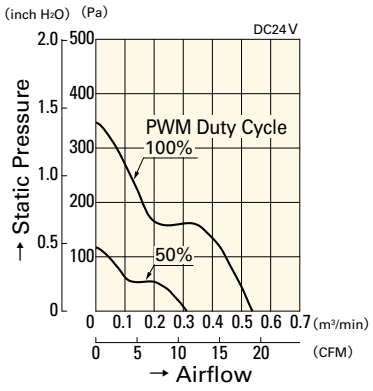
9GA0412P3M01



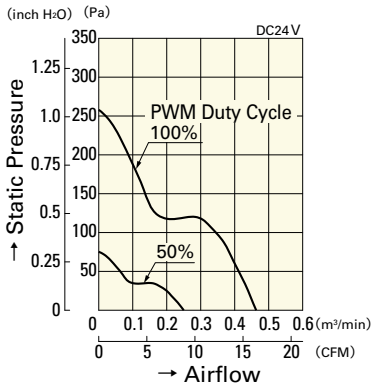
9GA0424P3J001



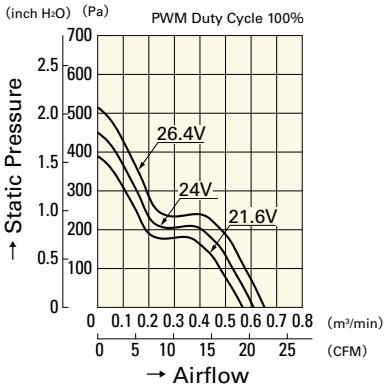
9GA0424P3G001



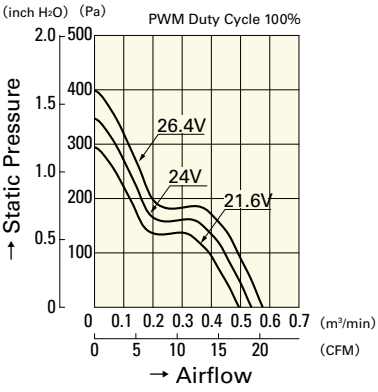
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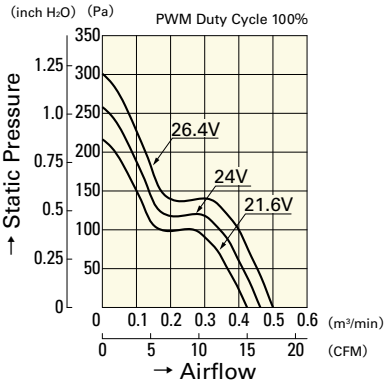
9GA0424P3M001



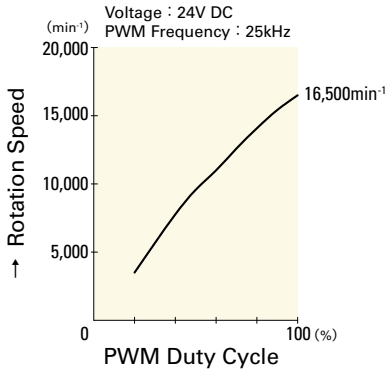
9GA0424P3G001



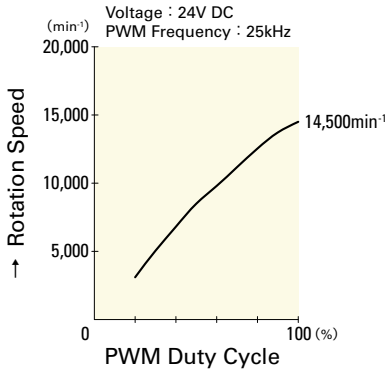
9GA0424P3H001



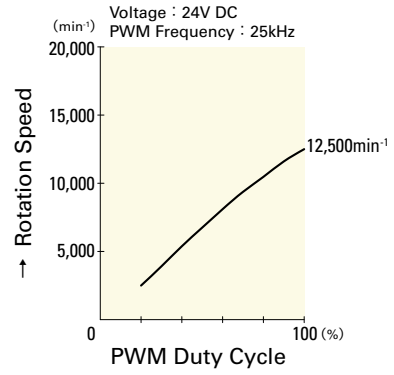
9GA0424P3M001



9GA0424P3G001



9GA0424P3H001



9GA0424P3M001

40mm sq. San Ace 40



General Specifications

- Material ····· Frame: Aluminum,Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

40×40×28mm (Mass：55g) 9GE type Low vibration

Specifications

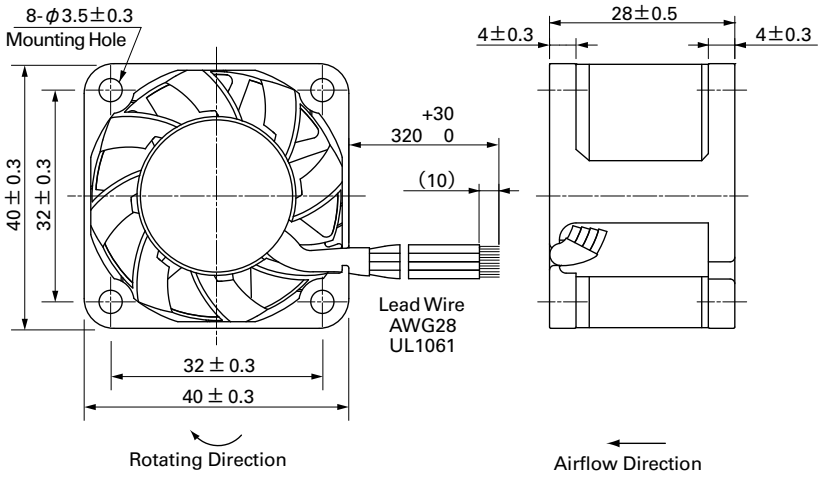
The following nos. **have PWM controls and pulse sensors.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GE0412P3K03	12	10.8 to 13.2	100	0.84	10.08	16,500	0.76	26.8	415	1.666	58	−20 to +60	40,000/60℃
			0	0.07	0.84	3,000	0.13	4.6	13	0.052	17		
9GE0412P3J03			100	0.65	7.8	15,000	0.69	24.4	343.0	1.378	56		
			0	0.05	0.6	2,650	0.12	4.2	10.7	0.042	14		
9GE0412P3G03			100	0.47	5.64	13,000	0.60	21.2	260	1.044	52		
			0	0.05	0.6	2,400	0.11	3.9	8.2	0.033	13		

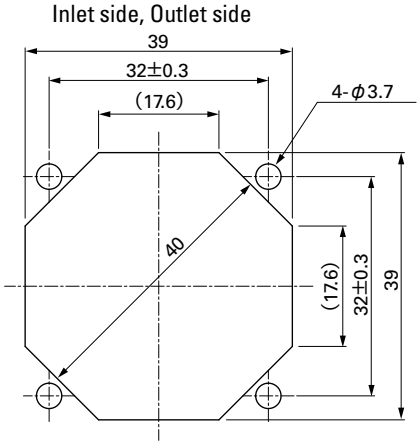
※PWM Frequency：25kHz

Other sensor specifications are available as options. Please refer to the index (p. 506).

Dimensions (unit: mm)



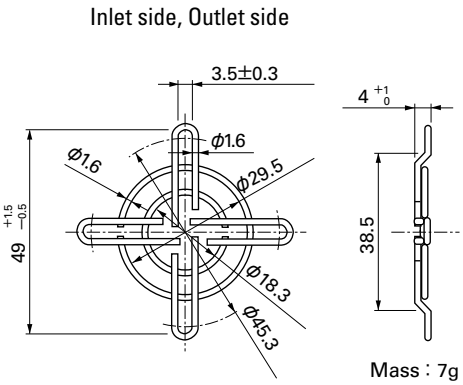
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

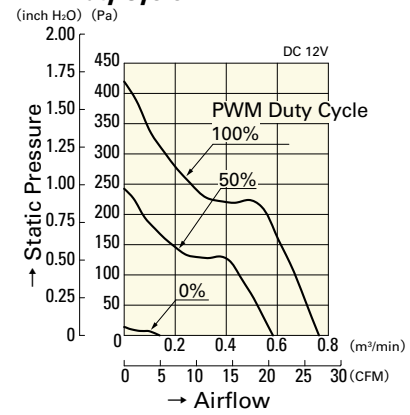
Finger Guards

Model：109-059 Surface treatment：Nickel-chrome plating (silver) Color
：109-059H ：Cation electropainting (black)

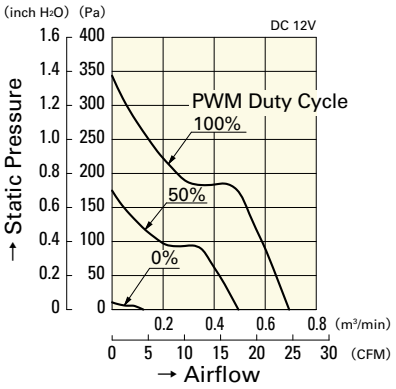


Airflow - Static Pressure Characteristics

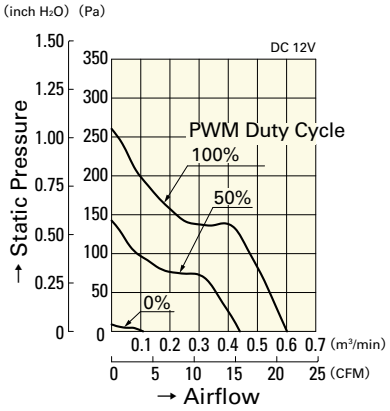
PWM Duty Cycle



9GE0412P3K03

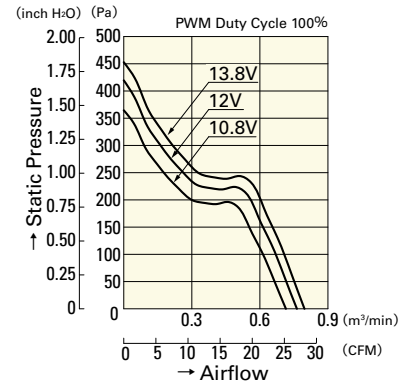


9GE0412P3J03

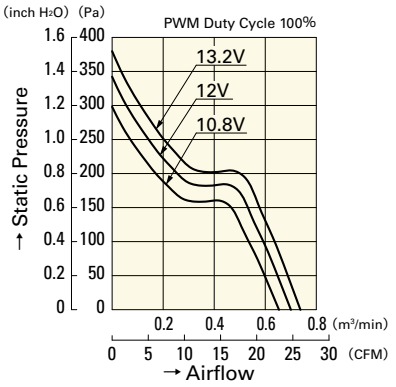


9GE0412P3G03

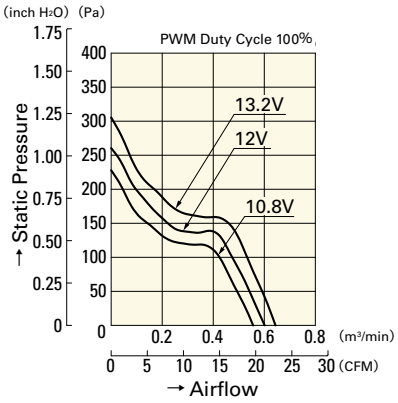
Operating Voltage Range



9GE0412P3K03

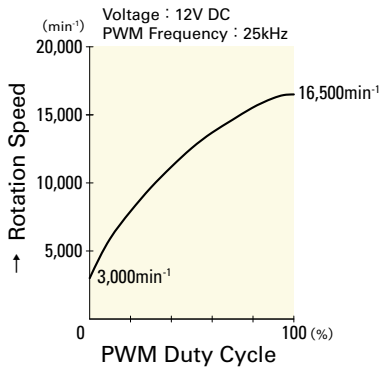


9GE0412P3J03

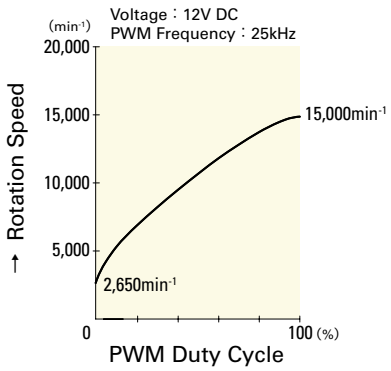


9GE0412P3G03

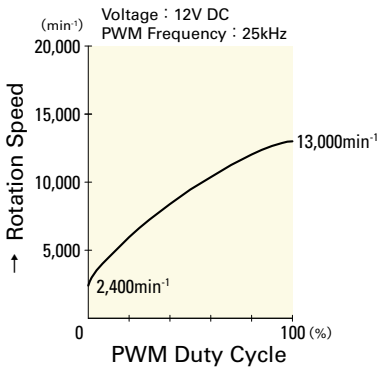
PWM Duty - Speed Characteristics Example



9GE0412P3K03



9GE0412P3J03



9GE0412P3G03

40 mm sq. San Ace 40



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −20℃ to +70℃ (Non-condensing)

40×40×28mm (Mass : 50g) 9GV type

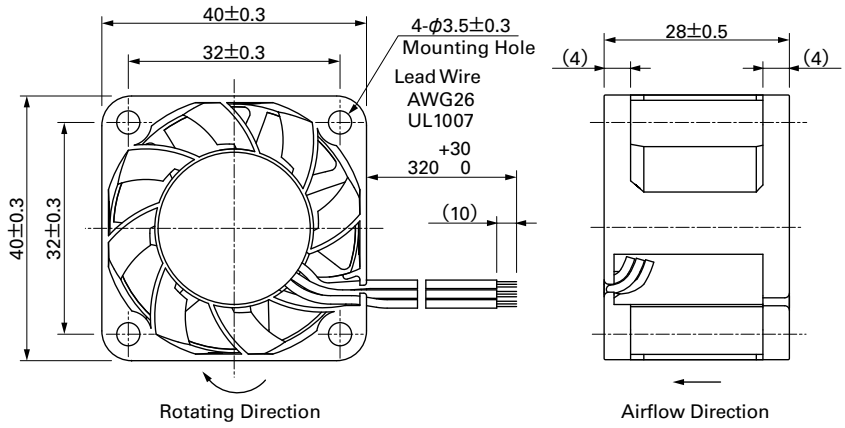
Specifications

The following nos. have pulse sensors and ribs. For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GV0412K301	12	10.8 to 12.6	0.84	10.08	16,500	0.76	26.8	415	1.668	58	−20 to +60	40,000/60℃
9GV0412J301		7 to 13.2	0.60	7.20	14,700	0.68	24.0	330	1.325	55		
9GV0412G301			0.47	5.64	13,000	0.60	21.1	260	1.044	52		
9GV0412H301			0.31	3.72	11,600	0.53	18.7	207	0.831	49		
9GV0412C301			0.15	1.80	8,300	0.37	13.1	100	0.402	41	−20 to +70	

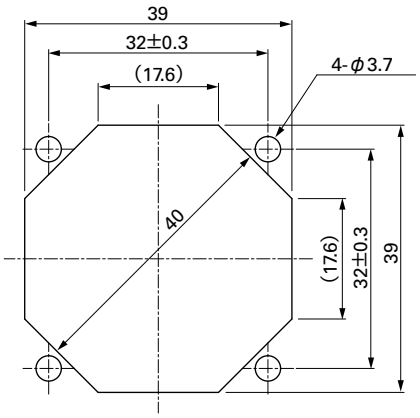
Other sensor specifications are available as options. Please refer to the index (p. 507).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

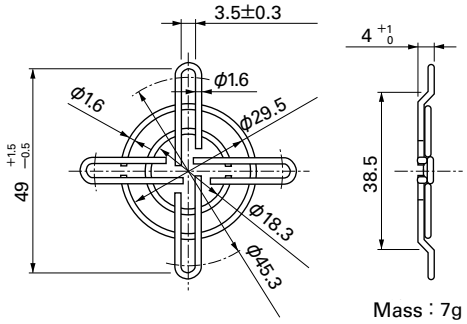


Options (unit: mm)

Finger Guards

Model : 109-059 Surface treatment : Nickel-chrome plating (silver) Color
: 109-059H : Cation electropainting (black)

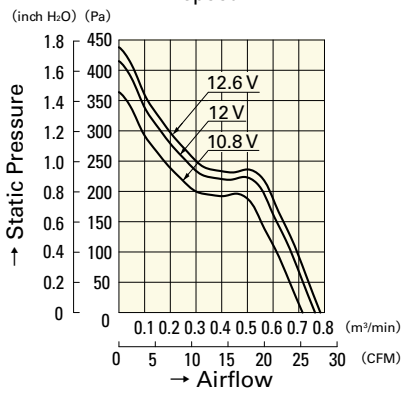
Inlet side, Outlet side



Mass : 7g

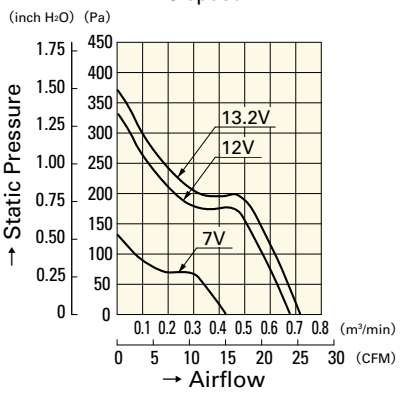
Airflow - Static Pressure Characteristics

K speed



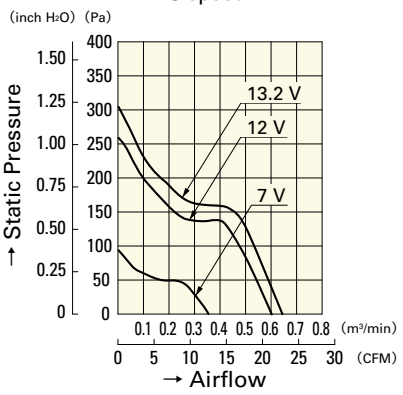
9GV0412K301

J speed



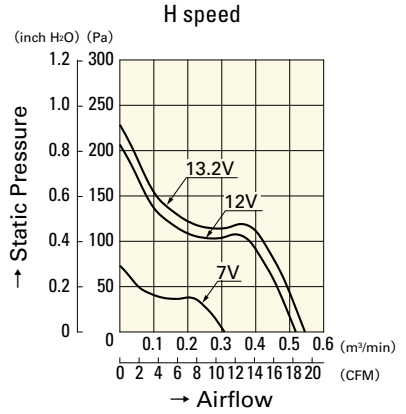
9GV0412J301

G speed



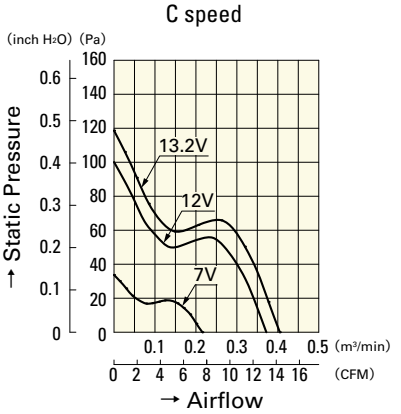
9GV0412G301

H speed



9GV0412H301

C speed



9GV0412C301

40 mm sq. San Ace 40



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

Model no. 109P0424R3013 is not certified.

40×40×28mm (Mass : 52g) 9P type

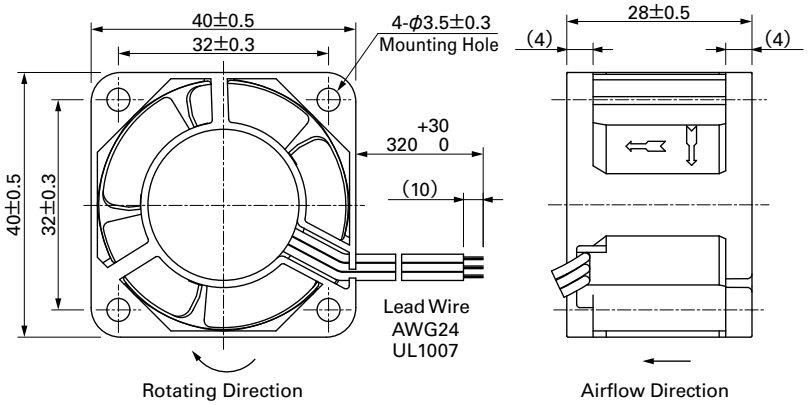
Specifications

The following nos. **have pulse sensors and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109P0405H3013	5	4.5 to 5.5	0.68	3.4	8,700	0.32	11.3	102.9	0.414	37	−20 to +70	40,000/60℃
109P0405F3013			0.28	1.4	6,700	0.244	8.6	58.8	0.236	30		60,000/60℃
109P0412K3013	12	8 to 13.2	0.55	6.6	15,500	0.59	20.8	340	1.365	50		40,000/60℃
109P0412J3013		7 to 13.2	0.35	4.2	12,500	0.46	16.2	210	0.843	44	−20 to +60	
109P0412G3013			0.31	3.72	11,500	0.42	14.8	179	0.719	42		
109P0412B3013		7 to 13.8	0.28	3.36	10,300	0.38	13.4	143	0.574	40		
109P0412H3013			0.195	2.34	8,700	0.32	11.3	102.9	0.414	37	−20 to +70	60,000/60℃
109P0412F3013			0.105	1.26	6,700	0.244	8.6	58.8	0.236	30		
109P0412M3013		10.2 to 13.8	0.045	0.54	4,100	0.15	5.3	21.6	0.087	20		
109P0424R3013	24	12 to 26.4	0.25	6	14,000	0.51	18.0	263.4	1.057	47	−20 to +60	40,000/60℃
109P0424J3013			0.18	4.32	12,500	0.46	16.2	210	0.843	44		
109P0424G3013			0.19	4.56	11,500	0.42	14.8	179	0.719	42		
109P0424B3013			0.13	3.12	10,300	0.38	13.4	143	0.574	40		
109P0424H3013		12 to 27.6	0.095	2.28	8,700	0.32	11.3	102.9	0.414	37	−20 to +70	60,000/60℃
109P0424F3013		14 to 27.6	0.055	1.32	6,700	0.244	8.6	58.8	0.236	30		

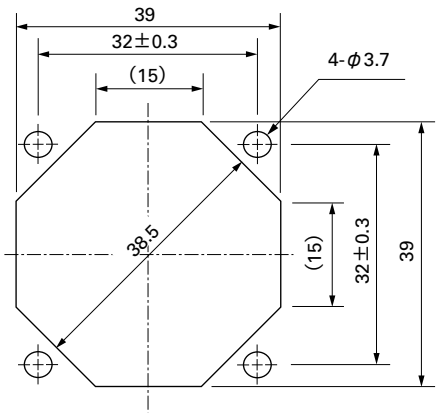
Other sensor specifications are available as options. Please refer to the index (pp. 496 to 497).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

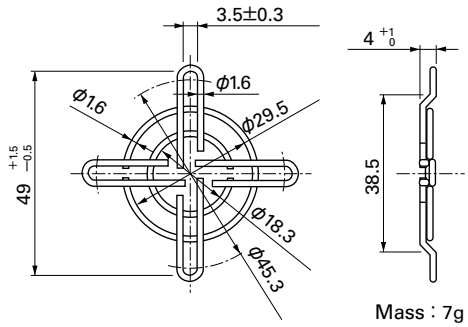


Options (unit: mm)

Finger Guards

Model : 109-059 Surface treatment : Nickel-chrome plating (silver) Color
: 109-059H : Cation electropainting (black)

Inlet side, Outlet side



Mass : 7g

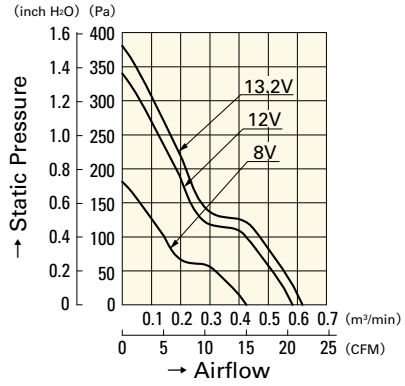
40mm sq.

San Ace 40

40×40×28mm 〔Mass：52g〕

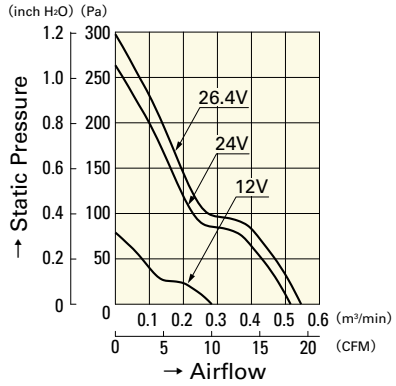
Airflow - Static Pressure Characteristics

K speed



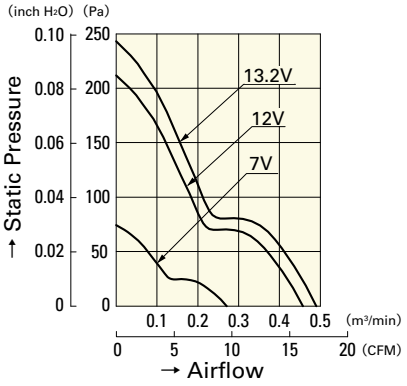
109P0412K3013

R speed



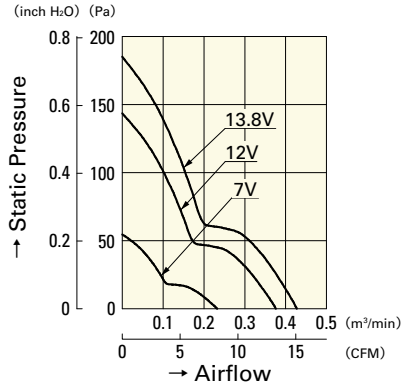
109P0424R3013

J speed



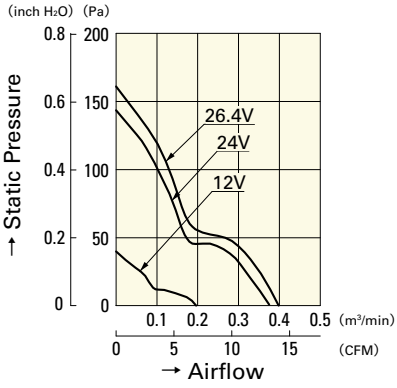
109P0412J3013

B speed



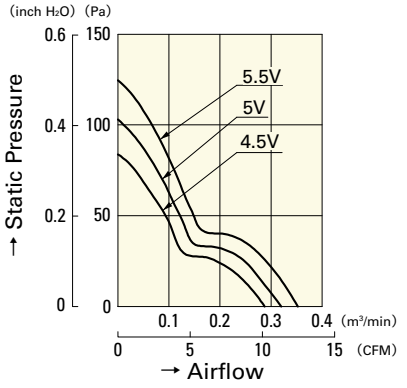
109P0412B3013

B speed



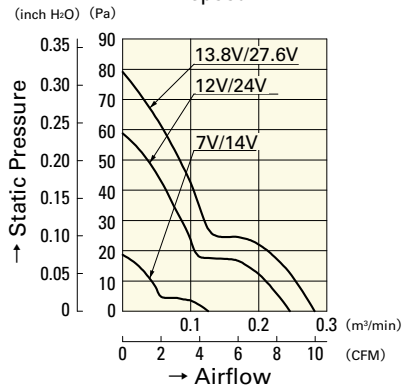
109P0424B3013

H speed



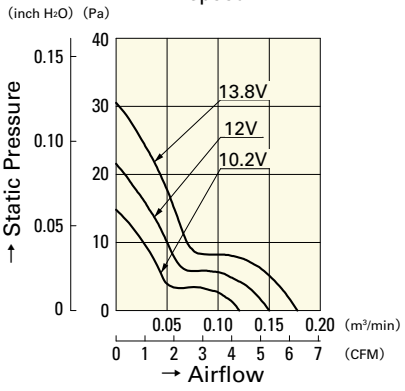
109P0405H3013

F speed



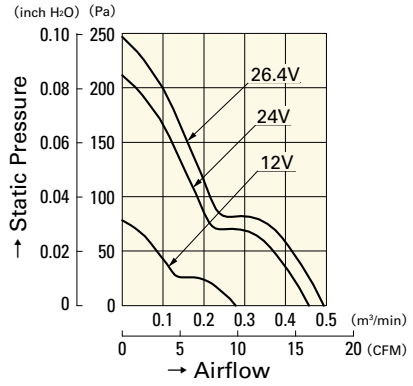
109P0412F3013
109P0424F3013

M speed



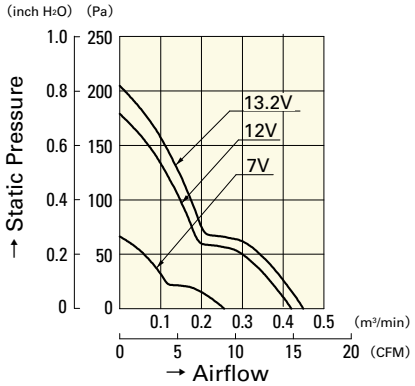
109P0412M3013

J speed



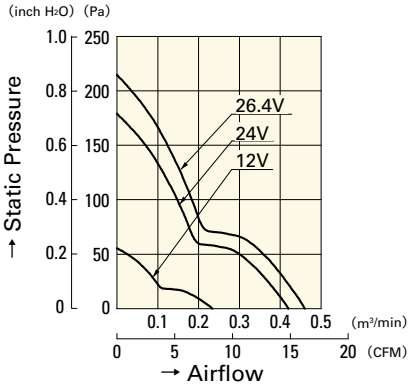
109P0424J3013

G speed



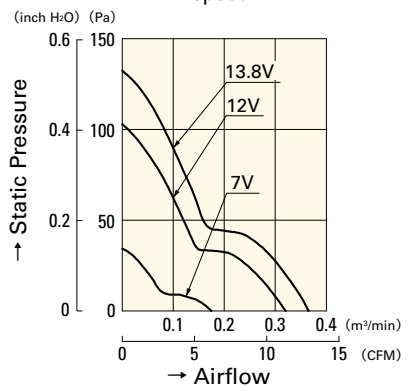
109P0412G3013

G speed



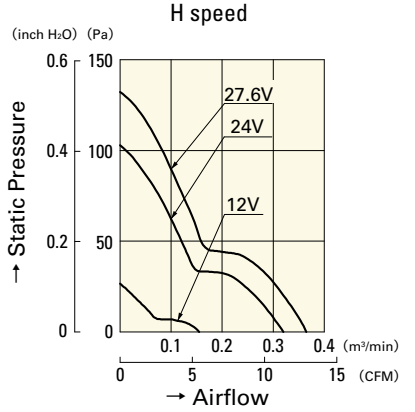
109P0424G3013

H speed



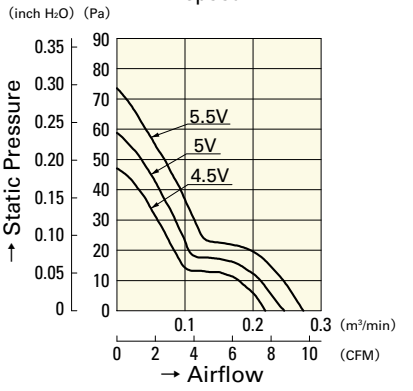
109P0412H3013

H speed



109P0424H3013

F speed



109P0405F3013

52mm sq. San Ace 52



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

52×52×15mm (Mass：40g) 9GAtype Low Power Consumption Fan

Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.**

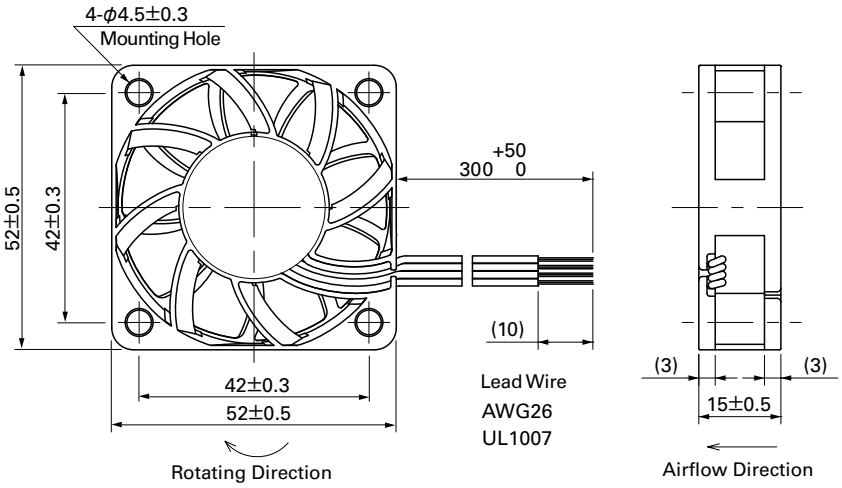
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0512P7G001	12	10.2 to 13.8	100	0.13	1.56	7,800	0.50	17.7	91.5	0.367	38	−20 to +70	40,000/60℃
9GA0512P7A001				0.08	0.96	6,300	0.40	14.1	59	0.237	32		
9GA0512P7H001				0.05	0.60	4,300	0.275	9.7	27.5	0.110	22		
9GA0512P7M001				0.04	0.48	3,400	0.215	7.6	17	0.068	16		
9GA0524P7G001	24	20.4 to 27.6	100	0.07	1.68	7,800	0.50	17.7	91.5	0.367	38		
9GA0524P7A001				0.05	1.20	6,300	0.40	14.1	59.0	0.237	32		
9GA0524P7H001				0.03	0.72	4,300	0.275	9.7	27.5	0.110	22		
9GA0524P7M001				0.02	0.48	3,400	0.215	7.6	17.0	0.068	16		

Note : Fan does not rotate when PWM duty cycle is 0%.

※PWM Frequency : 25kHz

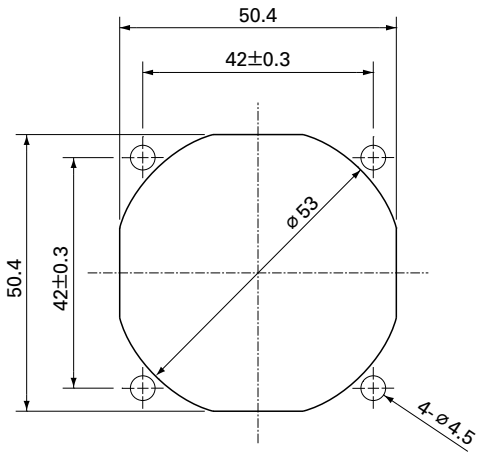
Other sensor specifications are available as options. Please refer to the index (p. 504).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

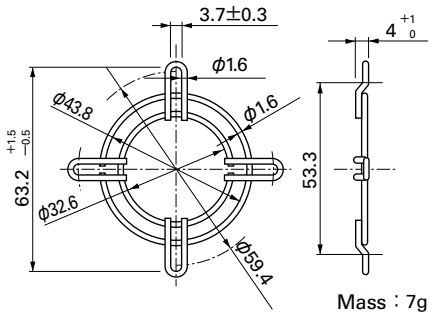


Options (unit: mm)

Finger Guards

Model：109-149 Surface treatment：Nickel-chrome plating (silver) Color

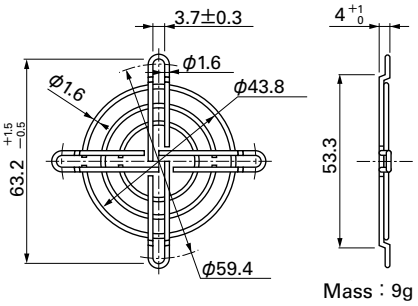
Outlet side



Mass：7g

Model：109-149E Surface treatment：Nickel-chrome plating (silver) Color

Inlet side, Outlet side



Mass：9g

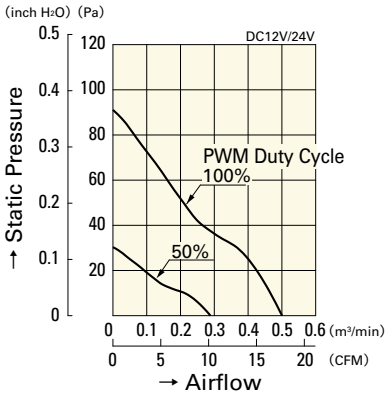
52mm sq.

San Ace 52

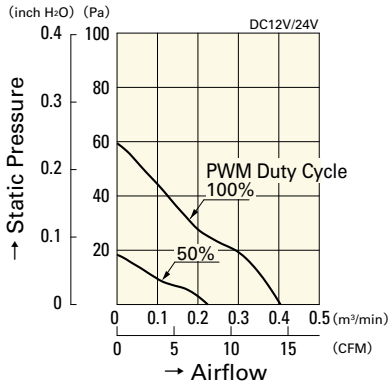
52×52×15mm 〔Mass：40g〕

Airflow - Static Pressure Characteristics

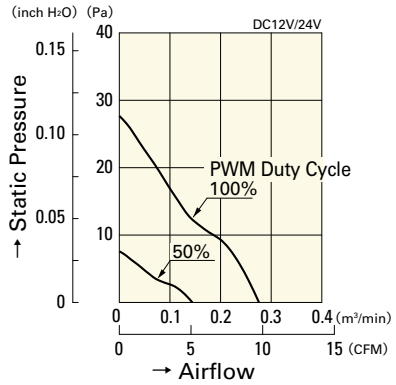
PWM Duty Cycle



9GA0512P7G001
9GA0524P7G001

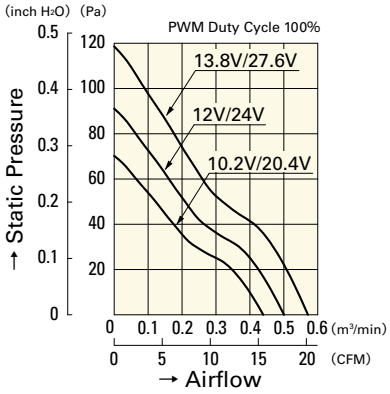


9GA0512P7A001
9GA0524P7A001

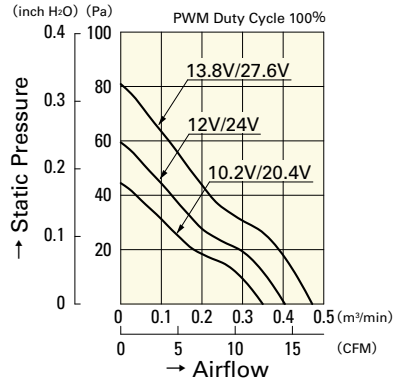


9GA0512P7H001
9GA0524P7H001

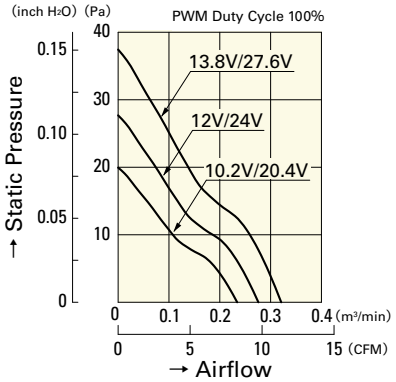
Operating Voltage Range



9GA0512P7G001
9GA0524P7G001

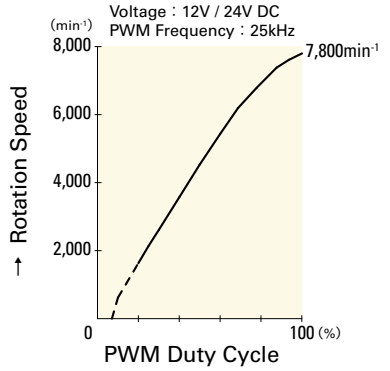


9GA0512P7A001
9GA0524P7A001

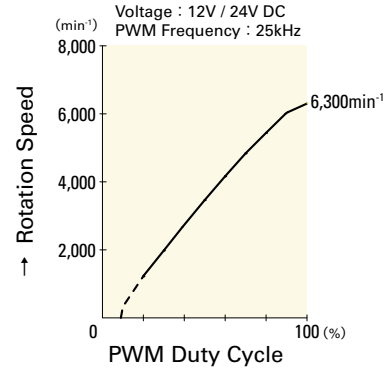


9GA0512P7H001
9GA0524P7H001

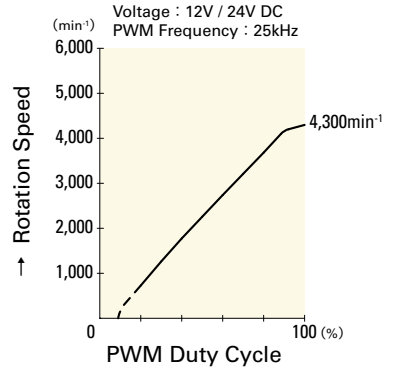
PWM Duty - Speed Characteristics Example



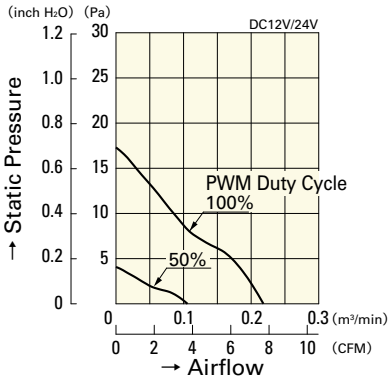
9GA0512P7G001
9GA0524P7G001



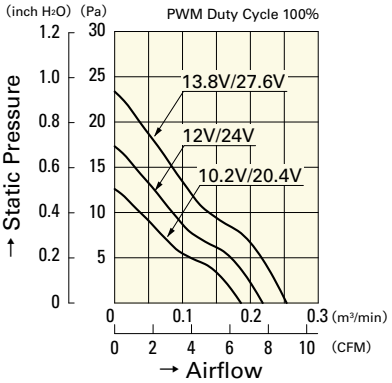
9GA0512P7A001
9GA0524P7A001



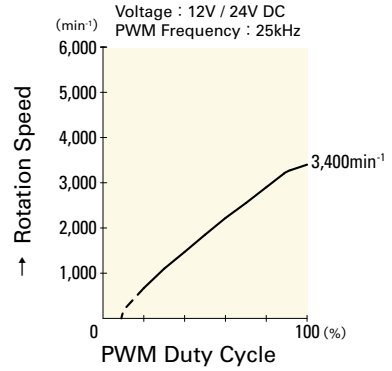
9GA0512P7H001
9GA0524P7H001



9GA0512P7M001
9GA0524P7M001



9GA0512P7M001
9GA0524P7M001



9GA0512P7M001
9GA0524P7M001

52mm sq. San Ace 52



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

52×52×15mm (Mass：55g) 9P type

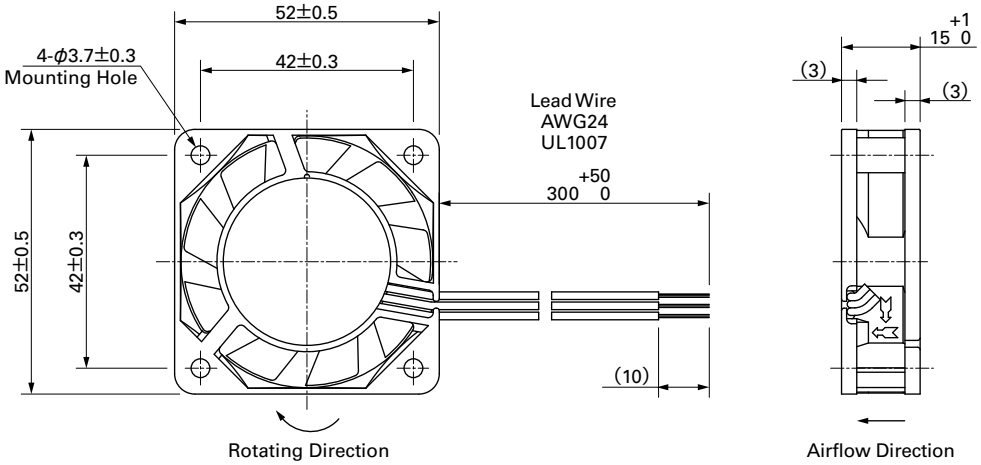
Specifications

The following nos. **have pulse sensors and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109P0505M701	5	4.5 to 5.5	0.15	0.75	3,700	0.205	7.24	21.4	0.086	22	−20 to +70	60,000/60℃
109P0512A701	12	10.2 to 13.8	0.21	2.52	6,800	0.375	13.25	69.7	0.280	36		40,000/60℃
109P0512H701		7 to 13.8	0.10	1.20	4,600	0.255	9.00	31.9	0.128	27		60,000/60℃
109P0512M701			0.07	0.84	3,700	0.205	7.24	21.4	0.086	22		
109P0524A701	24	14 to 27.6	0.11	2.64	6,800	0.375	13.24	69.7	0.280	36	−20 to +60	40,000/60℃
109P0524H701			0.05	1.20	4,600	0.255	9.00	31.9	0.128	27	−20 to +70	60,000/60℃
109P0524M701			0.04	0.96	3,700	0.205	7.24	21.4	0.086	22		

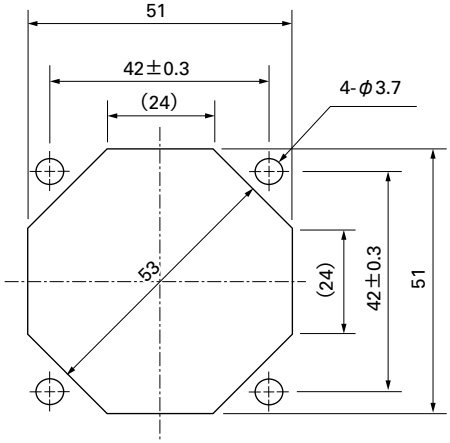
Other sensor specifications are available as options. Please refer to the index (p. 497).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

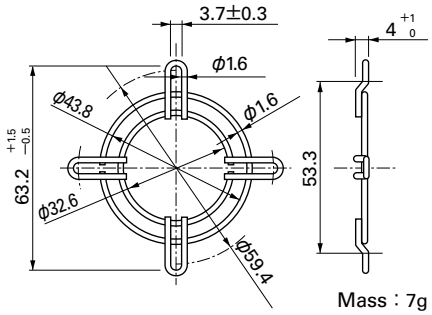


Options (unit: mm)

Finger Guards

Model：109-149　Surface treatment：Nickel-chrome plating　Color (silver)

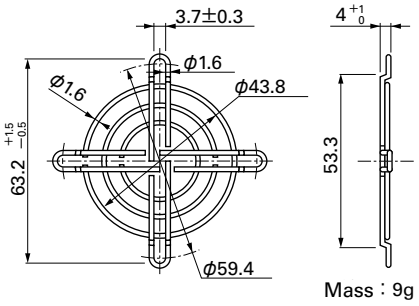
Outlet side



Mass：7g

Model：109-149E　Surface treatment：Nickel-chrome plating　Color (silver)

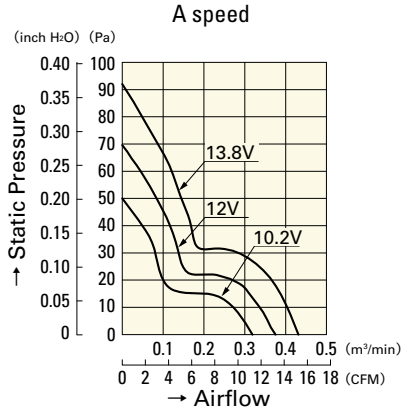
Inlet side, Outlet side



Mass：9g

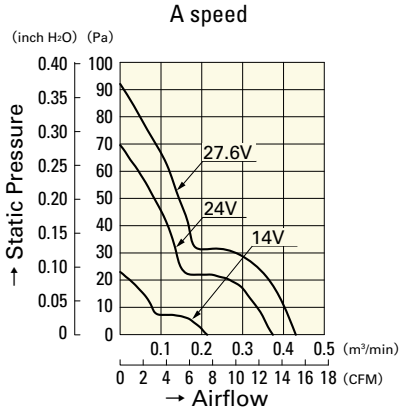
Airflow - Static Pressure Characteristics

A speed



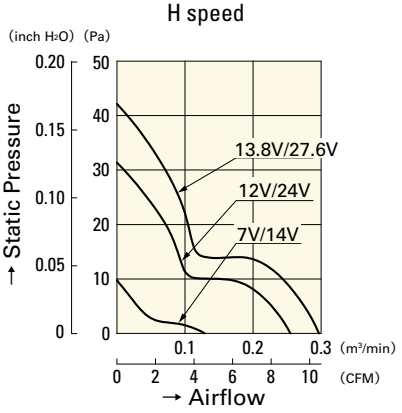
109P0512A701

A speed



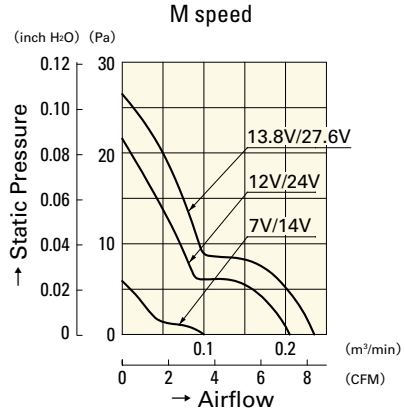
109P0524A701

H speed



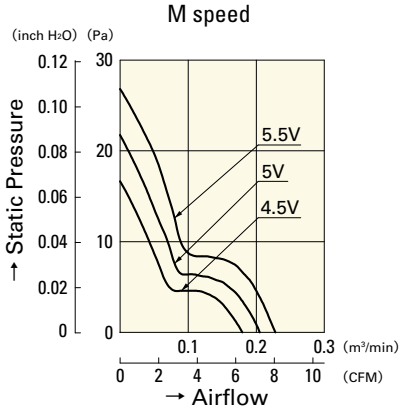
109P0512H701
109P0524H701

M speed



109P0512M701
109P0524M701

M speed



109P0505M701

60 mm sq. San Ace 60



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow
- Storage Temperature ···−30℃ to +70℃ (Non-condensing)

60×60×10mm (Mass : 35g) 9GA type Low Power Consumption Fan

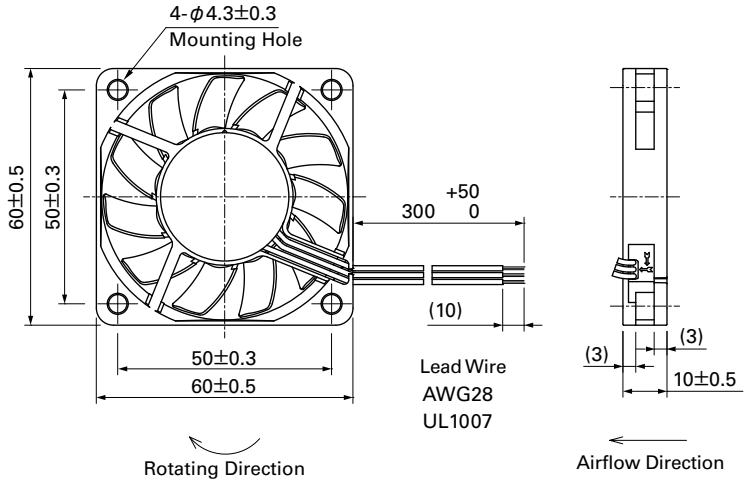
Specifications

The following nos. **have pulse sensors.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0612G9001	12	7.0 to 13.2	0.27	3.24	6,200	0.62	21.9	66	0.26	43	−20 to +60	40,000/60℃ (70,000/40℃)
9GA0612H9001		7.0 to 13.8	0.14	1.68	5,000	0.50	17.6	42.9	0.17	37	−20 to +70	
9GA0612L9001			0.03	0.36	2,300	0.23	8.1	9.1	0.037	17	−10 to +70	

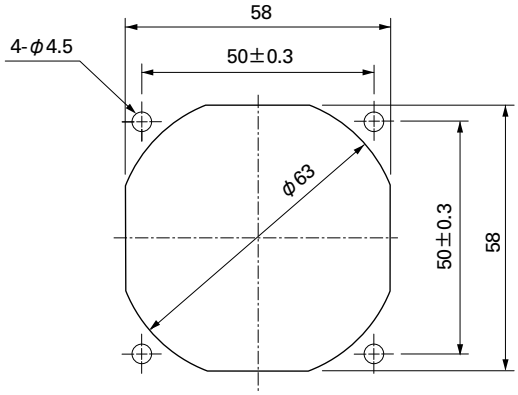
Other sensor specifications are available as options. Please refer to the index (pp. 504 to 505).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

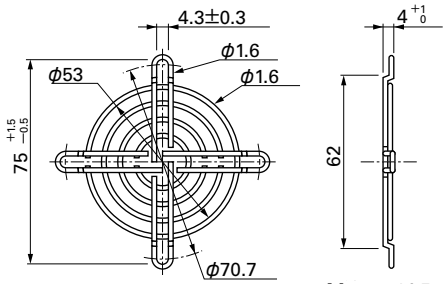


Options (unit: mm)

Finger Guards

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

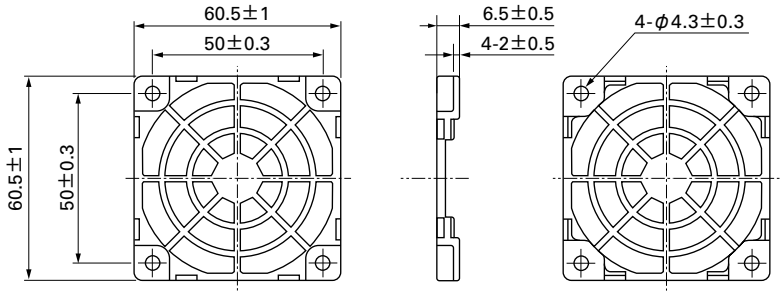
Inlet side, Outlet side



Mass : 14.5g

Resin Finger Guards

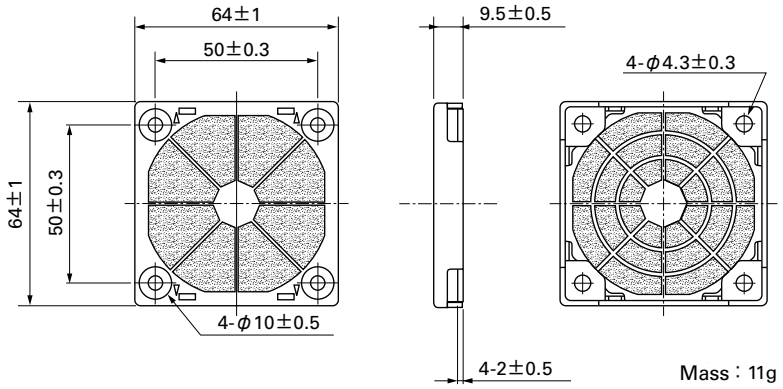
Model : 109-1003G



Mass : 7g

Resin Filter Kits

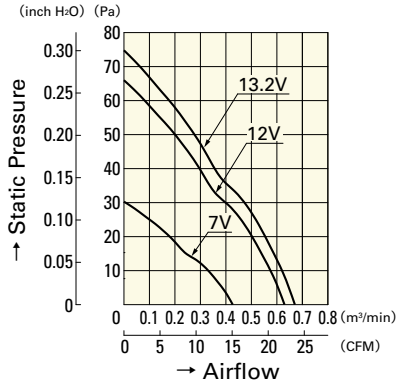
Model : 109-1003F13 (13PPI), 109-1003F20 (20PPI)
: 109-1003F30 (30PPI), 109-1003F40 (40PPI)



Mass : 11g

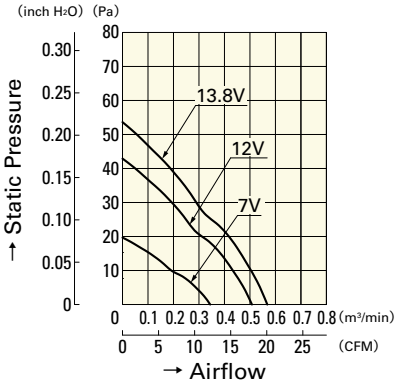
Airflow - Static Pressure Characteristics

G speed



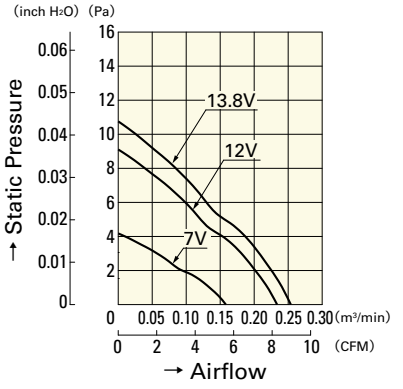
9GA0612G9001

H speed



9GA0612H9001

L speed



9GA0612L9001

60 mm sq. San Ace 60



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown (For models without PWM control function, there is no speed control wiring.)
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

Model no. 9GA0624P7G01 is not TÜV certified.

60×60×15mm (Mass : 50g) 9GA type Low Power Consumption Fan

Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0612P7G01	12	10.2 to 13.8	100	0.16	1.92	5,900	0.68	24	80	0.320	38	−20 to +70	40,000/60℃ (70,000/40℃)
			0	0.05	0.60	1,500	0.17	6.0	5.2	0.020	10		
9GA0612P7H01			100	0.10	1.2	4,900	0.56	19.7	55.6	0.223	34		
			0	0.03	0.36	1,300	0.15	5.3	3.9	0.015	8		
9GA0624P7G01 Note)	24	20.4 to 27.6	100	0.08	1.92	5,900	0.68	24.0	80	0.320	38	−10 to +70	

Note: Fan does not rotate when PWM duty cycle is 0%.

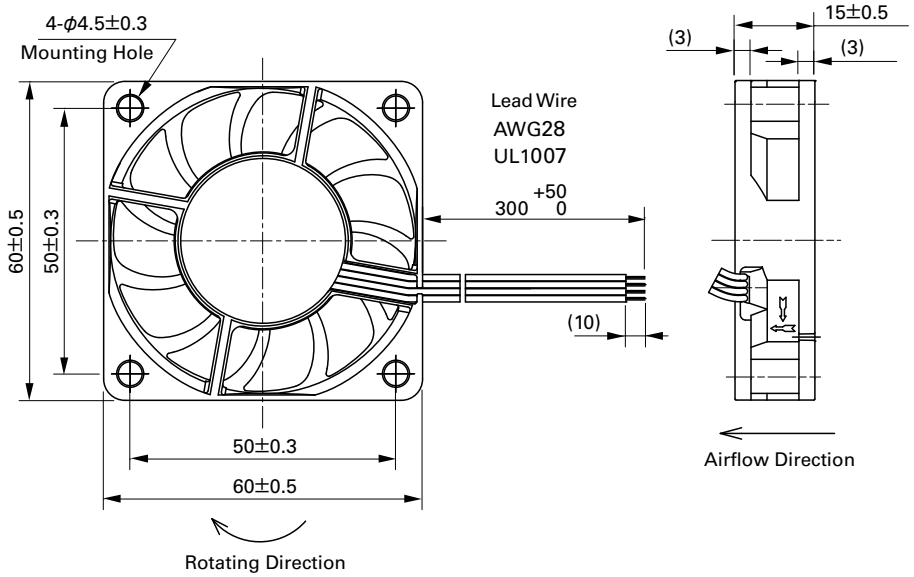
※PWM Frequency : 25kHz

The following nos. **have pulse sensors and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0612G701	12	6 to 13.8	0.16	1.92	5,900	0.68	24	80	0.320	38	−20 to +70	40,000/60℃ (70,000/40℃)
9GA0612H701			0.1	1.2	4,900	0.56	19.7	55.6	0.223	34		
9GA0612M701			0.08	0.96	3,900	0.45	15.9	35.3	0.142	28		60,000/60℃
9GA0612L701			0.03	0.36	2,800	0.31	10.9	18	0.072	17		

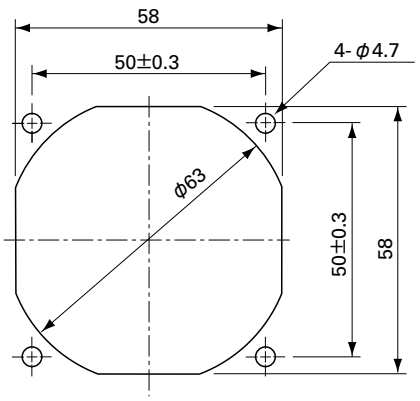
Other sensor specifications are available as options. Please refer to the index (pp. 504 to 505).

Dimensions (unit: mm) (With PWM control function・With pulse sensor)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

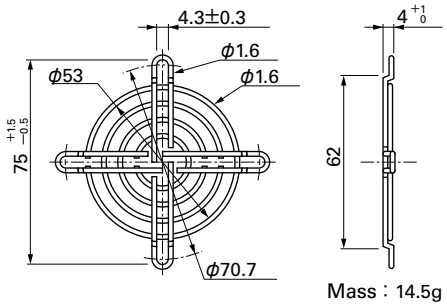


Options (unit: mm)

Finger Guards

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

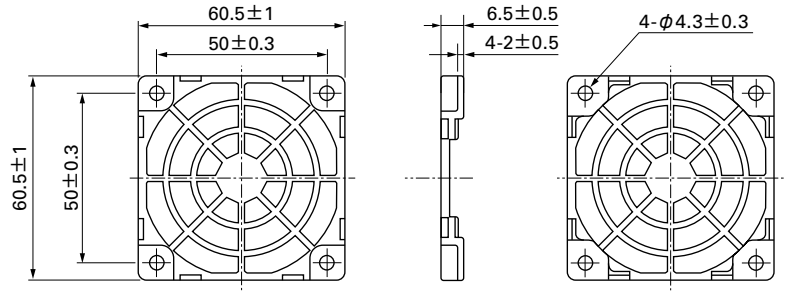
Inlet side, Outlet side



Mass : 14.5g

Resin Finger Guards

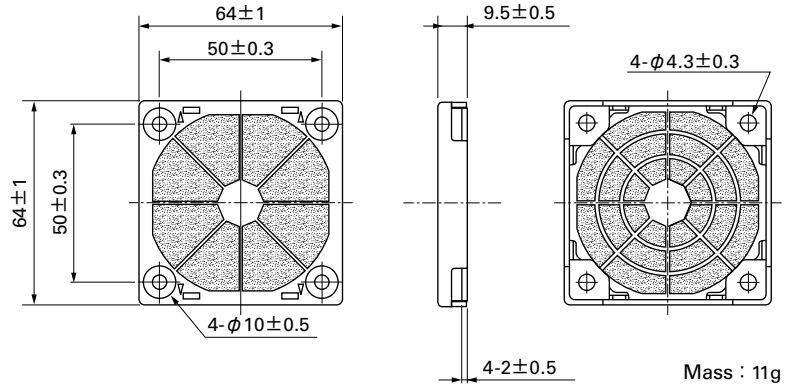
Model : 109-1003G



Mass : 7g

Resin Filter Kits

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

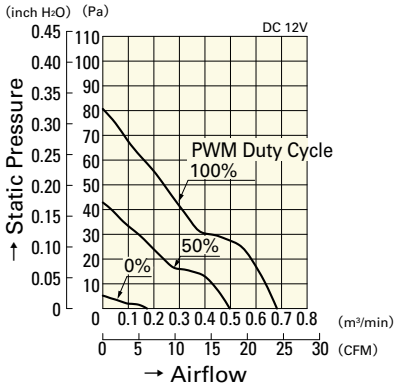


Mass : 11g

Airflow - Static Pressure Characteristics

PWM Duty Cycle

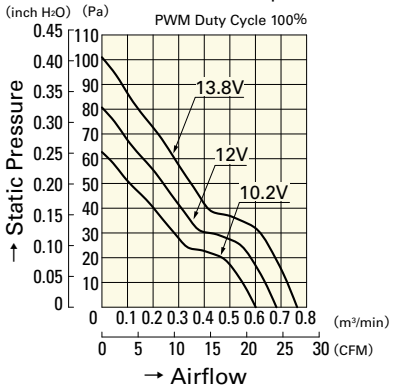
With PWM control function・With pulse sensor



9GA0612P7G01

Operating Voltage Range

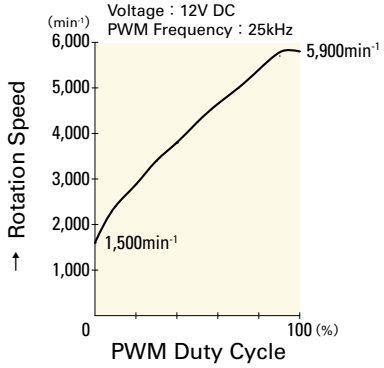
With PWM control function・With pulse sensor



9GA0612P7G01

PWM Duty - Speed Characteristics Example

With PWM control function・With pulse sensor



9GA0612P7G01

60 mm sq.

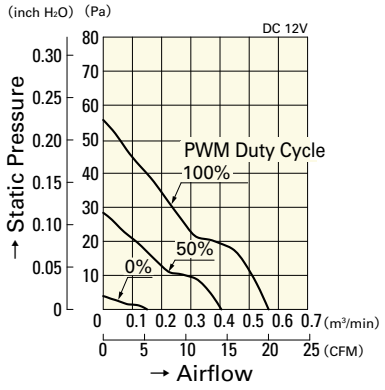
San Ace 60

60×60×15mm 〔Mass：50g〕

Airflow - Static Pressure Characteristics

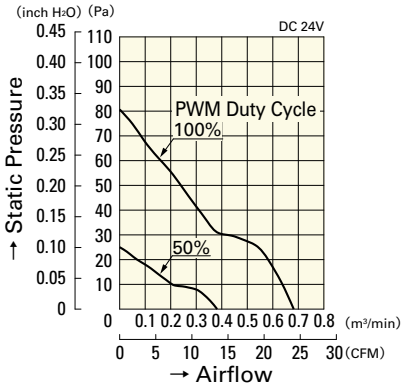
PWM Duty Cycle

With PWM control function・With pulse sensor



9GA0612P7H01

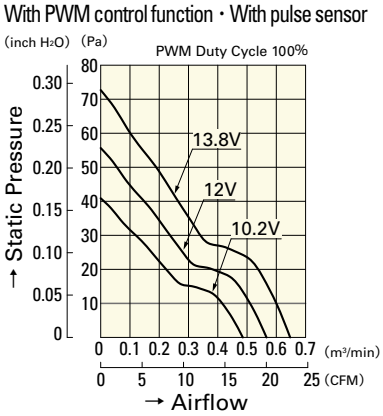
With PWM control function・With pulse sensor



9GA0624P7G01

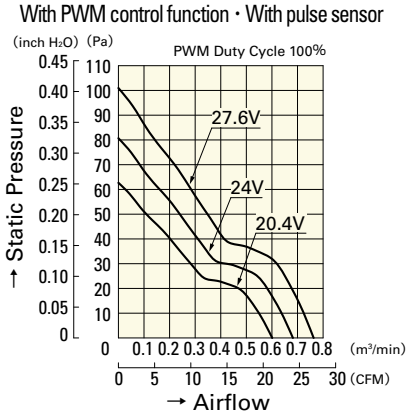
Operating Voltage Range

With PWM control function・With pulse sensor



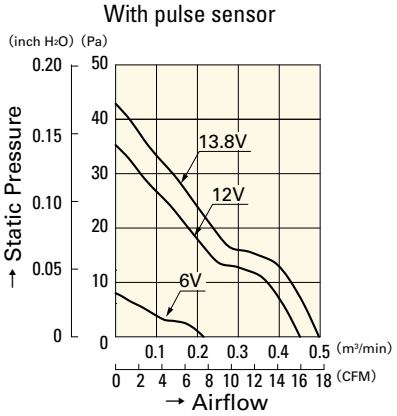
9GA0612P7H01

With PWM control function・With pulse sensor



9GA0624P7G01

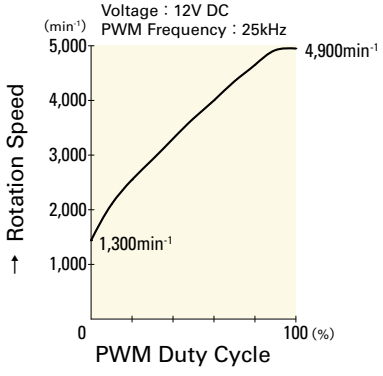
With pulse sensor



9GA0612M701

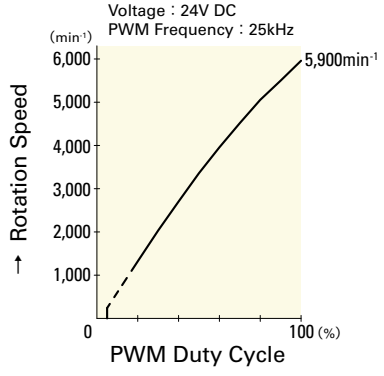
PWM Duty - Speed Characteristics Example

With PWM control function・With pulse sensor



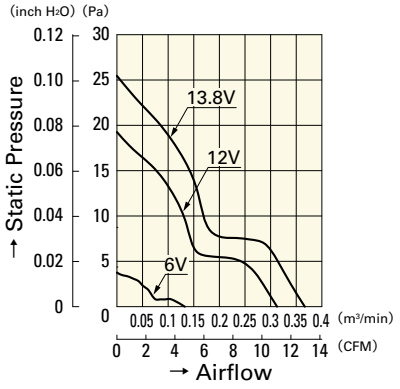
9GA0612P7H01

With PWM control function・With pulse sensor



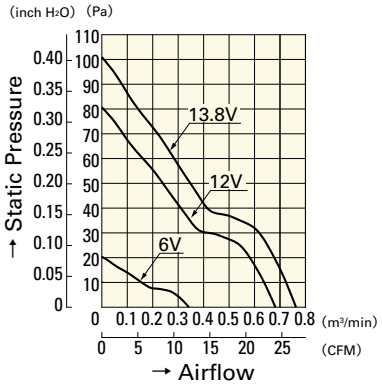
9GA0624P7G01

With pulse sensor



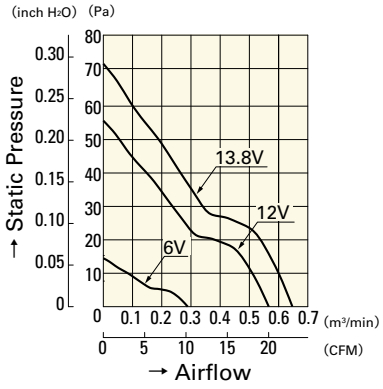
9GA0612L701

With pulse sensor



9GA0612G701

With pulse sensor



9GA0612H701

60 mm sq. San Ace 60



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ··· −30℃ to +70℃ (Non-condensing)

60×60×15mm (Mass : 60g) 9P type

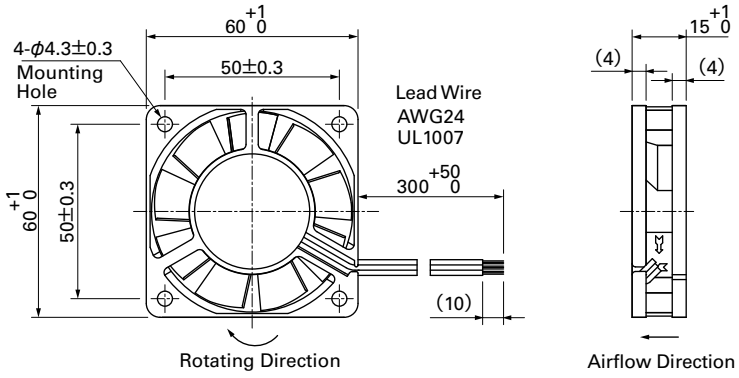
Specifications

The following nos. **have pulse sensors and ribs.**

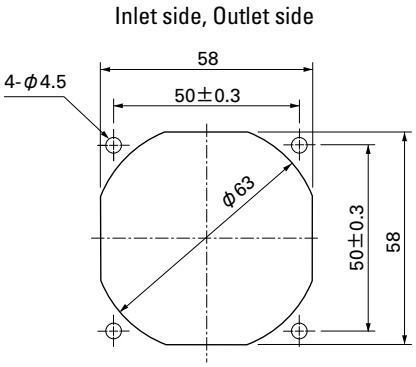
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109P0605H701	5	4.5 to 5.5	0.26	1.30	4,100	0.40	14.1	38.2	0.153	32	−20 to +70	60,000/60℃
109P0605M701			0.15	0.75	3,100	0.30	10.6	22.6	0.091	25		
109P0612K701	12	10.2 to 13.8	0.26	3.12	6,500	0.62	21.9	99.3	0.399	45	−20 to +60	40,000/60℃
109P0612S701			0.15	1.80	5,000	0.48	17.0	58.8	0.236	36	−20 to +70	
109P0612H701		7 to 13.8	0.09	1.08	4,100	0.40	14.1	38.2	0.153	32		60,000/60℃
109P0612M701		10.2 to 13.8	0.07	0.84	3,100	0.30	10.6	22.6	0.091	25		
109P0612B701			0.05	0.6	2,200	0.21	7.42	11.7	0.047	21		
109P0624J701	24	14 to 27.6	0.14	3.36	6,200	0.61	21.5	86.5	0.347	44	−20 to +60	40,000/60℃
109P0624S701			0.08	1.92	5,000	0.48	16.9	58.8	0.236	36	−20 to +70	
109P0624H701			0.06	1.44	4,100	0.40	14.1	38.2	0.153	32		60,000/60℃
109P0624M701		20.4 to 27.6	0.04	0.96	3,100	0.30	10.6	22.6	0.091	25		

Other sensor specifications are available as options. Please refer to the index (p. 497).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent opening (unit: mm)

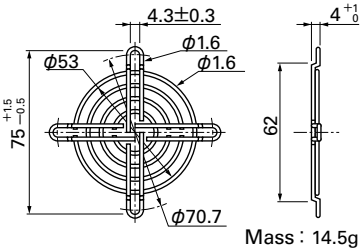


Options (unit: mm)

Finger Guards

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

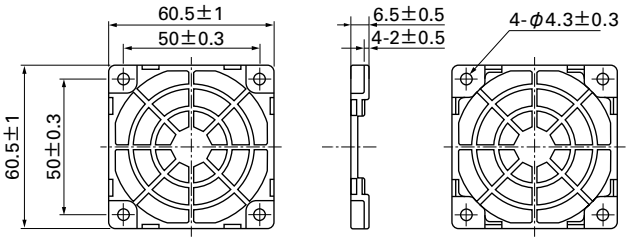
Inlet side, Outlet side



Mass : 14.5g

Resin Finger Guards

Model : 109-1003G

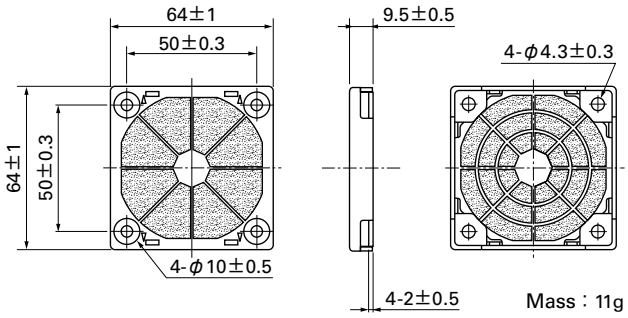


Mass : 7g

Options (unit: mm)

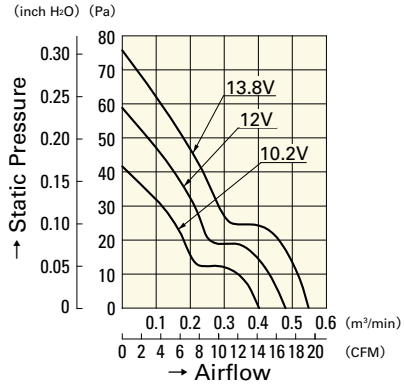
Resin Filter Kits

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



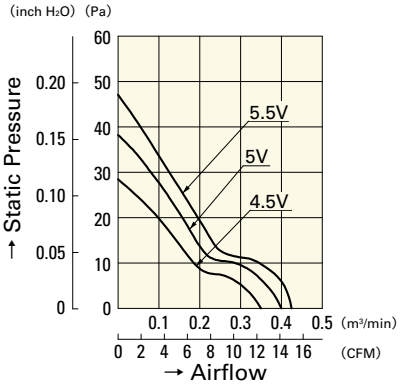
Airflow - Static Pressure Characteristics

S speed



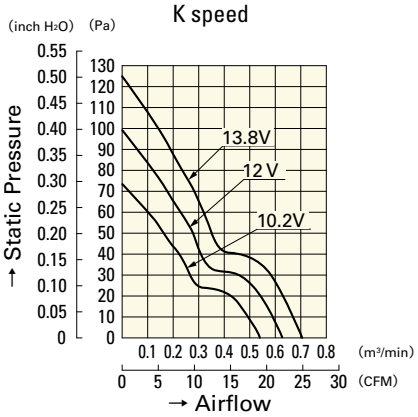
109P0612S701

H speed



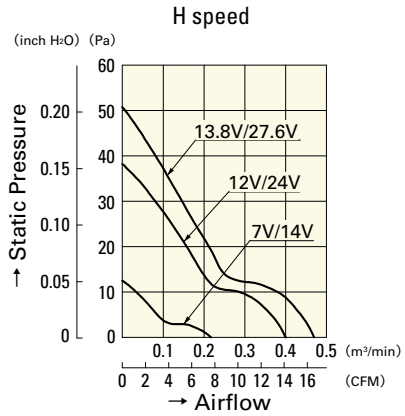
109P0605H701

K speed



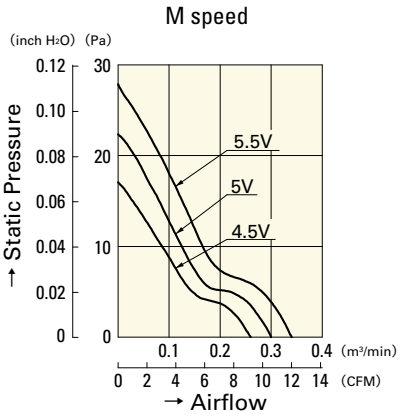
109P0612K701

H speed



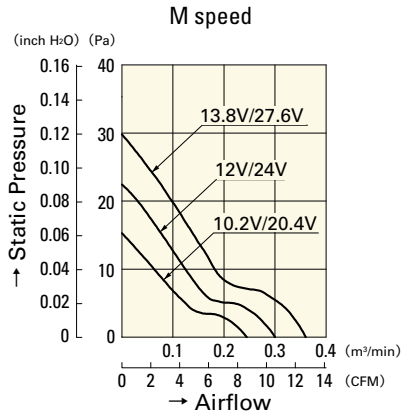
109P0612H701
109P0624H701

M speed



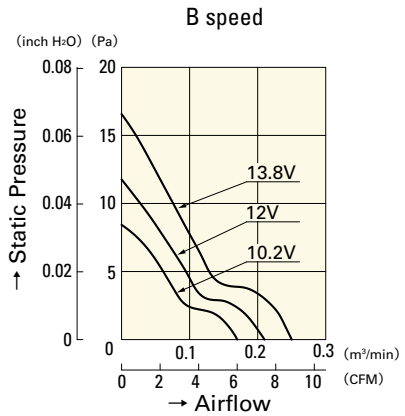
109P0605M701

M speed



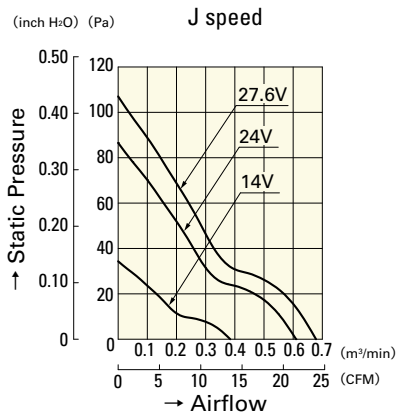
109P0612M701
109P0624M701

B speed



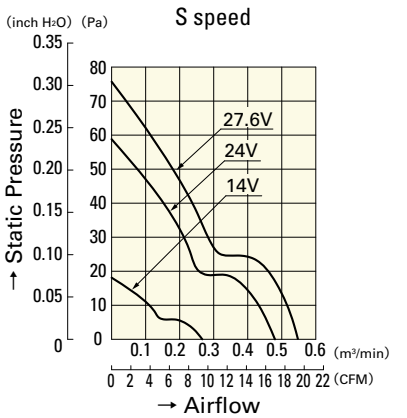
109P0612B701

J speed



109P0624J701

S speed



109P0624S701

60 mm sq. San Ace 60



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
  (For models without PWM control function, there is no speed control wiring.)
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

60×60×20mm (Mass : 70g) 9GA type Low Power Consumption Fan

Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle Note※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0612P6G001	12	10.8 to 13.2	100	0.26	3.12	6,850	0.88	31.1	125	0.50	43	−20 to +70	40,000/60℃ (70,000/40℃)
9GA0612P6S001			100	0.15	1.80	5,500	0.70	24.7	81	0.33	36		
9GA0624P6G001	24	21.6 to 26.4	100	0.12	2.88	6,850	0.88	31.1	125	0.50	43		
9GA0624P6S001			100	0.07	1.68	5,500	0.70	24.7	81	0.33	36		

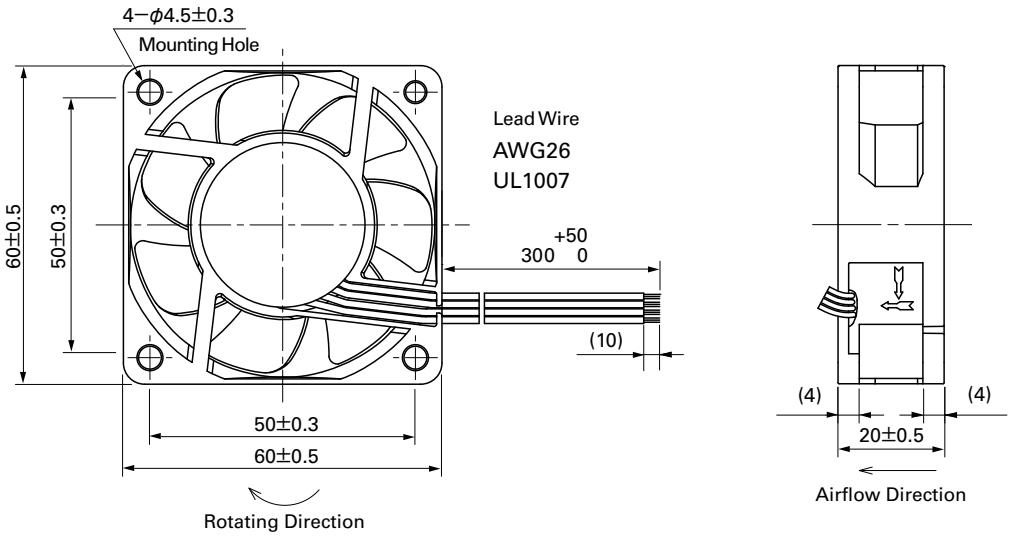
Note: Fan does not rotate when PWM duty cycle is 0%. ※PWM Frequency : 25kHz

The following nos. **have pulse sensors and ribs.**

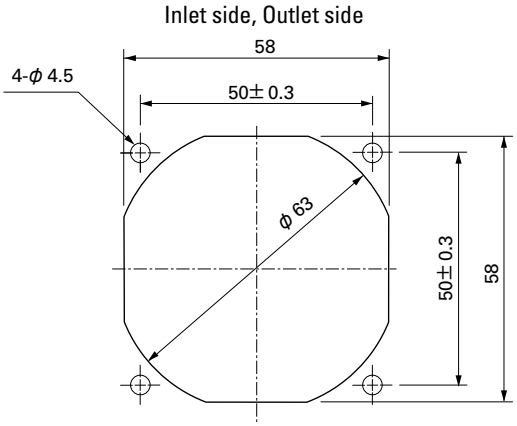
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0612H6001	12	10.8 to 13.2	0.09	1.08	4,100	0.52	18.4	45	0.18	29	−20 to +70	60,000/60℃
9GA0612M6001			0.05	0.60	2,700	0.34	12.0	20	0.08	18		
9GA0624H6001	24	21.6 to 26.4	0.04	0.96	4,100	0.52	18.4	45	0.18	29		
9GA0624M6001			0.03	0.72	2,700	0.34	12.0	20	0.08	18		

Other sensor specifications are available as options. Please refer to the index (pp. 504 to 505).

Dimensions (unit: mm) (With PWM control function・With pulse sensor)



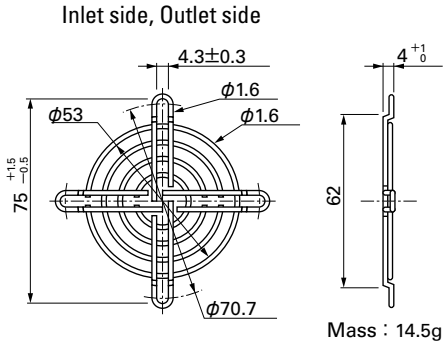
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

Finger Guards

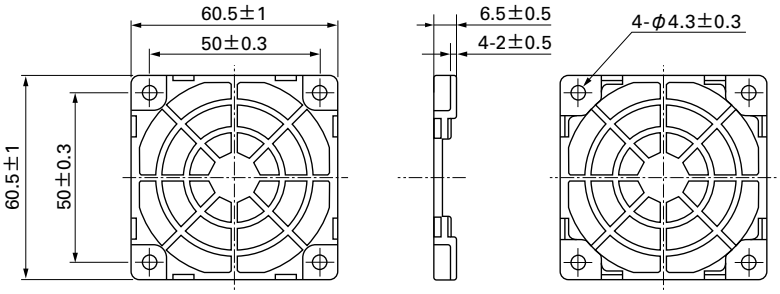
Model : 109-139E Surface treatment : Nickel-chrome plating (silver) Color
: 109-139H : Cation electropainting (black)



Mass : 14.5g

Resin Finger Guards

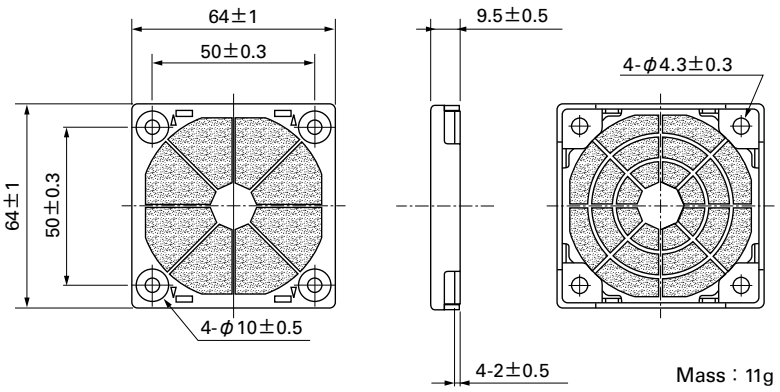
Model : 109-1003G



Mass : 7g

Resin Filter Kits

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



Mass : 11g

60 mm sq.

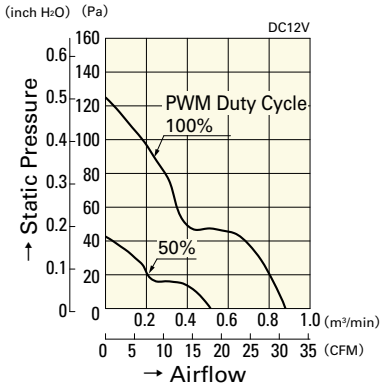
San Ace 60

60×60×20mm 〔Mass：70g〕

Airflow - Static Pressure Characteristics

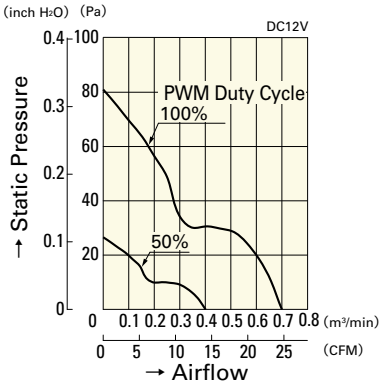
PWM Duty Cycle

With PWM control function・With pulse sensor



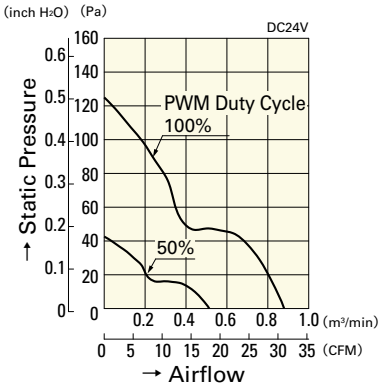
9GA0612P6G001

With PWM control function・With pulse sensor



9GA0612P6S001

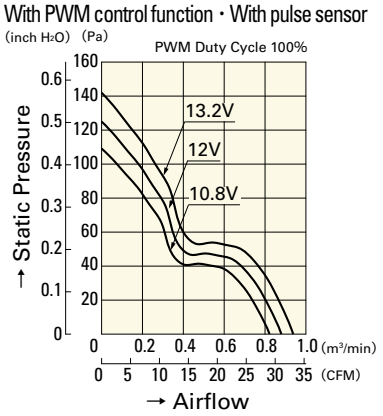
With PWM control function・With pulse sensor



9GA0624P6G001

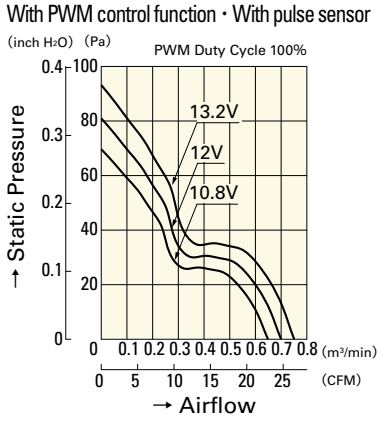
Operating Voltage Range

With PWM control function・With pulse sensor



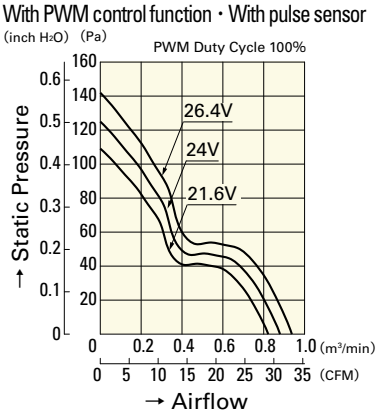
9GA0612P6G001

With PWM control function・With pulse sensor



9GA0612P6S001

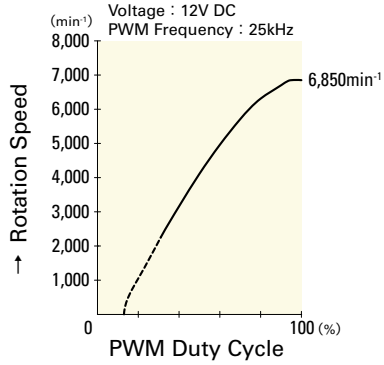
With PWM control function・With pulse sensor



9GA0624P6G001

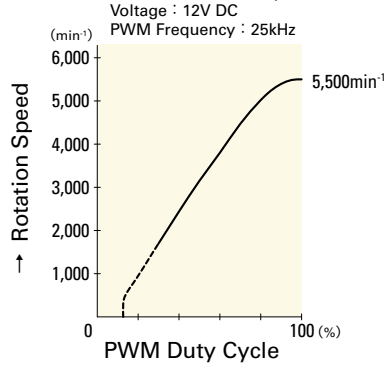
PWM Duty - Speed Characteristics Example

With PWM control function・With pulse sensor



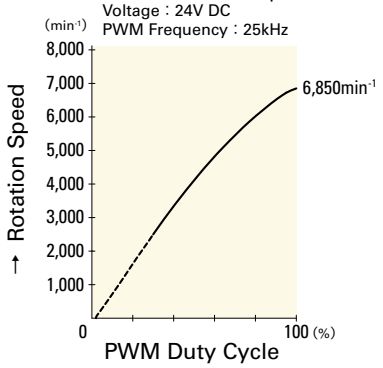
9GA0612P6G001

With PWM control function・With pulse sensor



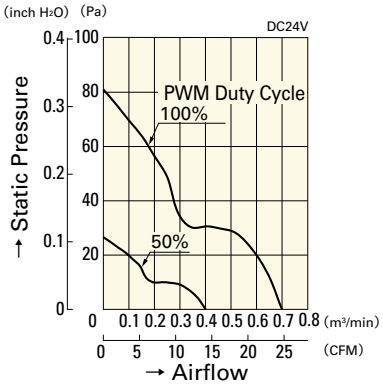
9GA0612P6S001

With PWM control function・With pulse sensor



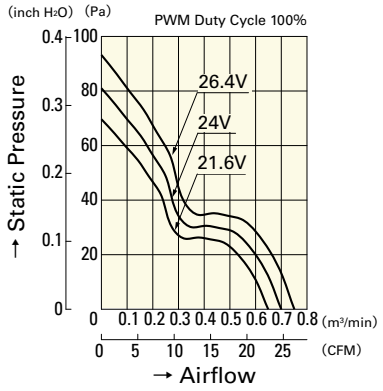
9GA0624P6G001

With PWM control function・With pulse sensor



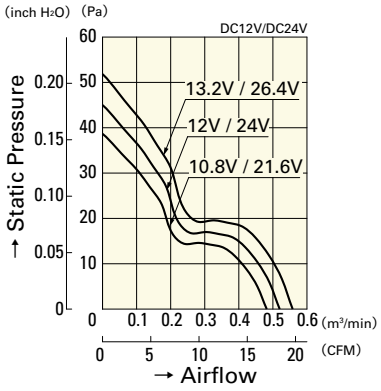
9GA0624P6S001

With PWM control function・With pulse sensor



9GA0624P6S001

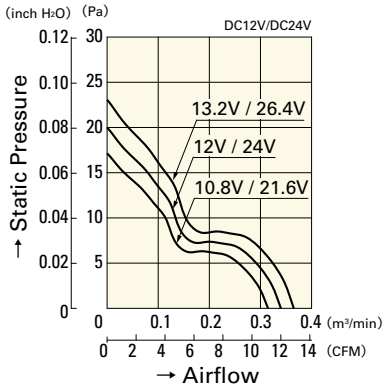
With pulse sensor



9GA0612H6001

9GA0624H6001

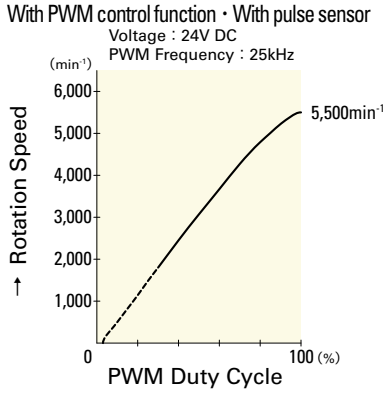
With pulse sensor



9GA0612M6001

9GA0624M6001

With PWM control function・With pulse sensor



9GA0624P6S001

60 mm sq. San Ace 60



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

60×60×20mm (Mass : 90g) 9P type

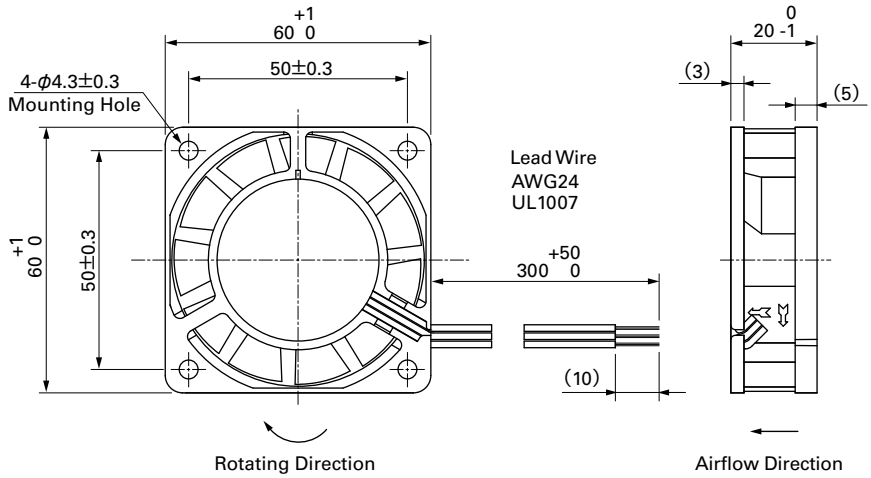
Specifications

The following nos. **have pulse sensors and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109P0612W601	12	6 to 16	0.13	1.56	4,200	0.42	14.8	31.8	0.128	31	−20 to +70	60,000/60℃
109P0612H601		10.2 to 13.8	0.13	1.56	4,200	0.42	14.8	31.8	0.128	31		
109P0612M601			0.09	1.08	3,200	0.30	10.6	18.8	0.076	25		
109P0624W601	24	12 to 30	0.07	1.68	4,200	0.42	14.8	31.8	0.128	31		
109P0624H601		20.4 to 27.6	0.07	1.68	4,200	0.42	14.8	31.8	0.128	31		
109P0624M601			0.05	1.20	3,200	0.30	10.6	18.8	0.076	25		
109P0648H601	48	43 to 53	0.07	3.36	5,600	0.55	19.4	52.9	0.212	41		40,000/60℃

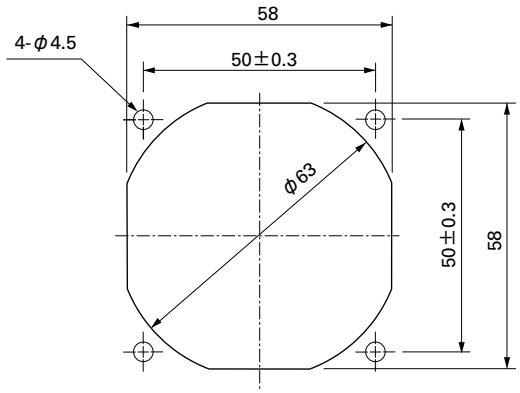
Other sensor specifications are available as options. Please refer to the index (p. 497).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

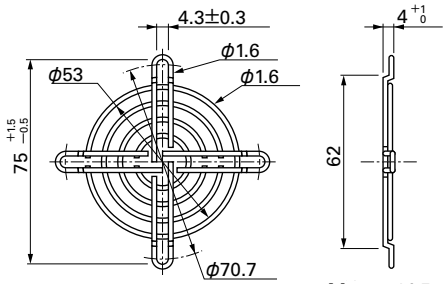


Options (unit: mm)

Finger Guards

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

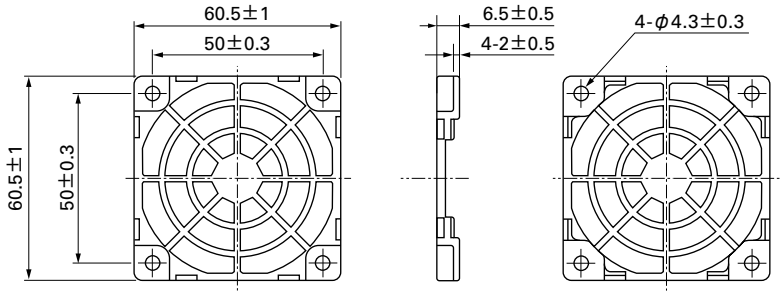
Inlet side, Outlet side



Mass : 14.5g

Resin Finger Guards

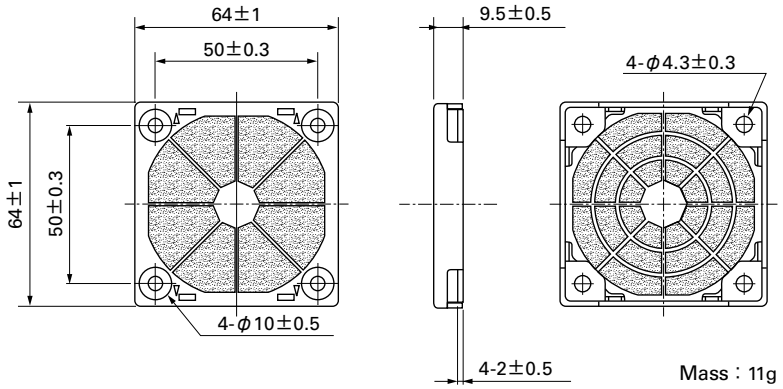
Model : 109-1003G



Mass : 7g

Resin Filter Kits

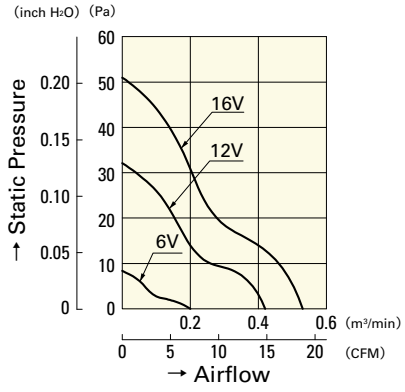
Model : 109-1003F13 (13PPI), 109-1003F20 (20PPI)
: 109-1003F30 (30PPI), 109-1003F40 (40PPI)



Mass : 11g

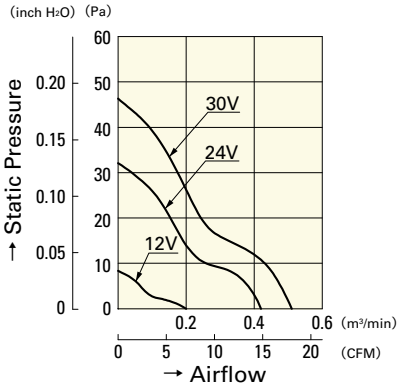
Airflow - Static Pressure Characteristics

Wide range



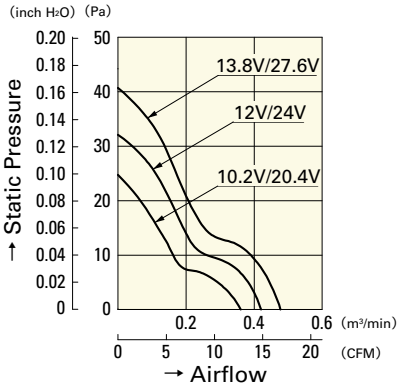
109P0612W601

Wide range



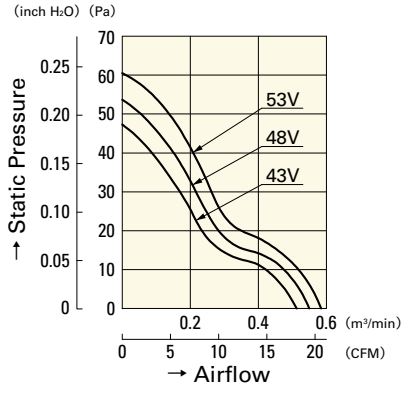
109P0624W601

H speed



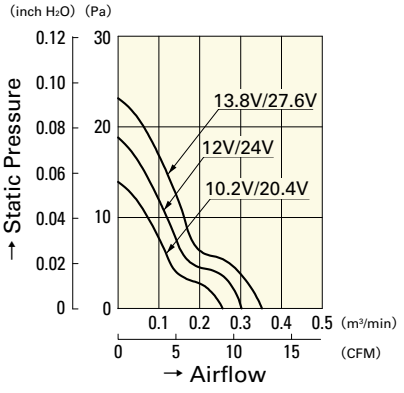
109P0612H601
109P0624H601

H speed



109P0648H601

M speed



109P0612M601
109P0624M601

60 mm sq. San Ace 60



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow
- Storage Temperature ··· −30℃ to +70℃ (Non-condensing)

60×60×25mm (Mass : 55g) 9S type Silent Fan

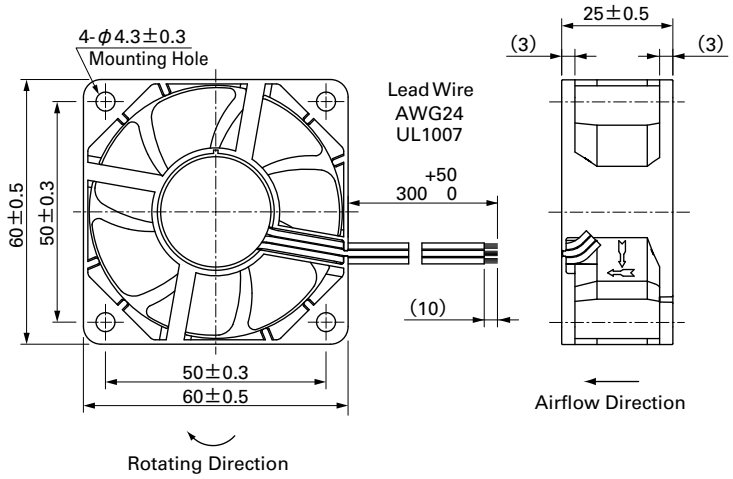
Specifications

The following nos. have pulse sensors and ribs. For ribless, append "1" to the model no.

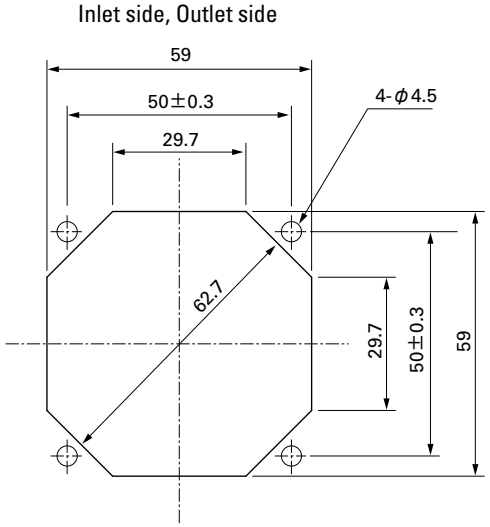
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9S0612S401	12	5.0 to 13.8	0.20	2.40	5,000	0.74	26.1	65.7	0.26	31	−10 to +70	40,000/60℃
9S0612H401			0.11	1.32	3,900	0.58	20.5	40.0	0.16	24		
9S0612F401		6.0 to 13.8	0.08	0.96	3,300	0.49	17.3	29.3	0.12	20		
9S0612M401			0.07	0.84	2,700	0.40	14.1	19.7	0.08	16		

Other sensor specifications are available as options. Please refer to the index (p. 510).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

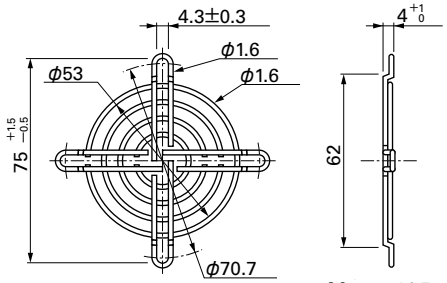


Options (unit: mm)

Finger Guards

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

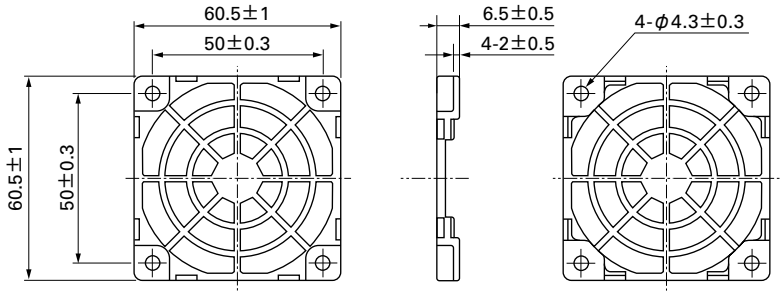
Inlet side, Outlet side



Mass : 14.5g

Resin Finger Guards

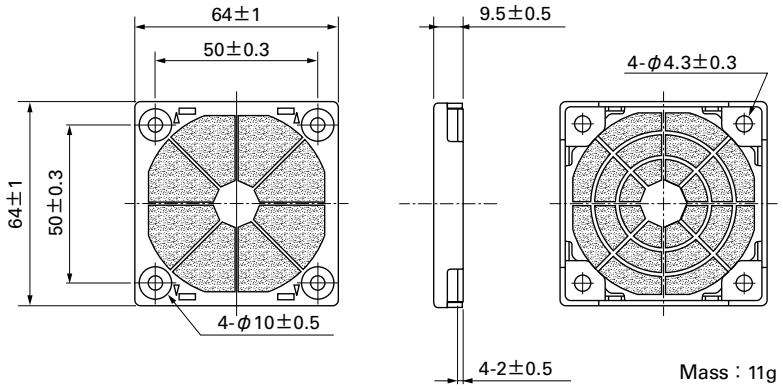
Model : 109-1003G



Mass : 7g

Resin Filter Kits

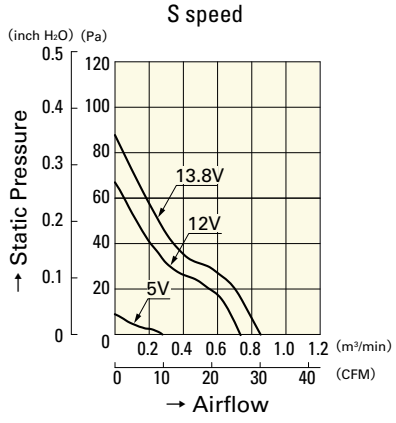
Model : 109-1003F13 (13PPI), 109-1003F20 (20PPI)
: 109-1003F30 (30PPI), 109-1003F40 (40PPI)



Mass : 11g

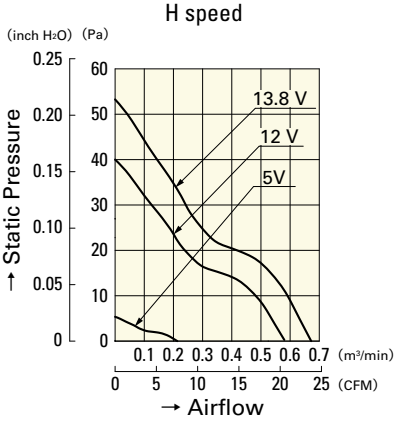
Airflow - Static Pressure Characteristics

S speed



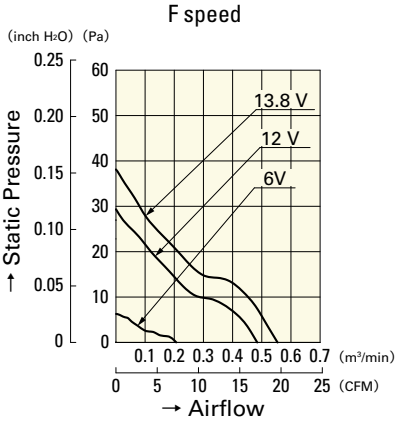
9S0612S401

H speed



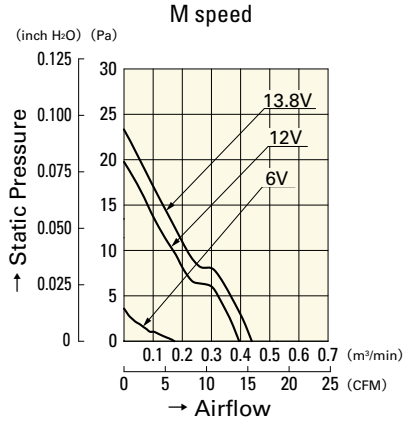
9S0612H401

F speed



9S0612F401

M speed



9S0612M401

60mm sq. San Ace 60



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ··· −30℃ to +70℃ (Non-condensing)

60×60×25mm (Mass : 90g) 9G type

Specifications

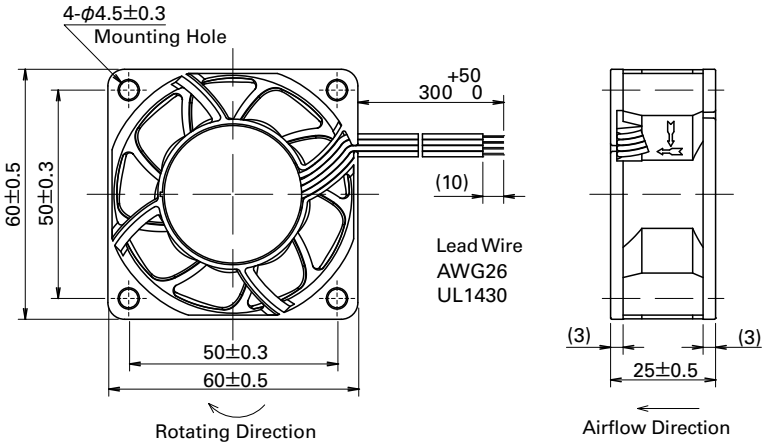
The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature Range [℃]	Expected Life [h]
9G0612P4S001	12	10.2 to 13.8	100	0.67	8.04	11,000	1.4	49.4	300	1.20	53	−20 to +70	40,000/60℃ (70,000/40℃)
			0	0.07	0.84	3,300	0.42	14.8	27	0.11	19		
9G0612P4H001			100	0.50	6.00	9,500	1.21	42.7	224	0.90	49		
			0	0.06	0.72	2,850	0.36	12.7	20.2	0.08	18		
9G0624P4S001	24	20.4 to 27.6	100	0.34	8.16	11,000	1.4	49.4	300	1.20	53		
			0	0.04	0.96	3,300	0.42	14.8	27	0.11	19		
9G0624P4H001			100	0.25	6.00	9,500	1.21	42.7	224	0.90	49		
			0	0.04	0.96	2,850	0.36	12.7	20.2	0.08	18		
9G0648P4S001	48	36 to 72	100	0.18	8.64	11,000	1.4	49.4	305	1.22	53		
			0	0.02	0.96	3,300	0.42	14.8	27.4	0.11	19		

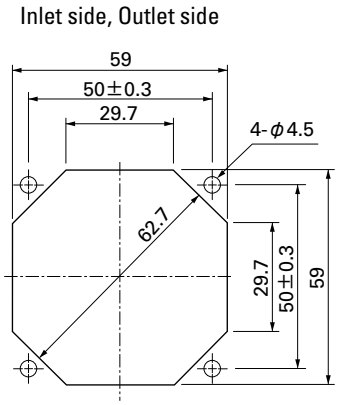
※PWM Frequency : 25kHz

Other sensor specifications are available as options. Please refer to the index (pp. 501 to 502).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

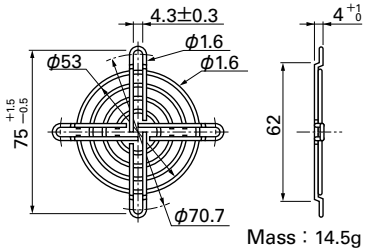


Options (unit: mm)

Finger Guards

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

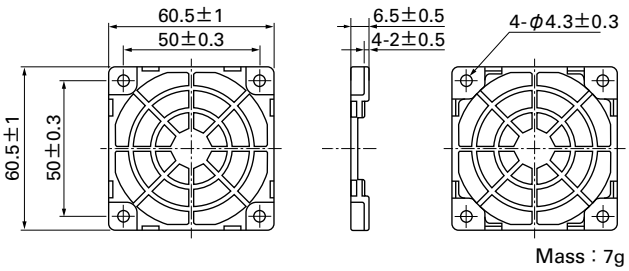
Inlet side, Outlet side



Mass : 14.5g

Resin Finger Guards

Model : 109-1003G

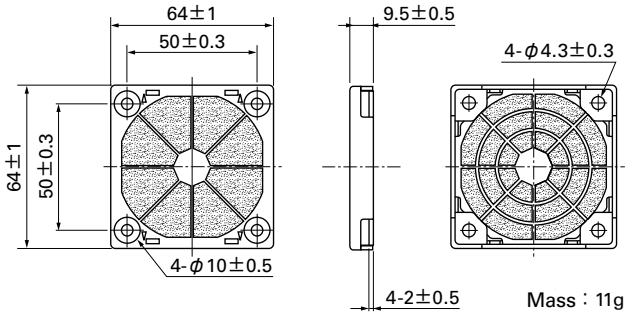


Mass : 7g

Options (unit: mm)

Resin Filter Kits

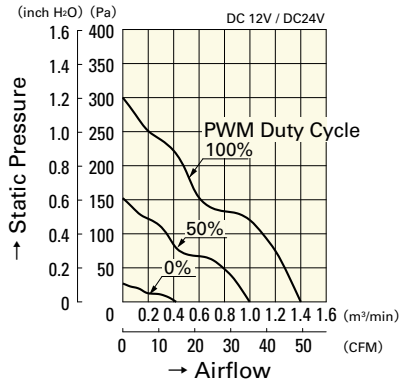
Model : 109-1003F13 (13PPI), 109-1003F20 (20PPI)
: 109-1003F30 (30PPI), 109-1003F40 (40PPI)



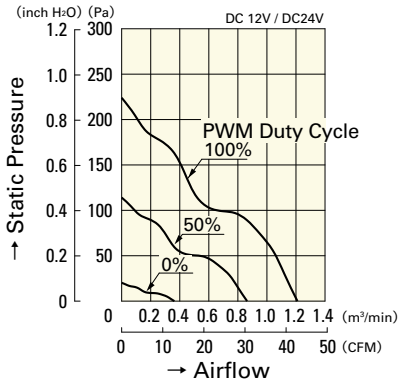
Mass : 11g

Airflow - Static Pressure Characteristics

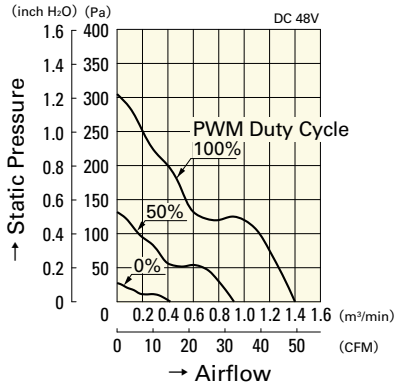
PWM Duty Cycle



9G0612P4S001
9G0624P4S001

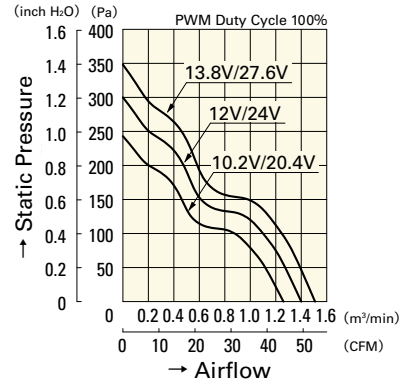


9G0612P4H001
9G0624P4H001

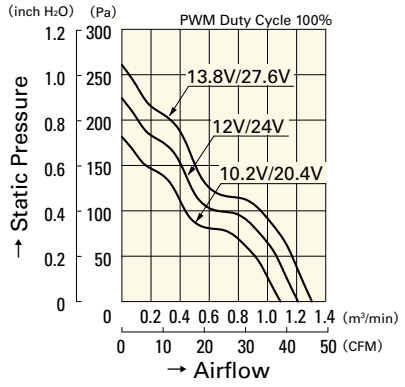


9G0648P4S001

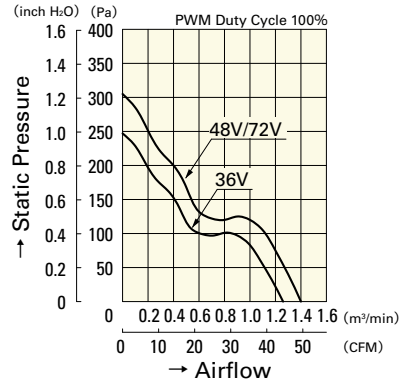
Operating Voltage Range



9G0612P4S001
9G0624P4S001

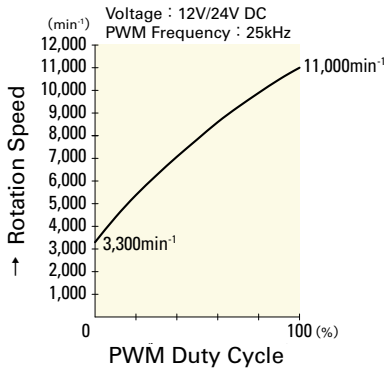


9G0612P4H001
9G0624P4H001

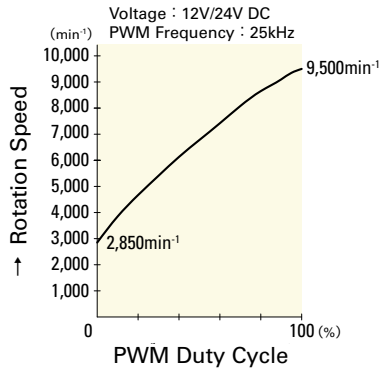


9G0648P4S001

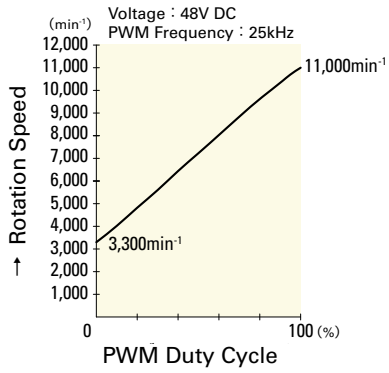
PWM Duty - Speed Characteristics Example



9G0612P4S001
9G0624P4S001



9G0612P4H001
9G0624P4H001



9G0648P4S001

60 mm sq. San Ace 60



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

60×60×25mm (Mass : 90g) 9R type

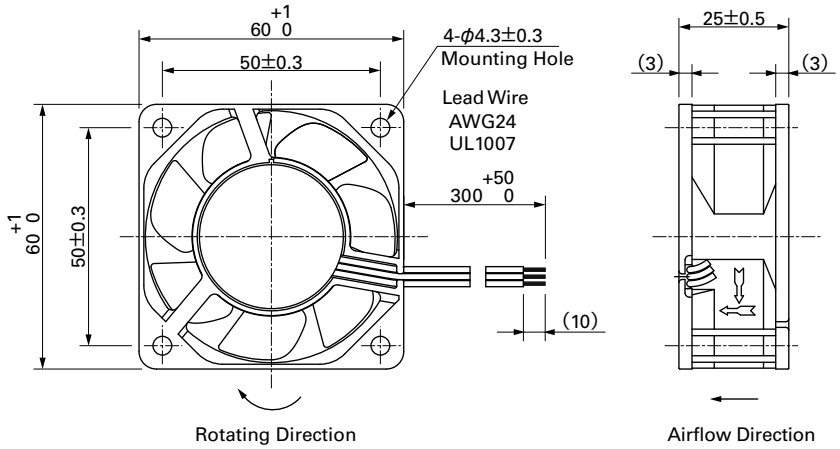
Specifications

The following nos. **have pulse sensors and ribs.** **For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109R0605H401	5	4.5 to 5.5	0.34	1.70	3,800	0.53	18.7	40.2	0.161	28	−20 to +70	60,000/60℃
109R0605F401			0.20	1.00	3,200	0.44	15.5	29.4	0.118	24	−20 to +60	
109R0605M401			0.13	0.65	2,600	0.36	12.7	19.6	0.079	20	−20 to +70	
109R0612J401	12	10.8 to 13.2	0.47	5.64	7,600	1.06	37.1	155.0	0.622	44	−20 to +60	40,000/60℃
109R0612G401			0.24	2.88	5,600	0.78	27.5	87.3	0.351	39	−20 to +70	60,000/60℃
109R0612D401		10.2 to 13.8	0.21	2.52	5,150	0.72	25.4	73.5	0.295	37		
109R0612S401		6 to 13.8	0.17	2.04	4,600	0.65	23.0	56.8	0.228	33		
109R0612H401			0.11	1.32	3,800	0.53	18.7	40.1	0.161	28		
109R0612F401			0.09	1.08	3,200	0.44	15.5	29.4	0.118	24		
109R0612M401		7 to 13.8	0.06	0.72	2,600	0.36	12.7	19.6	0.079	20		
109R0624J401	24	21.6 to 26.4	0.24	5.76	7,600	1.06	37.1	155.0	0.622	44	−20 to +60	40,000/60℃
109R0624G401		20.4 to 27.6	0.13	3.12	5,600	0.78	27.5	87.3	0.351	39	−20 to +70	
109R0624D401		12 to 27.6	0.12	2.88	5,150	0.72	25.4	73.5	0.295	37		
109R0624S401			0.08	1.92	4,600	0.65	23.0	56.8	0.228	33		60,000/60℃
109R0624H401			0.06	1.44	3,800	0.53	18.7	40.2	0.161	28		
109R0624F401			0.05	1.20	3,200	0.44	15.5	29.4	0.118	24		
109R0624M401		14 to 27.6	0.04	0.96	2,600	0.36	12.7	19.6	0.079	20		
109R0648J401	48	43.2 to 52.8	0.12	5.76	7,600	1.06	37.1	155.0	0.622	44	−20 to +60	40,000/60℃
109R0648G401		43 to 53	0.07	3.36	5,600	0.78	27.5	87.3	0.351	39		
109R0648H401		40 to 53	0.04	1.92	3,800	0.53	18.7	40.2	0.161	28	−20 to +70	60,000/60℃

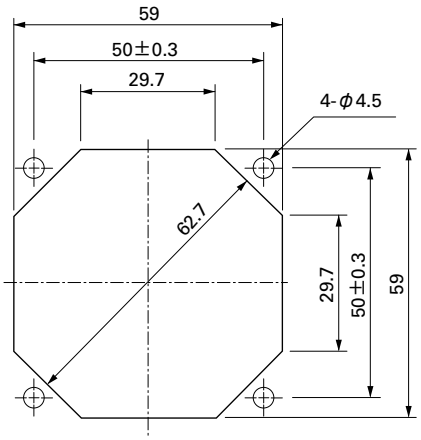
Other sensor specifications are available as options. Please refer to the index (pp. 498 to 499).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

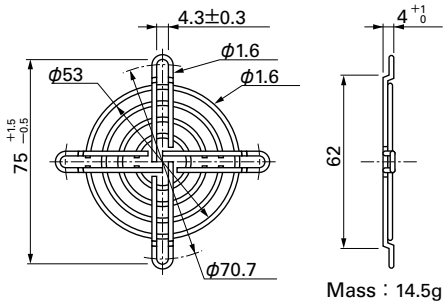


Options (unit: mm)

Finger Guards

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

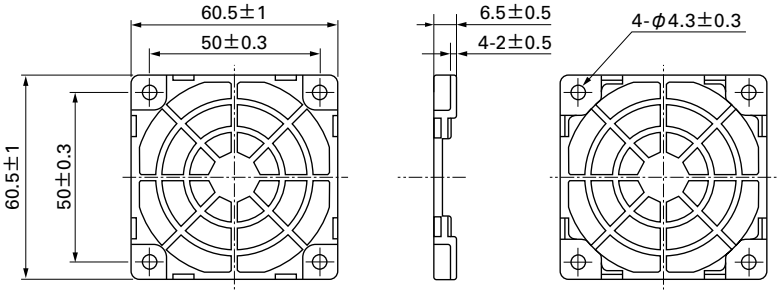
Inlet side, Outlet side



Mass : 14.5g

Resin Finger Guards

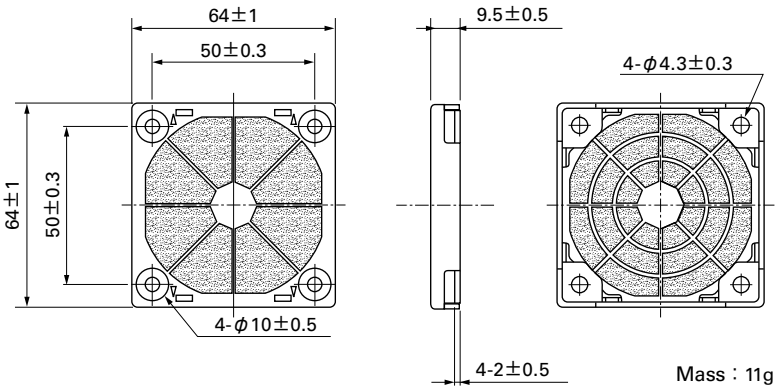
Model : 109-1003G



Mass : 7g

Resin Filter Kits

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



Mass : 11g

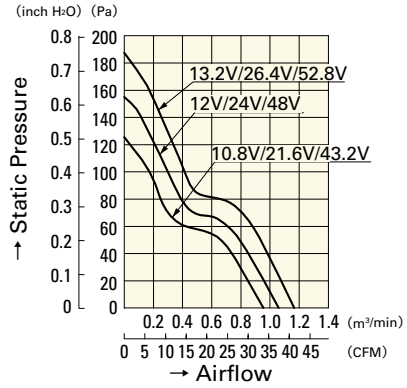
60 mm sq.

San Ace 60

60×60×25mm 〔Mass：90g〕

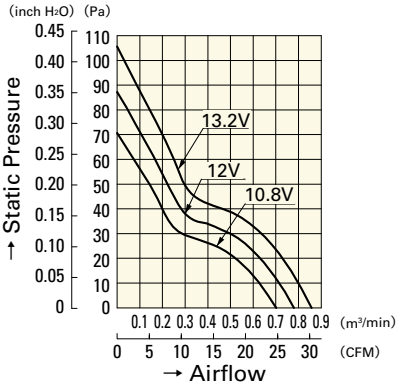
Airflow - Static Pressure Characteristics

J speed



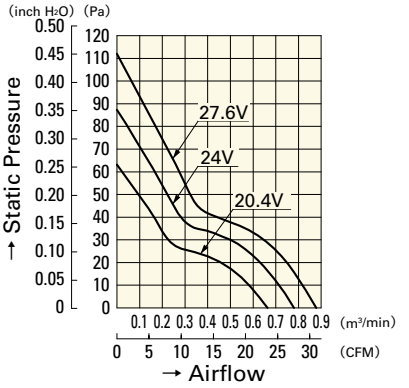
109R0612J401
109R0624J401
109R0648J401

G speed



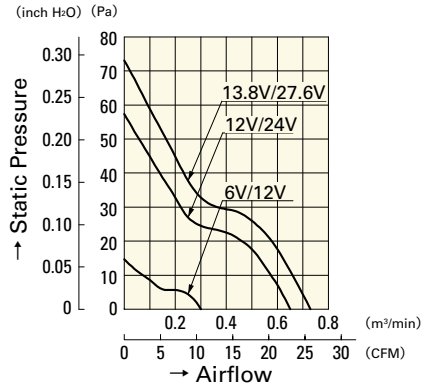
109R0612G401

G speed



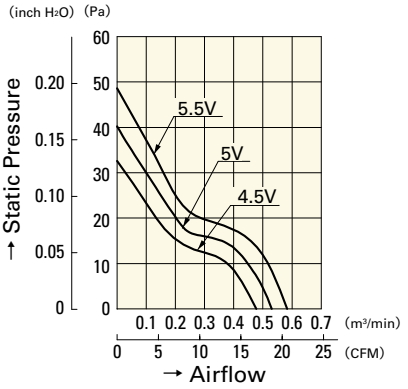
109R0624G401

S speed



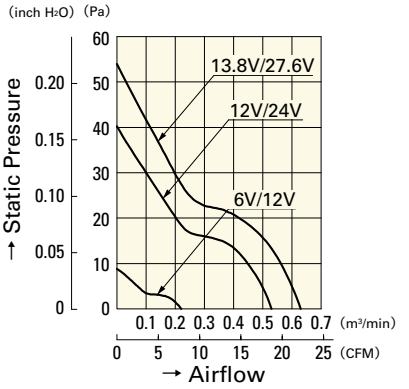
109R0612S401
109R0624S401

H speed



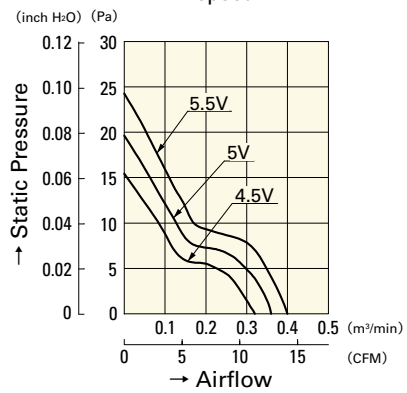
109R0605H401

H speed



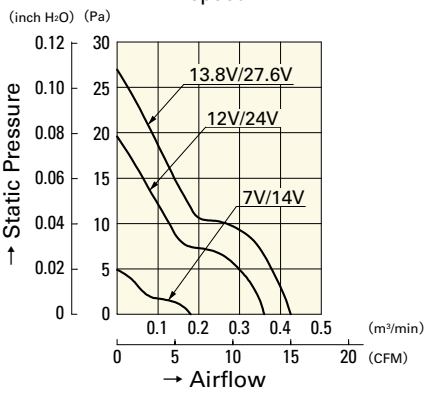
109R0612H401
109R0624H401

M speed



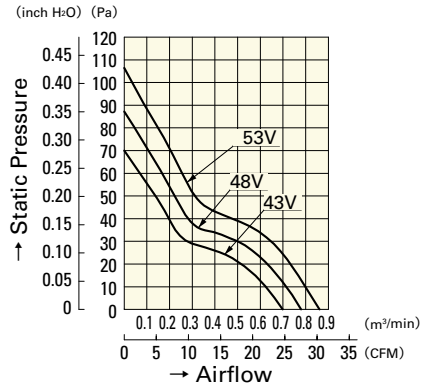
109R0605M401

M speed



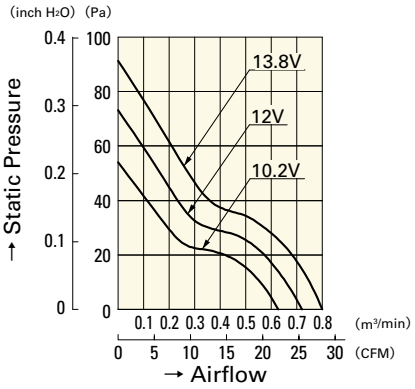
109R0612M401
109R0624M401

G speed



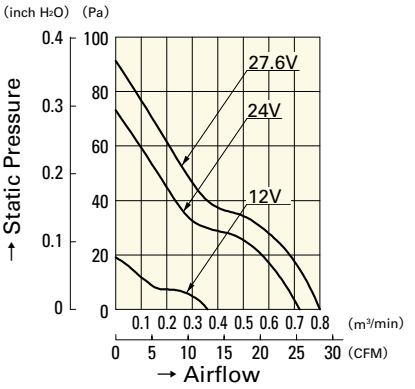
109R0648G401

D speed



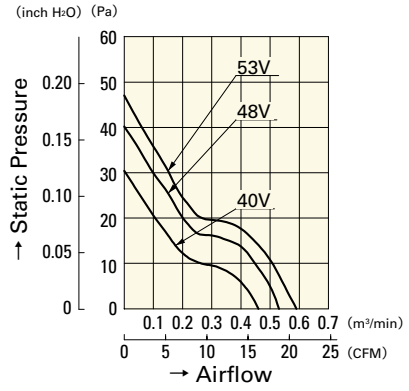
109R0612D401

D speed



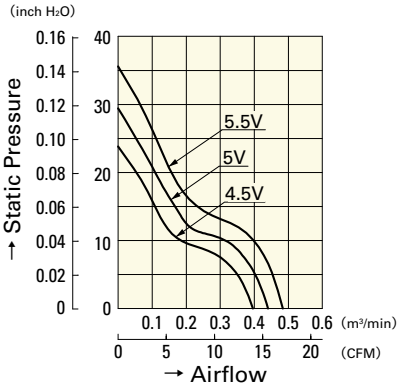
109R0624D401

H speed



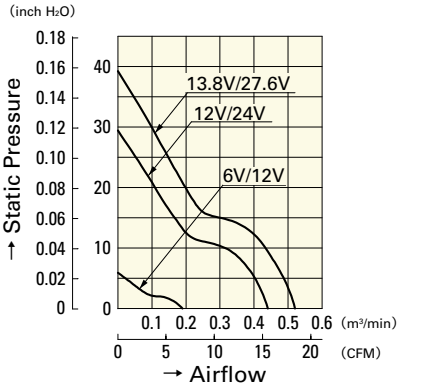
109R0648H401

F speed



109R0605F401

F speed



109R0612F401
109R0624F401

60 mm sq. San Ace 60



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ··· −30℃ to +70℃ (Non-condensing)

60×60×25mm (Mass : 80g) 9Atype San Cooler

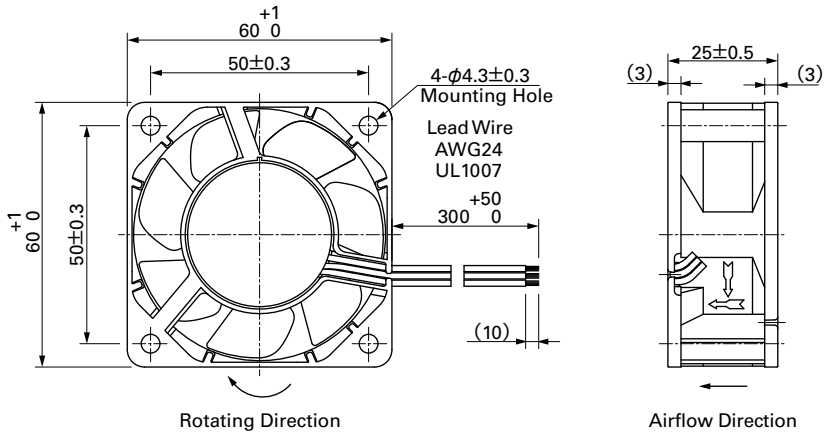
Specifications

The following nos. have pulse sensors and ribs. For ribless, append "1" to the model no.

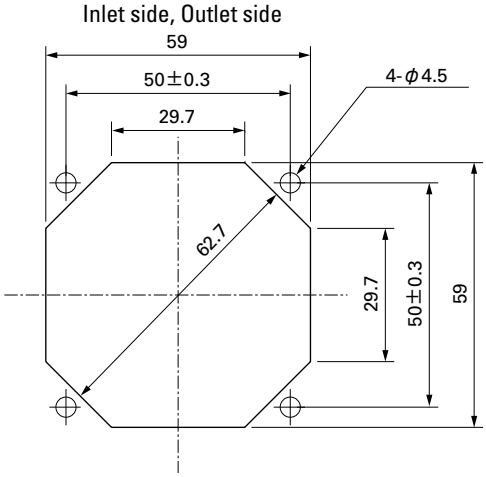
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9A0612G401	12	6 to 13.2	0.24	2.88	5,600	0.78	27.6	87.3	0.351	39	−20 to +60	30,000/60℃
9A0612S401		6 to 13.8	0.17	2.04	4,600	0.65	23.0	56.8	0.228	33	−20 to +70	40,000/60℃
9A0612H401			0.11	1.32	3,800	0.53	18.7	40.2	0.161	28		
9A0612F401			0.09	1.08	3,200	0.44	15.5	29.4	0.118	24		
9A0612M401		7 to 13.8	0.06	0.72	2,600	0.36	12.7	19.6	0.079	20		
9A0624G401	24	12 to 27.6	0.13	3.12	5,600	0.78	27.6	87.3	0.351	39	−20 to +60	30,000/60℃
9A0624S401		12 to 27.6	0.08	1.92	4,600	0.65	23.0	56.8	0.228	33	−20 to +70	40,000/60℃
9A0624H401			0.06	1.44	3,800	0.53	18.7	40.2	0.161	28		
9A0624F401			0.05	1.2	3,200	0.44	15.5	29.4	0.118	24		
9A0624M401		14 to 27.6	0.04	0.96	2,600	0.36	12.7	19.6	0.079	20		

Other sensor specifications are available as options. Please refer to the index (pp. 499 to 500).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

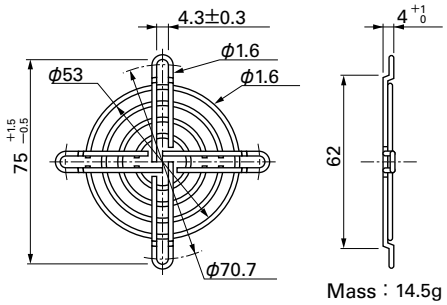


Options (unit: mm)

Finger Guards

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

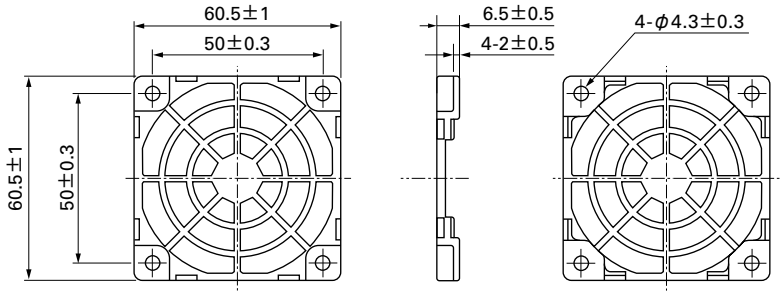
Inlet side, Outlet side



Mass : 14.5g

Resin Finger Guards

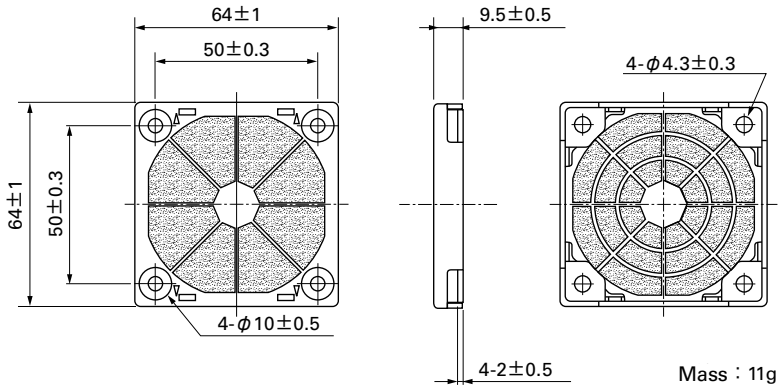
Model : 109-1003G



Mass : 7g

Resin Filter Kits

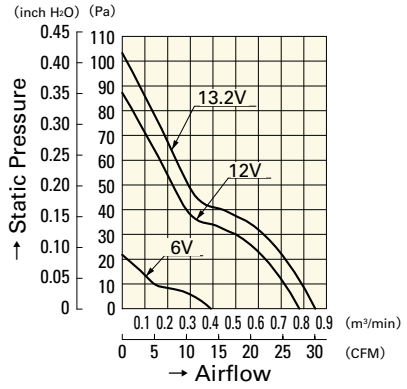
Model : 109-1003F13 (13PPI), 109-1003F20 (20PPI)
: 109-1003F30 (30PPI), 109-1003F40 (40PPI)



Mass : 11g

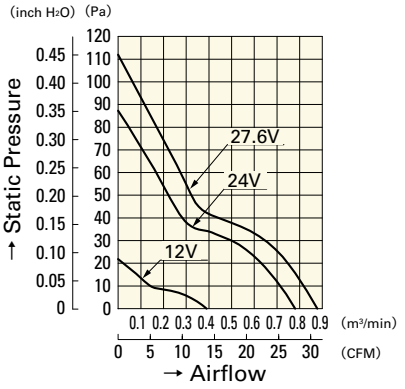
Airflow - Static Pressure Characteristics

G speed



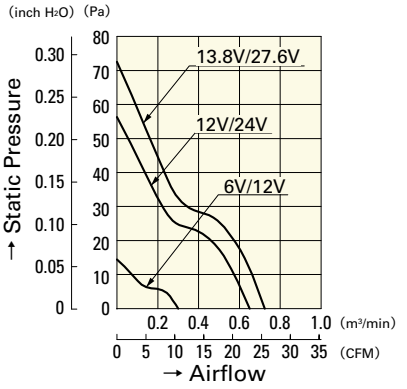
9A0612G401

G speed



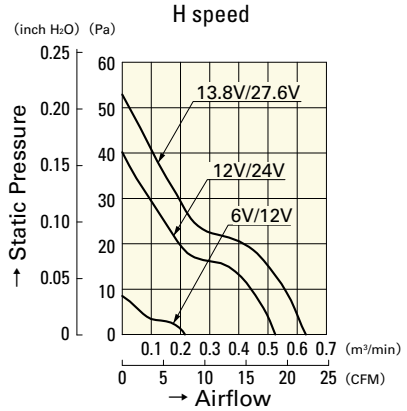
9A0624G401

S speed



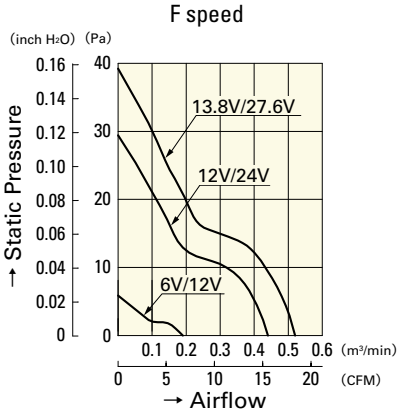
9A0612S401
9A0624S401

H speed



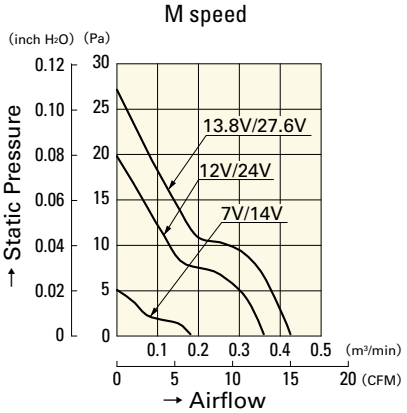
9A0612H401
9A0624H401

F speed



9A0612F401
9A0624F401

M speed



9A0612M401
9A0624M401

60 mm sq. San Ace 60



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

60×60×38mm (Mass : 135g) 9HV type

Specifications

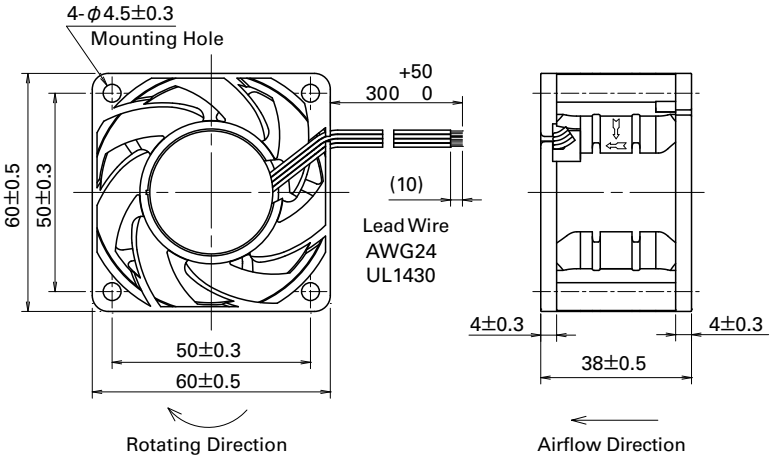
The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle[Note]※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature Range [℃]	Expected Life [h]
9HV0612P1J001	12	10.8 to 12.6	100	2.7	32.4	21,700	1.88	66.4	1,750	7.00	68	−20 to +70	40,000/60℃ (70,000/40℃)
			20	0.17	2.04	5,300	0.43	15.2	102	0.41	34		

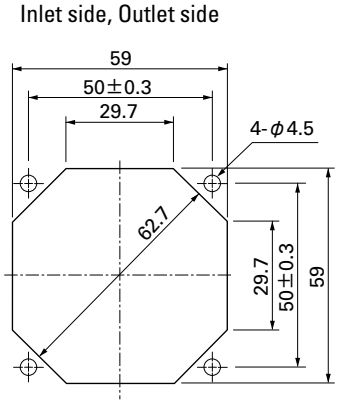
Note: Fan does not rotate when PWM duty cycle is 0%.

※PWM Frequency : 25kHz

Dimensions (unit: mm) (With ribs)



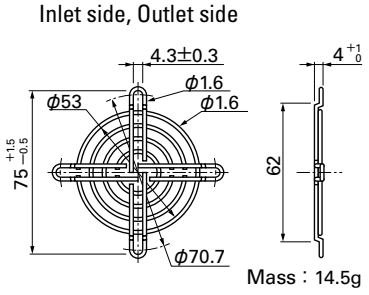
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

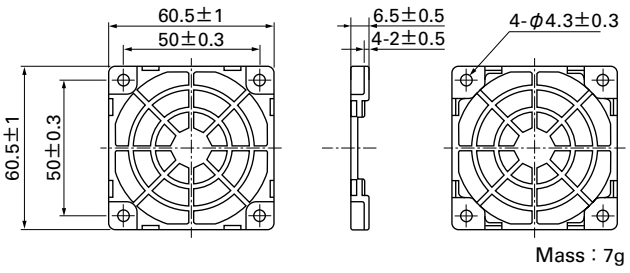
Finger Guards

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



Resin Finger Guards

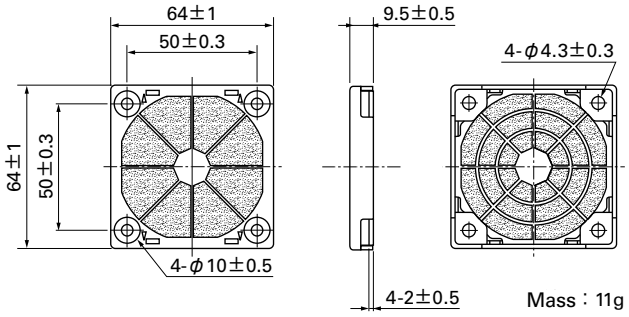
Model : 109-1003G



Options (unit: mm)

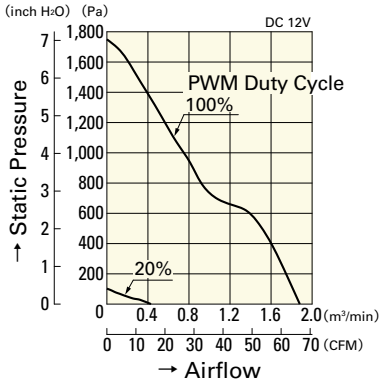
Resin Filter Kits

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



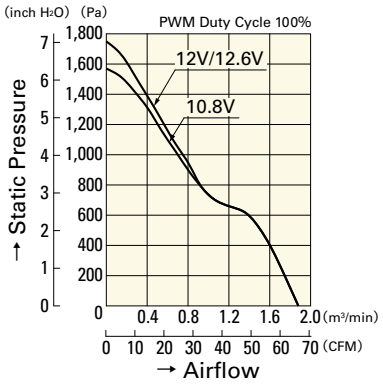
Airflow - Static Pressure Characteristics

PWM Duty Cycle



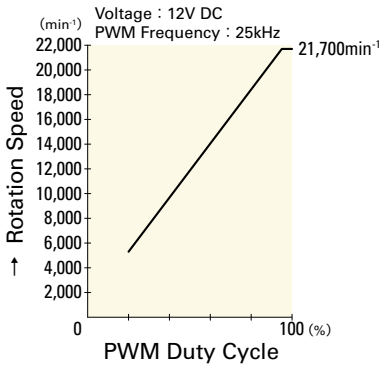
9HV0612P1J001

Operating Voltage Range



9HV0612P1J001

PWM Duty - Speed Characteristics Example



9HV0612P1J001

60 mm sq. San Ace 60



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

60×60×38mm (Mass：130g) 9GA type Low Power Consumption Fan

Specifications

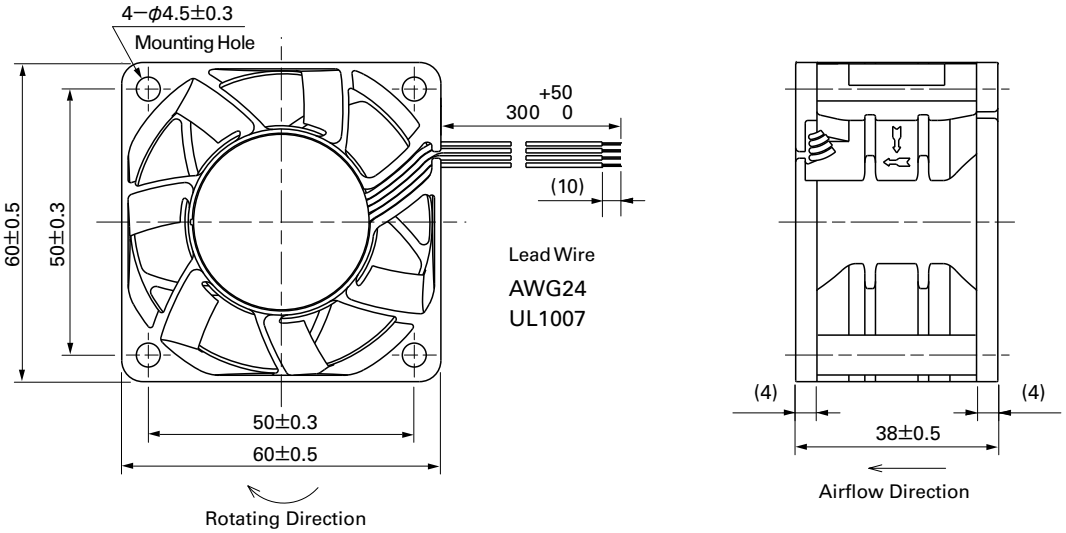
The following nos. **have PWM controls, pulse sensors, and ribs. For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle Note※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0612P1J03	12	10.8 to 12.6	100	1.50	18.00	17,500	1.75	62	820	3.3	63	−20 to +60	40,000/60℃ (70,000/40℃)
			20	0.10	1.20	4,000	0.40	14	43	0.17	24		
9GA0612P1K03		10.8 to 13.2	100	0.95	11.40	14,800	1.50	53	600	2.4	59	−20 to +70	
			20	0.10	1.20	4,000	0.40	14	43	0.17	24		
9GA0612P1H03			100	0.55	6.60	11,500	1.15	40	375	1.5	52		
			20	0.06	0.72	2,600	0.27	9.5	20	0.08	19		
9GA0612P1K60			100	0.95	11.40	14,800	1.50	53	675	2.7	59	−20 to +60	
			0	0.05	0.60	1,480	0.134	4.7	8.3	0.03	16		
9GA0624P1J03	24	21.6 to 25.2	100	0.75	18.00	17,500	1.75	62	820	3.3	63	−20 to +60	
			20	0.10	2.40	6,200	0.63	22	104	0.42	35		
9GA0624P1K03		21.6 to 26.4	100	0.5	12	14,800	1.5	53.0	600	2.4	59	−20 to +70	
			20	0.06	1.44	5,000	0.5	17.7	70	0.28	28		

Note: 9GA0612P1J03, 9GA0612P1K03, 9GA0612P1H03, 9GA0624P1J03, 9GA0624P1K03 does not rotate when PWM duty cycle is 0%. ※PWM Frequency：25kHz

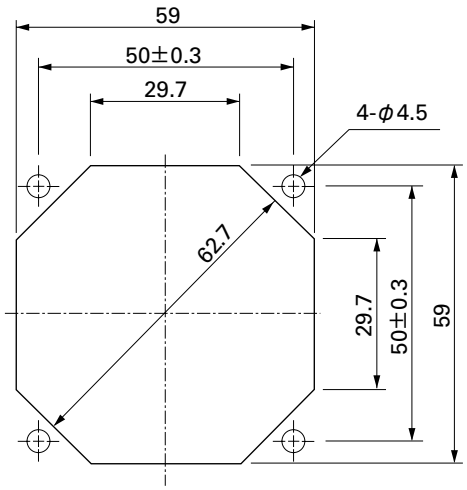
Other sensor specifications are available as options. Please refer to the index (p. 505).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

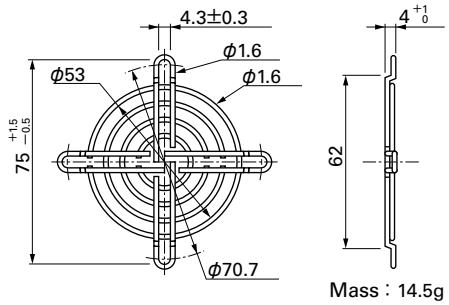


Options (unit: mm)

Finger Guards

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

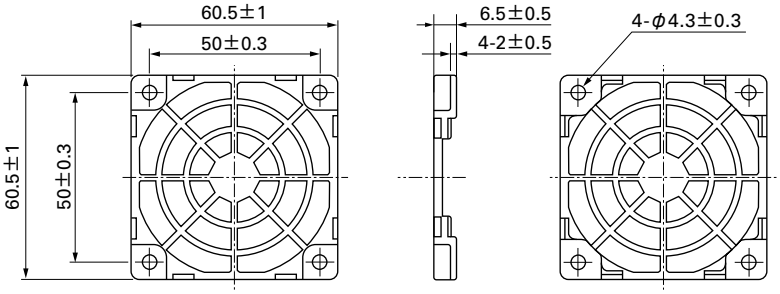
Inlet side, Outlet side



Mass : 14.5g

Resin Finger Guards

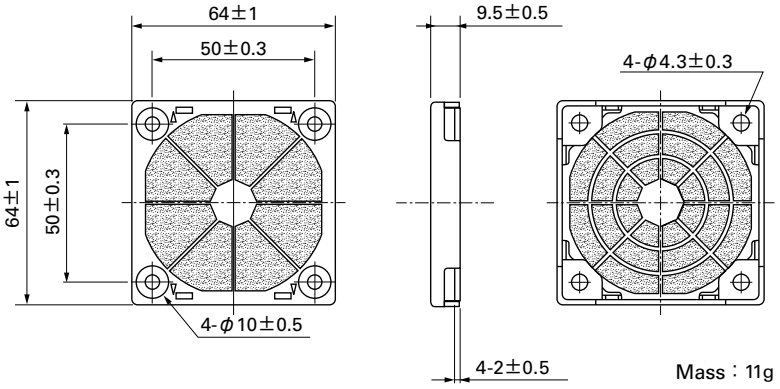
Model : 109-1003G



Mass : 7g

Resin Filter Kits

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



Mass : 11g

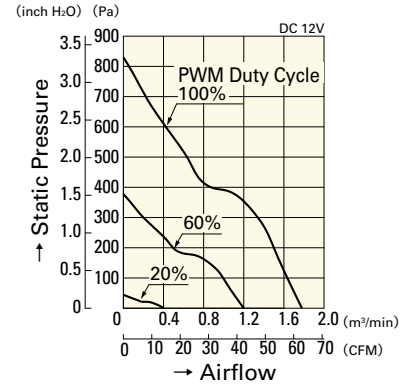
60mm sq.

San Ace 60

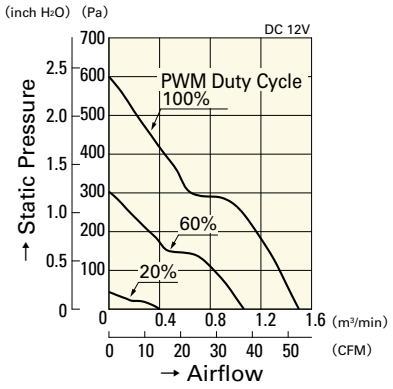
60×60×38mm 〔Mass：130g〕

Airflow - Static Pressure Characteristics

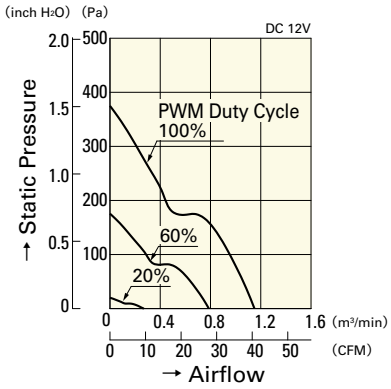
PWM Duty Cycle



9GA0612P1J03

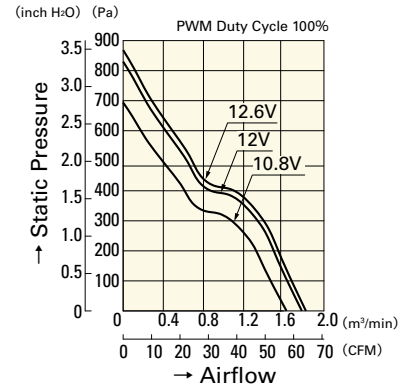


9GA0612P1K03

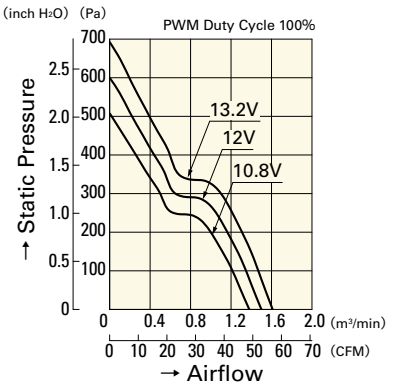


9GA0612P1H03

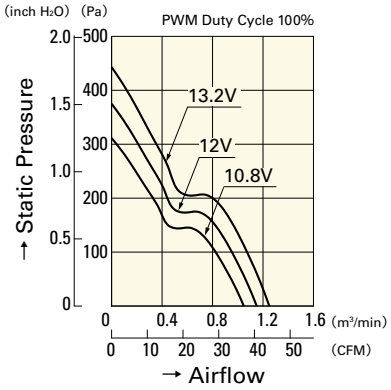
Operating Voltage Range



9GA0612P1J03

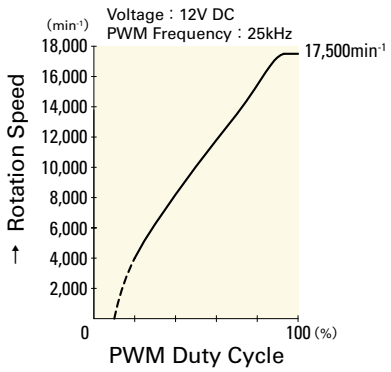


9GA0612P1K03

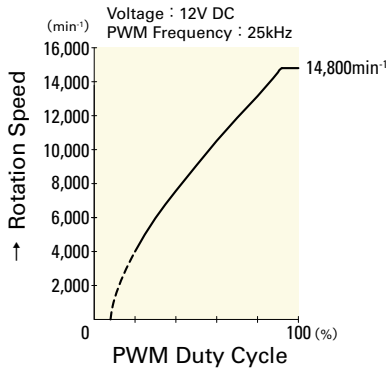


9GA0612P1H03

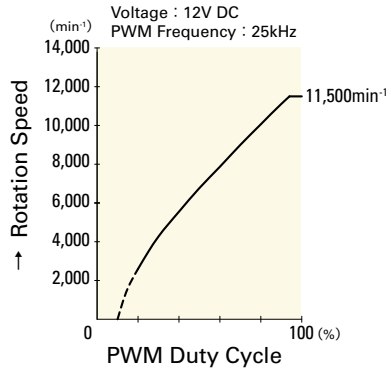
PWM Duty - Speed Characteristics Example



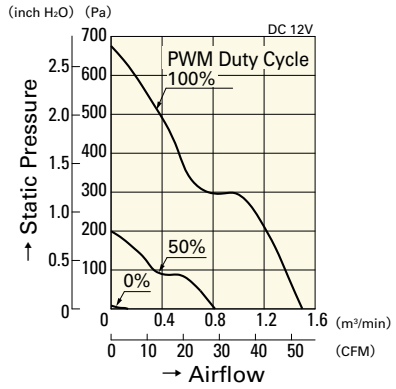
9GA0612P1J03



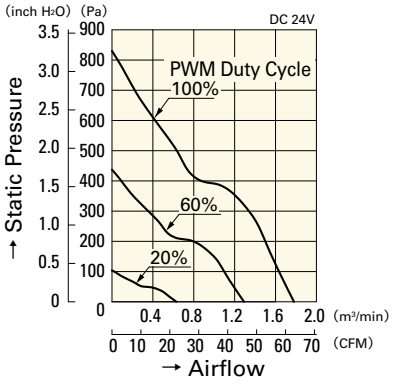
9GA0612P1K03



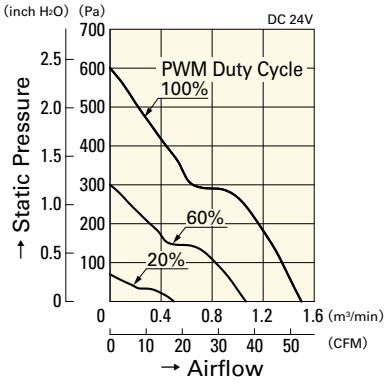
9GA0612P1H03



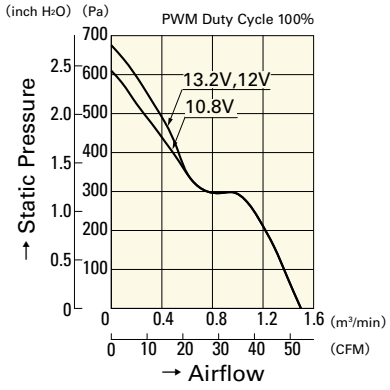
9GA0612P1K60



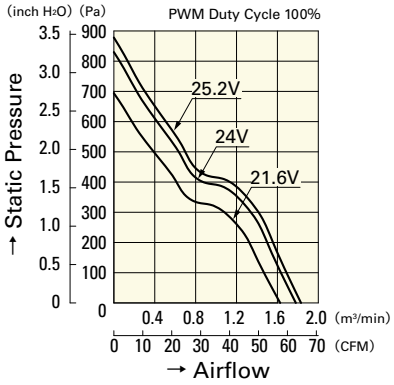
9GA0624P1J03



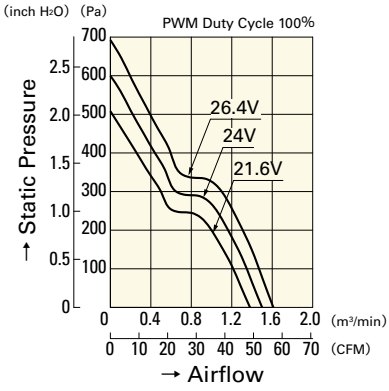
9GA0624P1K03



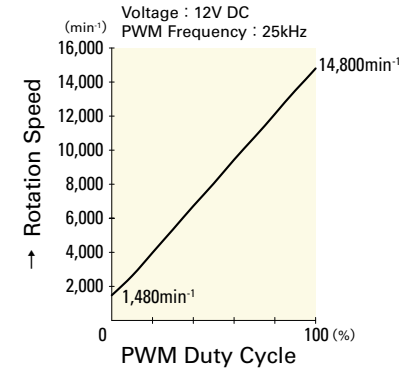
9GA0612P1K60



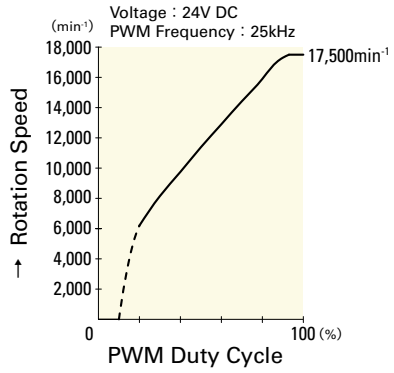
9GA0624P1J03



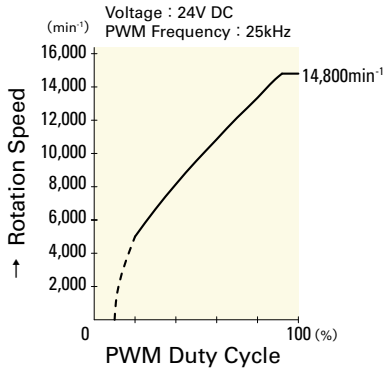
9GA0624P1K03



9GA0612P1K60



9GA0624P1J03



9GA0624P1K03

60 mm sq. San Ace 60



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ··· −30℃ to +70℃ (Non-condensing)

60×60×38mm (Mass : 130g) 9GV type

Specifications

The following nos. have PWM controls, pulse sensors, and ribs. For ribless, append "1" to the model no.

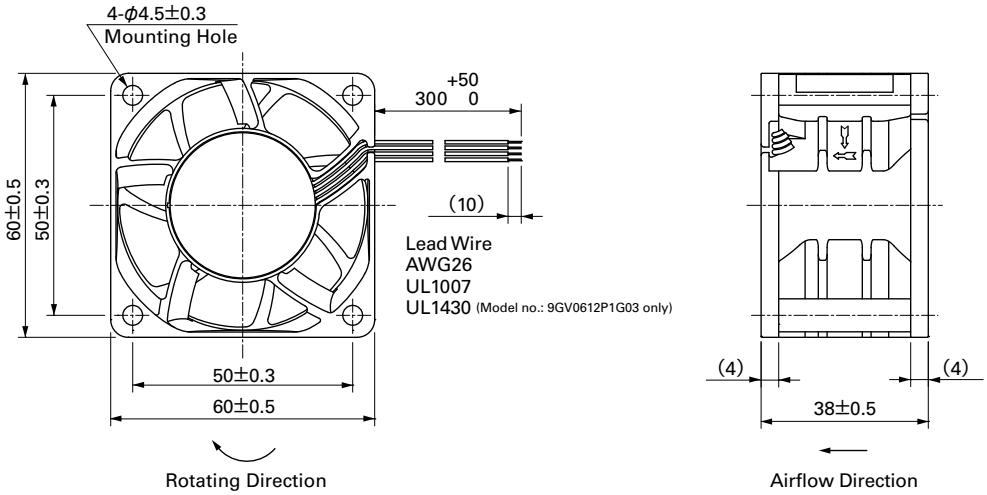
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature Range [℃]	Expected Life [h]
9GV0612P1G03	12	8.0 to 13.8	100	2.8	33.6	16,000	2.37	84	751	3.02	66	−20 to +70	40,000/60℃
			0	0.12	1.5	3,100	0.44	15	26	0.10	25		
9GV0612P1H03			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			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		
9GV0612P1L01 Note)		10.8 to 13.8	100	0.7	8.4	10,000	1.49	52.6	293	1.17	52		
9GV0624P1G03	24	20.4 to 27.6	100	1.4	33.6	16,000	2.37	84	751	3.02	66		
			0	0.12	2.88	6,000	0.89	31	105	0.42	38		
9GV0624P1M03 Note)			100	0.73	17.52	13,000	1.93	68.0	496	1.99	60		
9GV0648P1H03	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		

Note : Fan does not rotate when PWM duty cycle is 0%.

※PWM Frequency : 25kHz

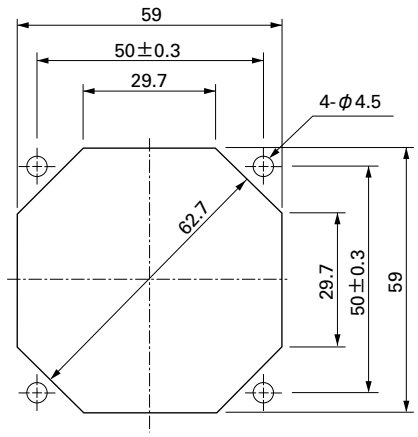
Other sensor specifications are available as options. Please refer to the index (p. 507).

Dimensions (unit: mm) (With ribs)



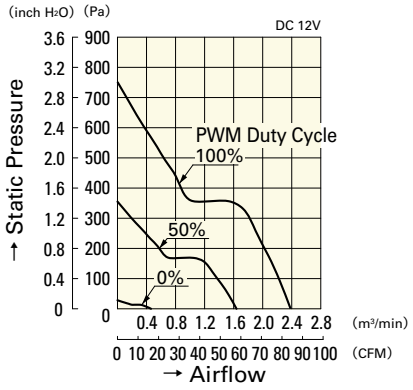
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side



Airflow - Static Pressure Characteristics

PWM Duty Cycle



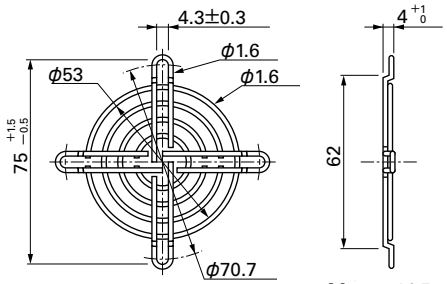
9GV0612P1G03

Options (unit: mm)

Finger Guards

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

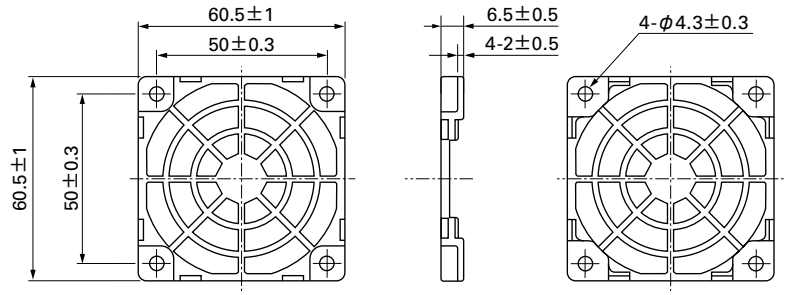
Inlet side, Outlet side



Mass : 14.5g

Resin Finger Guards

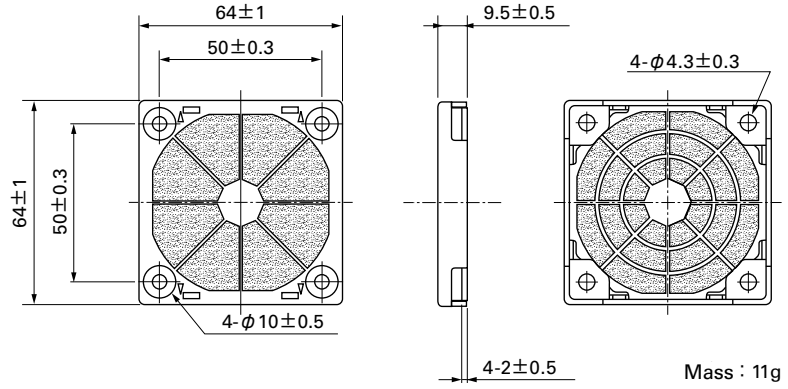
Model : 109-1003G



Mass : 7g

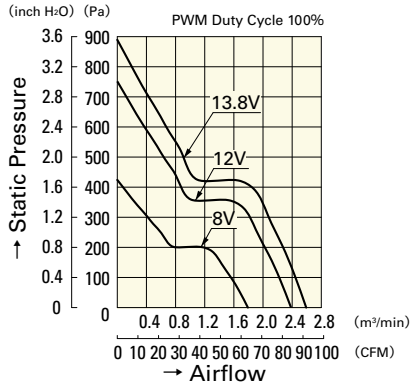
Resin Filter Kits

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



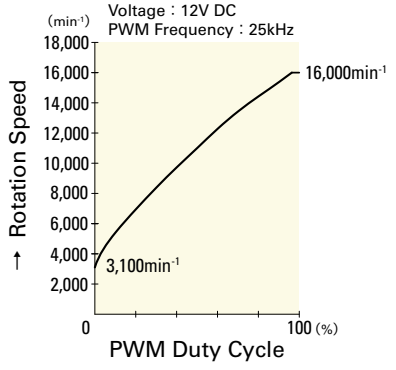
Mass : 11g

Operating Voltage Range



9GV0612P1G03

PWM Duty - Speed Characteristics Example



9GV0612P1G03

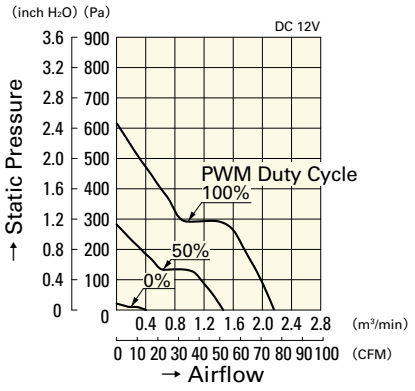
60 mm sq.

San Ace 60

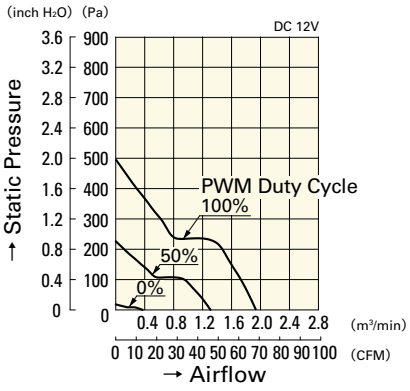
60×60×38mm 〔Mass：130g〕

Airflow - Static Pressure Characteristics

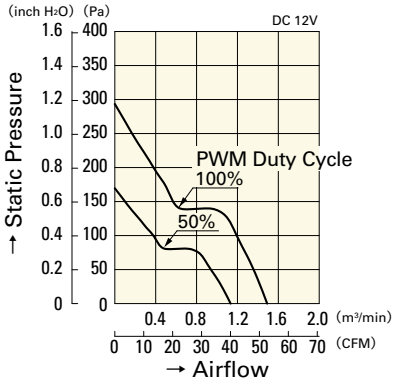
PWM Duty Cycle



9GV0612P1H03

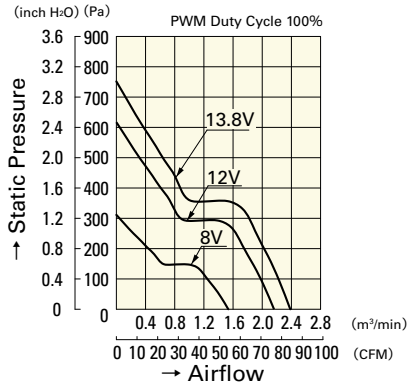


9GV0612P1M03

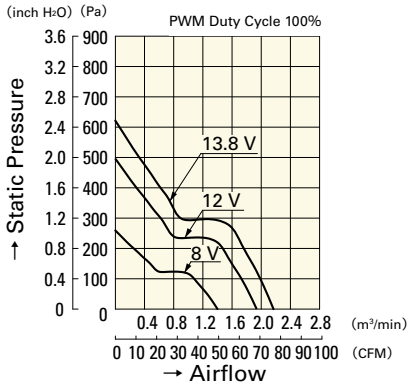


9GV0612P1L01

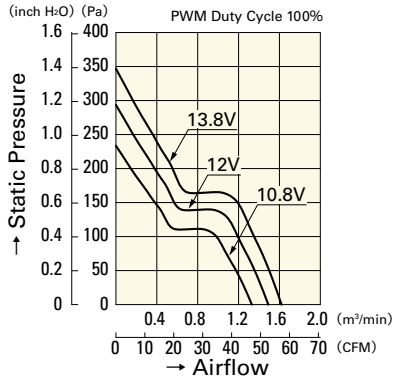
Operating Voltage Range



9GV0612P1H03

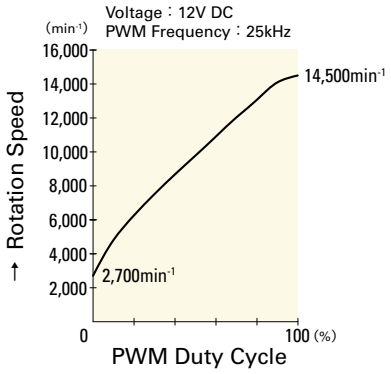


9GV0612P1M03

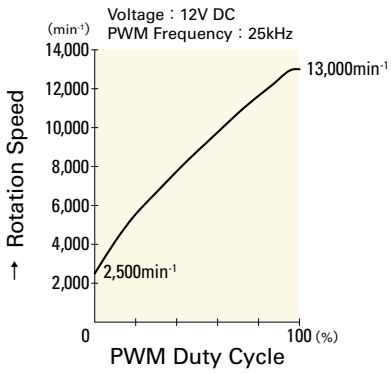


9GV0612P1L01

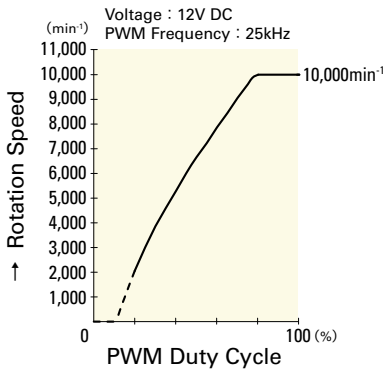
PWM Duty - Speed Characteristics Example



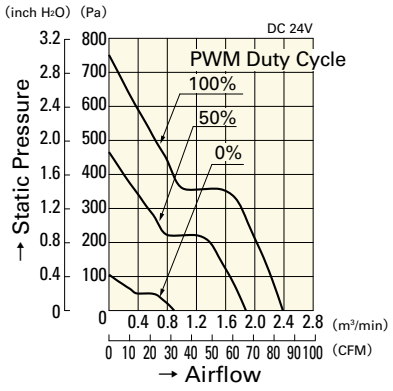
9GV0612P1H03



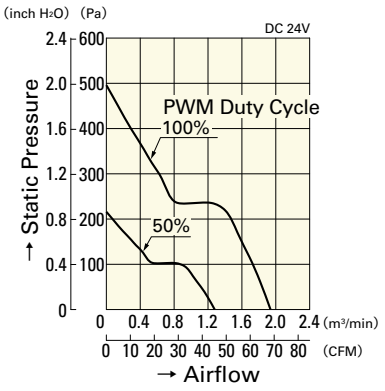
9GV0612P1M03



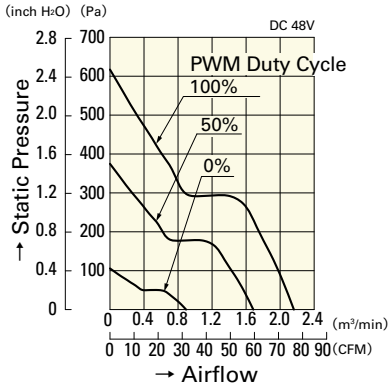
9GV0612P1L01



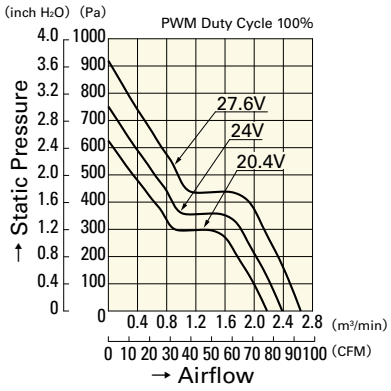
9GV0624P1G03



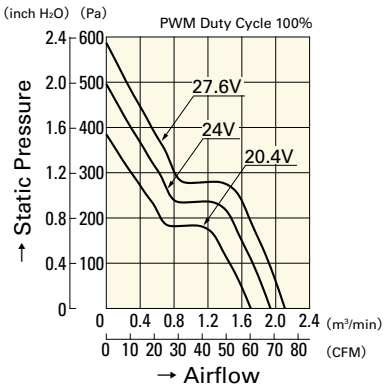
9GV0624P1M03



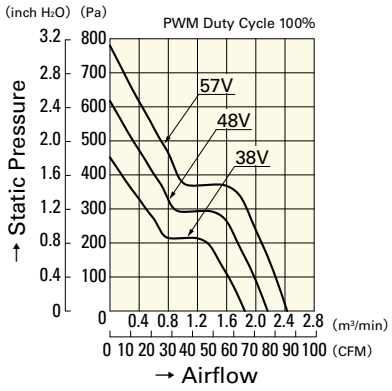
9GV0648P1H03



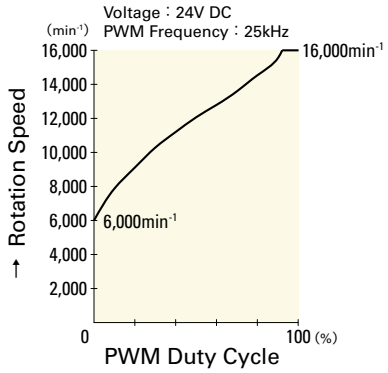
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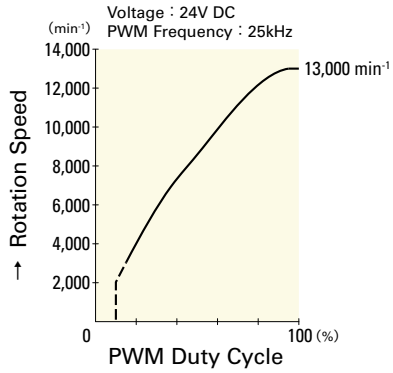
9GV0624P1M03



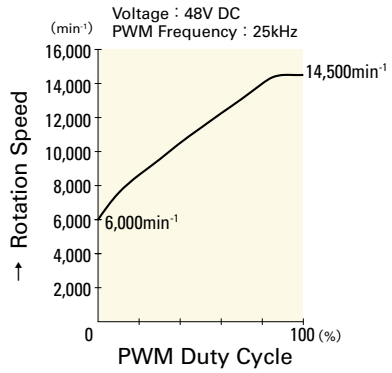
9GV0648P1H03



9GV0624P1G03



9GV0624P1M03



9GV0648P1H03

60 mm sq. San Ace 60



(Ribless model depicted)

General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow
- Storage Temperature ···−30℃ to +70℃ (Non-condensing)

60×60×38mm (Mass : 110g) 9G type

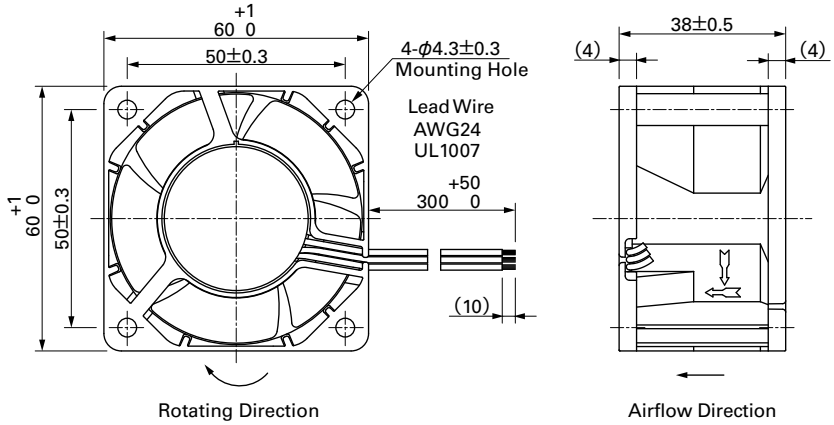
Specifications

The following nos. have pulse sensors and ribs. For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9G0612G101	12	7.0 to 13.8	1.54	18.5	11,800	1.84	65	435	1.747	58	−20 to +70	40,000/60℃
9G0612S101			1.36	16.3	10,800	1.70	60	370	1.486	56		
9G0624G101	24	14.0 to 27.6	0.85	20.4	11,800	1.84	65	435	1.747	58		
9G0624S101			0.70	16.8	10,800	1.70	60	370	1.486	56		
9G0624H101			0.57	13.68	9,800	1.54	54.4	304.6	1.223	54		
9G0648G101	48	28 to 55.2	0.35	16.8	11,800	1.84	65	435	1.747	58		
9G0648S101			0.29	13.9	10,800	1.70	60	370	1.486	56		

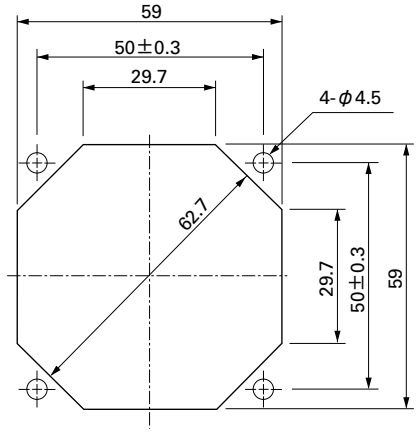
Other sensor specifications are available as options. Please refer to the index (pp. 501 to 502).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

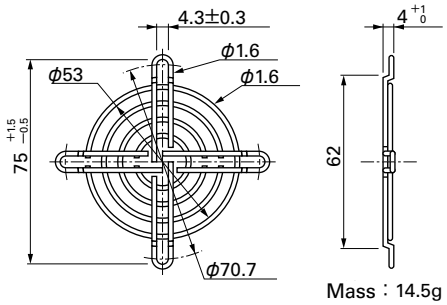


Options (unit: mm)

Finger Guards

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

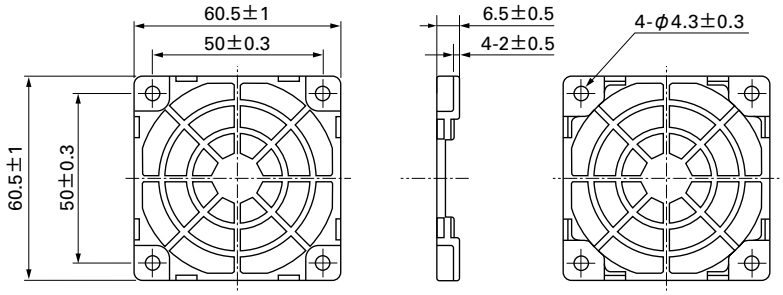
Inlet side, Outlet side



Mass : 14.5g

Resin Finger Guards

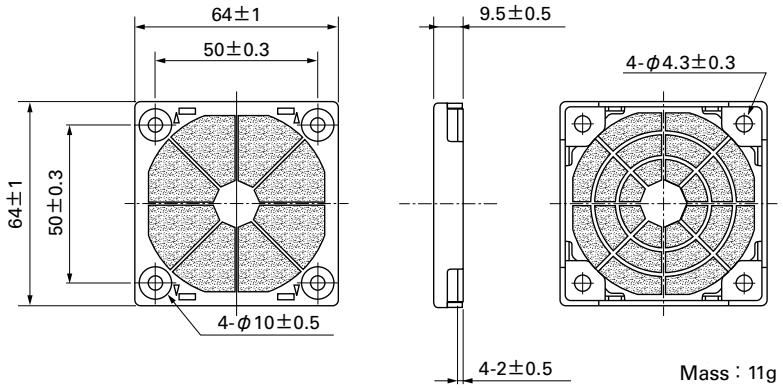
Model : 109-1003G



Mass : 7g

Resin Filter Kits

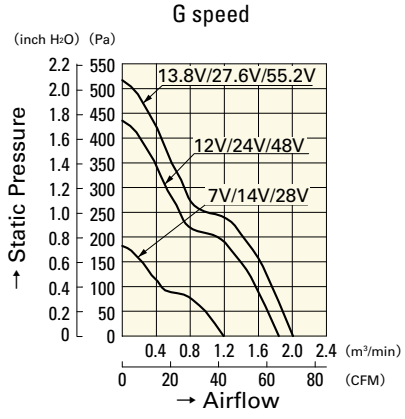
Model : 109-1003F13 (13PPI), 109-1003F20 (20PPI)
: 109-1003F30 (30PPI), 109-1003F40 (40PPI)



Mass : 11g

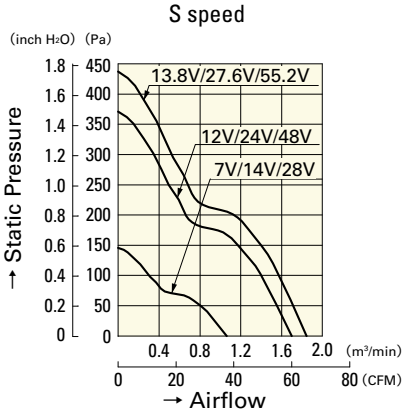
Airflow - Static Pressure Characteristics

G speed



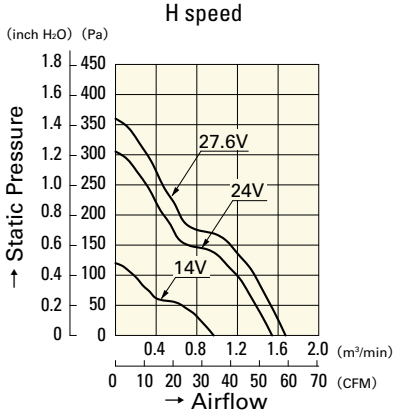
9G0612G101
9G0624G101
9G0648G101

S speed



9G0612S101
9G0624S101
9G0648S101

H speed



9G0624H101

70mm sq. San Ace 70



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

70×70×38mm (Mass : 170g) 9GA type Low Power Consumption Fan

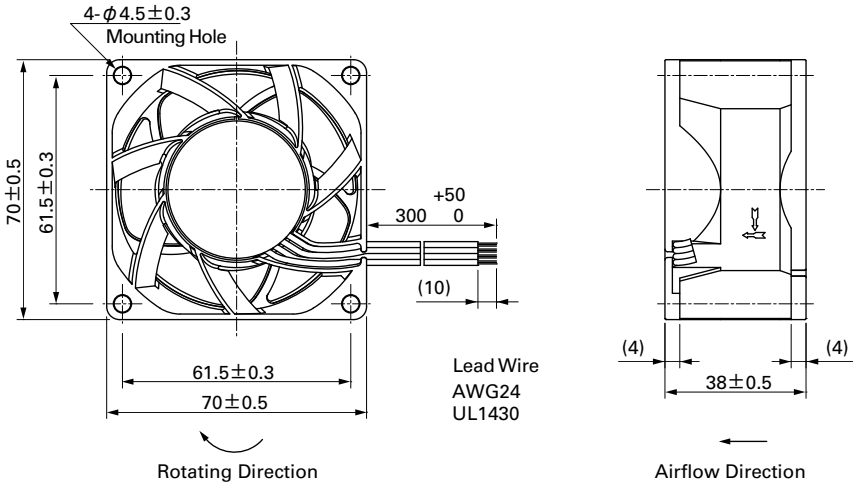
Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

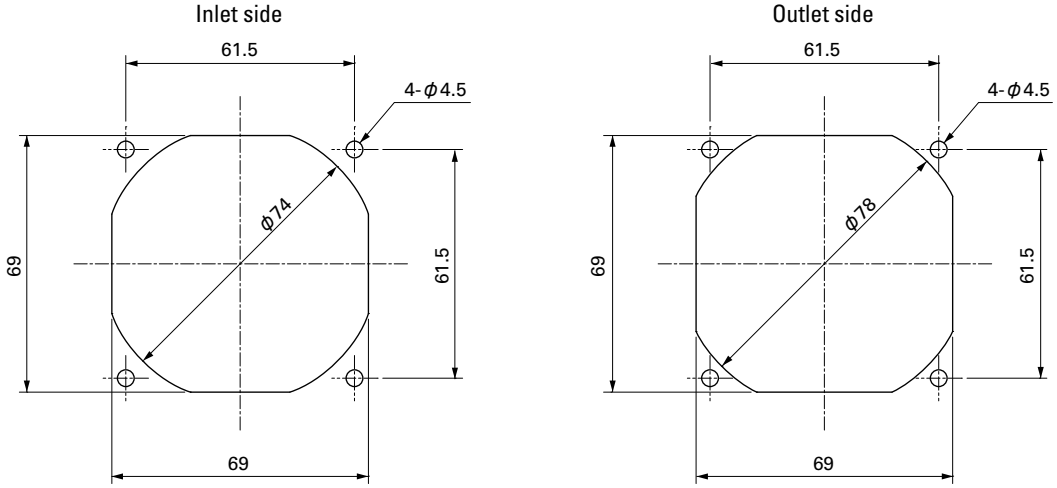
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0712P1G001	12	10.8 to 13.2	100	2.6	31.2	16,500	2.65	93.6	860	3.45	65	−20 to +70	40,000/60℃ (70,000/40℃)
			0	0.16	1.92	4,400	0.70	24.7	61	0.24	30		
9GA0712P1H001			100	1.1	13.2	12,000	1.92	67.8	455	1.83	57		
			0	0.07	0.84	2,500	0.40	14.1	20	0.08	19		

※PWM Frequency : 25kHz

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

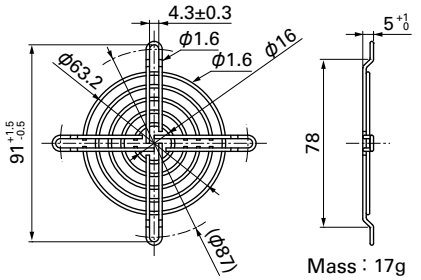


Options (unit: mm)

Finger Guards

Color
Model : 109-1128 Surface treatment : Nickel-chrome plating (silver)

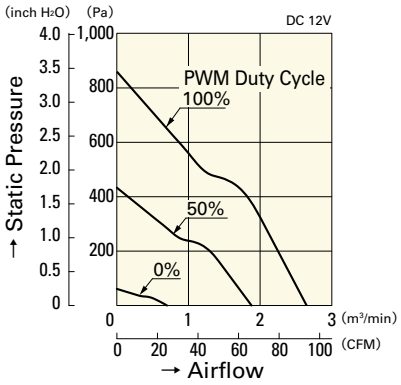
Inlet side, Outlet side



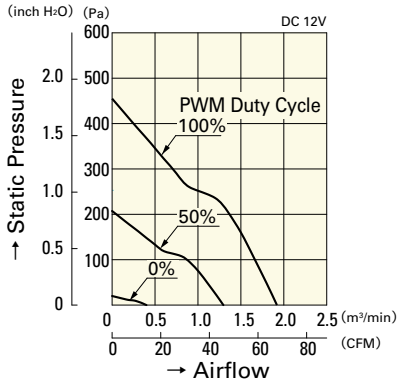
Mass : 17g

Airflow - Static Pressure Characteristics

PWM Duty Cycle

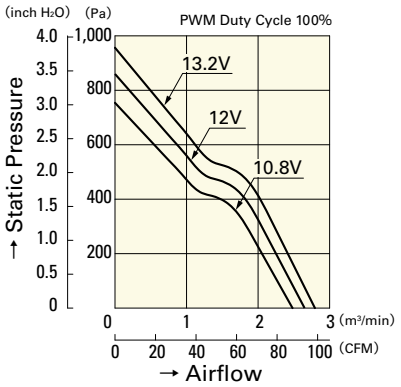


9GA0712P1G001

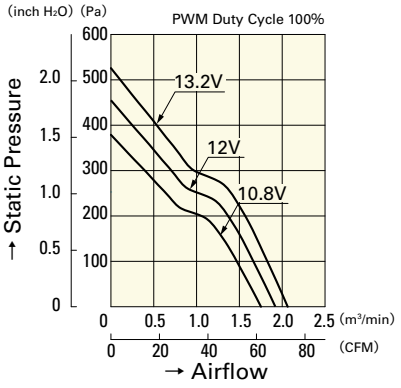


9GA0712P1H001

Operating Voltage Range

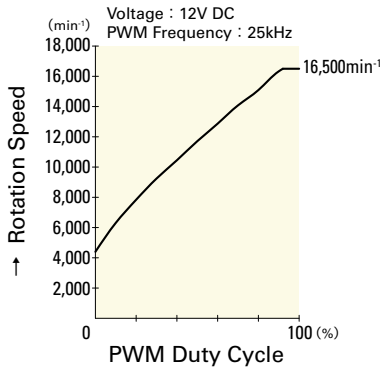


9GA0712P1G001

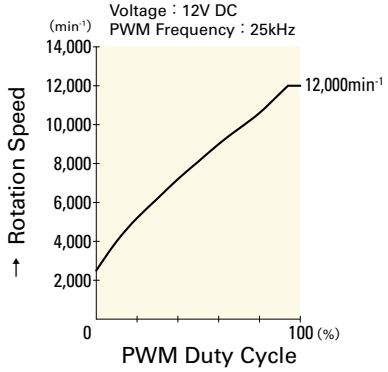


9GA0712P1H001

PWM Duty - Speed Characteristics Example



9GA0712P1G001



9GA0712P1H001

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown (For models without PWM control function, there is no speed control wiring.)
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

c UL us

Model no. 9GA0812H7001 is not certified.

80×80×15mm (Mass : 65g) 9GA type Low Power Consumption Fan

Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle Note※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0812P7G001	12	10.2 to 13.8	100	0.29	3.48	6,100	1.44	50.9	84.0	0.34	41	−20 to +70	40,000/60℃ (70,000/40℃)
9GA0812P7S001			100	0.17	2.04	5,000	1.18	41.7	56.4	0.23	37		
9GA0824P7G001	24	20.4 to 27.6	100	0.13	3.12	6,100	1.44	50.9	84.0	0.34	41		
9GA0824P7S001			100	0.08	1.92	5,000	1.18	41.7	56.4	0.23	37		

Note: Fan does not rotate when PWM duty cycle is 0%.

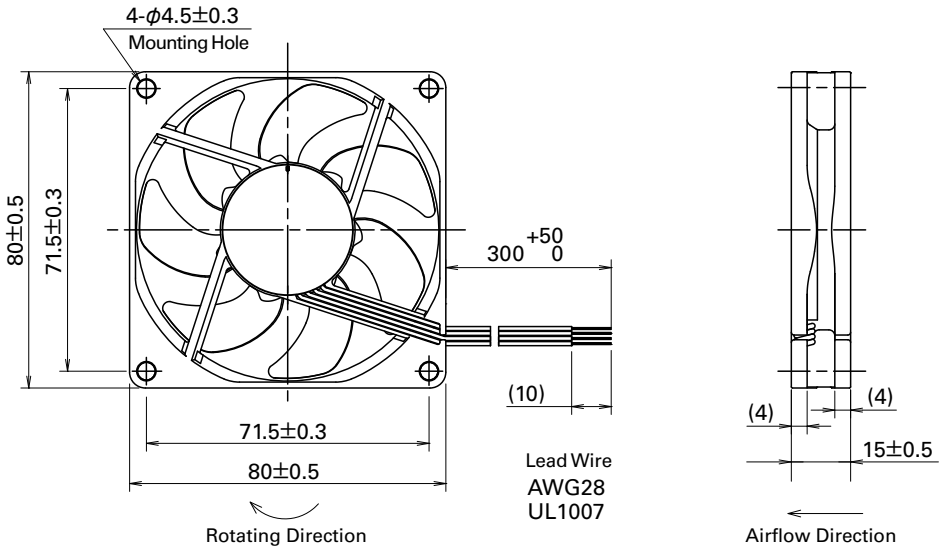
※PWM Frequency : 25kHz

The following nos. **have pulse sensors and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0812H7001	12	6 to 13.2	0.09	1.08	3,800	0.89	31.4	32.6	0.13	29	−20 to +70	40,000/60℃ (70,000/40℃)
9GA0824H7001	24	12 to 26.4	0.05	1.20	3,800	0.89	31.4	32.6	0.13	29		

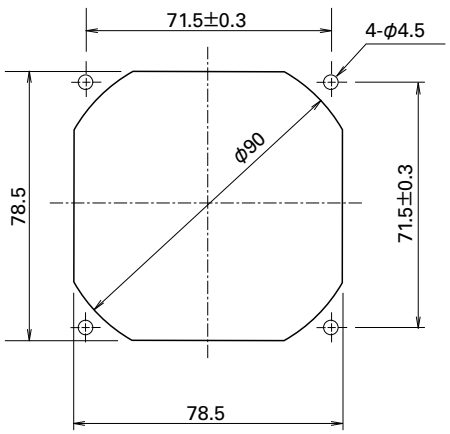
Other sensor specifications are available as options. Please refer to the index (pp. 505 to 506).

Dimensions (unit: mm) (With PWM control function・With pulse sensor)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

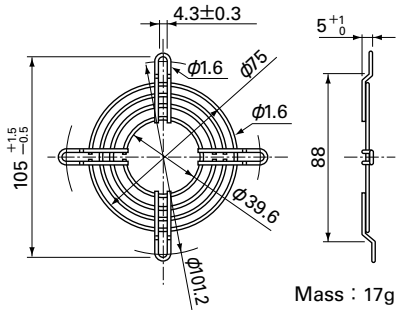


Options (unit: mm)

Finger Guards

Model : 109-049C Surface treatment : Nickel-chrome plating (silver) Color

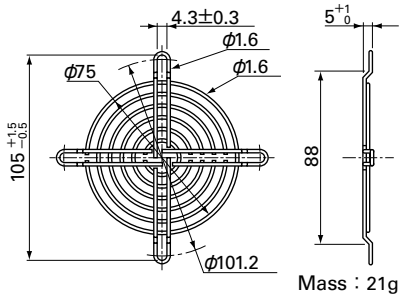
Outlet side



Mass : 17g

Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color
: 109-049H : Cation electropainting (black)

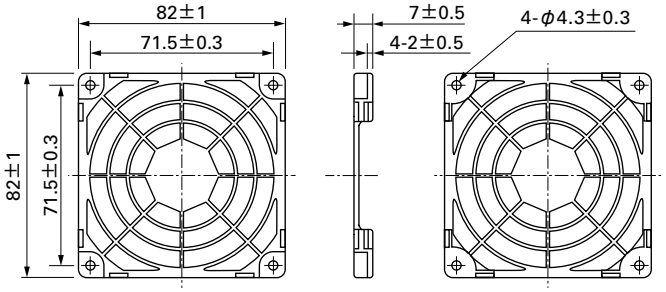
Inlet side, Outlet side



Mass : 21g

Resin Finger Guards

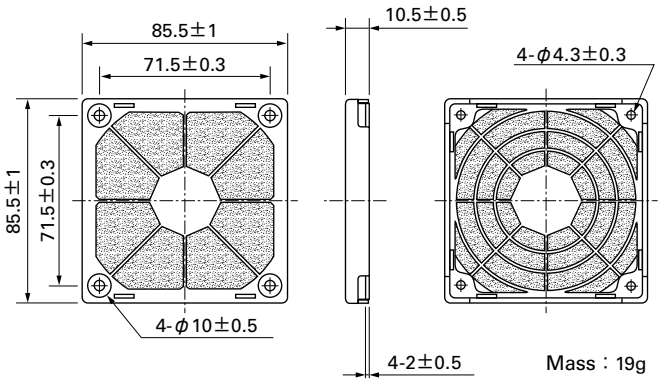
Model : 109-1002G



Mass : 10g

Resin Filter Kits

Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

80 mm sq.

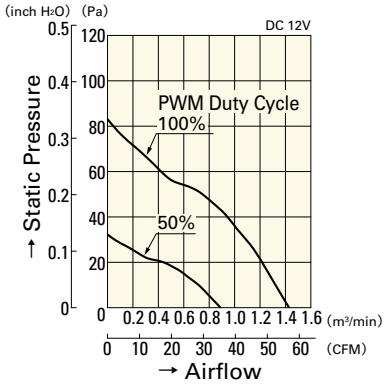
San Ace 80

80×80×15mm 〔Mass：65g〕

Airflow - Static Pressure Characteristics

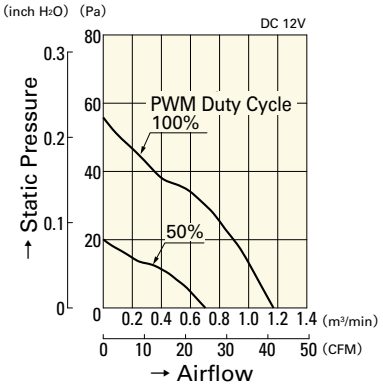
PWM Duty Cycle

With PWM control function・With pulse sensor



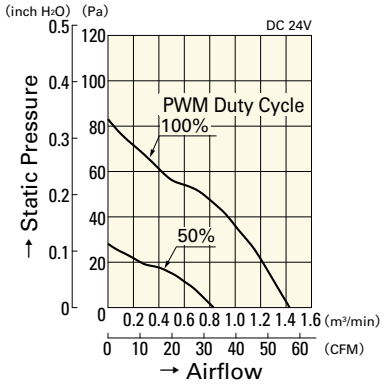
9GA0812P7G001

With PWM control function・With pulse sensor



9GA0812P7S001

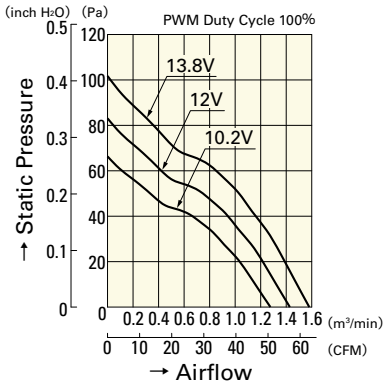
With PWM control function・With pulse sensor



9GA0824P7G001

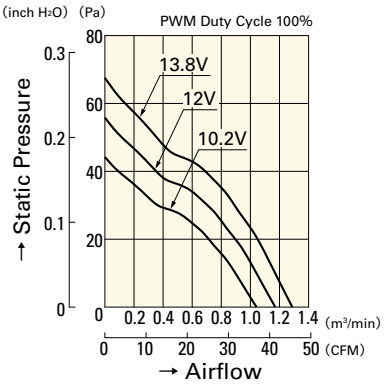
Operating Voltage Range

With PWM control function・With pulse sensor



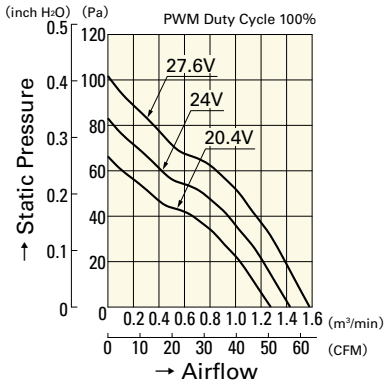
9GA0812P7G001

With PWM control function・With pulse sensor



9GA0812P7S001

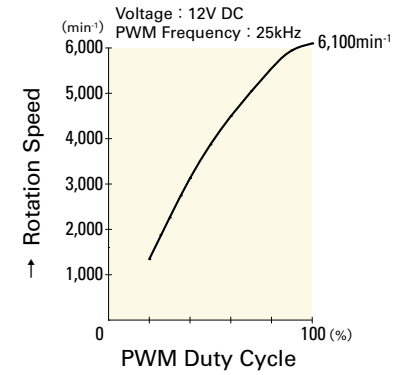
With PWM control function・With pulse sensor



9GA0824P7G001

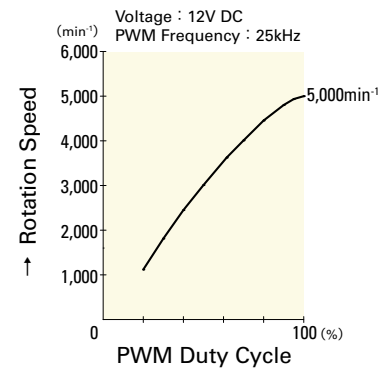
PWM Duty - Speed Characteristics Example

With PWM control function・With pulse sensor



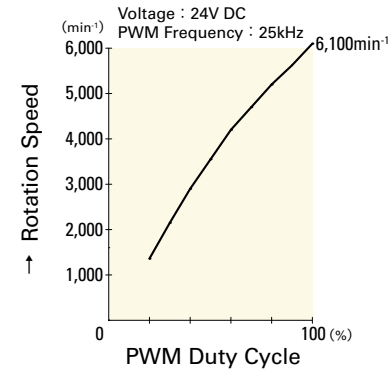
9GA0812P7G001

With PWM control function・With pulse sensor



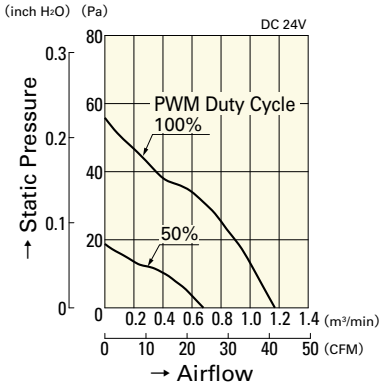
9GA0812P7S001

With PWM control function・With pulse sensor



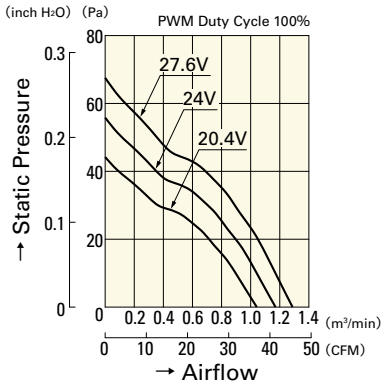
9GA0824P7G001

With PWM control function・With pulse sensor



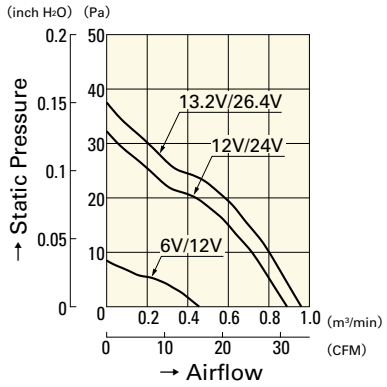
9GA0824P7S001

With PWM control function・With pulse sensor



9GA0824P7S001

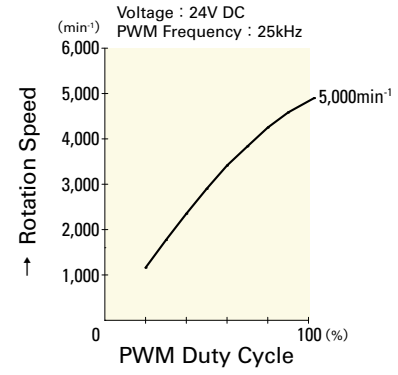
With pulse sensor



9GA0812H7001

9GA0824H7001

With PWM control function・With pulse sensor



9GA0824P7S001

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

80×80×15mm (Mass : 68g) 9P type

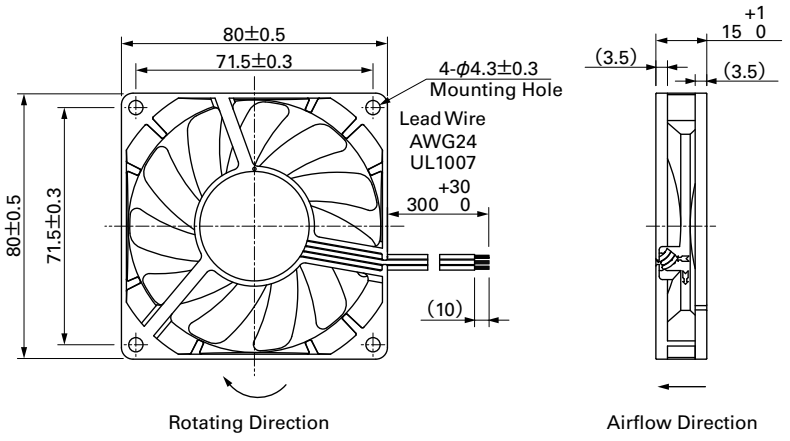
Specifications

The following nos. **have pulse sensors and ribs.**

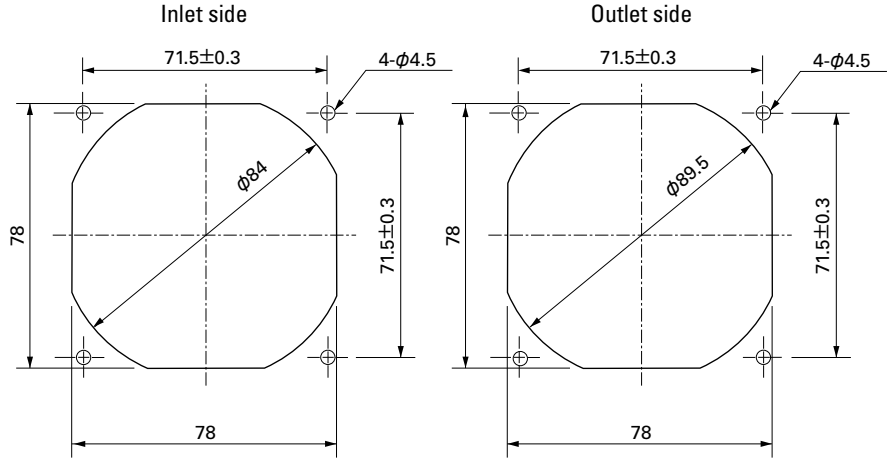
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109P0812H701	12	7 to 13.8	0.2	2.4	3,100	0.91	32.1	29.4	0.118	31	−20 to +70	40,000/60℃
109P0812M701			0.09	1.08	2,000	0.57	20.1	12.6	0.051	21		60,000/60℃
109P0824H701	24	14 to 27.6	0.1	2.4	3,100	0.91	32.1	29.4	0.118	31		40,000/60℃
109P0824M701			0.05	1.2	2,000	0.57	20.1	12.6	0.051	21		60,000/60℃

Other sensor specifications are available as options. Please refer to the index (pp. 497 to 498).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

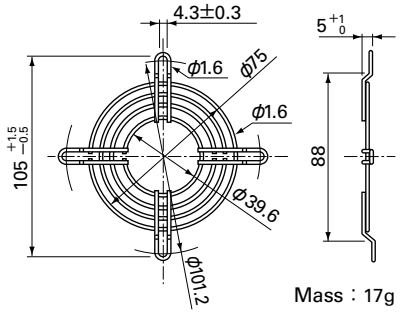


Options (unit: mm)

Finger Guards

Model : 109-049C Surface treatment : Nickel-chrome plating (silver) Color

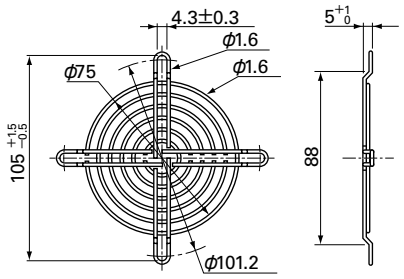
Outlet side



Mass : 17g

Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color
: 109-049H : Cation electropainting (black)

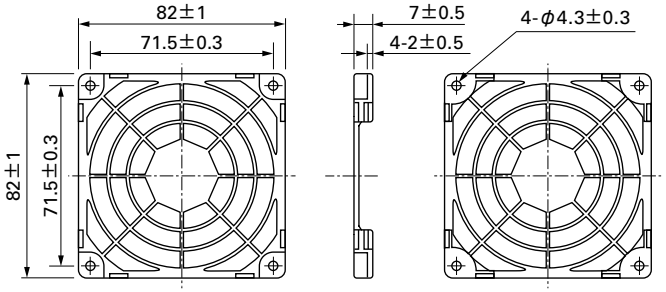
Inlet side, Outlet side



Mass : 21g

Resin Finger Guards

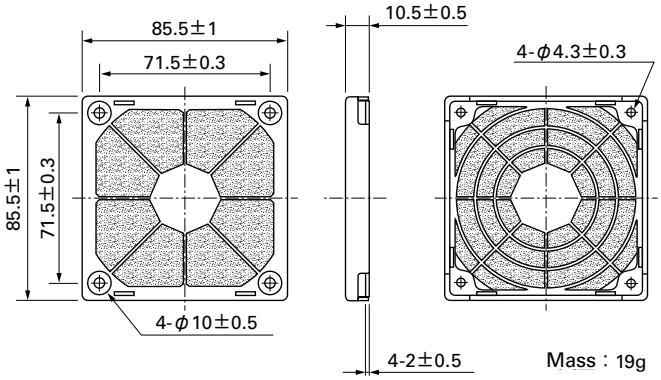
Model : 109-1002G



Mass : 10g

Resin Filter Kits

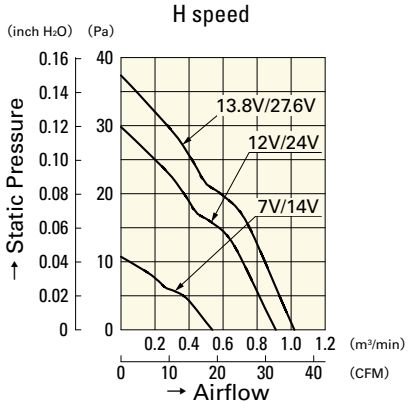
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

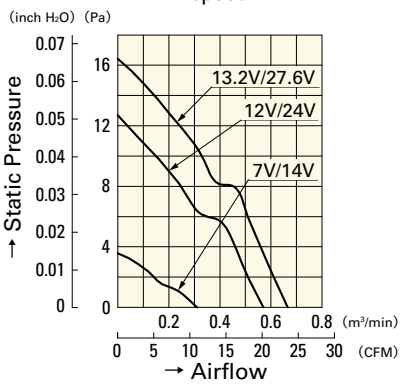
Airflow - Static Pressure Characteristics

H speed



109P0812H701
109P0824H701

M speed



109P0812M701
109P0824M701

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

80×80×20mm (Mass : 80g) 9GA type Low Power Consumption Fan

Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.**

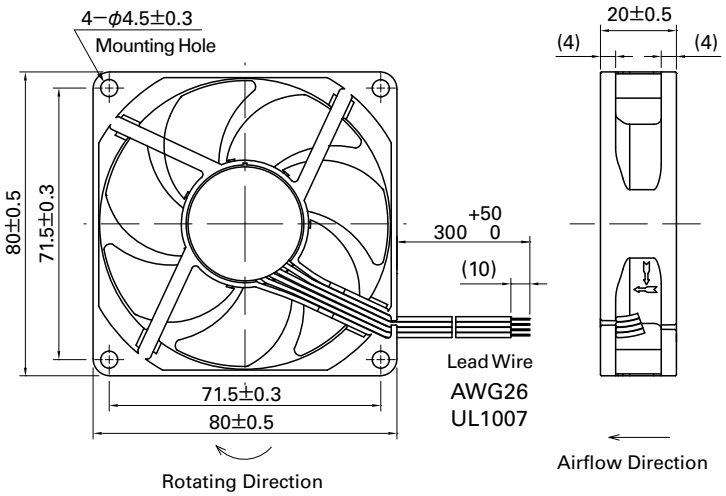
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle Note)※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0812P6G001	12	10.2 to 13.8	100	0.3	3.6	5,850	1.72	60.78	110	0.44	45	−20 to +70	40,000/60℃ (70,000/40℃)
9GA0812P6M001				0.06	0.72	2,900	0.84	29.68	27	0.11	26.5		60,000/60℃
9GA0824P6G001	24	20.4 to 27.6	100	0.15	3.6	5,850	1.72	60.78	110	0.44	45		40,000/60℃ (70,000/40℃)
9GA0824P6M001				0.03	0.72	2,900	0.84	29.68	27	0.11	26.5		60,000/60℃

Note: Fan does not rotate when PWM duty cycle is 0%.

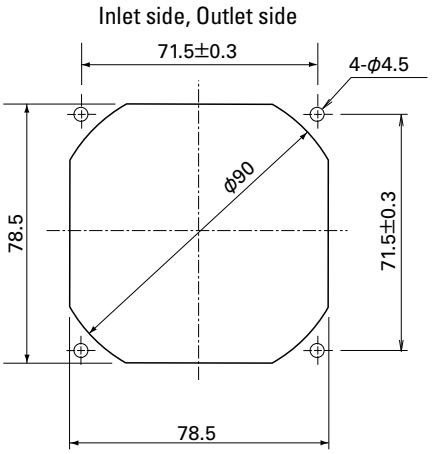
※PWM Frequency : 25kHz

Other sensor specifications are available as options. Please refer to the index (pp. 505 to 506).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

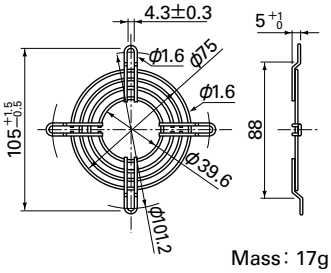


Options (unit: mm)

Finger Guards

Model : 109-049C Surface treatment : Nickel-chrome plating (silver) Color

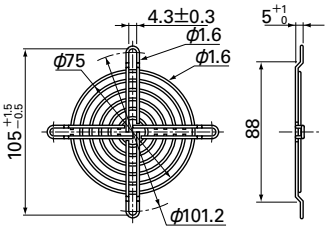
Outlet side



Mass : 17g

Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color
: 109-049H : Cation electropainting (black)

Inlet side, Outlet side

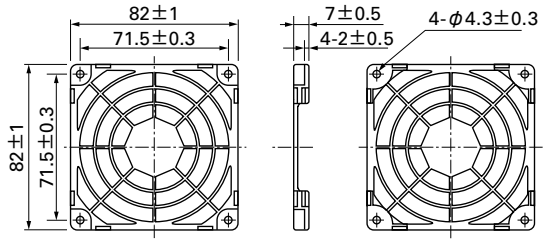


Mass : 21g

Options (unit: mm)

Resin Finger Guards

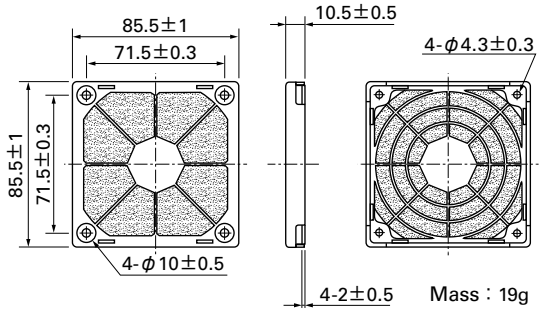
Model : 109-1002G



Mass : 10g

Resin Filter Kits

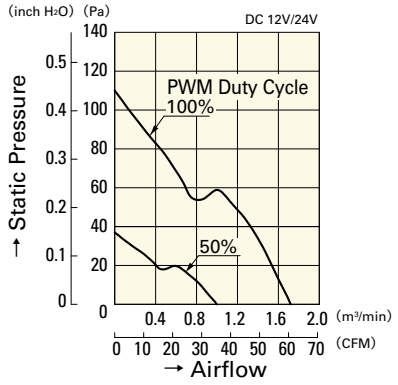
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)

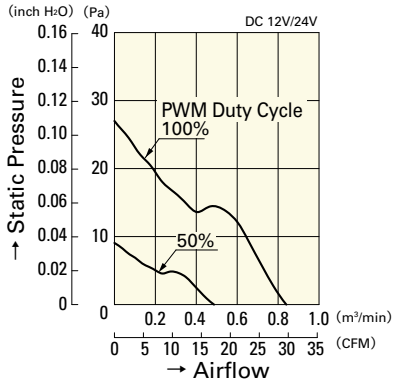


Mass : 19g

Airflow - Static Pressure Characteristics

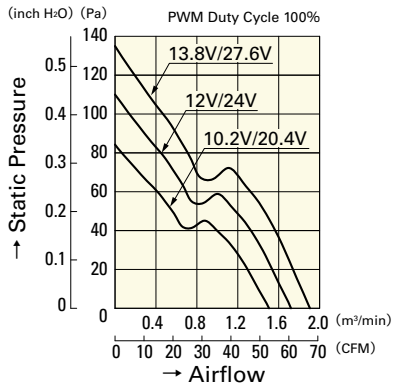
PWM Duty Cycle

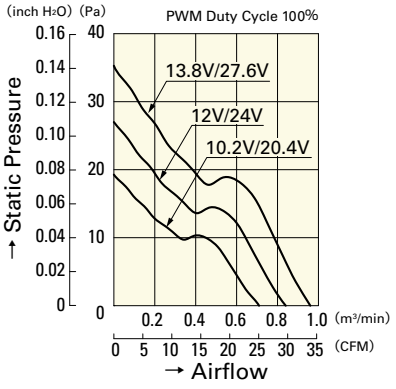




9GA0812P6G001	9GA0812P6M001
9GA0824P6G001	9GA0824P6M001

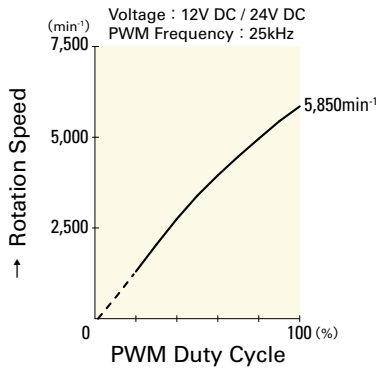
Operating Voltage Range

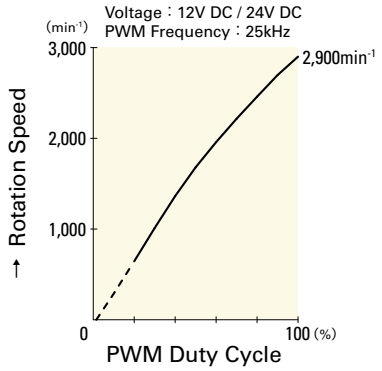




9GA0812P6G001	9GA0812P6M001
9GA0824P6G001	9GA0824P6M001

PWM Duty - Speed Characteristics Example





9GA0812P6G001	9GA0812P6M001
9GA0824P6G001	9GA0824P6M001

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

Model no. 109P0812C601 is not certified.

80×80×20mm (Mass : 100g) 9P type

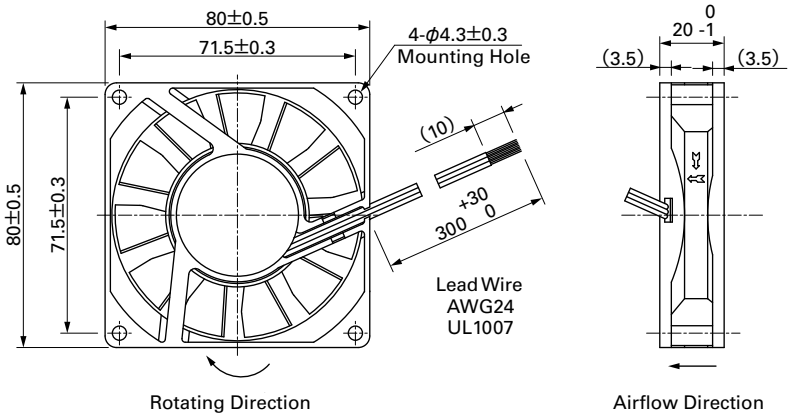
Specifications

The following nos. **have pulse sensors and ribs.**

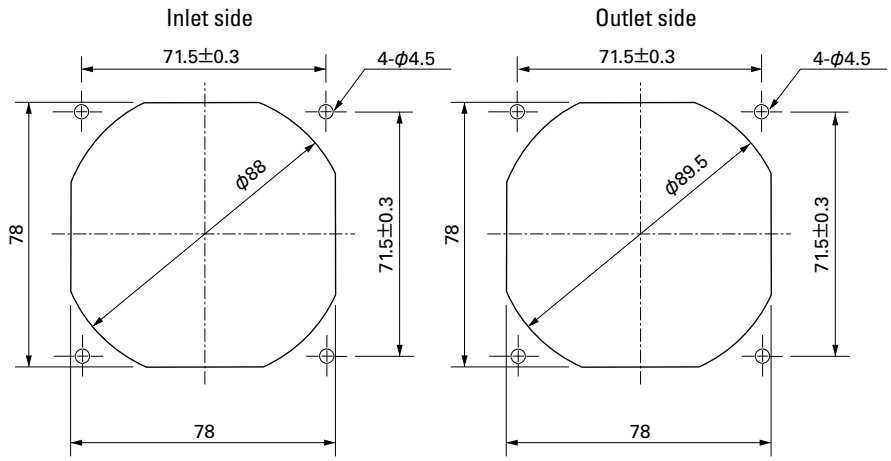
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109P0812C601	12	10.2 to 13.8	0.29	3.48	3,700	1.07	37.8	46	0.185	39	−20 to +60	60,000/60℃
109P0812H601			0.21	2.52	2,900	0.84	29.7	29.4	0.118	31	−20 to +70	
109P0812M601			0.13	1.56	2,300	0.67	23.7	18.6	0.075	25		
109P0824H601	24	20.4 to 27.6	0.12	2.88	2,900	0.84	29.7	29.4	0.118	31		
109P0824M601			0.07	1.68	2,300	0.67	23.7	18.6	0.075	25		
109P0848C601	48	38 to 57.6	0.08	3.84	3,700	1.07	37.8	46	0.185	39	−20 to +70	40,000/60℃
109P0848H601			0.05	2.4	2,900	0.84	29.7	29.4	0.118	31	−20 to +60	

Other sensor specifications are available as options. Please refer to the index (pp. 497 to 498).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

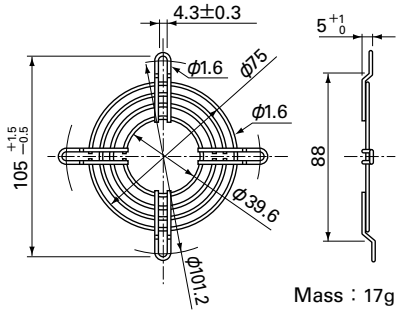


Options (unit: mm)

Finger Guards

Model : 109-049C Surface treatment : Nickel-chrome plating (silver) Color

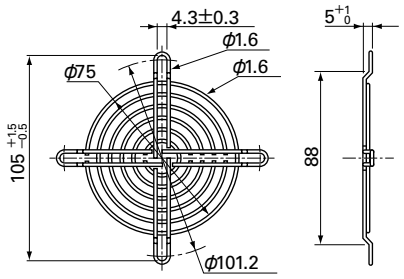
Outlet side



Mass : 17g

Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color
: 109-049H : Cation electropainting (black)

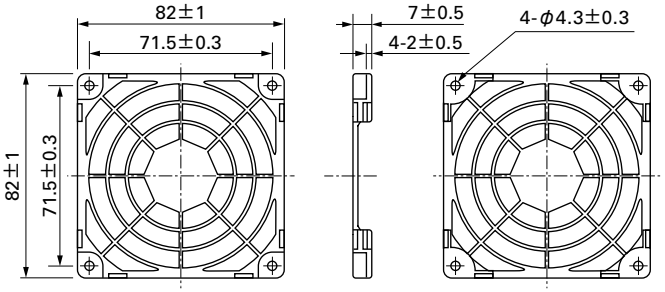
Inlet side, Outlet side



Mass : 21g

Resin Finger Guards

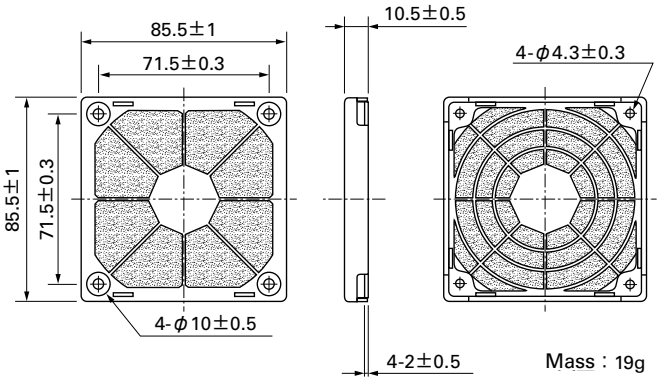
Model : 109-1002G



Mass : 10g

Resin Filter Kits

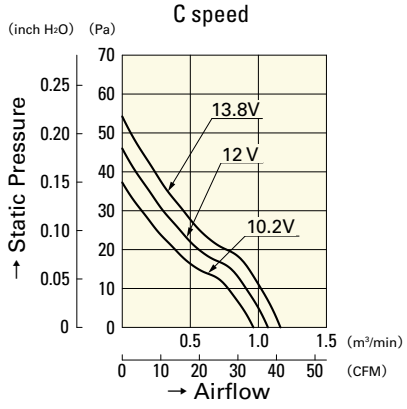
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

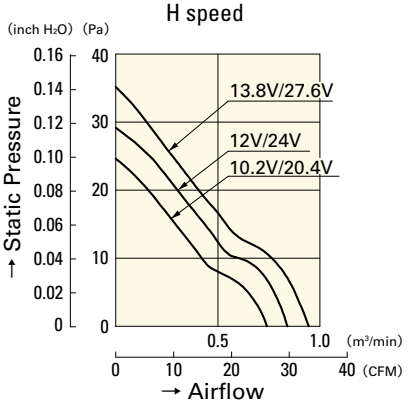
Airflow - Static Pressure Characteristics

C speed



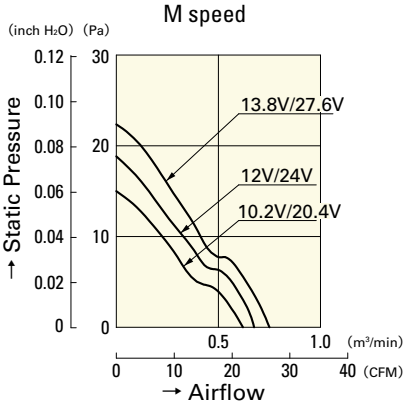
109P0812C601

H speed



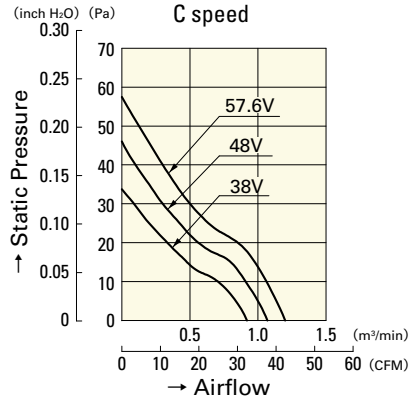
109P0812H601
109P0824H601

M speed



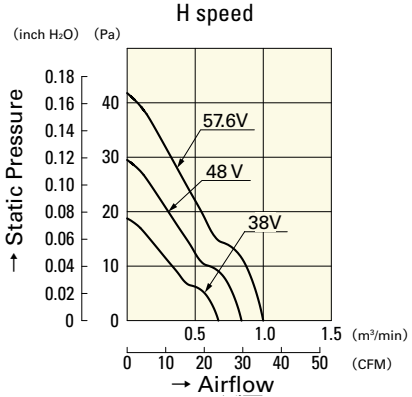
109P0812M601
109P0824M601

C speed



109P0848C601

H speed



109P0848H601

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ··· −30℃ to +70℃ (Non-condensing)

80×80×25mm (Mass : 110g) 9GA type Low Noise Low Power Consumption Fan

Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

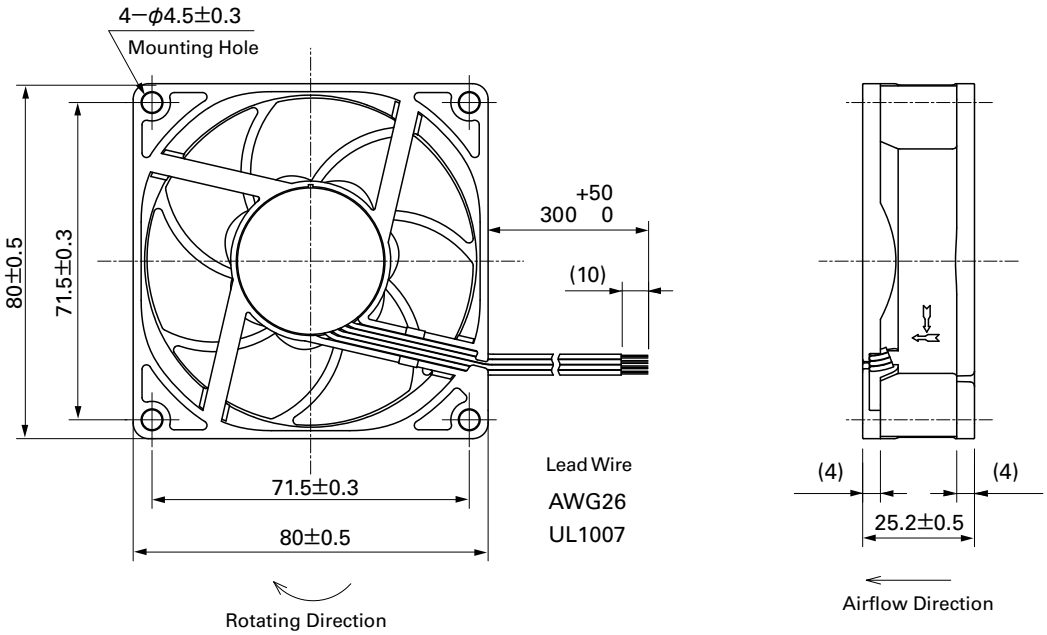
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle Note※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0812P4J001	12	10.8 to 13.2	100	0.6	7.2	7,400	2.07	73.0	177.6	0.7	48	−20 to +70	40,000/60℃ (70,000/40℃)
			25	0.08	0.96	2,500	0.69	24.3	20.2	0.08	21		
9GA0812P4G001			100	0.48	5.76	6,800	1.91	67.4	150	0.6	45		
			25	0.06	0.72	1,500	0.42	14.8	7.2	0.02	17		
9GA0812P4H001			100	0.22	2.64	5,200	1.46	51.5	87.7	0.35	37		
			25	0.06	0.72	1,600	0.44	15.5	8.3	0.03	17		
9GA0824P4J001	24	21.6 to 26.4	100	0.28	6.72	7,400	2.07	73.0	177.6	0.7	48		
			25	0.06	1.44	2,800	0.78	27.5	25.4	0.1	23		
9GA0824P4G001			100	0.21	5.04	6,800	1.91	67.4	150	0.6	45		
			25	0.04	0.96	2,100	0.58	20.4	14.3	0.05	19		
9GA0824P4H001			100	0.1	2.4	5,200	1.46	51.5	87.7	0.35	37		
			25	0.02	0.48	1,500	0.42	14.8	7.2	0.02	17		

Note: Fan does not rotate when PWM duty cycle is 0%.

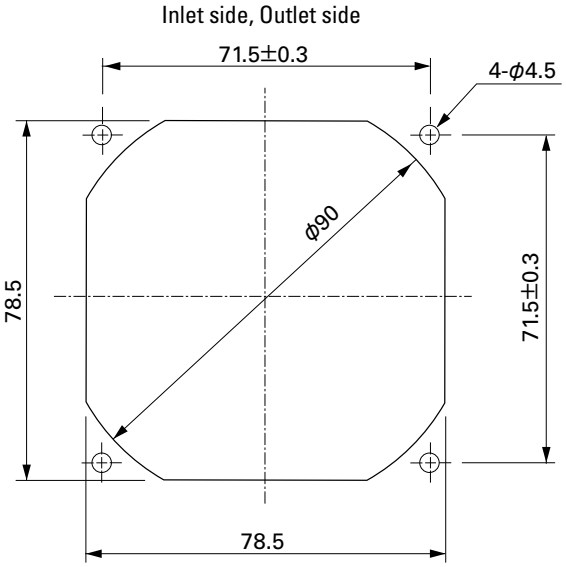
※PWM Frequency : 25kHz

Other sensor specifications are available as options. Please refer to the index (pp. 505 to 506).

Dimensions (unit: mm) (With ribs)



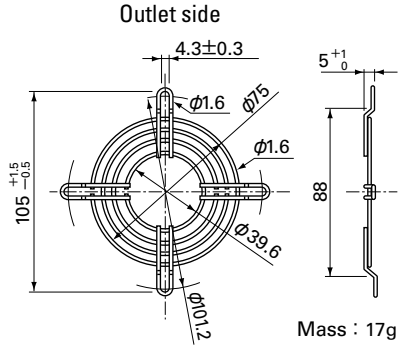
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

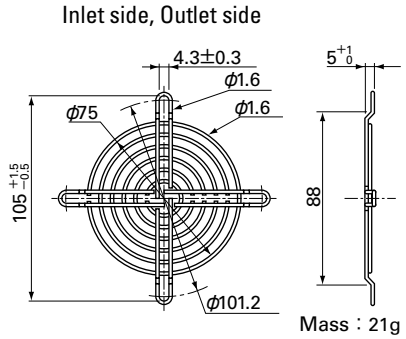
Finger Guards

Model : 109-049C Surface treatment : Nickel-chrome plating (silver) Color



Mass : 17g

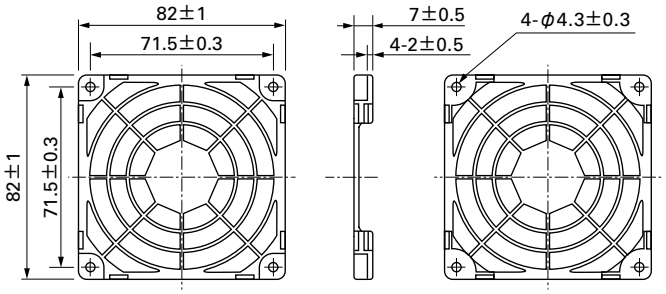
Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color
: 109-049H : Cation electropainting (black)



Mass : 21g

Resin Finger Guards

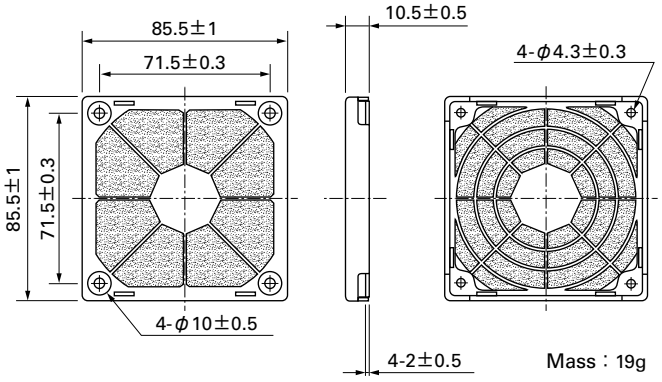
Model : 109-1002G



Mass : 10g

Resin Filter Kits

Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

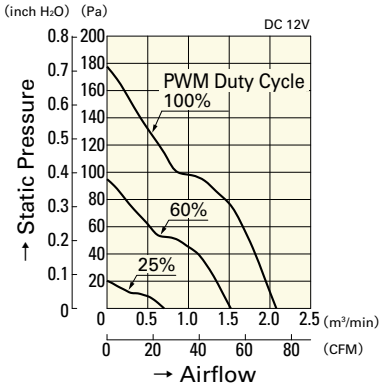
80 mm sq.

San Ace 80

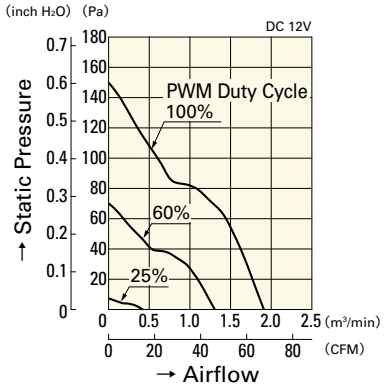
80×80×25mm 〔Mass：110g〕

Airflow - Static Pressure Characteristics

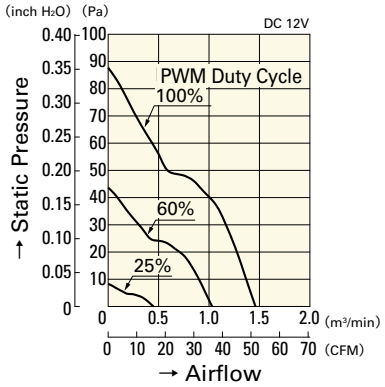
PWM Duty Cycle



9GA0812P4J001

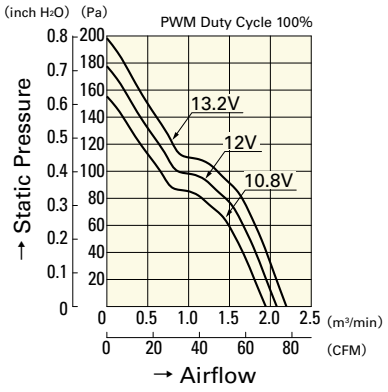


9GA0812P4G001

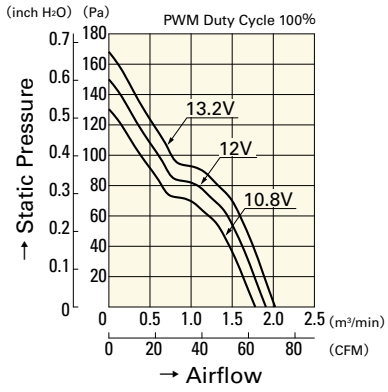


9GA0812P4H001

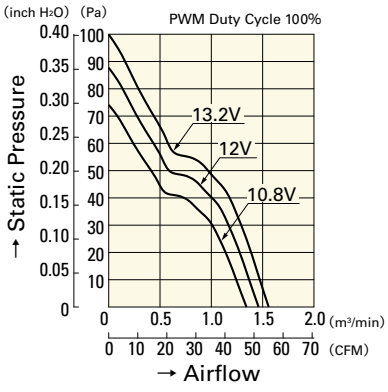
Operating Voltage Range



9GA0812P4J001

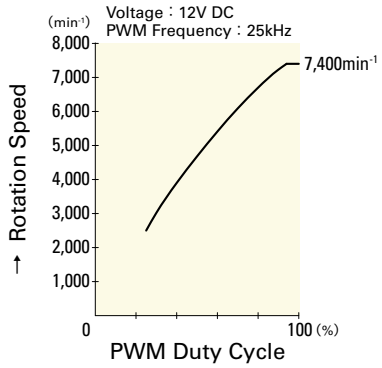


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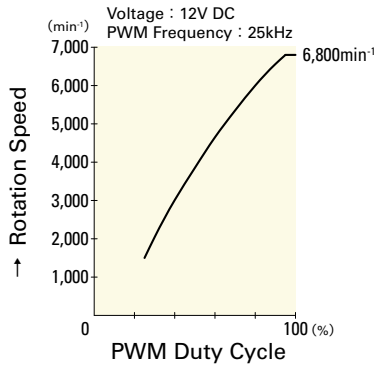


9GA0812P4H001

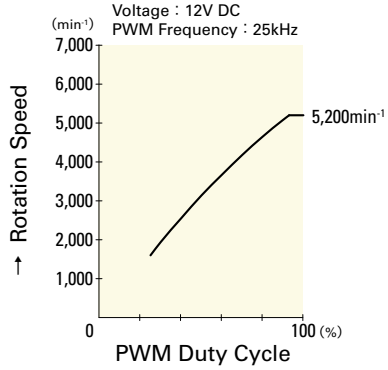
PWM Duty - Speed Characteristics Example



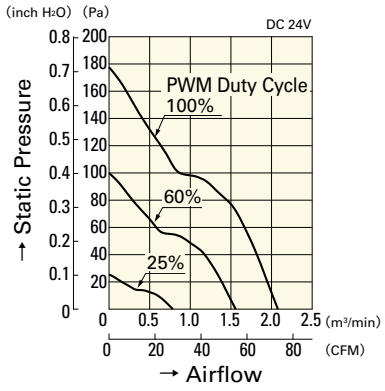
9GA0812P4J001



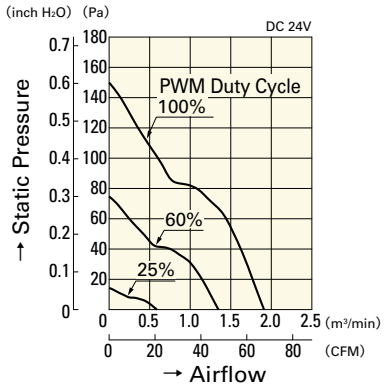
9GA0812P4G001



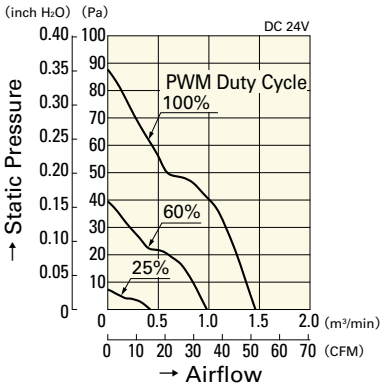
9GA0812P4H001



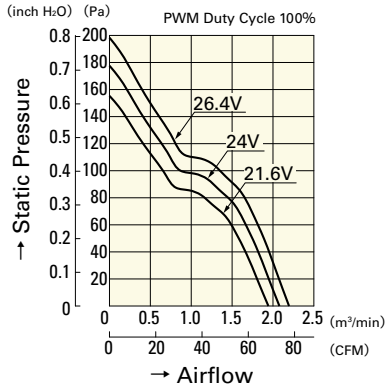
9GA0824P4J001



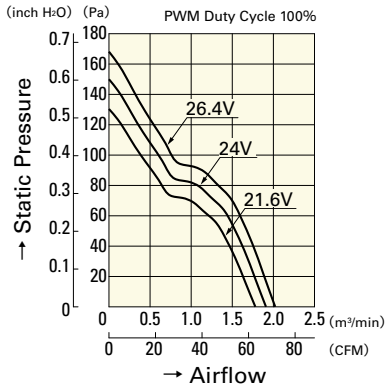
9GA0824P4G001



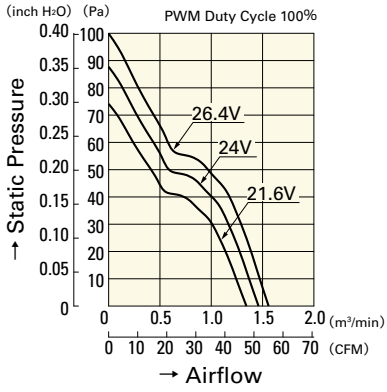
9GA0824P4H001



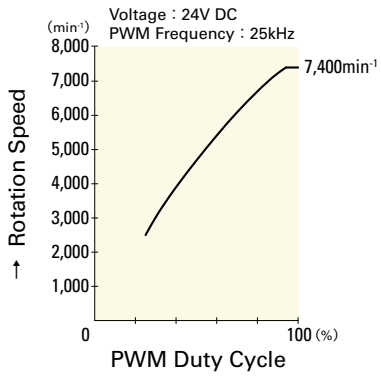
9GA0824P4J001



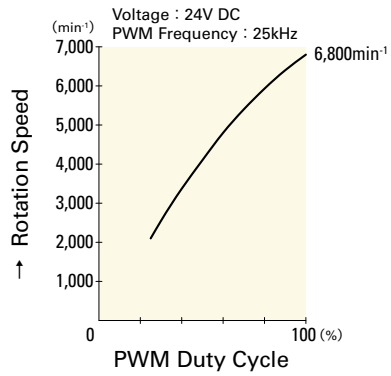
9GA0824P4G001



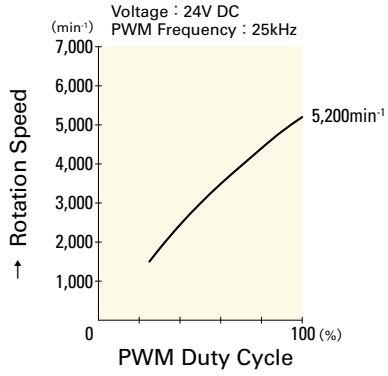
9GA0824P4H001



9GA0824P4J001



9GA0824P4G001



9GA0824P4H001

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow
- Storage Temperature ··· −30℃ to +70℃ (Non-condensing)

Model no. 9S0812H401 is not TÜV certified.

80×80×25mm (Mass : 75g) 9S type Silent Fan

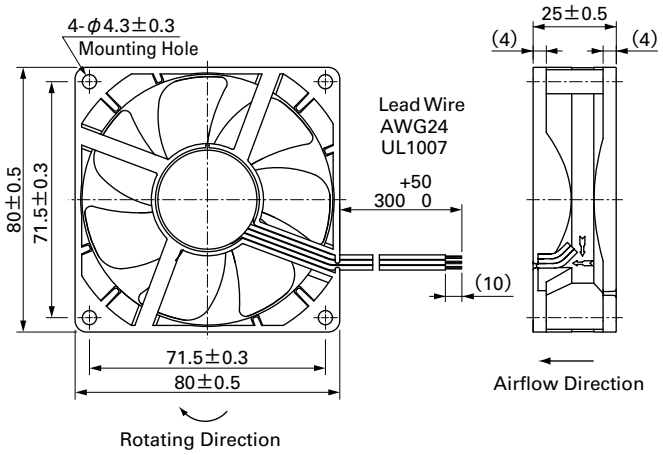
Specifications

The following nos. **have pulse sensors and ribs. For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9S0812H401	12	5.0 to 13.2	0.23	2.76	3,400	1.12	39.5	52.15	0.20	31	−10 to +70	40,000/60℃
9S0812F401		5.0 to 13.8	0.11	1.32	2,800	0.93	32.8	35.5	0.143	24		
9S0812M401			0.08	0.96	2,500	0.83	29.3	27.5	0.110	22		
9S0812L401		6.0 to 13.8	0.05	0.60	2,000	0.66	23.3	18.1	0.073	16		
9S0824M401	24	10 to 26.4	0.06	1.44	2,500	0.83	29.3	27.5	0.110	22		
9S0824L401			0.04	0.96	2,000	0.66	23.3	18.1	0.073	16		

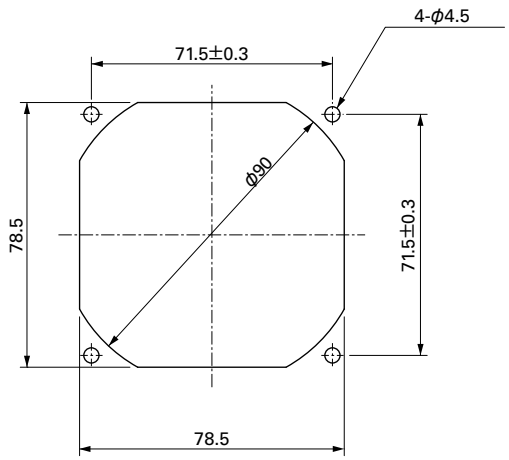
Other sensor specifications are available as options. Please refer to the index (p. 510).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

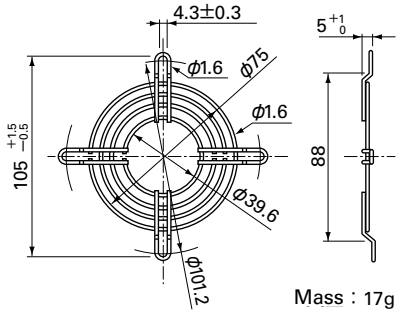


Options (unit: mm)

Finger Guards

Color
Model : 109-049C Surface treatment : Nickel-chrome plating (silver)

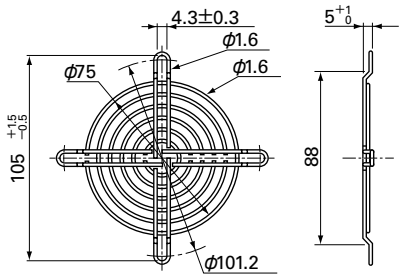
Outlet side



Mass : 17g

Color
Model : 109-049E Surface treatment : Nickel-chrome plating (silver)
: 109-049H : Cation electropainting (black)

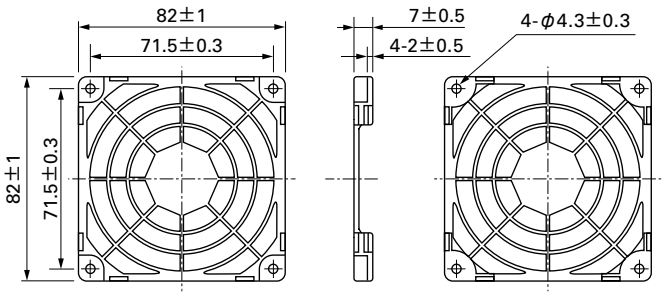
Inlet side, Outlet side



Mass : 21g

Resin Finger Guards

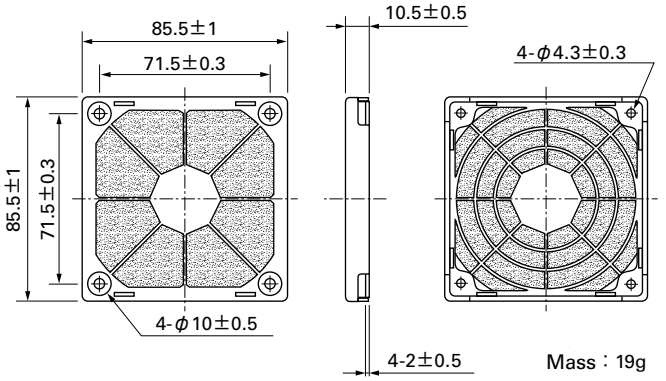
Model : 109-1002G



Mass : 10g

Resin Filter Kits

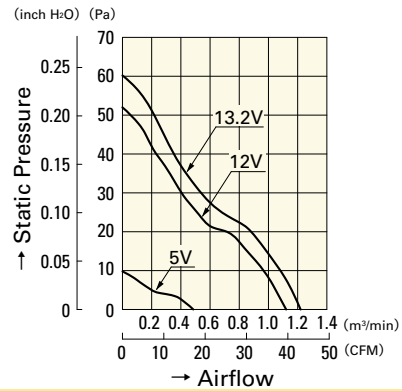
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

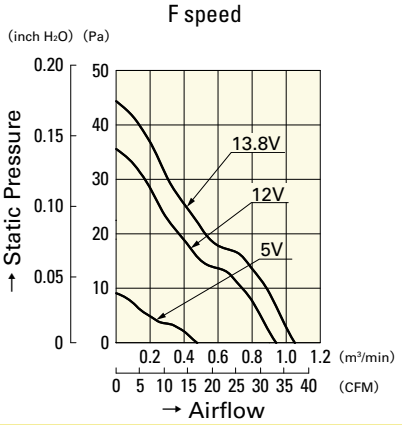
Airflow - Static Pressure Characteristics

H speed



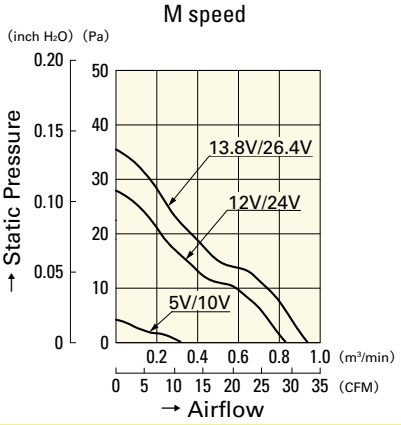
9S0812H401

F speed



9S0812F401

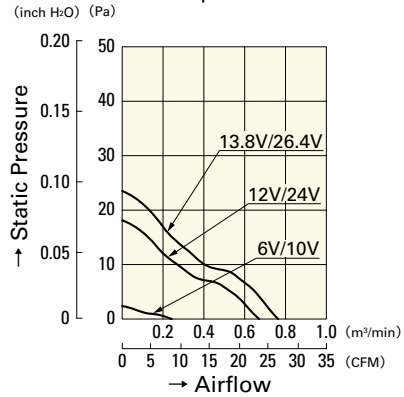
M speed



9S0812M401

9S0824M401

L speed



9S0812L401

9S0824L401

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃ , rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···−30℃ to +70℃ (Non-condensing)

80×80×25mm (Mass：125g) 9GV type

Specifications

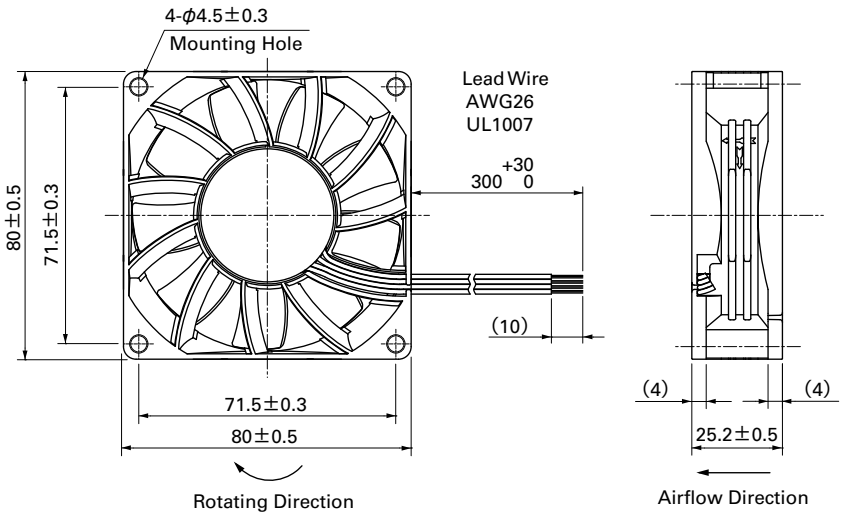
The following nos. **have PWM controls, pulse sensors, and ribs. For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GV0812P4K03	12	10.2 to 13.8	100	0.87	10.4	5,600	2.12	74.8	173.0	0.69	52	−20 to +70	40,000/60℃
			0	0.10	1.2	1,400	0.50	18.7	10.3	0.04	18		
9GV0812P4J03			100	0.47	5.6	4,500	1.72	60.7	110.0	0.44	46		
			0	0.07	0.8	1,200	0.45	16.2	7.5	0.03	14		
9GV0824P4K01	24	20.4 to 27.6	100	0.44	10.56	5,600	2.12	74.8	173.0	0.69	52		
			0	0.06	1.44	1,400	0.53	18.7	10.8	0.04	18		
9GV0848P4K03	48	43 to 53	100	0.22	10.56	5,600	2.12	74.8	173.0	0.69	52		
			0	0.04	1.92	1,500	0.57	20.1	12.4	0.05	19		

※PWM Frequency：25kHz

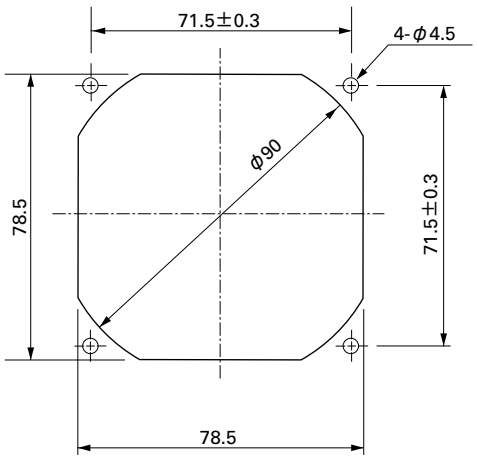
Other sensor specifications are available as options. Please refer to the index (p. 507).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

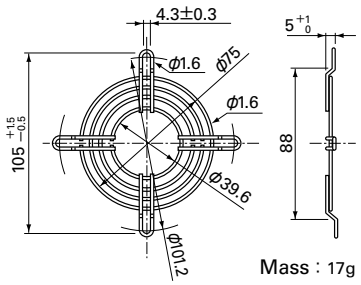


Options (unit: mm)

Finger Guards

Model : 109-049C Surface treatment : Nickel-chrome plating (silver) Color

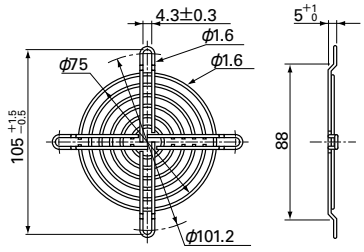
Outlet side



Mass : 17g

Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color
: 109-049H : Cation electropainting (black)

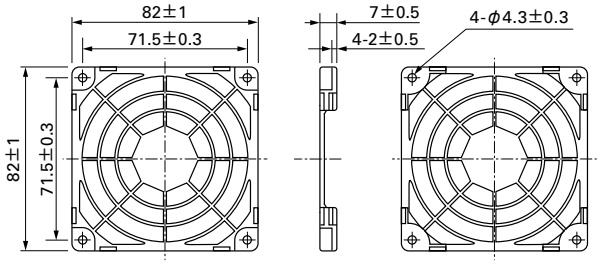
Inlet side, Outlet side



Mass : 21g

Resin Finger Guards

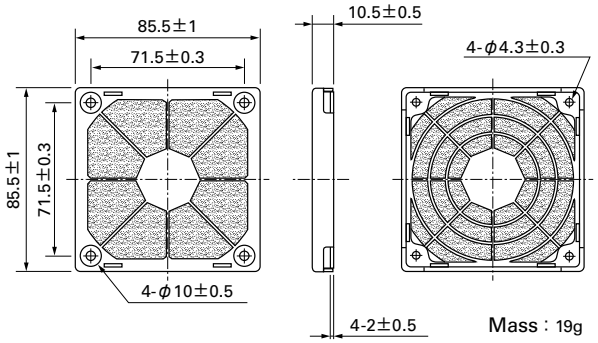
Model : 109-1002G



Mass : 10g

Resin Filter Kits

Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

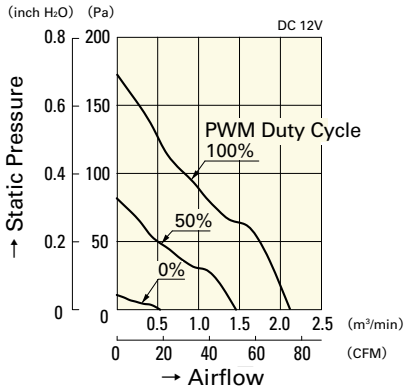
80 mm sq.

San Ace 80

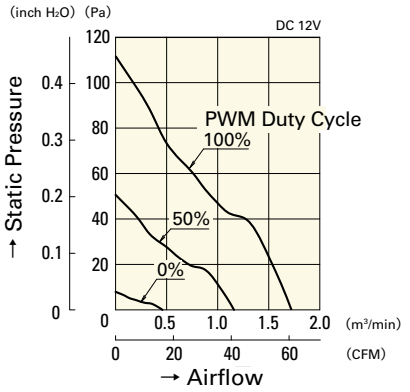
80×80×25mm 〔Mass：125g〕

Airflow - Static Pressure Characteristics

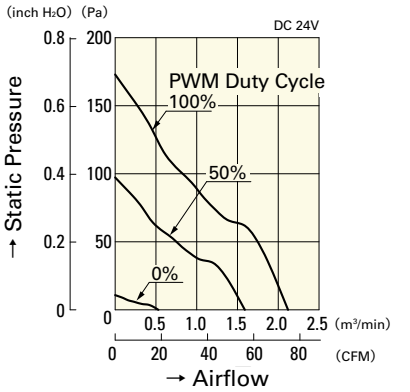
PWM Duty Cycle



9GV0812P4K03

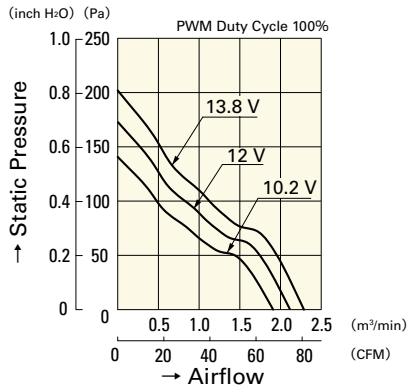


9GV0812P4J03

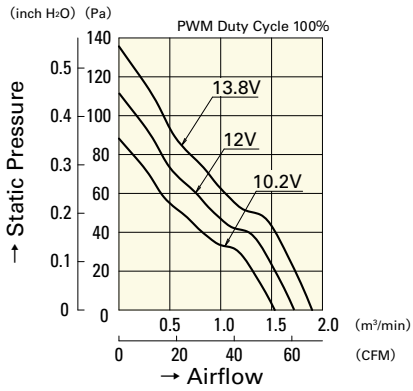


9GV0824P4K01

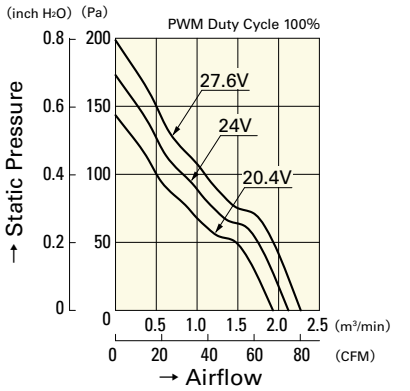
Operating Voltage Range



9GV0812P4K03

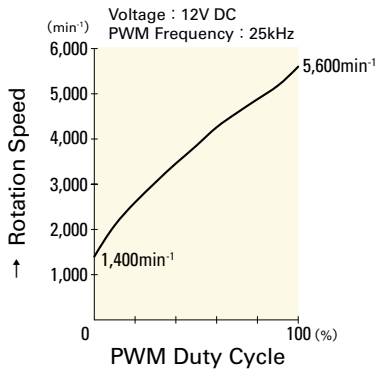


9GV0812P4J03

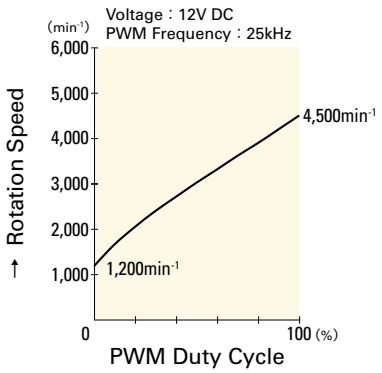


9GV0824P4K01

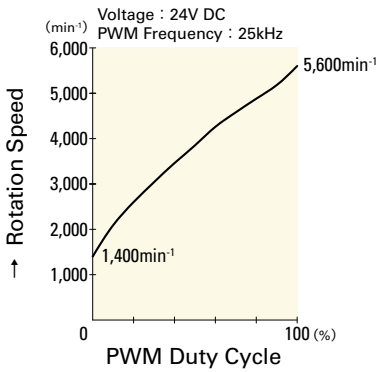
PWM Duty - Speed Characteristics Example



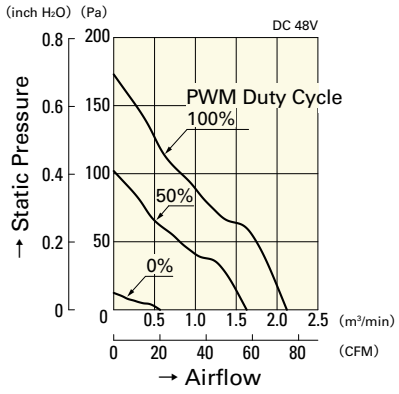
9GV0812P4K03



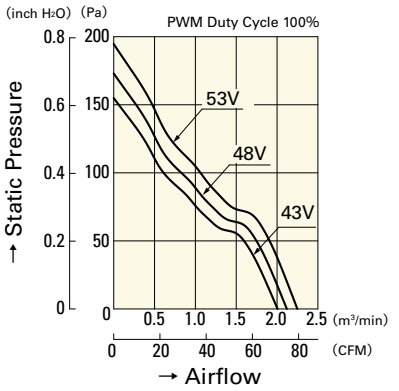
9GV0812P4J03



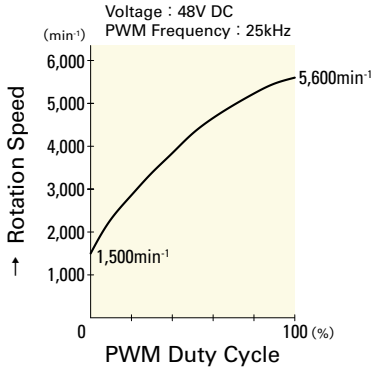
9GV0824P4K01



9GV0848P4K03



9GV0848P4K03



9GV0848P4K03

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

Model no. 109R0812E401 is not certified.

80×80×25mm (Mass : 110g) 9R type

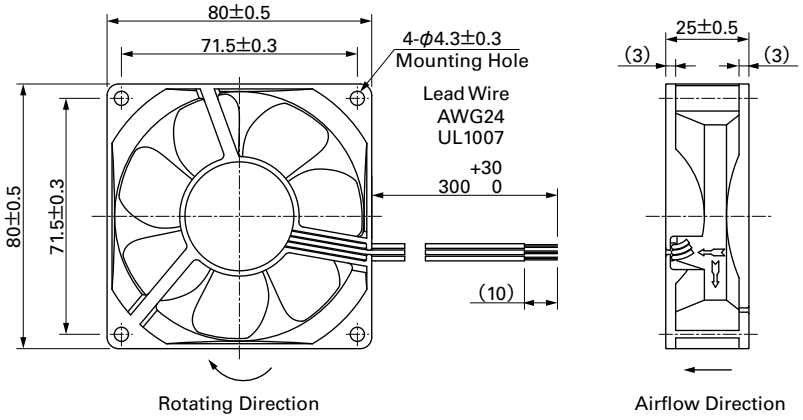
Specifications

The following nos. **have pulse sensors and ribs. For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109R0805F401	5	4.5 to 5.5	0.25	1.25	2,600	0.92	32.5	28.4	0.114	26	−20 to +70	60,000/60℃
109R0805M401			0.17	0.85	2,350	0.83	29.3	22.5	0.090	23		
109R0812G401	12	10.8 to 13.2	0.37	4.44	4,500	1.50	53.0	80.4	0.323	40	−20 to +60	40,000/60℃
109R0812E401		6 to 13.8	0.24	2.88	3,700	1.31	46.3	57.8	0.232	35		
109R0812S401			0.18	2.16	3,400	1.20	42.4	48.0	0.193	34	−20 to +70	60,000/60℃
109R0812H401			0.13	1.56	2,900	1.03	36.4	35.3	0.142	29		
109R0812F401			0.11	1.32	2,600	0.92	32.5	28.4	0.114	26		
109R0812M401			0.09	1.08	2,350	0.83	29.3	22.5	0.090	23		
109R0812L401		7 to 13.8	0.06	0.72	1,850	0.65	23.0	14.7	0.059	20		
109R0824G401	24	20.4 to 26.4	0.20	4.80	4,500	1.50	53.0	80.4	0.323	40	−20 to +60	40,000/60℃
109R0824S401		12 to 27.6	0.10	2.40	3,400	1.20	42.4	48.0	0.193	34	−20 to +70	60,000/60℃
109R0824H401			0.07	1.68	2,900	1.03	36.4	35.3	0.142	29		
109R0824F401			0.06	1.44	2,600	0.92	32.5	28.4	0.114	26		
109R0824M401			0.05	1.20	2,350	0.83	29.3	22.5	0.090	23		
109R0824L401		14 to 27.6	0.04	0.96	1,850	0.65	23.0	14.7	0.059	20		
109R0848K401	48	40.8 to 55.2	0.10	4.80	4,600	1.56	55.1	88.4	0.355	41	−20 to +60	40,000/60℃
109R0848S401			0.06	2.88	3,400	1.20	42.4	48.0	0.193	34	−20 to +70	60,000/60℃

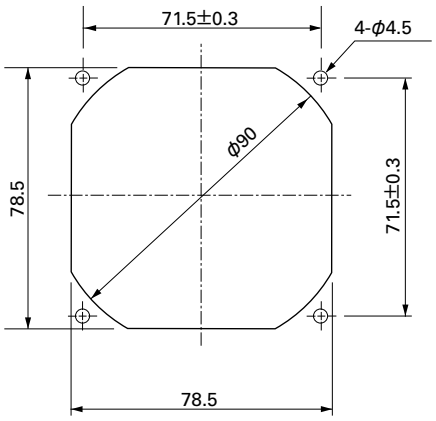
Other sensor specifications are available as options. Please refer to the index (p. 499).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

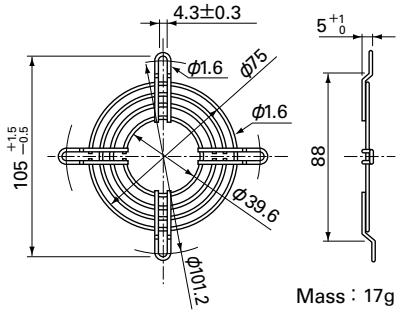


Options (unit: mm)

Finger Guards

Model : 109-049C Surface treatment : Nickel-chrome plating (silver) Color

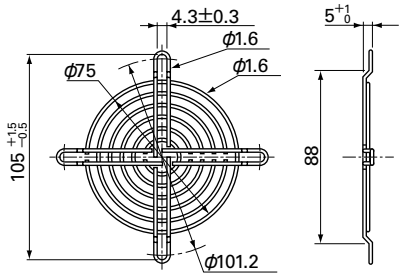
Outlet side



Mass : 17g

Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color
: 109-049H : Cation electropainting (black)

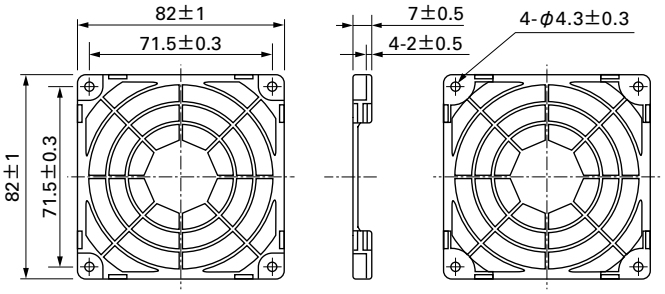
Inlet side, Outlet side



Mass : 21g

Resin Finger Guards

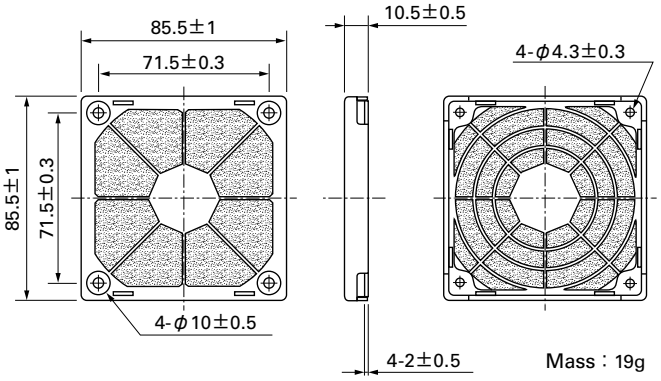
Model : 109-1002G



Mass : 10g

Resin Filter Kits

Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

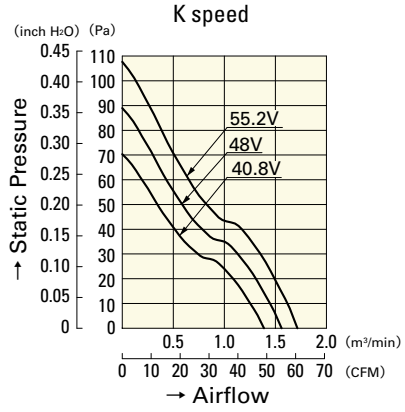
80 mm sq.

San Ace 80

80×80×25mm 〔Mass：110g〕

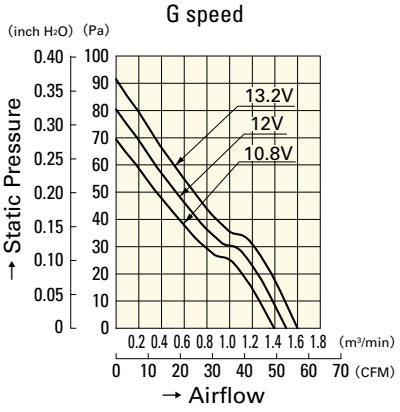
Airflow - Static Pressure Characteristics

K speed



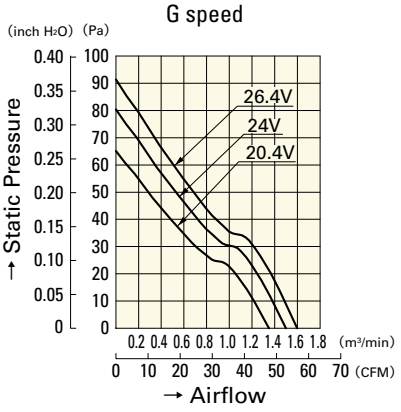
109R0848K401

G speed



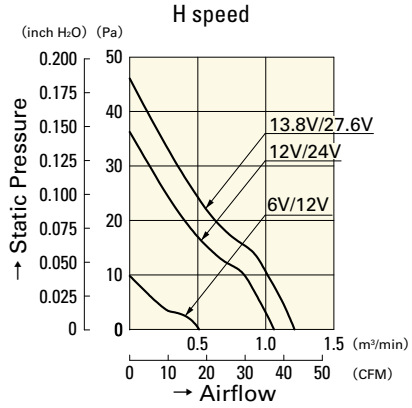
109R0812G401

G speed



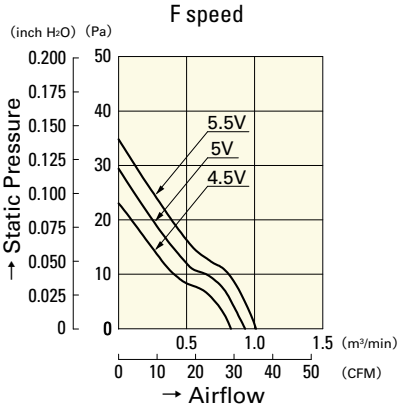
109R0824G401

H speed



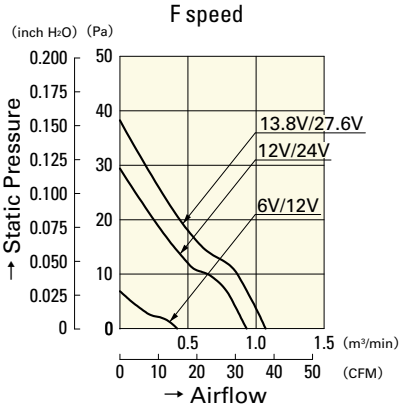
109R0812H401
109R0824H401

F speed



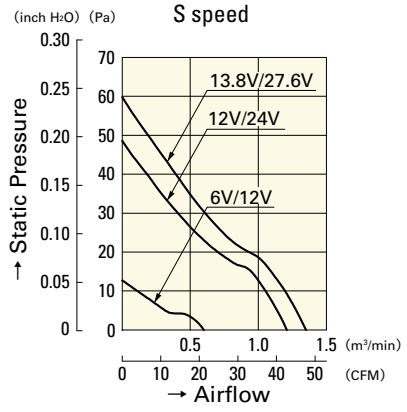
109R0805F401

F speed



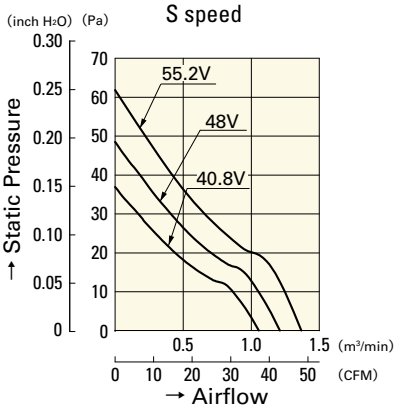
109R0812F401
109R0824F401

S speed



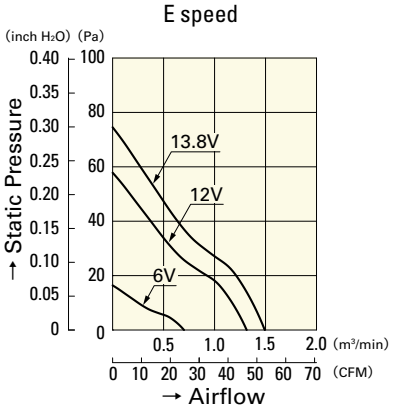
109R0812S401
109R0824S401

S speed



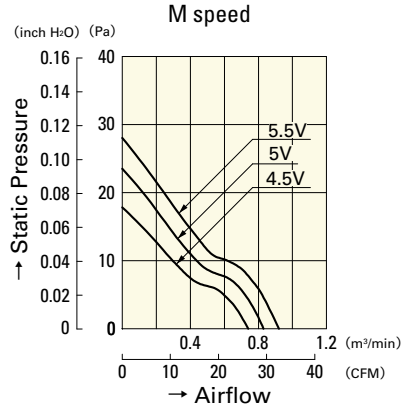
109R0848S401

E speed



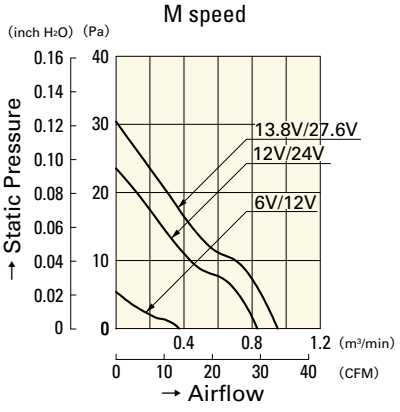
109R0812E401

M speed



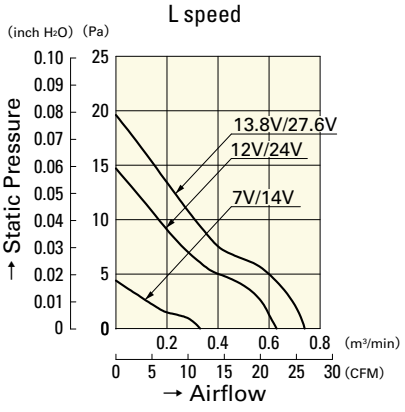
109R0805M401

M speed



109R0812M401
109R0824M401

L speed



109R0812L401
109R0824L401

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

80×80×25mm (Mass : 90g) 9A type San Cooler

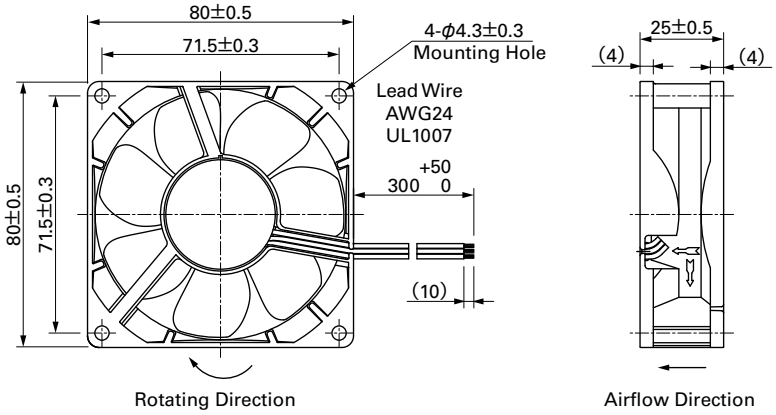
Specifications

The following nos. **have pulse sensors and ribs.** **For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9A0812G401	12	6 to 13.2	0.38	4.56	4,500	1.5	53.0	80.3	0.323	40	−20 to +60	30,000/60℃
9A0812S401		6 to 13.8	0.18	2.16	3,400	1.2	42.4	48	0.193	34	−20 to +70	40,000/60℃
9A0812H401			0.13	1.56	2,900	1.03	36.4	35.3	0.142	29		
9A0812F401			0.11	1.32	2,600	0.92	32.5	28.4	0.114	26		
9A0812M401			0.09	1.08	2,350	0.83	29.3	22.5	0.090	23		
9A0812L401		7 to 13.8	0.06	0.72	1,850	0.65	23.0	14.7	0.059	20		
9A0824G401	24	12 to 26.4	0.21	5.04	4,500	1.5	53.0	80.3	0.323	40	−20 to +60	30,000/60℃
9A0824S401		12 to 27.6	0.1	2.4	3,400	1.2	42.4	48	0.193	34	−20 to +70	40,000/60℃
9A0824H401			0.07	1.68	2,900	1.03	36.4	35.3	0.142	29		
9A0824F401			0.06	1.44	2,600	0.92	32.5	28.4	0.114	26		
9A0824M401			0.05	1.2	2,350	0.83	29.3	22.5	0.090	23		
9A0824L401		14 to 27.6	0.04	0.96	1,850	0.65	23.0	14.7	0.059	20		

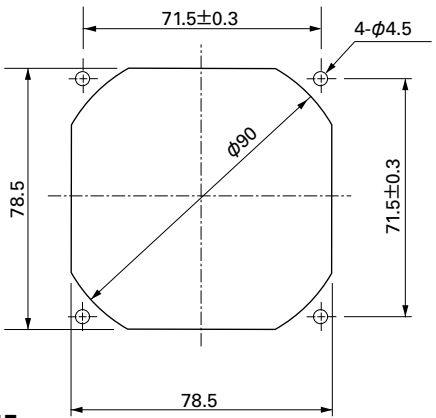
Other sensor specifications are available as options. Please refer to the index (p. 500).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

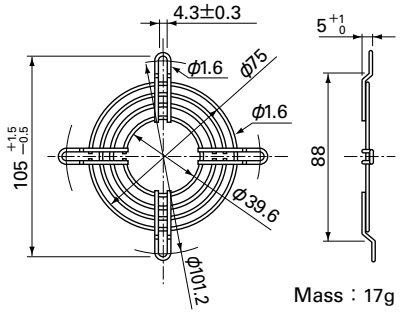


Options (unit: mm)

Finger Guards

Color
Model : 109-049C Surface treatment : Nickel-chrome plating (silver)

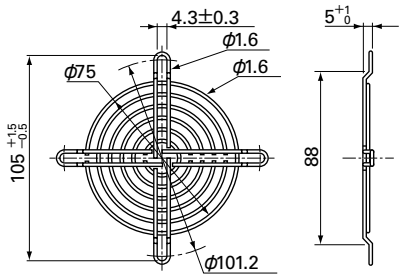
Outlet side



Mass : 17g

Color
Model : 109-049E Surface treatment : Nickel-chrome plating (silver)
: 109-049H : Cation electropainting (black)

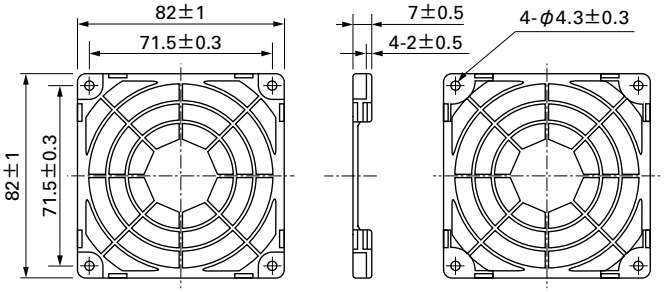
Inlet side, Outlet side



Mass : 21g

Resin Finger Guards

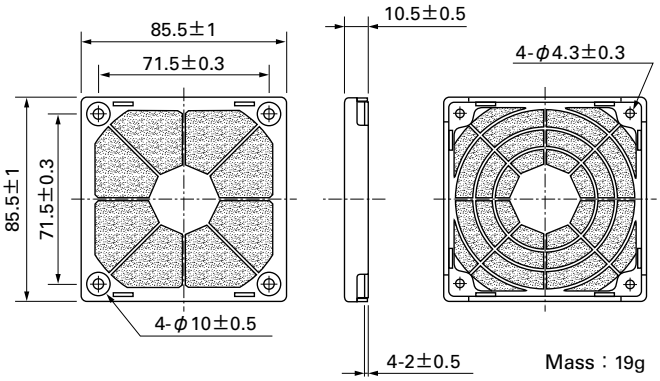
Model : 109-1002G



Mass : 10g

Resin Filter Kits

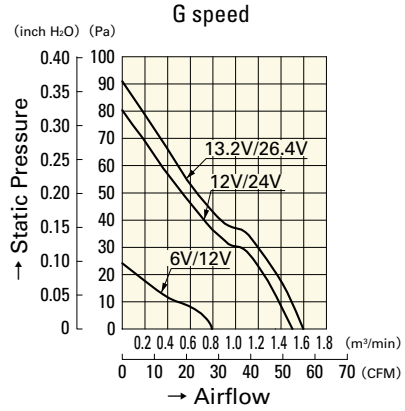
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

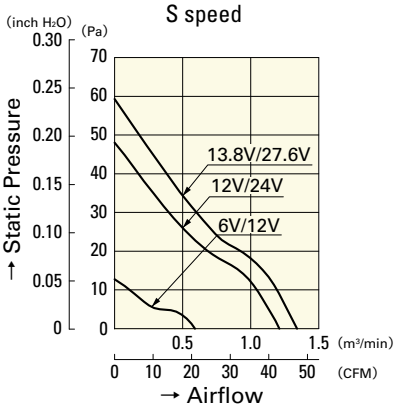
Airflow - Static Pressure Characteristics

G speed



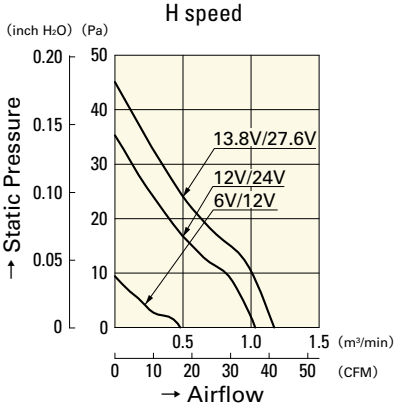
9A0812G401
9A0824G401

S speed



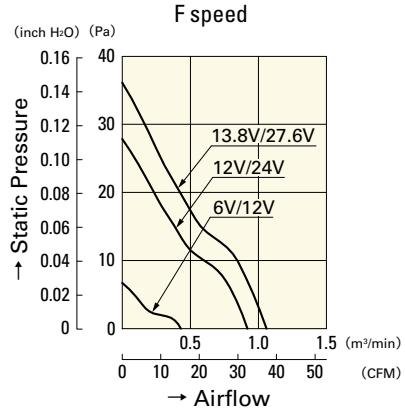
9A0812S401
9A0824S401

H speed



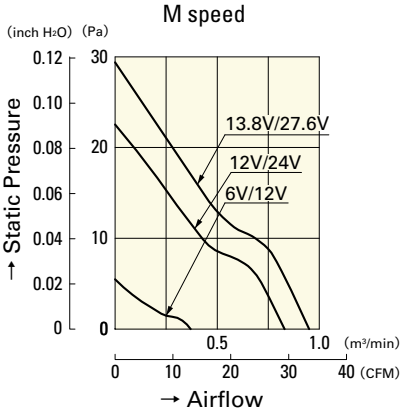
9A0812H401
9A0824H401

F speed



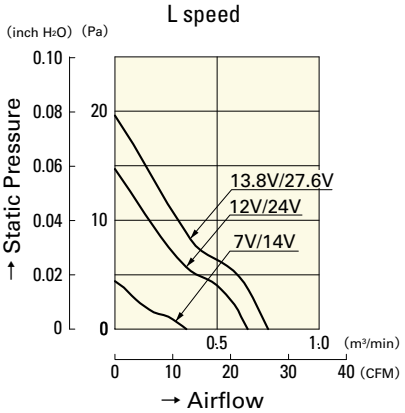
9A0812F401
9A0824F401

M speed



9A0812M401
9A0824M401

L speed



9A0812L401
9A0824L401

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ··· −30℃ to +70℃ (Non-condensing)

80×80×32mm (Mass：130g) 9GA type High Airflow Low Power Consumption Fan

Specifications

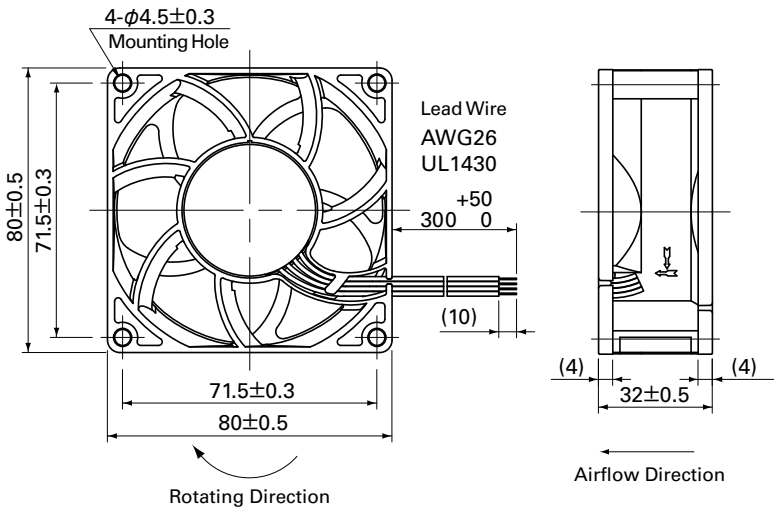
The following nos. **have PWM controls, pulse sensors, and ribs. For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0812P2S001	12	10.2 to 13.8	100	0.83	9.96	9,700	2.45	86.5	360	1.45	57	−20 to +70	40,000/60℃
			0	0.08	0.96	2,800	0.71	25.1	30	0.12	24		
9GA0812P2H001			100	0.59	7.08	8,700	2.20	77.7	294	1.18	54		
			0	0.05	0.6	2,600	0.66	23.3	26	0.105	21		
9GA0812P2M001		10.2 to 12.6	100	0.35	4.2	6,700	1.69	59.6	171	0.68	47	−20 to +55	
			0	0.04	0.48	1,400	0.35	12.3	7.5	0.03	10		
9GA0824P2S001	24	20.4 to 27.6	100	0.42	10.1	9,700	2.45	86.5	360	1.45	57	−20 to +70	
			0	0.05	1.2	2,800	0.71	25.1	30	0.12	24		
9GA0848P2S001	48	40.8 to 55.2	100	0.22	10.56	9,700	2.45	86.5	360	1.45	57	−10 to +70	
			0	0.04	1.92	2,800	0.71	25.1	30	0.12	24		

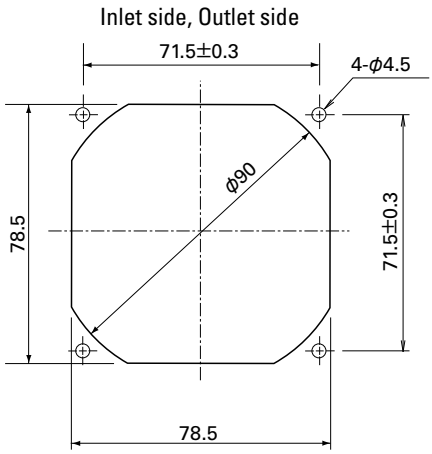
※PWM Frequency：25kHz

Other sensor specifications are available as options. Please refer to the index (pp. 505 to 506).

Dimensions (unit: mm) (With ribs)



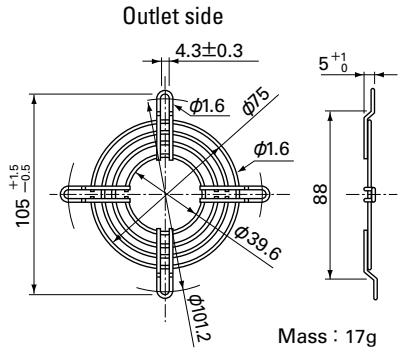
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

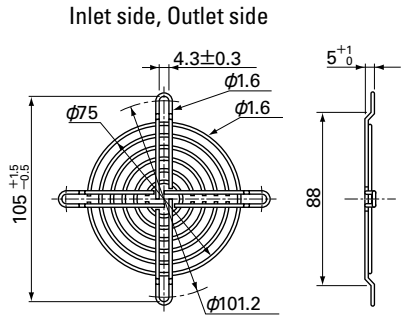
Finger Guards

Model : 109-049C Surface treatment : Nickel-chrome plating (silver) Color



Mass : 17g

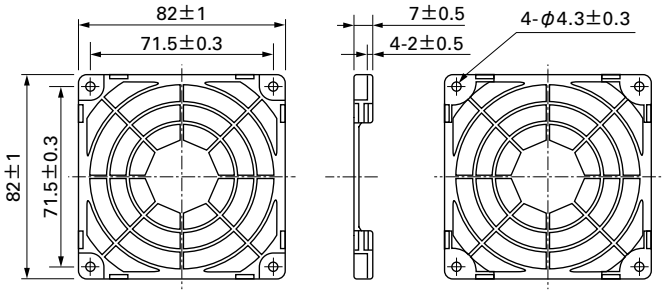
Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color
: 109-049H : Cation electropainting (black)



Mass : 21g

Resin Finger Guards

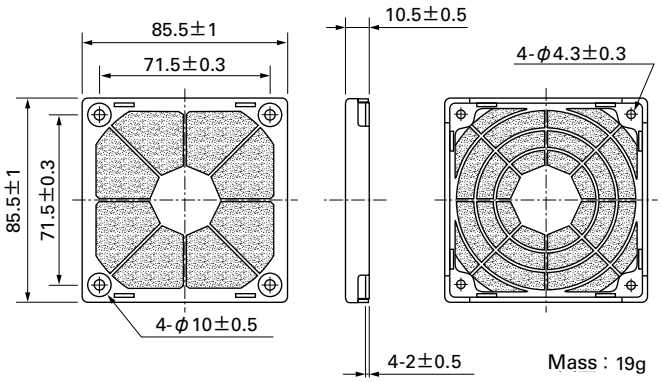
Model : 109-1002G



Mass : 10g

Resin Filter Kits

Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

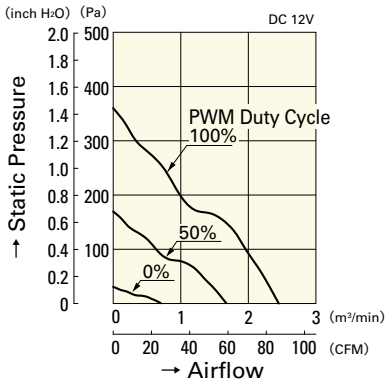
80 mm sq.

San Ace 80

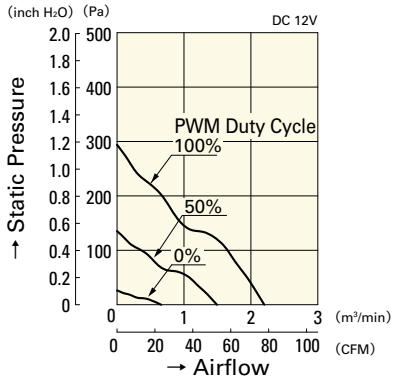
80×80×32mm 〔Mass：130g〕

Airflow - Static Pressure Characteristics

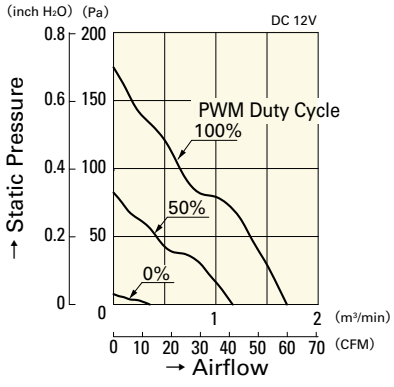
PWM Duty Cycle



9GA0812P2S001

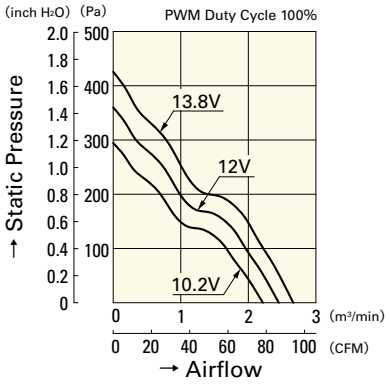


9GA0812P2H001

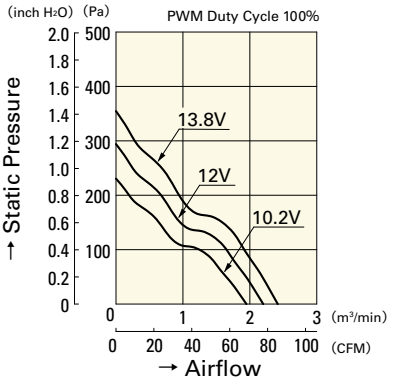


9GA0812P2M001

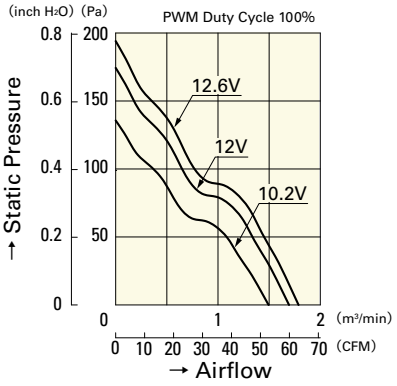
Operating Voltage Range



9GA0812P2S001

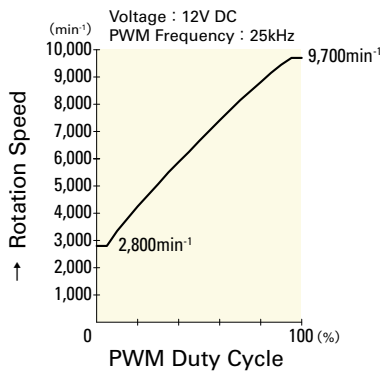


9GA0812P2H001

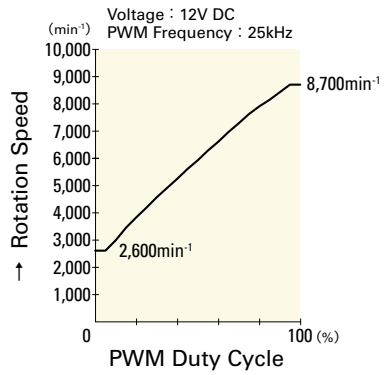


9GA0812P2M001

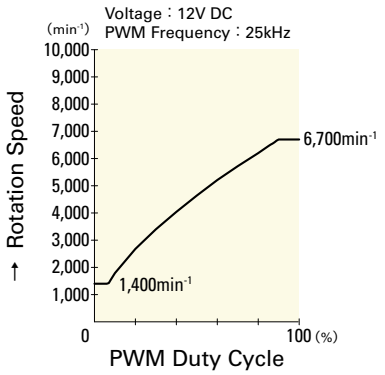
PWM Duty - Speed Characteristics Example



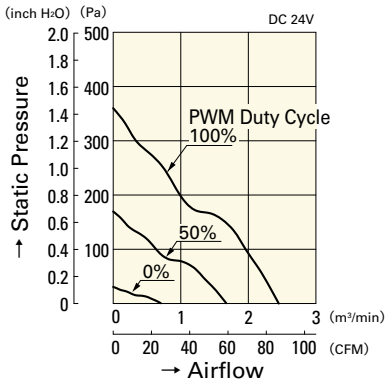
9GA0812P2S001



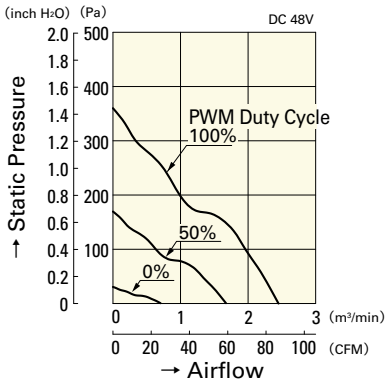
9GA0812P2H001



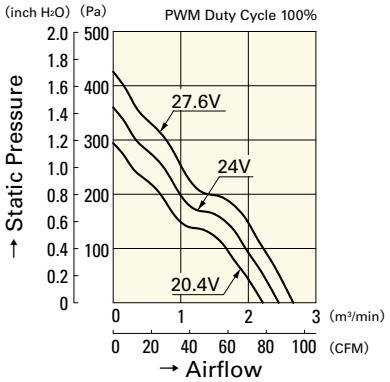
9GA0812P2M001



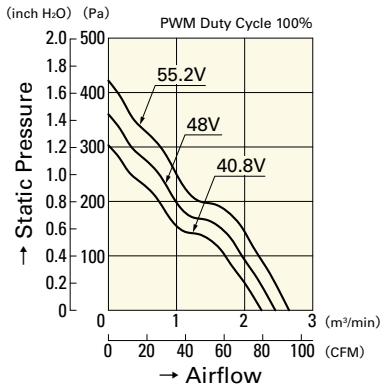
9GA0824P2S001



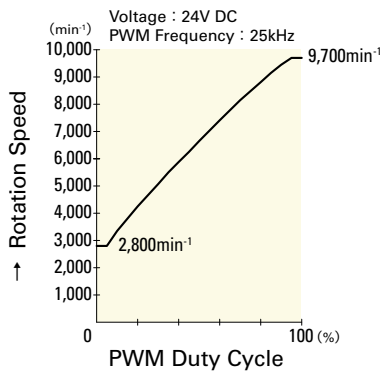
9GA0848P2S001



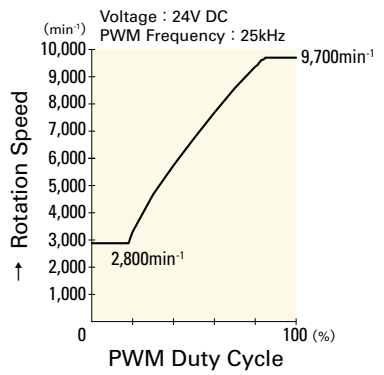
9GA0824P2S001



9GA0848P2S001



9GA0824P2S001



9GA0848P2S001

80 mm sq.

San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

80×80×32mm (Mass : 150g) 9P type

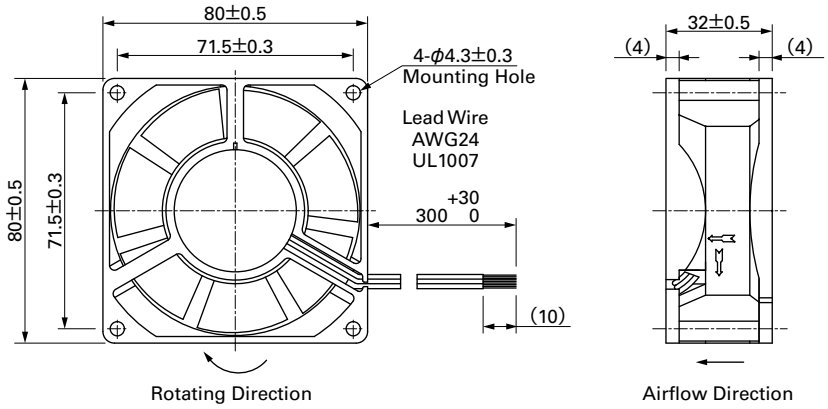
Specifications

The following nos. **have pulse sensors and ribs. For ribless, append "1" to the model no.**

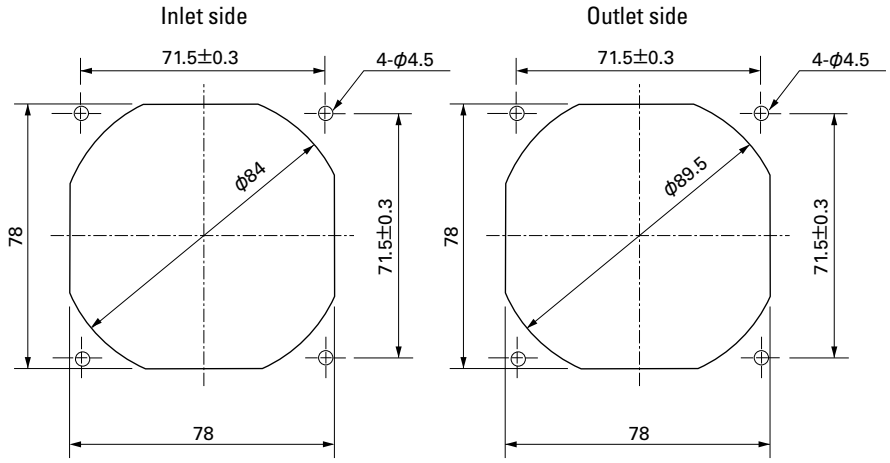
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109P0812A201	12	6 to 13.2	0.56	6.72	4,600	1.52	53.7	91.1	0.366	45	−20 to +55	40,000(+55℃)
109P0812H201		10.2 to 13.8	0.16	1.92	3,150	1.05	37.1	43.1	0.173	33	−20 to +70	40,000/60℃
109P0812M201			0.07	0.84	2,000	0.65	23.0	18.6	0.075	21		60,000/60℃
109P0824A201	24	12 to 26.4	0.29	6.96	4,600	1.52	53.7	91.1	0.366	45	−20 to +60	40,000/60℃
109P0824H201		20.4 to 27.6	0.09	2.16	3,150	1.05	37.1	43.1	0.173	33	−20 to +70	
109P0824M201			0.04	0.96	2,000	0.65	23.0	18.6	0.075	21		60,000/60℃
109P0848H201	48	43 to 53	0.06	2.88	3,350	1.10	38.9	50.9	0.204	35		40,000/60℃

Other sensor specifications are available as options. Please refer to the index (pp. 497 to 498).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

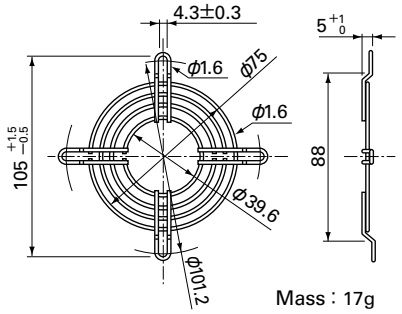


Options (unit: mm)

Finger Guards

Model : 109-049C Surface treatment : Nickel-chrome plating (silver) Color

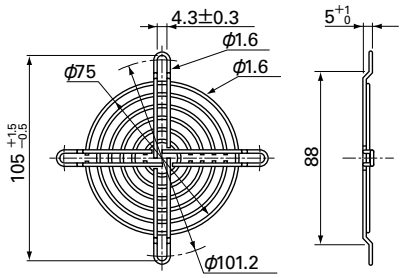
Outlet side



Mass : 17g

Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color
: 109-049H : Cation electropainting (black)

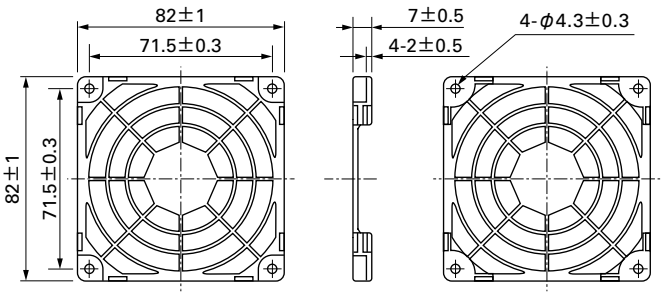
Inlet side, Outlet side



Mass : 21g

Resin Finger Guards

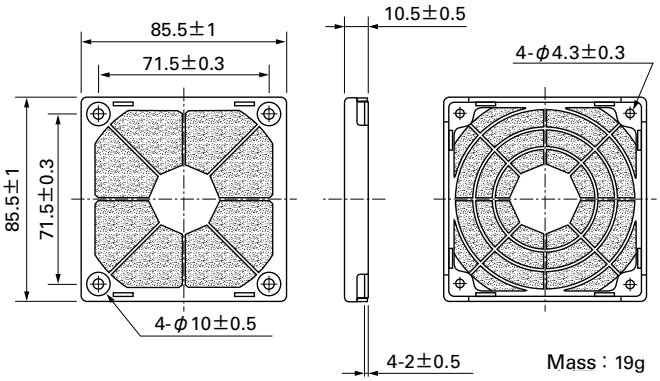
Model : 109-1002G



Mass : 10g

Resin Filter Kits

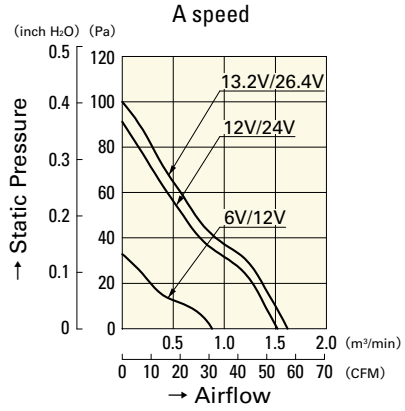
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

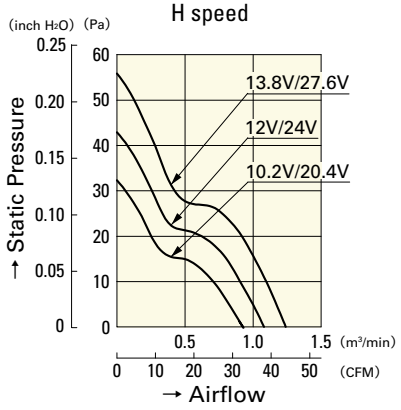
Airflow - Static Pressure Characteristics

A speed



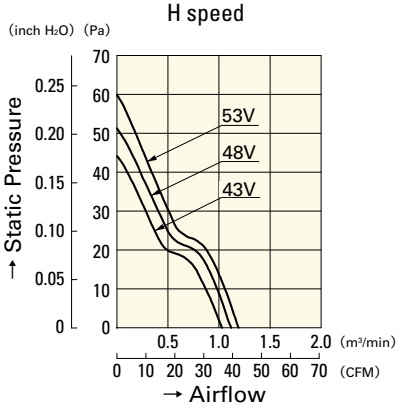
109P0812A201
109P0824A201

H speed



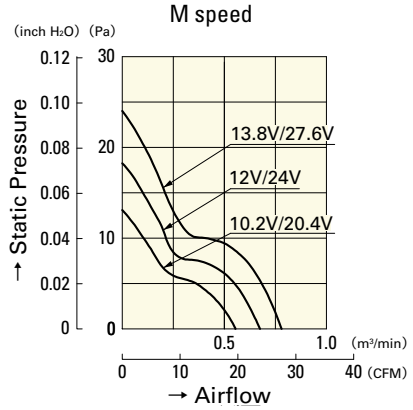
109P0812H201
109P0824H201

H speed



109P0848H201

M speed



109P0812M201
109P0824M201

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

80×80×38mm (Mass : 220g) 9HVA type

Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

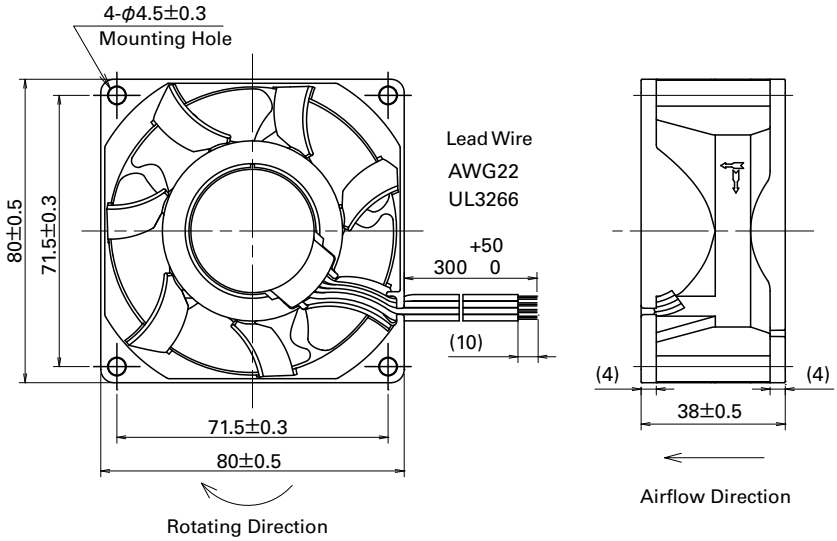
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle Note※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9HVA0812P1G001	12	10.8 to 13.2	100	3.5	42	16,100	3.75	132	1,350	5.4	73	−20 to +70	40,000/60℃ (70,000/40℃)
			20	0.2	2.4	4,200	0.96	33.9	105	0.42	44		

Note: Fan does not rotate when PWM duty cycle is 0%.

※PWM Frequency : 25kHz

Other sensor specifications are available as options. Please refer to the index (p. 509).

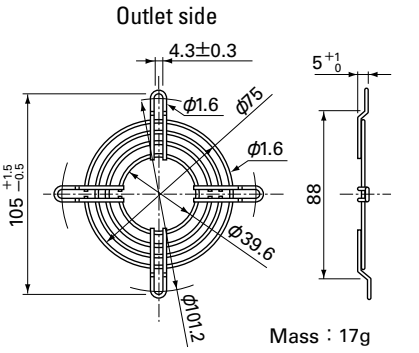
Dimensions (unit: mm) (With ribs)



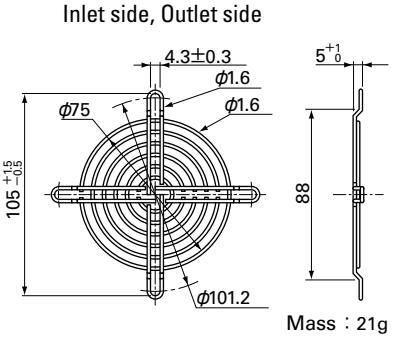
Options (unit: mm)

Finger Guards

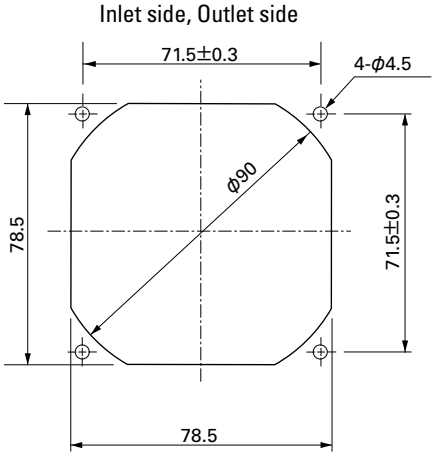
Color
Model : 109-049C Surface treatment : Nickel-chrome plating (silver)



Color
Model : 109-049E Surface treatment : Nickel-chrome plating (silver)
: 109-049H : Cation electropainting (black)



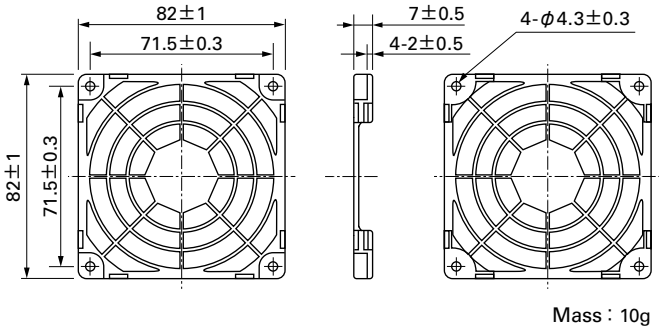
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

Resin Finger Guards

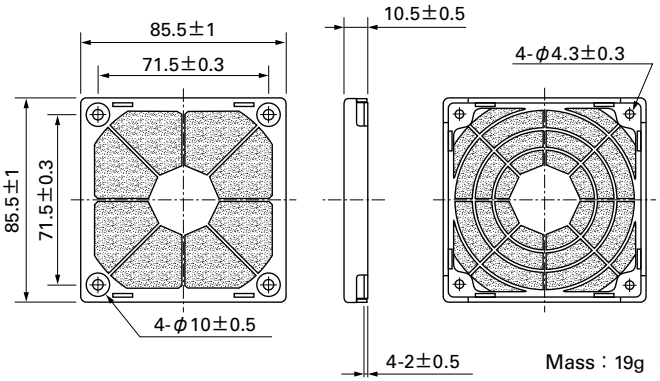
Model : 109-1002G



Mass : 10g

Resin Filter Kits

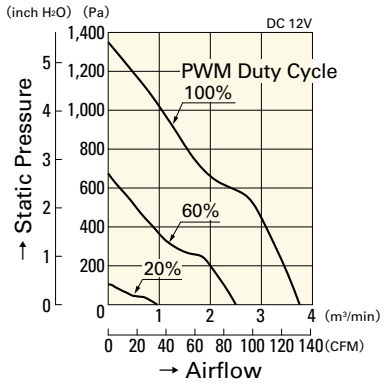
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

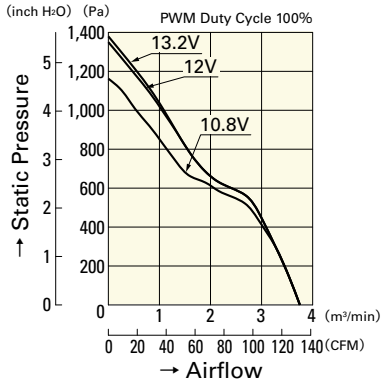
Airflow - Static Pressure Characteristics

PWM Duty Cycle



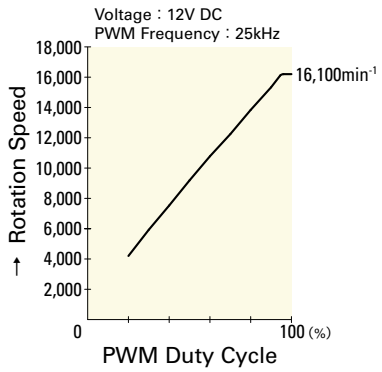
9HVA0812P1G001

Operating Voltage Range



9HVA0812P1G001

PWM Duty - Speed Characteristics Example



9HVA0812P1G001

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

80×80×38mm (Mass : 230g) 9HV type

Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

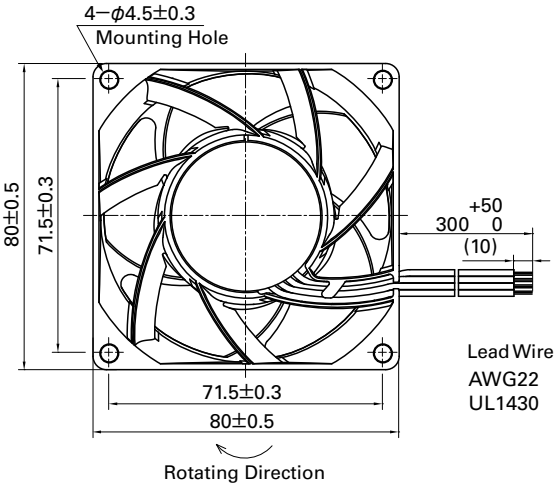
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9HV0812P1G001	12	10.8 to 13.2	100	3.4	40.8	14,900	3.7	130.7	1,000	4.0	69	−20 to +70	40,000/60℃ (70,000/40℃)
			0	0.64	7.68	4,400	1.06	37.5	87.2	0.35	40		
9HV0824P1G003 Note1,2)	24	21.6 to 26.4	100	1.7	40.8	14,900	3.7	130.7	1,000	4.0	69		
9HV0848P1G001	48	36 to 57	100	0.85	40.8	14,900	3.7	130.7	1,000	4.0	69	−10 to +70	
			0	0.13	6.24	4,400	1.06	37.5	87.2	0.35	40		

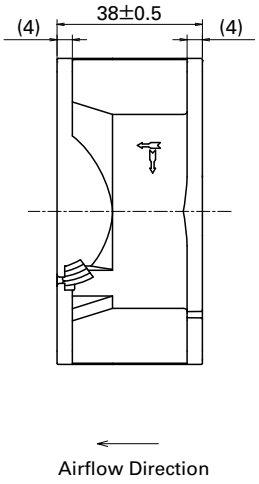
Note 1: Fan does not rotate when PWM duty cycle is 0%.
Note 2: Model no. for a ribless frame model is 9HV0824P1G0011.

※PWM Frequency : 25kHz

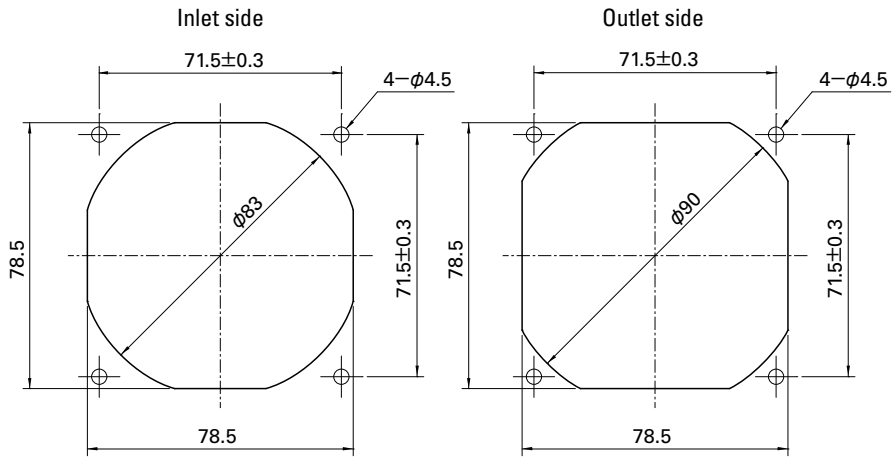
Other sensor specifications are available as options. Please refer to the index (p. 508).

Dimensions (unit: mm) (With ribs)





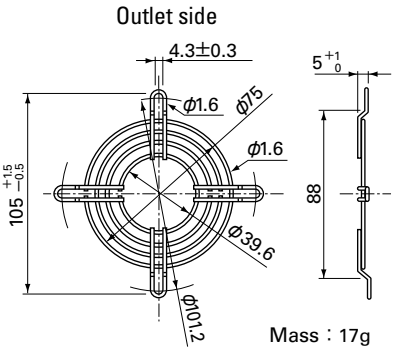
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



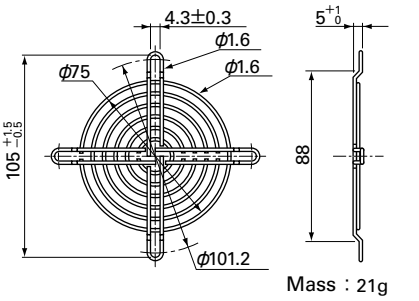
Options (unit: mm)

Finger Guards

Model : 109-049C Color
Surface treatment : Nickel-chrome plating (silver)



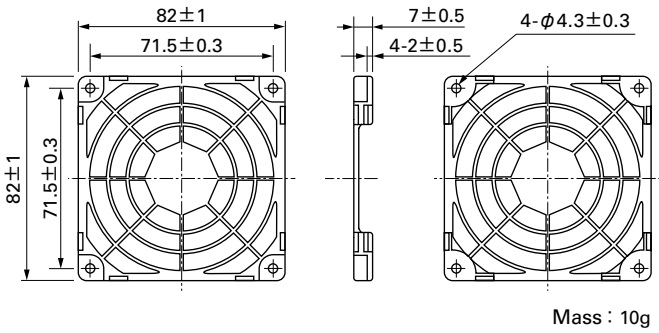
Model : 109-049E Color
: 109-049H Surface treatment : Nickel-chrome plating (silver)
: Cation electropainting (black)



Options (unit: mm)

Resin Finger Guards

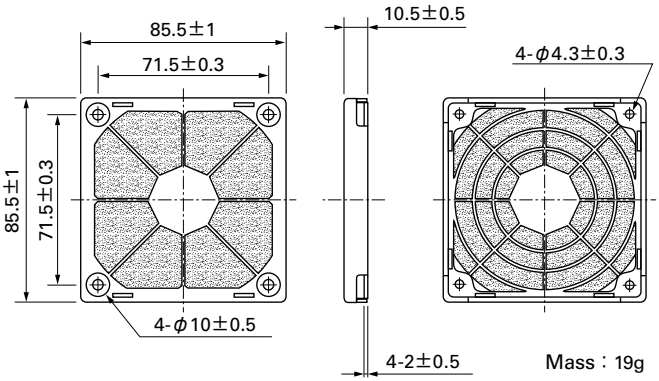
Model : 109-1002G



Mass : 10g

Resin Filter Kits

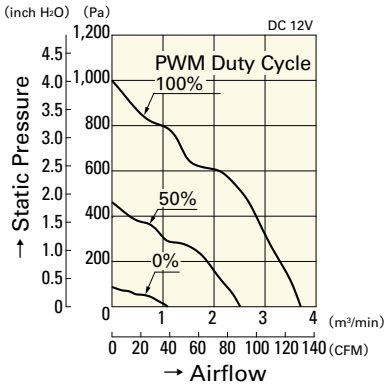
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



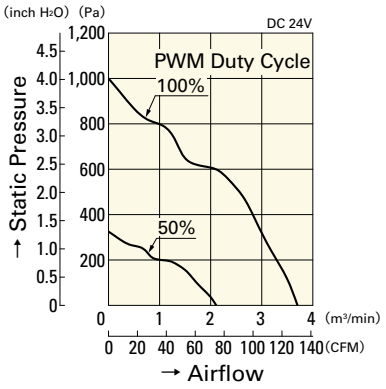
Mass : 19g

Airflow - Static Pressure Characteristics

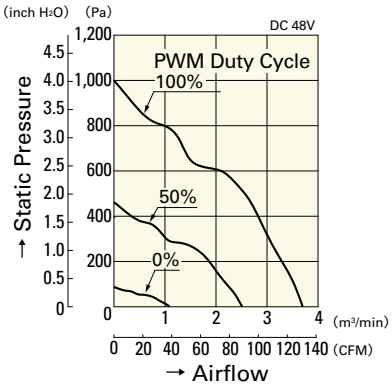
PWM Duty Cycle



9HV0812P1G001

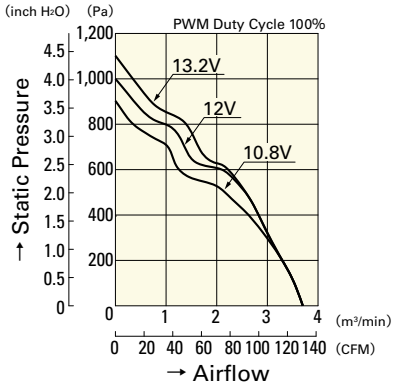


9HV0824P1G003

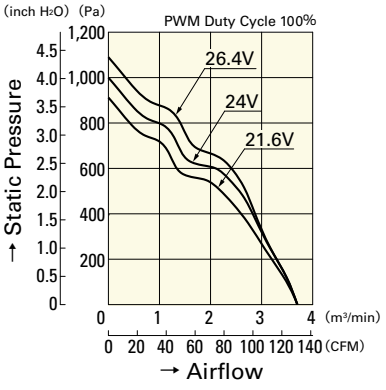


9HV0848P1G001

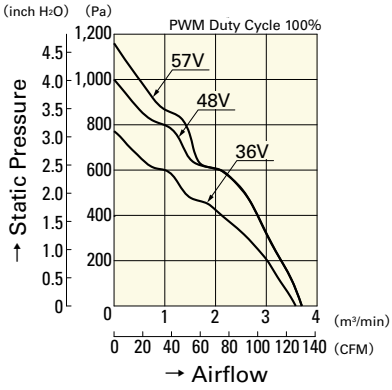
Operating Voltage Range



9HV0812P1G001

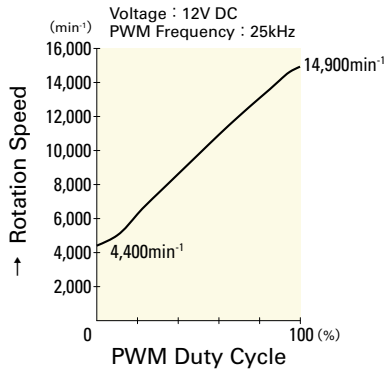


9HV0824P1G003

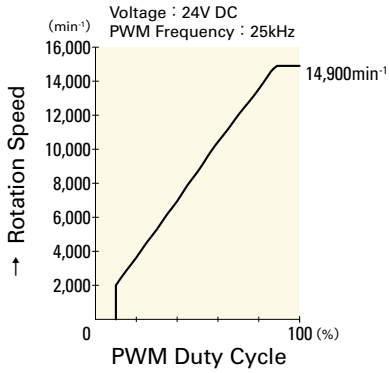


9HV0848P1G001

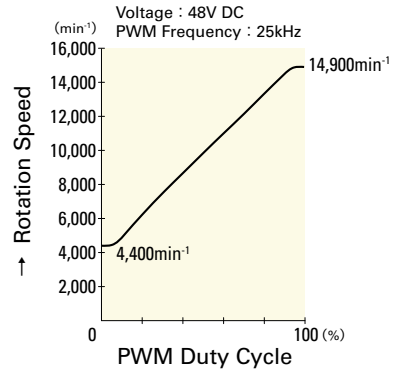
PWM Duty - Speed Characteristics Example



9HV0812P1G001



9HV0824P1G003



9HV0848P1G001

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black Sensor yellow Control brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

80×80×38mm (Mass : 160g) 9GA type Low Power Consumption Fan

Specifications

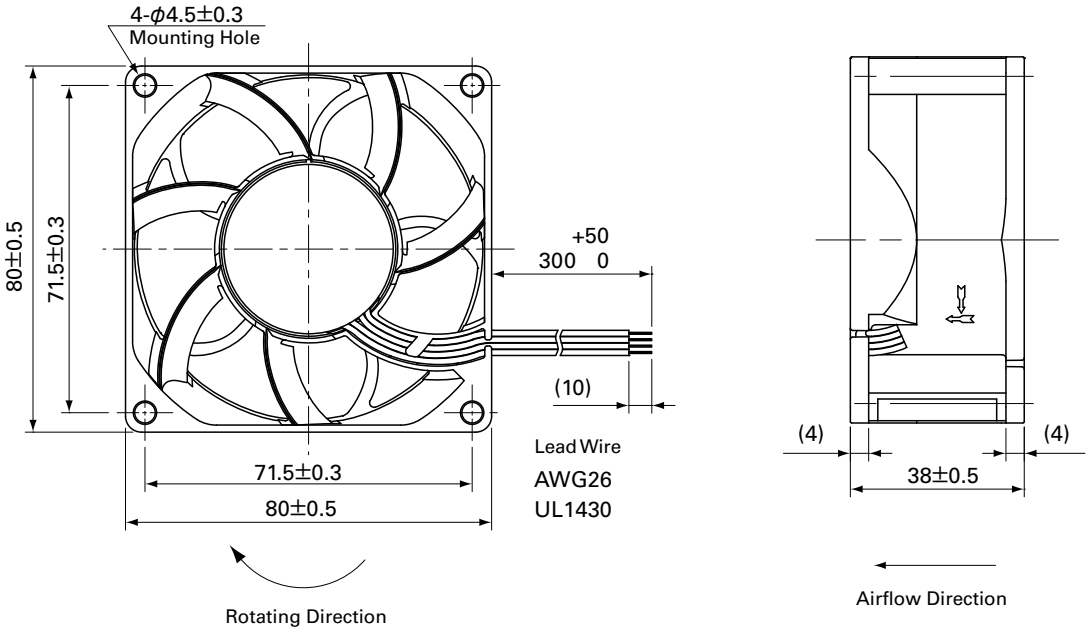
The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0812P1G61	12	10.8 to 13.2	100	1.2	14.4	10,500	2.85	100.6	480	1.93	60	−20 to +70	40,000/60℃ (70,000/40℃)
			0	0.04	0.48	2,000	0.51	18.0	28.7	0.11	21		
9GA0812P1S61			100	0.94	11.28	9,550	2.6	91.8	480	1.93	59		
			0	0.1	1.2	2,900	0.74	26.1	60	0.24	27		
9GA0812P1H61			100	0.6	7.2	8,250	2.25	79.4	380	1.53	55		
			0	0.08	0.96	2,500	0.64	22.6	45	0.18	24		
9GA0824P1S61	24	20.4 to 27.6	100	0.47	11.28	9,550	2.6	91.8	480	1.93	59		
			0	0.06	1.44	2,900	0.74	26.1	60	0.24	27		
9GA0824P1H61			100	0.3	7.2	8,250	2.25	79.4	380	1.53	55		
			0	0.05	1.2	2,500	0.64	22.6	45	0.18	24		
9GA0848P1S61	48	40.8 to 55.2	100	0.25	12	9,550	2.6	91.8	480	1.93	59		
			0	0.04	1.92	2,990	0.74	26.1	60	0.24	27		

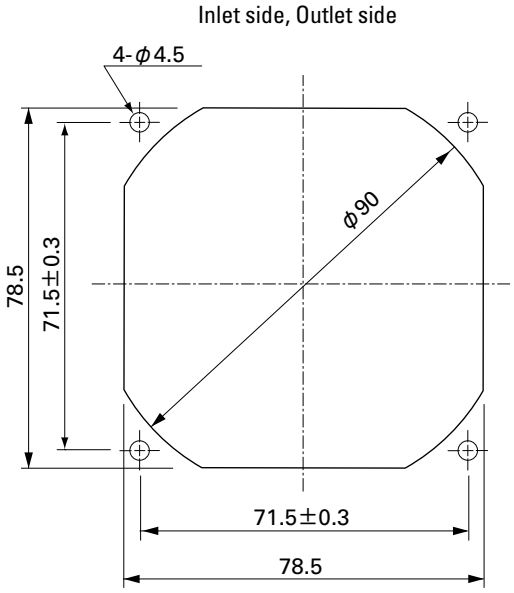
※PWM Frequency : 25kHz

Other sensor specifications are available as options. Please refer to the index (pp. 505 to 506).

Dimensions (unit: mm) (With ribs)



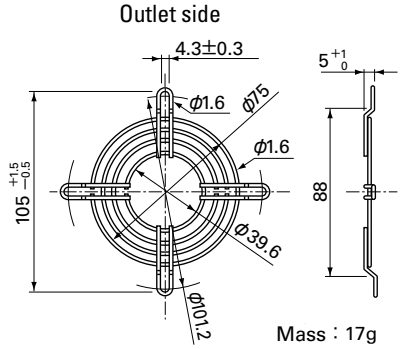
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

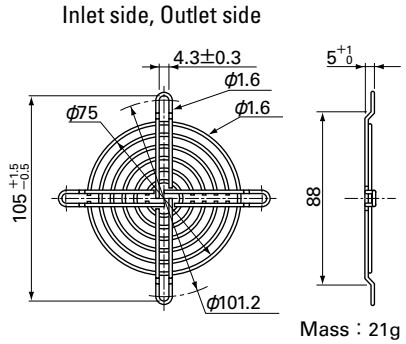
Finger Guards

Model : 109-049C Surface treatment : Nickel-chrome plating (silver) Color



Mass : 17g

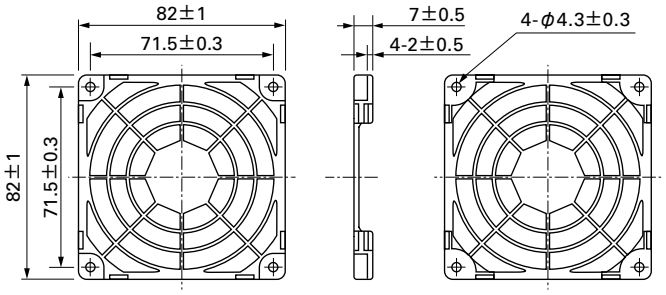
Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color
: 109-049H : Cation electropainting (black)



Mass : 21g

Resin Finger Guards

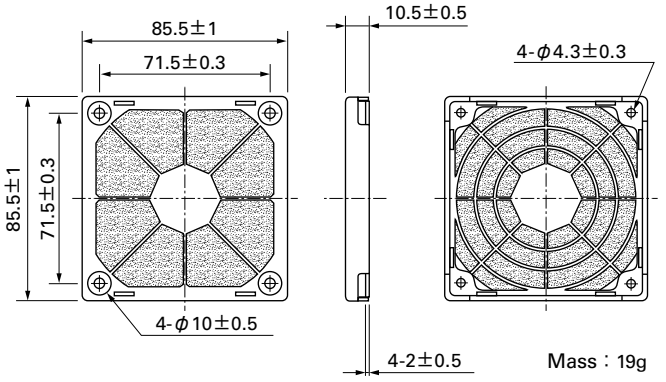
Model : 109-1002G



Mass : 10g

Resin Filter Kits

Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

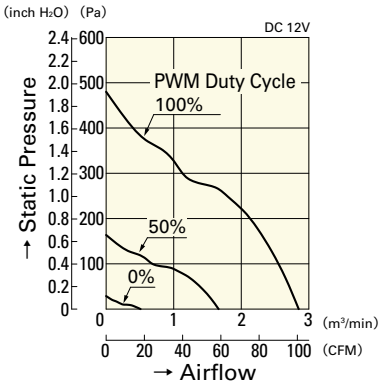
80 mm sq.

San Ace 80

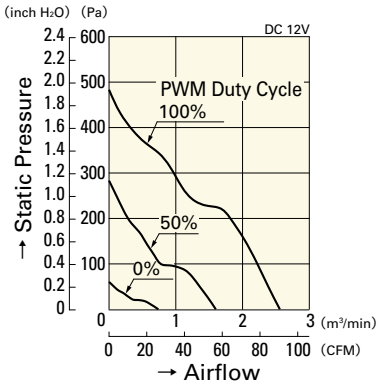
80×80×38mm 〔Mass：160g〕

Airflow - Static Pressure Characteristics

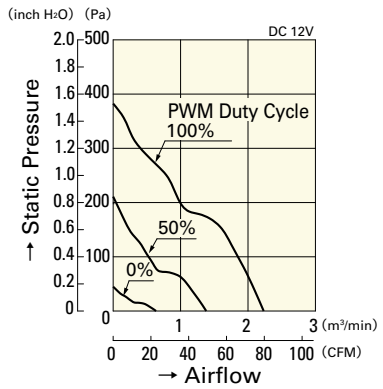
PWM Duty Cycle



9GA0812P1G61

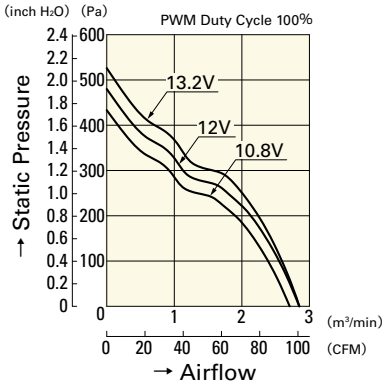


9GA0812P1S61

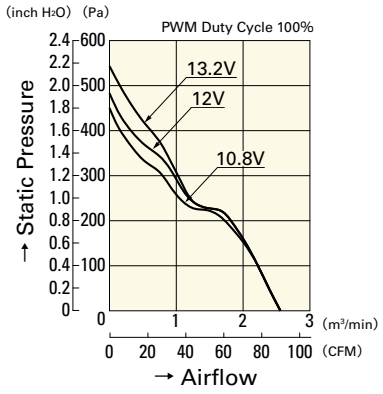


9GA0812P1H61

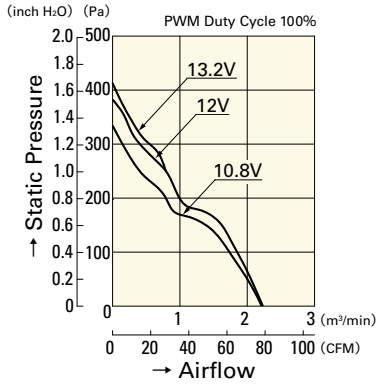
Operating Voltage Range



9GA0812P1G61

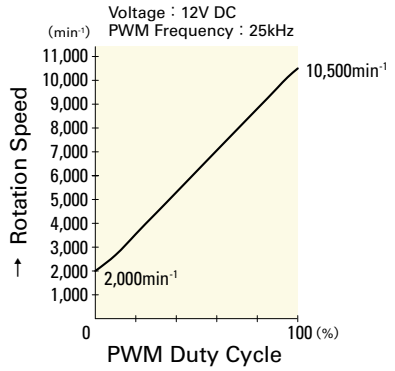


9GA0812P1S61

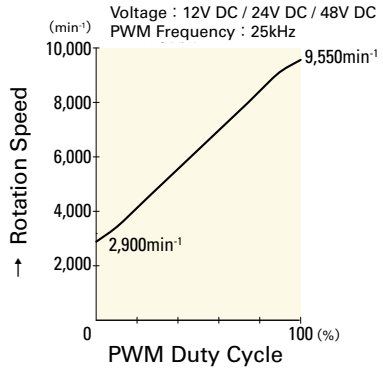


9GA0812P1H61

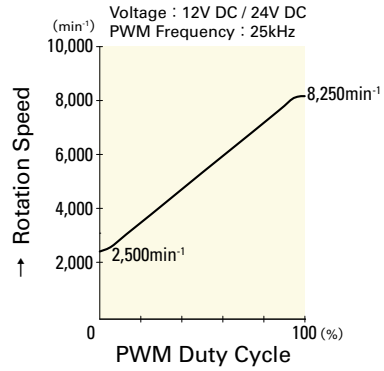
PWM Duty - Speed Characteristics Example



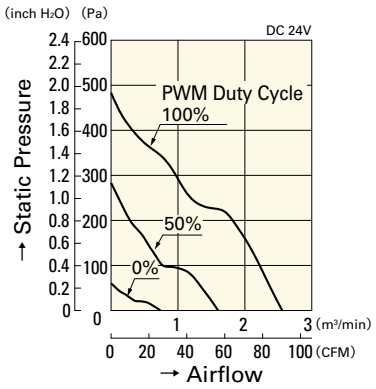
9GA0812P1G61



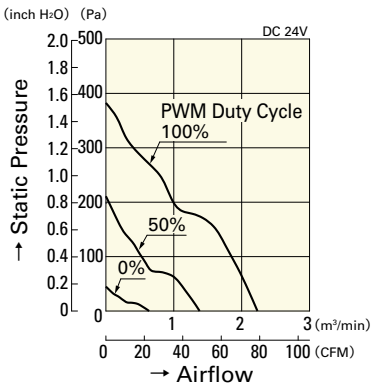
9GA0812P1S61
9GA0824P1S61
9GA0848P1S61



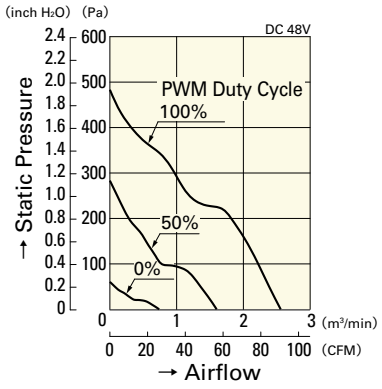
9GA0812P1H61
9GA0824P1H61



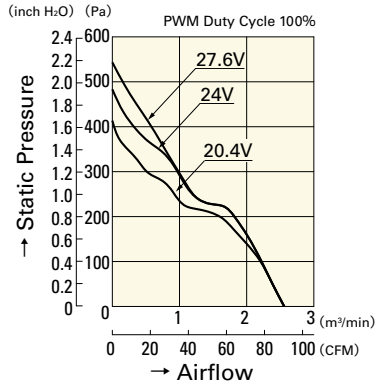
9GA0824P1S61



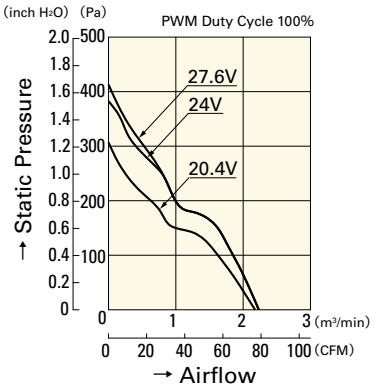
9GA0824P1H61



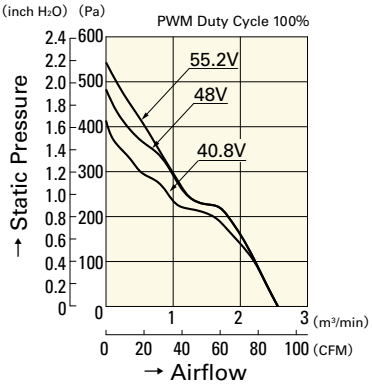
9GA0848P1S61



9GA0824P1S61



9GA0824P1H61



9GA0848P1S61

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

80×80×38mm (Mass : 220g) 9GV type

Specifications

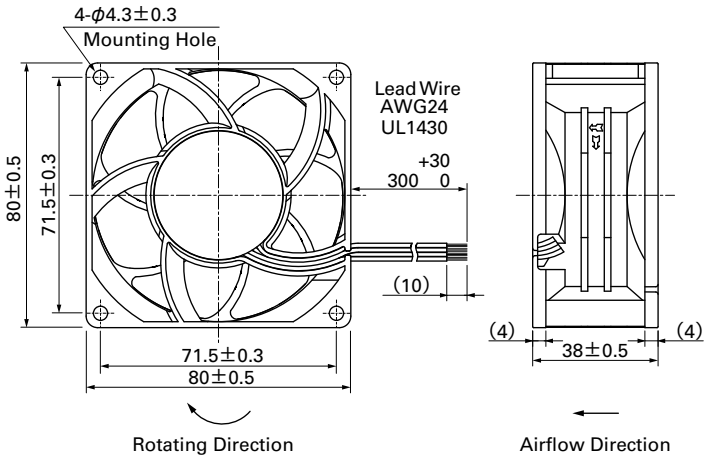
The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GV0812P1G03	12	10.8 to 13.2	100	3.80	45.60	10,200	3.90	138.0	490.0	1.97	65	−20 to +70	40,000/60℃
			0	0.32	3.84	3,000	1.15	40.6	42.4	0.17	34		
9GV0812P1H03			100	3.00	36.00	9,700	3.70	131.0	440.0	1.77	63		
			0	0.20	2.40	2,900	1.11	39.2	39.0	0.16	34		
9GV0812P1F03		10.2 to 13.8	100	1.5	18	8,000	3.05	108.0	301.0	1.21	58		
			0	0.12	1.44	2,400	0.92	32.0	27.1	0.11	26		
9GV0812P1M03			100	0.75	9	6,000	2.29	81.0	169.0	0.68	51		
			0	0.09	1.08	1,700	0.65	23.0	13.6	0.05	19		
9GV0824P1G03	24	20.4 to 27.6	100	1.6	38.40	10,200	3.9	138.0	490.0	1.97	65		
			0	0.3	7.2	4,700	1.79	63.2	104.0	0.41	44		
9GV0848P1G03	48	40.8 to 55.2	100	0.84	40.32	10,200	3.9	138.0	490.0	1.97	65		
			0	0.15	7.2	4,700	1.79	63.2	104.0	0.41	44		

※PWM Frequency : 25kHz

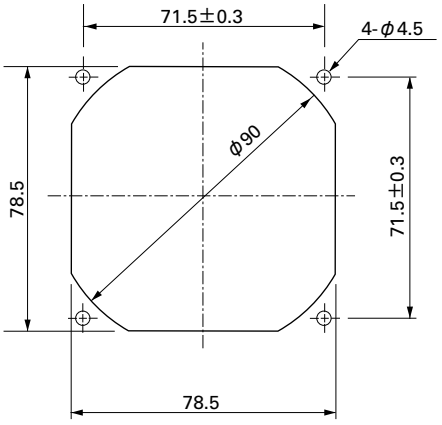
Other sensor specifications are available as options. Please refer to the index (p. 507).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

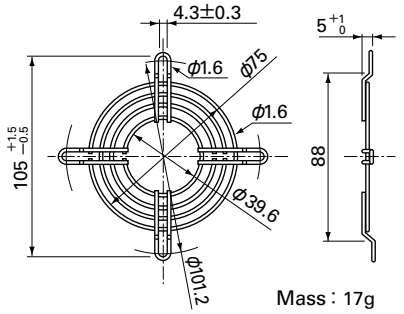


Options (unit: mm)

Finger Guards

Model : 109-049C Surface treatment : Nickel-chrome plating (silver) Color

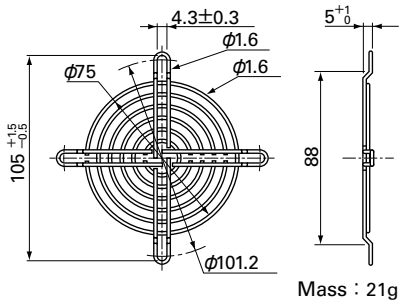
Outlet side



Mass : 17g

Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color
: 109-049H : Cation electropainting (black)

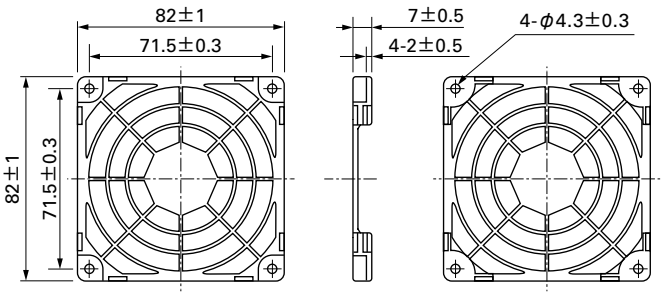
Inlet side, Outlet side



Mass : 21g

Resin Finger Guards

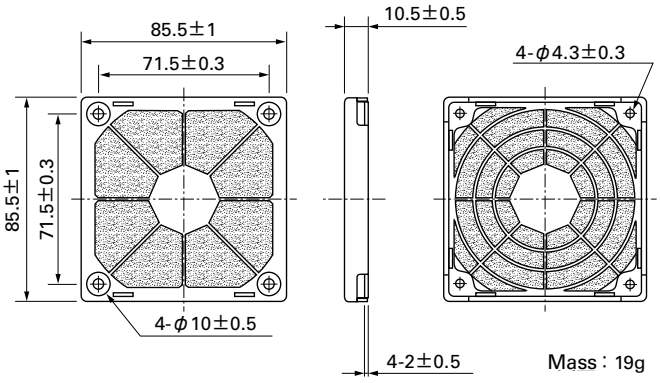
Model : 109-1002G



Mass : 10g

Resin Filter Kits

Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

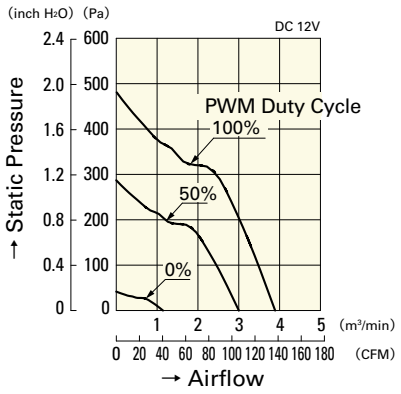
80 mm sq.

San Ace 80

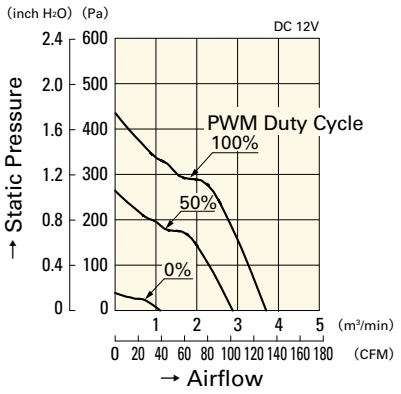
80×80×38mm 〔Mass：220g〕

Airflow - Static Pressure Characteristics

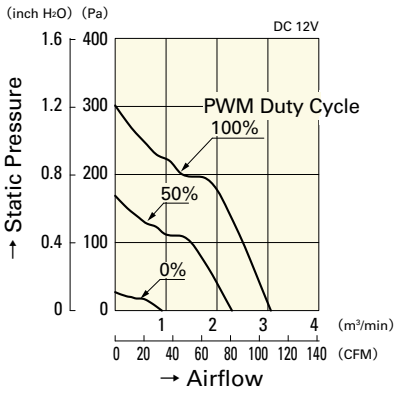
PWM Duty Cycle



9GV0812P1G03

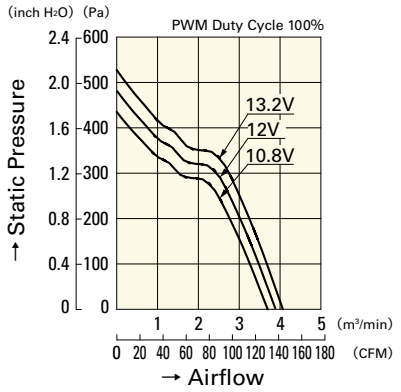


9GV0812P1H03

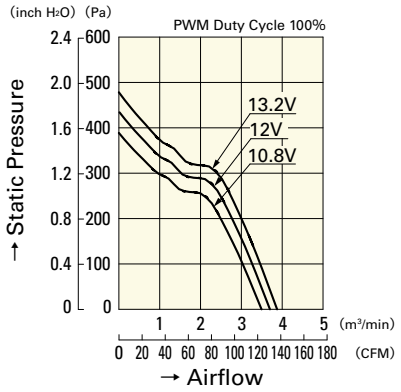


9GV0812P1F03

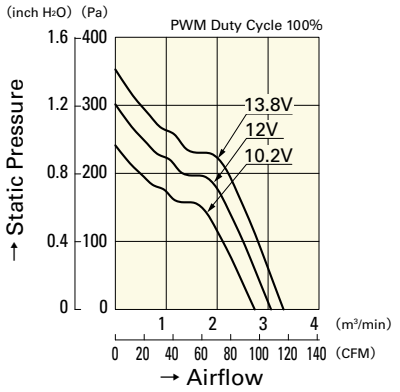
Operating Voltage Range



9GV0812P1G03

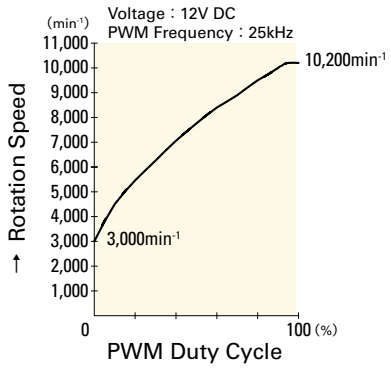


9GV0812P1H03

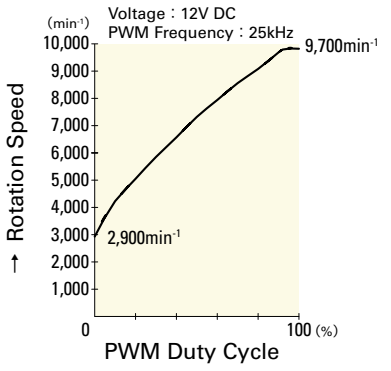


9GV0812P1F03

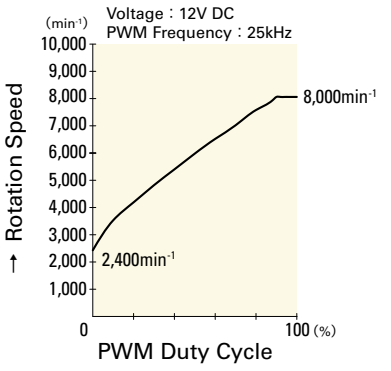
PWM Duty - Speed Characteristics Example



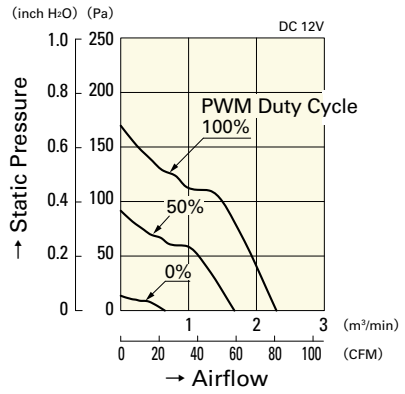
9GV0812P1G03



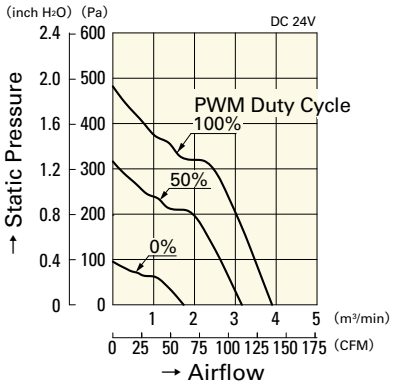
9GV0812P1H03



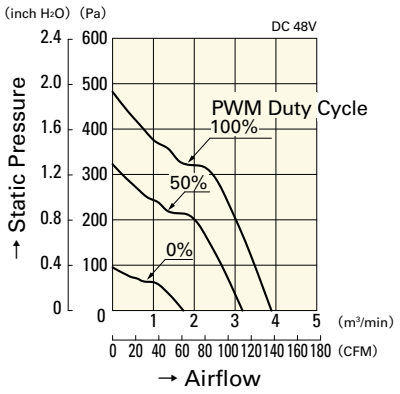
9GV0812P1F03



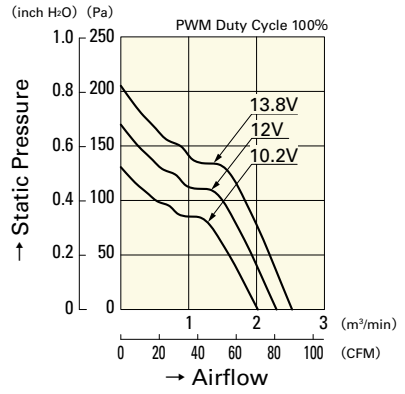
9GV0812P1M03



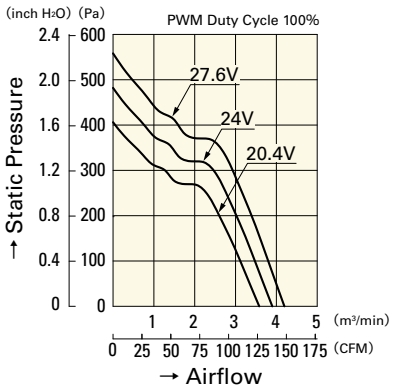
9GV0824P1G03



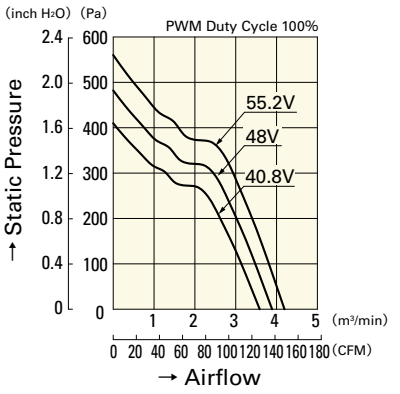
9GV0848P1G03



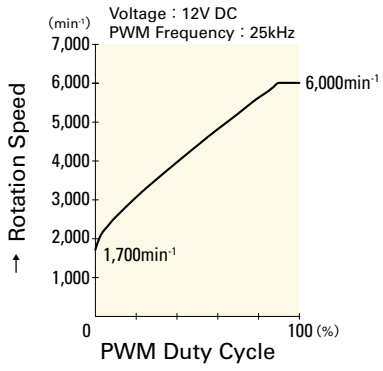
9GV0812P1M03



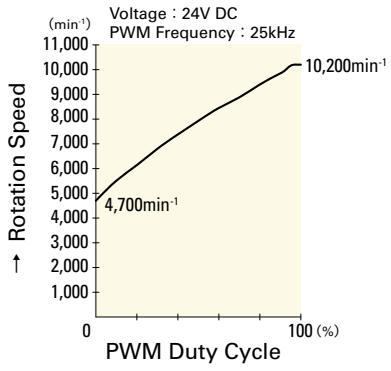
9GV0824P1G03



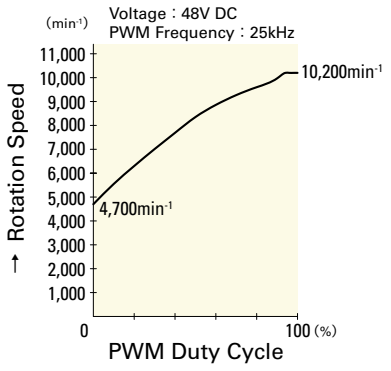
9GV0848P1G03



9GV0812P1M03



9GV0824P1G03



9GV0848P1G03

80 mm sq. San Ace 80



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

80×80×38mm (Mass : 170g) 9G type

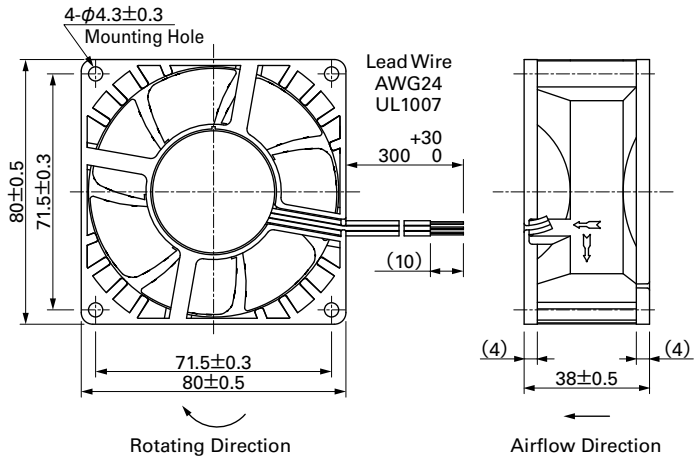
Specifications

The following nos. **have pulse sensors and ribs. For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9G0812K101	12	10.8 to 13.2	1.8	21.6	7,800	3.10	107.3	310	1.285	58	−20 to +60	40,000/60℃
9G0812G101		7 to 13.8	1.1	13.2	6,300	2.55	90	211	0.847	51	−20 to +70	
9G0812H101			0.9	10.8	5,700	2.28	80	171	0.687	49		
9G0824G101	24	20.4 to 27.6	0.56	13.4	6,300	2.55	90	211	0.847	51		
9G0824H101			0.42	10.1	5,700	2.28	80	171	0.687	49		
9G0848G101	48	40.8 to 55.2	0.27	13.0	6,300	2.55	90	211	0.847	51		
9G0848H101			0.20	9.6	5,700	2.28	80	171	0.687	49		

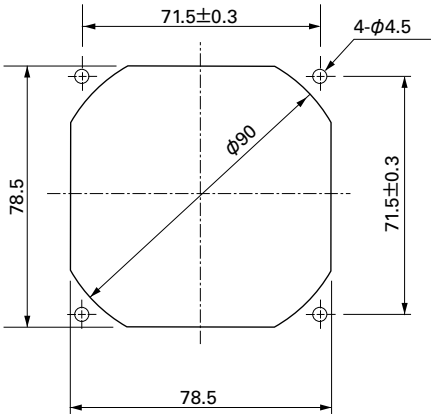
Other sensor specifications are available as options. Please refer to the index (p. 502).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

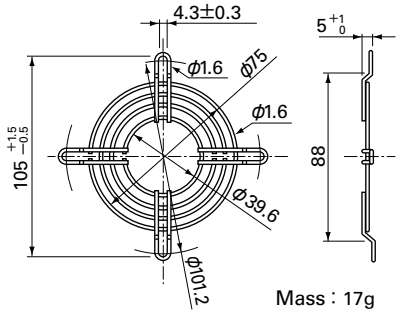


Options (unit: mm)

Finger Guards

Model : 109-049C Surface treatment : Nickel-chrome plating (silver) Color

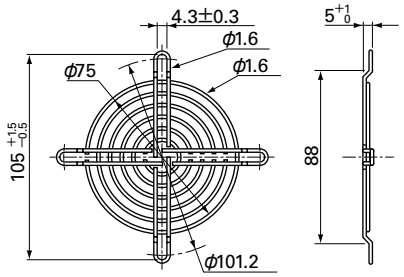
Outlet side



Mass : 17g

Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color
: 109-049H : Cation electropainting (black)

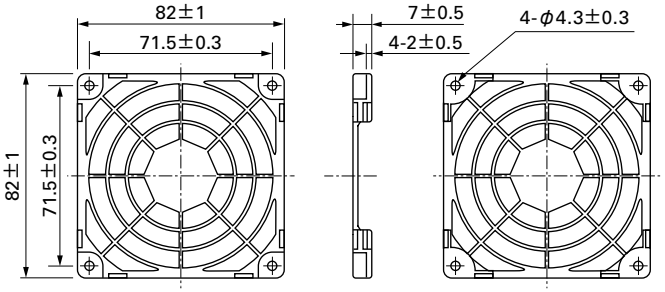
Inlet side, Outlet side



Mass : 21g

Resin Finger Guards

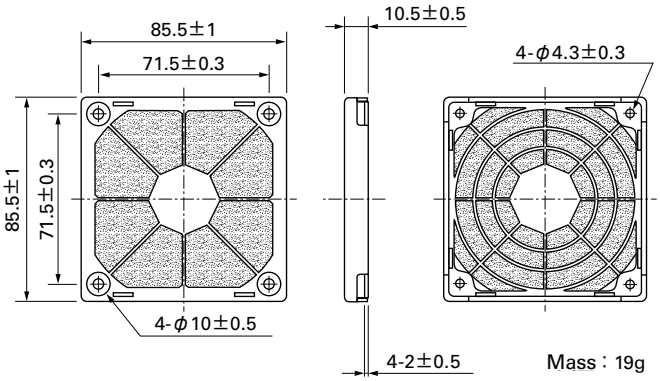
Model : 109-1002G



Mass : 10g

Resin Filter Kits

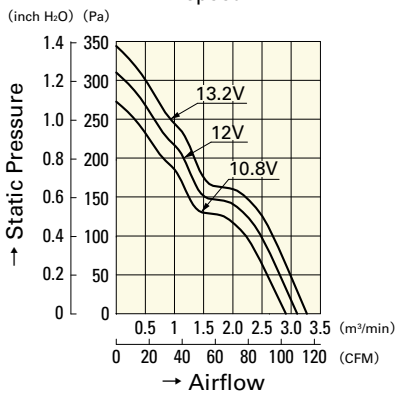
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

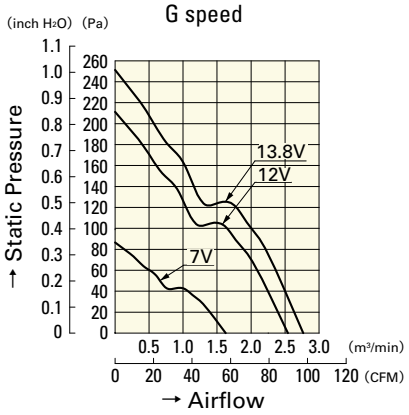
Airflow - Static Pressure Characteristics

K speed



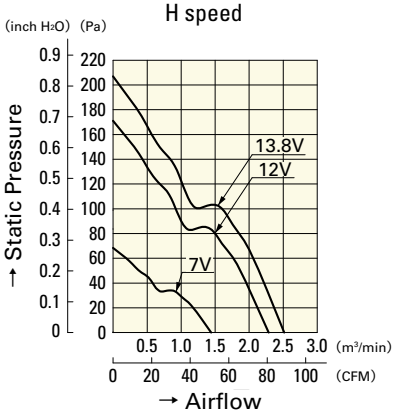
9G0812K101

G speed



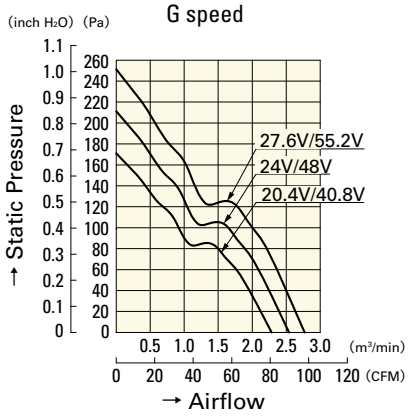
9G0812G101

H speed



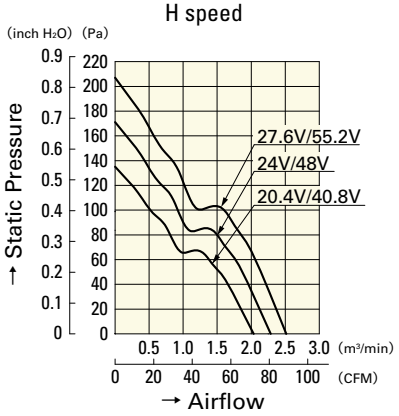
9G0812H101

G speed



9G0824G101
9G0848G101

H speed



9G0824H101
9G0848H101

92mm sq.

San Ace 92



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

92×92×25mm (Mass : 125g) 9GA type Low Power Consumption Fan

Specifications

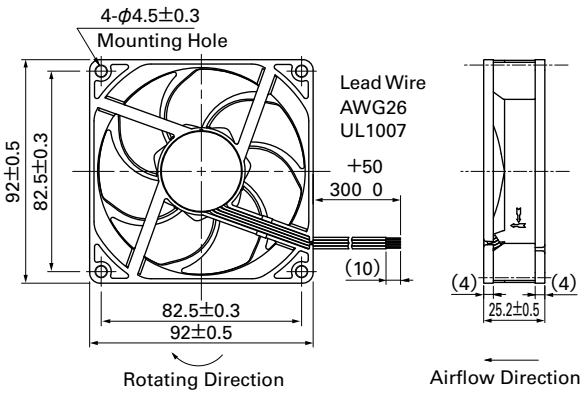
The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0912P4J03	12	10.2 to 13.8	100	0.39	4.68	5,000	2.20	77.7	105	0.42	43	−20 to +70	60,000/60℃
			0	0.06	0.72	1,500	0.65	23.3	9.4	0.04	14		
9GA0912P4G03			100	0.28	3.36	4,400	1.93	68.2	81	0.33	39		
			0	0.06	0.72	1,500	0.65	23.3	9.4	0.04	14		
9GA0912P4S03			100	0.2	2.4	3,800	1.67	59.0	60.6	0.24	35		
			0	0.06	0.72	1,500	0.65	23.3	9.4	0.04	14		
9GA0924P4J03	24	20.4 to 27.6	100	0.2	4.80	5,000	2.20	77.7	105	0.42	43		
			0	0.04	0.96	1,500	0.65	23.3	9.4	0.04	14		
9GA0924P4G03			100	0.15	3.60	4,400	1.93	68.2	81	0.33	39		
			0	0.04	0.96	1,500	0.65	23.3	9.4	0.04	14		
9GA0924P4S03			100	0.12	2.88	3,800	1.67	59.0	60.6	0.24	35		
			0	0.04	0.96	1,500	0.65	23.3	9.4	0.04	14		

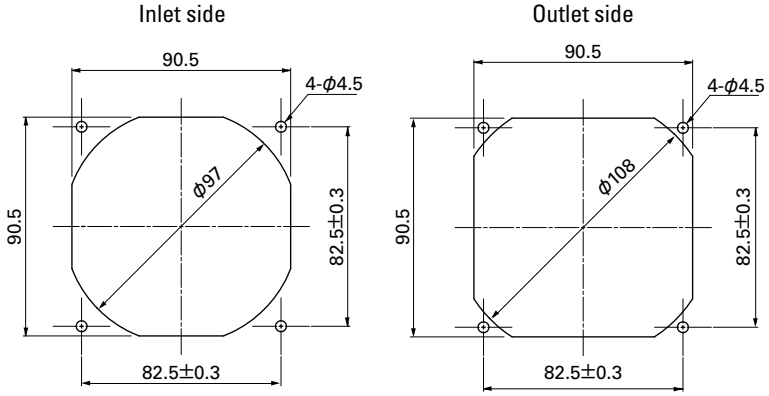
※PWM Frequency : 25kHz

Other sensor specifications are available as options. Please refer to the index (p. 506).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

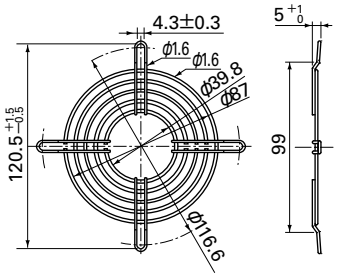


Options (unit: mm)

Finger Guards

Model : 109-099C Surface treatment : Nickel-chrome plating (silver) Color

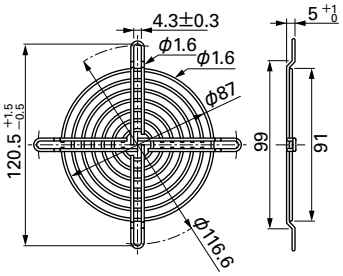
Outlet side



Mass : 22g

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

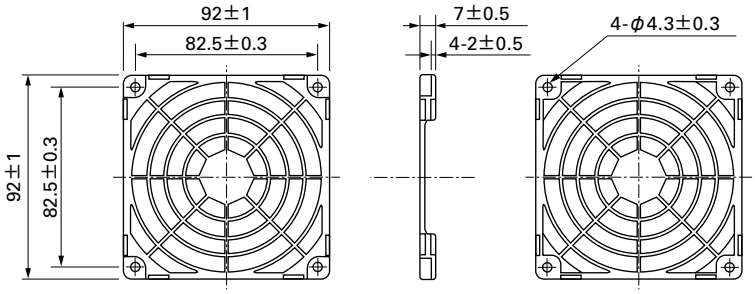
Inlet side, Outlet side



Mass : 29g

Resin Finger Guards

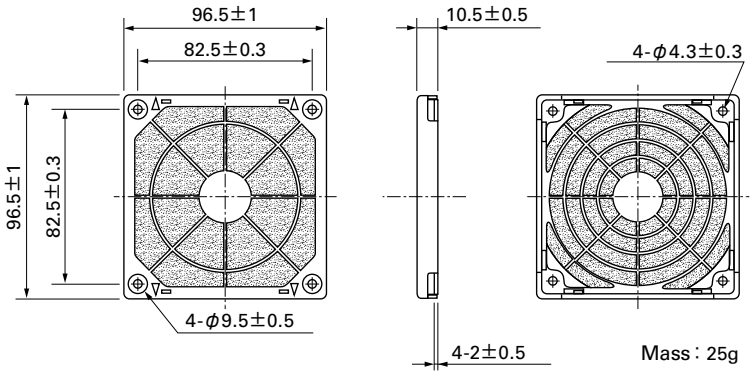
Model : 109-1001G



Mass : 12g

Resin Filter Kits

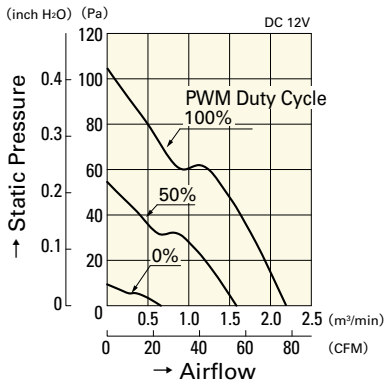
Model : 109-1001F13 (13PPI), 109-1001F20 (20PPI)
: 109-1001F30 (30PPI), 109-1001F40 (40PPI)



Mass : 25g

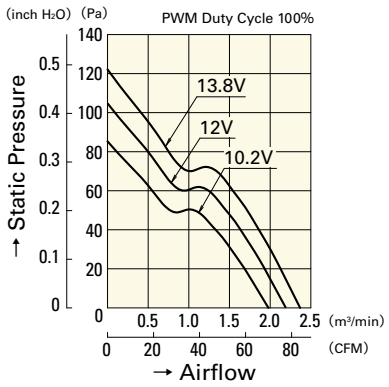
Airflow - Static Pressure Characteristics

PWM Duty Cycle



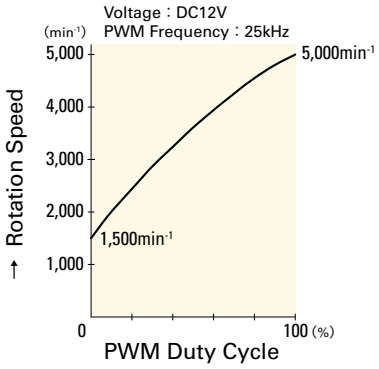
9GA0912P4J03

Operating Voltage Range



9GA0912P4J03

PWM Duty - Speed Characteristics Example



9GA0912P4J03

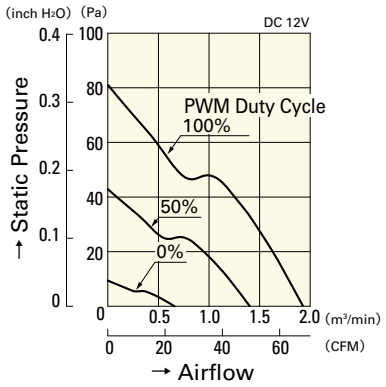
92mm sq.

San Ace 92

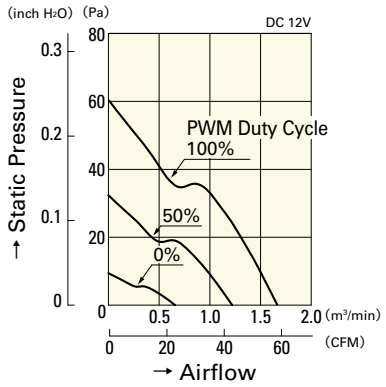
92×92×25mm 〔Mass：125g〕

Airflow - Static Pressure Characteristics

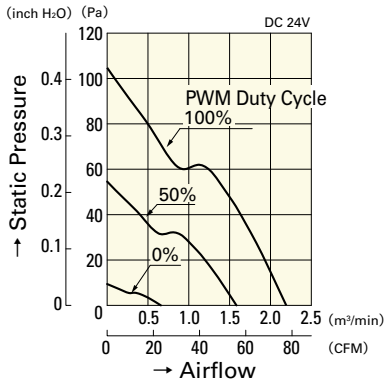
PWM Duty Cycle



9GA0912P4G03

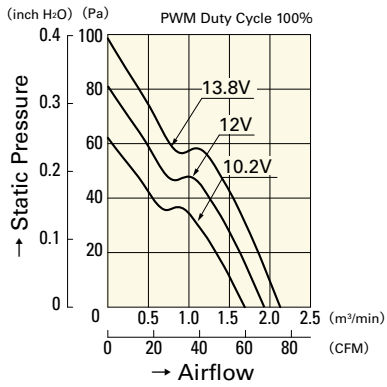


9GA0912P4S03

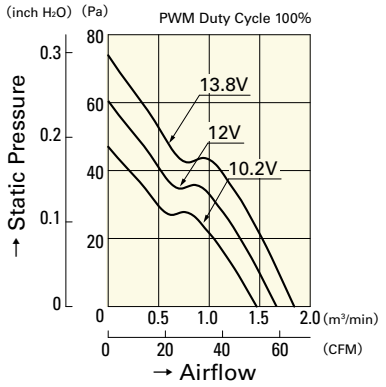


9GA0924P4J03

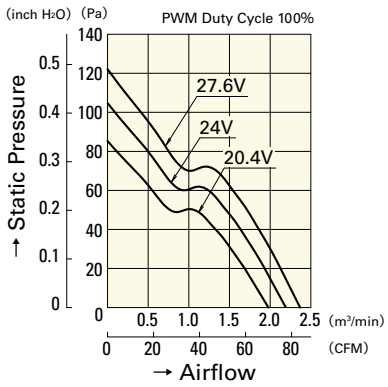
Operating Voltage Range



9GA0912P4G03

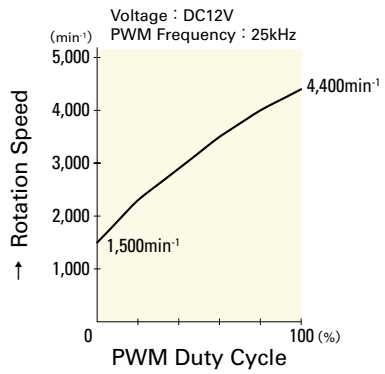


9GA0912P4S03

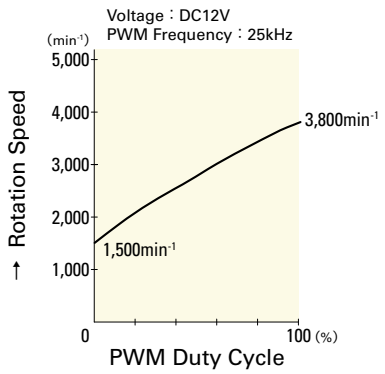


9GA0924P4J03

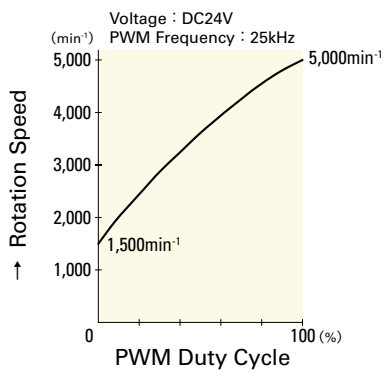
PWM Duty - Speed Characteristics Example



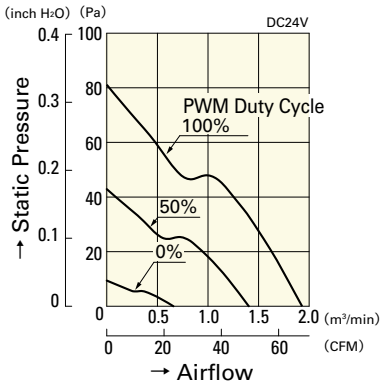
9GA0912P4G03



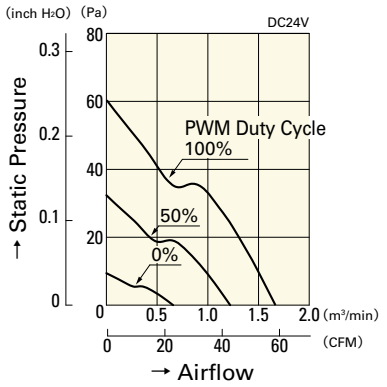
9GA0912P4S03



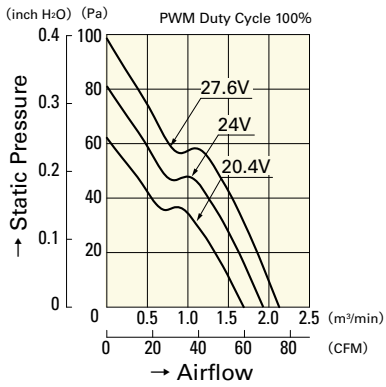
9GA0924P4J03



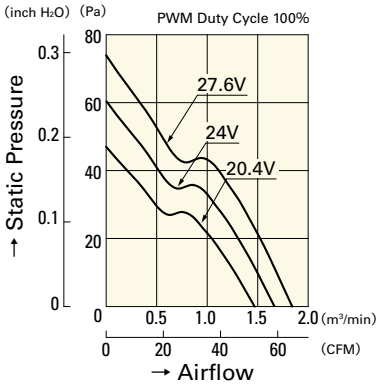
9GA0924P4G03



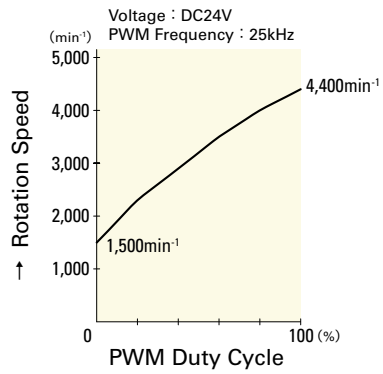
9GA0924P4S03



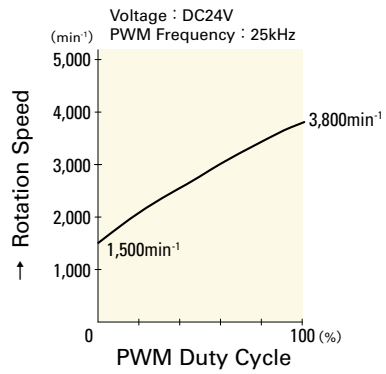
9GA0924P4G03



9GA0924P4S03



9GA0924P4G03



9GA0924P4S03

92mm sq. San Ace 92



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

92×92×25mm (Mass : 100g) 9S type Silent Fan

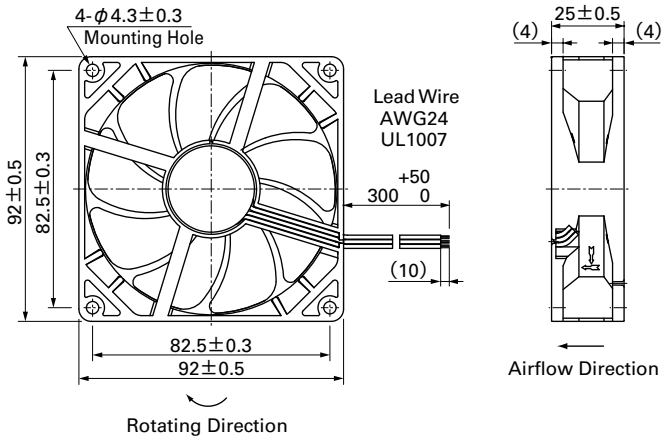
Specifications

The following nos. have pulse sensors and ribs. For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9S0912F401	12	5.0 to 13.8	0.14	1.68	2,650	1.26	44.5	30.0	0.120	27	−10 to +70	40,000/60℃
9S0912M401			0.11	1.32	2,250	1.07	37.8	21.6	0.087	22		
9S0912L401		6.0 to 13.8	0.07	0.84	1,750	0.83	29.3	13.1	0.053	17		
9S0924F401	24	14 to 26.4	0.09	2.16	2,650	1.26	44.5	30.0	0.120	27		
9S0924M401			0.07	1.68	2,250	1.07	37.8	21.6	0.087	22		
9S0924L401			0.04	0.96	1,750	0.83	29.3	13.1	0.053	17		

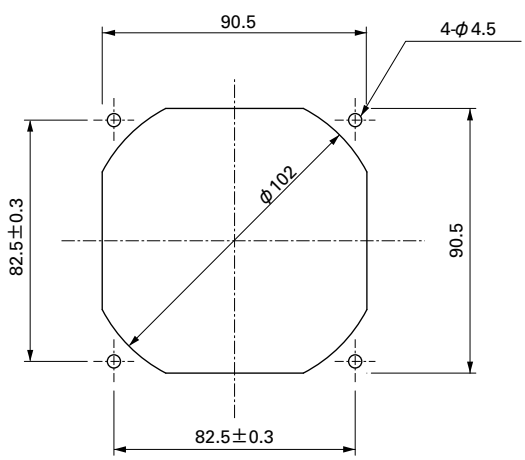
Other sensor specifications are available as options. Please refer to the index (p. 510).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

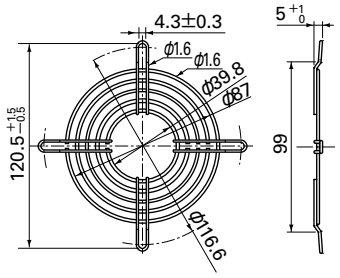


Options (unit: mm)

Finger Guards

Model : 109-099C Surface treatment : Nickel-chrome plating (silver) Color

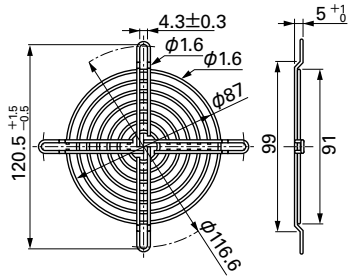
Outlet side



Mass 22g

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

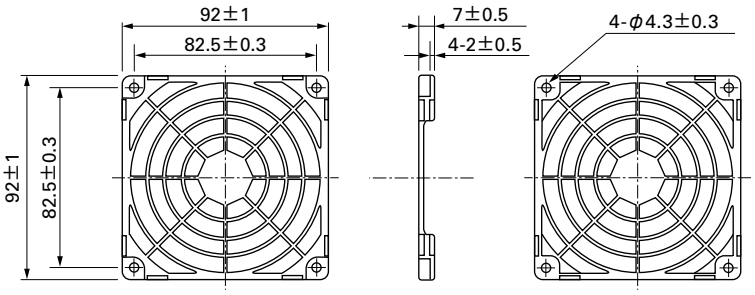
Inlet side, Outlet side



Mass : 29g

Resin Finger Guards

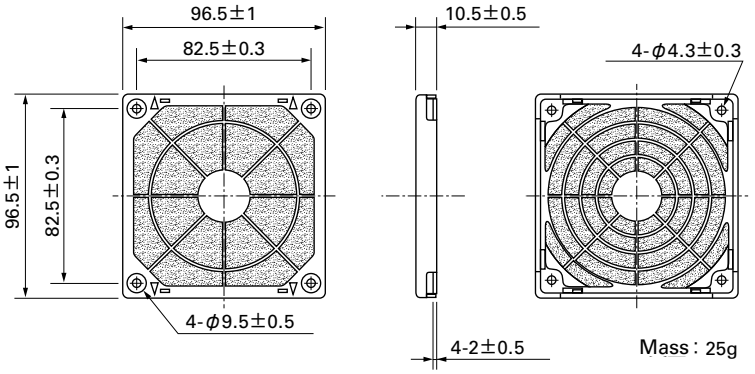
Model : 109-1001G



Mass : 12g

Resin Filter Kits

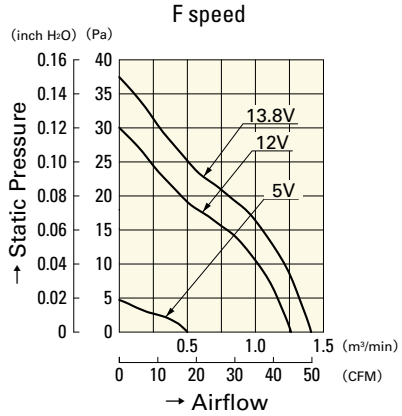
Model : 109-1001F13 (13PPI), 109-1001F20 (20PPI)
: 109-1001F30 (30PPI), 109-1001F40 (40PPI)



Mass : 25g

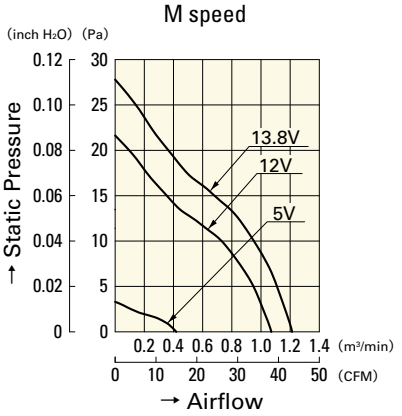
Airflow - Static Pressure Characteristics

F speed



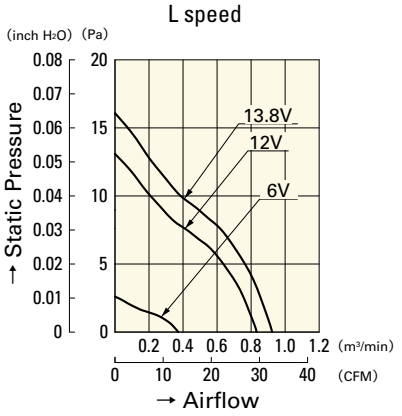
9S0912F401

M speed



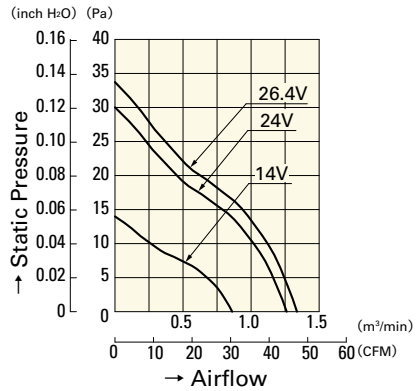
9S0912M401

L speed



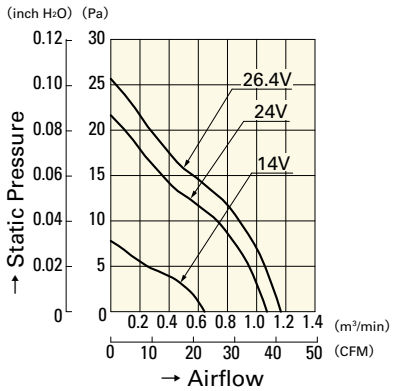
9S0912L401

F speed



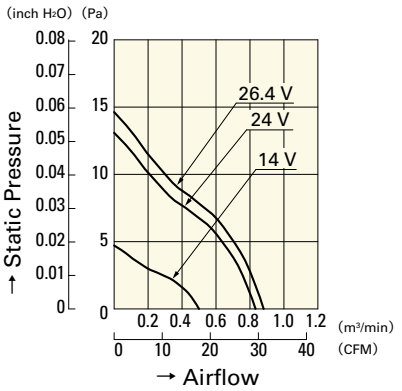
9S0924F401

M speed



9S0924M401

L speed



9S0924L401

92mm sq. San Ace 92



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

92×92×25mm (Mass : 100g) 9A type San Cooler

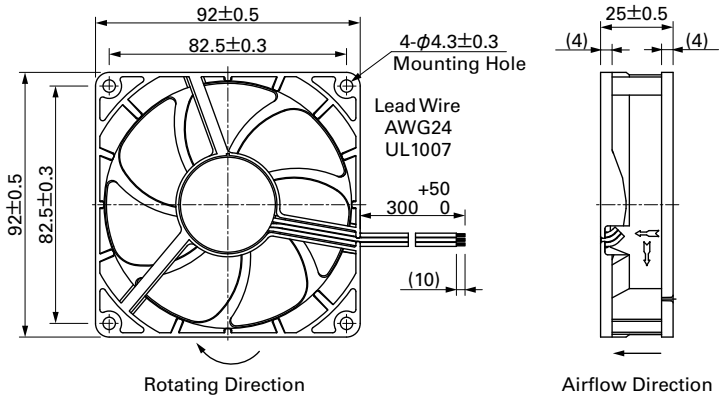
Specifications

The following nos. have pulse sensors and ribs. For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9A0912G401	12	6 to 13.8	0.39	4.68	3,900	1.76	62.1	66.5	0.267	43	−20 to +60	30,000/60℃
9A0912S401			0.27	3.24	3,550	1.66	58.6	56.1	0.225	39		40,000/60℃
9A0912H401			0.21	2.52	3,150	1.45	51.2	44	0.177	33	−20 to +70	
9A0912F401			0.14	1.68	2,650	1.24	43.8	32.2	0.129	30		
9A0912M401			0.12	1.44	2,250	1.04	36.7	22.6	0.091	27		
9A0912L401		7 to 13.8	0.07	0.84	1,750	0.8	28.2	13.4	0.054	23		
9A0924G401	24	12 to 27.6	0.19	4.56	3,900	1.76	62.1	66.5	0.267	43	−20 to +60	30,000/60℃
9A0924S401			0.15	3.6	3,550	1.66	58.6	56.1	0.225	39	−20 to +70	40,000/60℃
9A0924H401			0.1	2.4	3,150	1.45	51.2	44	0.177	33		
9A0924F401			0.08	1.92	2,650	1.24	43.8	32.2	0.129	30		
9A0924M401			0.05	1.2	2,250	1.04	36.7	22.6	0.091	27		
9A0924L401		14 to 27.6	0.04	0.96	1,750	0.8	28.2	13.4	0.054	23		
9A0948S401	48	40.5 to 53	0.08	3.84	3,550	1.66	58.6	56.1	0.225	39	−20 to +60	

Other sensor specifications are available as options. Please refer to the index (p. 500).

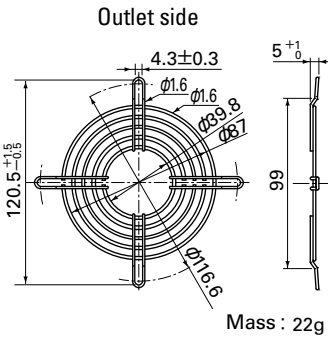
Dimensions (unit: mm) (With ribs)



Options (unit: mm)

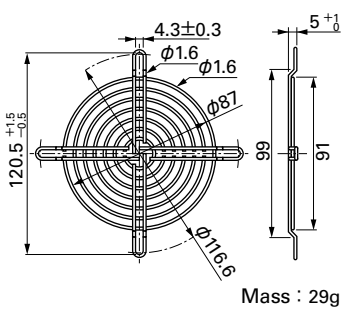
Finger Guards

Color
Model : 109-099C Surface treatment : Nickel-chrome plating (silver)



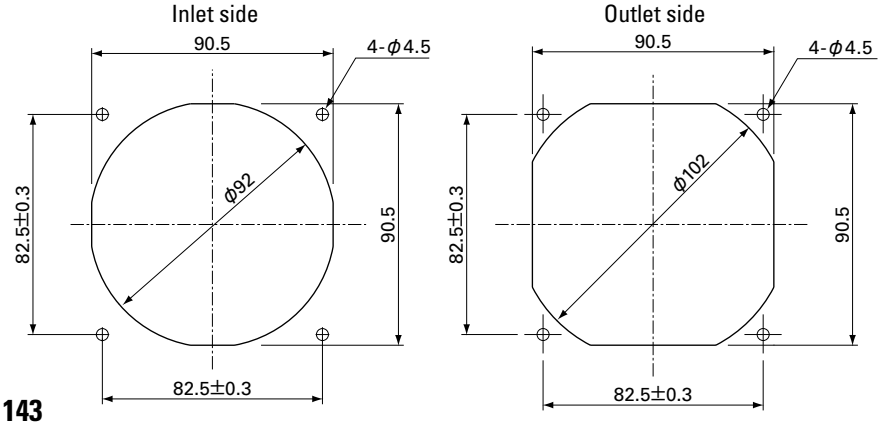
Mass : 22g

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



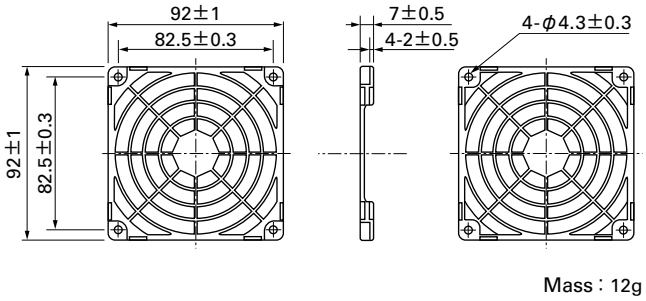
Mass : 29g

Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



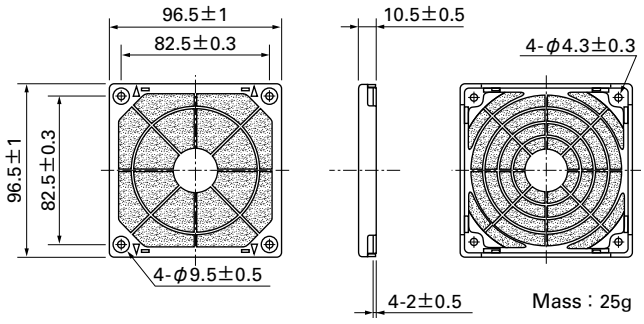
Options (unit: mm)

Resin Finger Guards
Model : 109-1001G



Mass : 12g

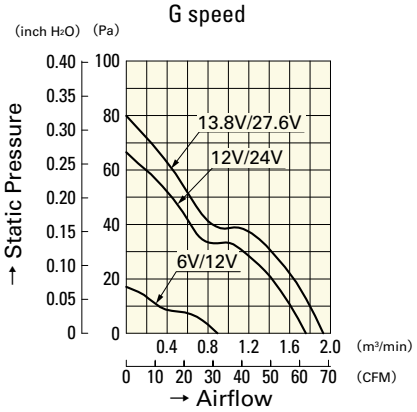
Resin Filter Kits
Model : 109-1001F13 (13PPI), 109-1001F20 (20PPI)
: 109-1001F30 (30PPI), 109-1001F40 (40PPI)



Mass : 25g

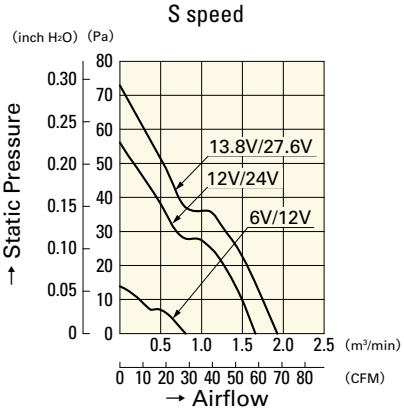
Airflow - Static Pressure Characteristics

G speed



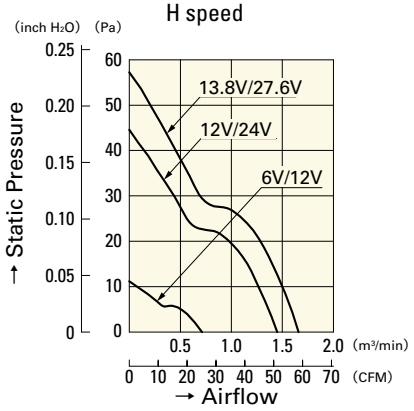
9A0912G401
9A0924G401

S speed



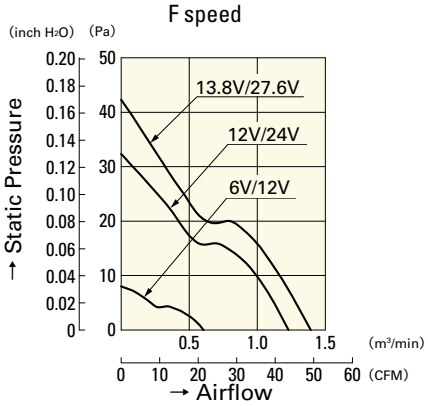
9A0912S401
9A0924S401

H speed



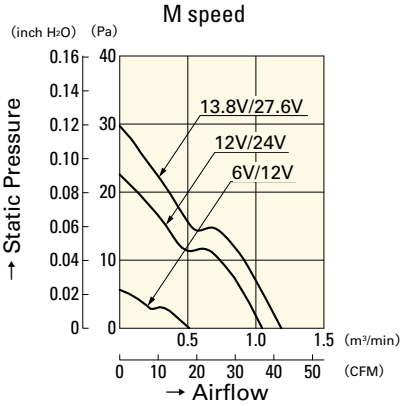
9A0912H401
9A0924H401

F speed



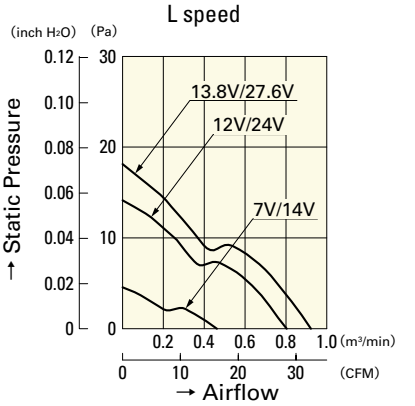
9A0912F401
9A0924F401

M speed



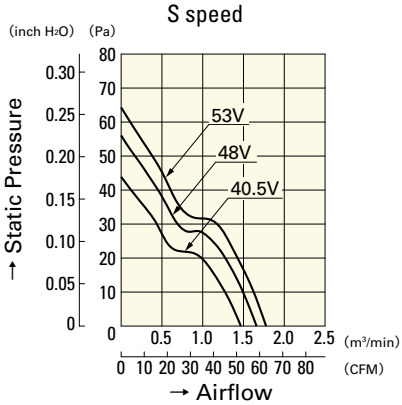
9A0912M401
9A0924M401

L speed



9A0912L401
9A0924L401

S speed



9A0948S401

92mm sq. San Ace 92



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

92×92×32mm (Mass : 170g) 9G type

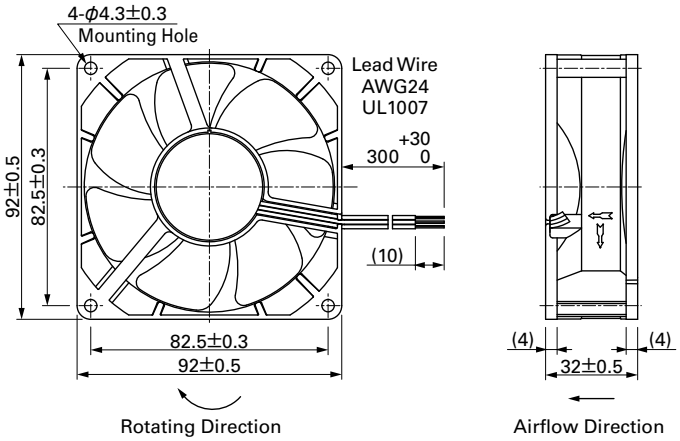
Specifications

The following nos. have pulse sensors and ribs. For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9G0912A201	12	10.2 to 13.8	0.58	6.96	4,300	2.50	88.3	115	0.462	44	−20 to +70	40,000/60℃
9G0912S201			0.38	4.56	3,500	2.00	70.7	77	0.309	38		
9G0912H201			0.23	2.76	2,850	1.59	56.2	51	0.205	32		
9G0912M201			0.13	1.56	2,100	1.20	42.4	27	0.108	25		
9G0924A201	24	20.4 to 27.6	0.30	7.20	4,300	2.50	88.3	115	0.462	44	−20 to +60	
9G0924S201			0.19	4.56	3,500	2.00	70.7	77	0.309	38	−20 to +70	
9G0924H201			0.12	2.88	2,850	1.59	56.2	51	0.205	32		
9G0924M201			0.08	1.92	2,100	1.20	42.4	27	0.108	25		
9G0948A201	48	40.8 to 55.2	0.16	7.68	4,300	2.50	88.3	115	0.462	44		
9G0948S201			0.11	5.28	3,500	2.00	70.7	77	0.309	38		
9G0948H201			0.08	3.84	2,850	1.59	56.2	51	0.205	32		
9G0948M201			0.05	2.40	2,100	1.20	42.4	27	0.108	25		

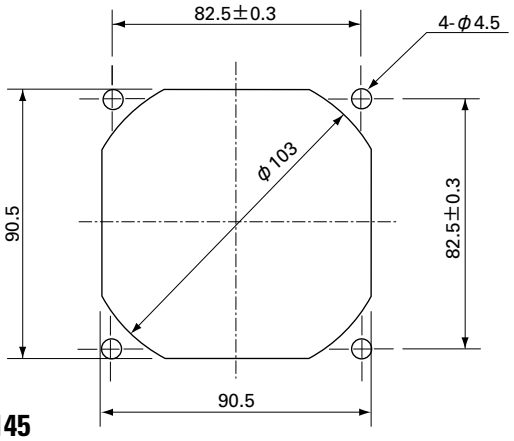
Other sensor specifications are available as options. Please refer to the index (pp. 502 to 503).

Dimensions (unit: mm) (With ribs)

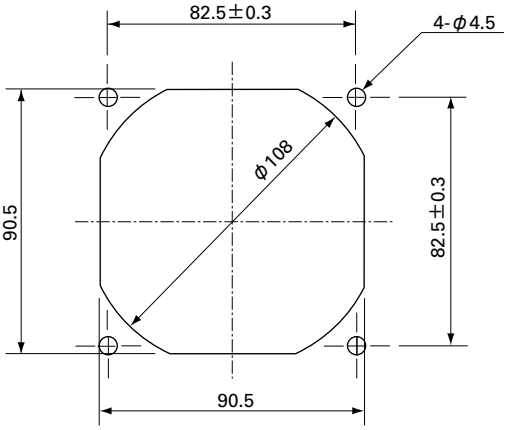


Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side



Outlet side

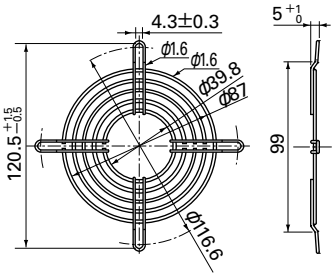


Options (unit: mm)

Finger Guards

Model : 109-099C Surface treatment : Nickel-chrome plating (silver) Color

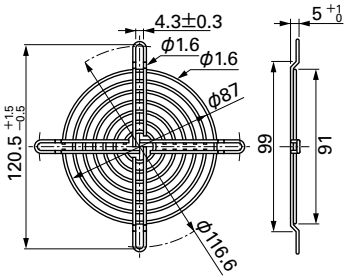
Outlet side



Mass : 22g

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

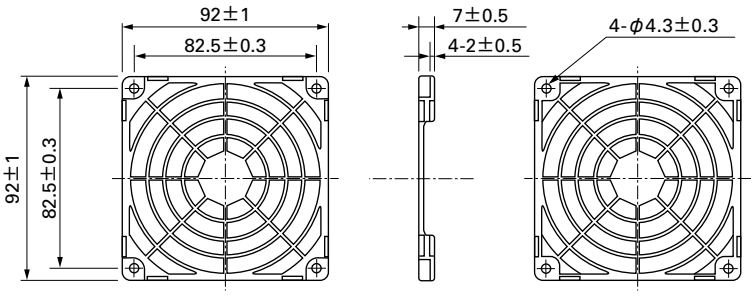
Inlet side, Outlet side



Mass : 29g

Resin Finger Guards

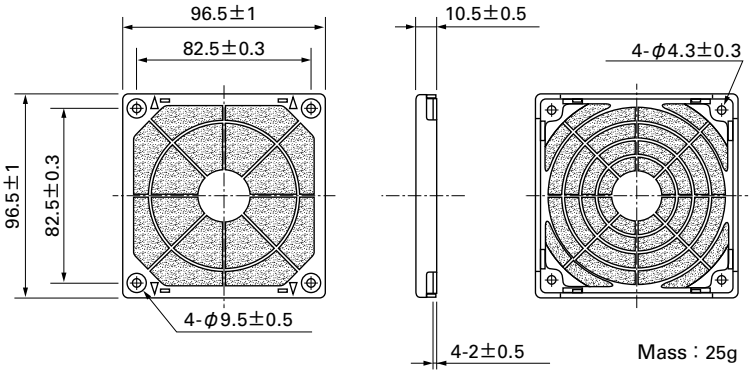
Model : 109-1001G



Mass : 12g

Resin Filter Kits

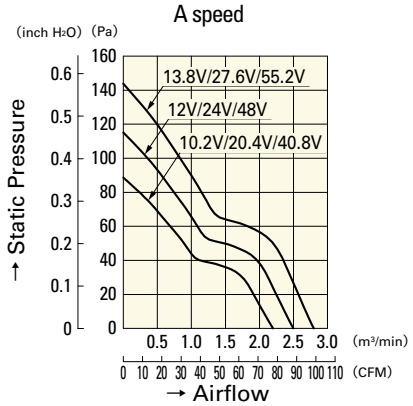
Model : 109-1001F13 (13PPI), 109-1001F20 (20PPI)
: 109-1001F30 (30PPI), 109-1001F40 (40PPI)



Mass : 25g

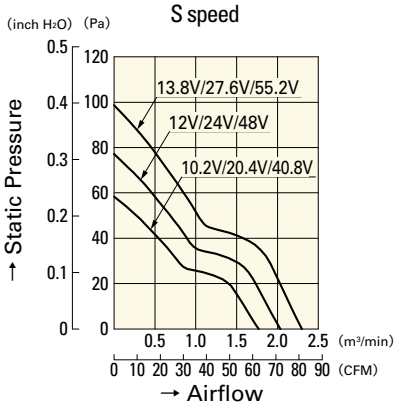
Airflow - Static Pressure Characteristics

A speed



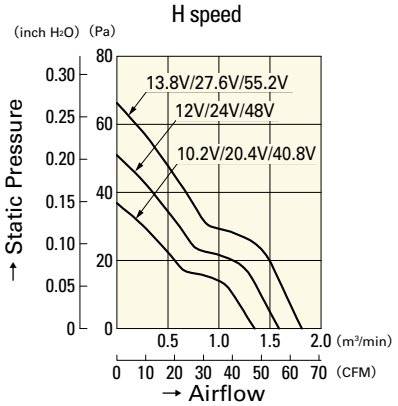
9G0912A201
9G0924A201
9G0948A201

S speed



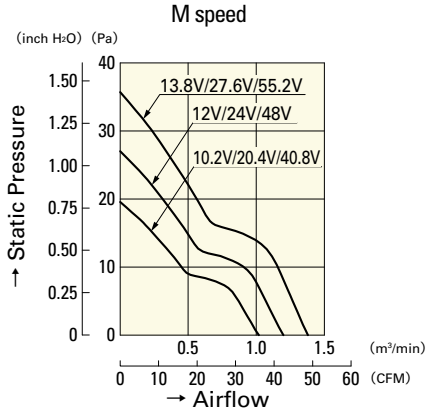
9G0912S201
9G0924S201
9G0948S201

H speed



9G0912H201
9G0924H201
9G0948H201

M speed



9G0912M201
9G0924M201
9G0948M201

92mm sq. San Ace 92



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10: Survival rate: 90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

92×92×38mm (Mass : 240g) 9GA type Low Power Consumption Fan

Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

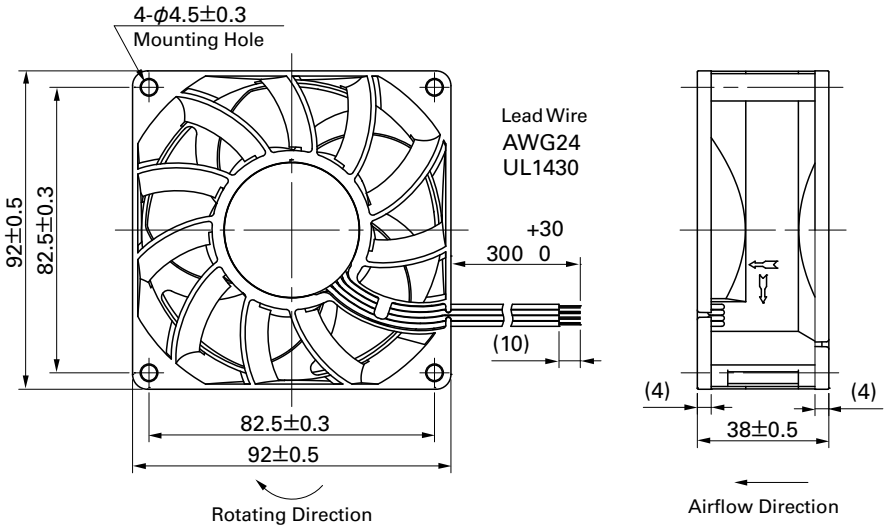
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GA0912P1H03	12	10.2 to 13.8	100	2.10	25.2	9,700	4.00	141	500	2.01	63	−20 to +70	40,000/60℃ (70,000/40℃)
			0	0.16	1.92	2,500	0.97	34.3	33	0.13	29		
9GA0924P1H01	24	20.4 to 27.6	100	1.1	26.4	9,700	4.00	141	500	2.01	63	−10 to +70	
			0	0.07	1.68	2,500	0.97	34.3	33	0.13	29		
9GA0948P1H03 Note)	48	40.8 to 55.2	100	0.55	26.4	9,700	4.00	141	500	2.01	63	−20 to +70	

Note: Rated voltage 48V fans do not rotate when PWM duty cycle is 0%.

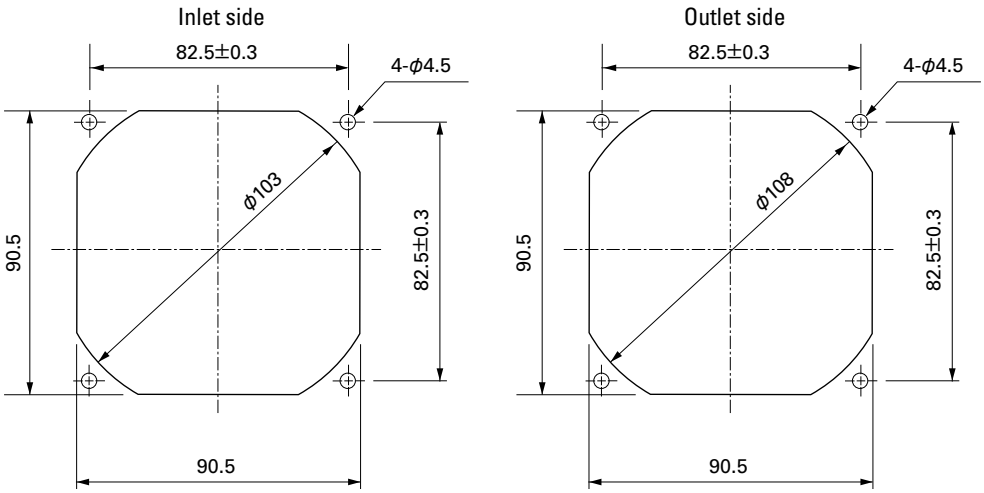
※PWM Frequency : 25kHz

Other sensor specifications are available as options. Please refer to the index (p. 506).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

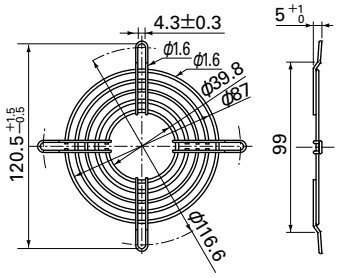


Options (unit: mm)

Finger Guards

Color
Model : 109-099C Surface treatment : Nickel-chrome plating (silver)

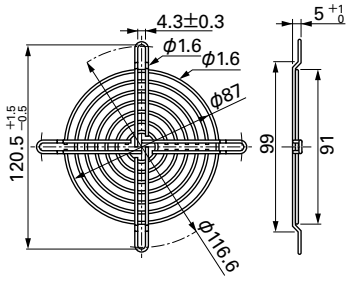
Outlet side



Mass : 22g

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

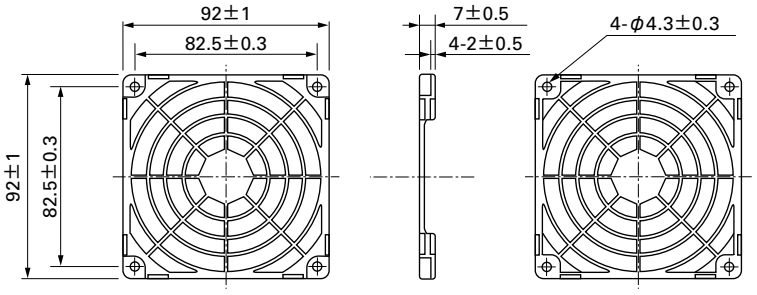
Inlet side, Outlet side



Mass : 29g

Resin Finger Guards

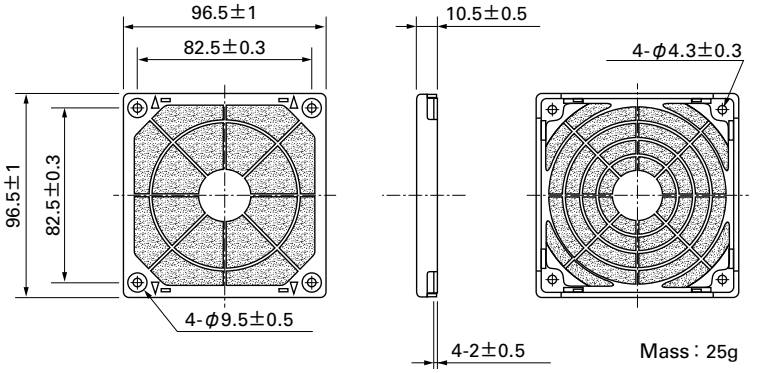
Model : 109-1001G



Mass : 12g

Resin Filter Kits

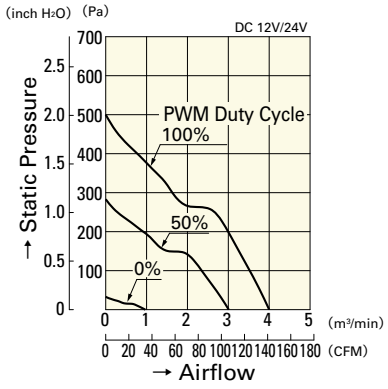
Model : 109-1001F13 (13PPI), 109-1001F20 (20PPI)
: 109-1001F30 (30PPI), 109-1001F40 (40PPI)



Mass : 25g

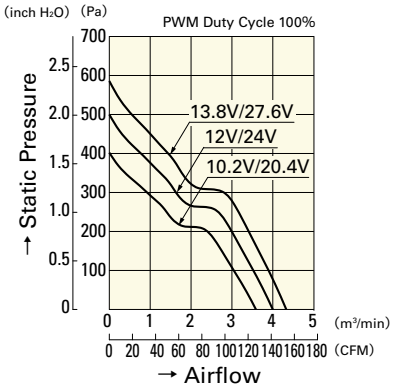
Airflow - Static Pressure Characteristics

PWM Duty Cycle



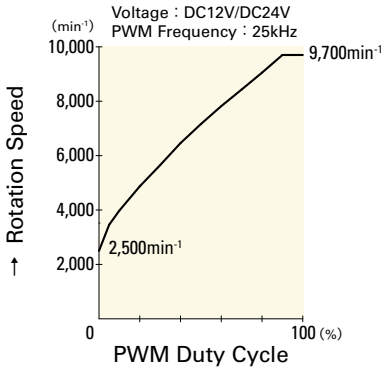
9GA0912P1H03
9GA0924P1H01

Operating Voltage Range

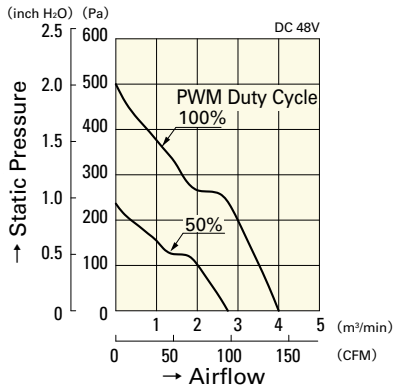


9GA0912P1H03
9GA0924P1H01

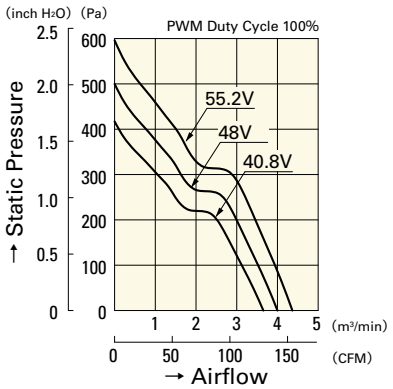
PWM Duty - Speed Characteristics Example



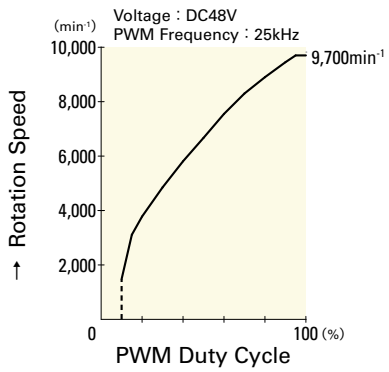
9GA0912P1H03
9GA0924P1H01



9GA0948P1H03



9GA0948P1H03



9GA0948P1H03

92mm sq.

San Ace 92



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

92×92×38mm (Mass : 250g) 9HV type

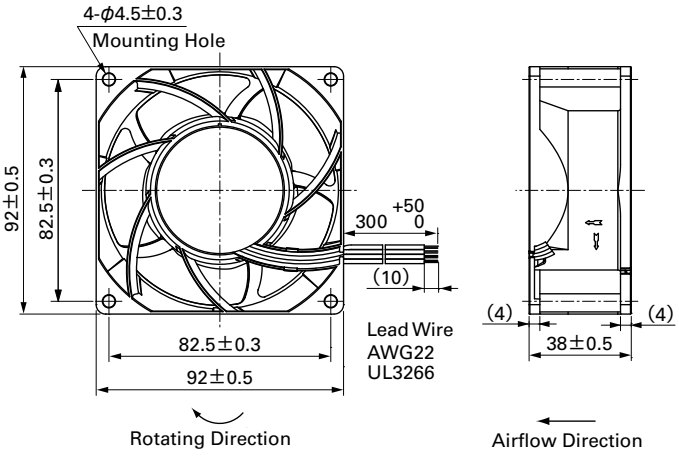
Specifications

The following nos. **have PWM controls, pulse sensors, and ribs. For ribless, append "1" to the model no.**

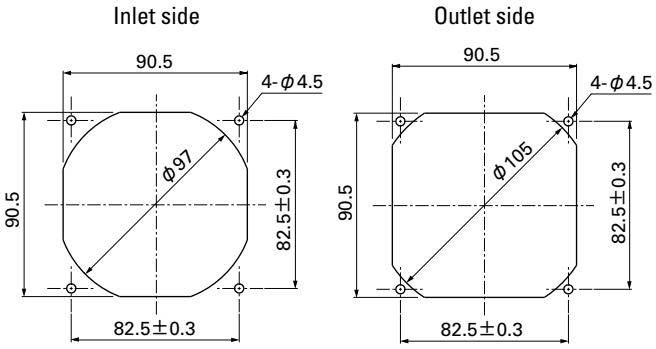
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9HV0912P1G001	12	8 to 12.6	100	5.2	62.4	14,900	5.1	180	1,100	4.42	72	−20 to +70	40,000/60℃ (70,000/40℃)
			0	0.8	9.6	4,500	1.54	54.4	160	0.64	44		
9HV0948P1G001	48	36 to 60	100	1.2	57.6	14,900	5.1	180	1,100	4.42	72		
			0	0.15	7.2	4,500	1.54	54.4	160	0.64	44		

※PWM Frequency : 25kHz

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



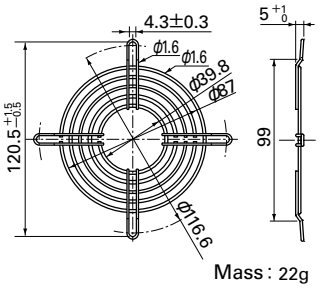
Options (unit: mm)

Finger Guards

Model : 109-099C Surface treatment : Nickel-chrome plating (silver) Color

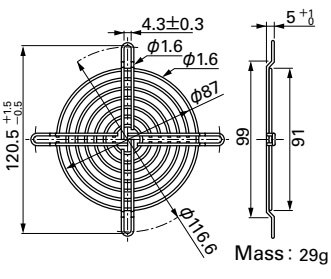
Model : 109-099E Surface treatment : Nickel-chrome plating (silver) Color
: 109-099H : Cation electropainting (black)

Outlet side



Mass : 22g

Inlet side, Outlet side

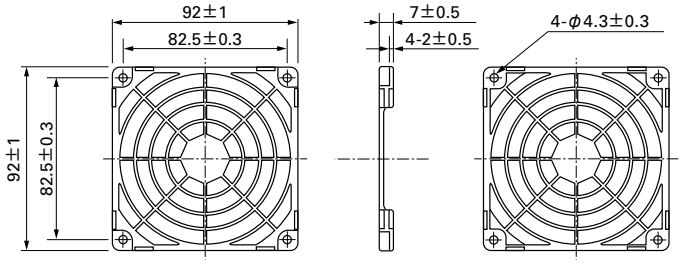


Mass : 29g

Options (unit: mm)

Resin Finger Guards

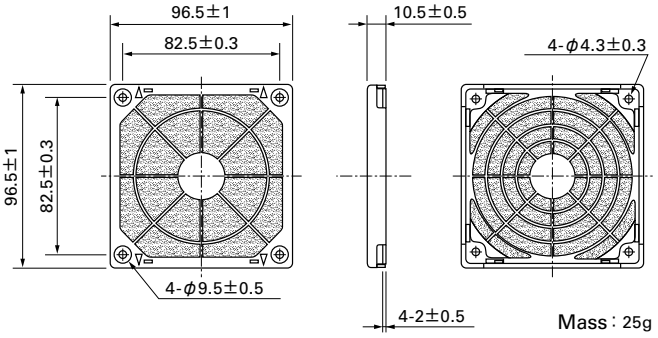
Model : 109-1001G



Mass : 12g

Resin Filter Kits

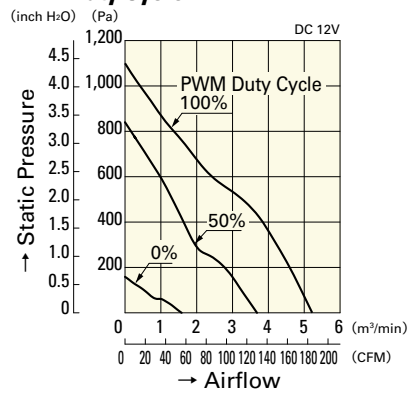
Model : 109-1001F13 (13PPI), 109-1001F20 (20PPI)
: 109-1001F30 (30PPI), 109-1001F40 (40PPI)



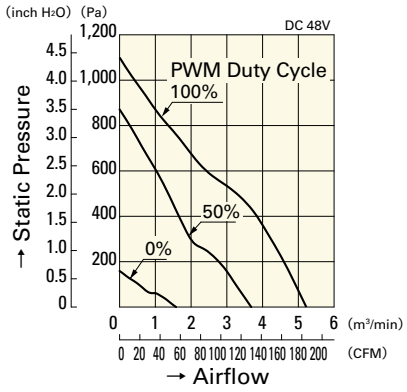
Mass : 25g

Airflow - Static Pressure Characteristics

PWM Duty Cycle

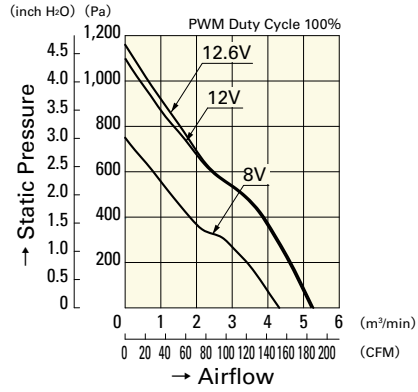


9HV0912P1G001

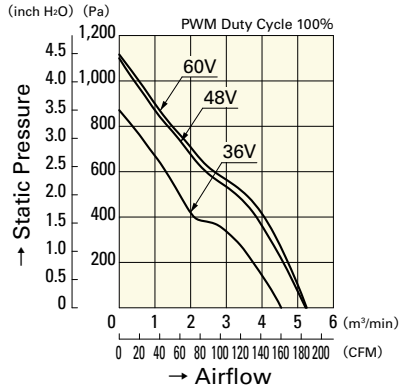


9HV0948P1G001

Operating Voltage Range

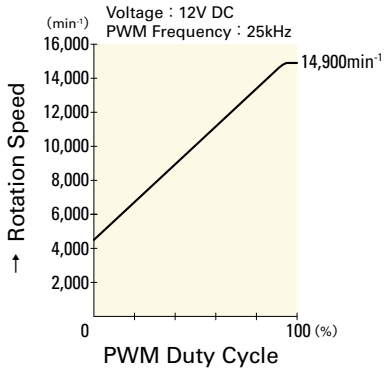


9HV0912P1G001

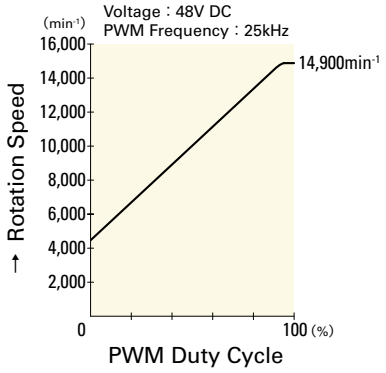


9HV0948P1G001

PWM Duty - Speed Characteristics Example



9HV0912P1G001



9HV0948P1G001

92mm sq. San Ace 92



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ··· −30℃ to +70℃ (Non-condensing)

92×92×38mm (Mass : 250g) 9GV type

Specifications

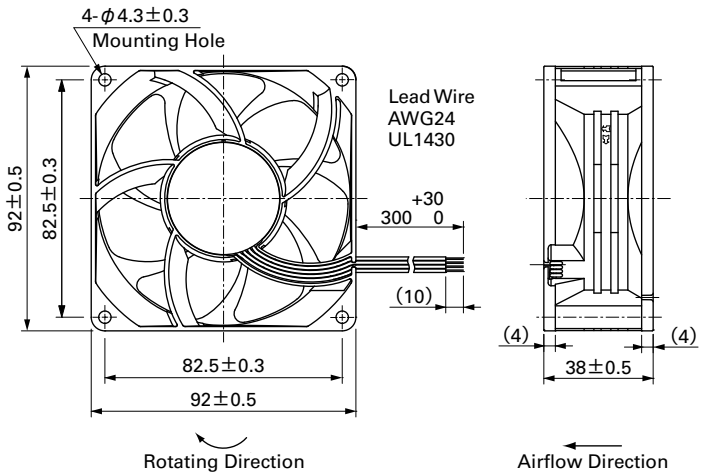
The following nos. **have PWM controls, pulse sensors, and ribs. For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GV0912P1G03	12	10.8 to 13.2	100	4.10	49.2	9,000	5.35	189.0	430.0	1.73	68	−20 to +70	40,000/60℃
			0	0.33	4.0	2,900	1.72	60.8	44.6	0.18	37		
9GV0912P1H03		10.2 to 13.8	100	3.50	42.0	8,500	5.05	178.0	385.0	1.55	64		
			0	0.29	3.5	2,700	1.60	56.5	38.8	0.16	34		
9GV0912P1F03			100	1.9	22.8	7,000	4.15	146.6	261	1.05	59	−10 to +70	
			0	0.16	1.92	2,200	1.3	45.9	25.7	0.1	31		
9GV0948P1H03	48	40.8 to 55.2	100	0.82	39.4	8,500	5.05	178.0	385.0	1.55	64	−20 to +70	
			0	0.14	6.7	4,000	2.37	83.7	85.2	0.34	45		
9GV0948P1F03			100	0.48	23.04	7,000	4.15	146.6	261	1.05	59	−10 to +70	
			0	0.12	5.76	3,500	2.07	73.1	65.2	0.26	42		

※PWM Frequency : 25kHz

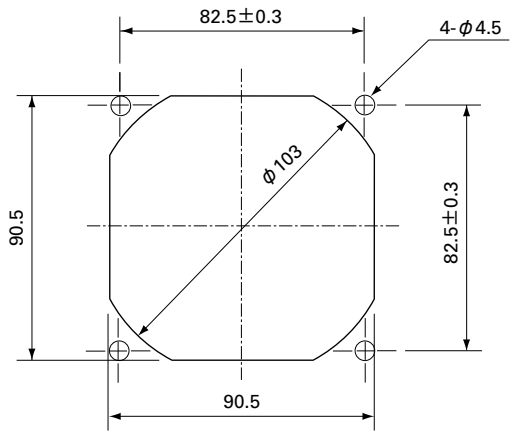
Other sensor specifications are available as options. Please refer to the index (pp. 507 to 508).

Dimensions (unit: mm) (With ribs)

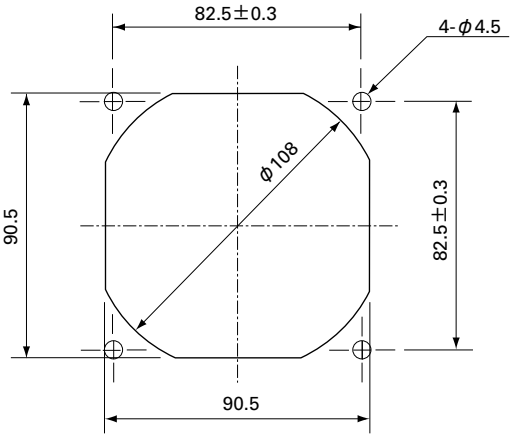


Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side



Outlet side

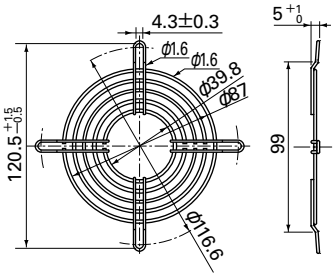


Options (unit: mm)

Finger Guards

Model : 109-099C Surface treatment : Nickel-chrome plating (silver) Color

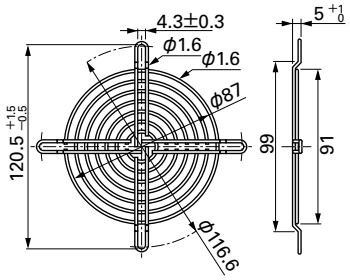
Outlet side



Mass : 22g

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

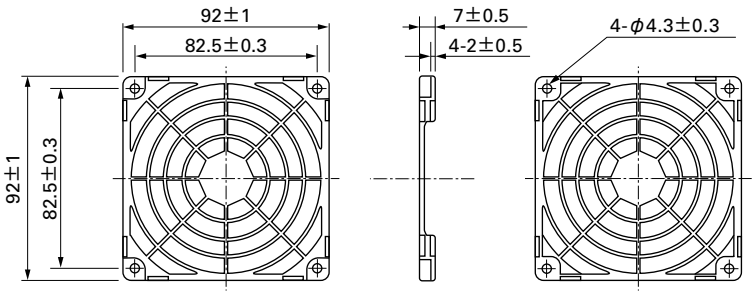
Inlet side, Outlet side



Mass : 29g

Resin Finger Guards

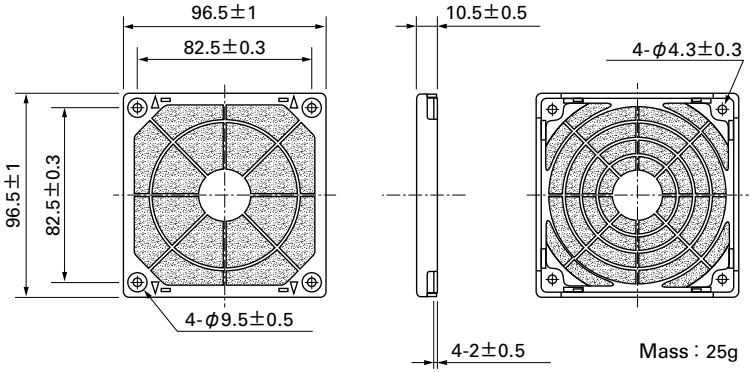
Model : 109-1001G



Mass : 12g

Resin Filter Kits

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



Mass : 25g

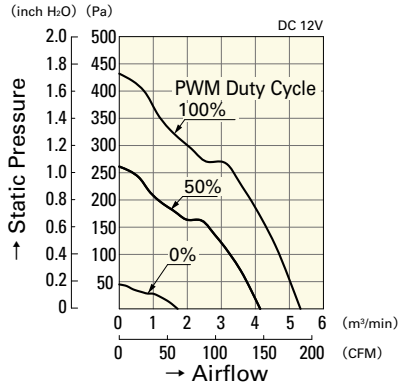
92mm sq.

San Ace 92

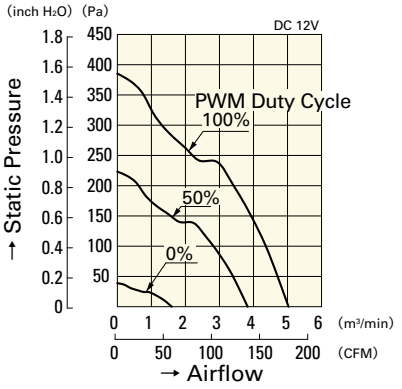
92×92×38mm 〔Mass：250g〕

Airflow - Static Pressure Characteristics

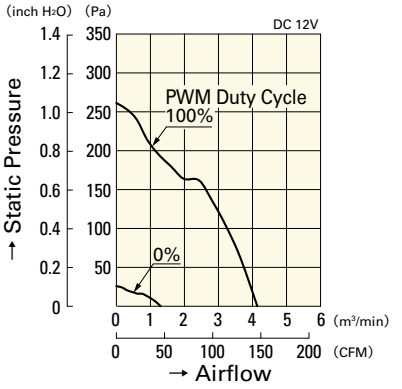
PWM Duty Cycle



9GV0912P1G03

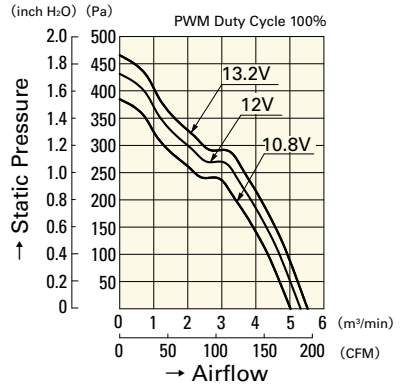


9GV0912P1H03

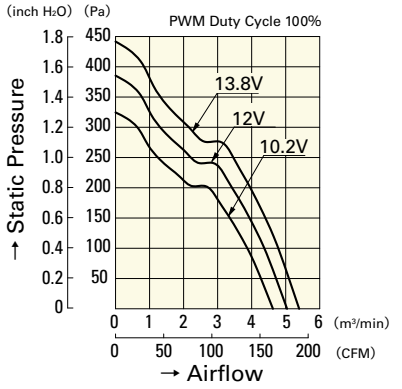


9GV0912P1F03

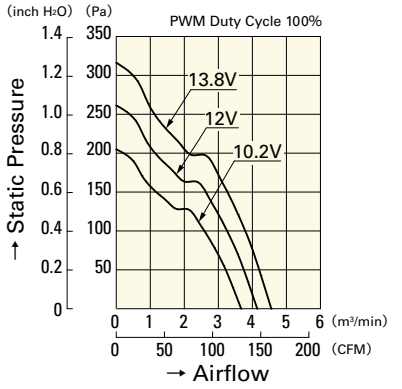
Operating Voltage Range



9GV0912P1G03

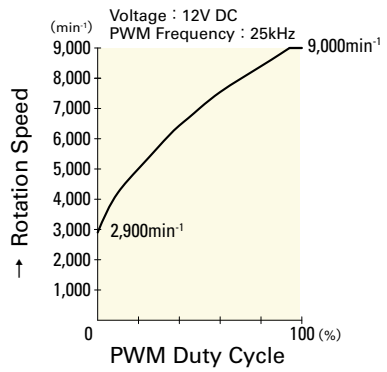


9GV0912P1H03

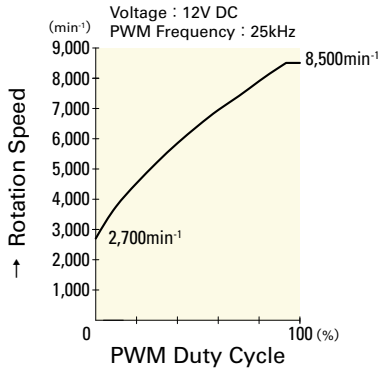


9GV0912P1F03

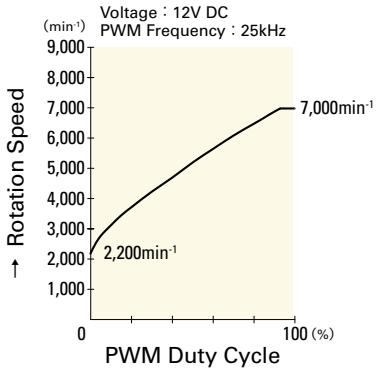
PWM Duty - Speed Characteristics Example



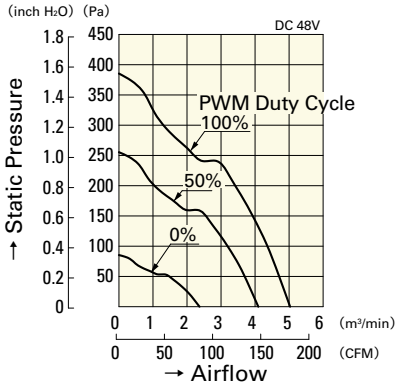
9GV0912P1G03



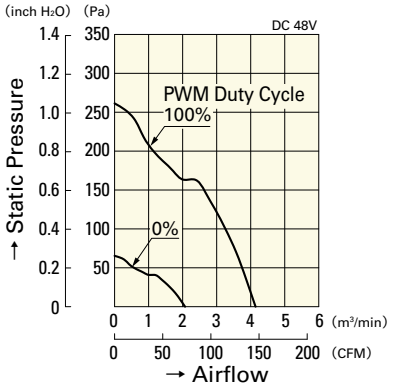
9GV0912P1H03



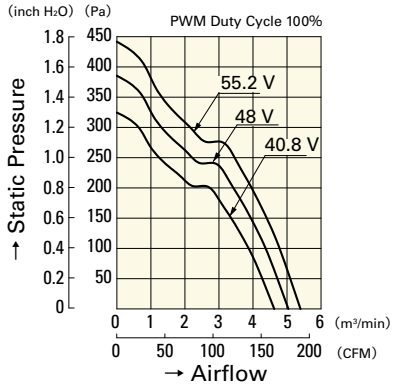
9GV0912P1F03



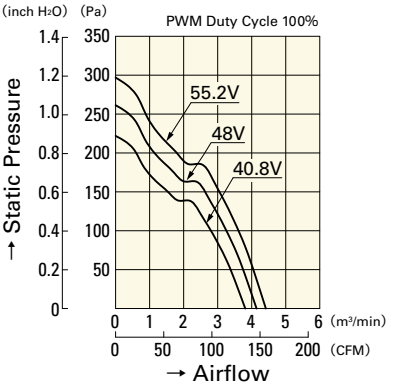
9GV0948P1H03



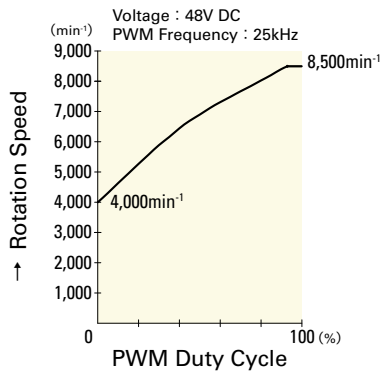
9GV0948P1F03



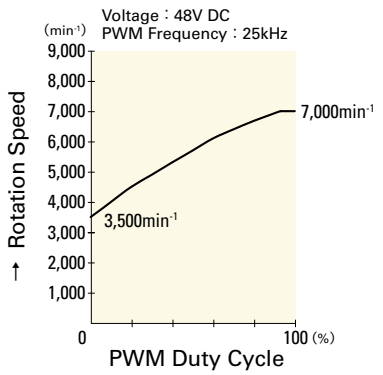
9GV0948P1H03



9GV0948P1F03



9GV0948P1H03



9GV0948P1F03

92mm sq. San Ace 92



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

92×92×38mm (Mass : 180g) 9G type

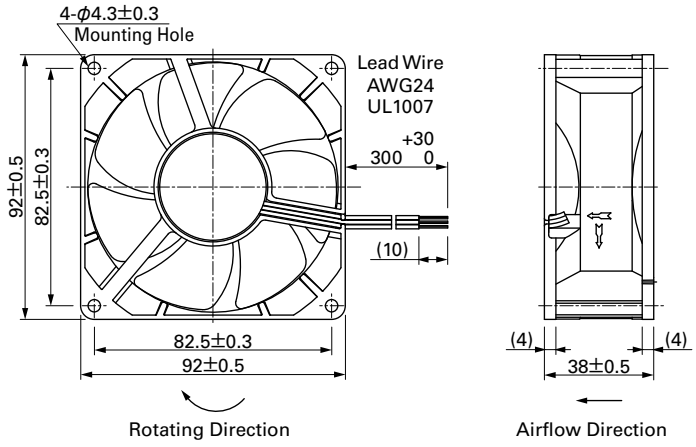
Specifications

The following nos. have pulse sensors and ribs. For ribless, append "1" to the model no.

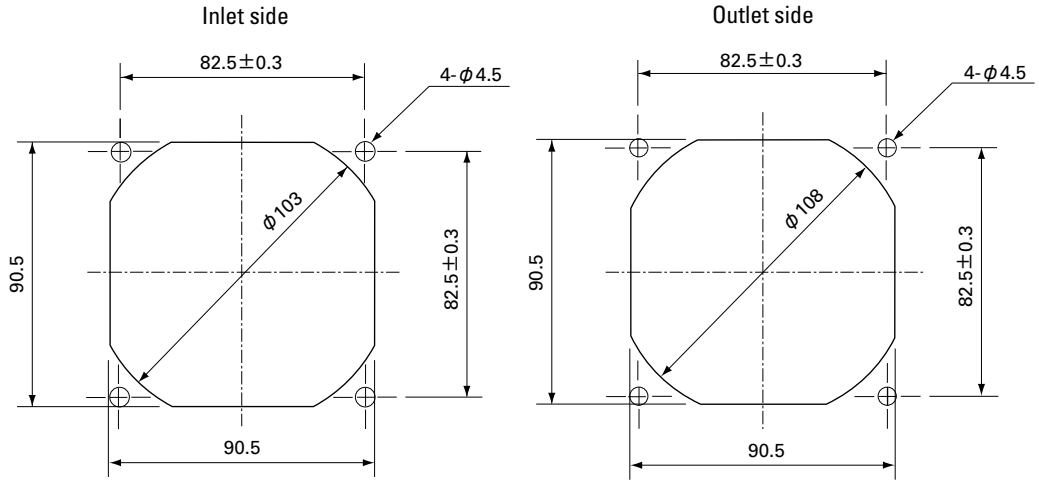
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9G0912G101	12	7.0 to 13.8	1.1	13.2	5,000	3.10	110	150	0.602	50	−20 to +60	40,000/60℃
9G0912H101			0.58	6.96	4,000	2.54	90	100	0.402	43		
9G0924G101	24	20.4 to 27.6	0.55	13.2	5,000	3.10	110	150	0.602	50		
9G0924H101			0.3	7.2	4,000	2.54	90	100	0.402	43		
9G0948J101	48	40.8 to 55.2	0.32	15.36	5,500	3.41	120.49	178	0.715	55	−20 to +70	
9G0948G101			0.27	12.96	5,000	3.10	110	150	0.602	50	−20 to +60	
9G0948H101			0.16	7.68	4,000	2.54	90	100	0.402	43		

Other sensor specifications are available as options. Please refer to the index (pp. 502 to 503).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

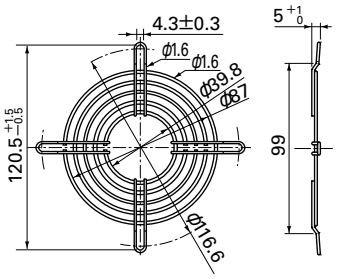


Options (unit: mm)

Finger Guards

Model : 109-099C Surface treatment : Nickel-chrome plating (silver) Color

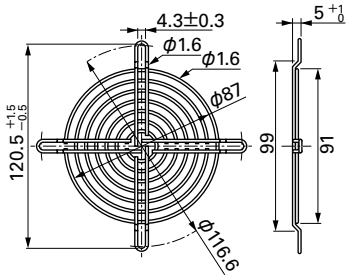
Outlet side



Mass : 22g

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

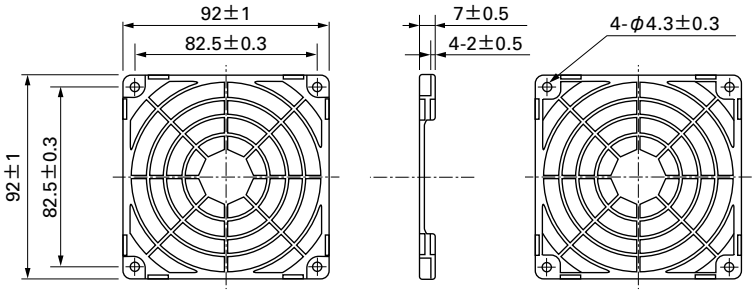
Inlet side, Outlet side



Mass : 29g

Resin Finger Guards

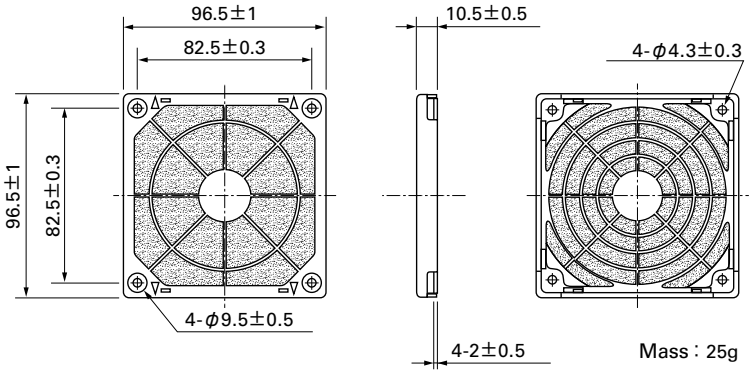
Model : 109-1001G



Mass : 12g

Resin Filter Kits

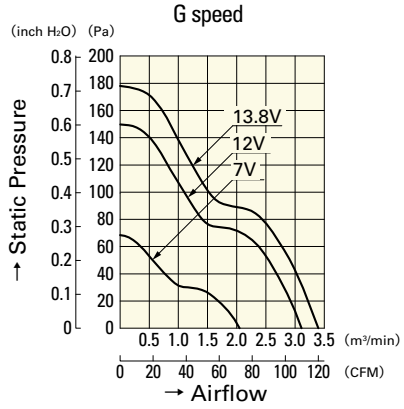
Model : 109-1001F13 (13PPI), 109-1001F20 (20PPI)
: 109-1001F30 (30PPI), 109-1001F40 (40PPI)



Mass : 25g

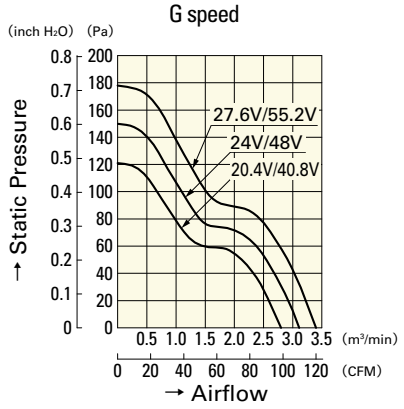
Airflow - Static Pressure Characteristics

G speed



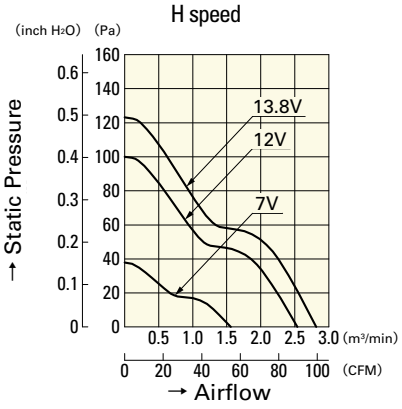
9G0912G101

G speed



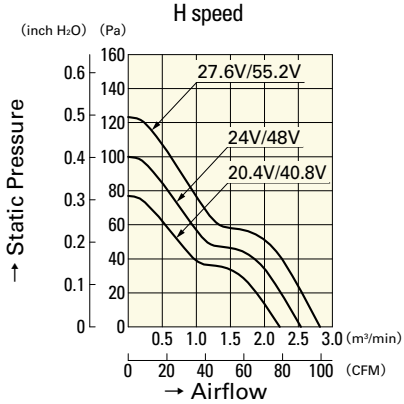
9G0924G101
9G0948G101

H speed



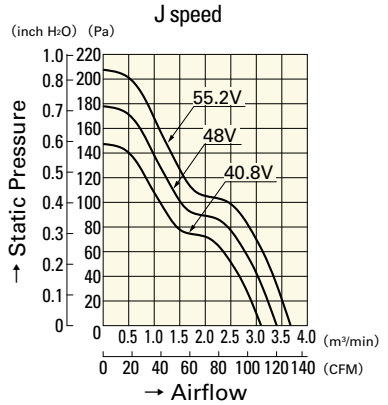
9G0912H101

H speed



9G0924H101
9G0948H101

J speed



9G0948J101

120 mm sq. San Ace 120



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

120×120×25mm (Mass : 140g) 9S type Silent Fan

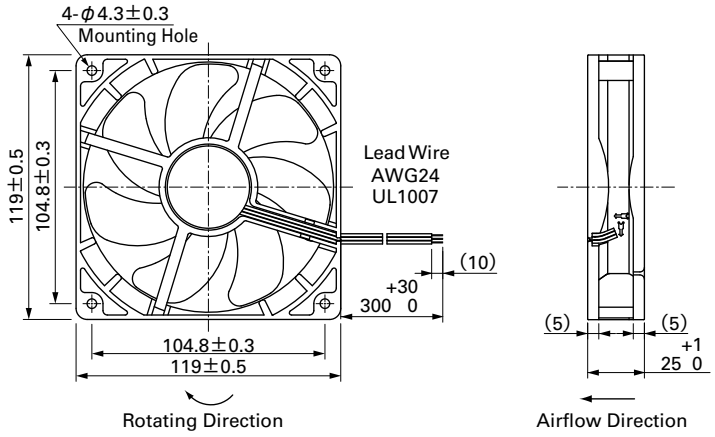
Specifications

The following nos. **have pulse sensors and ribs. For ribless, append "1" to the model no.**

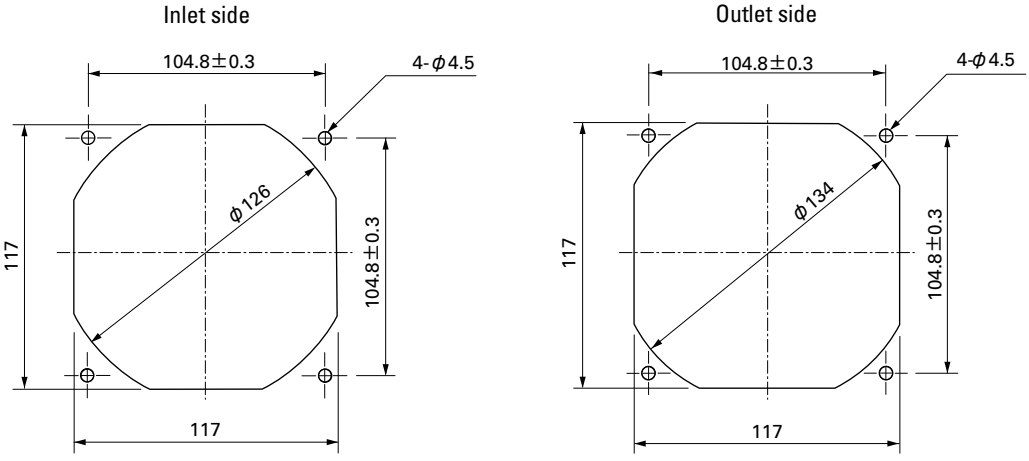
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9S1212H401	12	5.0 to 13.2	0.39	4.68	2,700	2.45	86.5	45.2	0.18	36	−10 to +60	40,000/60℃
9S1212F401		5.0 to 13.8	0.19	2.28	2,200	2.00	70.6	30.0	0.12	30	−10 to +70	
9S1212M401		6.0 to 13.8	0.13	1.56	1,850	1.66	58.6	22.7	0.09	24		
9S1212L401		7.0 to 13.8	0.08	0.96	1,500	1.36	48.1	14.9	0.06	17		
9S1224M401	24	14 to 26.4	0.06	1.44	1,850	1.66	58.6	22.7	0.090	24		

Other sensor specifications are available as options. Please refer to the index (p. 510).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

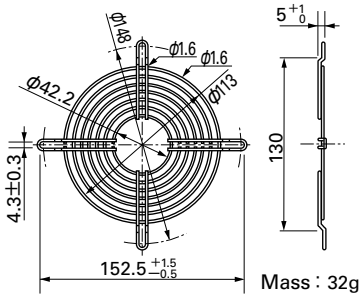


Options (unit: mm)

Finger Guards

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

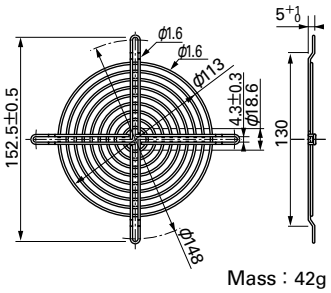
Outlet side



Mass : 32g

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

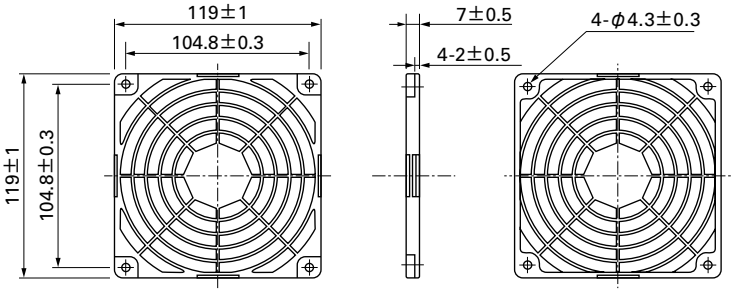
Inlet side, Outlet side



Mass : 42g

Resin Finger Guards

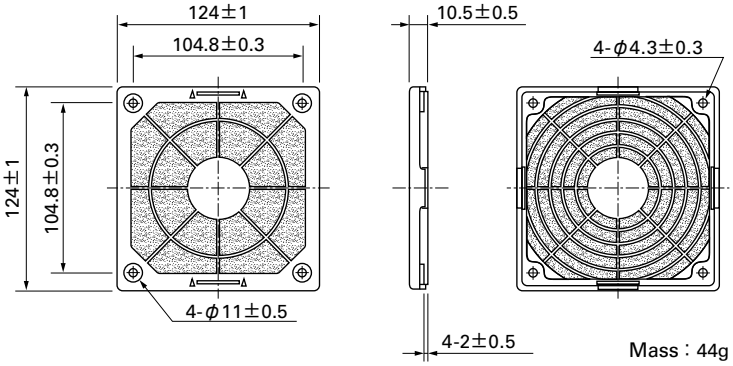
Model : 109-1000G



Mass : 23g

Resin Filter Kits

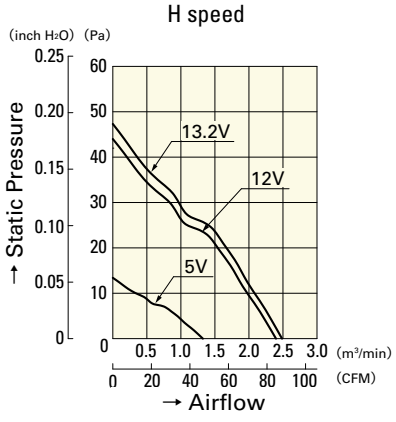
Model : 109-1000F13 (13PPI), 109-1000F20 (20PPI)
: 109-1000F30 (30PPI), 109-1000F40 (40PPI)



Mass : 44g

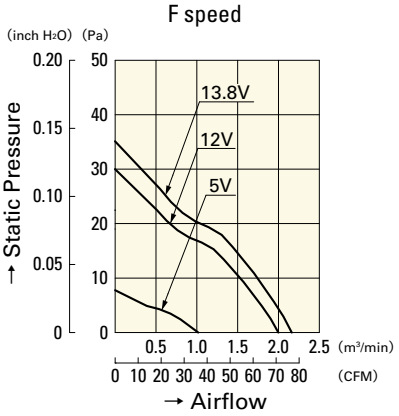
Airflow - Static Pressure Characteristics

H speed



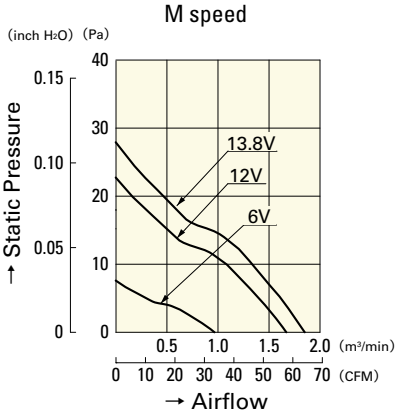
9S1212H401

F speed



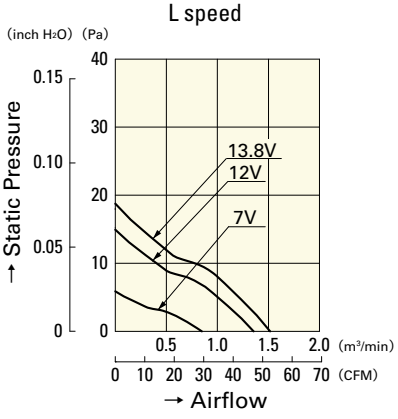
9S1212F401

M speed



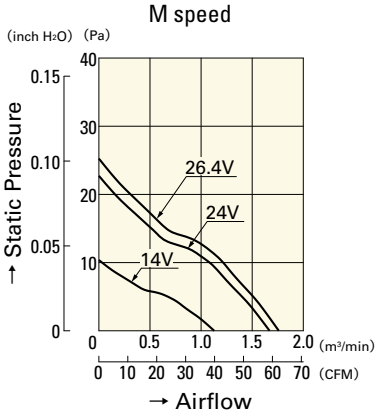
9S1212M401

L speed



9S1212L401

M speed



9S1224M401

120mm sq. San Ace 120



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

120×120×25mm (Mass : 260g) 9GV type

Specifications

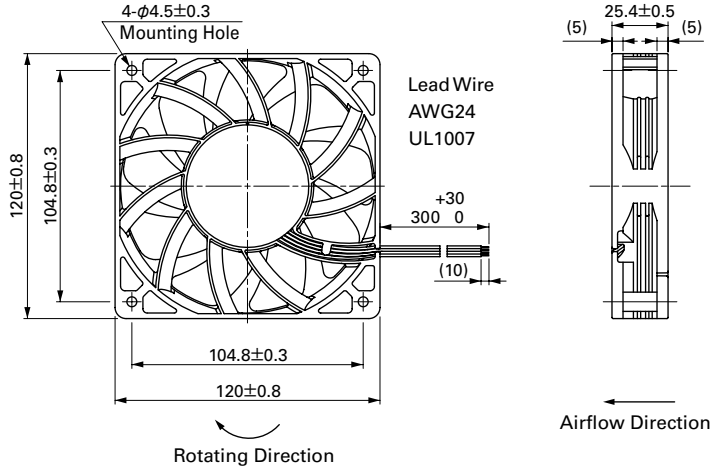
The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GV1212P4G01	12	10.2 to 13.8	100	1.68	20.16	5,100	4.83	171	224	0.90	58	−20 to +70	40,000/60℃
			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	5,100	4.83	171	224	0.90	58		
			0	0.13	3.12	1,650	1.56	55.1	23.5	0.09	30		
9GV1248P4J01	48	40.8 to 55.2	100	0.5	24.00	5,400	5.11	180	251	1.01	59		
			0	0.15	7.20	3,000	2.84	100	77.5	0.31	47		
9GV1248P4G01		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			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

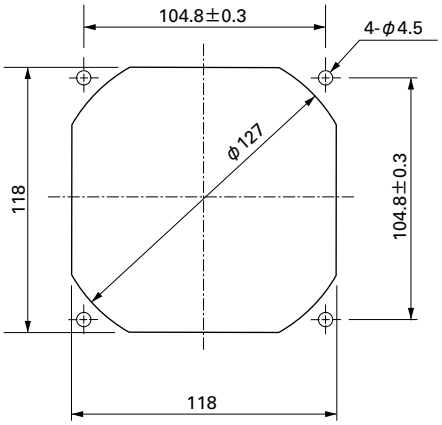
Other sensor specifications are available as options. Please refer to the index (p. 508).

Dimensions (unit: mm) (With ribs)

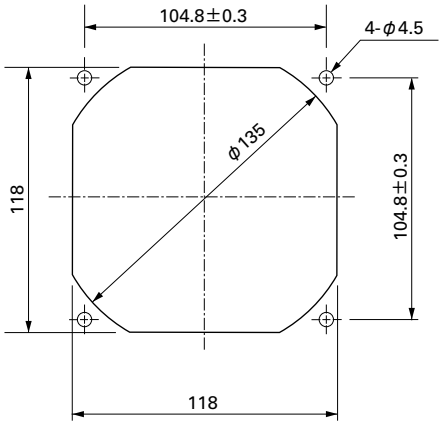


Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side



Outlet side

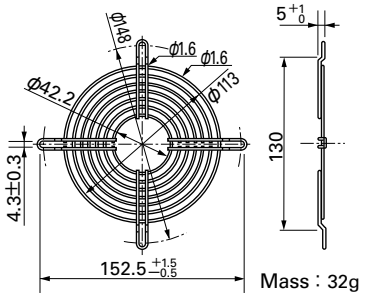


Options (unit: mm)

Finger Guards

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

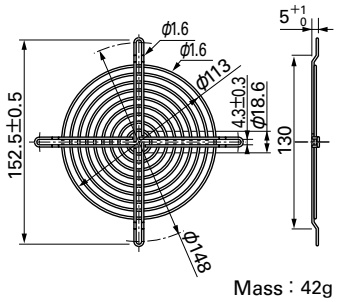
Outlet side



Mass : 32g

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

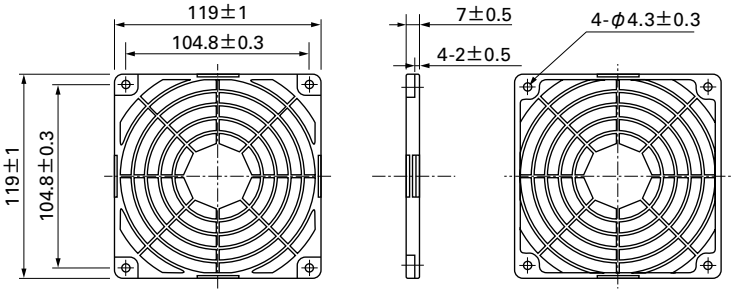
Inlet side, Outlet side



Mass : 42g

Resin Finger Guards

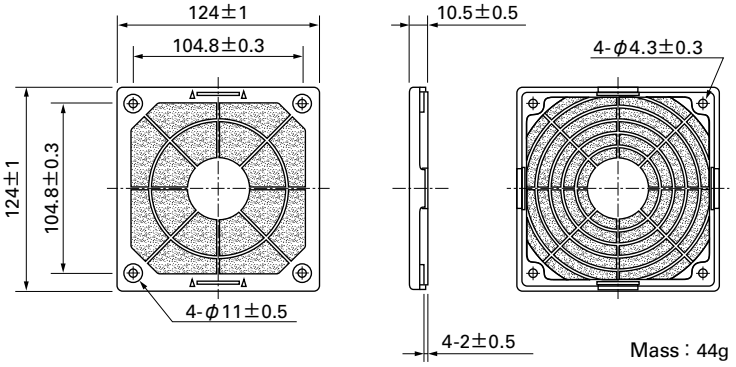
Model : 109-1000G



Mass : 23g

Resin Filter Kits

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



Mass : 44g

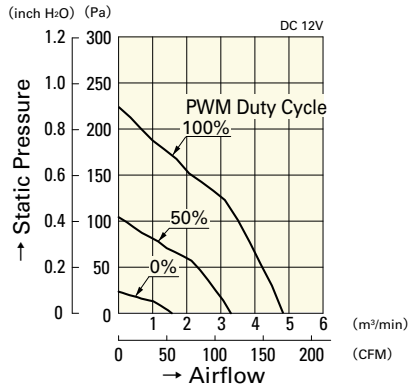
120mm sq.

San Ace 120

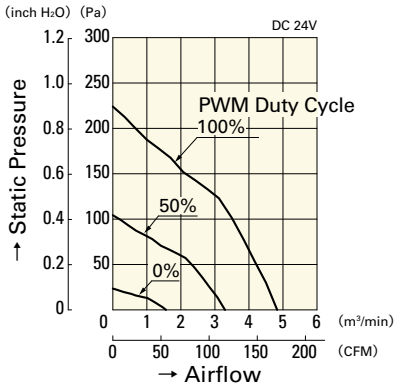
120×120×25mm (Mass : 260g)

Airflow - Static Pressure Characteristics

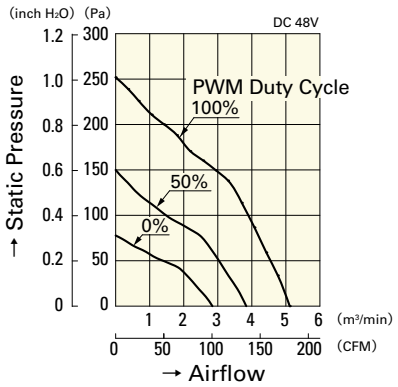
PWM Duty Cycle



9GV1212P4G01

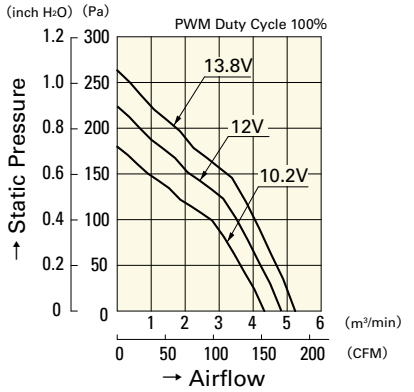


9GV1224P4G01

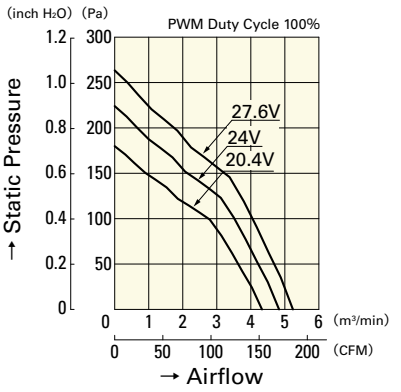


9GV1248P4J01

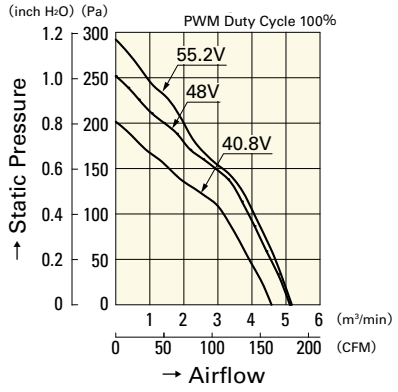
Operating Voltage Range



9GV1212P4G01

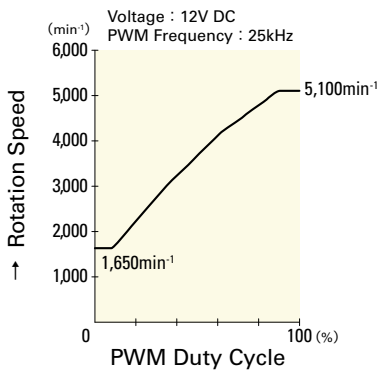


9GV1224P4G01

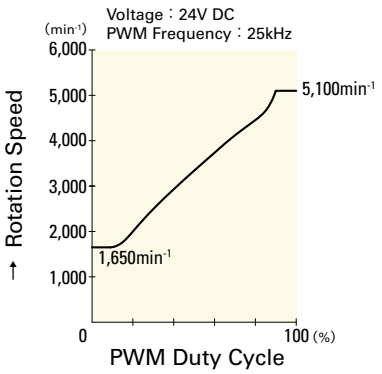


9GV1248P4J01

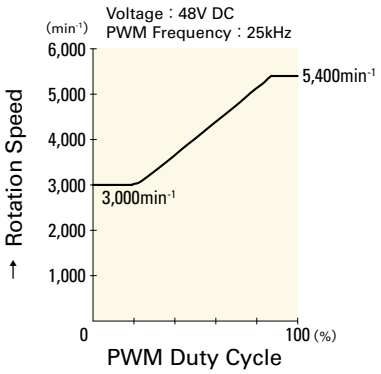
PWM Duty - Speed Characteristics Example



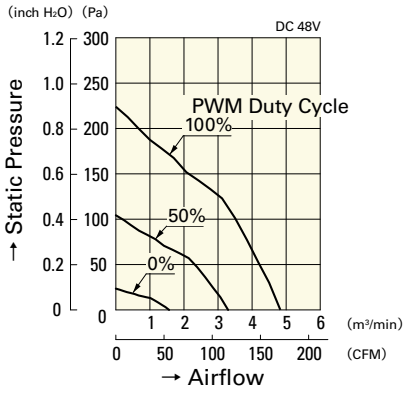
9GV1212P4G01



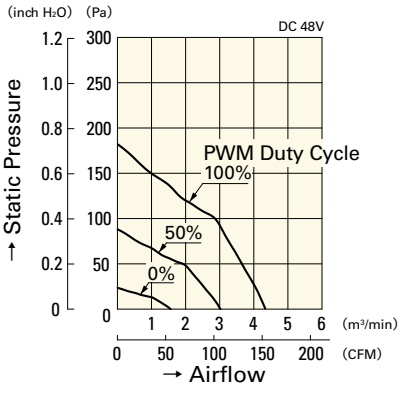
9GV1224P4G01



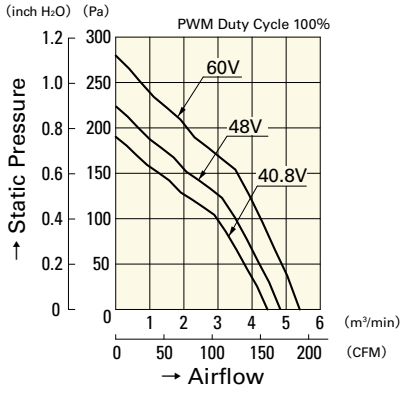
9GV1248P4J01



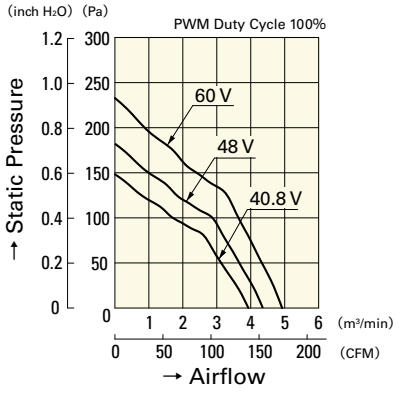
9GV1248P4G01



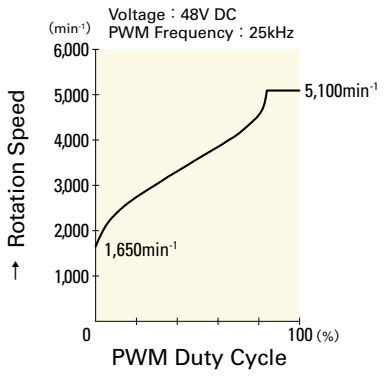
9GV1248P4H01



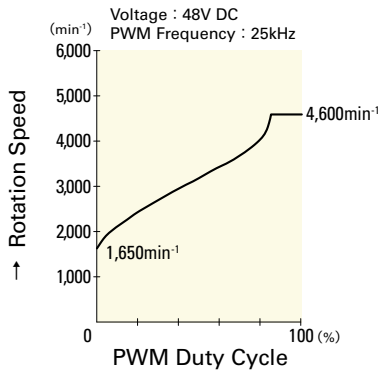
9GV1248P4G01



9GV1248P4H01



9GV1248P4G01



9GV1248P4H01

120mm sq. San Ace 120



Model no. 9G1212B401 is not certified.

General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

120×120×25mm (Mass : 240g) 9G type

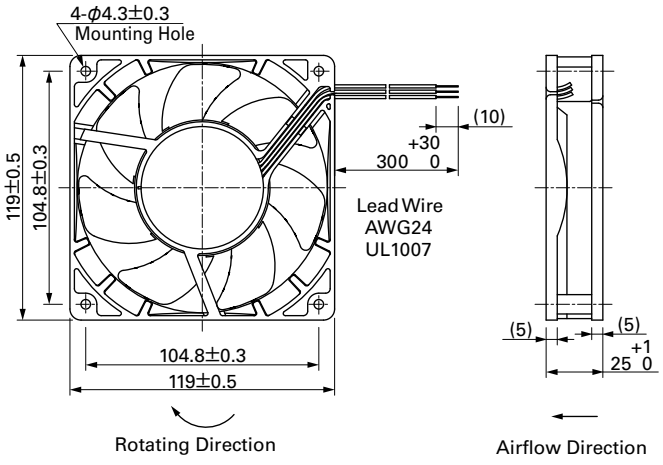
Specifications

The following nos. have pulse sensors and ribs. For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9G1212G401	12	10.2 to 13.8	0.90	10.8	4,100	3.68	130	120	0.482	51	−20 to +70	40,000/60℃
9G1212E401			0.58	6.96	3,650	3.25	115	98	0.394	48		
9G1212A401			0.40	4.80	3,150	2.83	100	77	0.309	44		
9G1212H401		6 to 13.8	0.31	3.72	2,850	2.50	88	64	0.257	40		
9G1212F401		7 to 13.8	0.19	2.28	2,250	1.98	70	42	0.169	35		
9G1212M401			0.14	1.68	1,950	1.66	59	31	0.124	29		
9G1212B401		10.2 to 13.8	0.06	0.72	1,000	0.88	31	9.6	0.039	18		
9G1224G401	24	20.4 to 27.6	0.47	11.28	4,100	3.68	130	120	0.482	51		
9G1224E401			0.37	8.88	3,650	3.25	115	98	0.394	48		
9G1224A401			0.21	5.04	3,150	2.83	100	77	0.309	44		
9G1224H401		12 to 27.6	0.17	4.08	2,850	2.50	88	64	0.257	40		
9G1224F401		20.4 to 27.6	0.10	2.40	2,250	1.98	70	42	0.169	35		
9G1224M401			0.08	1.92	1,950	1.66	59	31	0.124	29		
9G1248G401	48	40.8 to 55.2	0.23	11.04	4,100	3.68	130	120	0.482	51		
9G1248E401			0.16	7.68	3,650	3.25	115	98	0.394	48		
9G1248A401			0.13	6.24	3,150	2.83	100	77	0.309	44		
9G1248H401			0.10	4.80	2,850	2.50	88	64	0.257	40		
9G1248F401			0.06	2.88	2,250	1.98	70	42	0.169	35		
9G1248M401			0.05	2.40	1,950	1.66	59	31	0.124	29		

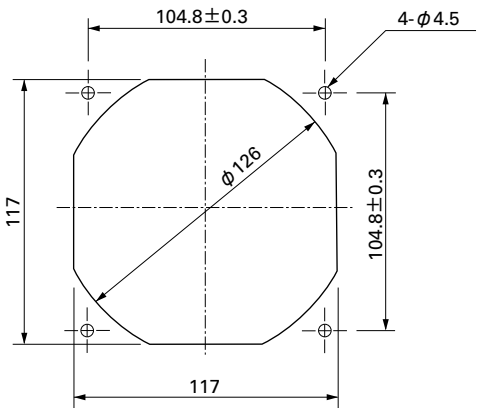
Other sensor specifications are available as options. Please refer to the index (pp. 503 to 504).

Dimensions (unit: mm) (With ribs)

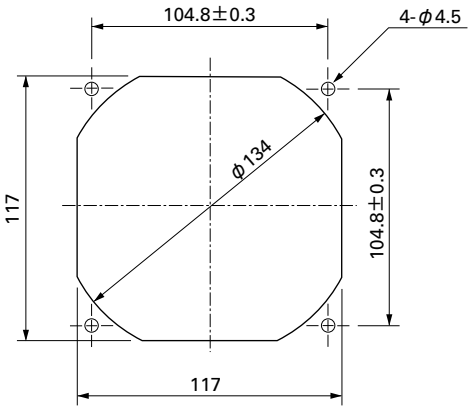


Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side



Outlet side

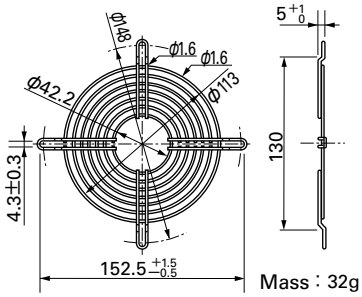


Options (unit: mm)

Finger Guards

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

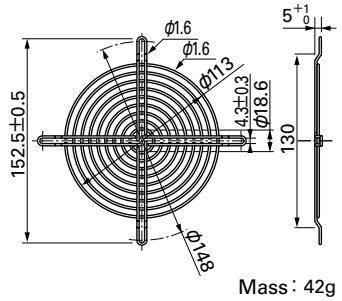
Outlet side



Mass : 32g

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

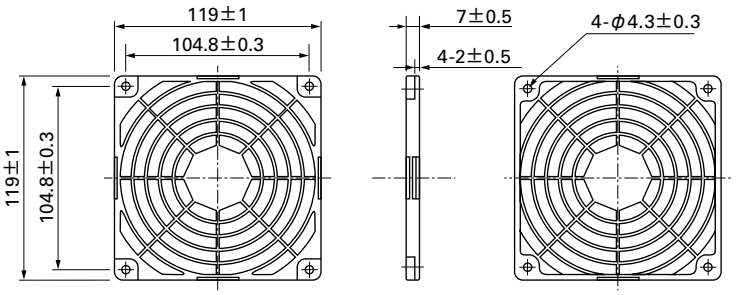
Inlet side, Outlet side



Mass : 42g

Resin Finger Guards

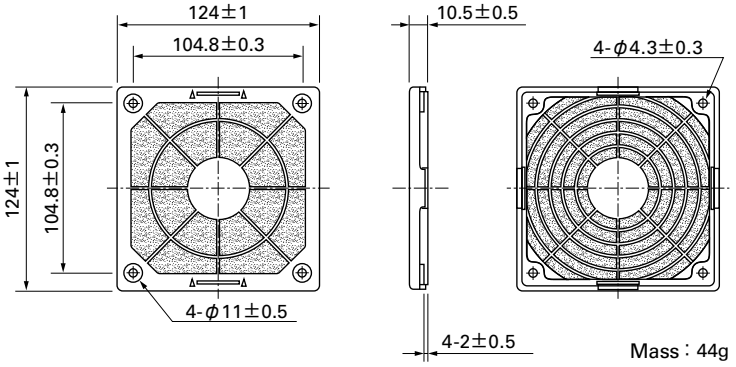
Model : 109-1000G



Mass : 23g

Resin Filter Kits

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



Mass : 44g

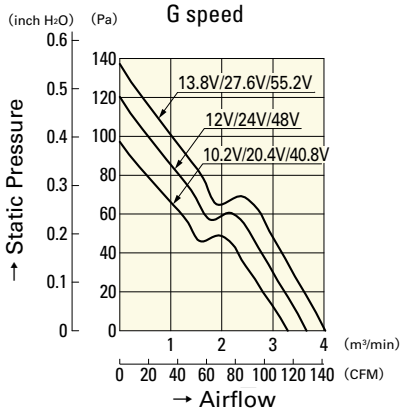
120mm sq.

San Ace 120

120×120×25mm 〔Mass：240g〕

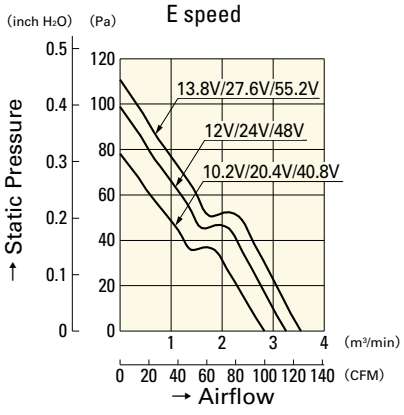
Airflow - Static Pressure Characteristics

G speed



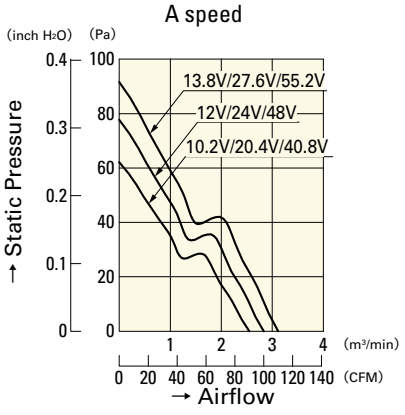
9G1212G401
9G1224G401
9G1248G401

E speed



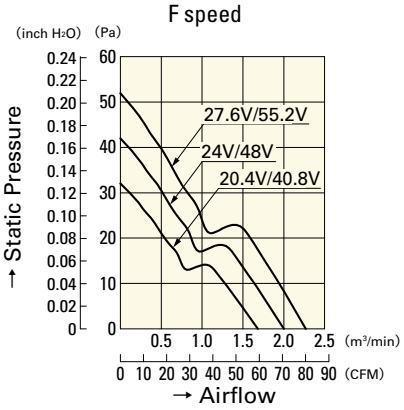
9G1212E401
9G1224E401
9G1248E401

A speed



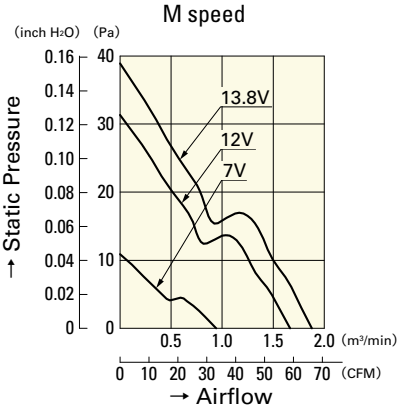
9G1212A401
9G1224A401
9G1248A401

F speed



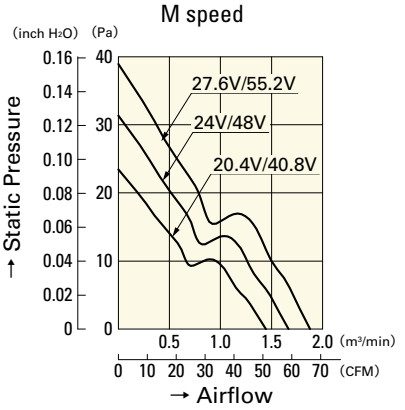
9G1224F401
9G1248F401

M speed



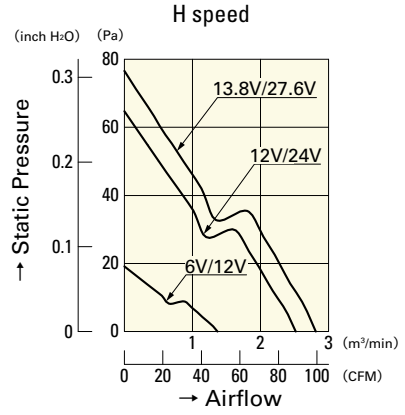
9G1212M401

M speed



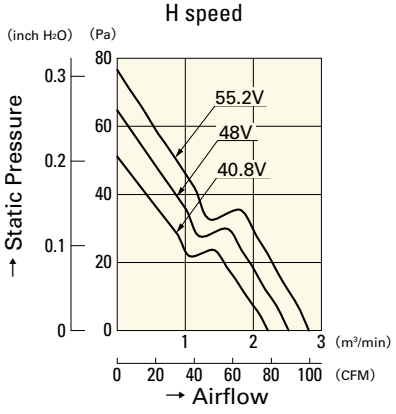
9G1224M401
9G1248M401

H speed



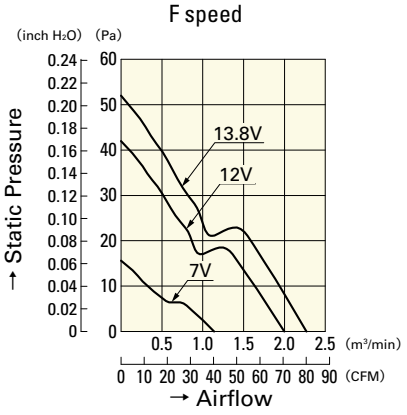
9G1212H401
9G1224H401

H speed



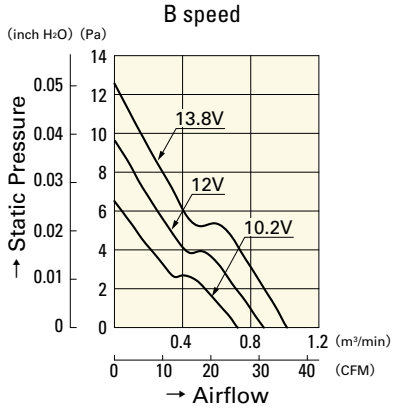
9G1248H401

F speed



9G1212F401

B speed



9G1212B401

120mm sq. San Ace 120



General Specifications

- Material ····· Frame: Aluminum, Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

120×120×38mm (Mass：460g) 9HV type

Specifications

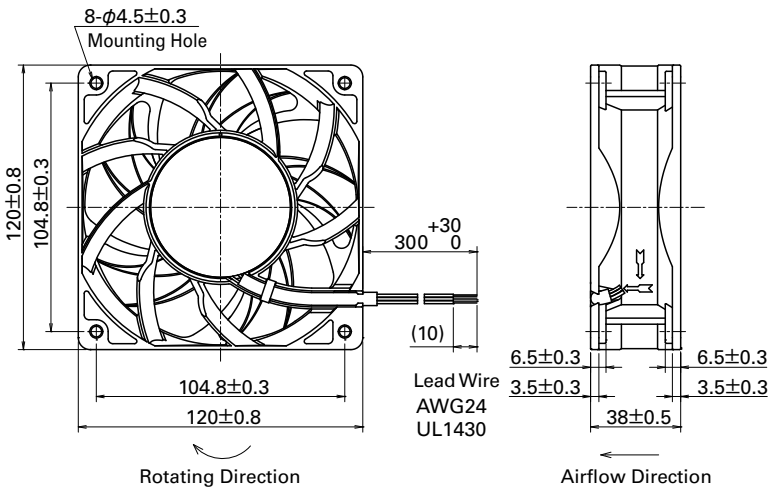
The following nos. **have PWM controls and pulse sensors.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9HV1224P1A001	24	21.6 to 26.4	100	2.4	57.6	9,600	7.0	247	950	3.82	71	−20 to +70	40,000/60℃ (70,000/40℃)
			0	0.37	8.88	3,800	2.7	95	161	0.65	46		
9HV1248P1G001	48	36 to 60	100	2.0	96	11,500	8.3	293	1,300	5.22	75		
			0	0.23	11	3,800	2.7	95	161	0.65	46		
9HV1248P1H001			100	1.4	67	10,000	7.2	254	1,050	4.22	72		
			0	0.23	11	3,800	2.7	95	161	0.65	46		

※PWM Frequency：25kHz

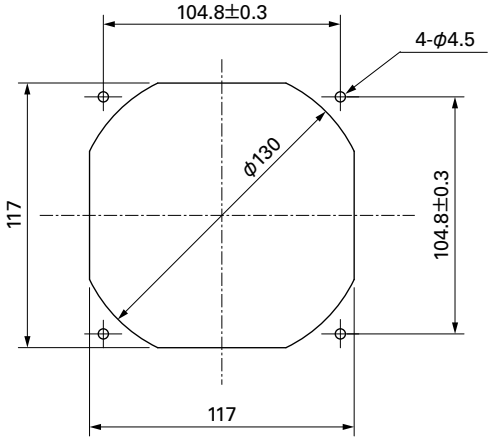
Other sensor specifications are available as options. Please refer to the index (p. 509).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side



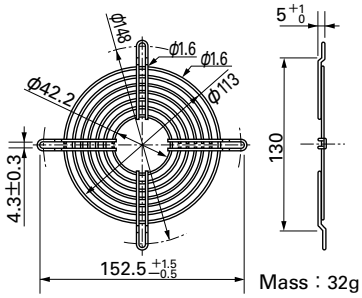
Options (unit: mm)

Finger Guards

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

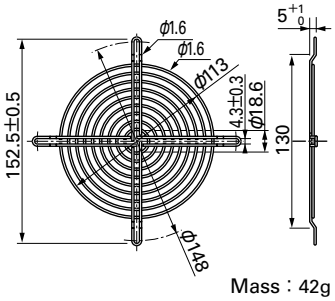
Model：109-019E Surface treatment：Nickel-chrome plating (silver) Color：Cation electropainting (black)
：109-019K

Outlet side



Mass：32g

Inlet side, Outlet side

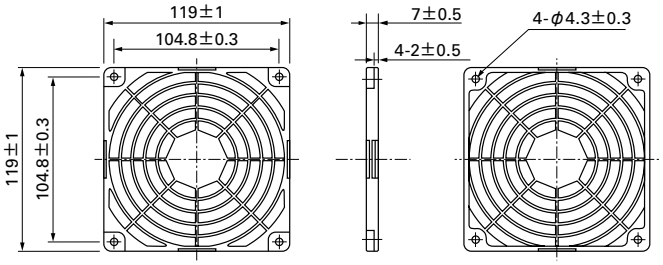


Mass：42g

Options (unit: mm)

Resin Finger Guards

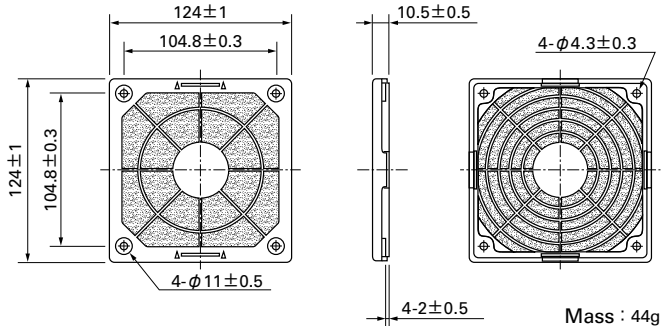
Model : 109-1000G



Mass : 23g

Resin Filter Kits

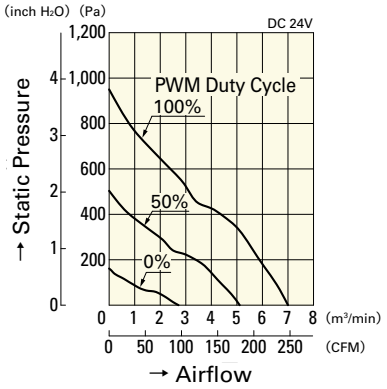
Model : 109-1000F13 (13PPI), 109-1000F20 (20PPI)
: 109-1000F30 (30PPI), 109-1000F40 (40PPI)



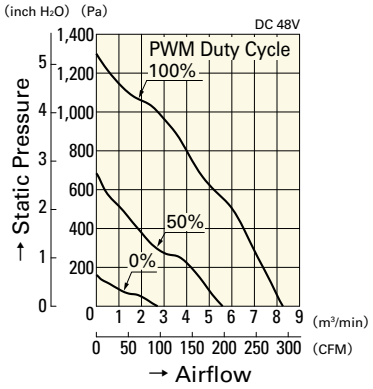
Mass : 44g

Airflow - Static Pressure Characteristics

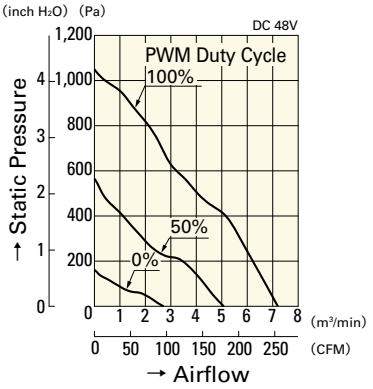
PWM Duty Cycle



9HV1224P1A001

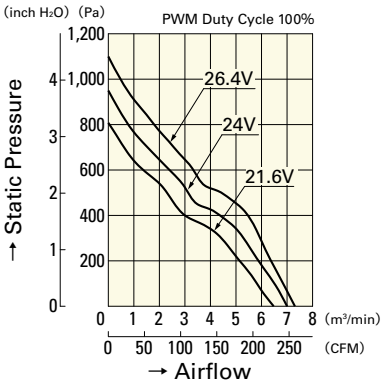


9HV1248P1G001

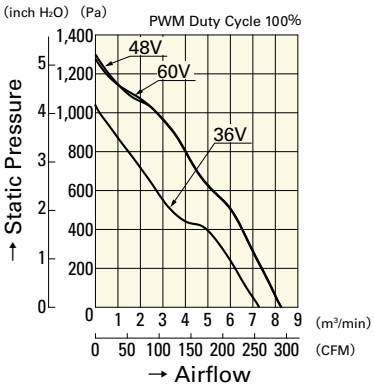


9HV1248P1H001

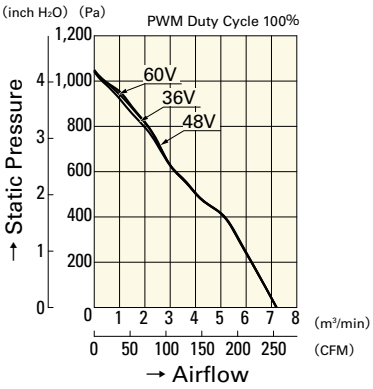
Operating Voltage Range



9HV1224P1A001

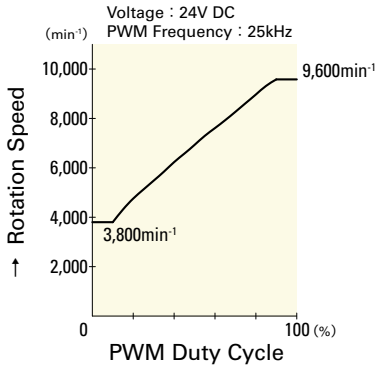


9HV1248P1G001

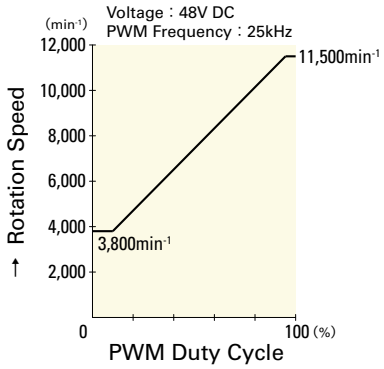


9HV1248P1H001

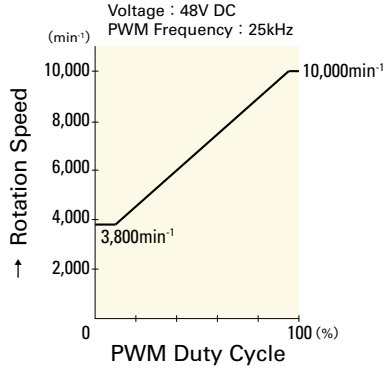
PWM Duty - Speed Characteristics Example



9HV1224P1A001



9HV1248P1G001



9HV1248P1H001

120mm sq. San Ace 120



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ··· −30℃ to +70℃ (Non-condensing)

120×120×38mm (Mass : 360g) 9GV type

Specifications

The following nos. **have PWM controls, pulse sensors, and ribs.** **For ribless, append "1" to the model no.**

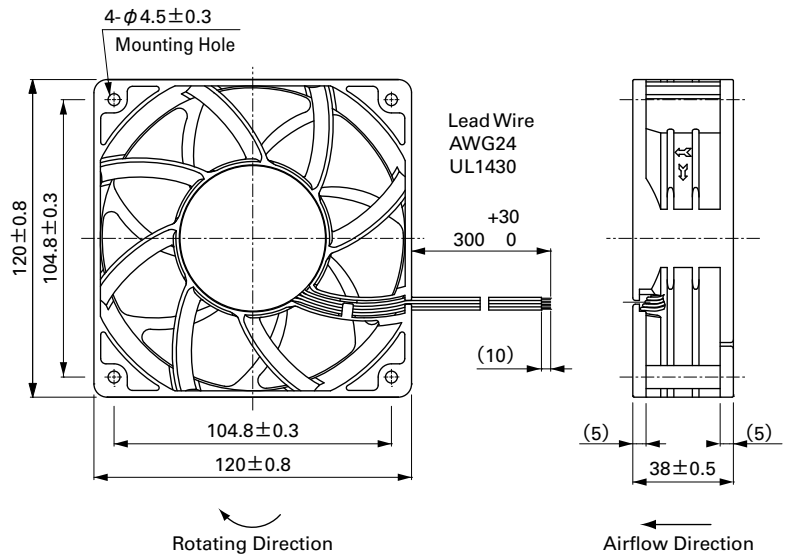
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GV1212P1J01	12	10.2 to 13.8	100	3.00	36.00	6,400	6.35	224.0	360.0	1.45	64	−20 to +70	40,000/60℃
			0	0.19	2.28	1,500	1.49	52.6	19.8	0.08	33		
9GV1212P1G01			100	2.1	25.2	5,500	5.45	192.6	265	1.06	60		
			0	0.19	2.28	1,500	1.49	52.6	19.8	0.08	33		
9GV1224P1J01 Note)	24	20.4 to 27.6	100	1.5	36.00	6,400	6.35	224.0	360	1.45	64		
9GV1224P1H01 Note)			100	0.8	19.2	5,200	5.16	182.3	237	0.95	58		
9GV1248P1J01	48	40.8 to 55.2	100	0.75	36.00	6,400	6.35	224.0	360.0	1.45	64		
			0	0.06	2.88	1,500	1.49	52.6	26.1	0.106	33		

Note: Fan does not rotate when PWM duty cycle is 0%.

※PWM Frequency : 25kHz

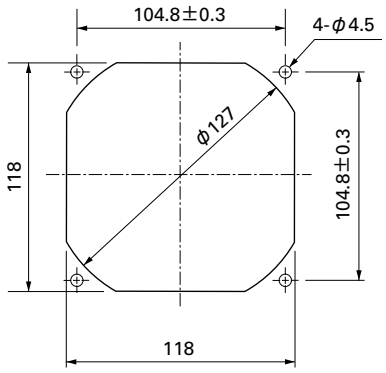
Other sensor specifications are available as options. Please refer to the index (p. 508).

Dimensions (unit: mm) (With ribs)

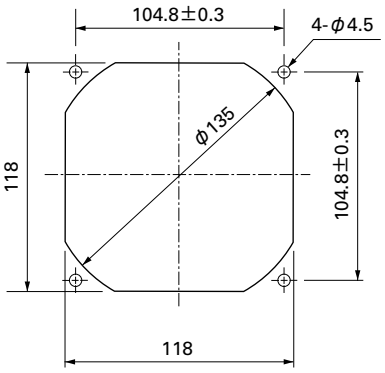


Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side



Outlet side

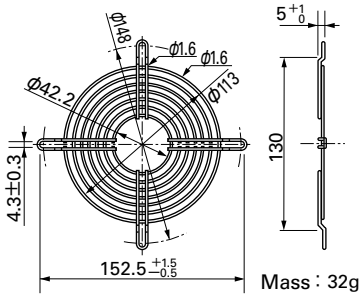


Options (unit: mm)

Finger Guards

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

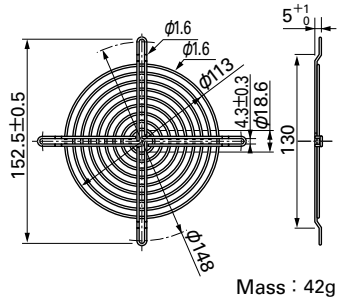
Outlet side



Mass : 32g

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

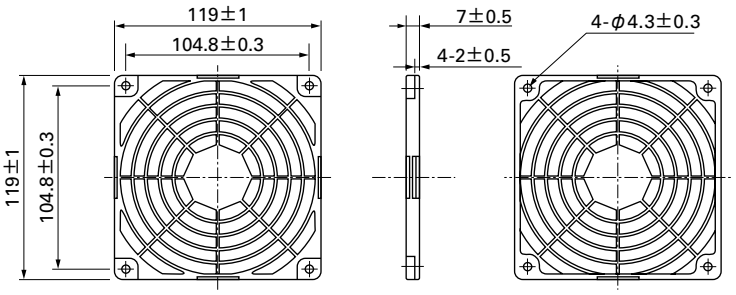
Inlet side, Outlet side



Mass : 42g

Resin Finger Guards

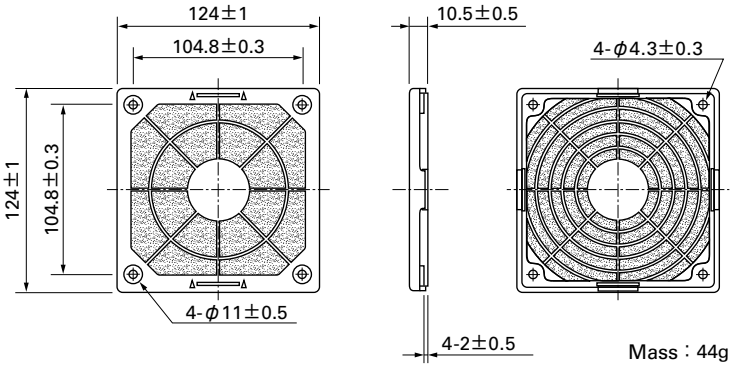
Model : 109-1000G



Mass : 23g

Resin Filter Kits

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



Mass : 44g

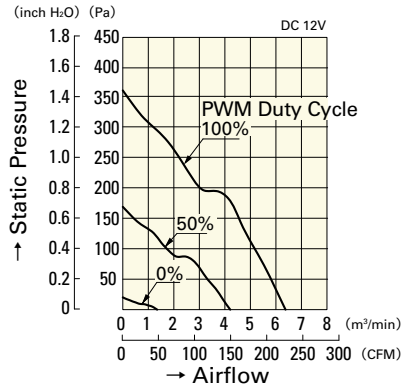
120mm sq.

San Ace 120

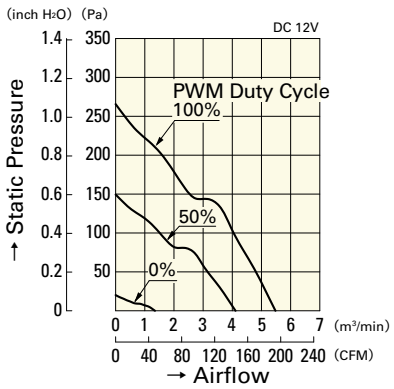
120×120×38mm 〔Mass：360g〕

Airflow - Static Pressure Characteristics

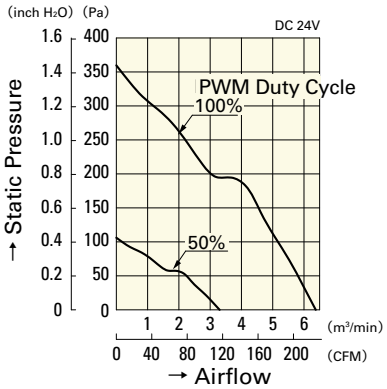
PWM Duty Cycle



9GV1212P1J01

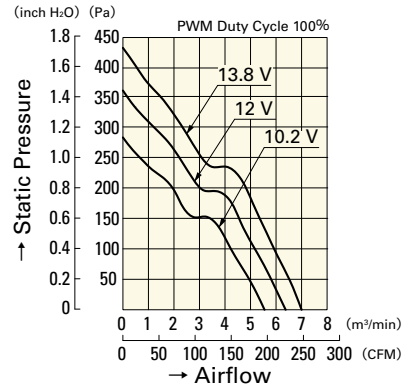


9GV1212P1G01

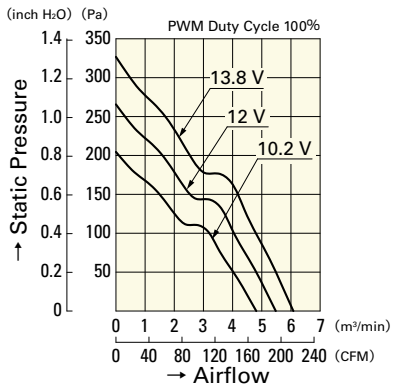


9GV1224P1J01

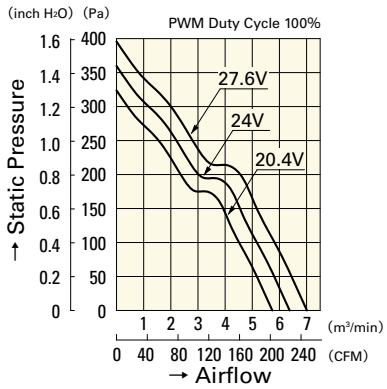
Operating Voltage Range



9GV1212P1J01

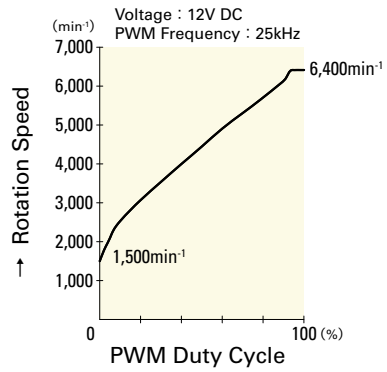


9GV1212P1G01

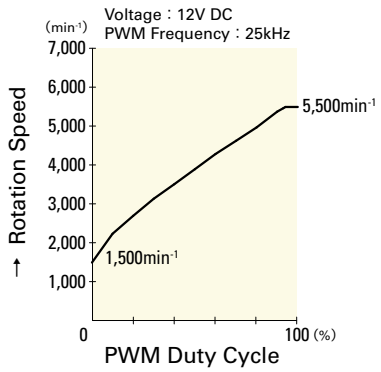


9GV1224P1J01

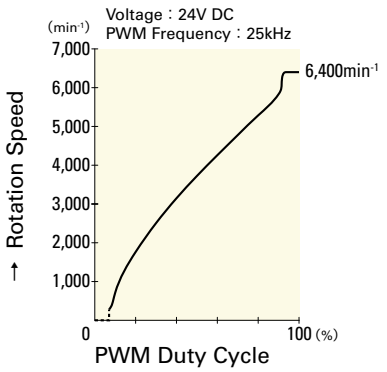
PWM Duty - Speed Characteristics Example



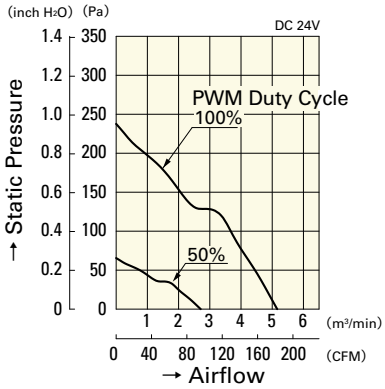
9GV1212P1J01



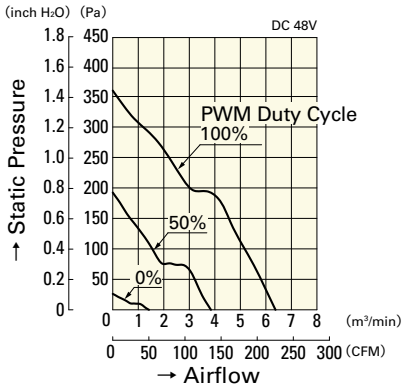
9GV1212P1G01



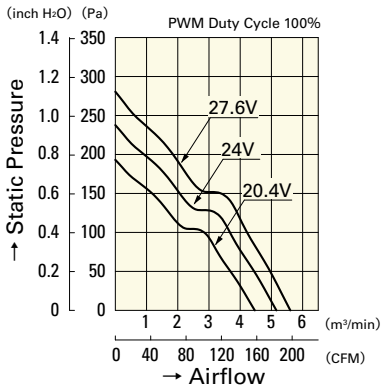
9GV1224P1J01



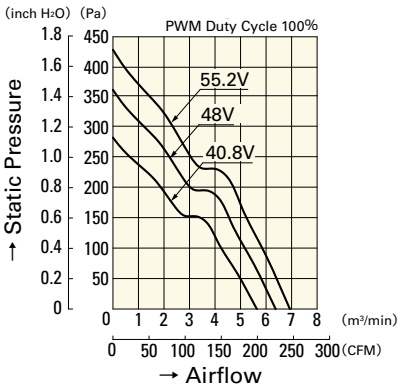
9GV1224P1H01



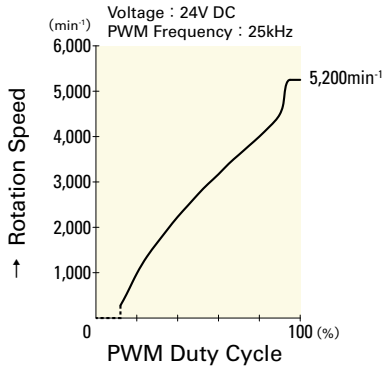
9GV1248P1J01



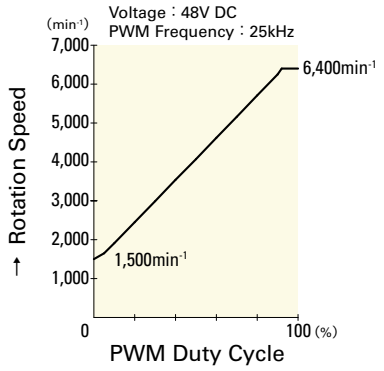
9GV1224P1H01



9GV1248P1J01



9GV1224P1H01



9GV1248P1J01

120mm sq.

San Ace 120



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0),
  Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

120×120×38mm (Mass : 330g) 9G type

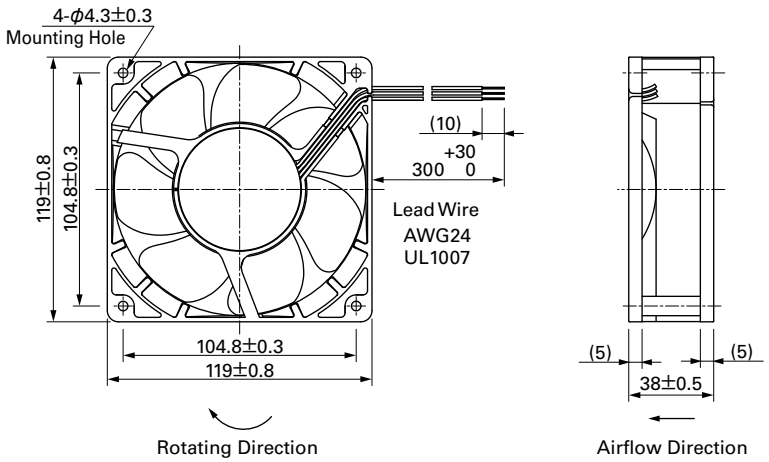
Specifications

The following nos. have pulse sensors and ribs. For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9G1212G101	12	10.2 to 13.8	0.98	11.76	3,600	3.88	137	135	0.542	49	−20 to +70	40,000/60℃
9G1212E101			0.61	7.32	3,100	3.34	118	100	0.402	46		
9G1212H101		7 to 13.8	0.38	4.56	2,600	2.80	99	70.4	0.283	39		
9G1212F101			0.28	3.36	2,280	2.45	87	54.2	0.218	36		
9G1212M101			0.21	2.52	1,950	2.10	74	39.6	0.159	32		
9G1224G101	24	20.4 to 27.6	0.50	12	3,600	3.88	137	135	0.542	49		
9G1224E101			0.34	8.16	3,100	3.34	118	100	0.402	46		
9G1224H101		14 to 27.6	0.22	5.28	2,600	2.80	99	70.4	0.283	39		
9G1224F101			0.16	3.84	2,280	2.45	87	54.2	0.218	36		
9G1224M101			0.11	2.64	1,950	2.10	74	39.6	0.159	32		
9G1248G101	48	40.8 to 55.2	0.25	12	3,600	3.88	137	135	0.542	49		
9G1248E101			0.17	8.16	3,100	3.34	118	100	0.402	46		
9G1248H101			0.11	5.28	2,600	2.80	99	70.4	0.283	39		
9G1248F101			0.09	4.32	2,280	2.45	87	54.2	0.218	36		
9G1248M101			0.07	3.36	1,950	2.10	74	39.6	0.159	32		

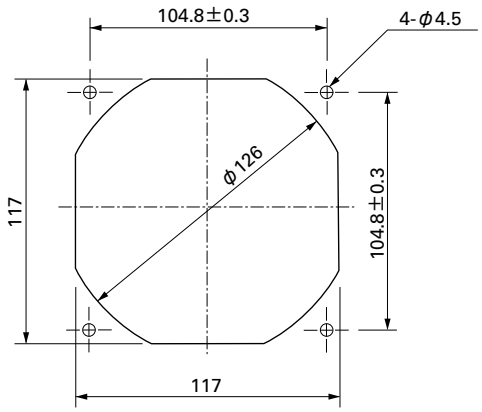
Other sensor specifications are available as options. Please refer to the index (pp. 503 to 504).

Dimensions (unit: mm) (With ribs)

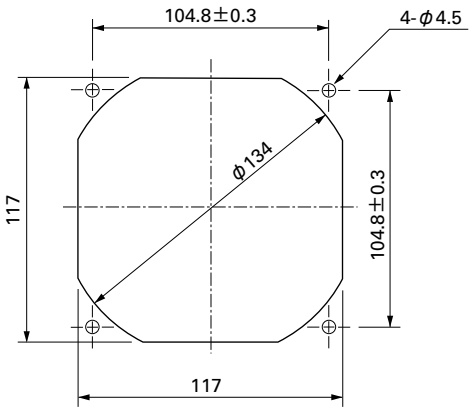


Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side



Outlet side

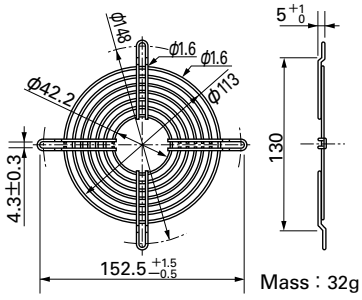


Options (unit: mm)

Finger Guards

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

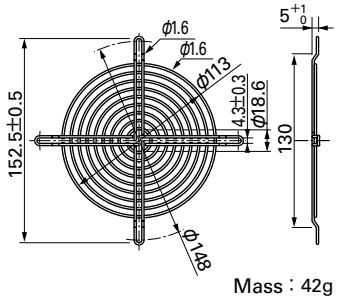
Outlet side



Mass : 32g

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

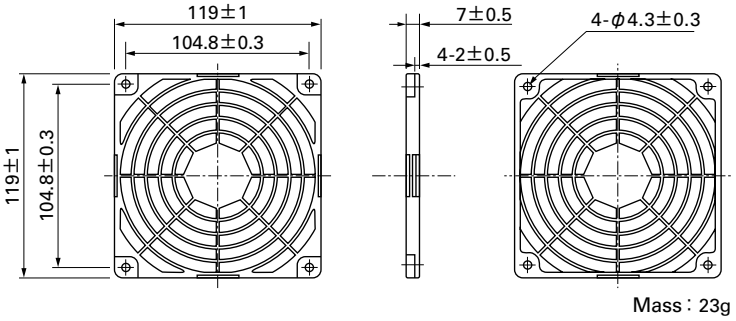
Inlet side, Outlet side



Mass : 42g

Resin Finger Guards

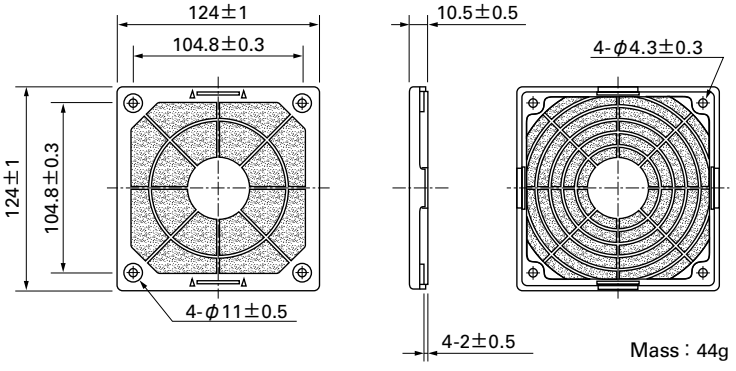
Model : 109-1000G



Mass : 23g

Resin Filter Kits

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



Mass : 44g

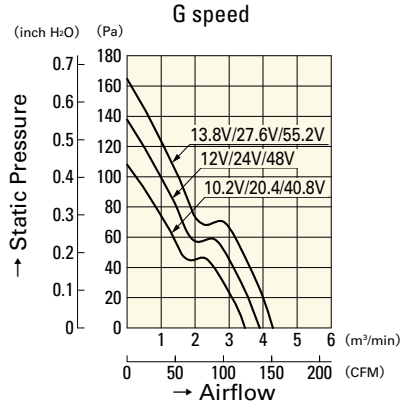
120mm sq.

San Ace 120

120×120×38mm 〔Mass：330g〕

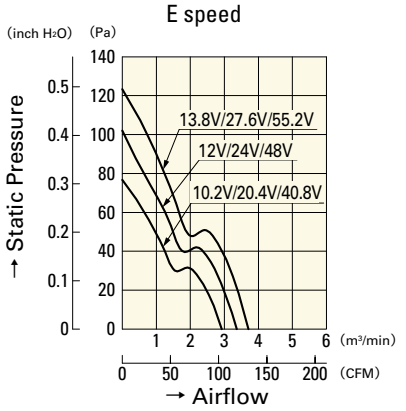
Airflow - Static Pressure Characteristics

G speed



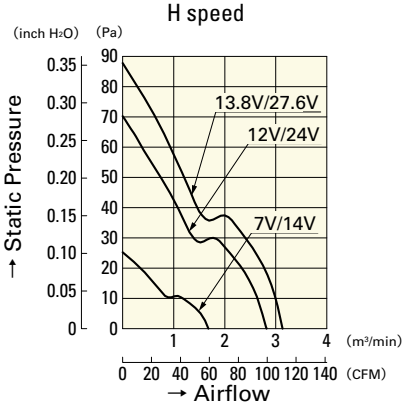
9G1212G101
9G1224G101
9G1248G101

E speed



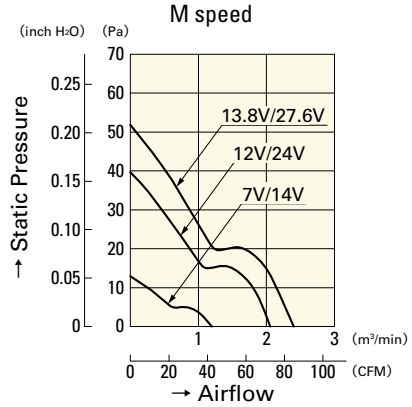
9G1212E101
9G1224E101
9G1248E101

H speed



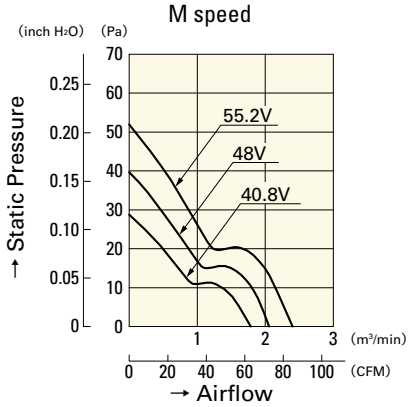
9G1212H101
9G1224H101

M speed



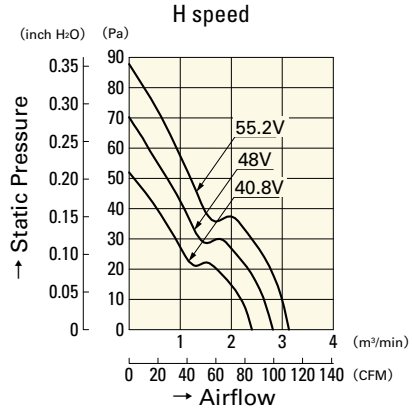
9G1212M101
9G1224M101

M speed



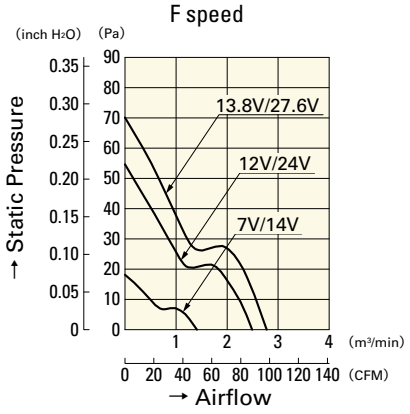
9G1248M101

H speed



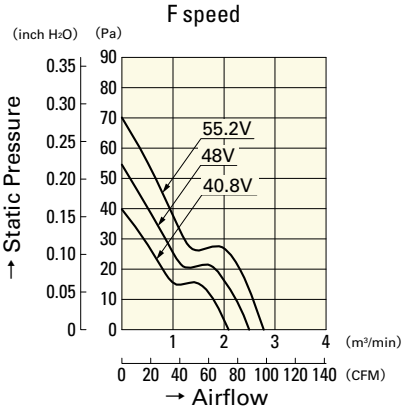
9G1248H101

F speed



9G1212F101
9G1224F101

F speed



9G1248F101

120 mm sq. San Ace 120



General Specifications

- Material ····· Frame: Aluminum, Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

Model no. 9SG1224H101 is not certified.

120×120×38mm (Mass：400g) 9SG type

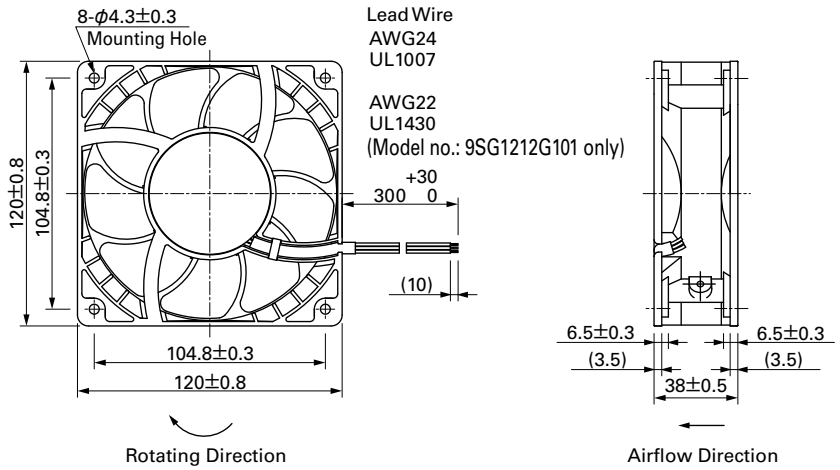
Specifications

The following nos. **have pulse sensors.**

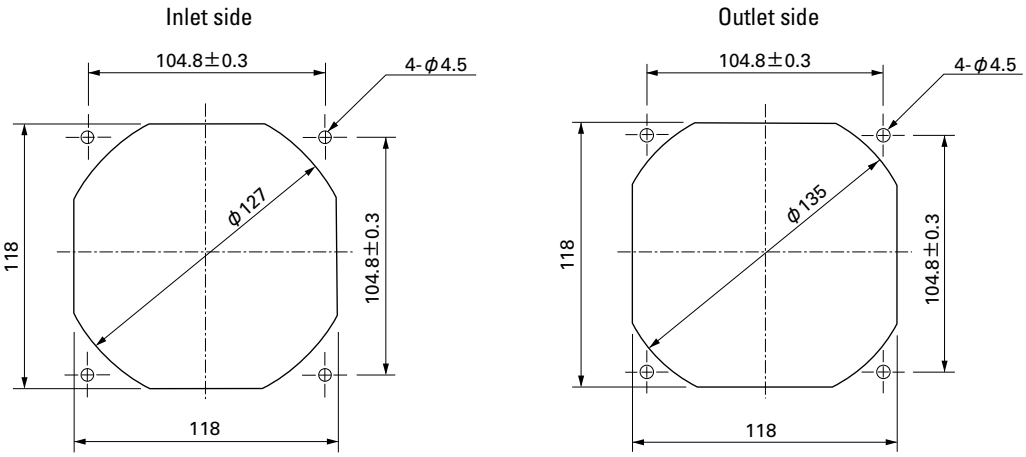
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9SG1212G101	12	10.2 to 13.8	4.0	48.0	6,000	7.35	260	340	1.37	64	−20 to +70	40,000/60℃
9SG1224G101	24	20.4 to 27.6	2.0	48.0	6,000	7.35	260	340	1.37	64		
9SG1224H101			0.46	11.0	3,400	4.02	142	126	0.51	48		
9SG1248G101	48	40.8 to 55.2	1.0	48.0	6,000	7.35	260	340	1.37	64		

Other sensor specifications are available as options. Please refer to the index (p. 510).

Dimensions (unit: mm)



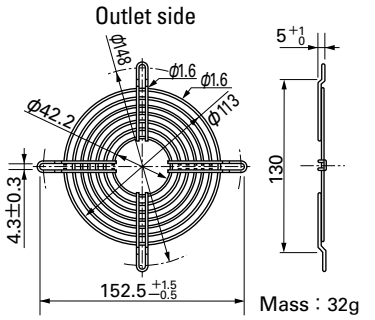
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

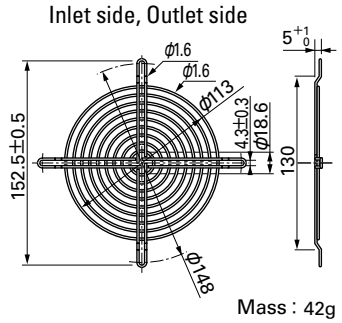
Finger Guards

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



Mass : 32g

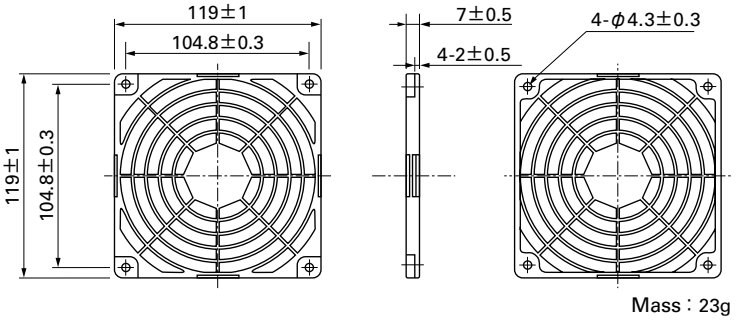
Model : 109-019E Surface treatment : Nickel-chrome plating (silver) Color
: 109-019K : Cation electropainting (black)



Mass : 42g

Resin Finger Guards

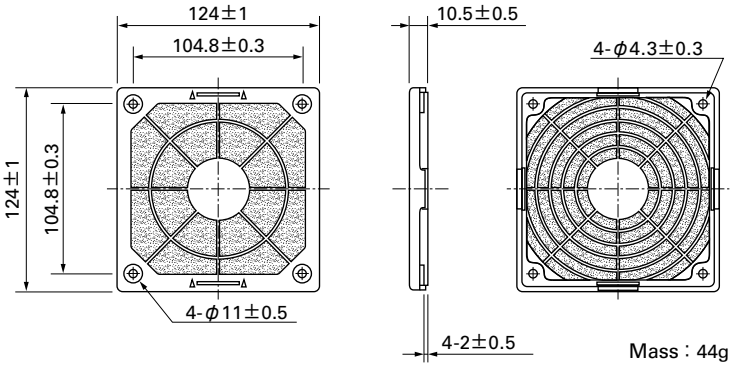
Model : 109-1000G



Mass : 23g

Resin Filter Kits

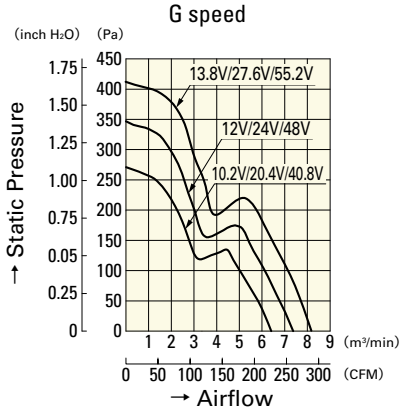
Model : 109-1000F13 (13PPI), 109-1000F20 (20PPI)
: 109-1000F30 (30PPI), 109-1000F40 (40PPI)



Mass : 44g

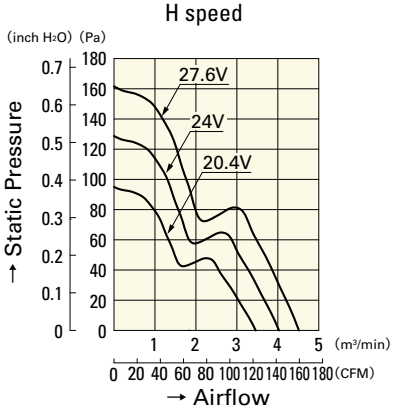
Airflow - Static Pressure Characteristics

G speed



9SG1212G101
9SG1224G101
9SG1248G101

H speed



9SG1224H101

127 mm sq.

San Ace 127



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

127×127×38mm (Mass : 350g) 9P type

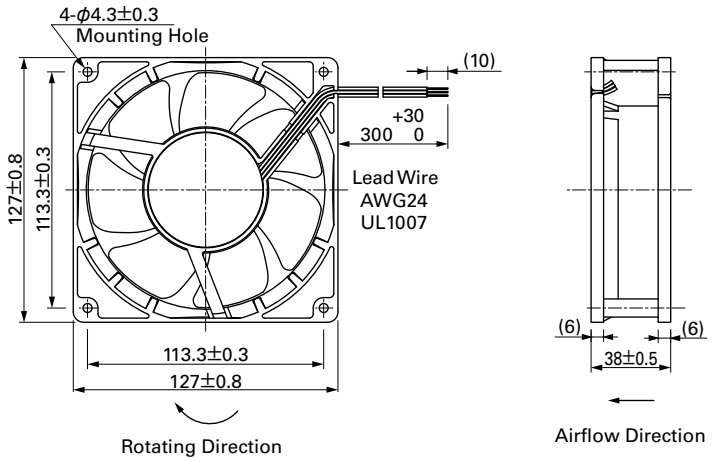
Specifications

The following nos. **have pulse sensors and ribs. For ribless, append "1" to the model no.**

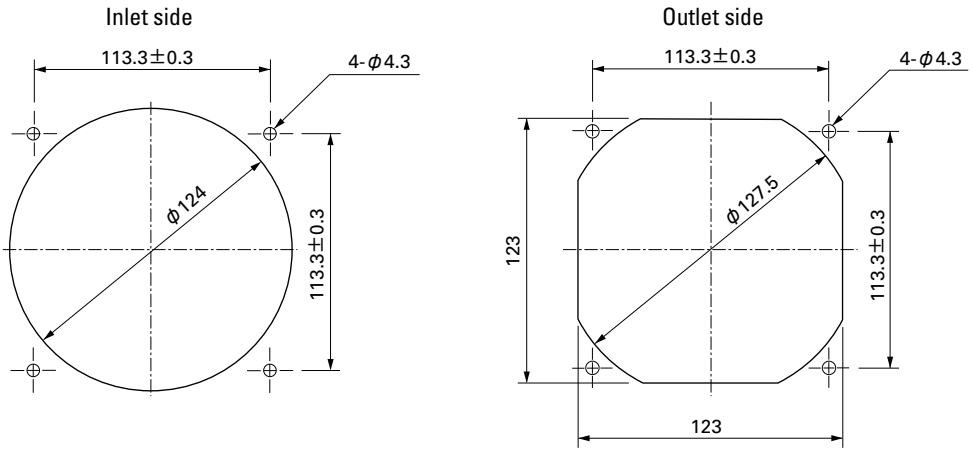
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109P1312S101	12	10.2 to 13.8	1.3	15.6	3,300	4.2	148	117.6	0.472	47	−20 to +60	40,000/60℃
109P1312H101			0.82	9.84	2,950	3.8	134	98	0.394	45		
109P1324S101	24	20.4 to 27.6	0.55	13.2	3,300	4.2	148	117.6	0.472	47		
109P1324H101			0.41	9.84	2,950	3.8	134	98	0.394	45		
109P1348S101	48	40.8 to 55.2	0.3	14.4	3,300	4.2	148	117.6	0.472	47		
109P1348H101			0.2	9.6	2,950	3.8	134	98	0.394	45		

Other sensor specifications are available as options. Please refer to the index (p. 498).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

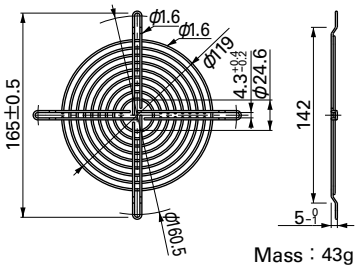


Options (unit: mm)

Finger Guards

Model：109-722 Surface treatment：Nickel-chrome plating Color (silver)

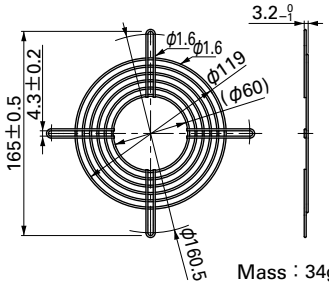
Inlet side, Outlet side



Mass：43g

Model：109-723 Surface treatment：Nickel-chrome plating Color (silver)

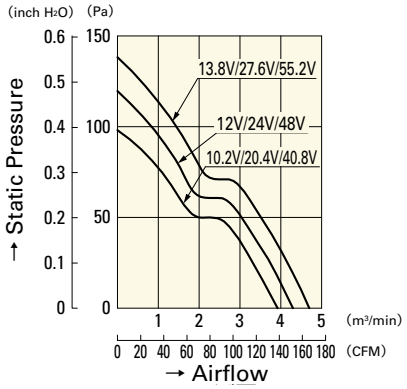
Outlet side



Mass：34g

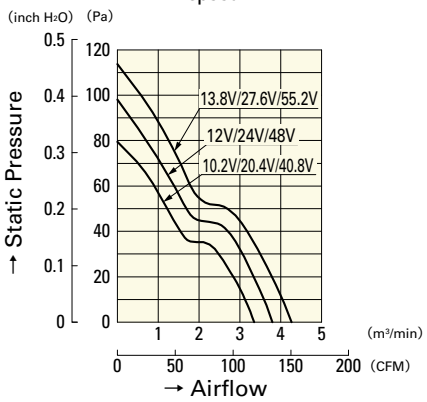
Airflow - Static Pressure Characteristics

S speed



109P1312S101
109P1324S101
109P1348S101

H speed



109P1312H101
109P1324H101
109P1348H101

127 mm sq. San Ace 127



General Specifications

- Material ····· Frame: Aluminum, Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

127×127×38mm (Mass : 400g) 9E type

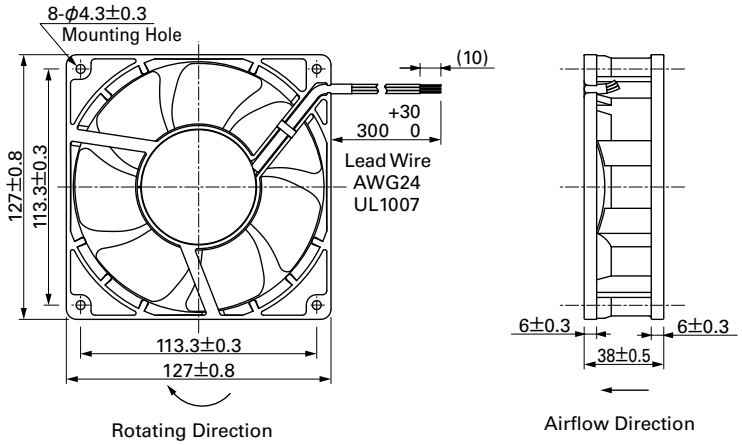
Specifications

The following nos. **have pulse sensors.**

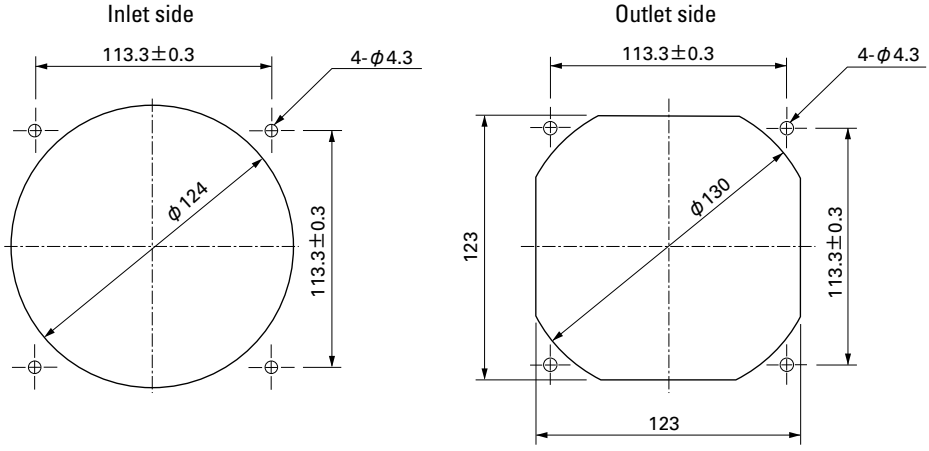
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109E1312A101	12	10.2 to 13.8	1.4	16.8	3,850	4.81	170	155	0.622	52	−20 to +70	60,000/60℃
109E1312S101			1.2	14.4	3,450	4.37	154	125	0.502	49		
109E1324G101	24	20.4 to 27.6	1.1	26.4	4,550	5.66	200	216	0.867	57	−20 to +60	40,000/60℃
109E1324A101			0.7	16.8	3,850	4.81	170	155	0.622	52	−20 to +70	60,000/60℃
109E1324S101			0.53	12.7	3,450	4.37	154	125	0.502	49		
109E1348G101	48	40.8 to 55.2	0.54	25.9	4,550	5.66	200	216	0.867	57	−20 to +60	40,000/60℃
109E1348A101			0.36	17.3	3,850	4.81	170	155	0.622	52	−20 to +70	60,000/60℃
109E1348S101			0.28	13.4	3,450	4.37	154	125	0.502	49		

Other sensor specifications are available as options. Please refer to the index (p. 495).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

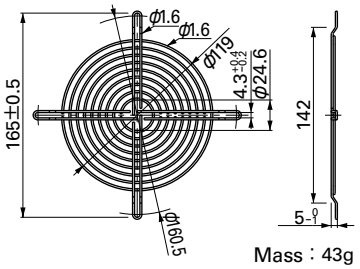


Options (unit: mm)

Finger Guards

Model：109-722　Surface treatment：Nickel-chrome plating　Color (silver)

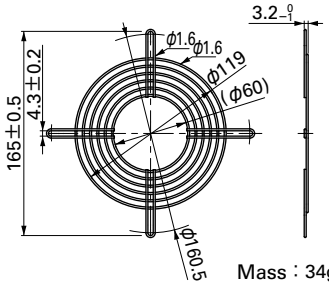
Inlet side, Outlet side



Mass：43g

Model：109-723　Surface treatment：Nickel-chrome plating　Color (silver)

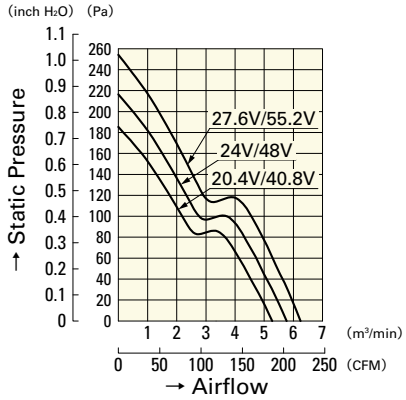
Outlet side



Mass：34g

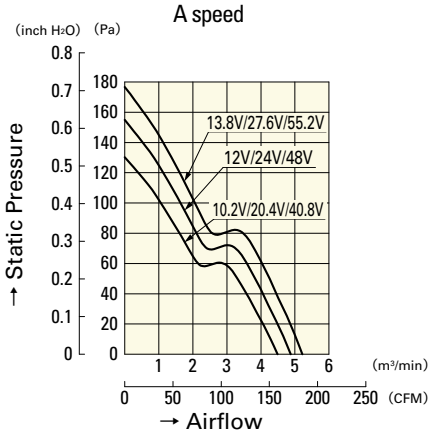
Airflow - Static Pressure Characteristics

G speed



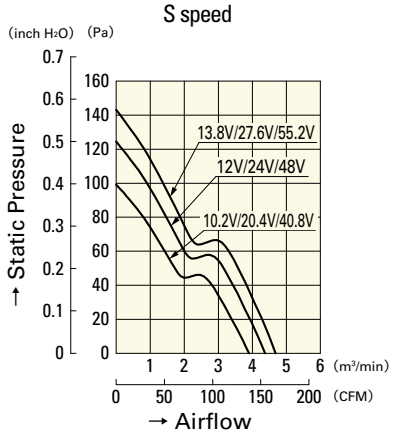
109E1324G101
109E1348G101

A speed



109E1312A101
109E1324A101
109E1348A101

S speed



109E1312S101
109E1324S101
109E1348S101

140 mm sq. San Ace 140



General Specifications

- Material ····· Frame: Aluminum (Flammability: UL94V-1), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature ··· −30℃ to +70℃ (Non-condensing)

140×140×38mm (Mass : 630g) 9GV type

Specifications

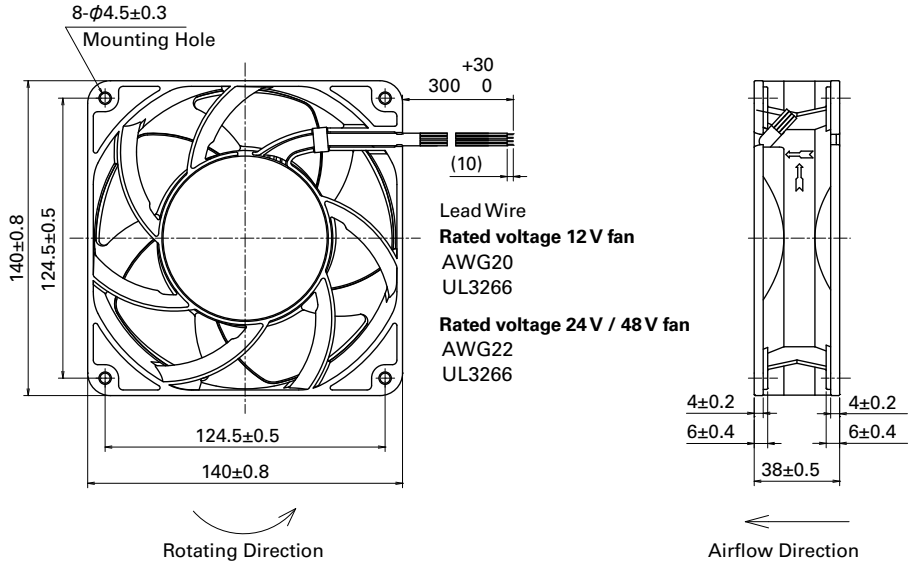
The following nos. **have PWM controls and pulse sensors.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle Note1※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GV1412P1G001	12	10.8 to 13.2	100	4.6	55.20	7,600	8.80	310	640	2.57	70	−20 to +70	40,000/60℃
			20	0.26	3.12	2,300	2.66	93	80	0.32	39		
9GV1412P1S001			100	3.1	37.20	6,650	7.70	272	480	1.93	67		
			20	0.26	3.12	2,300	2.66	93	80	0.32	39		
9GV1412P1H001			100	1.7	20.40	5,200	6.00	212	300	1.20	62		
			20	0.26	3.12	2,300	2.66	93	80	0.32	39		
9GV1424P1G001	24	21.6 to 26.4	100	2.3	55.20	7,600	8.80	310	640	2.57	70		
			20	0.13	3.12	2,300	2.66	93	80	0.32	39		
9GV1424P1S001			100	1.55	37.20	6,650	7.70	272	480	1.93	67		
			20	0.13	3.12	2,300	2.66	93	80	0.32	39		
9GV1424P1H001			100	0.85	20.40	5,200	6.00	212	300	1.20	62		
			20	0.13	3.12	2,300	2.66	93	80	0.32	39		
9GV1448P1G001	48	36 to 60	100	1.15	55.20	7,600	8.80	310	640	2.57	70		
			20	0.11	5.28	2,300	2.66	93	80	0.32	39		
9GV1448P1S001			100	0.78	37.44	6,650	7.70	272	480	1.93	67		
			20	0.11	5.28	2,300	2.66	93	80	0.32	39		
9GV1448P1H001			100	0.42	20.16	5,200	6.00	212	300	1.20	62		
			20	0.11	5.28	2,300	2.66	93	80	0.32	39		

Note: Fan does not rotate when PWM duty cycle is 0%.

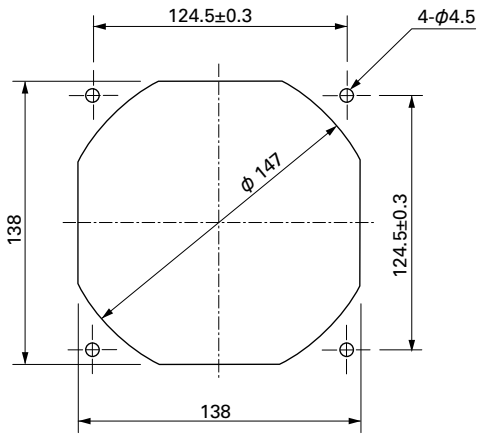
※PWM Frequency : 25kHz

Dimensions (unit: mm)

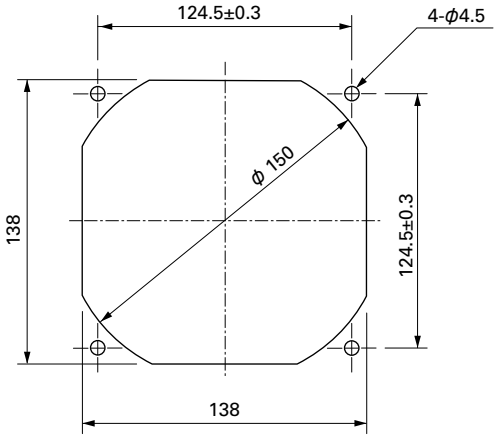


Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side



Outlet side

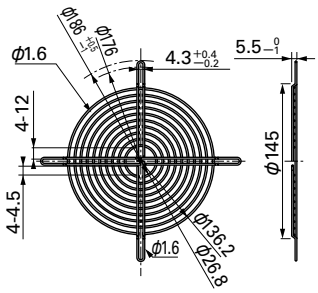


Options (unit: mm)

Finger Guards

Model：109-719　Surface treatment：Nickel-chrome plating (silver)　Color

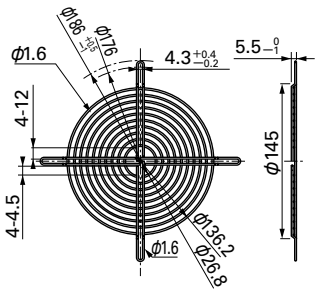
Inlet side, Outlet side



Mass：51g

Model：109-719H　Surface treatment：Cation electropainting (black)　Color

Inlet side, Outlet side



Mass：51g

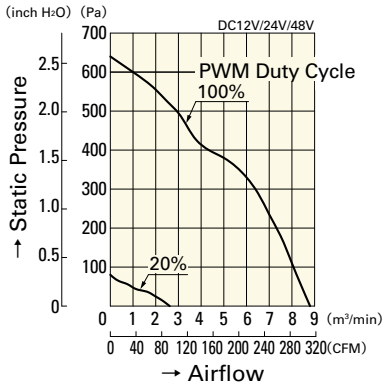
140mm sq.

San Ace 140

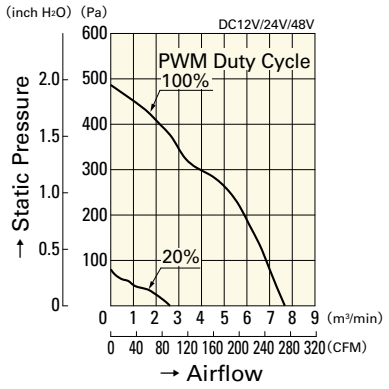
140×140×38mm 〔Mass：630g〕

Airflow - Static Pressure Characteristics

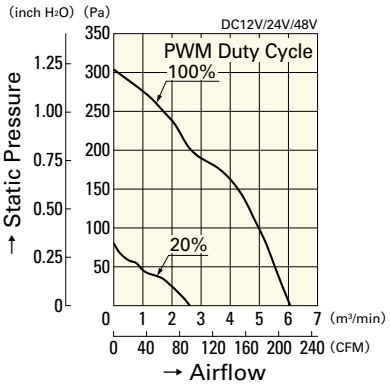
PWM Duty Cycle



9GV1412P1G001
9GV1424P1G001
9GV1448P1G001

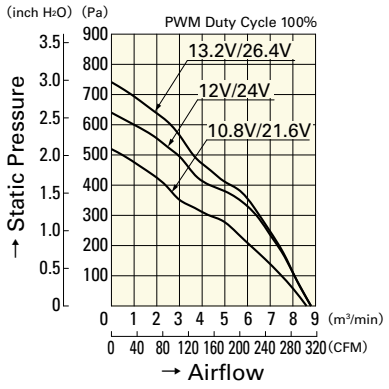


9GV1412P1S001
9GV1424P1S001
9GV1448P1S001

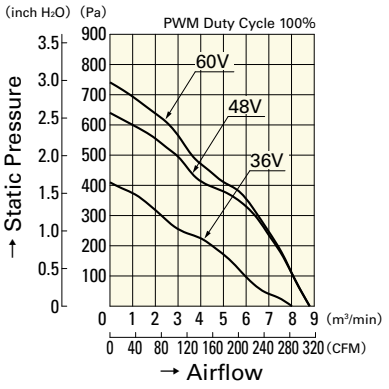


9GV1412P1H001
9GV1424P1H001
9GV1448P1H001

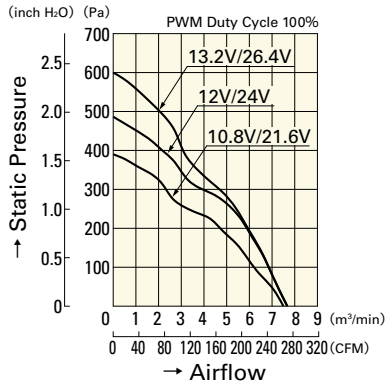
Operating Voltage Range



9GV1412P1G001
9GV1424P1G001

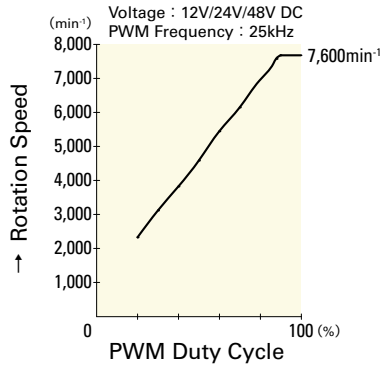


9GV1448P1G001

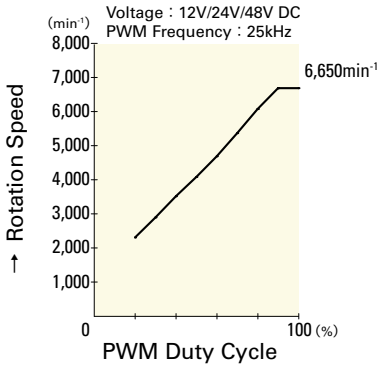


9GV1412P1S001
9GV1424P1S001

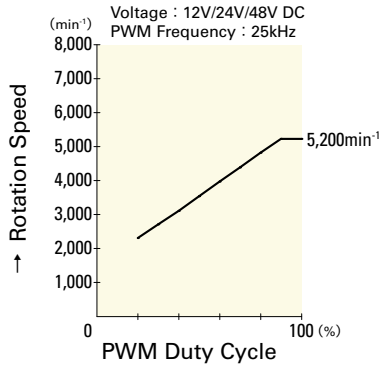
PWM Duty - Speed Characteristics Example



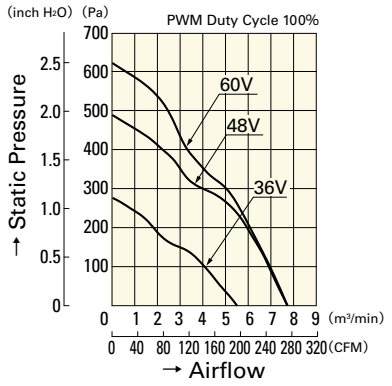
9GV1412P1G001
9GV1424P1G001
9GV1448P1G001



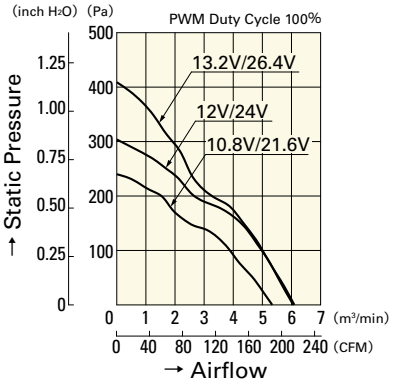
9GV1412P1S001
9GV1424P1S001
9GV1448P1S001



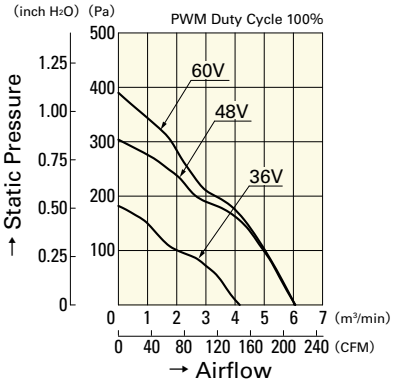
9GV1412P1H001
9GV1424P1H001
9GV1448P1H001



9GV1448P1S001



9GV1412P1H001
9GV1424P1H001



9GV1448P1H001

140 mm sq. San Ace 140



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

140×140×38mm (Mass : 450g) 9P type

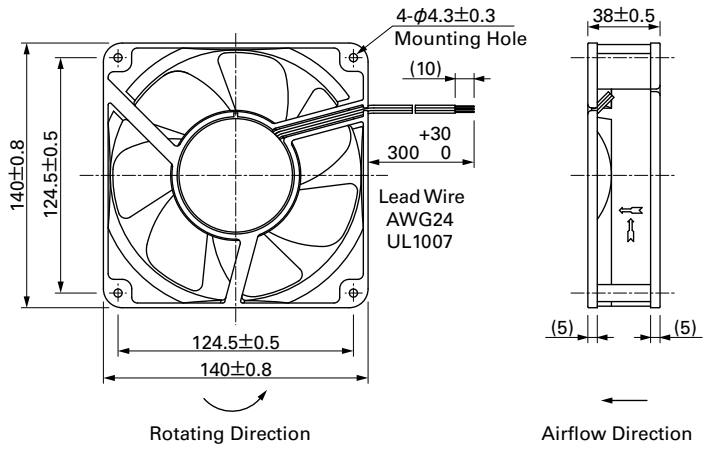
Specifications

The following nos. **have pulse sensors and ribs.**

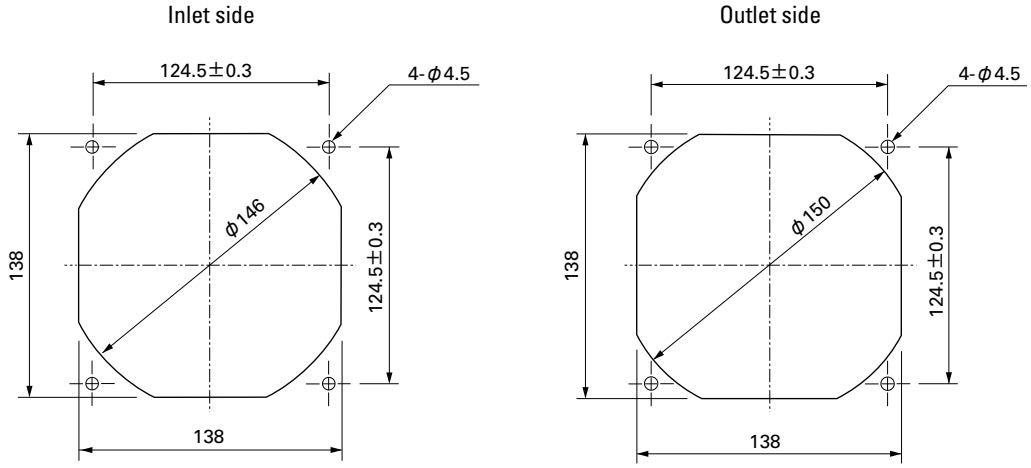
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109P1412H101	12	10.2 to 13.8	0.73	8.76	2,600	4.5	159	94	0.378	46	−20 to +70	40,000/60℃
109P1412M101			0.33	3.96	1,900	3.3	117	52	0.209	38		
109P1424H101	24	20.4 to 27.6	0.37	8.88	2,600	4.5	159	94	0.378	46		
109P1424M101			0.16	3.84	1,900	3.3	117	52	0.209	38		
109P1448H101	48	40.8 to 55.2	0.2	9.6	2,600	4.5	159	94	0.378	46		
109P1448M101			0.09	4.32	1,900	3.3	117	52	0.209	38		

Other sensor specifications are available as options. Please refer to the index (p. 498).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

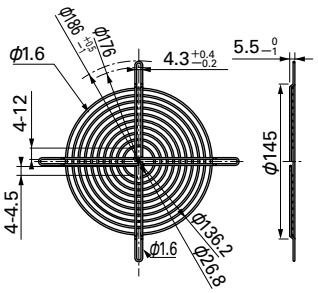


Options (unit: mm)

Finger Guards

Model：109-719　Surface treatment：Nickel-chrome plating　Color (silver)

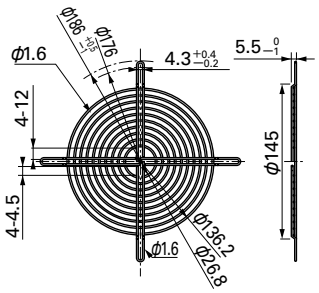
Inlet side, Outlet side



Mass：51g

Model：109-719H　Surface treatment：Cation electropainting　Color (black)

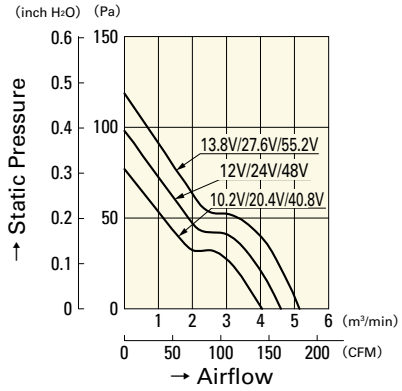
Inlet side, Outlet side



Mass：51g

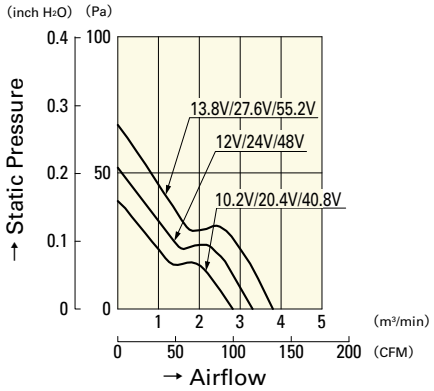
Airflow - Static Pressure Characteristics

H speed



109P1412H101
109P1424H101
109P1448H101

M speed



109P1412M101
109P1424M101
109P1448M101

150mm sq. San Ace 150



General Specifications

- Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

150×150×50mm (Mass : 450g) 9GV type

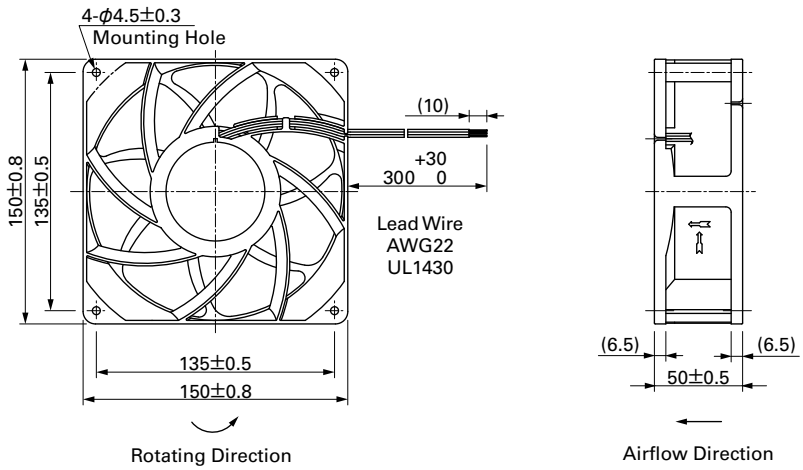
Specifications

The following nos. have pulse sensors and ribs. For ribless, append "1" to the model no.

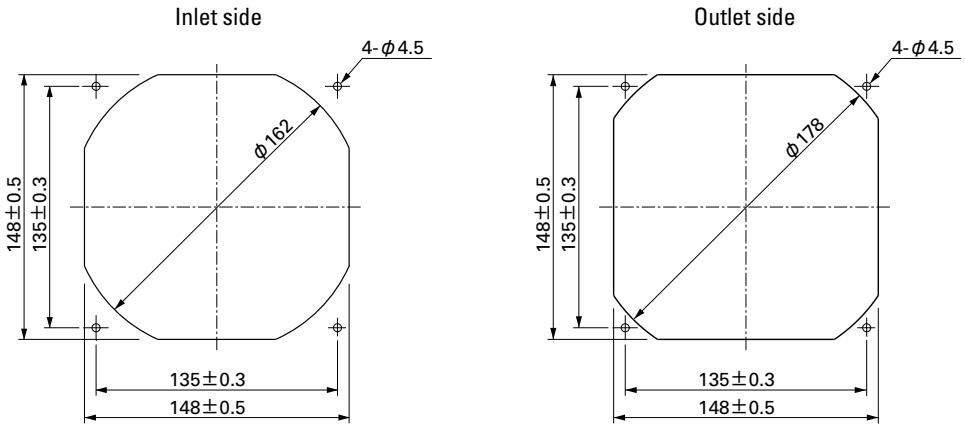
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GV1512H501	12	10.2 to 13.8	2.9	34.8	3,900	8.54	300	210	0.84	61	−20 to +70	40,000/60℃
9GV1512M501			1.2	14.4	3,000	6.35	224	132	0.53	53		
9GV1524M501	24	20.4 to 27.6	0.6	14.4	3,000	6.35	224	132	0.53	53		

Other sensor specifications are available as options. Please refer to the index (p. 508).

Dimensions (unit: mm) (With ribs)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

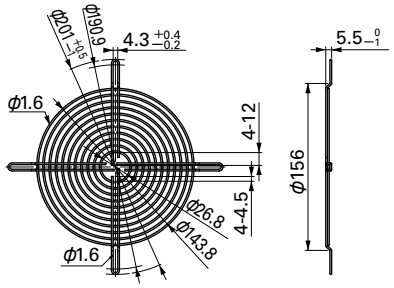


Options (unit: mm)

Finger Guards

Model：109-1051 Surface treatment：Nickel-chrome plating Color (silver)

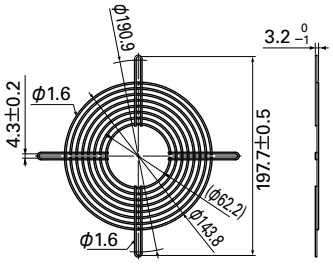
Inlet side, Outlet side



Mass：63g

Model：109-1052 Surface treatment：Nickel-chrome plating Color (silver)

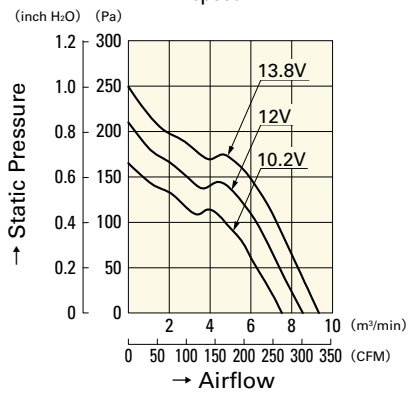
Outlet side



Mass：53g

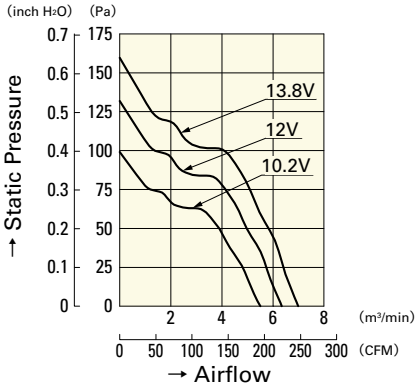
Airflow - Static Pressure Characteristics

H speed



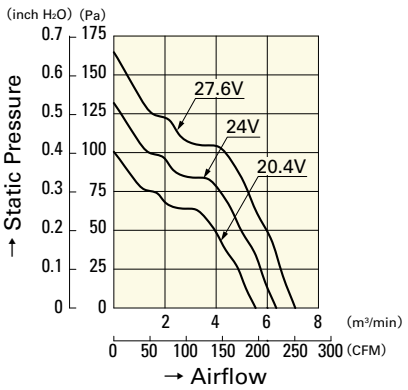
9GV1512H501

M speed



9GV1512M501

M speed



9GV1524M501

ϕ172mm San Ace 172



General Specifications

- Material ····· Frame: Aluminum, Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

ϕ172mm×147mm×25mm (Mass：500g) 9E type Sidecut type

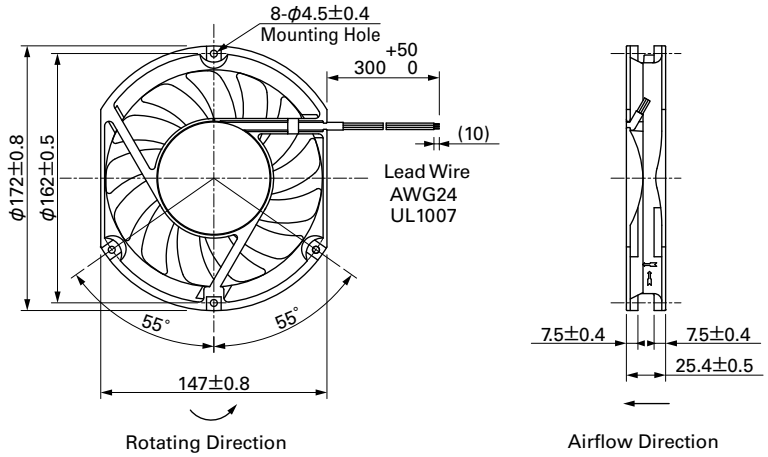
Specifications

The following nos. **have pulse sensors.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109E4712M401	12	10.2 to 13.8	1.3	15.6	2,800	5.2	183	92	0.369	51	−20 to +60	40,000/60℃
109E4712L401			1.0	12.0	2,500	4.6	162	73	0.293	48		
109E4724H401	24	20.4 to 27.6	1.0	24.0	3,400	6.4	226	135	0.542	57		
109E4724F401			0.79	19.0	3,100	5.8	204	112	0.450	54		
109E4724M401			0.58	13.9	2,800	5.2	183	92	0.369	51		
109E4724L401			0.44	10.6	2,500	4.6	162	73	0.293	48		
109E4748S401	48	40.8 to 55.2	0.62	29.8	3,650	6.8	240	156	0.627	58		
109E4748H401			0.52	25.0	3,400	6.4	226	135	0.542	57		
109E4748F401			0.40	19.2	3,100	5.8	204	112	0.450	54		
109E4748M401			0.32	15.4	2,800	5.2	183	92	0.369	51		
109E4748L401			0.25	12.0	2,500	4.6	162	73	0.293	48		

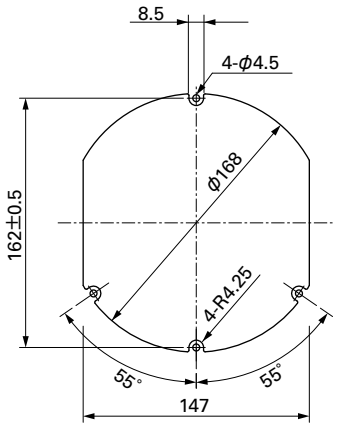
Other sensor specifications are available as options. Please refer to the index (pp. 495 to 496).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

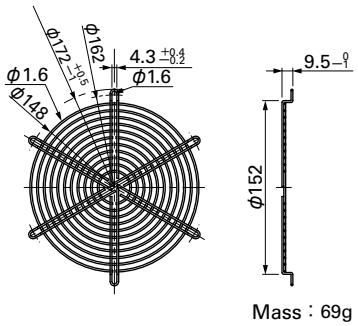


Options (unit: mm)

Finger Guards

Model : 109-319E　Surface treatment : Nickel-chrome plating (silver)　Color
: 109-319H　: Cation electropainting (black)

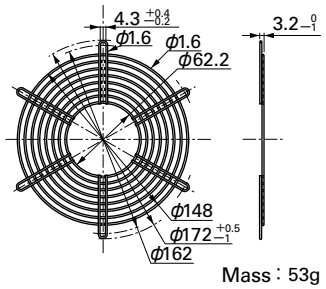
Inlet side, Outlet side



Mass : 69g

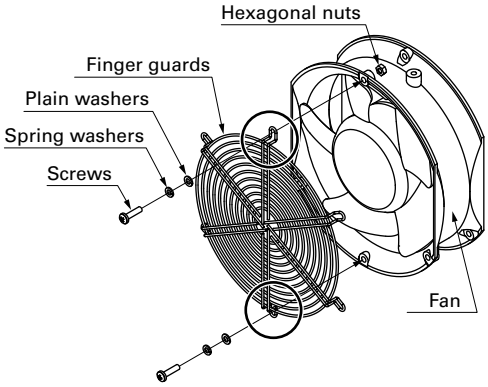
Model : 109-320　Surface treatment : Nickel-chrome plating (silver)　Color

Outlet side



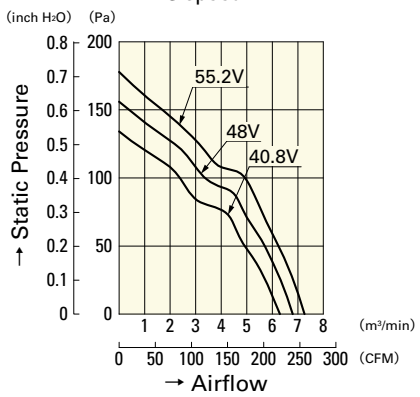
Mass : 53g

Finger guards 109-319E, 109-319H, and 109-320 should be mounted with two holes as in the drawing and do not use any other holes.



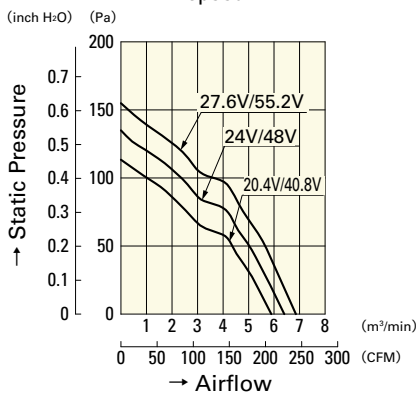
Airflow - Static Pressure Characteristics

S speed



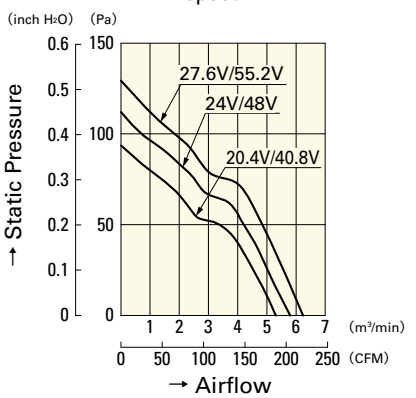
109E4748S401

H speed



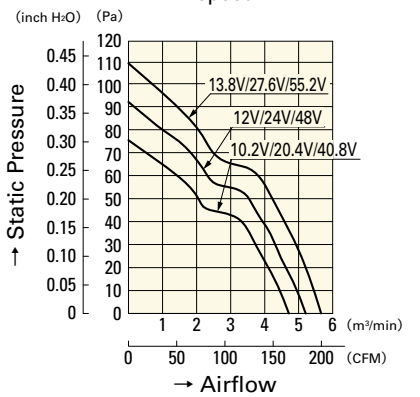
109E4724H401
109E4748H401

F speed



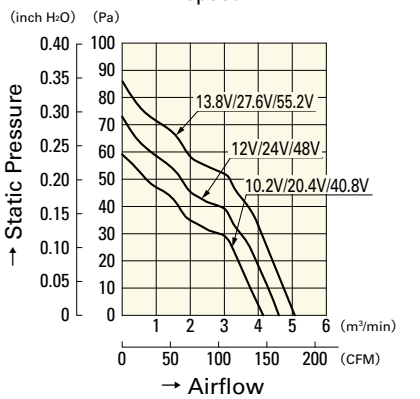
109E4724F401
109E4748F401

M speed



109E4712M401
109E4724M401
109E4748M401

L speed



109E4712L401
109E4724L401
109E4748L401

ϕ172mm San Ace 172



General Specifications

- Material ····· Frame: Aluminum, Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black Sensor yellow Control brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

ϕ172mm×150mm×51mm (Mass：800g) 9HV type Sidecut type

Specifications

The following nos. **have PWM controls and pulse sensors.**

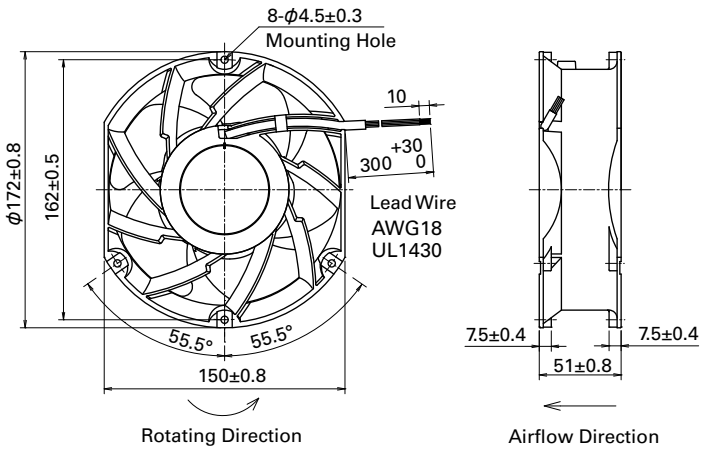
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9HV5724P5H001	24	16 to 30	100	5.0	120	8,000	12.3	434	1,000	4.02	77	−20 to +70	40,000/60℃ (70,000/40℃)
			20	0.50	12.0	3,000	4.60	162	175	0.70	51		
9HV5748P5G001	48	36 to 72	100	5.0	240	10,500	16.1	568	1,600	6.43	83		
			20	0.41	19.7	3,700	5.60	198	250	1.01	57		

Note: Fan does not rotate when PWM duty cycle is 0%.

※PWM Frequency：25kHz

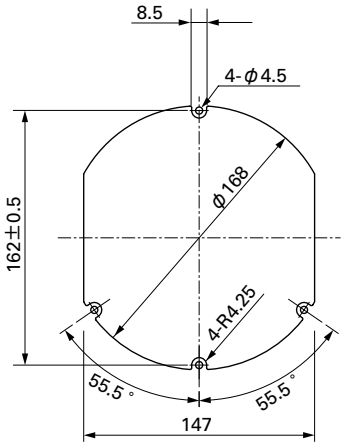
Other sensor specifications are available as options. Please refer to the index (p. 509).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

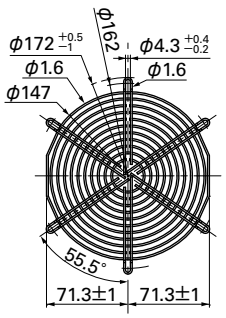


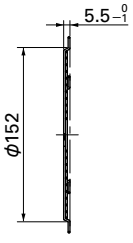
Options (unit: mm)

Finger Guards

Model：109-319J Surface treatment：Nickel-chrome plating (silver) Color

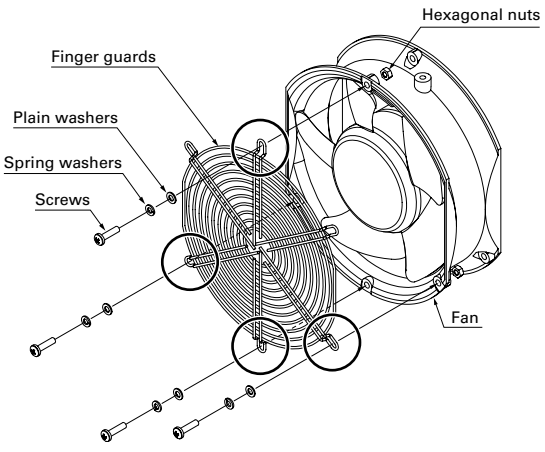
Inlet side, Outlet side





Mass：65g

Finger guard 109-319J should be mounted with four holes as in the drawing.

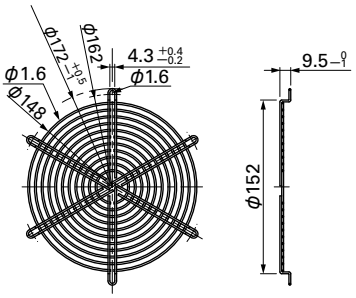


Options (unit: mm)

Finger Guards

Model : 109-319E　Surface treatment : Nickel-chrome plating (silver)　Color
: 109-319H　: Cation electropainting (black)

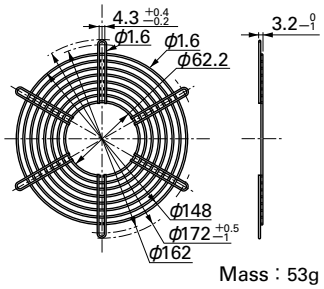
Inlet side, Outlet side



Mass : 69g

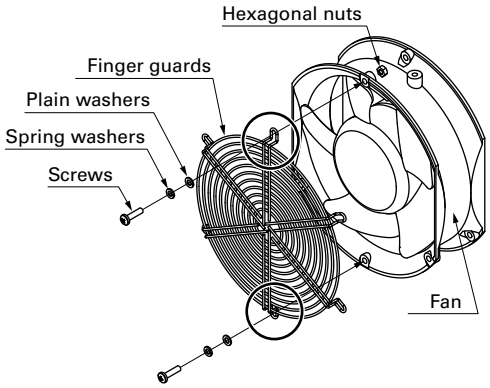
Model : 109-320　Surface treatment : Nickel-chrome plating (silver)　Color

Outlet side



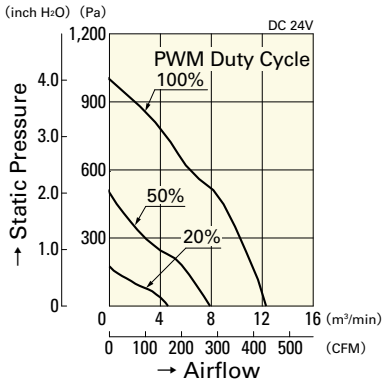
Mass : 53g

Finger guards 109-319E, 109-319H, and 109-320 should be mounted with two holes as in the drawing and do not use any other holes.

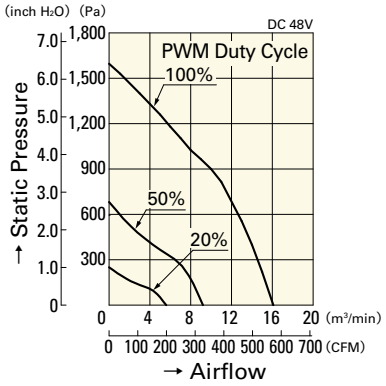


Airflow - Static Pressure Characteristics

PWM Duty Cycle

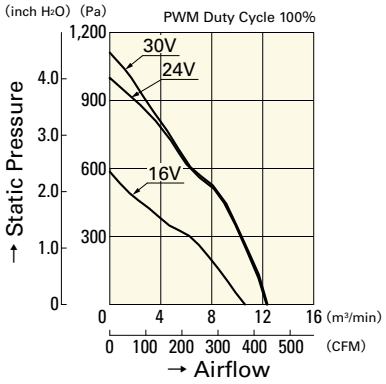


9HV5724P5H001

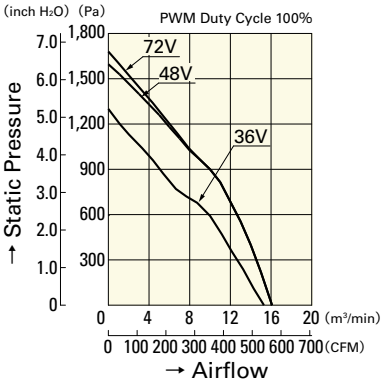


9HV5748P5G001

Operating Voltage Range

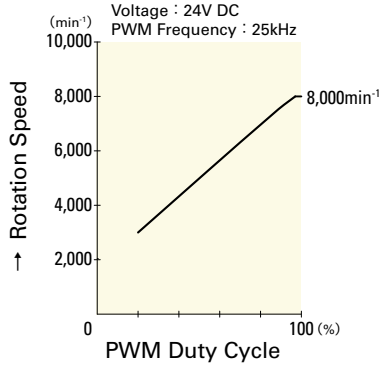


9HV5724P5H001

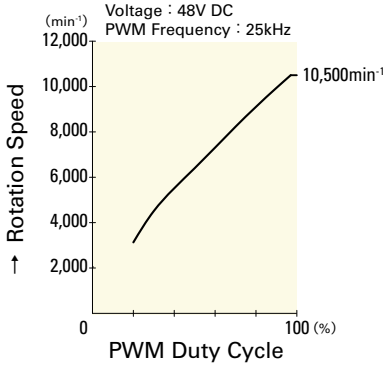


9HV5748P5G001

PWM Duty - Speed Characteristics Example



9HV5724P5H001



9HV5748P5G001

ϕ172mm San Ace 172



General Specifications

- Material ····· Frame: Aluminum, Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black Sensor yellow Control brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

ϕ172mm×150mm×51mm (Mass : 760g) 9SG type Sidecut type

Specifications

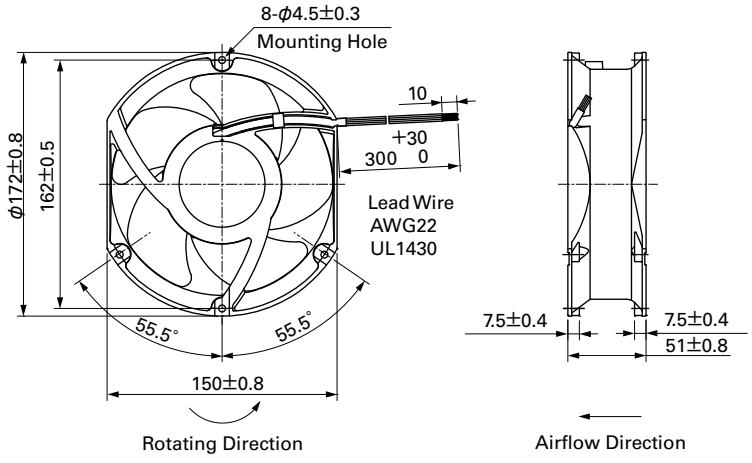
The following nos. **have PWM controls and pulse sensors.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9SG5724P5H61	24	20.4 to 27.6	100	2.8	67.2	6,500	11.6	410	540	2.16	71	−20 to +70	40,000/60℃
			0	0.18	4.32	1,300	2.32	81.9	30	0.12	28		
9SG5748P5G01	48	36 to 72	100	2.91	140	8,600	15.46	546	1,000	4.02	78	−20 to +60	
			0	0.21	10.1	2,000	3.59	127	75.1	0.30	40		
9SG5748P5H01			100	1.62	78	6,500	11.60	410	770	3.09	71		
			0	0.21	10.1	2,000	3.59	127	75.1	0.30	40		

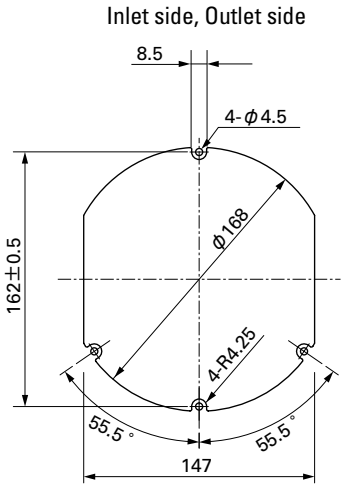
※PWM Frequency : 25kHz

Other sensor specifications are available as options. Please refer to the index (p. 510).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

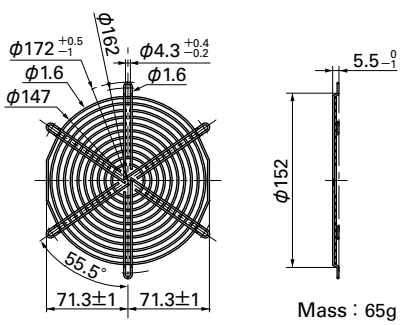


Options (unit: mm)

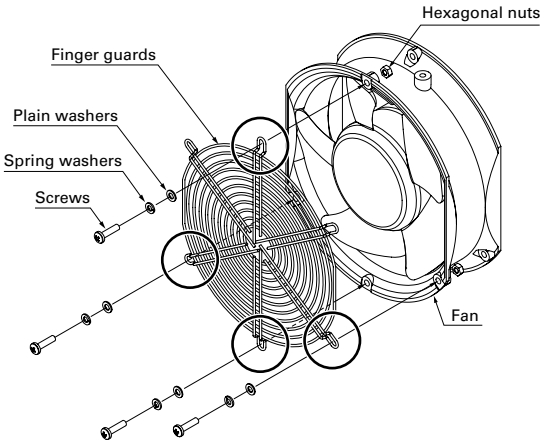
Finger Guards

Model : 109-319J Surface treatment : Nickel-chrome plating (silver) Color

Inlet side, Outlet side



Finger guard 109-319J should be mounted with four holes as in the drawing.

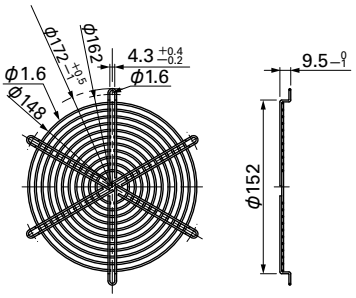


Options (unit: mm)

Finger Guards

Model : 109-319E　Surface treatment : Nickel-chrome plating (silver)　Color
: 109-319H　: Cation electropainting (black)

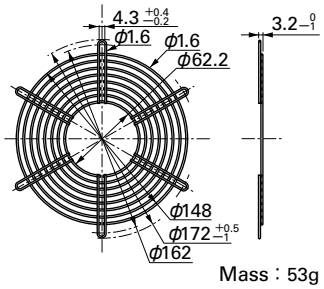
Inlet side, Outlet side



Mass : 69g

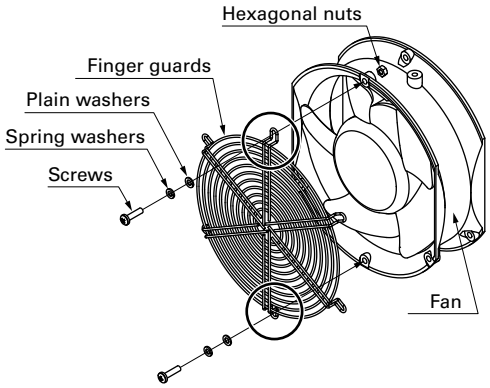
Model : 109-320　Surface treatment : Nickel-chrome plating (silver)　Color

Outlet side



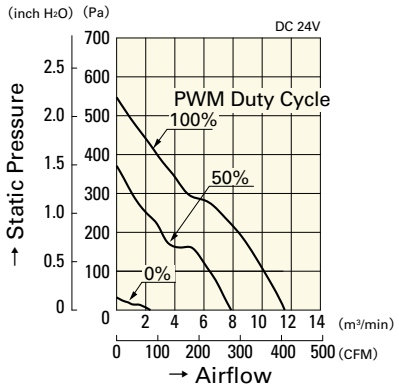
Mass : 53g

Finger guards 109-319E, 109-319H, and 109-320 should be mounted with two holes as in the drawing and do not use any other holes.

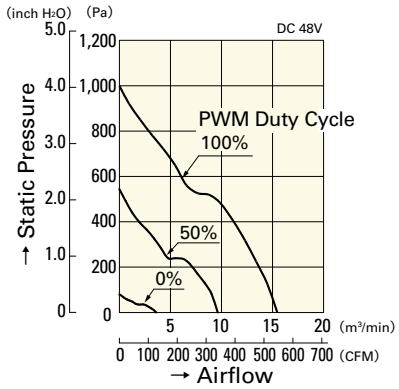


Airflow - Static Pressure Characteristics

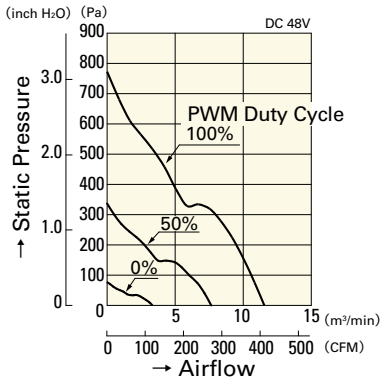
PWM Duty Cycle



9SG5724P5H61

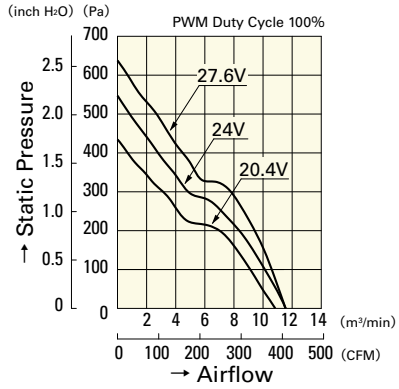


9SG5748P5G01

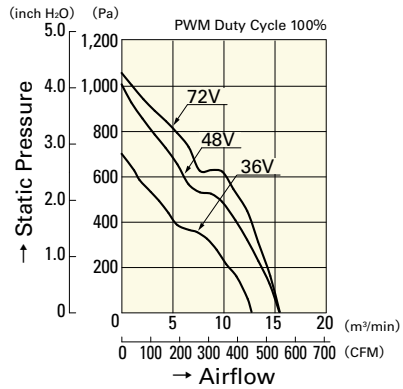


9SG5748P5H01

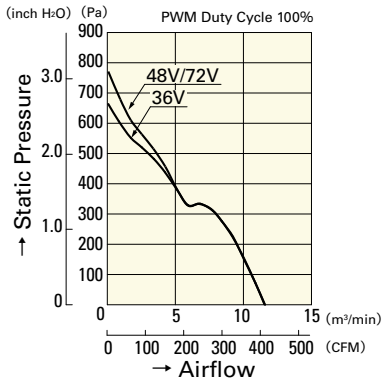
Operating Voltage Range



9SG5724P5H61

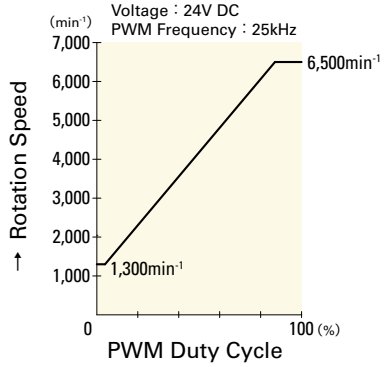


9SG5748P5G01

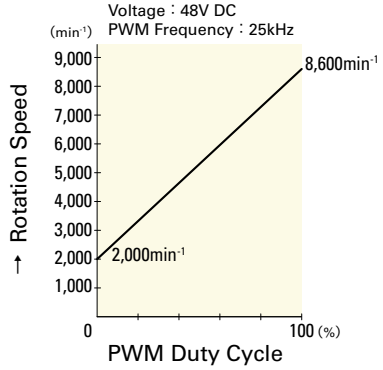


9SG5748P5H01

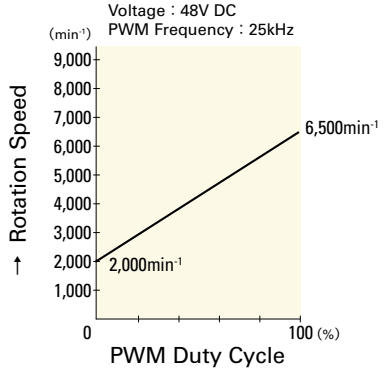
PWM Duty - Speed Characteristics Example



9SG5724P5H61



9SG5748P5G01



9SG5748P5H01

ϕ172mm San Ace 172



General Specifications

- Material ····· Frame: Aluminum, Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

ϕ172mm×150mm×51mm (Mass : 800g) 9GV type Sidecut type

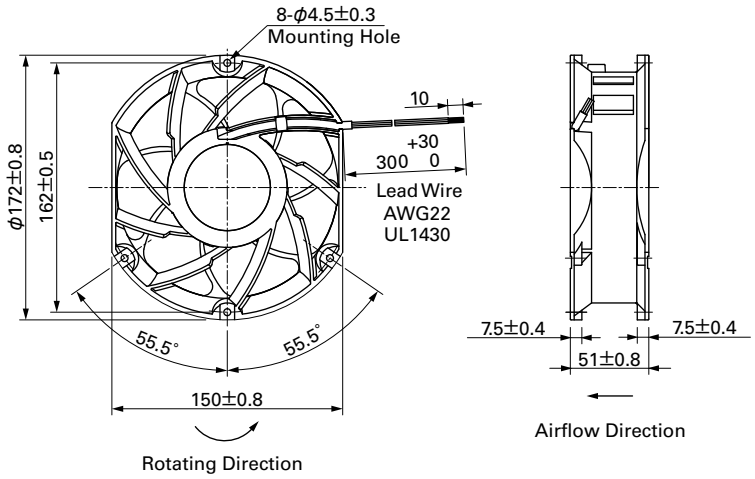
Specifications

The following nos. **have pulse sensors.**

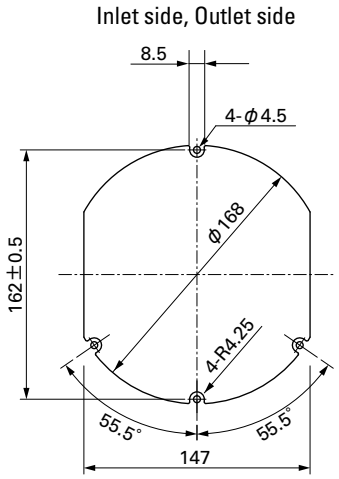
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GV5724H501	24	20.4 to 27.6	4.0	96	6,300	11.32	400	690	2.77	74	−20 to +70	40,000/60℃
9GV5748H501	48	40.8 to 55.2	2.0	96								

Other sensor specifications are available as options. Please refer to the index (p. 508).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

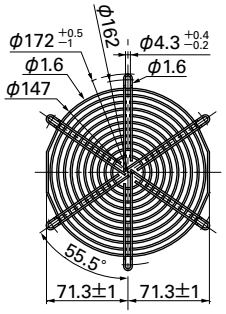


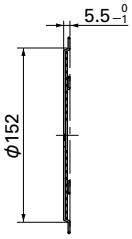
Options (unit: mm)

Finger Guards

Model : 109-319J Surface treatment : Nickel-chrome plating (silver) Color

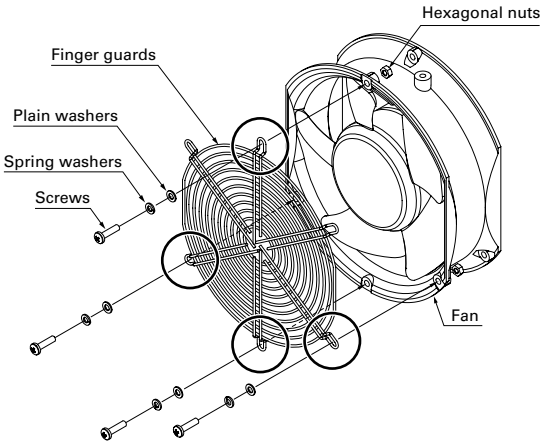
Inlet side, Outlet side





Mass : 65g

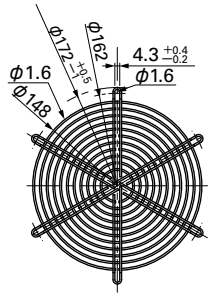
Finger guard 109-319J should be mounted with four holes as in the drawing.

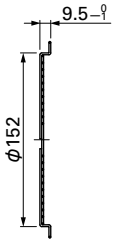


Finger Guards

Model : 109-319E Surface treatment : Nickel-chrome plating (silver) Color
: 109-319H : Cation electropainting (black)

Inlet side, Outlet side

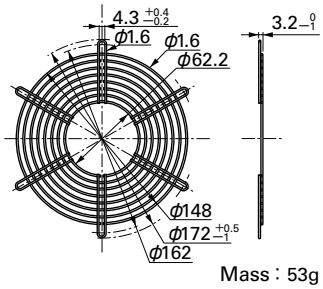




Mass : 69g

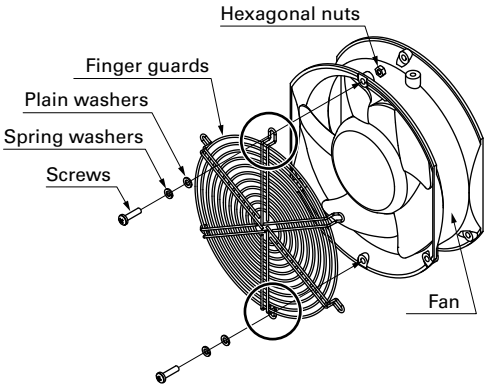
Model : 109-320 Surface treatment : Nickel-chrome plating (silver) Color

Outlet side



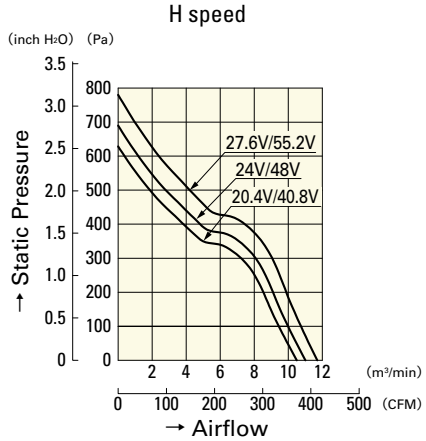
Mass : 53g

Finger guards 109-319E, 109-319H, and 109-320 should be mounted with two holes as in the drawing and do not use any other holes.



Airflow - Static Pressure Characteristics

H speed



9GV5724H501
9GV5748H501

ϕ172mm San Ace 172



General Specifications

- Material ····· Frame: Aluminum, Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

ϕ172mm×150mm×51mm (Mass : 760g) 9E type Sidecut type

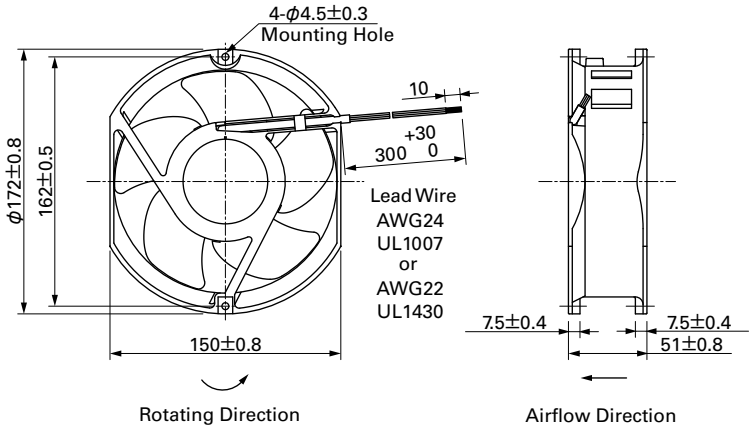
Specifications

The following nos. **have pulse sensors.**

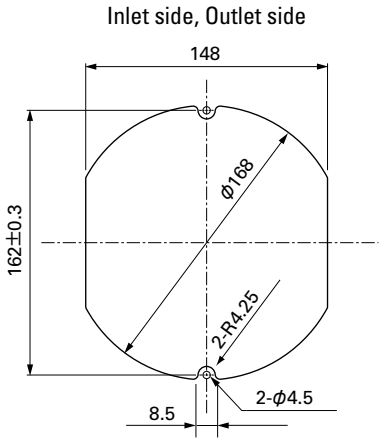
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109E5712K501	12	10.2 to 13.8	2.9	34.8	4,100	8.5	300	243.0	0.976	60	−20 to +60	40,000/60℃
109E5712Y501			2.3	27.6	3,800	8	282	210	0.84	60		
109E5712H501			1.2	14.4	3,050	6.4	226	137.2	0.551	52	−20 to +70	
109E5712F501			0.68	8.16	2,500	5.1	180	95	0.38	47		
109E5712M501			0.48	5.76	2,000	4.2	148	67.6	0.271	41		
109E5724C501	24	20.4 to 27.6	2.3	55.2	4,800	9.9	350	308.0	1.237	66	−20 to +70	
109E5724K501			1.3	31.2	4,100	8.5	300	243.0	0.976	60		
109E5724H501			0.58	13.92	3,050	6.4	226	137.2	0.551	52		
109E5724F501			0.35	8.4	2,500	5.1	180	95	0.38	47		
109E5724M501			0.2	4.8	2,000	4.2	148	67.6	0.271	41		
109E5748C501	48	40.8 to 55.2	1.2	57.6	4,800	9.9	350	308.0	1.237	66		
109E5748K501			0.7	33.6	4,100	8.5	300	243.0	0.976	60	−20 to +60	
109E5748H501			0.28	13.44	3,050	6.4	226	137.2	0.551	52		
109E5748F501			0.19	9.12	2,500	5.1	180	95	0.38	47	−20 to +70	
109E5748M501			0.11	5.28	2,000	4.2	148	67.6	0.271	41		

Other sensor specifications are available as options. Please refer to the index (p. 496).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

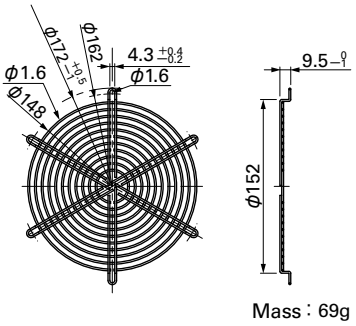


Options (unit: mm)

Finger Guards

Model : 109-319E　Surface treatment : Nickel-chrome plating (silver)　Color
: 109-319H　: Cation electropainting (black)

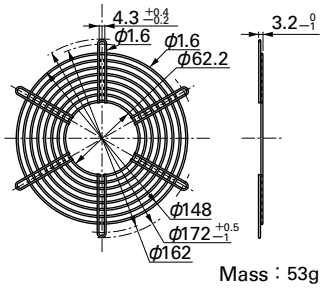
Inlet side, Outlet side



Mass : 69g

Model : 109-320　Surface treatment : Nickel-chrome plating (silver)　Color

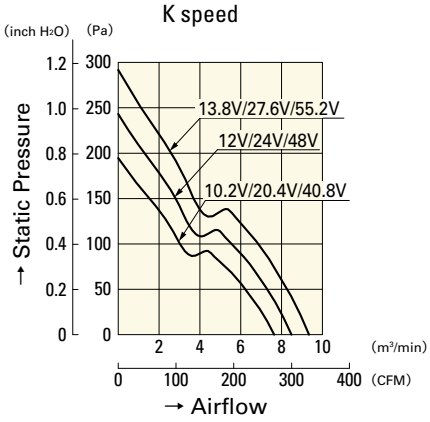
Outlet side



Mass : 53g

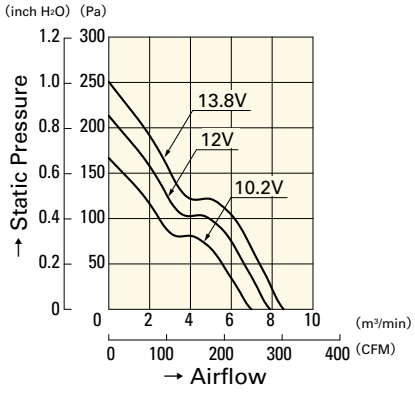
Airflow - Static Pressure Characteristics

K speed



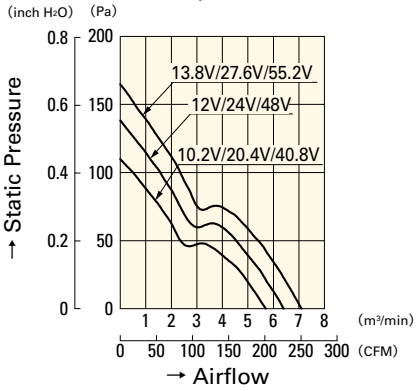
109E5712K501
109E5724K501
109E5748K501

Y speed



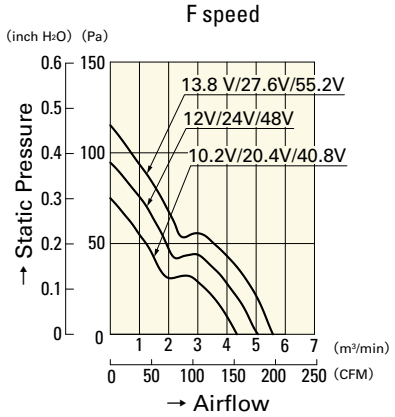
109E5712Y501

H speed



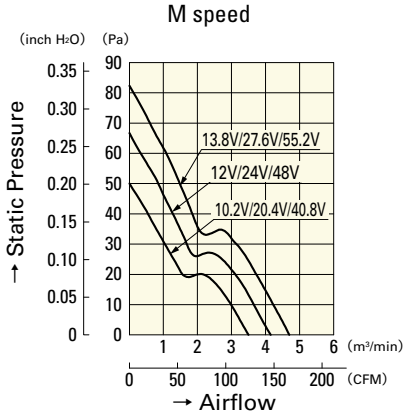
109E5712H501
109E5724H501
109E5748H501

F speed



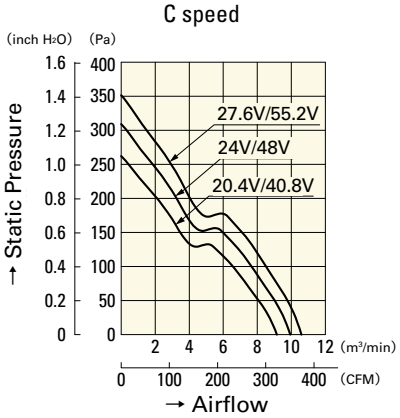
109E5712F501
109E5724F501
109E5748F501

M speed



109E5712M501
109E5724M501
109E5748M501

C speed



109E5724C501
109E5748C501

ϕ172mm San Ace 172



General Specifications

- Material ····· Frame: Aluminum, Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

ϕ172mm×51mm (Mass : 780g) 9E type Round type

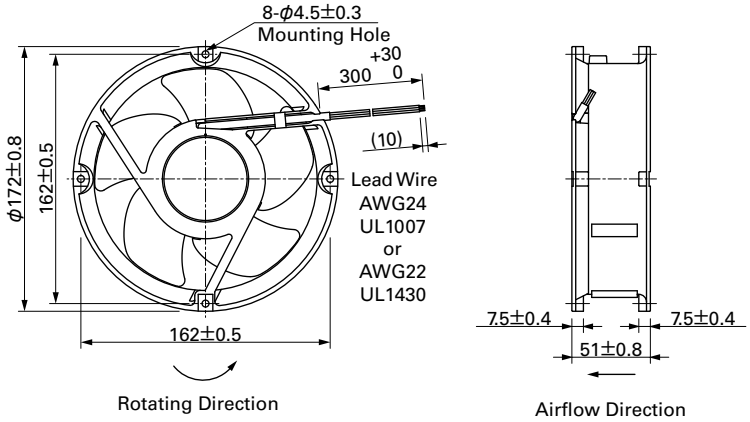
Specifications

The following nos. **have pulse sensors.**

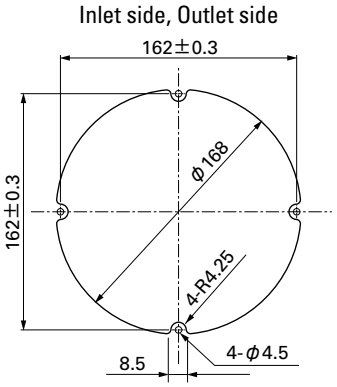
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
109E1712K501	12	10.2 to 13.8	2.9	34.8	4,100	8.5	300	243.0	0.976	55	−20 to +60	40,000/60℃
109E1712Y501			2.3	27.6	3,800	7.8	276	210.0	0.843	53		
109E1712H501			1.2	14.4	3,050	6.4	226	137.2	0.551	47	−20 to +70	
109E1712F501			0.9	10.8	2,500	5.1	180	95.0	0.382	42		
109E1712M501			0.48	5.76	2,000	4.2	148	67.6	0.271	36		
109E1724C501	24	20.4 to 27.6	2.3	55.2	4,800	9.9	350	308.0	1.237	60		
109E1724K501			1.3	31.2	4,100	8.5	300	243.0	0.976	55		
109E1724H501			0.58	13.92	3,050	6.4	226	137.2	0.551	47		
109E1724F501			0.35	8.4	2,500	5.1	180	95	0.382	42		
109E1724M501			0.2	4.8	2,000	4.2	148	67.6	0.271	36		
109E1748C501	48	40.8 to 55.2	1.2	57.6	4,800	9.9	350	308.0	1.237	60		
109E1748K501			0.7	33.6	4,100	8.5	300	243.0	0.976	55	−20 to +60	
109E1748H501			0.28	13.44	3,050	6.4	226	137.2	0.551	47	−20 to +70	
109E1748F501			0.19	9.12	2,500	5.1	180	95	0.382	42	−20 to +60	
109E1748M501			0.11	5.28	2,000	4.2	148	67.6	0.271	36	−20 to +70	

Other sensor specifications are available as options. Please refer to the index (p. 495).

Dimensions (unit: mm)



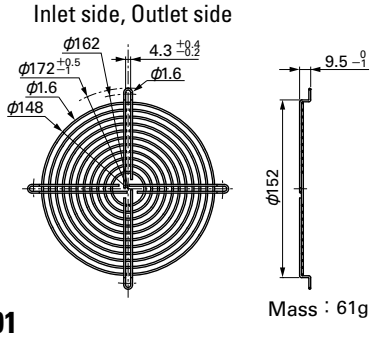
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



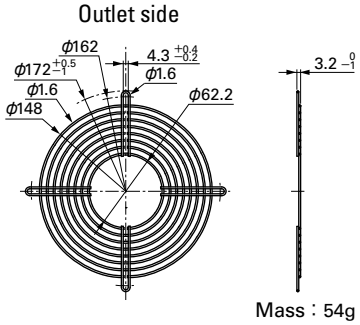
Options (unit: mm)

Finger Guards

Model : 109-1066 Surface treatment : Nickel-chrome plating (silver) Color



Model : 109-1068 Surface treatment : Nickel-chrome plating (silver) Color

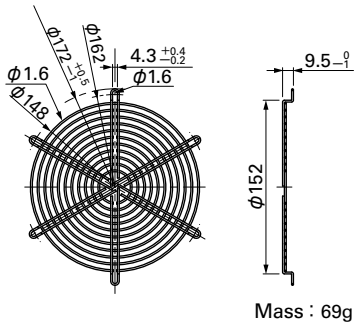


Options (unit: mm)

Finger Guards

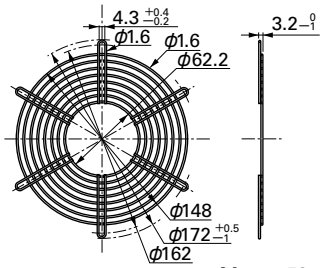
Model : 109-319E　Surface treatment : Nickel-chrome plating (silver)　Color
: 109-319H　: Cation electropainting (black)

Inlet side, Outlet side



Mass : 69g

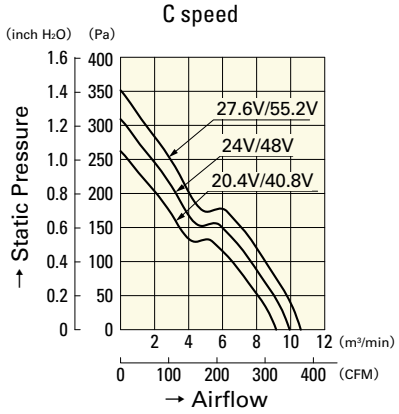
Outlet side



Mass : 53g

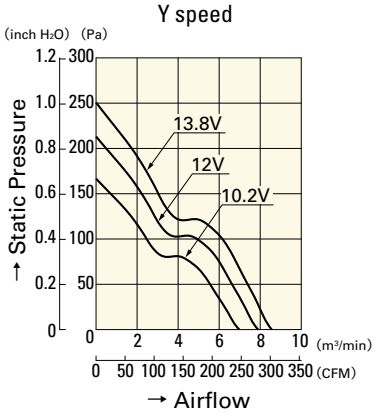
Airflow - Static Pressure Characteristics

C speed



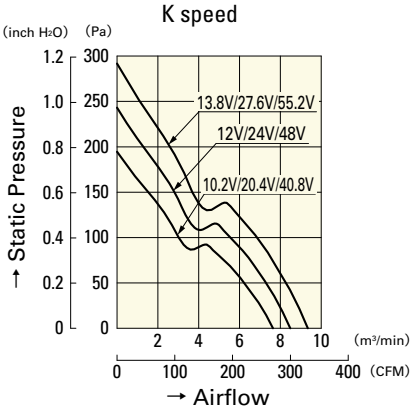
109E1724C501
109E1748C501

Y speed



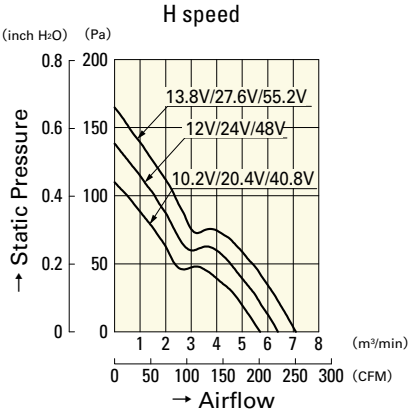
109E1712Y501

K speed



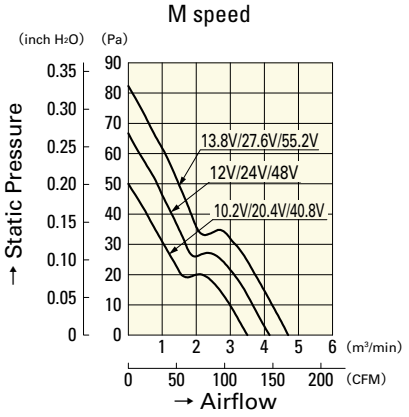
109E1712K501
109E1724K501
109E1748K501

H speed



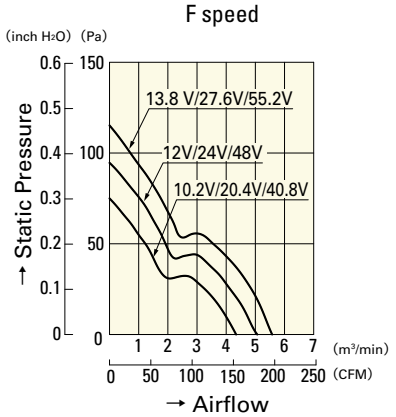
109E1712H501
109E1724H501
109E1748H501

M speed



109E1712M501
109E1724M501
109E1748M501

F speed



109E1712F501
109E1724F501
109E1748F501

ϕ200mm San Ace 200



General Specifications

- Material ····· Frame: Aluminum, Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black Sensor yellow Control brown
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

Power on when current is shut off. Do not power on 15s or more after power off.

ϕ200mm×70mm 〔Mass：1800g〕 9GV type

Specifications

The following nos. **have PWM controls and pulse sensors.**

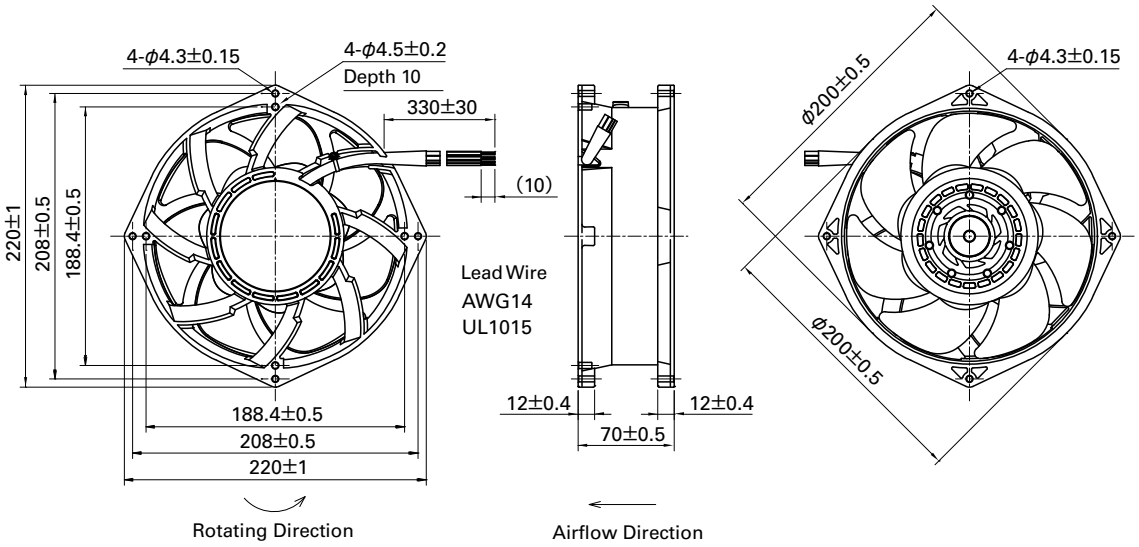
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9GV2048P0G201 Note)	48	36 to 72	100	12.5	600	8,000	31.5	1,112	1,400	5.62	81	−20 to +70	40,000/60℃ (70,000/40℃)

Note: Fan does not rotate when PWM duty cycle is 0%.

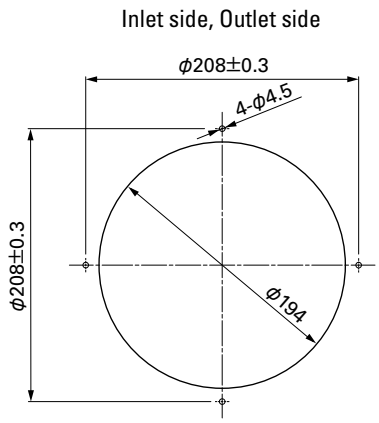
※PWM Frequency：1kHz

Other sensor specifications are available as options. Please refer to the index (p. 508).

Dimensions (unit: mm)



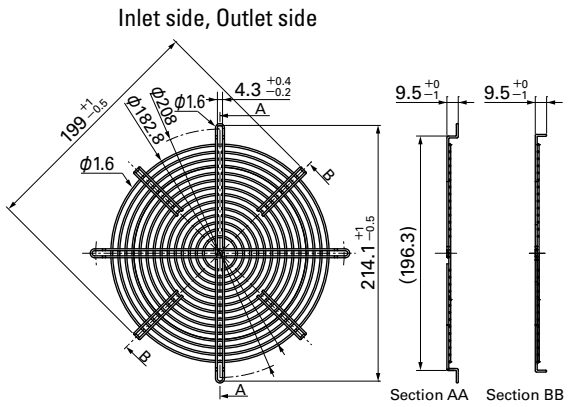
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

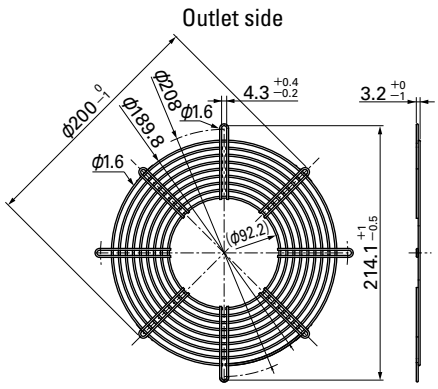
Finger Guards

Model : 109-1102 Surface treatment : Nickel-chrome plating (silver) Color



Mass : 100g

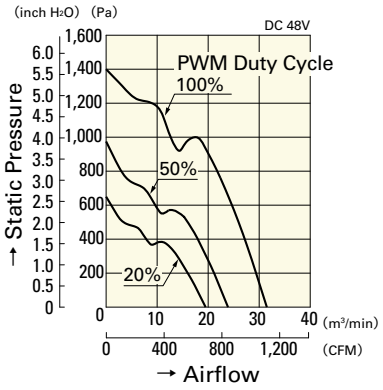
Model : 109-1103 Surface treatment : Nickel-chrome plating (silver) Color



Mass : 80g

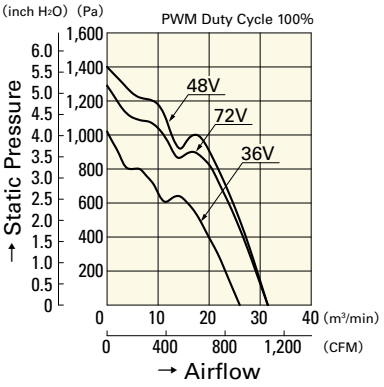
Airflow - Static Pressure Characteristics

PWM Duty Cycle



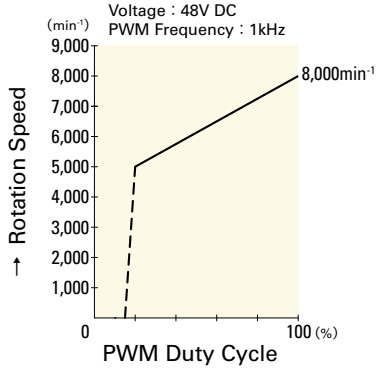
9GV2048P0G201

Operating Voltage Range



9GV2048P0G201

PWM Duty - Speed Characteristics Example



9GV2048P0G201

φ200mm San Ace 200



General Specifications

- Material ····· Frame: Aluminum, Impeller: Plastics (Flammability: UL94V-1)
- Expected Life ····· Refer to specifications (L10:Survival rate:90% at 60℃, rated voltage, and continuously run in a free air state)
- Lead Wire ····· ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature ···· −30℃ to +70℃ (Non-condensing)

Power on when current is shut off. Do not power on 10s or more after power off.

Model no. 9EC2048J001 is not certified.

φ200mm×70mm (Mass : 1800g) 9EC type

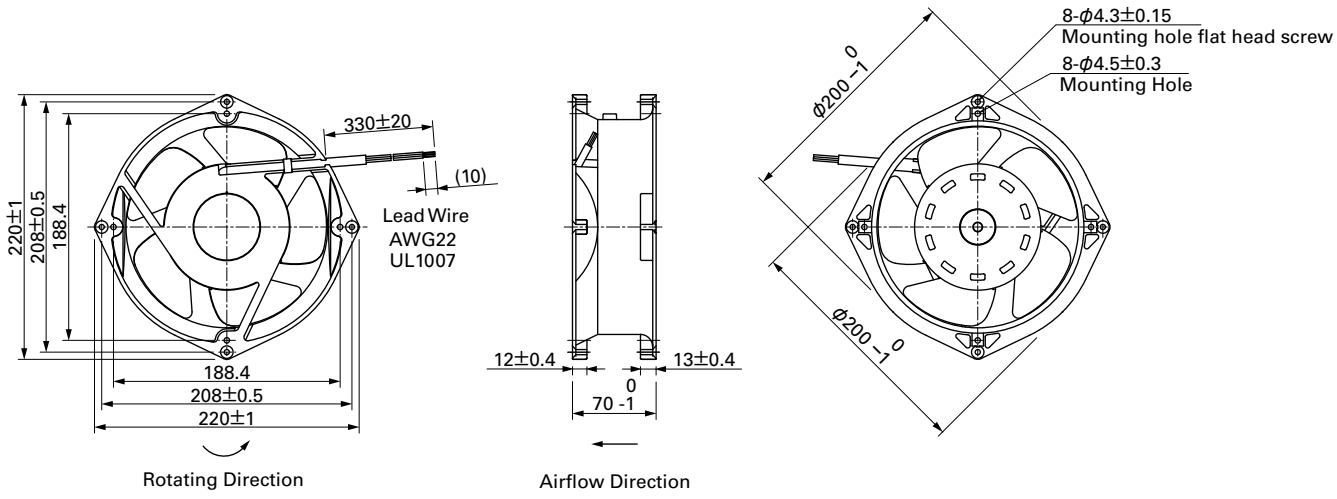
Specifications

The following nos. **have pulse sensors.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Airflow [m³/min]	Max. Airflow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH₂O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life [h]
9EC2024H001	24	20.4 to 26.4	2.0	48.0	3,600	11.0	388	360	1.446	60	−20 to +60	40,000/60℃
9EC2048J001	48	40.8 to 55.2	4.4	211.2	6,100	18.3	646	1,000	4.016	75		
9EC2048A001		43.0 to 51.0	2.2	105.6	4,800	14.7	519	640	2.570	68		
9EC2048H001		40.8 to 52.8	1.2	57.6	3,600	11.0	388	360	1.446	60		

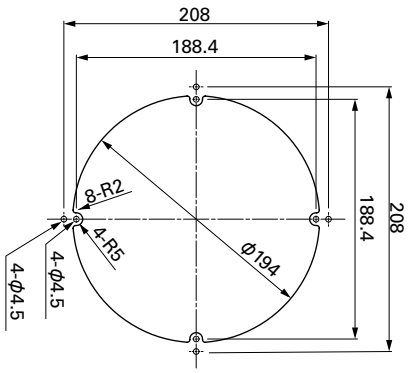
Other sensor specifications are available as options. Please refer to the index (p. 501).

Dimensions (unit: mm)



Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side

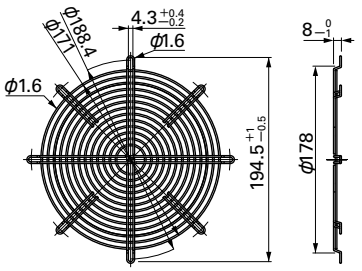


Options (unit: mm)

Finger Guards

Model : 109-720 Surface treatment : Nickel-chrome plating (silver) Color
: 109-720H : Cation electropainting (black)

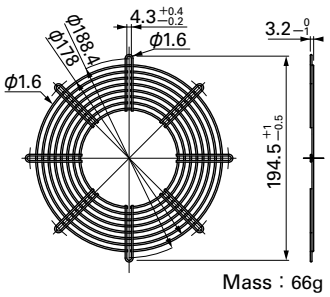
Inlet side, Outlet side



Mass : 84g

Model : 109-721 Surface treatment : Nickel-chrome plating (silver) Color
: 109-721H : Cation electropainting (black)

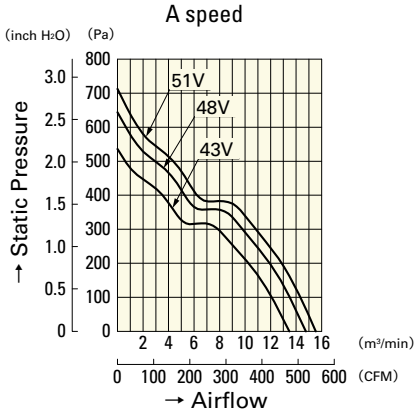
Outlet side



Mass : 66g

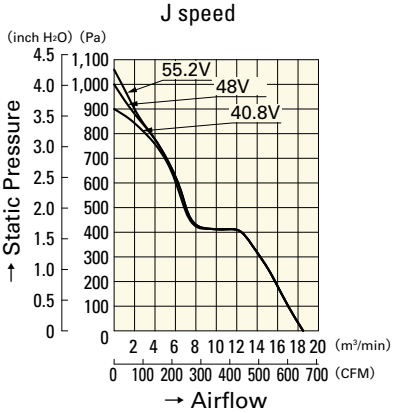
Airflow - Static Pressure Characteristics

A speed



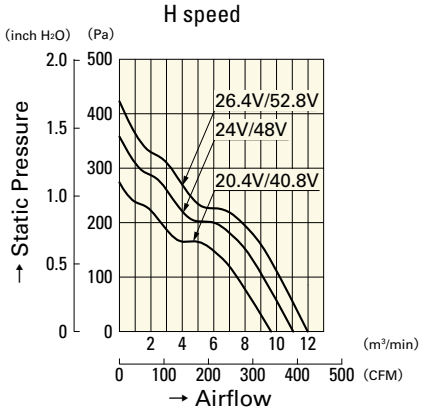
9EC2048A001

J speed



9EC2048J001

H speed



9EC2024H001
9EC2048H001

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9A0912G401 9GA0612P7H01 9S0612H402 9S1212L4011 9WL0424P3G001 9WPA0612P4G001 9HV5724P5H001 9RA0812G1001 9W1BM12P2H001 9WF0424H7D01 SA1-9WPA0824P4G001 109P0412G601 9L0412M301 9TM24P4H01 103H5208-5240 9LG0824P4G001 SA1-9RFA1324P3G001 109P0412H601 9G0624G102 9GA0712P1G001 9GE0412P3J03 9HV0812P1G001 SA1-DB14S422S SA1-9ADW5701P5H003 SA1-9W1BM24P2H001 9WF1224H101 9WP1212H1011 9GA0612L9001 9WP0624H401 9WPA0624P4G001