

Вентилятор sanyo denki san ace , Минск тел. +375447584780

www.fotorele.net www.tiristor.by радиодетали, электронные компоненты

email minsk17@tut.by tel.+375 29 758 47 80 МТС

каталог, описание, технические, характеристики, datasheet, параметры, маркировка, габариты, фото

QR код



9GT type

Wide Temperature Range Fan DC

These fans achieve an operating temperature range of -40°C to +85°C. They operate in a wide temperature range, serving in various applications where conventional fans could not be used. They are suitable for refrigerators and freezers, lighting devices, communications devices, PV inverters, and rapid EV charging stations.

40mm sq. to 120mm sq.
⇒pp. 359 to 370



9AD type

ACDC Fan AC

This fan operates by internally converting AC power into DC power. It provides the superior performance of a DC fan with the flexibility of AC input.

92x92x38mm
⇒pp. 413 to 416

120x120x38mm
⇒pp. 417 to 420



9RF type

Reversible Flow Fan DC

Multiple fans are usually used to blow air in both directions to ventilate houses, and to cool drink vending machines, and food display cases. With reversible flow fans, the wind direction can be switched so fewer fans are required.

φ136x28mm
⇒pp. 243 to 244



COOLING FAN

San Ace



2017

SANYO DENKI

San Ace COOLING SYSTEMS

Details on new and recommended products

NEW

High Static Pressure Fan DC

New high static pressure fans have been added to our product lineup. These fans feature improved static pressure compared with our current models. They deliver perfect solutions for efficiently cooling servers, ICT devices and power supplies.



60×60×38mm
⇒pp. 77 to 78

80×80×38mm
⇒pp. 123 to 124

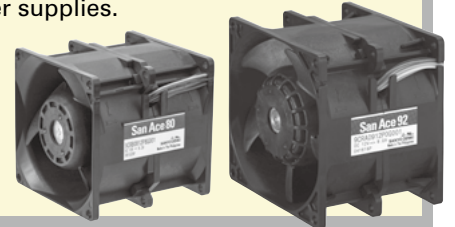
NEW

Counter Rotating Fan DC

Counter rotating fan lineup has been enriched with the addition of this new model that features higher airflow and higher static pressure than our current models. It provides effective cooling especially for high density equipment such as servers, data storage systems, ICT devices, and power supplies.

80×80×80mm
⇒pp. 229 to 230

92×92×76mm
⇒pp. 235 to 236



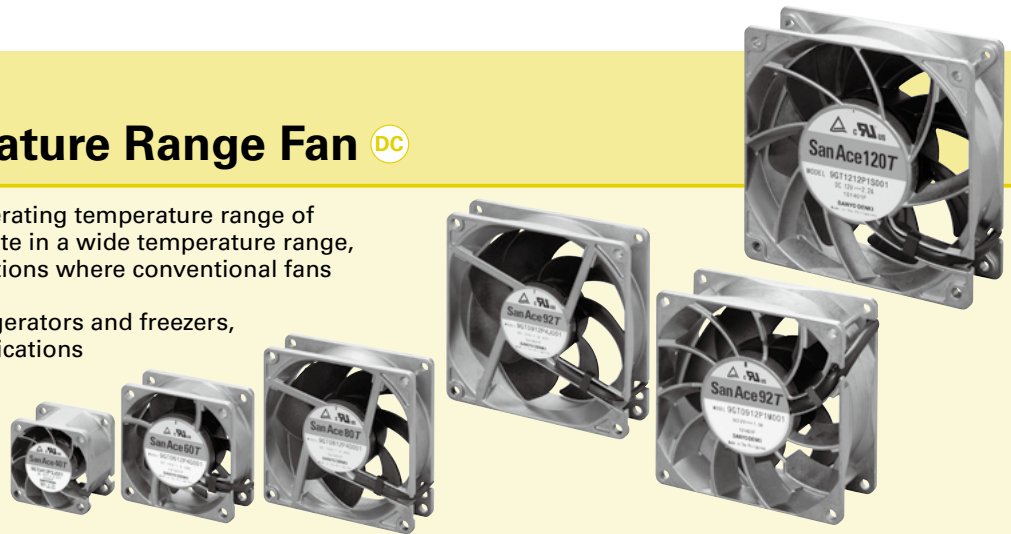
9GT type

Wide Temperature Range Fan DC

These fans achieve an operating temperature range of -40°C to +85°C. They operate in a wide temperature range, serving in various applications where conventional fans could not be used.

They are suitable for refrigerators and freezers, lighting devices, communications devices, PV inverters, and rapid EV charging stations.

40mm sq. to 120mm sq.
⇒pp. 359 to 370



9AD type

ACDC Fan AC

This fan operates by internally converting AC power into DC power. It provides the superior performance of a DC fan with the flexibility of AC input.

92×92×38mm
⇒pp. 413 to 416

120×120×38mm
⇒pp. 417 to 420



9RF type

Reversible Flow Fan DC

Multiple fans are usually used to blow air in both directions to ventilate houses, and to cool drink vending machines, and food display cases. With reversible flow fans, the wind direction can be switched so fewer fans are required.

φ136×28mm
⇒pp. 243 to 244





9T type

Centrifugal Fan DC

NEW

Product lineup has been expanded for centrifugal fans, that blow air in a centrifugal course. These fans deliver high airflow and high static pressure with low noise and low power consumption. It is suitable for use in ICT equipment, large-scale inverters, refrigeration units, dust collectors, and air conditioners.



$\phi 175 \times 69 \text{mm}$
⇒pp. 379 to 380



$\phi 221 \times 71 \text{mm}$
⇒pp. 383 to 384



$\phi 225 \times 99 \text{mm}$
⇒pp. 385 to 386

NEW

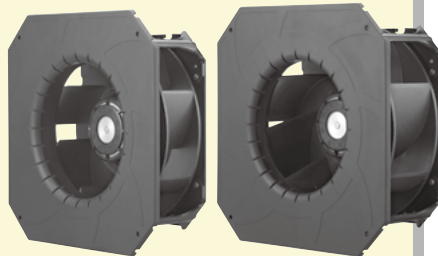
9B1T type

Bracket-mounted Centrifugal Fan DC

Centrifugal fan comes equipped with an air inlet, making the installation to your device easy.

$270 \times 270 \times 99 \text{mm}$
⇒pp. 387 to 388

$270 \times 270 \times 119 \text{mm}$
⇒pp. 389 to 390



NEW

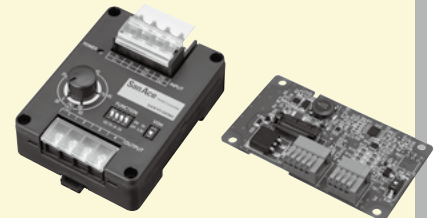
PWM Controller

This device provides external control of the rotational speed of fans that have PWM control function. By using this product, PWM control function fans can be fully utilized without the need for preparing new circuits, contributing to reducing the system power consumption and the fan noise.

⇒pp. 457 to 462

BOX type

PCB type

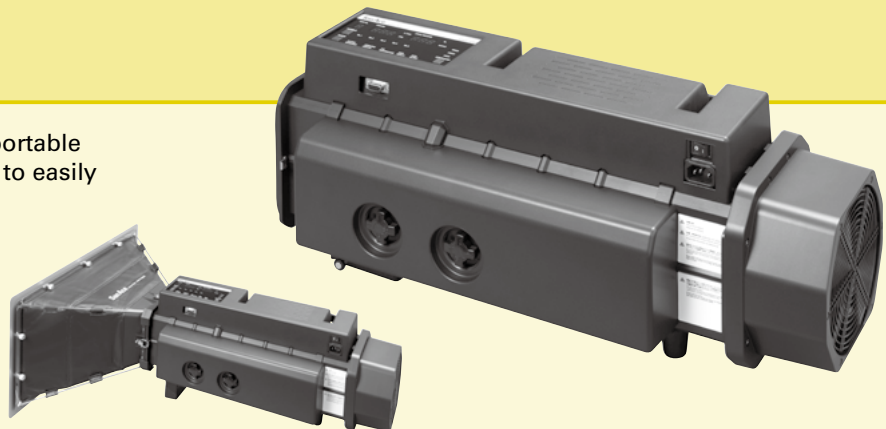


NEW

Airflow Tester

This product is the industry's first portable measuring device that enables you to easily measure the system impedance and operating airflow of devices.

⇒pp. 463 to 468



With connection duct mounted

■ Additional fans with various features are also available. See the lineup list on the following page, as well as the main section of the catalog.

DC

DC Fan

Cooling fan operating at 5V, 12V, 24V, and 48VDC.
Wide lineup including low power consumption fans, silent fans, and high airflow and high static pressure fans
36mm sq. to ϕ 200mm.



Counter Rotating Fan

Airflow and static pressure become higher than two conventional products of the same size connected in a series
38mm sq. to ϕ 172mm.



Reversible Flow Fan

The wind directions can be switched with these fans. Equivalent cooling performance can be obtained in both directions.
 ϕ 136mm



Splash Proof Fan

Cooling fan of IP54, IP55 and IP68 waterproof capability
40mm sq. to ϕ 172mm.



Splash Proof Centrifugal Fan

IP54 splash proof centrifugal fan
 ϕ 100mm to ϕ 175mm.



Oil Proof Fan

Cooling fan capable of operating in an oil-mist environment
40mm sq. to 120mm sq.



Long Life Fan

Cooling fan with Max. 200,000 hours of expected life
40mm sq. to ϕ 172mm.



Wide Temperature Range Fan

These fans can be used in a wide temperature range of -40°C to $+85^{\circ}\text{C}$.
40mm sq. to 120mm sq.



Centrifugal Fan

Cooling fan blows air in a centrifugal course.
It features high static pressure.
 ϕ 100mm to 270mm sq.



Blower

Cooling fan specialized for high static pressure
52mm to 160mm



AC

ACDC Fan

This fan works while internally converting AC power into DC power, providing the superior performance of a DC fan with the flexibility of AC input.
92mm sq. to 120mm sq.



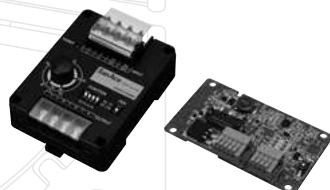
AC Fan

The cooling fan operates at 100V to 230V AC.
60mm sq. to ϕ 172mm



PWM Controller

This device provides external control of the rotational speed of fans that have PWM control function.



Airflow Tester

This product is the industry's first portable measuring device that enables you to easily measure the system impedance and operating airflow of devices.



Domain Diagram 5 to 8

DC

DC Fan 9

36mm sq. 11 to 12
 38mm sq. 13 to 16
 40mm sq. 17 to 46
 52mm sq. 47 to 52
 60mm sq. 53 to 88
 70mm sq. 89 to 90
 80mm sq. 91 to 136
 92mm sq. 137 to 156
 120mm sq. 157 to 178
 127mm sq. 179 to 182
 140mm sq. 183 to 188
 150mm sq. 189 to 190
 φ 172mm 191 to 202
 φ 200mm 203 to 206

Counter Rotating Fan 207

38mm sq. 209 to 210
 40mm sq. 211 to 220
 60mm sq. 221 to 228
 80mm sq. 229 to 234
 92mm sq. 235 to 236
 120mm sq. 237 to 238
 φ 172mm 239 to 240

Reversible Flow Fan 241

φ 136mm 243 to 244

Splash Proof Fan 245

40mm sq. 247 to 250
 60mm sq. 251 to 256
 80mm sq. 257 to 266
 92mm sq. 267 to 276
 120mm sq. 277 to 284
 140mm sq. 285 to 288
 φ 172mm 289 to 292

Splash Proof Centrifugal Fan 293

φ 100mm 295 to 296
 φ 133mm 297 to 298
 φ 150mm 299 to 300
 φ 175mm 301 to 302

Oil Proof Fan 303

40mm sq. 305 to 306
 60mm sq. 307 to 309
 80mm sq. 310
 92mm sq. 311 to 314
 120mm sq. 315 to 316

Long Life Fan 317

40mm sq. 319 to 320
 60mm sq. 321 to 328
 80mm sq. 329 to 334
 92mm sq. 335 to 340
 120mm sq. 341 to 348
 140mm sq. 349 to 352
 φ 172mm 353 to 356

Wide Temperature Range Fan 357

40mm sq. 359 to 360
 60mm sq. 361 to 362
 80mm sq. 363 to 364

DC

92mm sq. 365 to 368
 120mm sq. 369 to 370

Centrifugal Fan 371

φ 100mm 373 to 374
 φ 133mm 375 to 376
 φ 150mm 377 to 378
 φ 175mm 379 to 382
 φ 221mm 383 to 384
 φ 225mm 385 to 386
 270mm sq. 387 to 390

Blower 391

52mm 393 to 394
 76mm 395 to 398
 97mm 399 to 406
 120mm 407 to 408
 127mm 409
 160mm 410

AC

ACDC Fan 411

92mm sq. 413 to 416
 120mm sq. 417 to 420

AC Fan 421

60mm sq. 423 to 426
 80mm sq. 427 to 434
 92mm sq. 435 to 438
 120mm sq. 439 to 446
 160mm sq. 447 to 448
 φ 172mm 449 to 452

Sale Notice of Cooling Fan Set Models ... 453 to 456

PWM Controller 457 to 462

Airflow Tester 463 to 468

Option 469 to 479

Technical Material

Overview and Characteristics of Fan 480
 Guideline in Selecting a Fan 480
 Characteristics Calculation Method
 and Description 481 to 482
 Splash Proof Fan 483
 Cautions for Use of a Cooling Fan in the
 Vicinity of a Power Switching Circuit 484

Specifications for Sensor/PWM Control Function

Specifications for DC Fan Sensors 485 to 486
 Specifications for AC Fan Sensor 486
 Fans with PWM Control Function 487 to 488

Please Read:

Operating Precautions 489
 Fan Mounting Using Self-tapping Screw 490
 Safety Precautions 491 to 492
 Safety Standards 493
 RoHS Directive 494

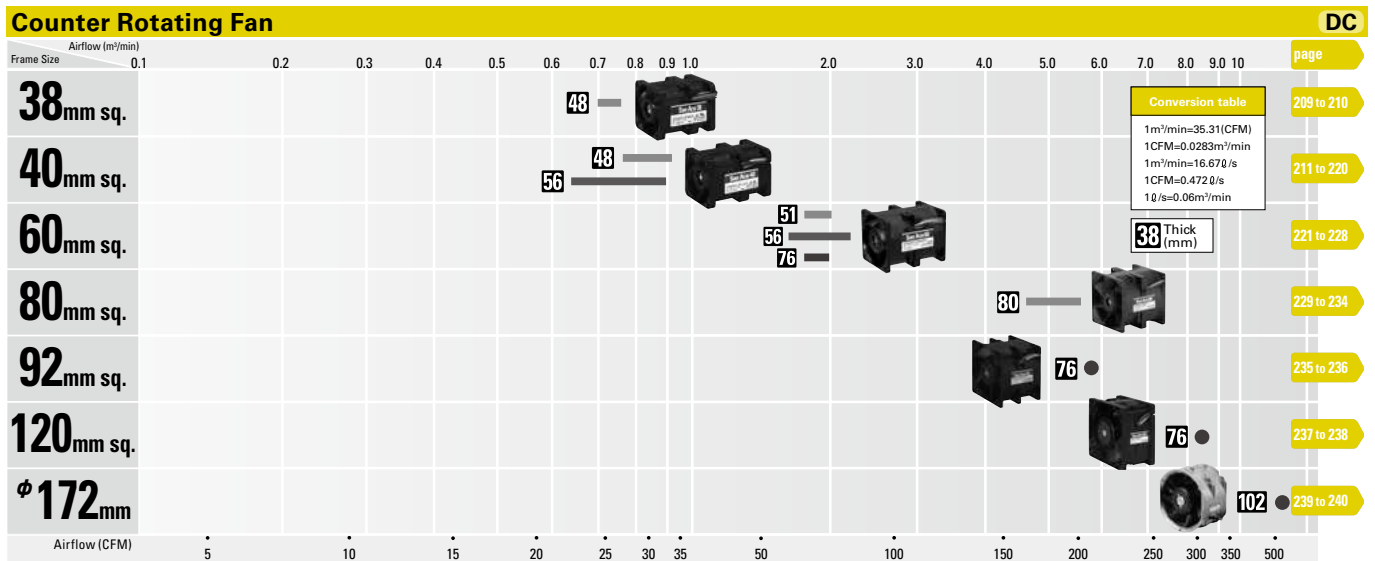
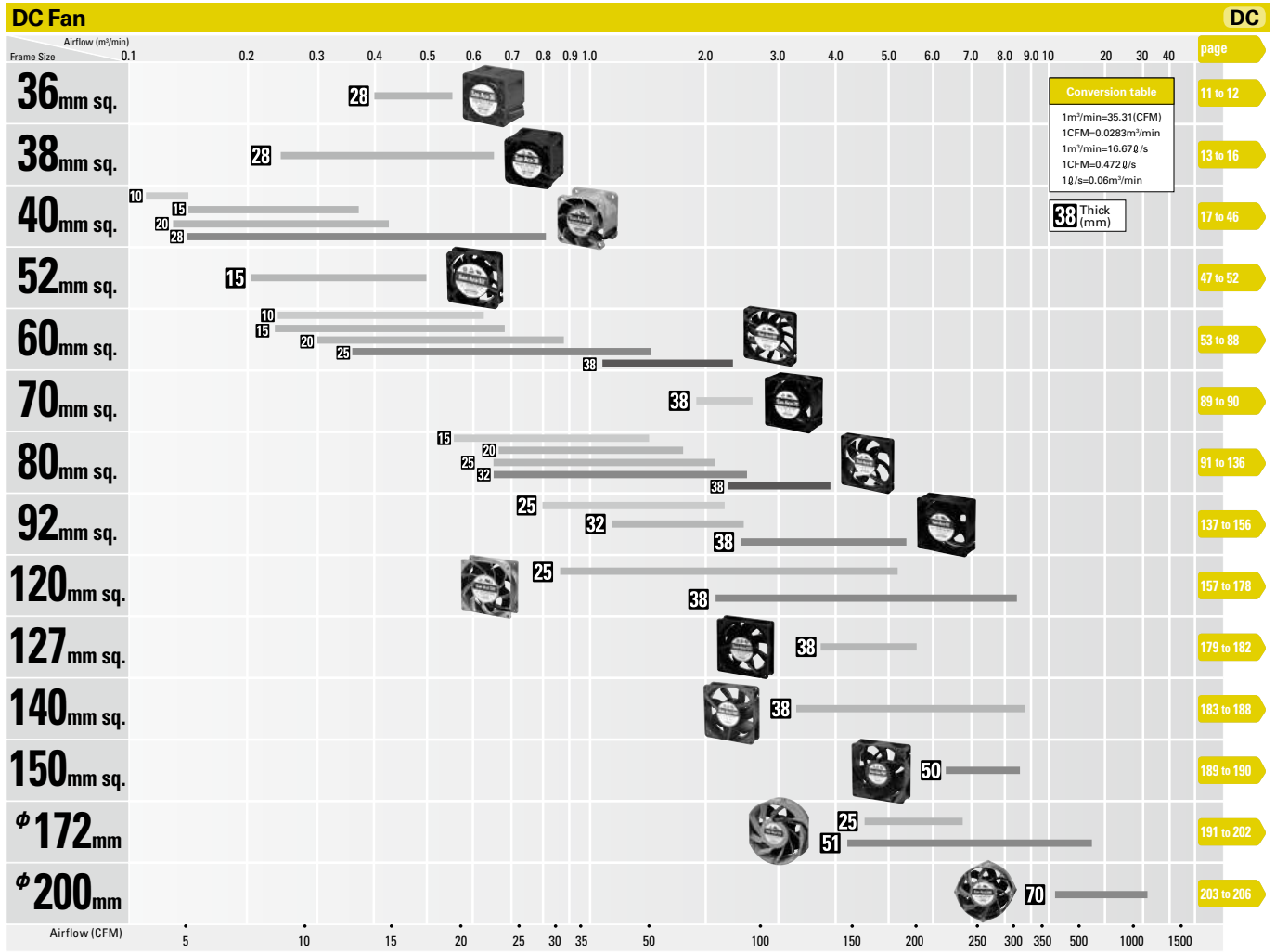
Index by Model No./Safety Standards List

DC Fan 495 to 513
 ACDC Fan 514
 AC Fan 514 to 515
 Option 516 to 517

Deleted Models in this Catalog 518 to 520

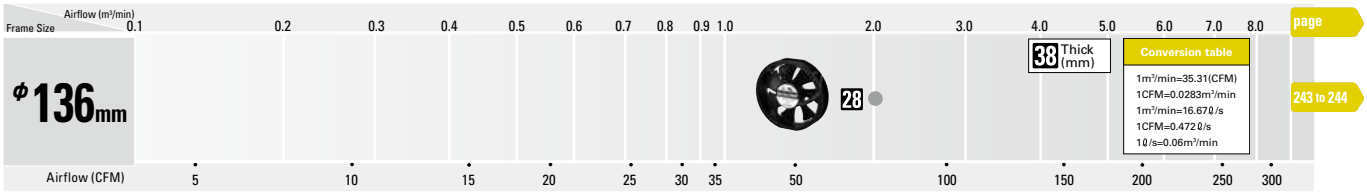
Distributors 521 to 524

Domain Diagram



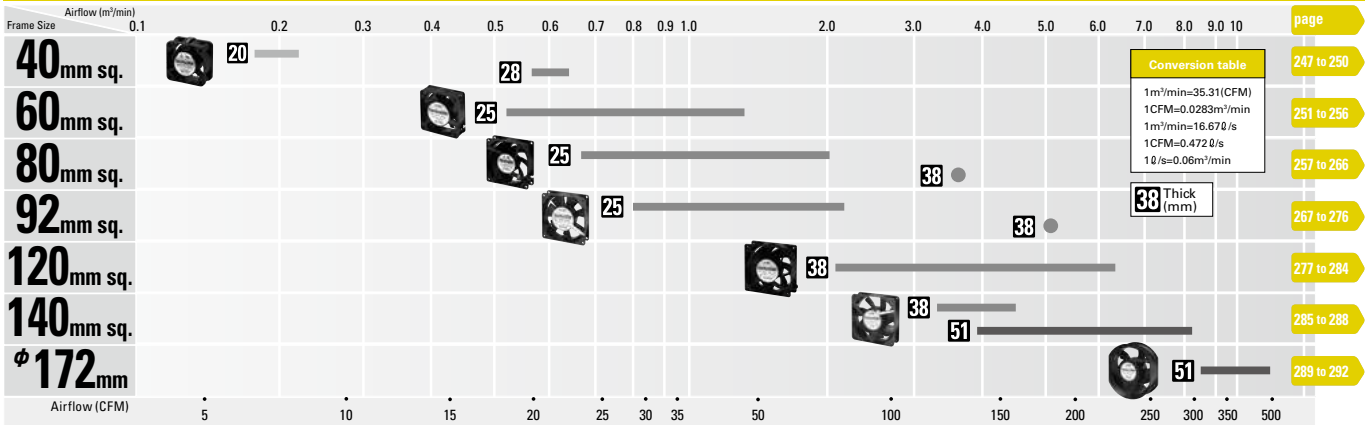
Reversible Flow Fan

DC



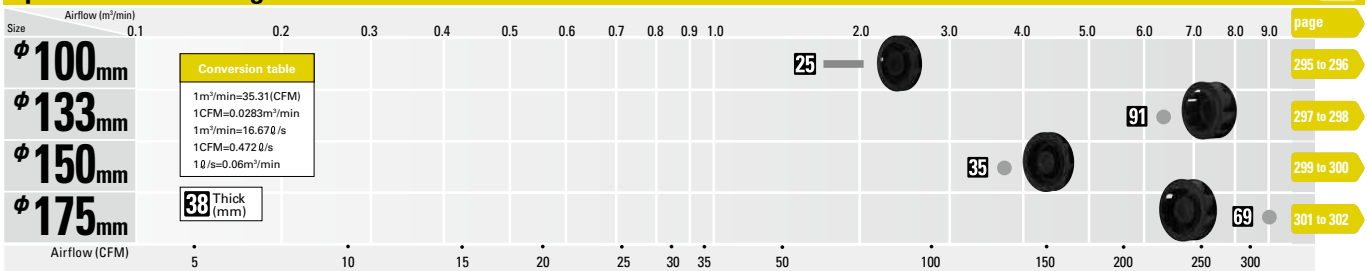
Splash Proof Fan

DC



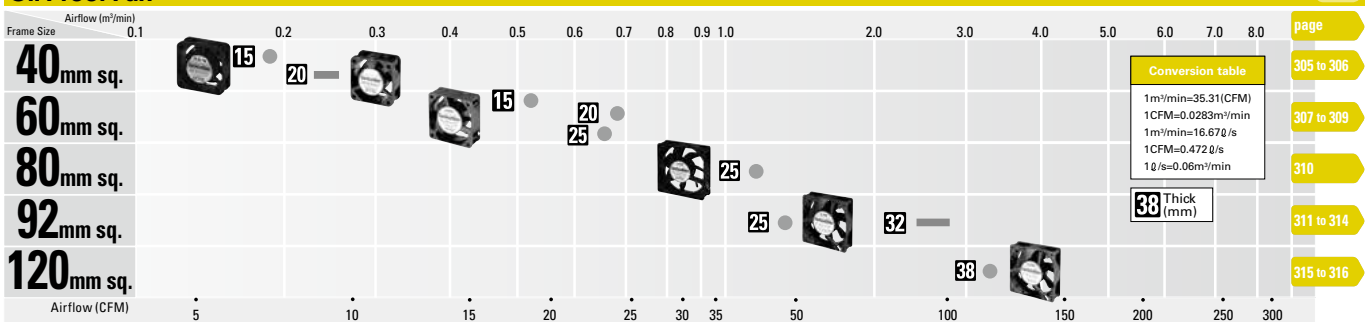
Splash Proof Centrifugal Fan

DC

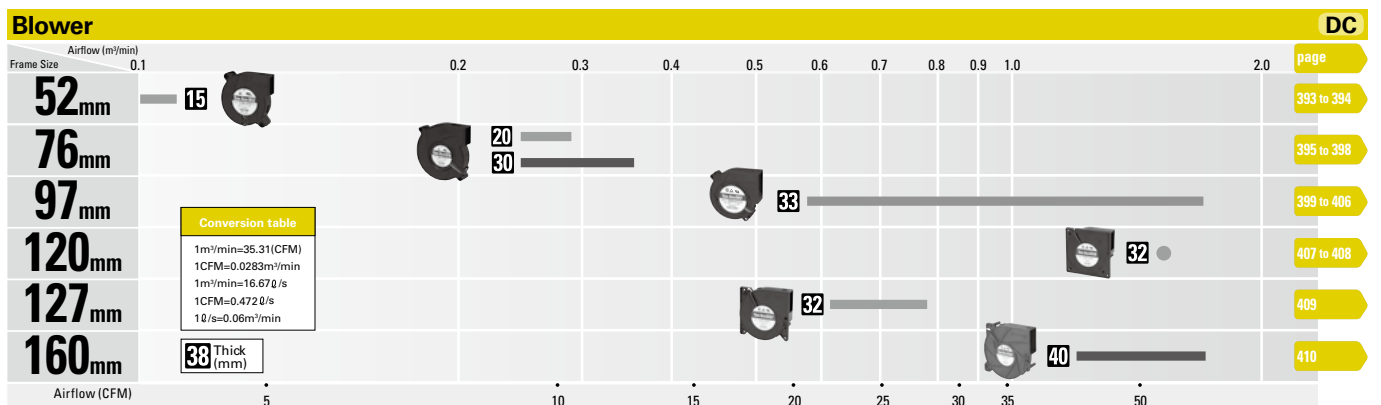
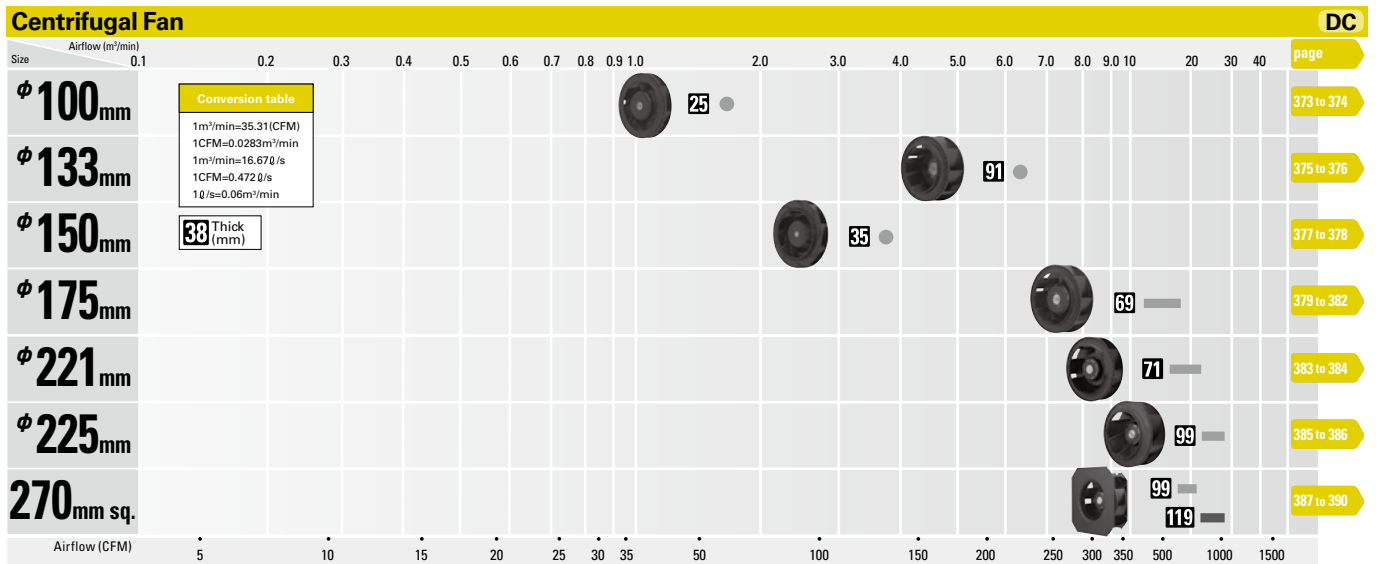
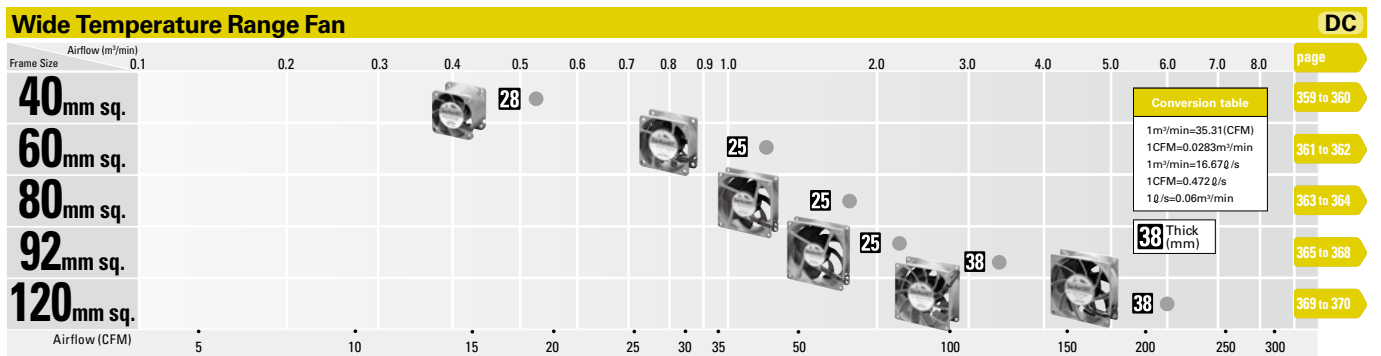
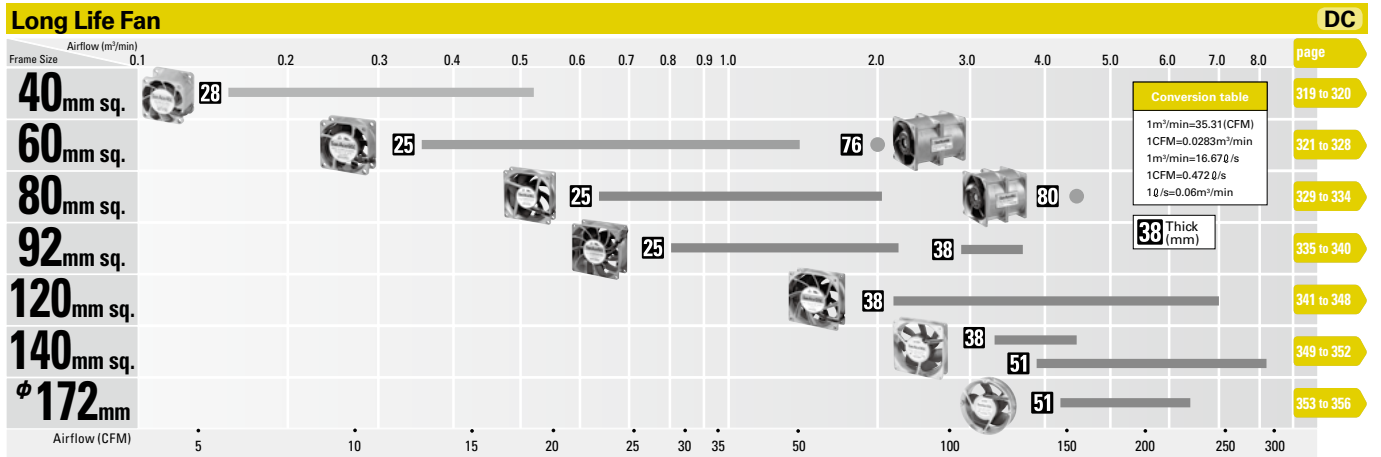


Oil Proof Fan

DC

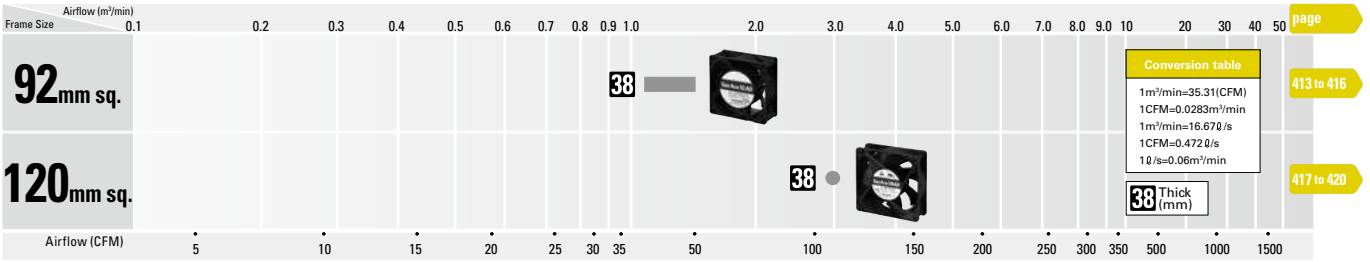


Domain Diagram



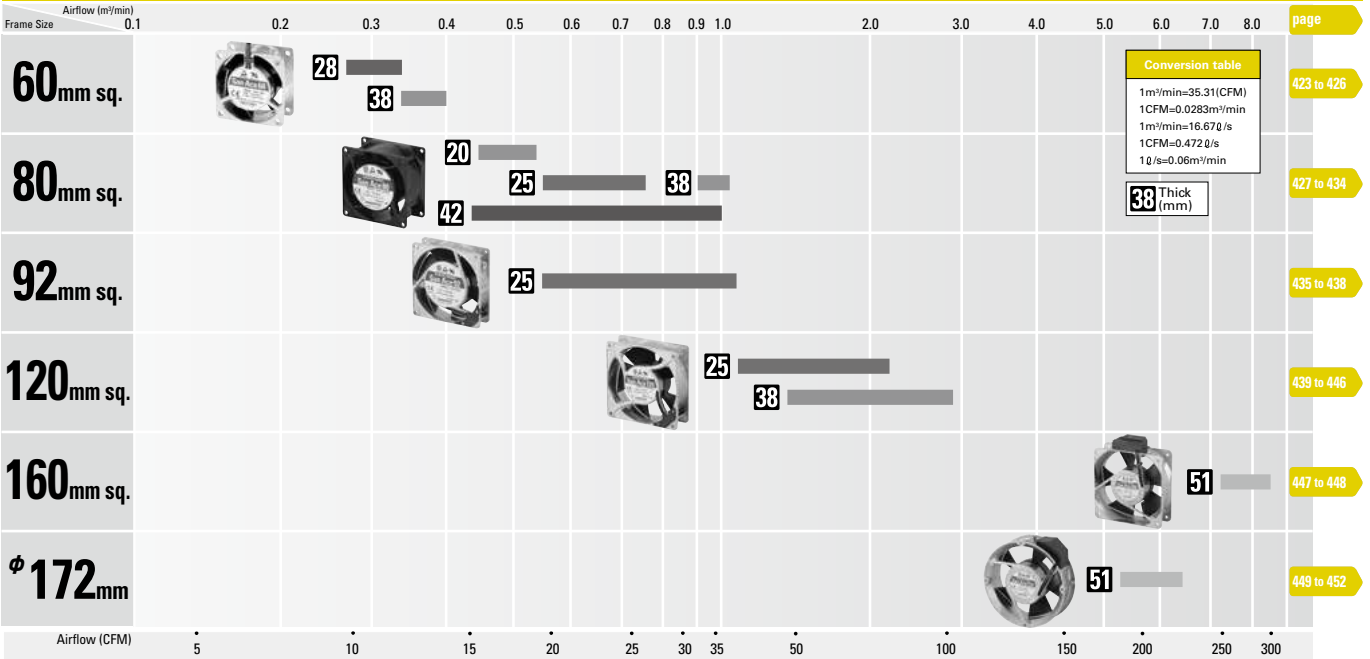
ACDC Fan

AC



AC Fan

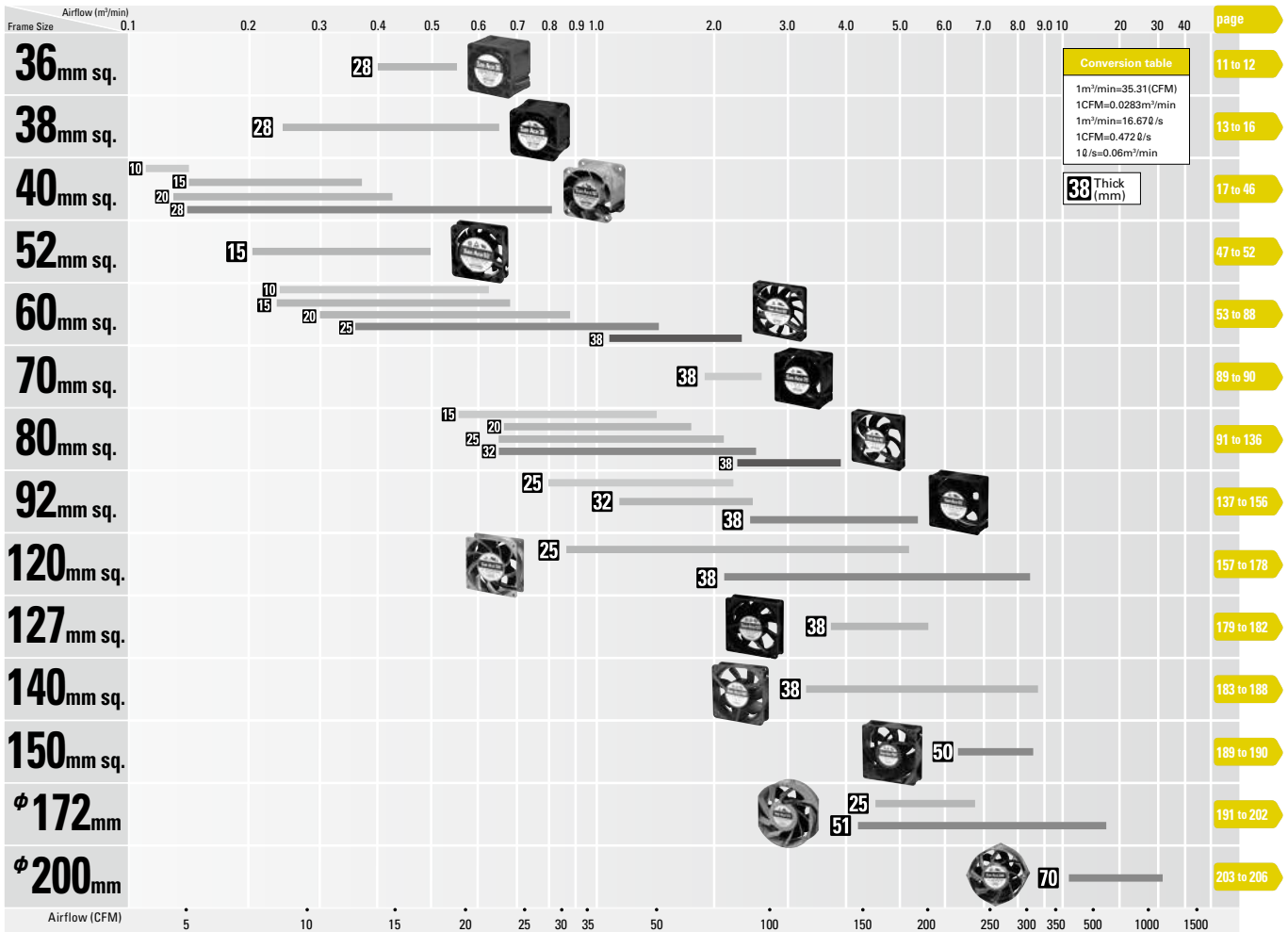
AC



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	
Model No.	① Rated Voltage [V]	② Operating Voltage Range [V]	③ Rated Current [A]	④ Rated Input [W]	⑤ Rated Speed [min ⁻¹]	⑥ Max. Airflow [m ³ /min] [CFM]		⑦ Max. Static Pressure [Pa] [inchH ₂ O]		⑧ SPL [dB(A)]	⑨ Operating Temperature [°C]	⑩ 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°C (70,000/40°C)

- ① Rated Voltage This is the necessary voltage to drive the fan. 12VDC, 24VDC and 48VDC are available.
- ② Operating Voltage Range The voltage range over which fan operation is guaranteed
- ③ Rated Current The current value during the fan's rated operation without load
- ④ Rated Input The input value during the fan's rated operation without load
- ⑤ Rated Speed The rotating speed during the fan's rated operation without load
- ⑥ Max. 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
- ⑦ Max. 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.
- ⑧ SPL "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.
- ⑨ Operating Temperature The temperature range over which fan operation is guaranteed (Non- condensing)
- ⑩ Expected 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°C 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°C ,rated voltage, and continuously run in a free air state)

* Splash proof fan: Varies for each model (Indoor, L10:Survival rate:90% at 60°C ,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.

36 mm 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°C ,
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°C to +70°C (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 [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C (70,000/40°C)
			0	0.07	0.84	3,200	0.09 3.2	14.0 0.056	32		

*PWM Frequency : 25kHz

Specifications

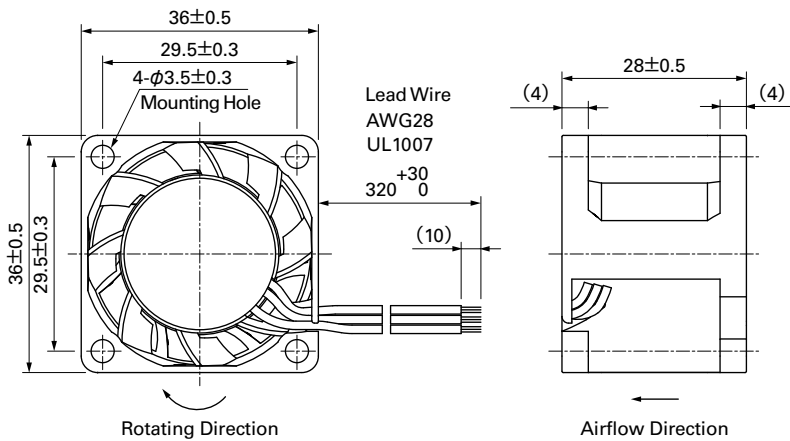
The following nos. **have pulse sensors and ribs.**

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

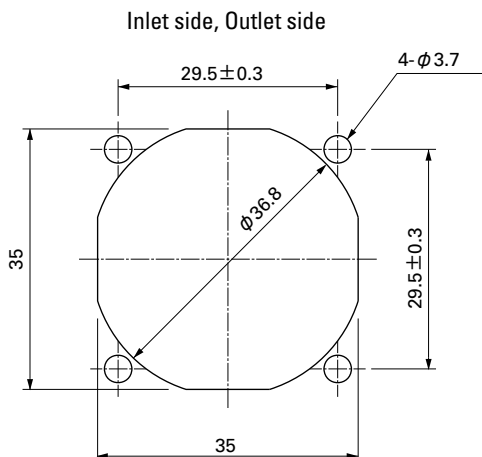
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9GV3612J301	12	7.0 to 13.2	0.75	9.0	19,000	0.55 19.4	525 2.108	58.5	-20 to +60	40,000/60°C
9GV3612G301			0.34	4.08	14,000	0.40 14.1	275 1.104	52.0		

Dimensions (unit: mm)

(With pulse sensor)



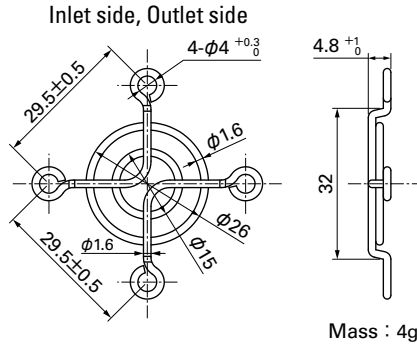
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

Finger Guards

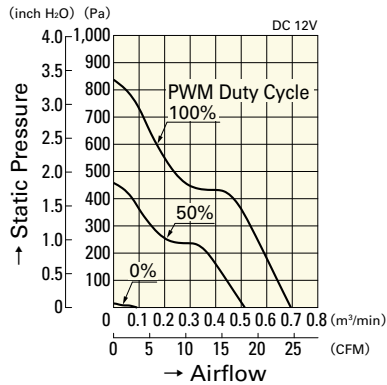
Model : 109-1050 Surface treatment : Nickel-chrome plating (silver) Color



Airflow - Static Pressure Characteristics

PWM Duty Cycle

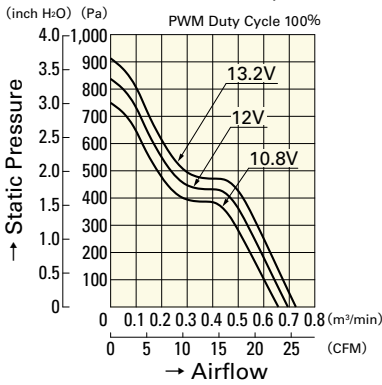
With PWM control function · With pulse sensor



9GX3612P3K001

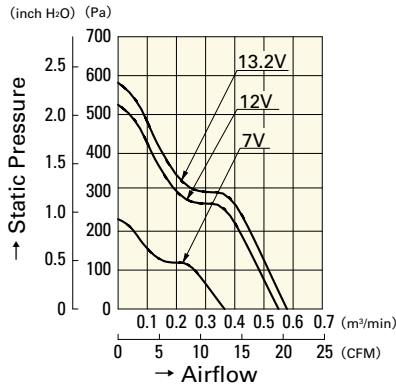
Operating Voltage Range

With PWM control function · With pulse sensor



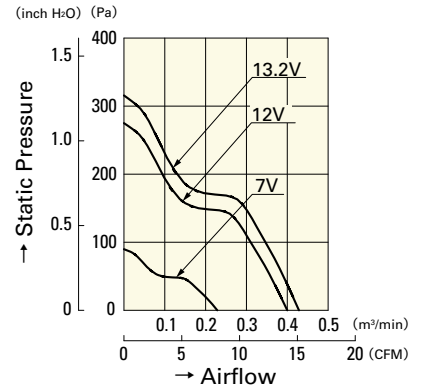
9GX3612P3K001

J speed



9GV3612J301

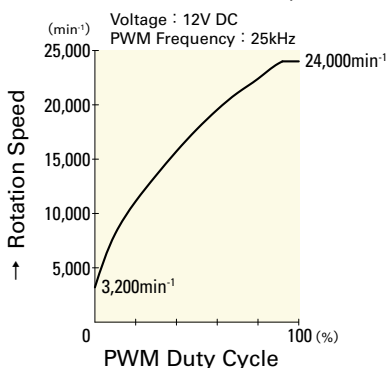
G speed



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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



Specifications

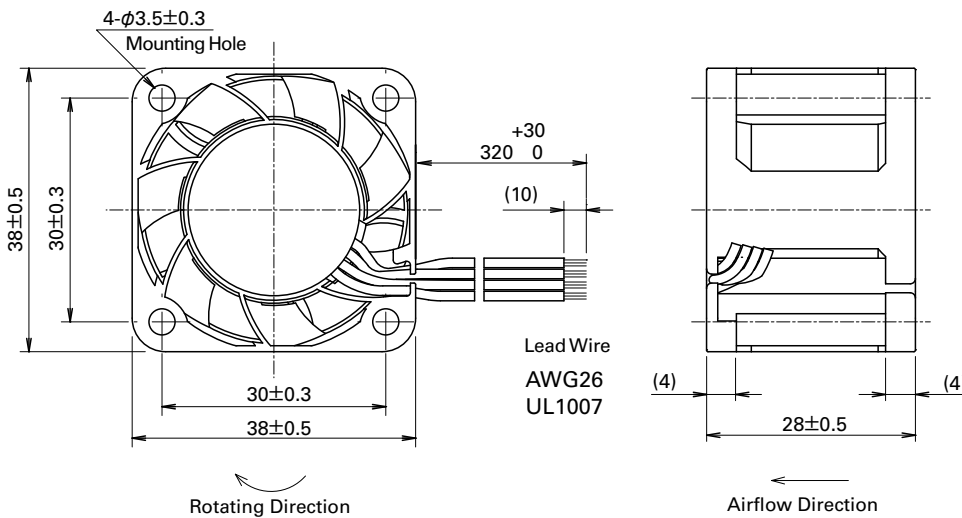
The following nos. **have PWM controls, pulse sensors, and ribs.** For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle [※] [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]		Max. Static Pressure [Pa] [inchH ₂ O]		SPL [dB(A)]	Operating Temperature [°C]	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°C (70,000/40°C)
			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		

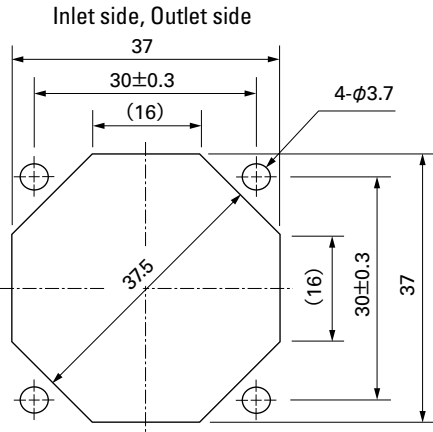
※PWM Frequency : 25kHz

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

Dimensions (unit: mm) (With ribs)



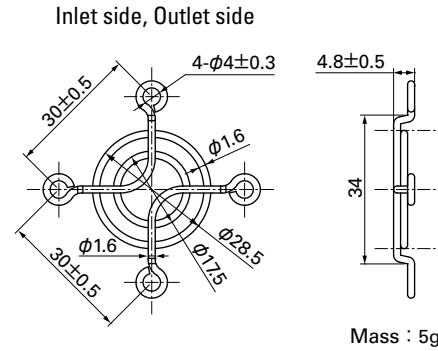
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

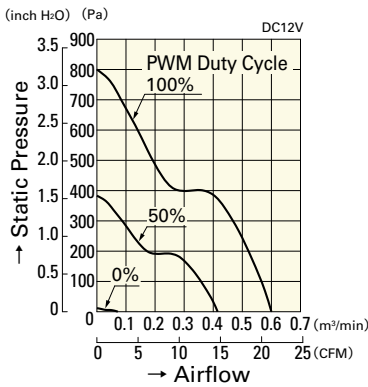
Finger Guards

Model : 109-1065 Surface treatment : Nickel-chrome plating Color

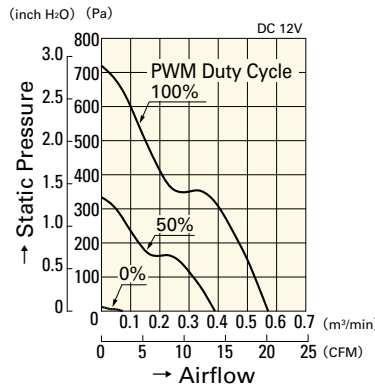


Airflow - Static Pressure Characteristics

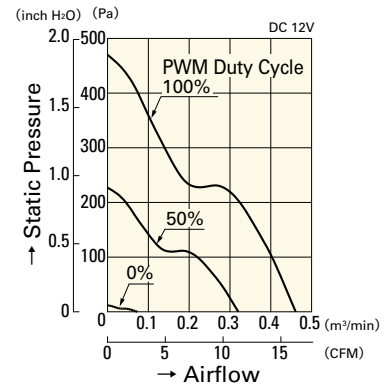
PWM Duty Cycle



9GA0312P3K001

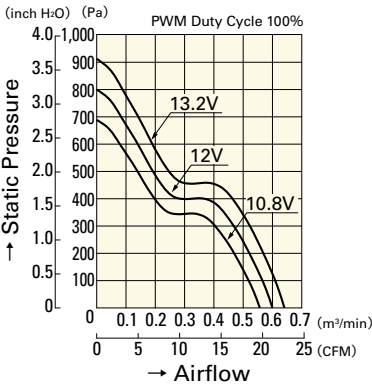


9GA0312P3J001

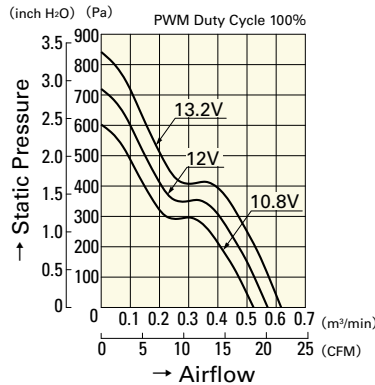


9GA0312P3G001

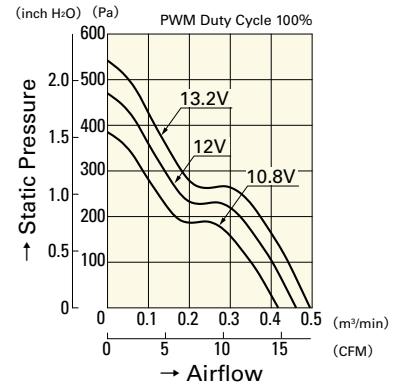
Operating Voltage Range



9GA0312P3K001

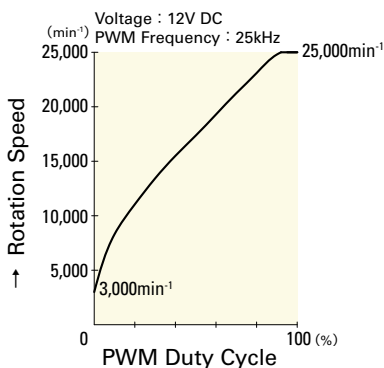


9GA0312P3J001

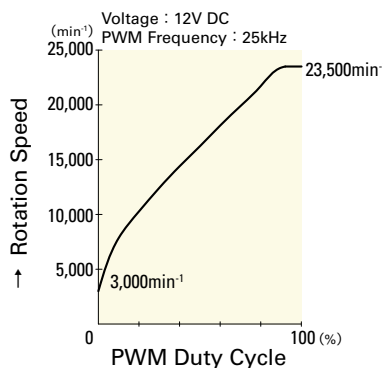


9GA0312P3G001

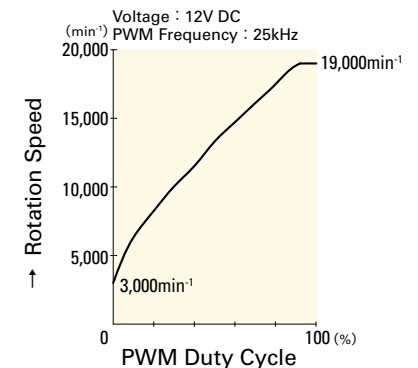
PWM Duty - Speed Characteristics Example



9GA0312P3K001



9GA0312P3J001



9GA0312P3G001

38mm 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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow
- Storage Temperature -20°C to +70°C (Non-condensing)

38×38×28mm (Mass : 50g) **9GV** type

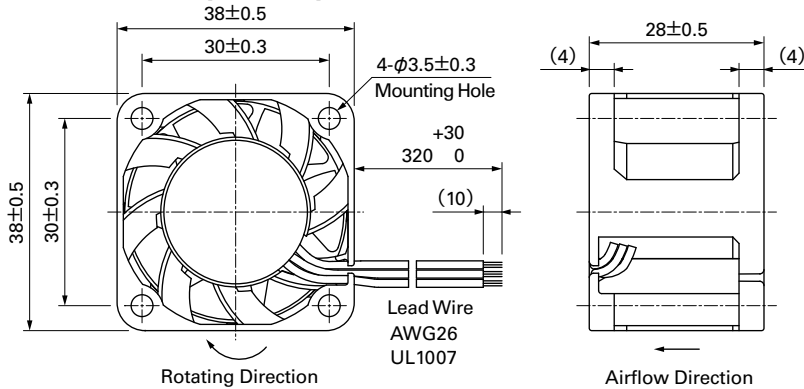
Specifications

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

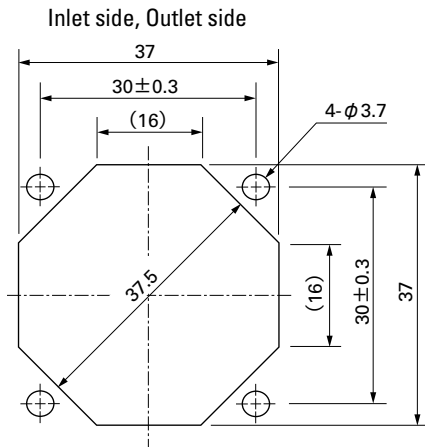
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9GV0312K301	12	7 to 13.2	0.79	9.48	18,200	0.65	23	425	1.707	59
9GV0312J301			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)

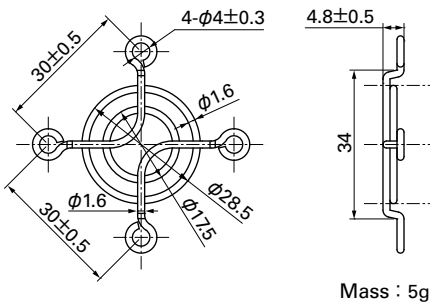


Options (unit: mm)

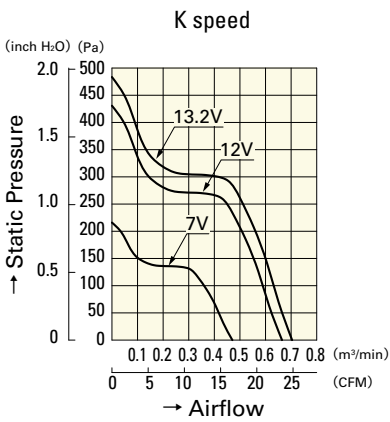
Finger Guards

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

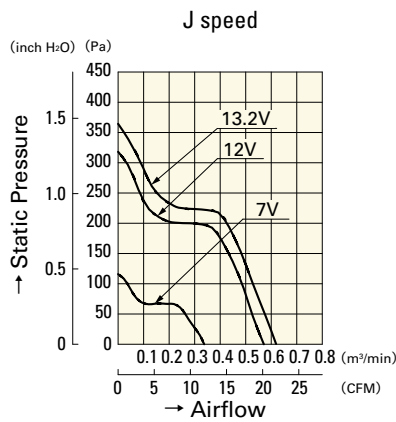
Inlet side, Outlet side



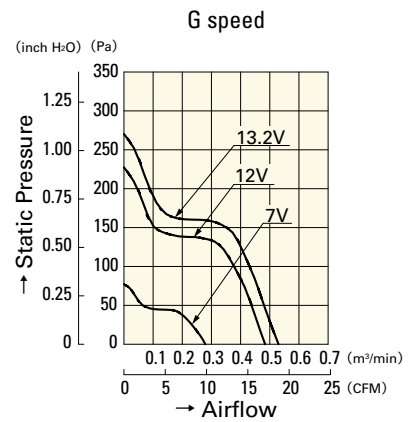
Airflow - Static Pressure Characteristics



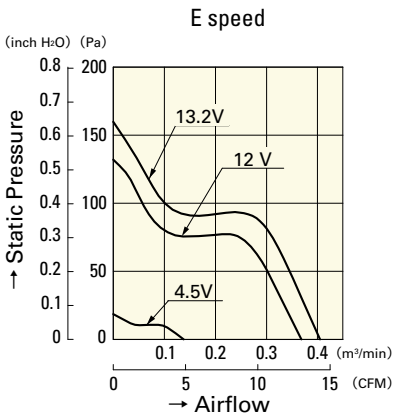
9GV0312K301



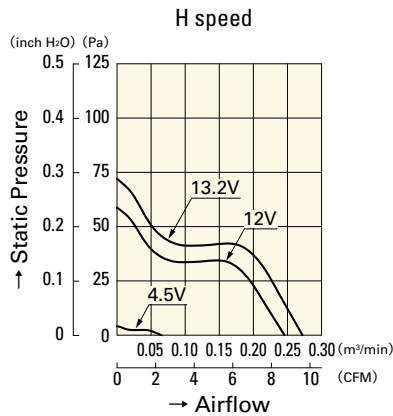
9GV0312J301



9GV0312G301



9GV0312E301



9GV0312H301

40mm 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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

40×40×10mm (Mass : 19g) **9P** type

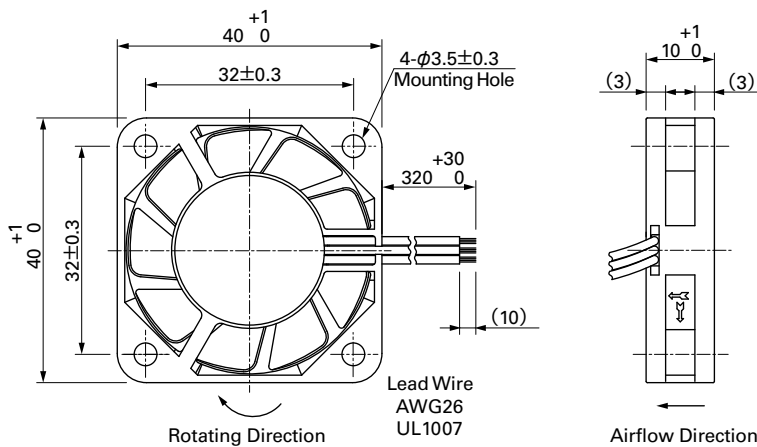
Specifications

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

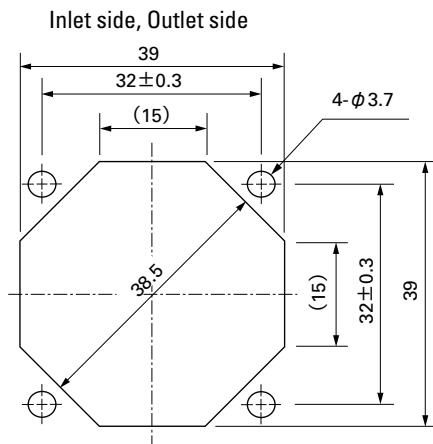
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
109P0405H901	5	4.5 to 5.5	0.16	0.8	6,200	0.15	5.3	41.2	-10 to +60	40,000/60°C
109P0405M901			0.11	0.55	5,000	0.12	4.2	27		
109P0412H901	12	7 to 13.8	0.07	0.84	6,200	0.15	5.3	41.2		
109P0412M901			0.06	0.72	5,000	0.12	4.2	27		

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

Dimensions (unit: mm)



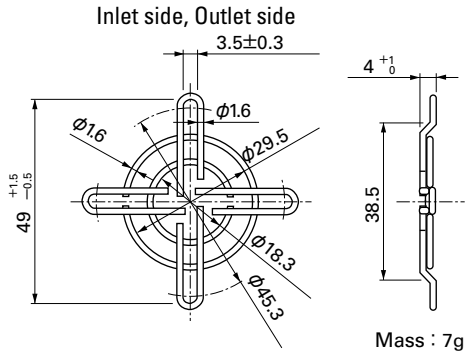
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



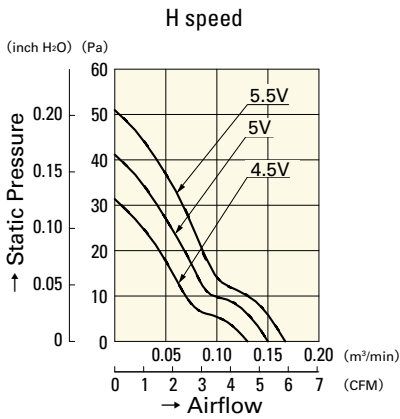
Options (unit: mm)

Finger Guards

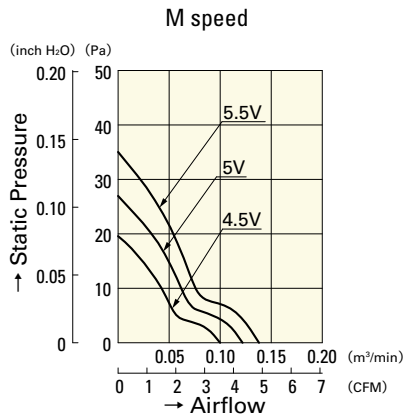
Model : 109-059 Surface treatment : Nickel-chrome plating (silver) Color
 : 109-059H : Cation electropainting (black)



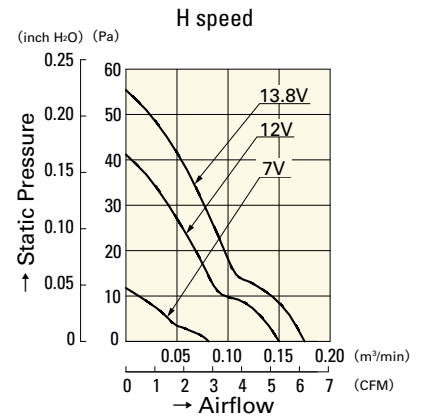
Airflow - Static Pressure Characteristics



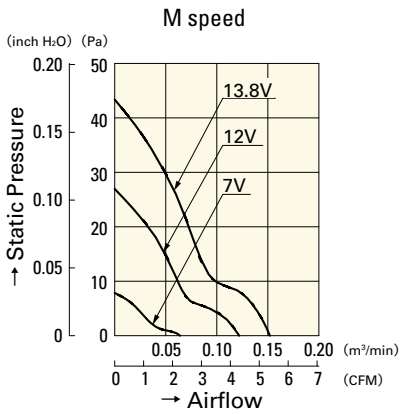
109P0405H901



109P0405M901



109P0412H901



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°C ,
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°C to +70°C (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 ^{Note①} [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C (70,000/40°C)

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

※PWM Frequency : 25kHz

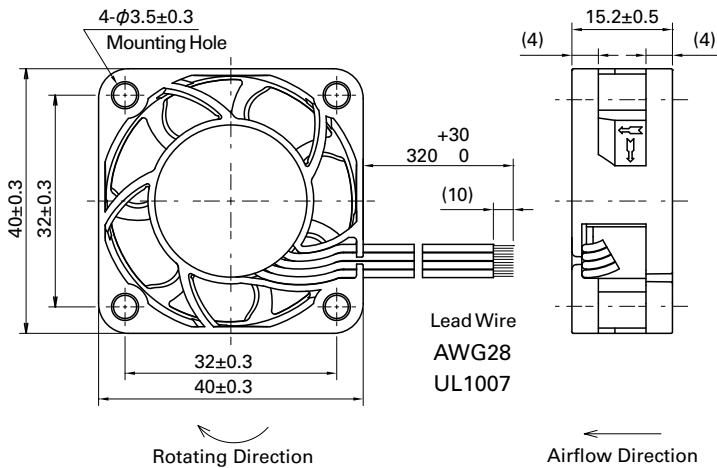
The following nos. **have pulse sensors and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C (70,000/40°C)
9GA0412H7001			0.06	0.72	7,300	0.2 7.1	59.6 0.24	28		

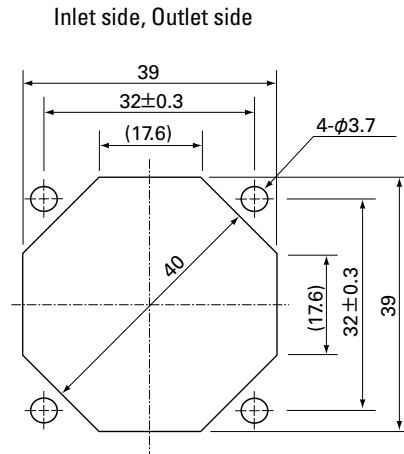
Other sensor specifications are available as options. Please refer to the index (p. 504).

Dimensions (unit: mm)

(With PWM control function · With pulse sensor)



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

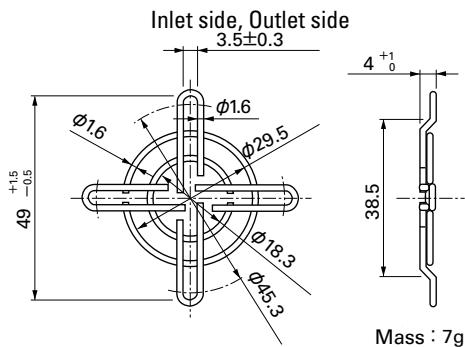


Options (unit: mm)

Finger Guards

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

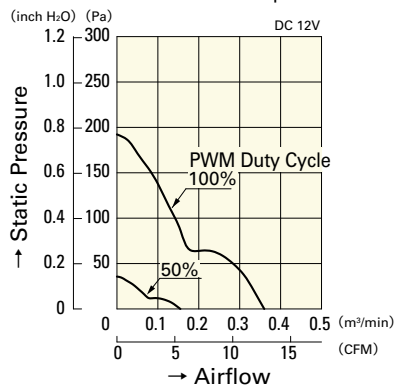
Color



Airflow - Static Pressure Characteristics

PWM Duty Cycle

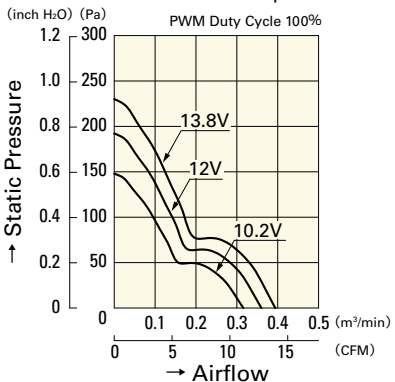
With PWM control function · With pulse sensor



9GA0412P7G001

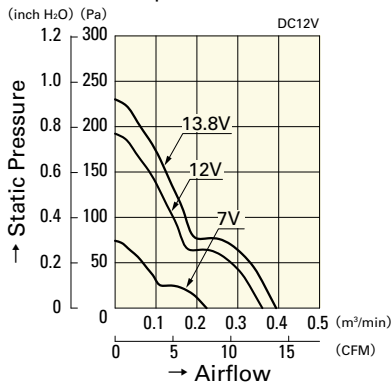
Operating Voltage Range

With PWM control function · With pulse sensor



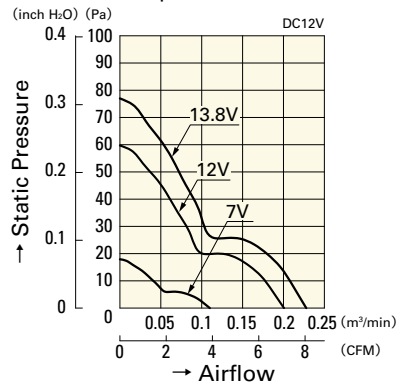
9GA0412P7G001

With pulse sensor



9GA0412G7001

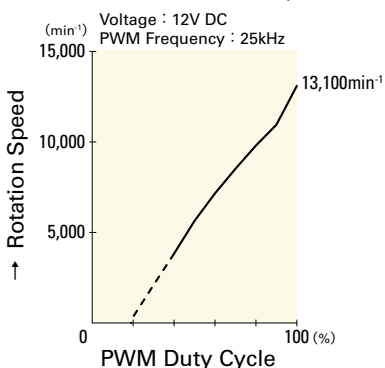
With pulse sensor



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

40×40×15 mm (Mass : 32g) **9P** type

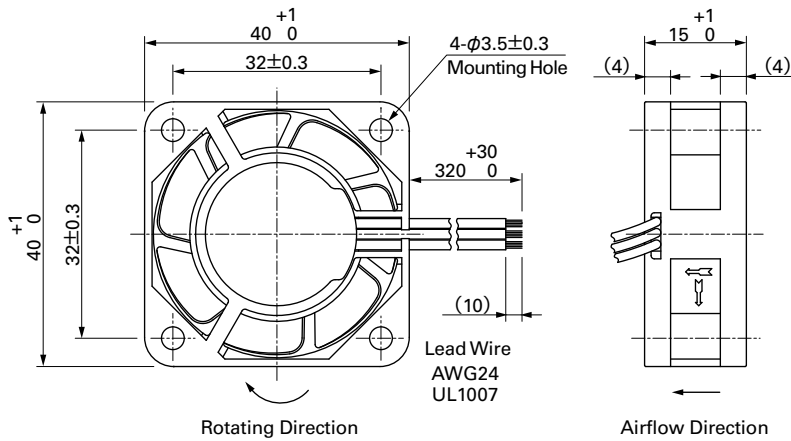
Specifications

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

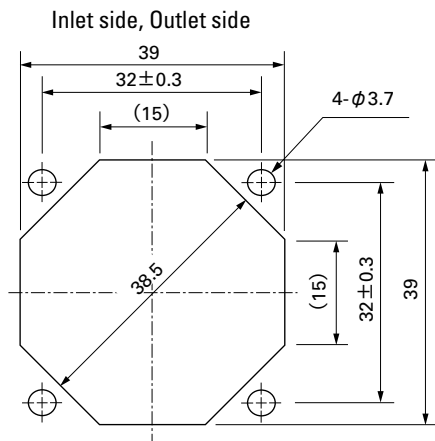
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]	
109P0405H701	5	4.5 to 5.5	0.28	1.4	7,700	0.18	6.4	75.5	0.303	28	60,000/60°C
109P0405M701			0.21	1.05	6,500	0.15	5.3	53	0.213	24	
109P0412R701	12	7 to 13.8	0.13	1.56	9,700	0.227	8.0	111.9	0.449	34	40,000/60°C
109P0412S701			0.18	2.16	8,600	0.2	7.06	92.1	0.369	32	60,000/60°C
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

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)

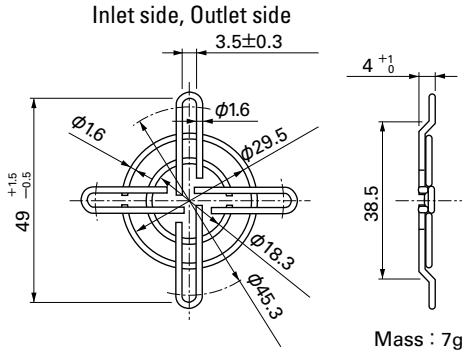


Options (unit: mm)

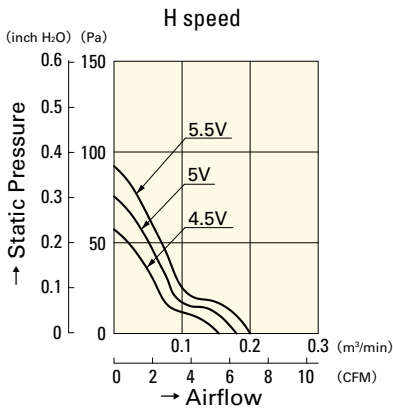
Finger Guards

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

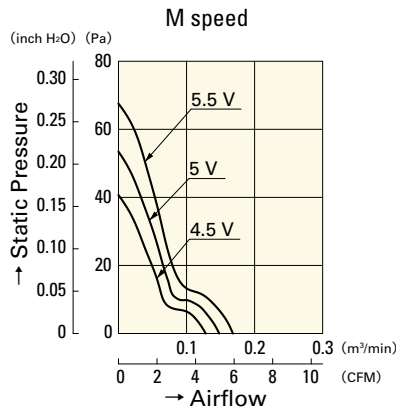
Color



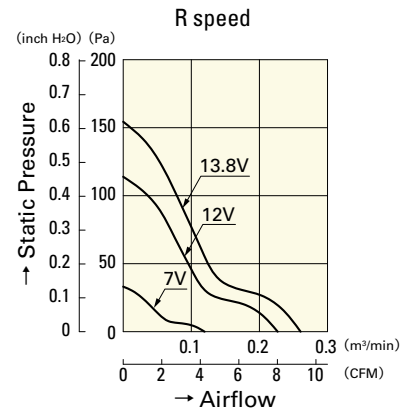
Airflow - Static Pressure Characteristics



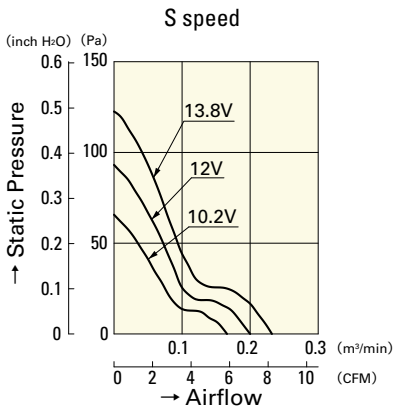
109P0405H701



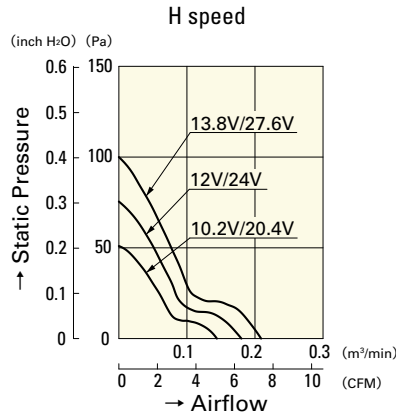
109P0405M701



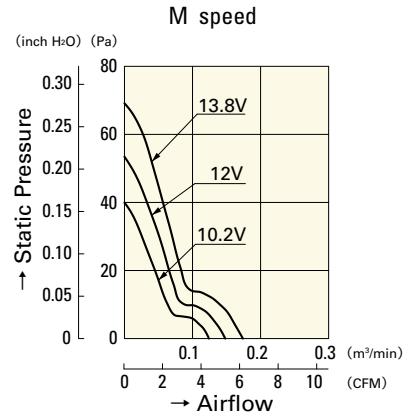
109P0412R701



109P0412S701



109P0412H701
109P0424H701



109P0412M701

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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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



Specifications

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

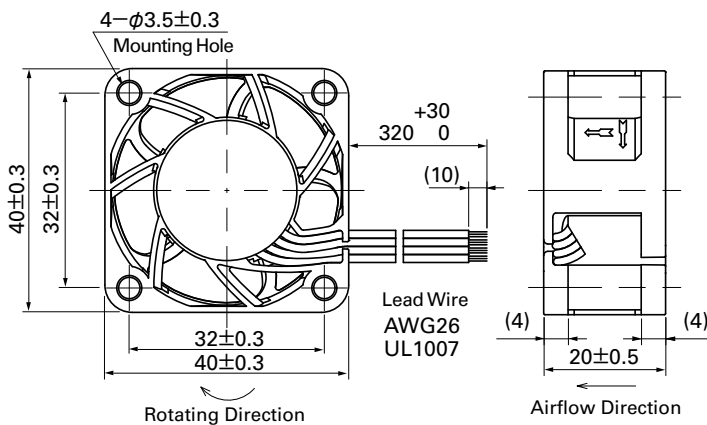
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle* [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9GA0405P6H001 ^(Note)	5	4.5 to 5.5	100	0.35	1.75	12,400	0.33 11.7	191 0.77	40	-20 to +70	40,000/60°C
9GA0405P6F001 ^(Note)			100	0.18	0.9	8,000	0.21 7.4	79.5 0.32	28		60,000/60°C
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°C
			0	0.04	0.48	3,800	0.10 3.5	17.9 0.07	14		60,000/60°C
100			0.14	1.68	12,400	0.33 11.7	191 0.77	40			
0			0.04	0.48	3,800	0.10 3.5	17.9 0.07	14			
9GA0412P6H001	100	0.08	0.96	8,000	0.21 7.4	79.5 0.32	28				
9GA0412P6F001	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°C
9GA0424P6H001 ^(Note)			100	0.08	1.92	12,400	0.33 11.7	191 0.77	40		60,000/60°C
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%.

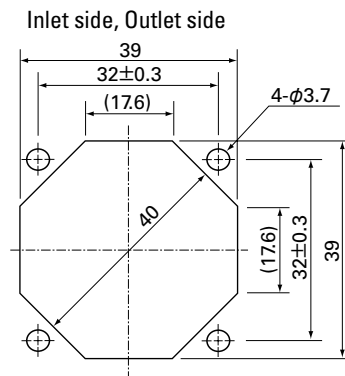
*PWM Frequency : 25kHz

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)

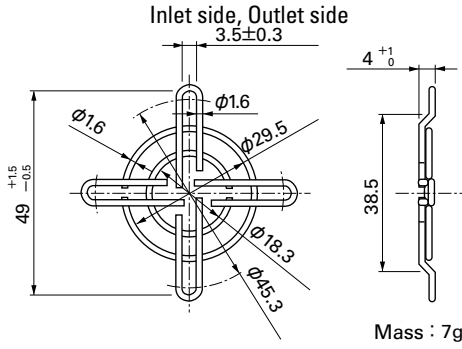


Options (unit: mm)

Finger Guards

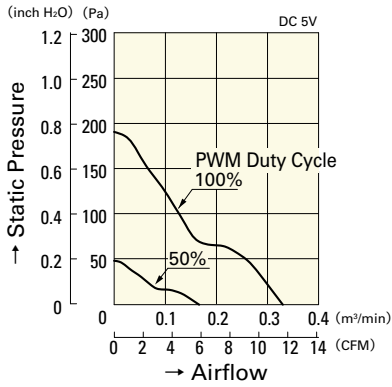
Model : 109-059 Surface treatment : Nickel-chrome plating (silver)
 : 109-059H : Cation electropainting (black)

Color

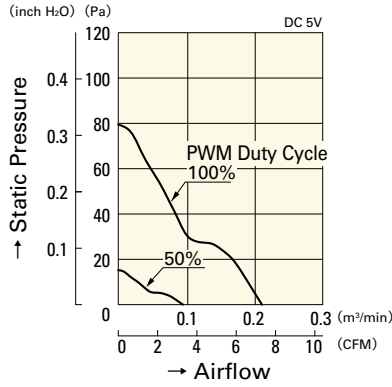


Airflow - Static Pressure Characteristics

PWM Duty Cycle

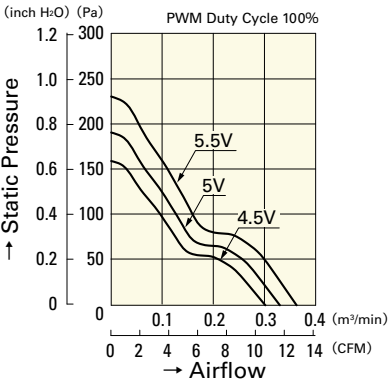


9GA0405P6H001

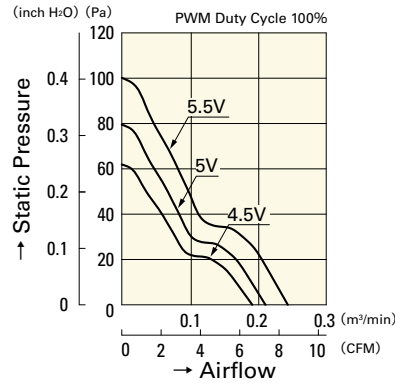


9GA0405P6F001

Operating Voltage Range

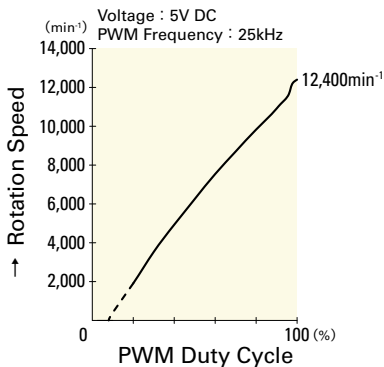


9GA0405P6H001

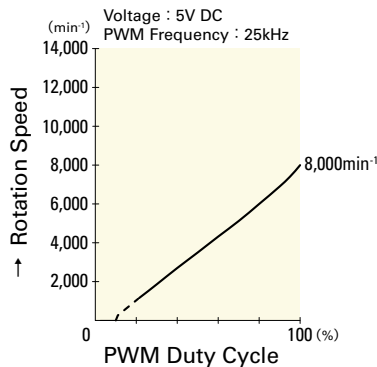


9GA0405P6F001

PWM Duty - Speed Characteristics Example



9GA0405P6H001



9GA0405P6F001

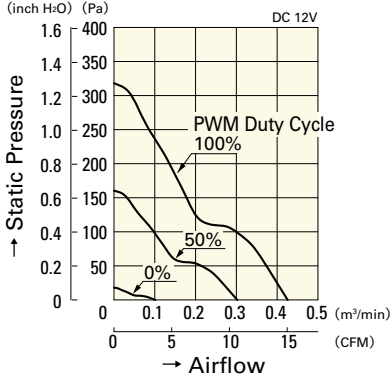
40mm sq.

San Ace 40

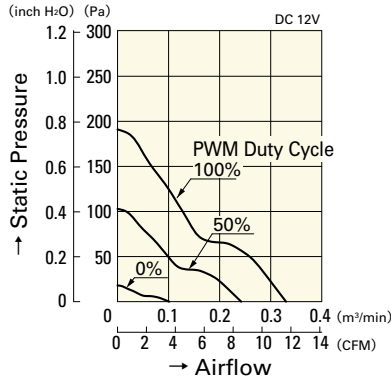
40×40×20mm [Mass : 35g]

Airflow - Static Pressure Characteristics

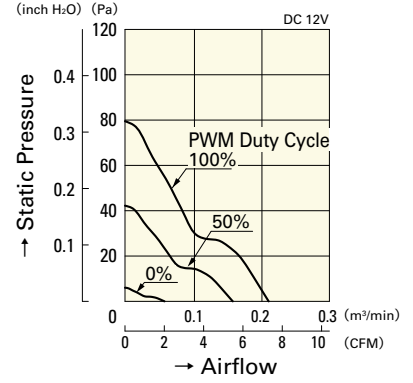
PWM Duty Cycle



9GA0412P6G001

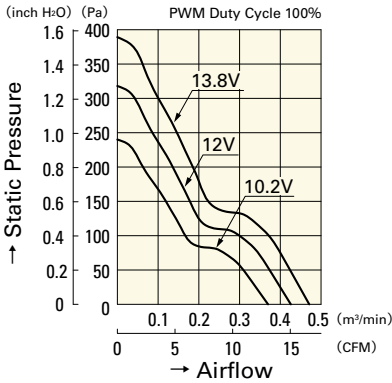


9GA0412P6H001

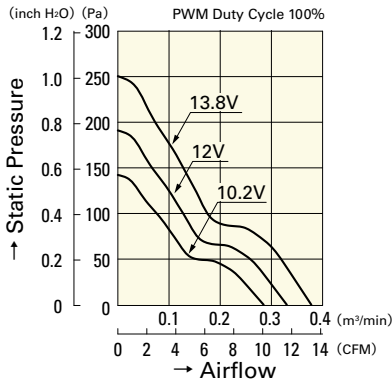


9GA0412P6F001

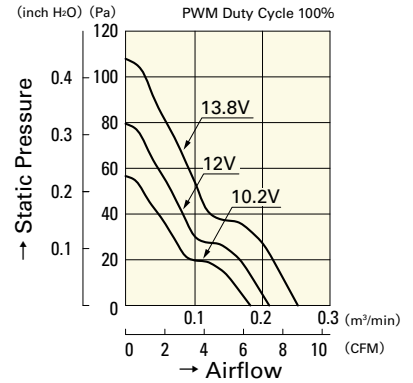
Operating Voltage Range



9GA0412P6G001

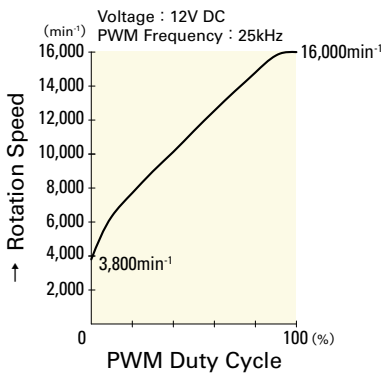


9GA0412P6H001

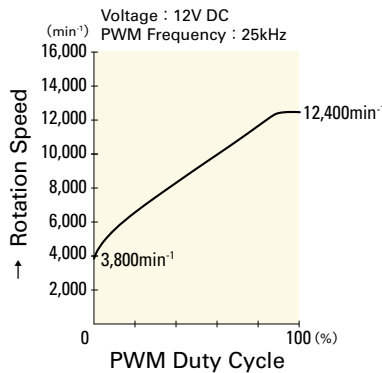


9GA0412P6F001

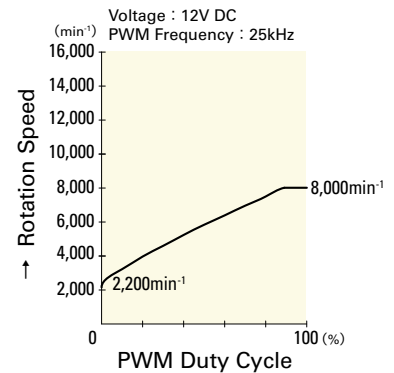
PWM Duty - Speed Characteristics Example



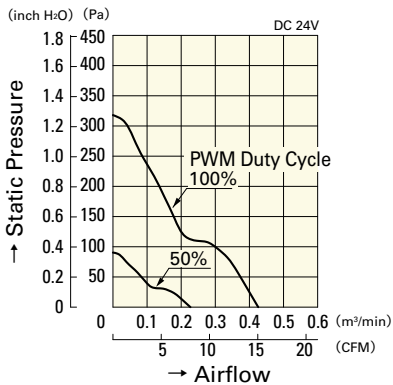
9GA0412P6G001



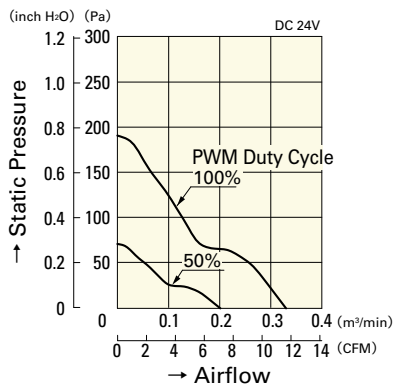
9GA0412P6H001



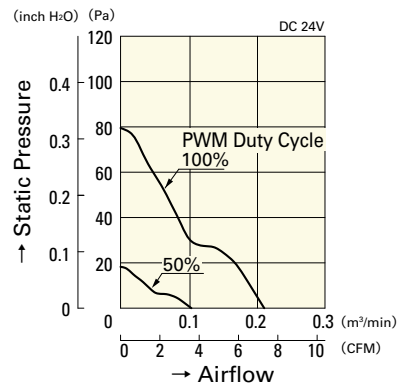
9GA0412P6F001



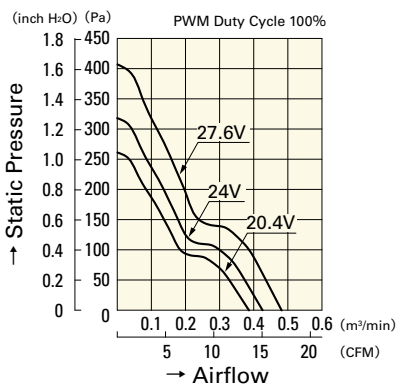
9GA0424P6G001



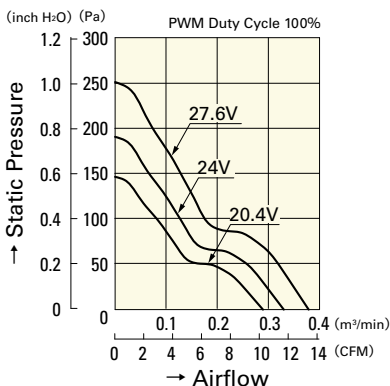
9GA0424P6H001



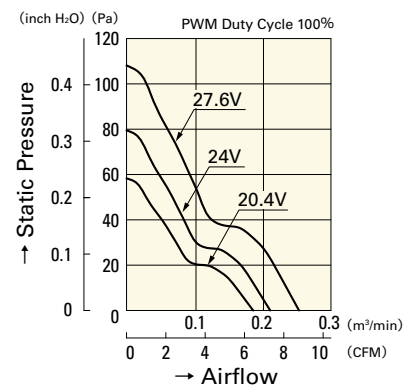
9GA0424P6F001



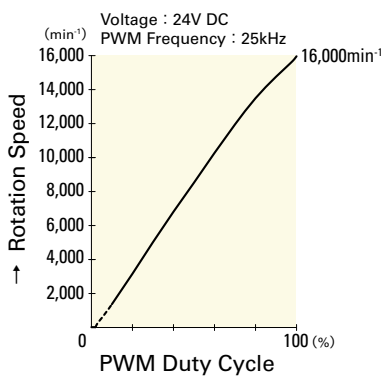
9GA0424P6G001



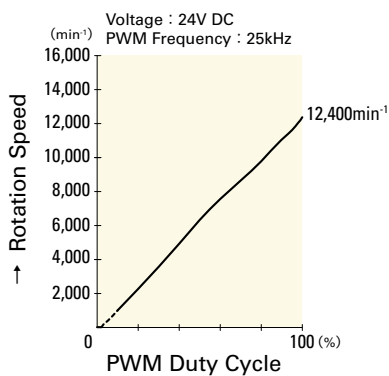
9GA0424P6H001



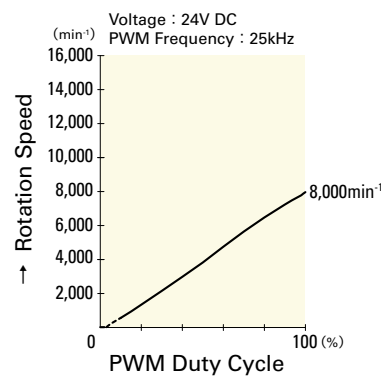
9GA0424P6F001



9GA0424P6G001



9GA0424P6H001



9GA0424P6F001

40mm 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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

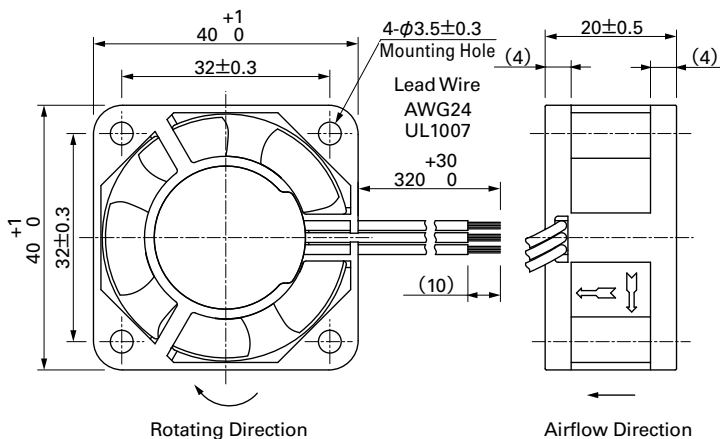
40×40×20mm (Mass : 45g) **9P** type

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 [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C
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		
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°C
109P0412D601			0.18	2.16	11,000	0.31 10.9	124 0.498	42		
109P0412E601			0.13	1.8	9,200	0.26 9.2	87.3 0.351	37	-20 to +70	60,000/60°C
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			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°C
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°C
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)

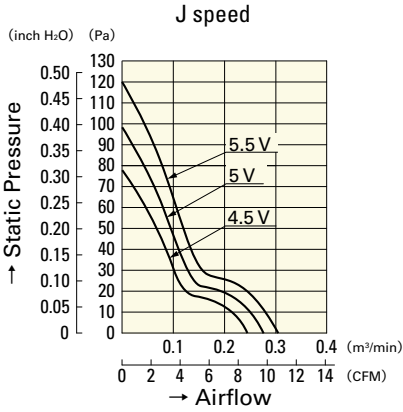


40mm sq.

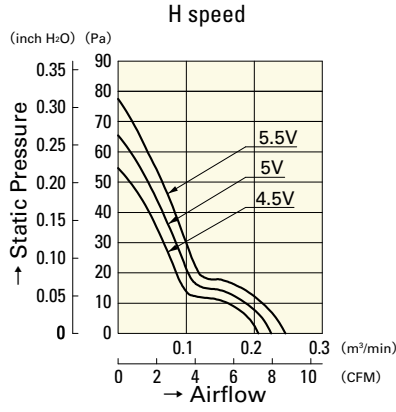
San Ace 40

40×40×20mm [Mass : 45g]

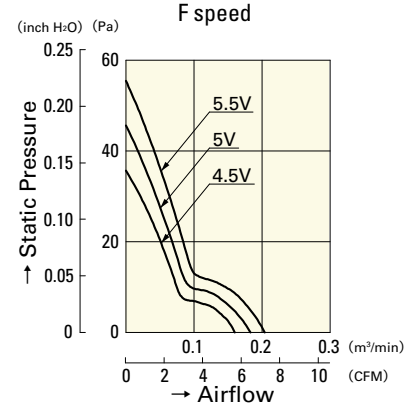
Airflow - Static Pressure Characteristics



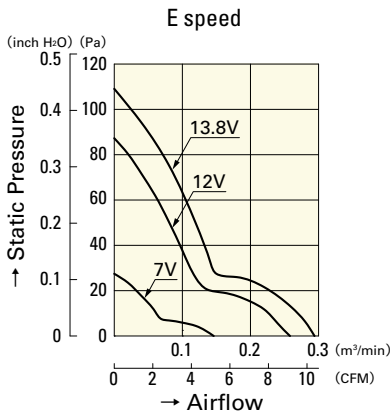
109P0405J601



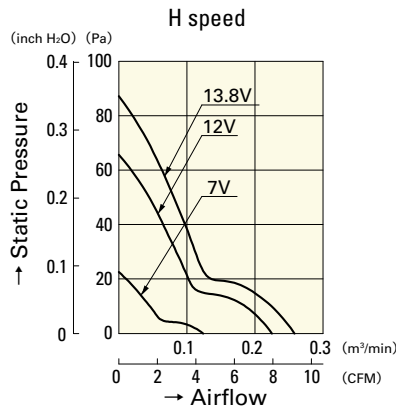
109P0405H601



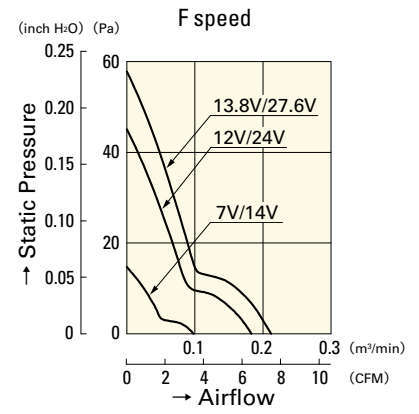
109P0405F601



109P0412E601

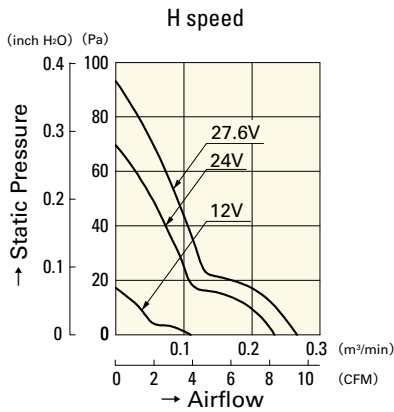


109P0412H601

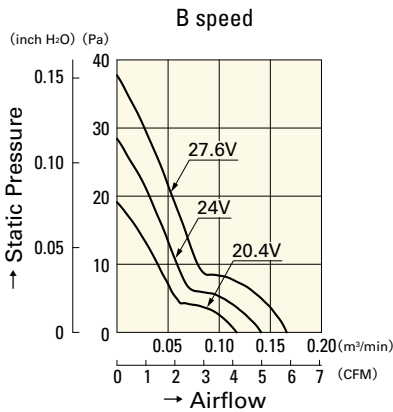


109P0412F601

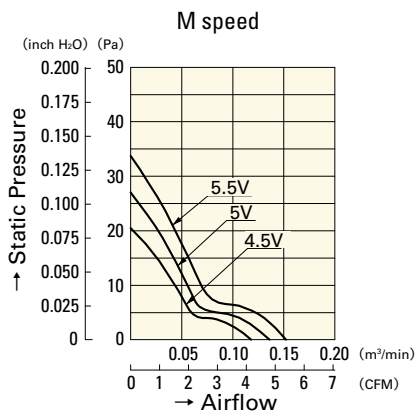
109P0424F601



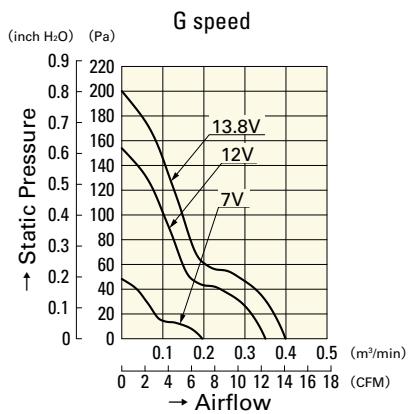
109P0424H601



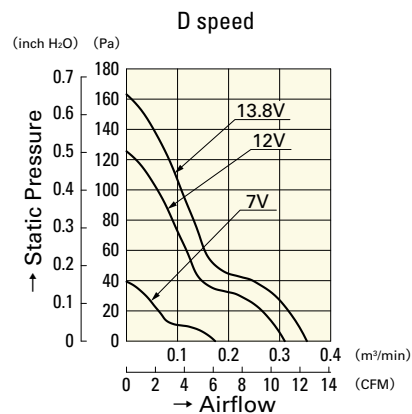
109P0424B601



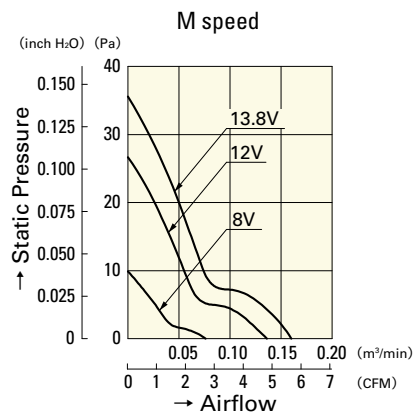
109P0405M601



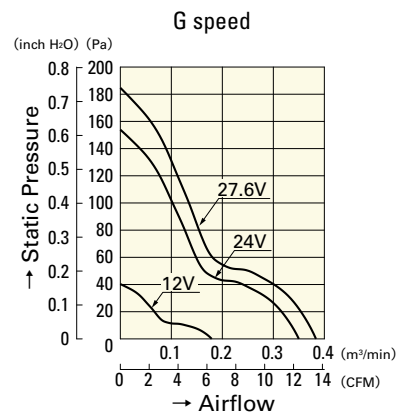
109P0412G601



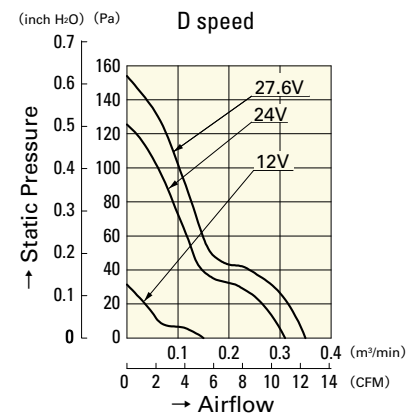
109P0412D601



109P0412M601



109P0424G601



109P0424D601

40 mm 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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

40×40×28mm (Mass : 60g) **9HV type**

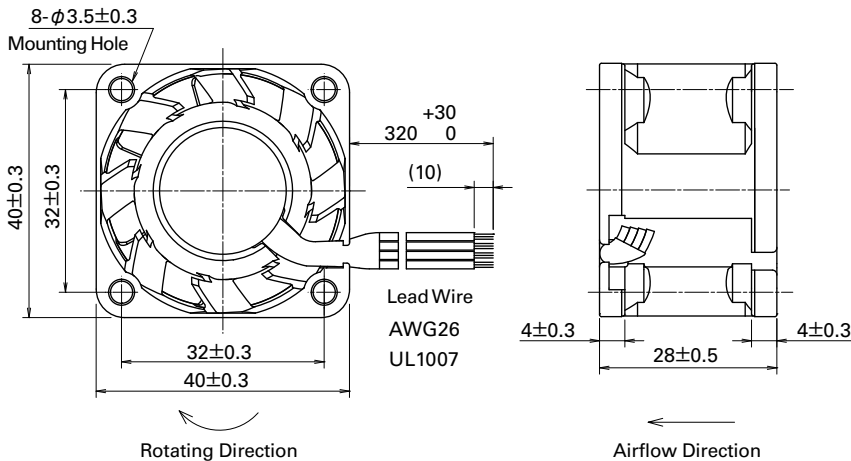
Specifications

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 [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C
			0	0.2	2.4	7,500	0.25 8.8	99 0.40	37		

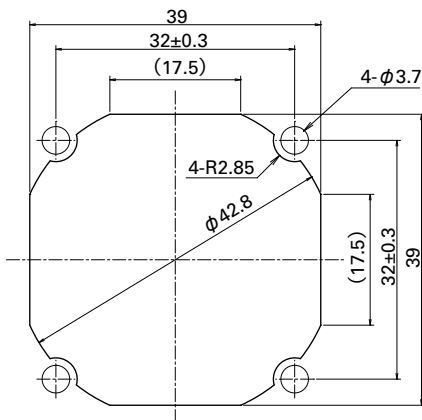
*PWM Frequency : 25kHz

Dimensions (unit: mm)



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

Inlet side, Outlet side



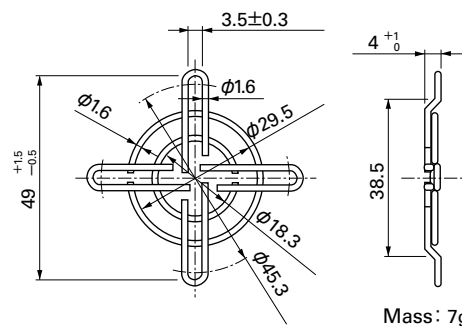
Options (unit: mm)

Finger Guards

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

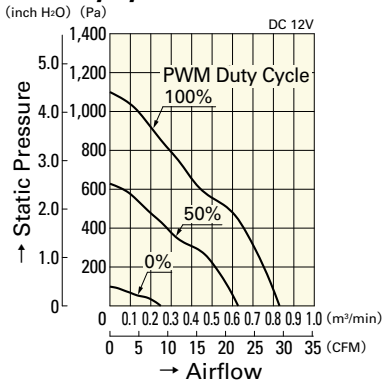
Color

Inlet side, Outlet side



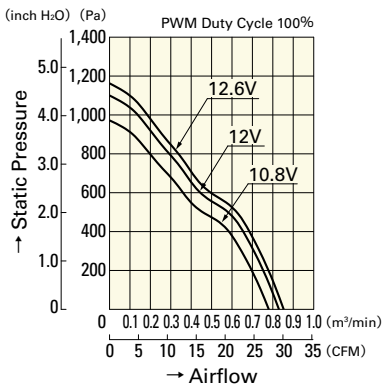
Airflow - Static Pressure Characteristics

PWM Duty Cycle



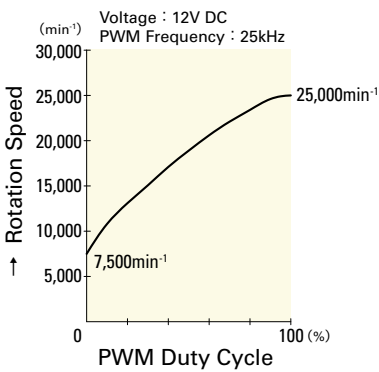
9HV0412P3K001

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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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

Specifications

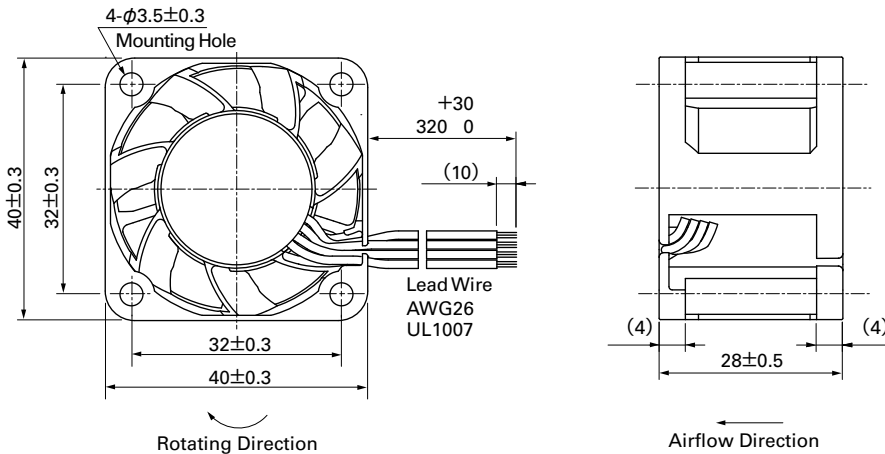
The following nos. **have PWM controls, pulse sensors, and ribs.** For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle ^{Note①} [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C
			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			

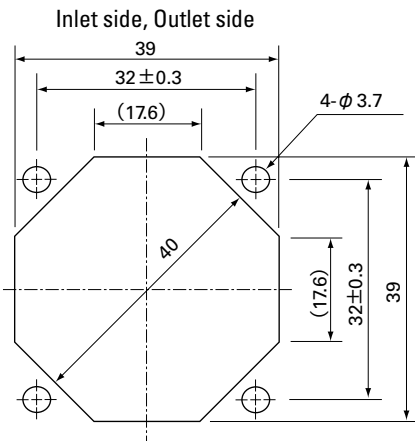
Note: 9GAX0412P3S001, 9GAX0412P3K001 does not rotate when PWM duty cycle is 0%.

※PWM Frequency: 25kHz

Dimensions (unit: mm) (With ribs)



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



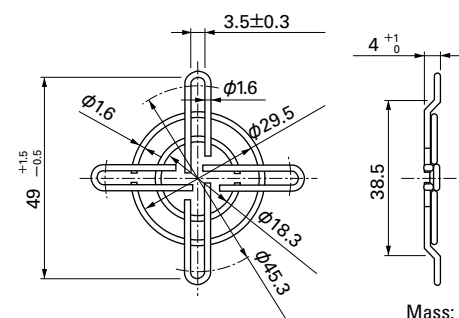
Options (unit: mm)

Finger Guards

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

Color

Inlet side, Outlet side



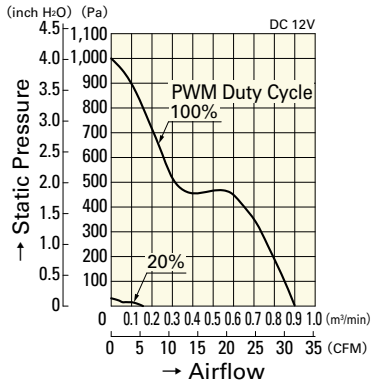
Airflow - Static Pressure Characteristics

PWM Duty - Speed Characteristics Example

DC

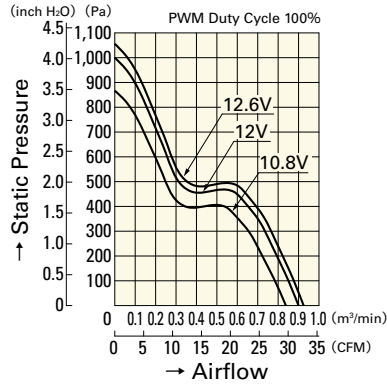
DC Fan 40mm

PWM Duty Cycle

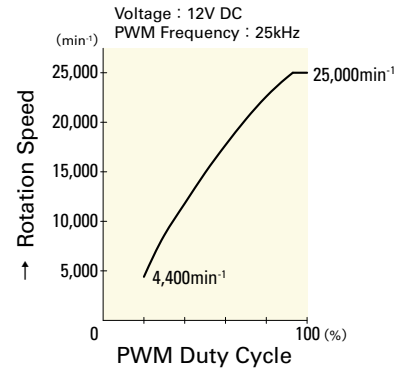


9GAX0412P3S001

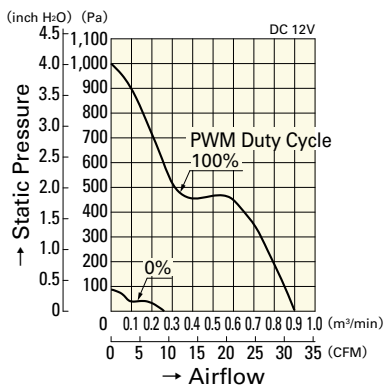
Operating Voltage Range



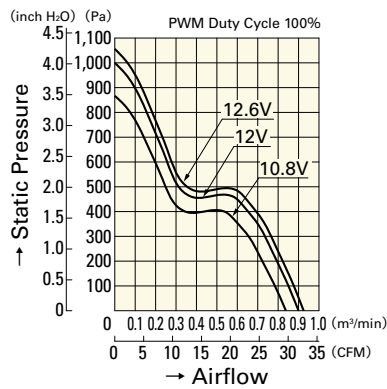
9GAX0412P3S001



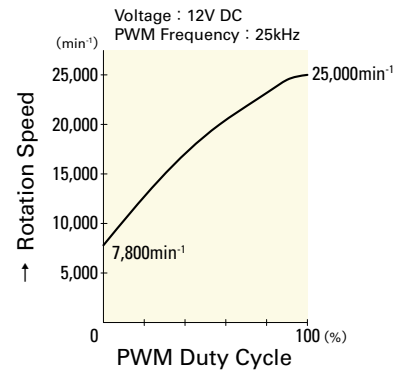
9GAX0412P3S001



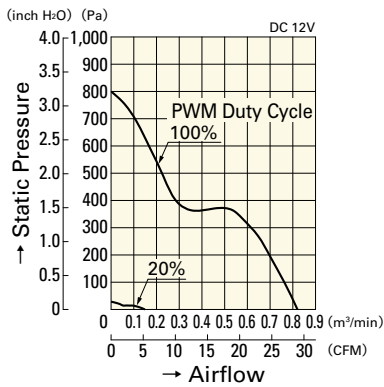
9GAX0412P3S003



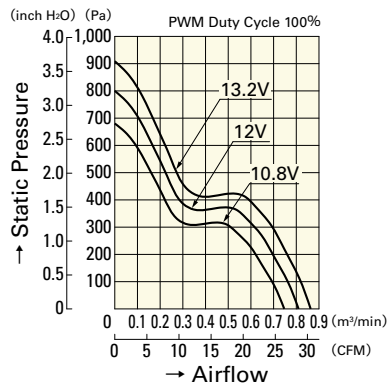
9GAX0412P3S003



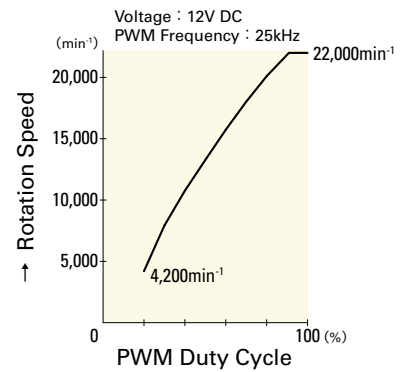
9GAX0412P3S003



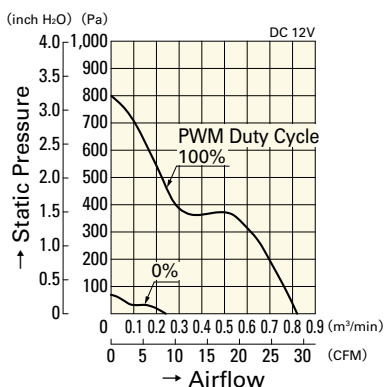
9GAX0412P3K001



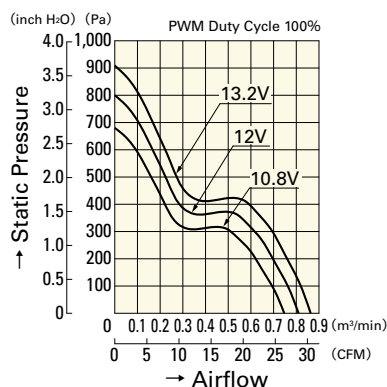
9GAX0412P3K001



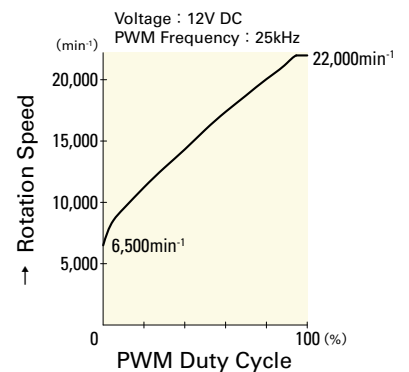
9GAX0412P3K001



9GAX0412P3K003



9GAX0412P3K003



9GAX0412P3K003

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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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.

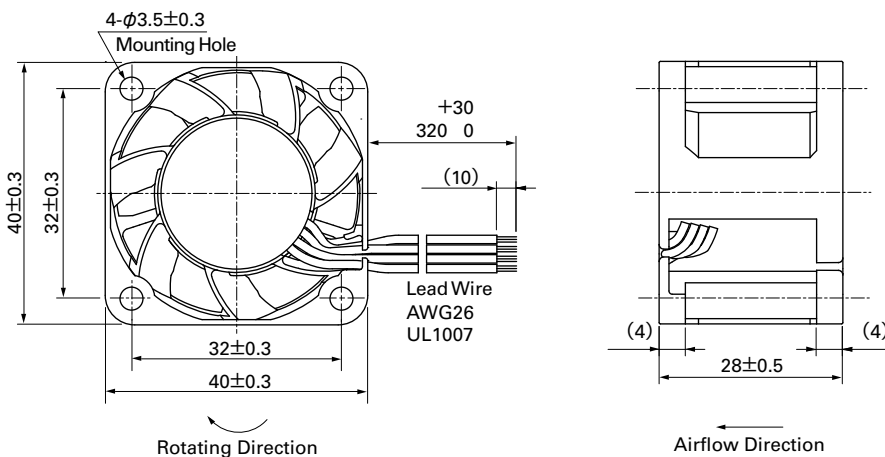
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle* [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]				
9GA0412P3K01	12	10.8 to 13.2	100	0.92	11.04	22,000	0.81 28.6	799 3.21	61	-20 to +60	30,000/60°C				
			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°C		
			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			-20 to +70	40,000/60°C
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% .

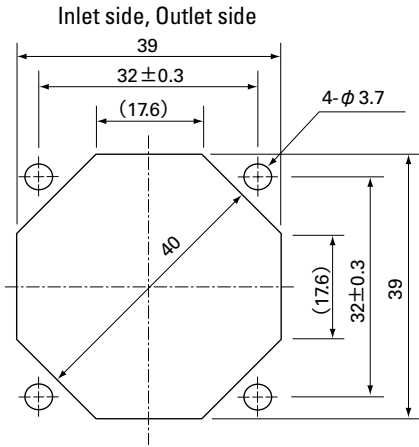
※PWM Frequency : 25kHz

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

Dimensions (unit: mm) (With ribs)



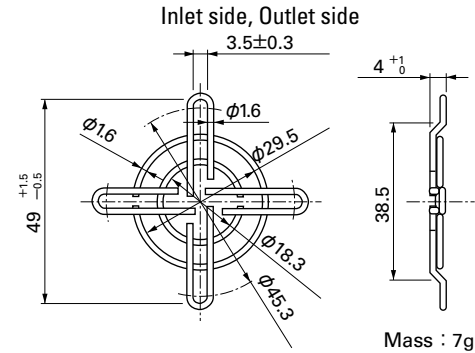
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

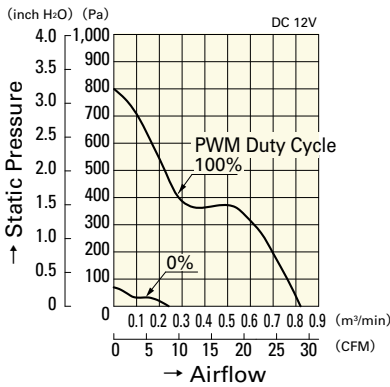
Finger Guards

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

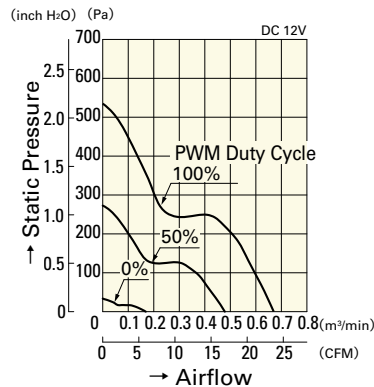


Airflow - Static Pressure Characteristics

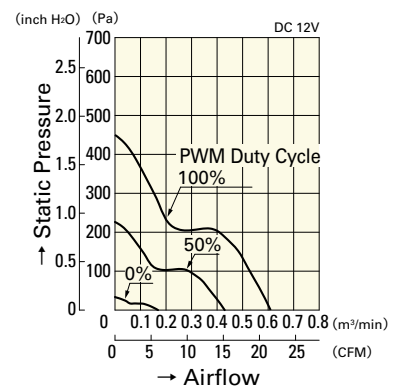
PWM Duty Cycle



9GA0412P3K01

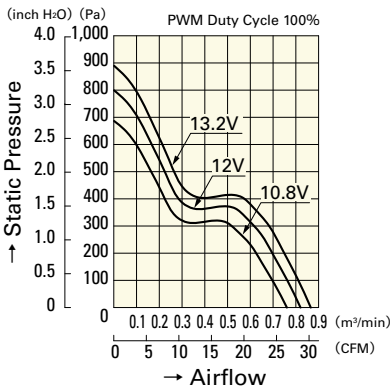


9GA0412P3J01

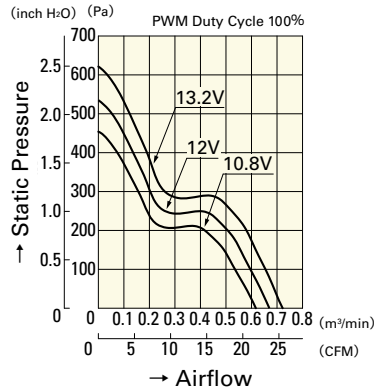


9GA0412P3G01

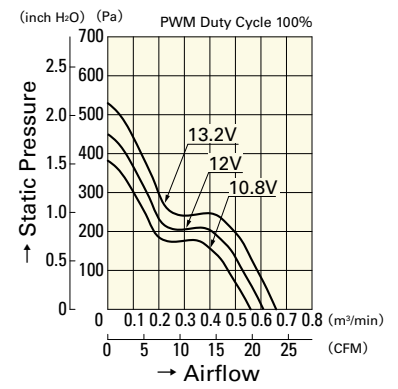
Operating Voltage Range



9GA0412P3K01

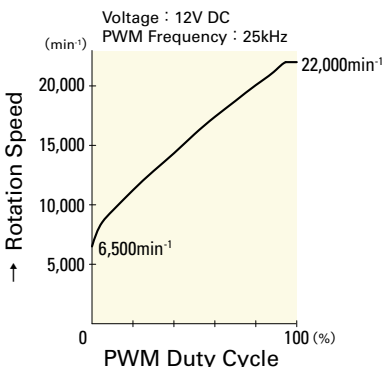


9GA0412P3J01

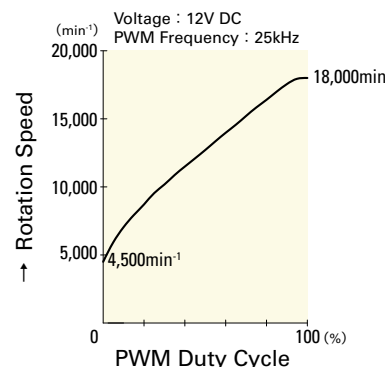


9GA0412P3G01

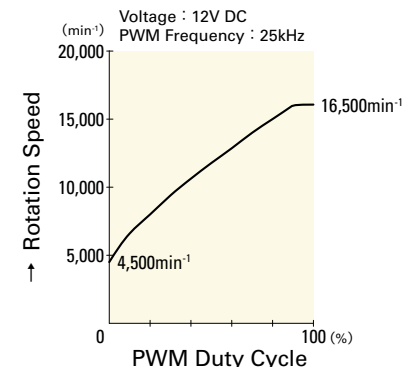
PWM Duty - Speed Characteristics Example



9GA0412P3K01



9GA0412P3J01



9GA0412P3G01

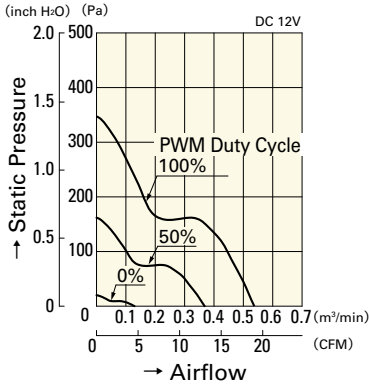
40mm sq.

San Ace 40

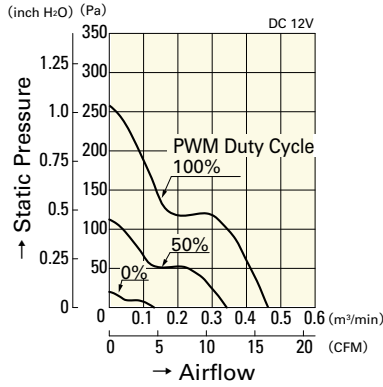
40×40×28mm [Mass : 53g]

Airflow - Static Pressure Characteristics

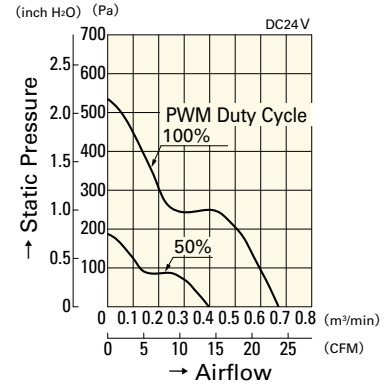
PWM Duty Cycle



9GA0412P3H01

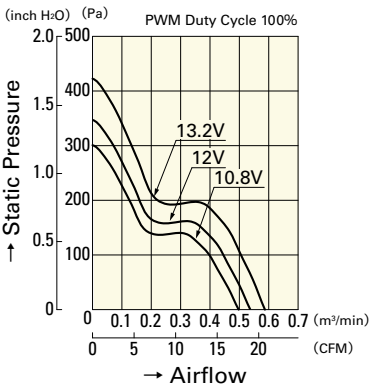


9GA0412P3M01

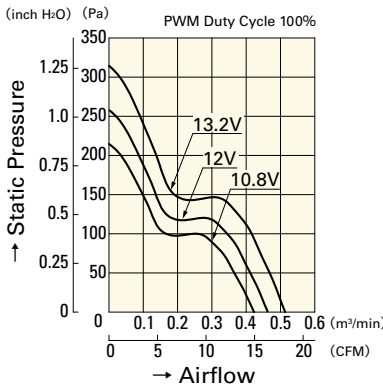


9GA0424P3J001

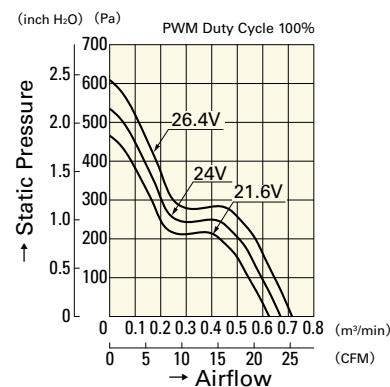
Operating Voltage Range



9GA0412P3H01

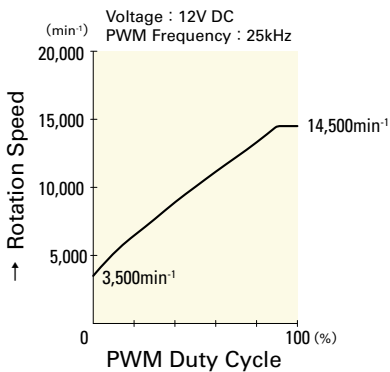


9GA0412P3M01

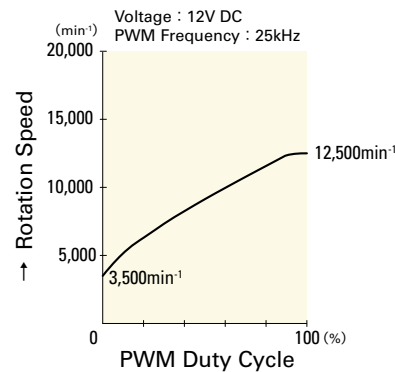


9GA0424P3J001

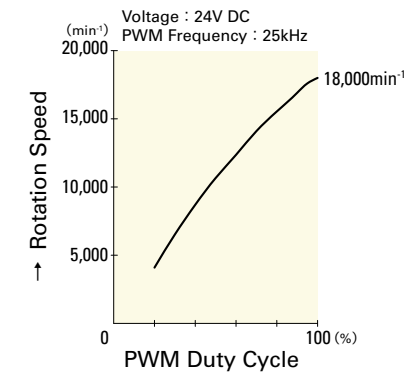
PWM Duty - Speed Characteristics Example



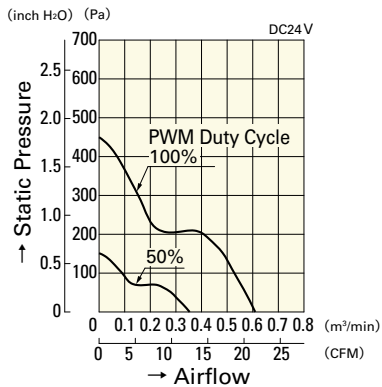
9GA0412P3H01



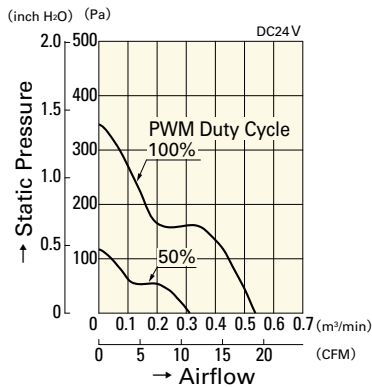
9GA0412P3M01



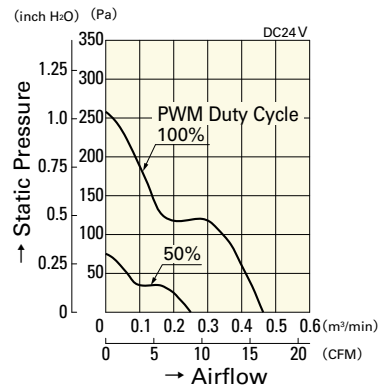
9GA0424P3J001



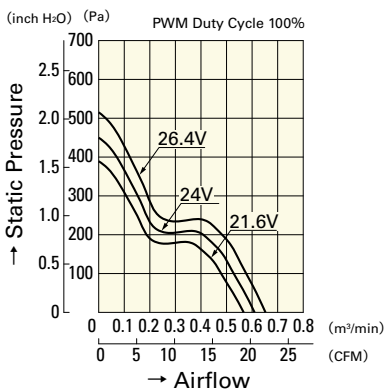
9GA0424P3G001



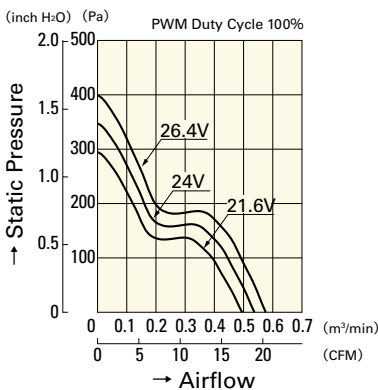
9GA0424P3H001



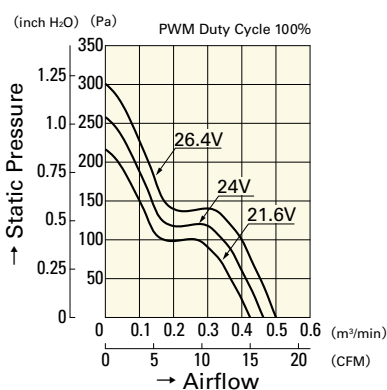
9GA0424P3M001



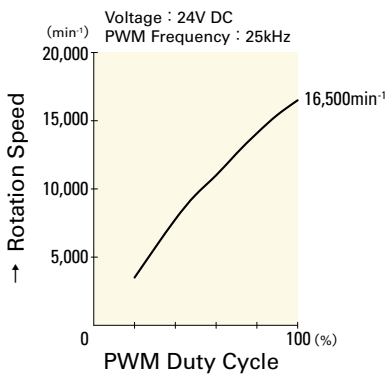
9GA0424P3G001



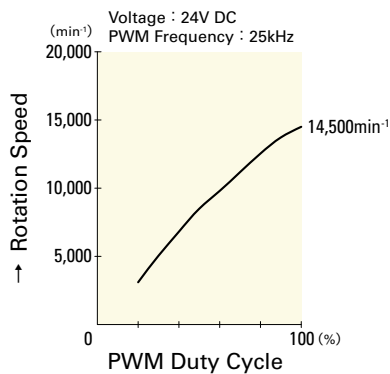
9GA0424P3H001



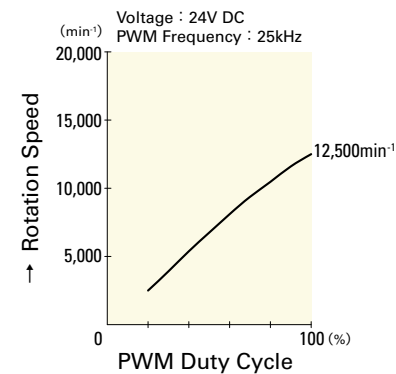
9GA0424P3M001



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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

Specifications

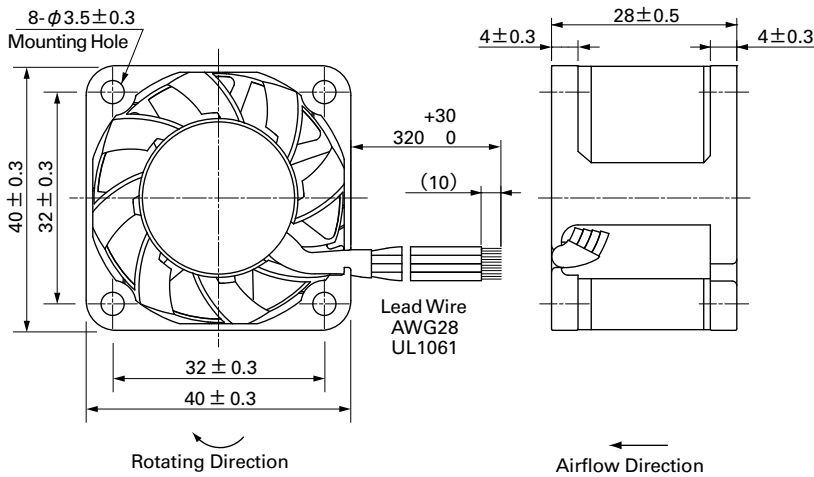
The following nos. **have PWM controls and pulse sensors.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle* [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C
			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		

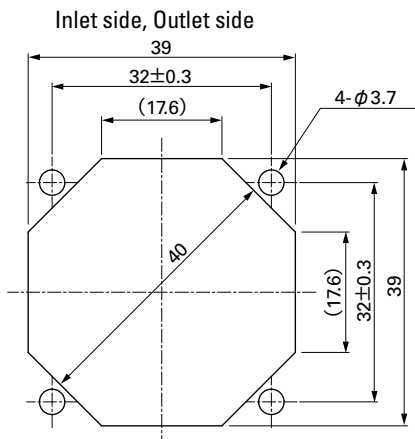
*PWM Frequency : 25kHz

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

Dimensions (unit: mm)



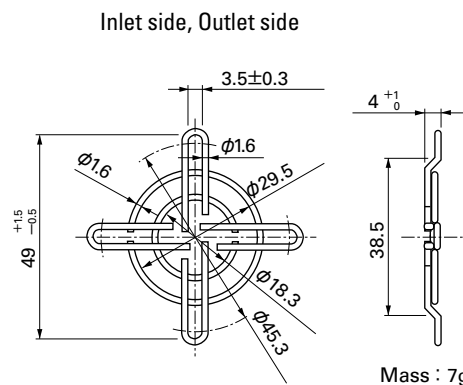
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

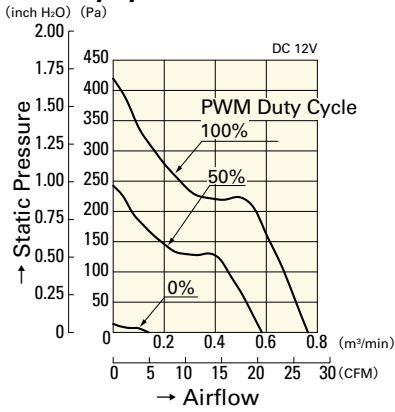
Finger Guards

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

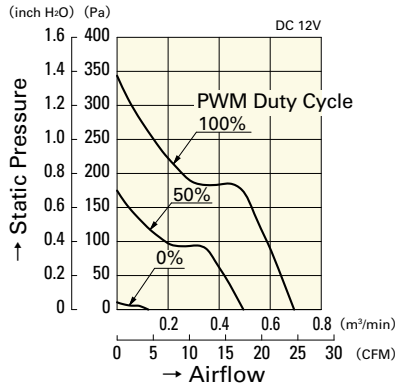


Airflow - Static Pressure Characteristics

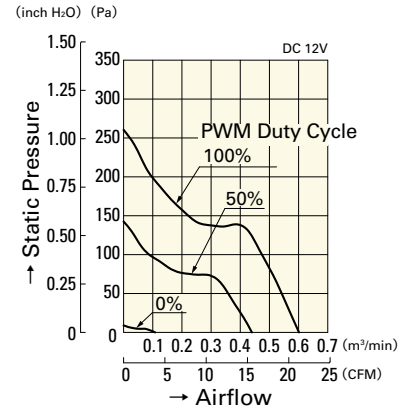
PWM Duty Cycle



9GE0412P3K03

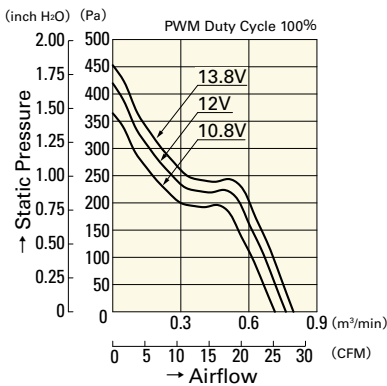


9GE0412P3J03

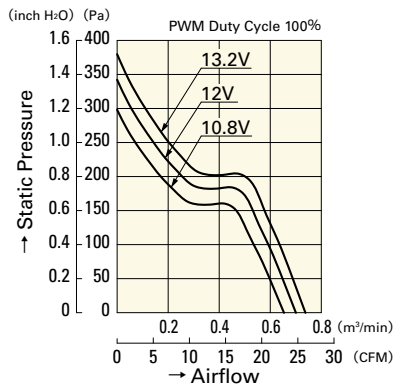


9GE0412P3G03

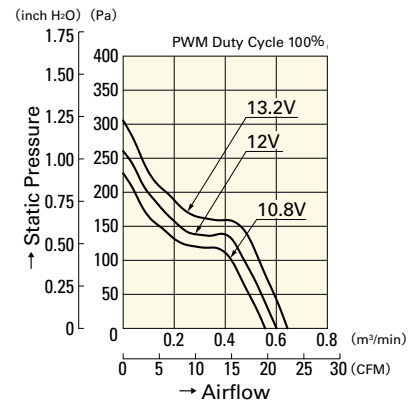
Operating Voltage Range



9GE0412P3K03

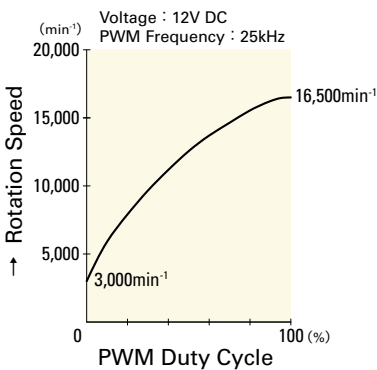


9GE0412P3J03

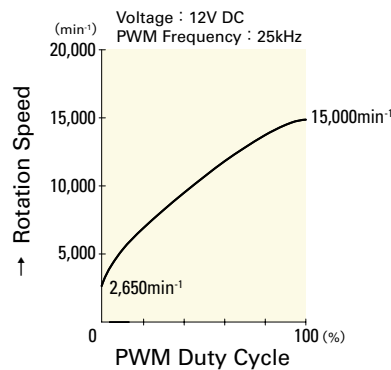


9GE0412P3G03

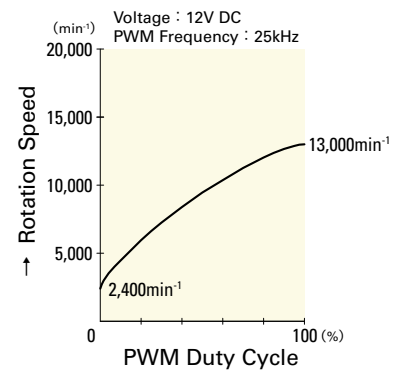
PWM Duty - Speed Characteristics Example



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -20°C to +70°C (Non-condensing)

40×40×28mm (Mass : 50g) **9GV type**

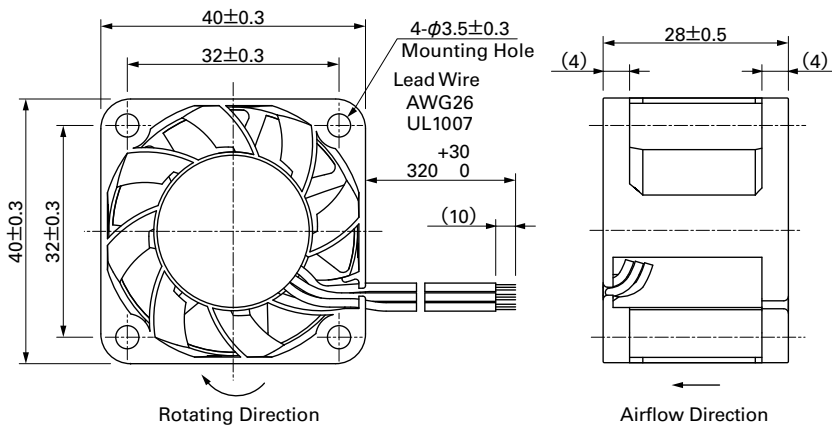
Specifications

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

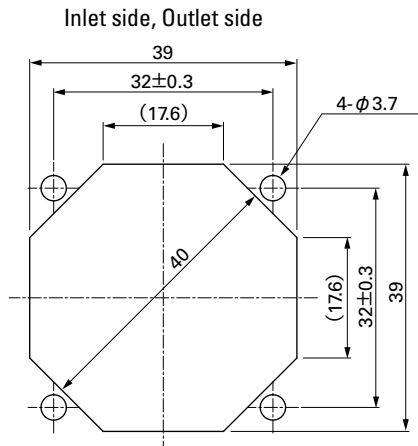
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]		
9GV0412K301	12	10.8 to 12.6	0.84	10.08	16,500	0.76	26.8	415	- 20 to +60	40,000/60°C		
9GV0412J301			0.60	7.20	14,700	0.68	24.0	330			1.325	55
9GV0412G301		7 to 13.2	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

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)



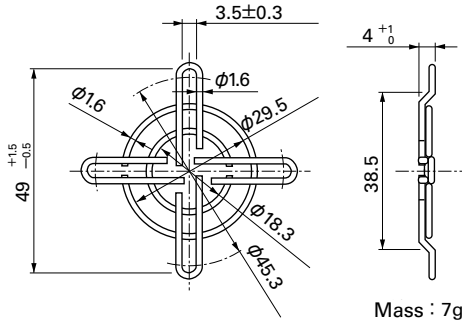
Options (unit: mm)

Finger Guards

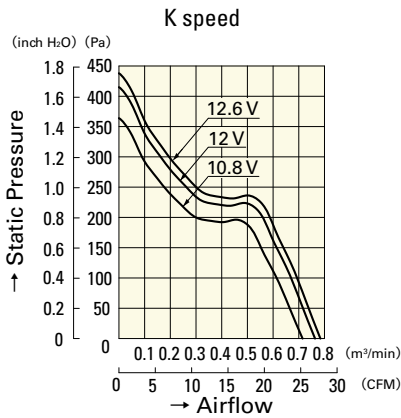
Model : 109-059 Surface treatment : Nickel-chrome plating (silver)
 : 109-059H : Cation electropainting (black)

Color

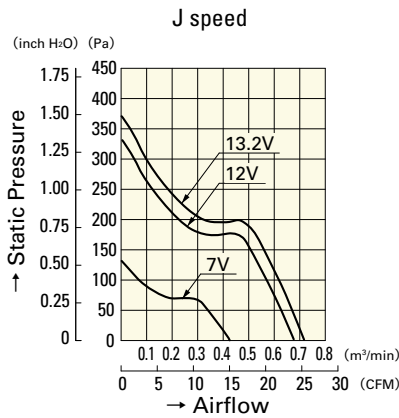
Inlet side, Outlet side



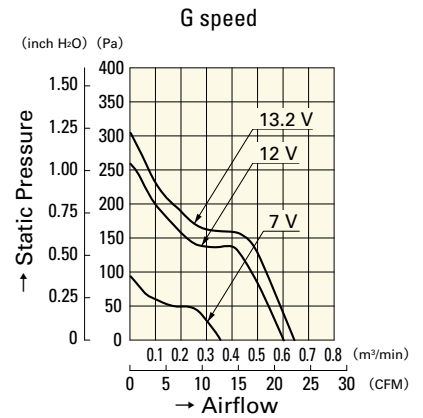
Airflow - Static Pressure Characteristics



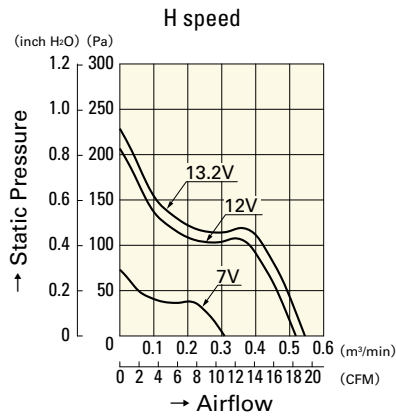
9GV0412K301



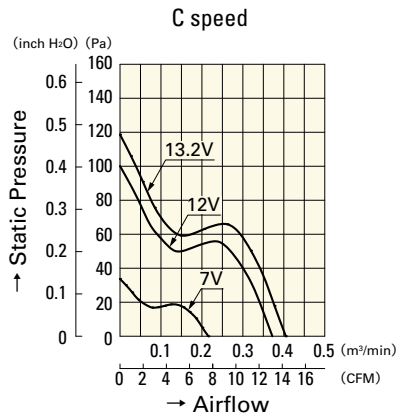
9GV0412J301



9GV0412G301



9GV0412H301



9GV0412C301

40mm sq.

San Ace 40



Model no. 109P0424R3013 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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

40×40×28mm (Mass : 52g) **9P type**

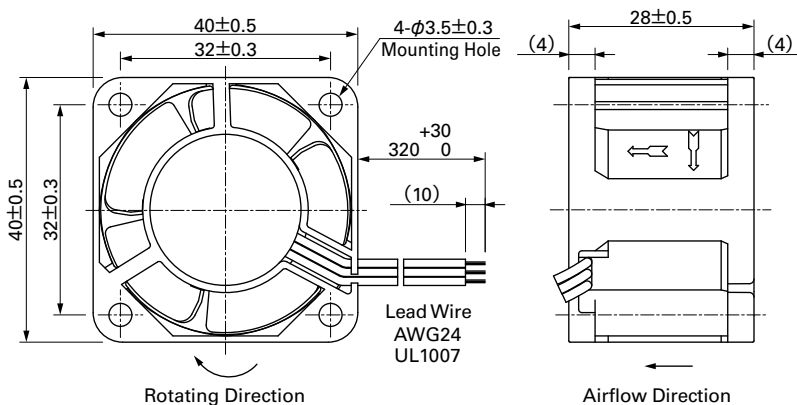
Specifications

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 [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C
109P0405F3013			0.28	1.4	6,700	0.244 8.6	58.8 0.236	30		60,000/60°C
109P0412K3013	12	8 to 13.2	0.55	6.6	15,500	0.59 20.8	340 1.365	50	-20 to +60	40,000/60°C
109P0412J3013			0.35	4.2	12,500	0.46 16.2	210 0.843	44		
109P0412G3013		7 to 13.2	0.31	3.72	11,500	0.42 14.8	179 0.719	42	-20 to +60	40,000/60°C
109P0412B3013			0.28	3.36	10,300	0.38 13.4	143 0.574	40		
109P0412H3013		7 to 13.8	0.195	2.34	8,700	0.32 11.3	102.9 0.414	37	-20 to +70	60,000/60°C
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
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	12 to 27.6		0.13	3.12	10,300	0.38 13.4	143 0.574	40	-20 to +70	60,000/60°C
109P0424H3013			0.095	2.28	8,700	0.32 11.3	102.9 0.414	37		
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)

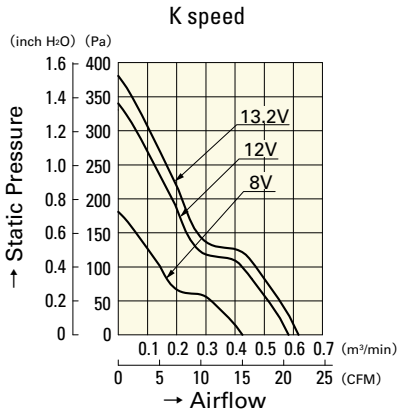


40mm sq.

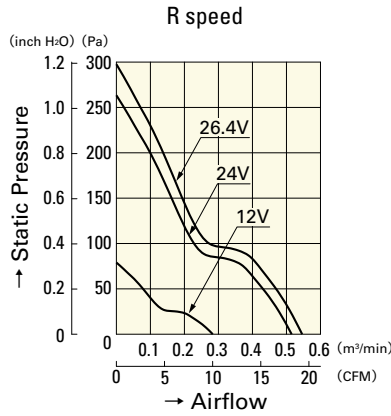
San Ace 40

40×40×28mm [Mass : 52g]

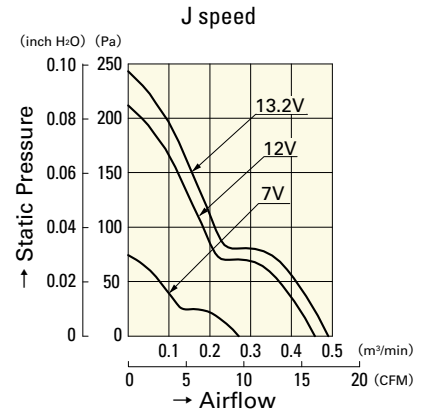
Airflow - Static Pressure Characteristics



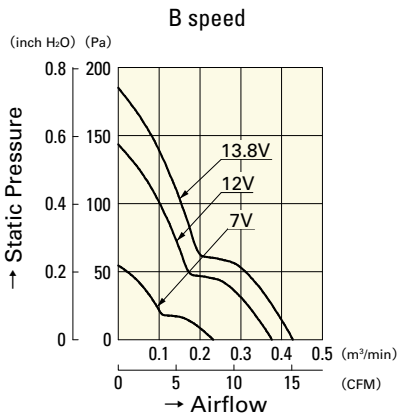
109P0412K3013



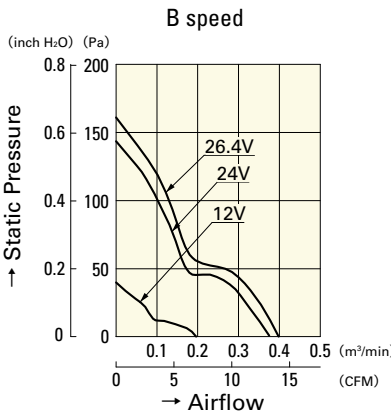
109P0424R3013



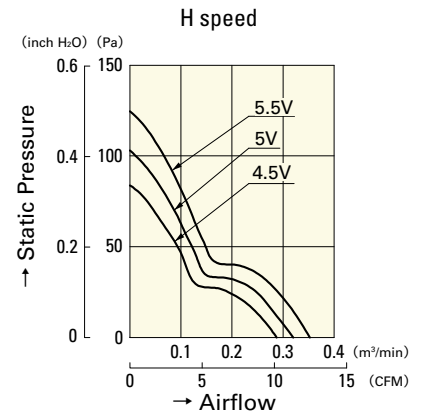
109P0412J3013



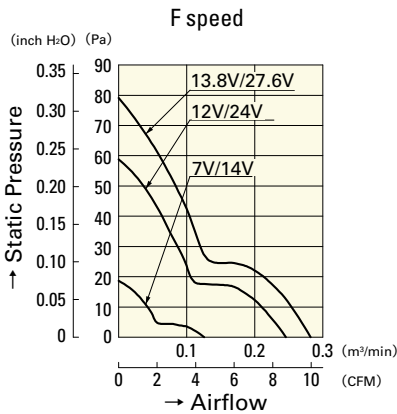
109P0412B3013



109P0424B3013

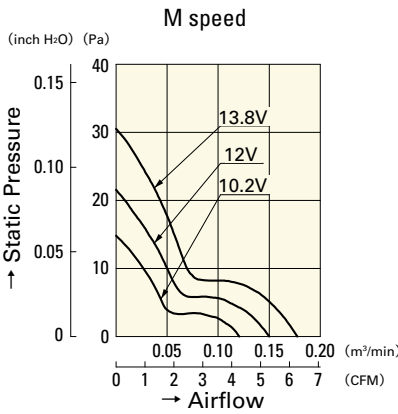


109P0405H3013

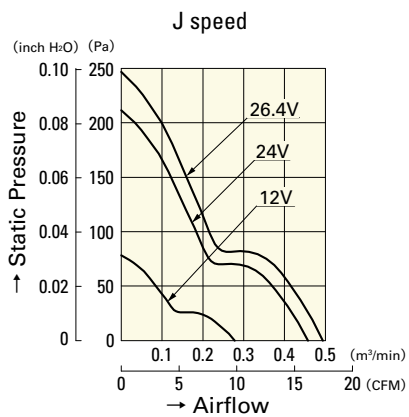


109P0412F3013

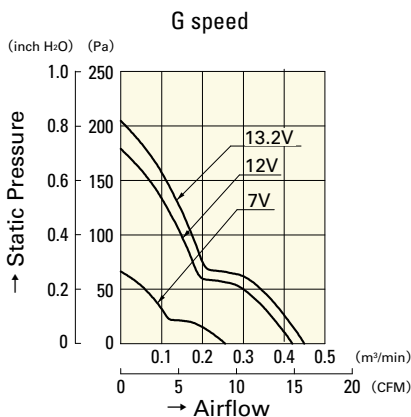
109P0424F3013



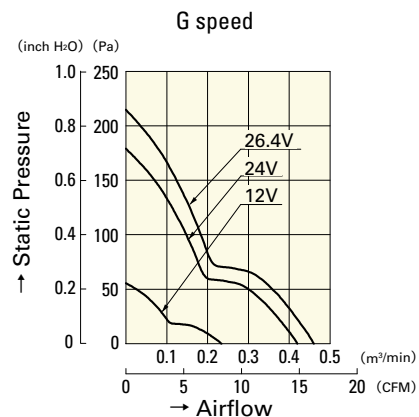
109P0412M3013



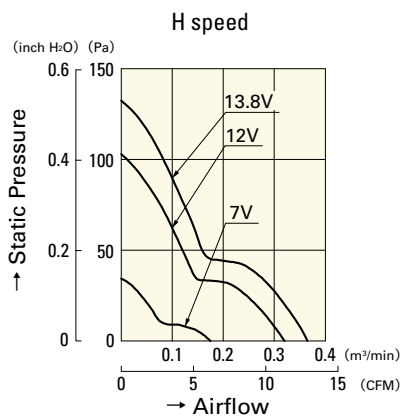
109P0424J3013



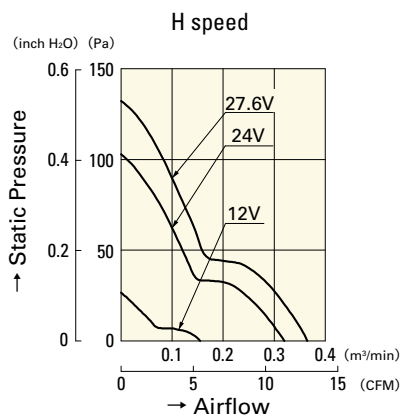
109P0412G3013



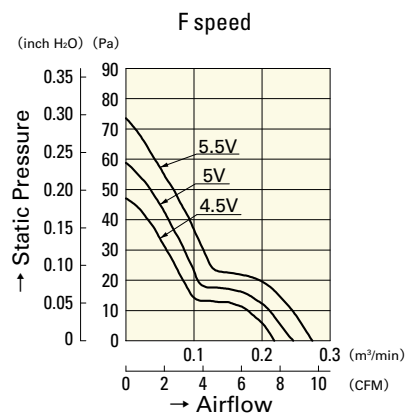
109P0424G3013



109P0412H3013



109P0424H3013



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

52×52×15mm (Mass : 40g) **9GA**type **Low Power Consumption Fan**



Specifications

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

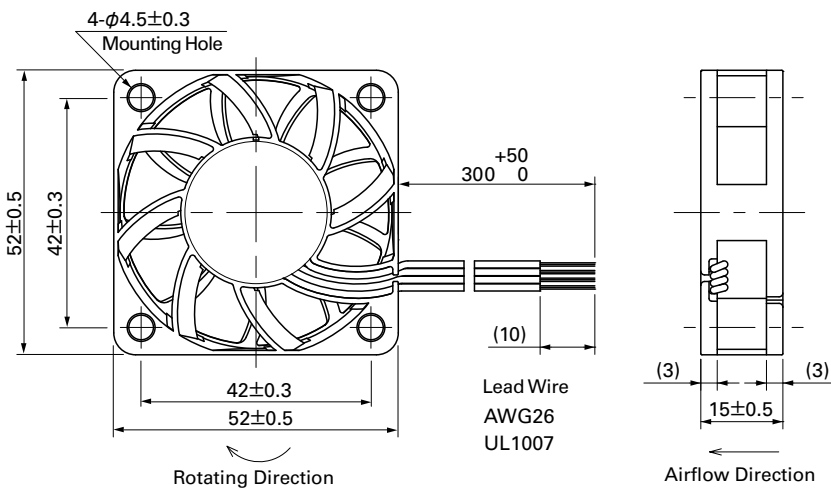
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle ^{Note①} [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9GA0512P7G001	12	10.2 to 13.8	100	0.13	1.56	7,800	0.50 17.7	91.5 0.367	38	-20 to +70	40,000/60°C
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%.

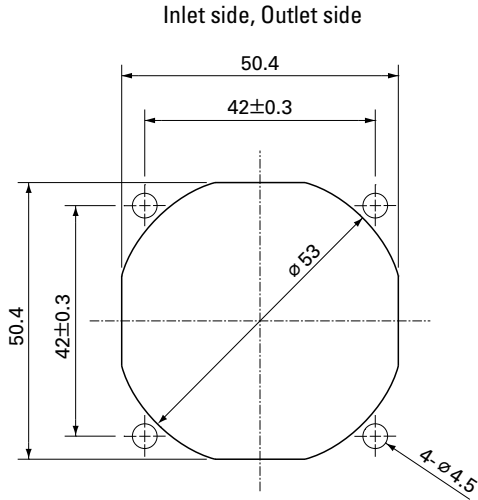
※PWM Frequency : 25kHz

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)

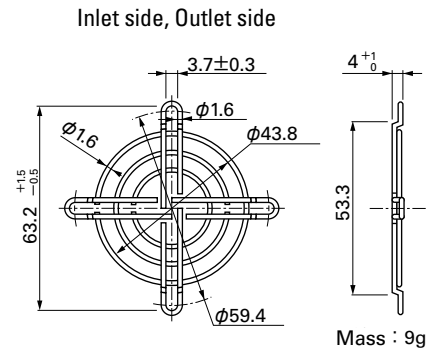
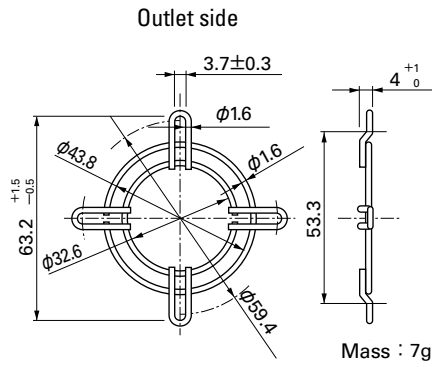


Options (unit: mm)

Finger Guards

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

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



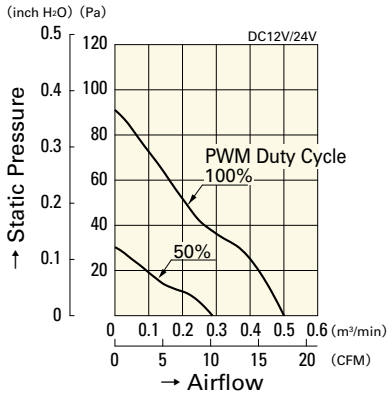
52mm sq.

San Ace 52

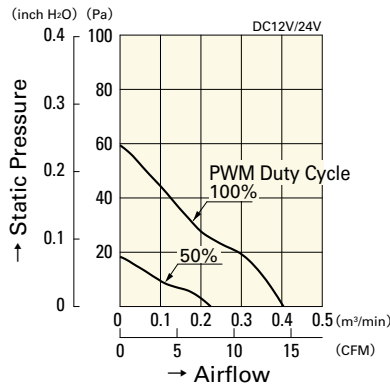
52×52×15mm [Mass : 40g]

Airflow - Static Pressure Characteristics

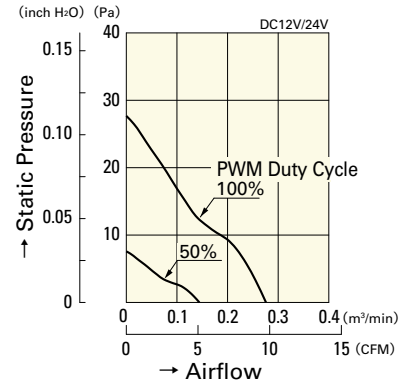
PWM Duty Cycle



9GA0512P7G001
9GA0524P7G001

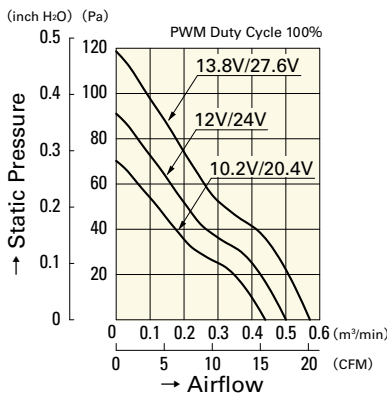


9GA0512P7A001
9GA0524P7A001

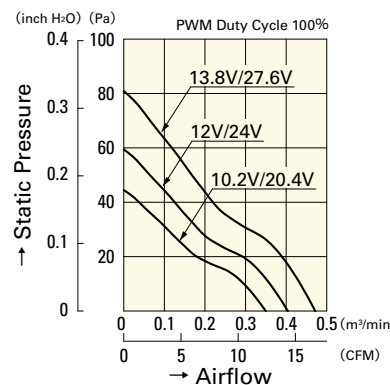


9GA0512P7H001
9GA0524P7H001

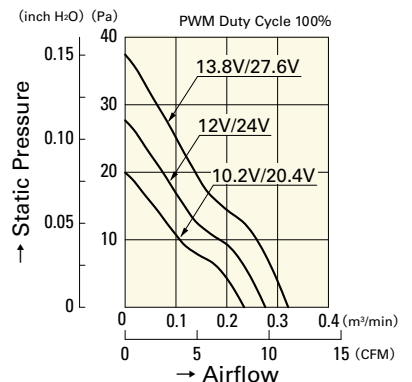
Operating Voltage Range



9GA0512P7G001
9GA0524P7G001

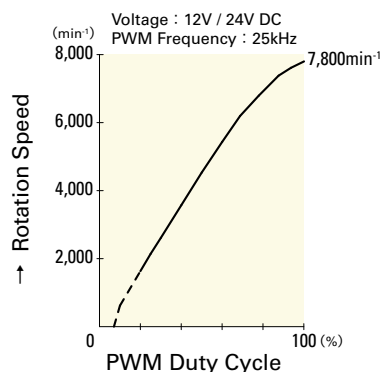


9GA0512P7A001
9GA0524P7A001

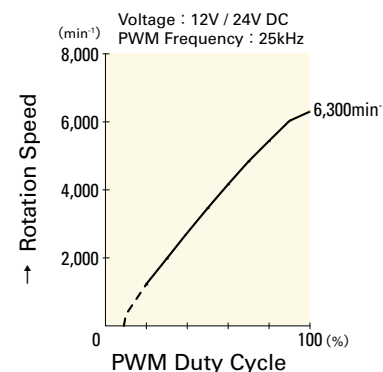


9GA0512P7H001
9GA0524P7H001

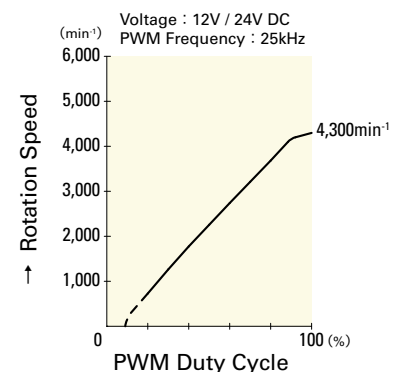
PWM Duty - Speed Characteristics Example



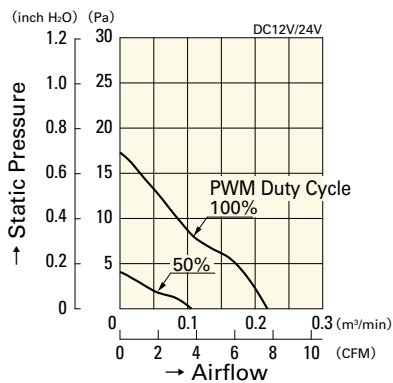
9GA0512P7G001
9GA0524P7G001



9GA0512P7A001
9GA0524P7A001

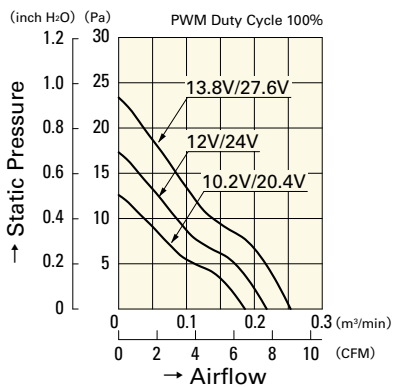


9GA0512P7H001
9GA0524P7H001



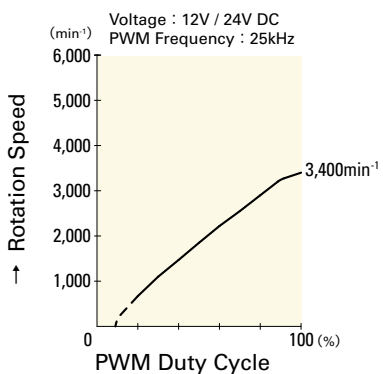
9GA0512P7M001

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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

52×52×15mm (Mass : 55g) **9P** type

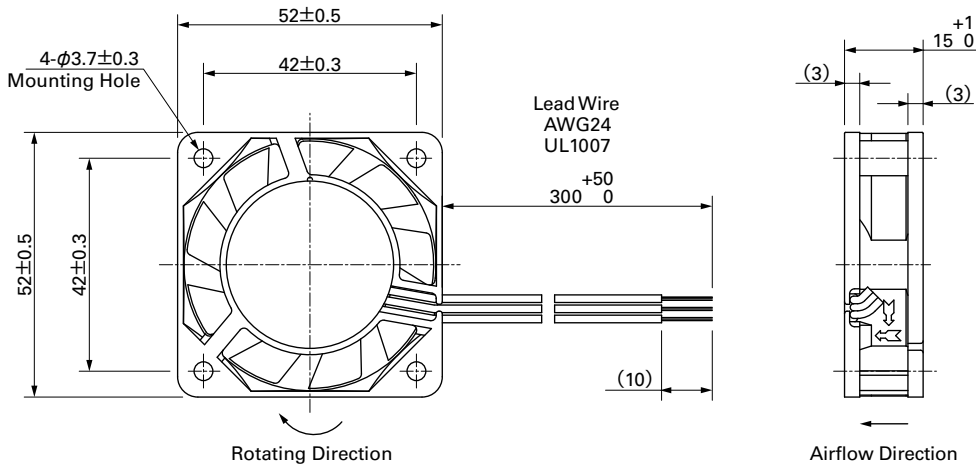
Specifications

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

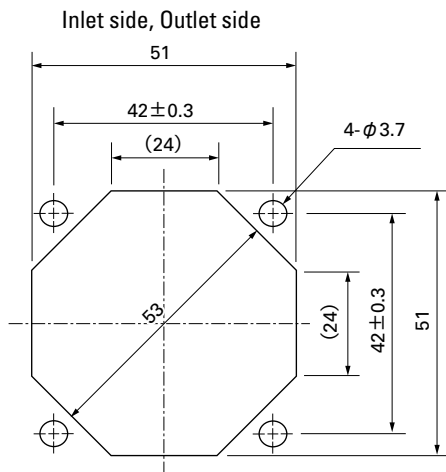
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
109P0505M701	5	4.5 to 5.5	0.15	0.75	3,700	0.205 7.24	21.4 0.086	22	-20 to +70	60,000/60°C
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°C
109P0512H701		7 to 13.8	0.10	1.20	4,600	0.255 9.00	31.9 0.128	27		60,000/60°C
109P0512M701			0.07	0.84	3,700	0.205 7.24	21.4 0.086	22		60,000/60°C
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°C
109P0524H701			0.05	1.20	4,600	0.255 9.00	31.9 0.128	27	-20 to +70	60,000/60°C
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)



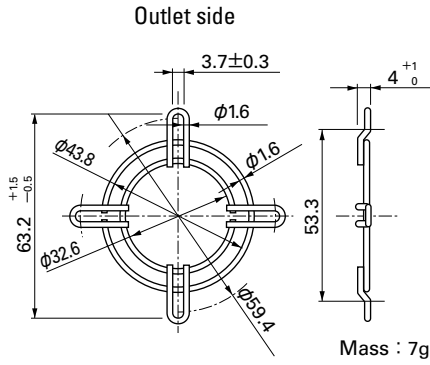
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



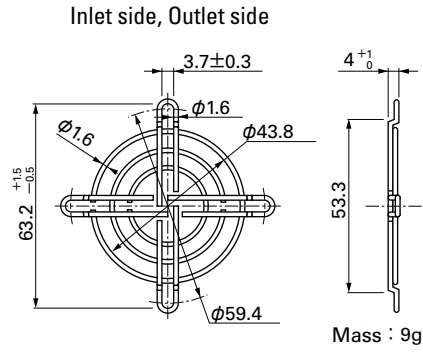
Options (unit: mm)

Finger Guards

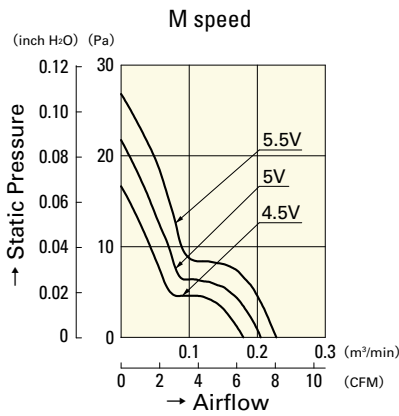
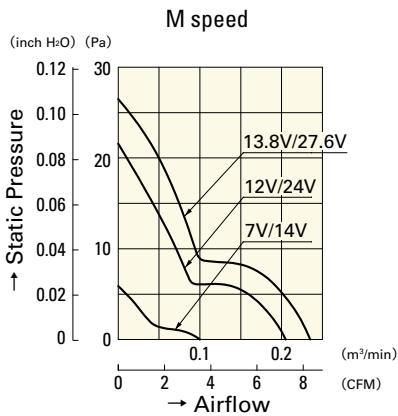
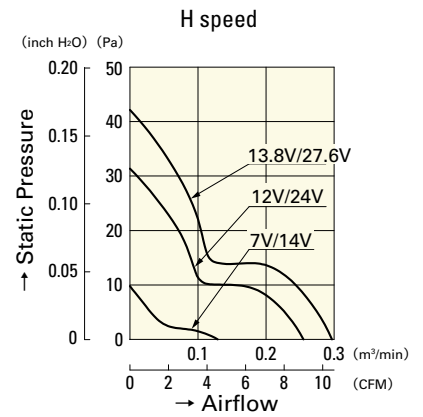
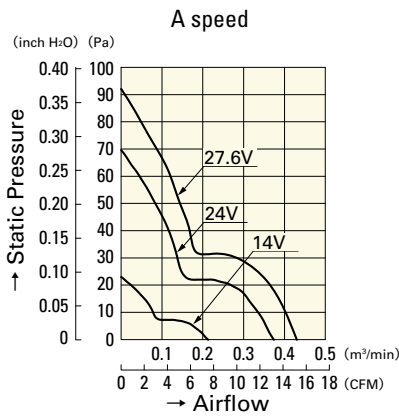
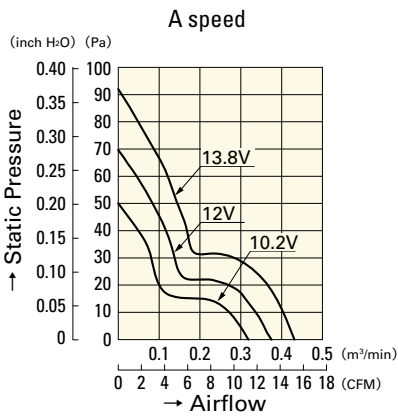
Model : 109-149 Surface treatment : Nickel-chrome plating Color (silver)



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



Airflow - Static Pressure Characteristics



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

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



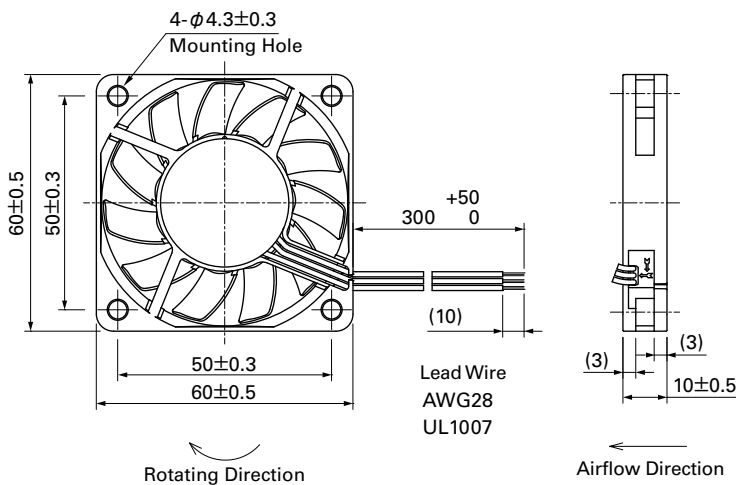
Specifications

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

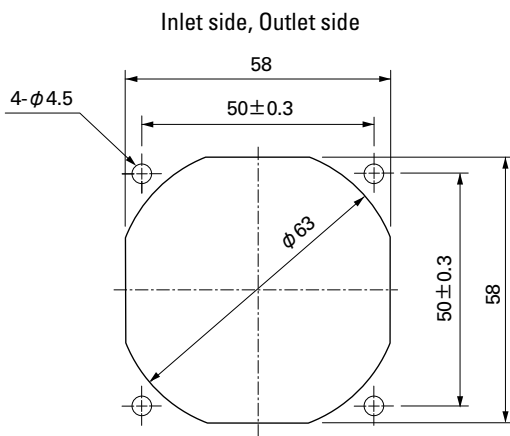
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9GA0612G9001	12	7.0 to 13.2	0.27	3.24	6,200	0.62 21.9	66 0.26	43	-20 to +60	40,000/60°C (70,000/40°C)
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)

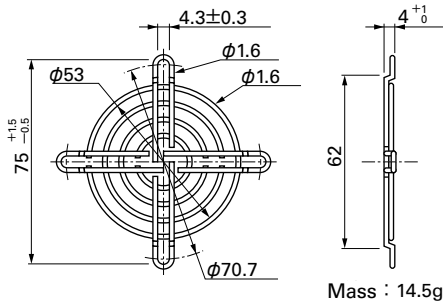


Options (unit: mm)

Finger Guards

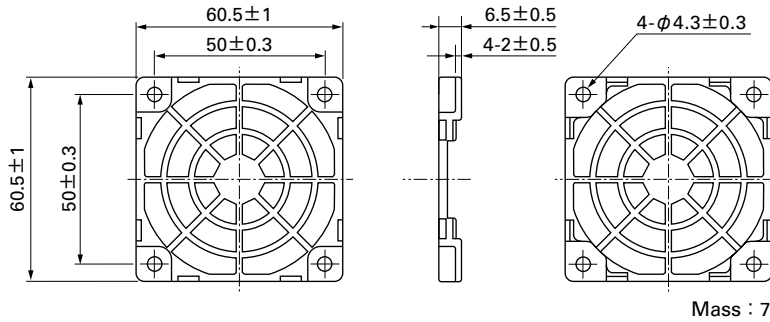
Model : 109-139E Surface treatment : Nickel-chrome plating (silver) Color : 109-139H : Cation electropainting (black)

Inlet side, Outlet side



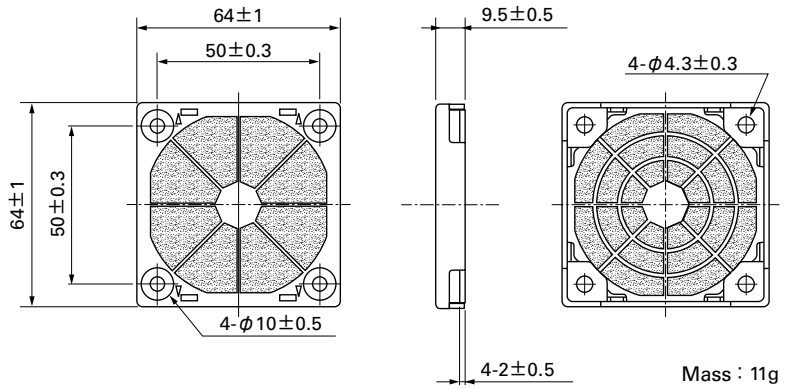
Resin Finger Guards

Model : 109-1003G

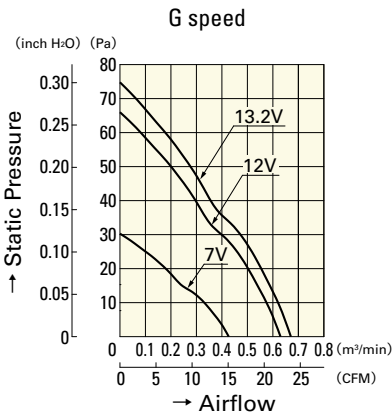


Resin Filter Kits

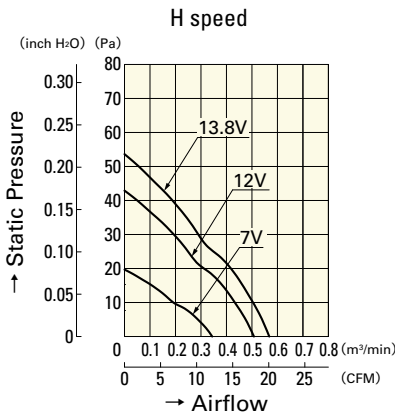
Model : 109-1003F13 (13PPI), 109-1003F20 (20PPI) : 109-1003F30 (30PPI), 109-1003F40 (40PPI)



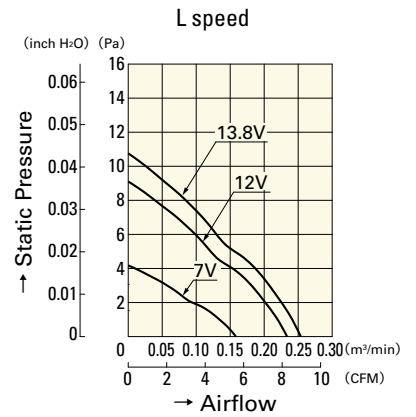
Airflow - Static Pressure Characteristics



9GA0612G9001



9GA0612H9001



9GA0612L9001

60mm sq.

San Ace 60



Model no. 9GA0624P7G01 is not TÜV certified.

General Specifications

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

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 [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C (70,000/40°C)
			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

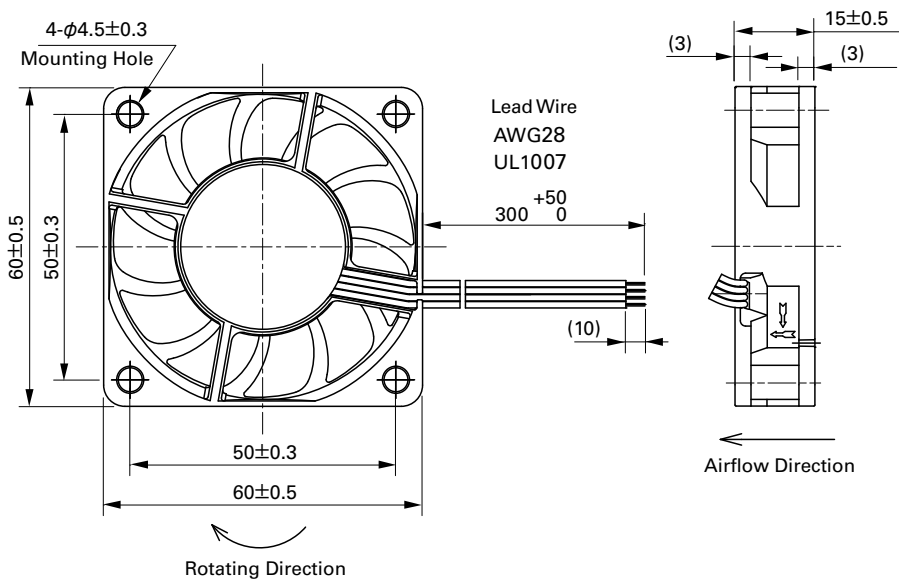
The following nos. have pulse sensors and ribs.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C (70,000/40°C)
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		
9GA0612L701			0.03	0.36	2,800	0.31 10.9	18 0.072	17		60,000/60°C

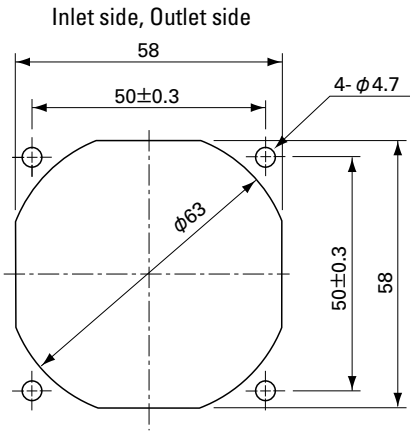
Other sensor specifications are available as options. Please refer to the index (pp. 504 to 505).

Dimensions (unit: mm)

(With PWM control function · With pulse sensor)

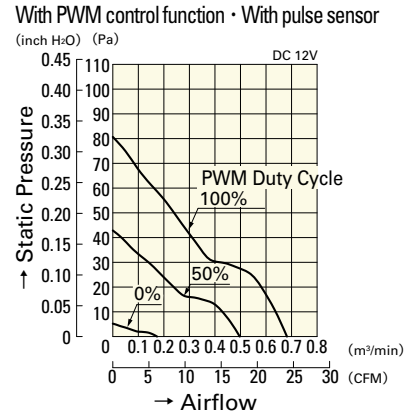


Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Airflow - Static Pressure Characteristics

PWM Duty Cycle



9GA0612P7G01

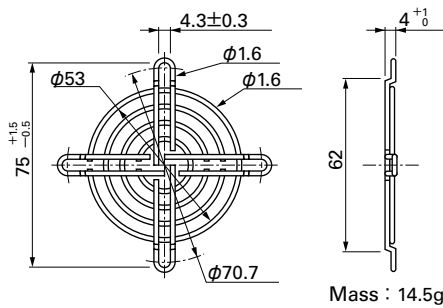
Options (unit: mm)

Finger Guards

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

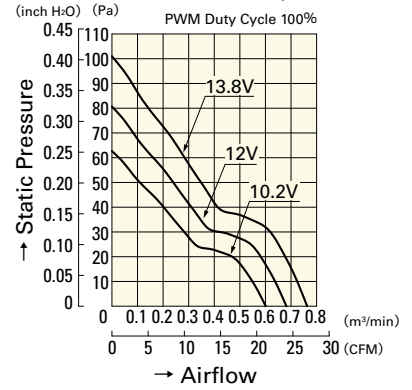
Color

Inlet side, Outlet side



Operating Voltage Range

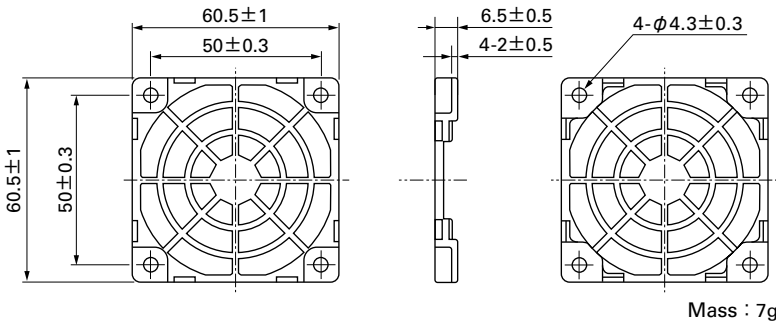
With PWM control function · With pulse sensor



9GA0612P7G01

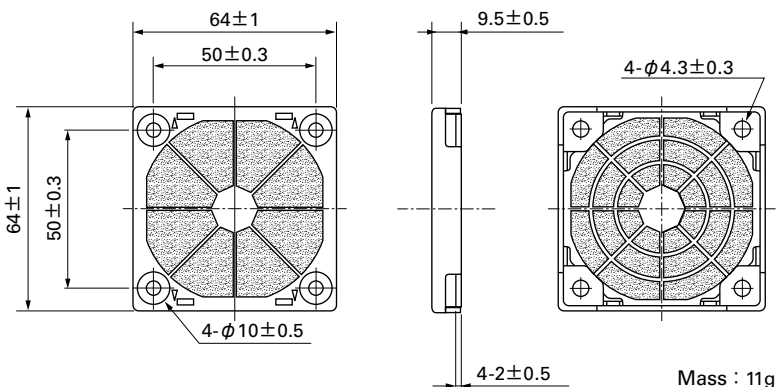
Resin Finger Guards

Model : 109-1003G



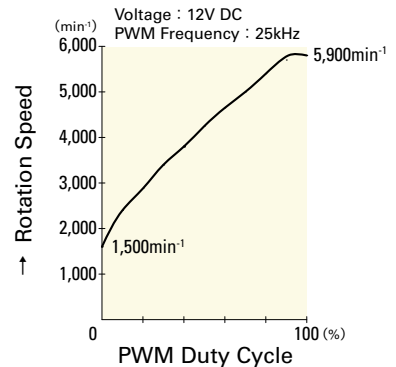
Resin Filter Kits

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



PWM Duty - Speed Characteristics Example

With PWM control function · With pulse sensor



9GA0612P7G01

60mm sq.

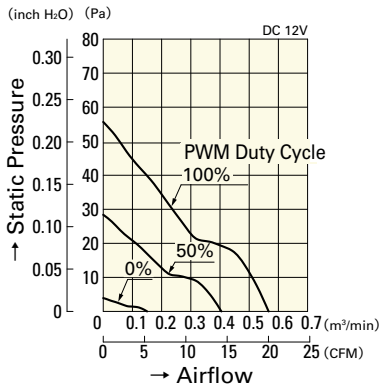
San Ace 60

60×60×15mm [Mass : 50g]

Airflow - Static Pressure Characteristics

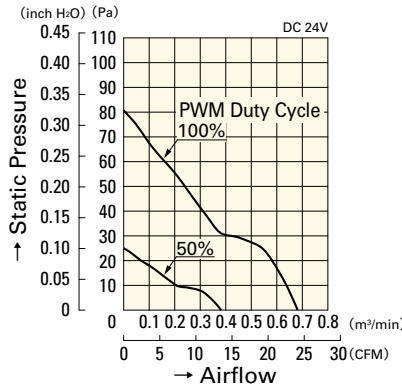
PWM Duty Cycle

With PWM control function · With pulse sensor



9GA0612P7H01

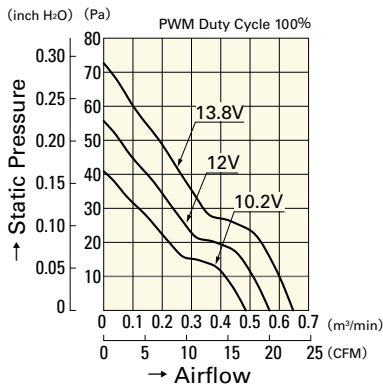
With PWM control function · With pulse sensor



9GA0624P7G01

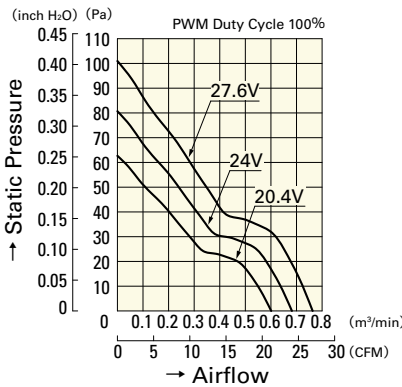
Operating Voltage Range

With PWM control function · With pulse sensor



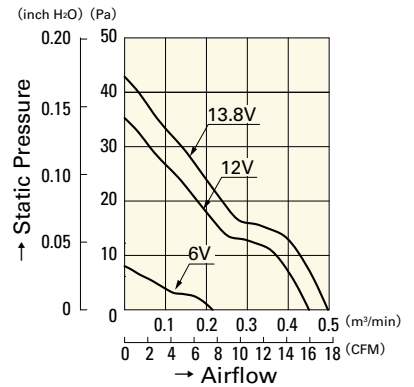
9GA0612P7H01

With PWM control function · With pulse sensor



9GA0624P7G01

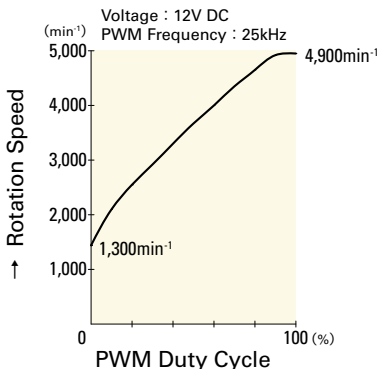
With pulse sensor



9GA0612M701

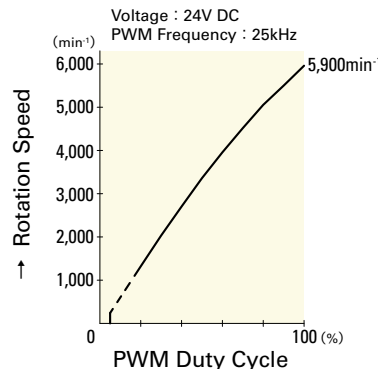
PWM Duty - Speed Characteristics Example

With PWM control function · With pulse sensor

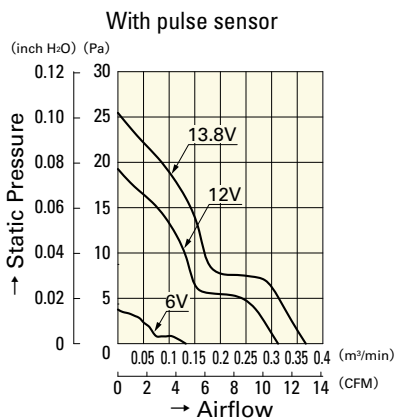


9GA0612P7H01

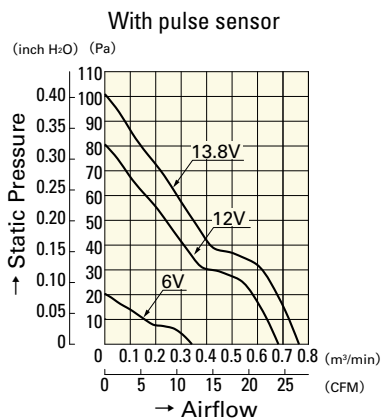
With PWM control function · With pulse sensor



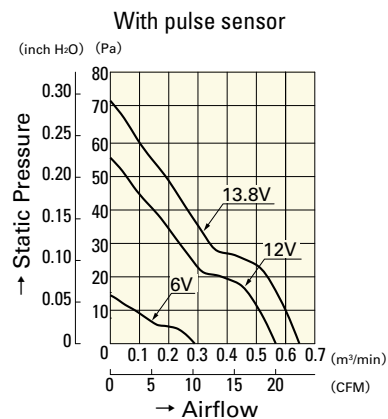
9GA0624P7G01



9GA0612L701



9GA0612G701



9GA0612H701

60mm 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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

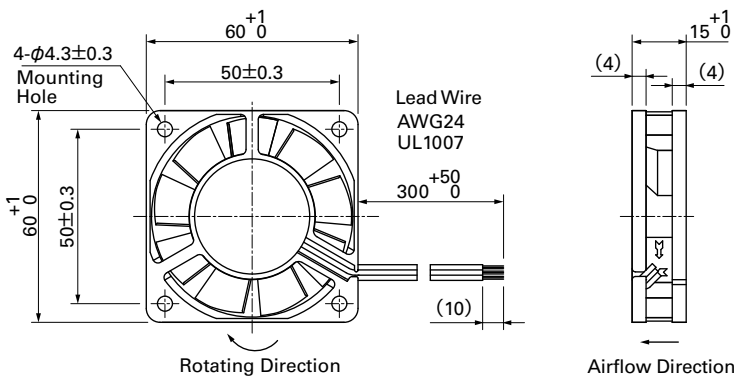
60×60×15mm (Mass : 60g) 9Ptype

Specifications The following nos. have pulse sensors and ribs.

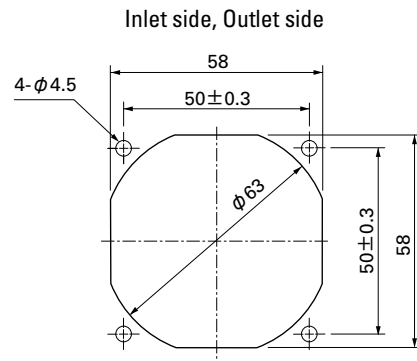
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
109P0605H701	5	4.5 to 5.5	0.26	1.30	4,100	0.40 14.1	38.2 0.153	32	-20 to +70	60,000/60°C
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°C
109P0612S701			0.15	1.80	5,000	0.48 17.0	58.8 0.236	36		
109P0612H701		7 to 13.8	0.09	1.08	4,100	0.40 14.1	38.2 0.153	32		
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		
109P0624S701	0.08			1.92	5,000	0.48 16.9	58.8 0.236	36		
109P0624H701	0.06			1.44	4,100	0.40 14.1	38.2 0.153	32		
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)

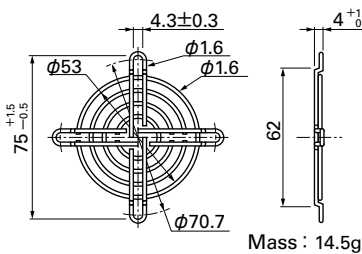


Options (unit: mm)

Finger Guards

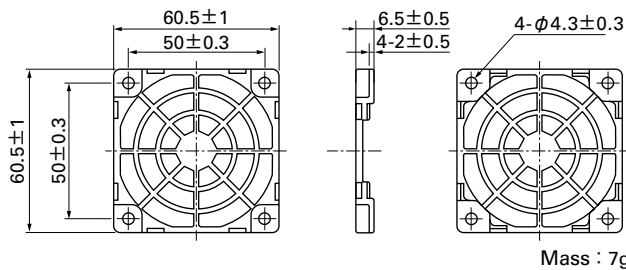
Model : 109-139E Surface treatment : Nickel-chrome plating (silver)
: 109-139H : Cation electropainting (black)

Inlet side, Outlet side



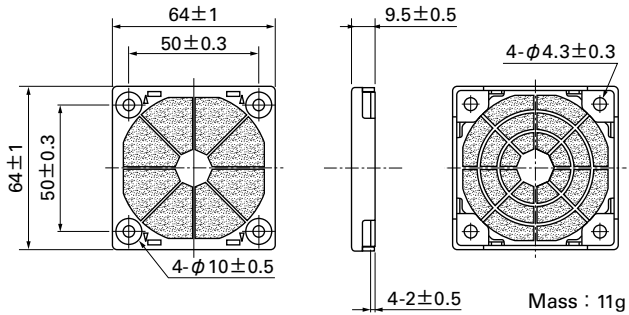
Resin Finger Guards

Model : 109-1003G

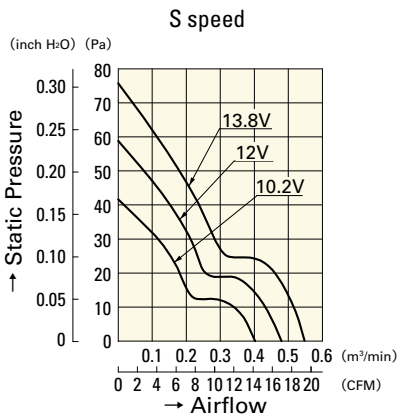


Resin Filter Kits

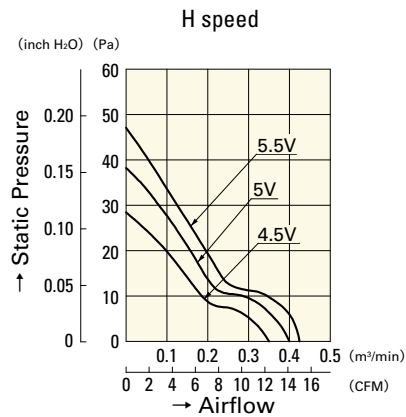
Model : 109-1003F13 (13PPI), 109-1003F20 (20PPI)
 : 109-1003F30 (30PPI), 109-1003F40 (40PPI)



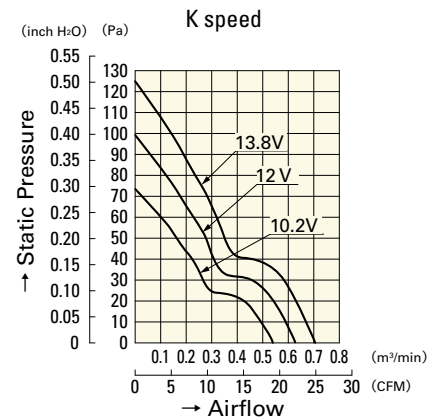
Airflow - Static Pressure Characteristics



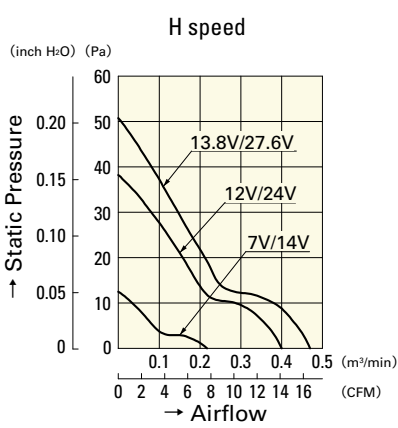
109P0612S701



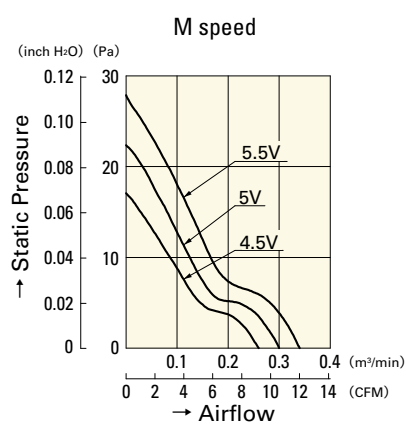
109P0605H701



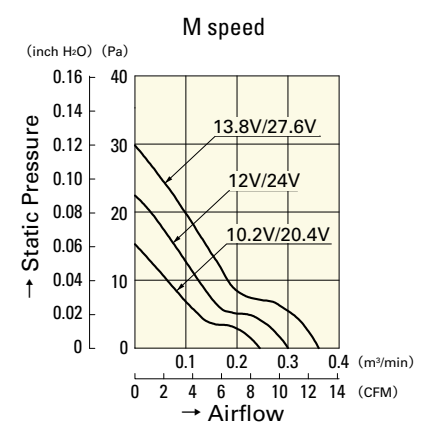
109P0612K701



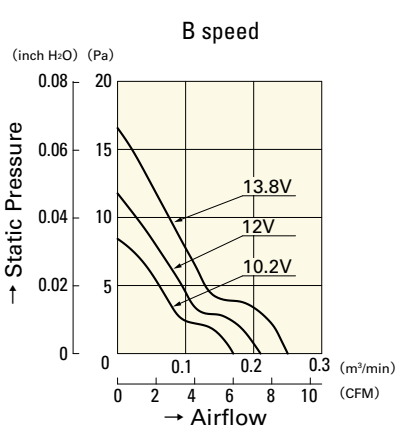
109P0612H701
109P0624H701



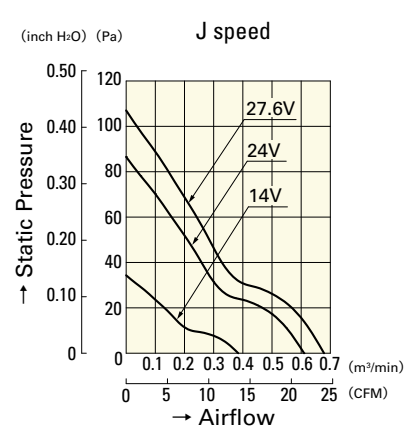
109P0605M701



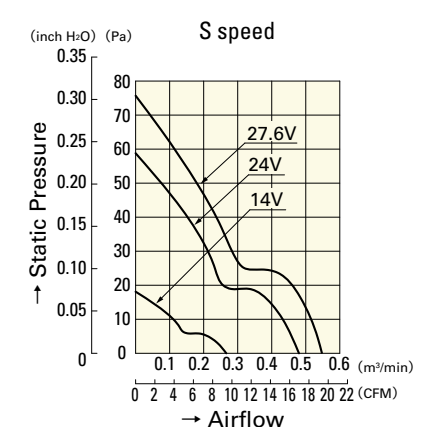
109P0612M701
109P0624M701



109P0612B701



109P0624J701



109P0624S701

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°C ,
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°C to +70°C (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 [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C (70,000/40°C)
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

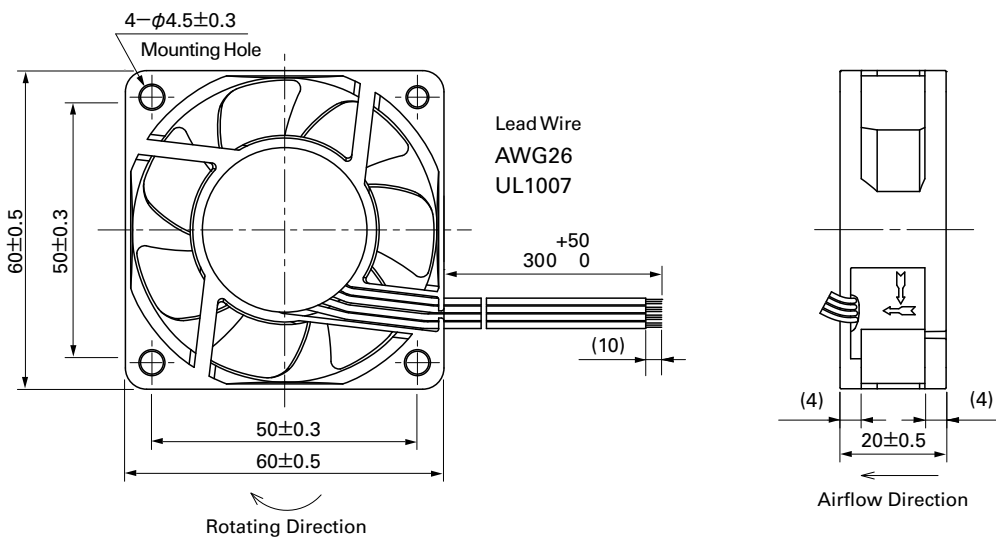
The following nos. have pulse sensors and ribs.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C
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		

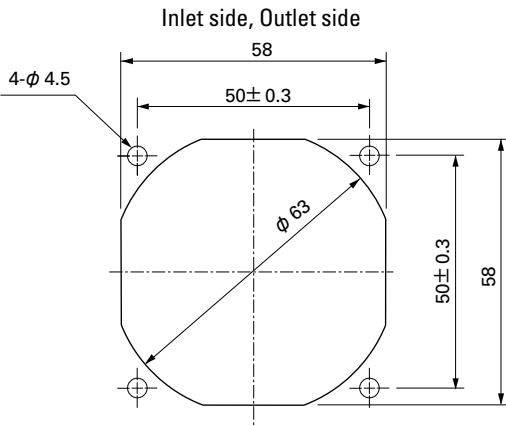
Other sensor specifications are available as options. Please refer to the index (pp. 504 to 505).

Dimensions (unit: mm)

(With PWM control function · With pulse sensor)



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



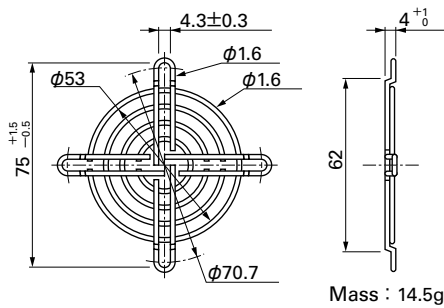
Options (unit: mm)

Finger Guards

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

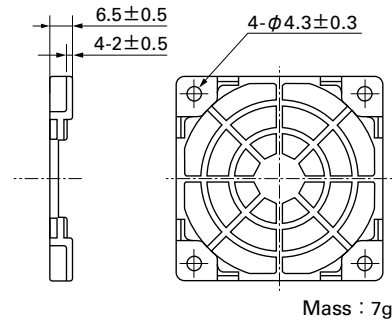
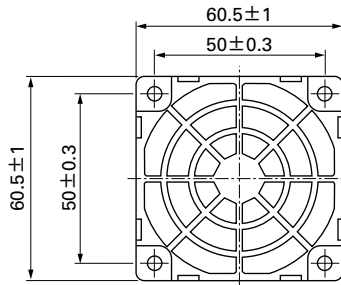
Color

Inlet side, Outlet side



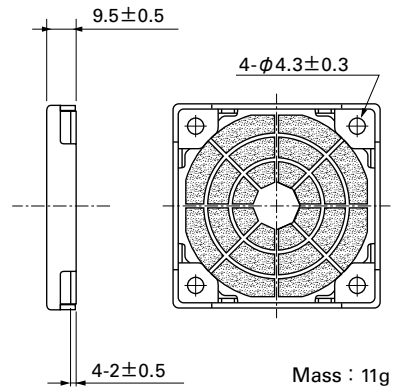
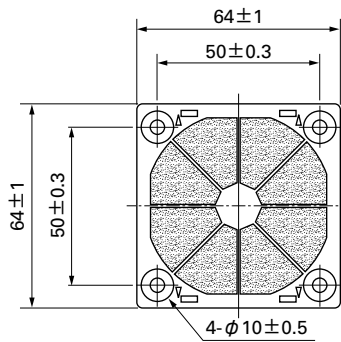
Resin Finger Guards

Model : 109-1003G



Resin Filter Kits

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



60mm sq.

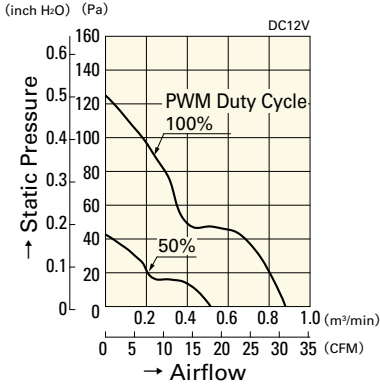
San Ace 60

60×60×20mm [Mass : 70g]

Airflow - Static Pressure Characteristics

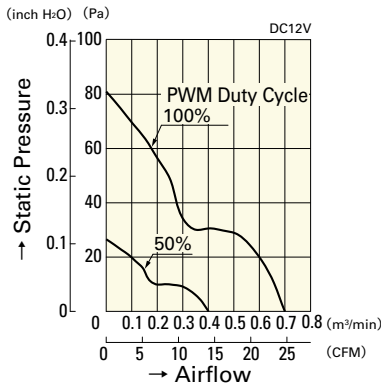
PWM Duty Cycle

With PWM control function · With pulse sensor



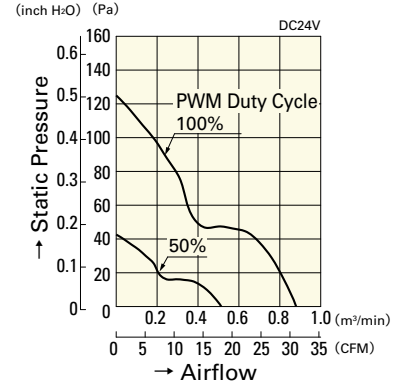
9GA0612P6G001

With PWM control function · With pulse sensor



9GA0612P6S001

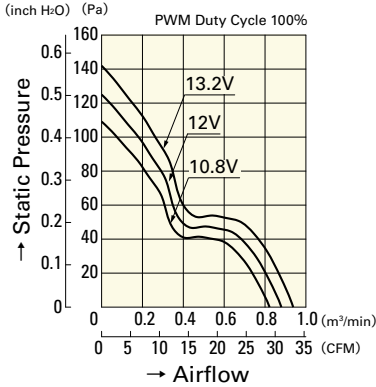
With PWM control function · With pulse sensor



9GA0624P6G001

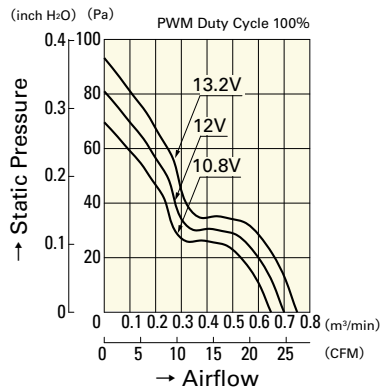
Operating Voltage Range

With PWM control function · With pulse sensor



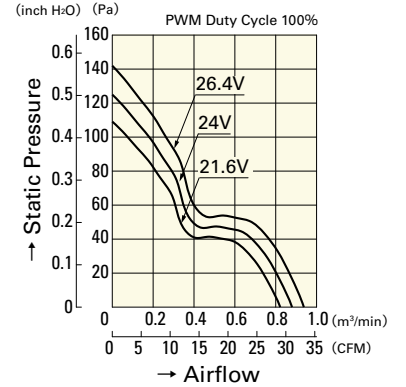
9GA0612P6G001

With PWM control function · With pulse sensor



9GA0612P6S001

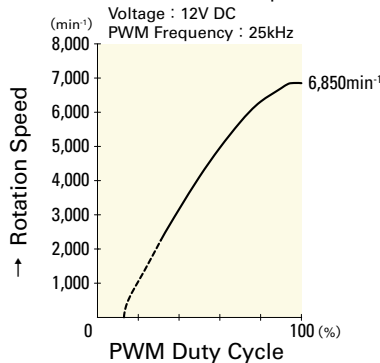
With PWM control function · With pulse sensor



9GA0624P6G001

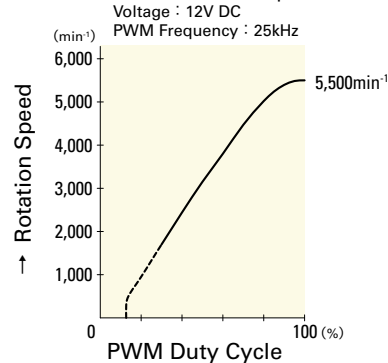
PWM Duty - Speed Characteristics Example

With PWM control function · With pulse sensor



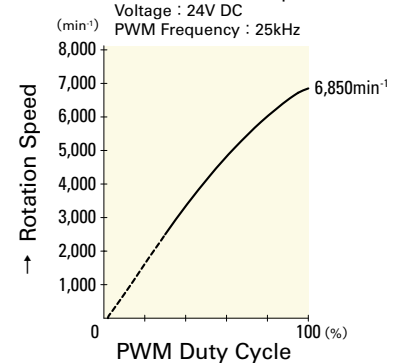
9GA0612P6G001

With PWM control function · With pulse sensor



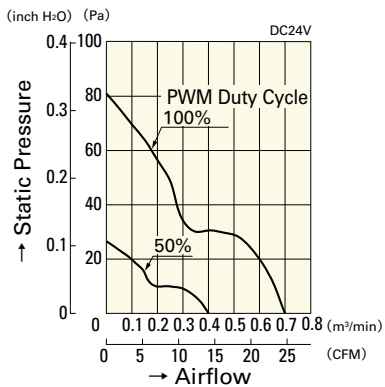
9GA0612P6S001

With PWM control function · With pulse sensor



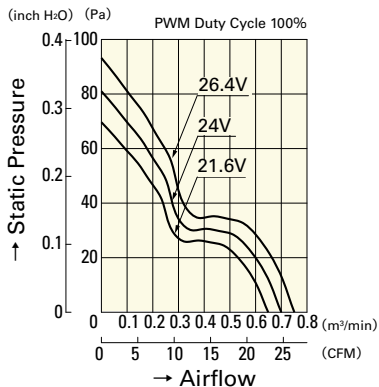
9GA0624P6G001

With PWM control function · With pulse sensor



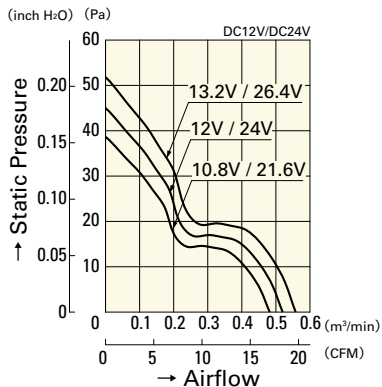
9GA0624P6S001

With PWM control function · With pulse sensor



9GA0624P6S001

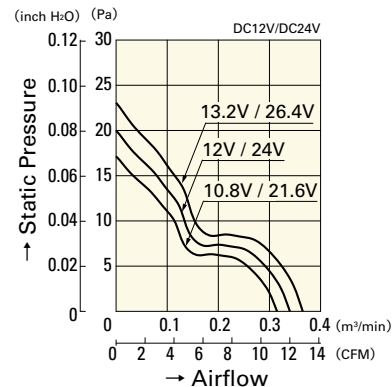
With pulse sensor



9GA0612H6001

9GA0624H6001

With pulse sensor

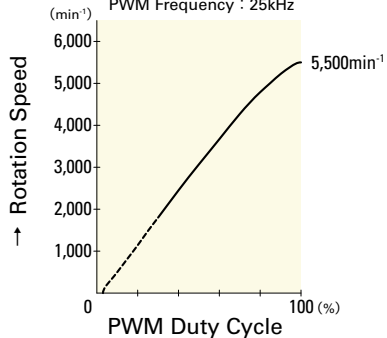


9GA0612M6001

9GA0624M6001

With PWM control function · With pulse sensor

Voltage : 24V DC
PWM Frequency : 25kHz



9GA0624P6S001

60mm 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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

60×60×20mm (Mass : 90g) **9P** type

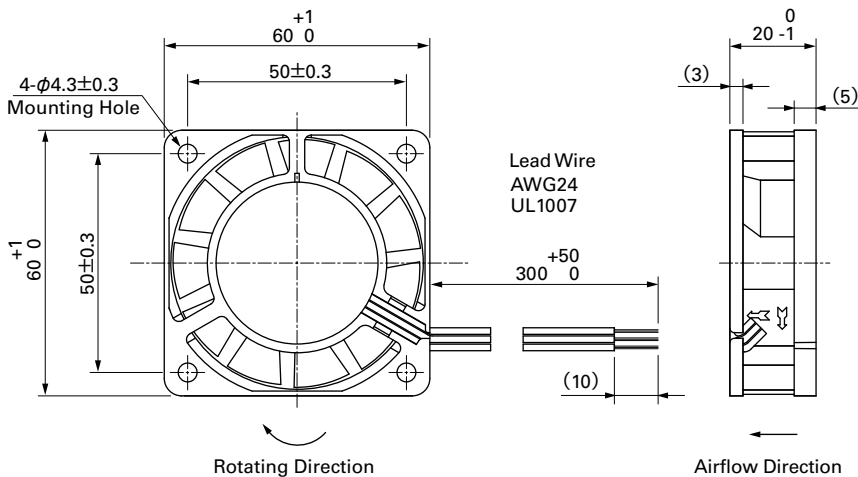
Specifications

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

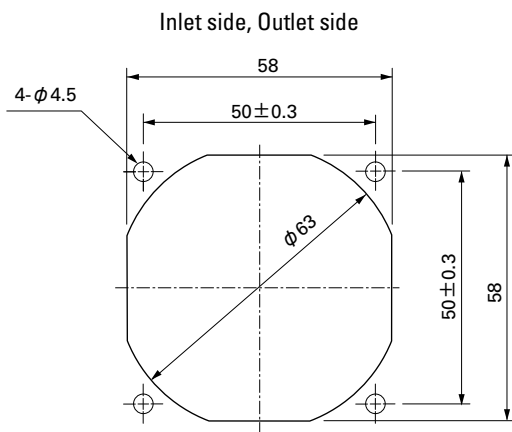
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
109P0612W601	12	6 to 16	0.13	1.56	4,200	0.42 14.8	31.8 0.128	31	-20 to +70	60,000/60°C
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		
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°C

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)



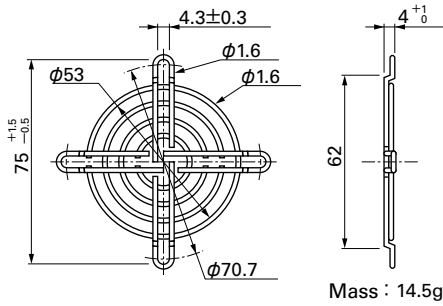
Options (unit: mm)

Finger Guards

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

Color

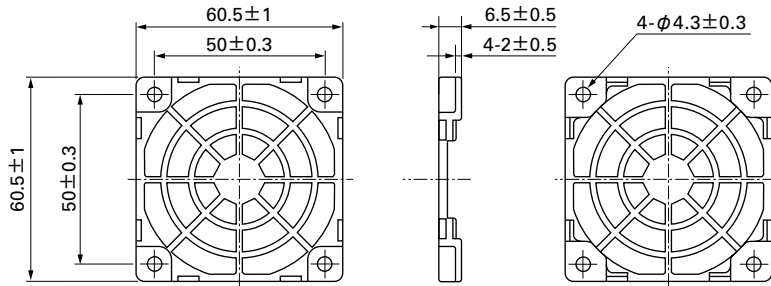
Inlet side, Outlet side



Mass : 14.5g

Resin Finger Guards

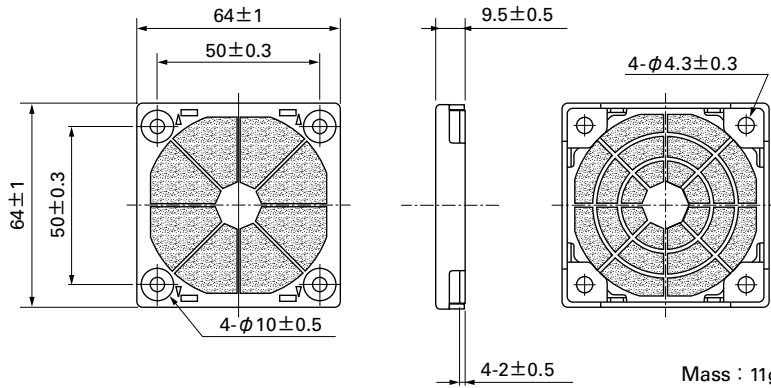
Model : 109-1003G



Mass : 7g

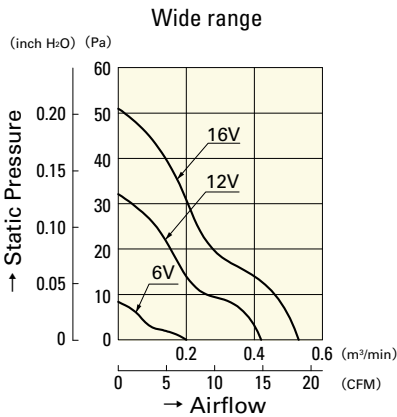
Resin Filter Kits

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

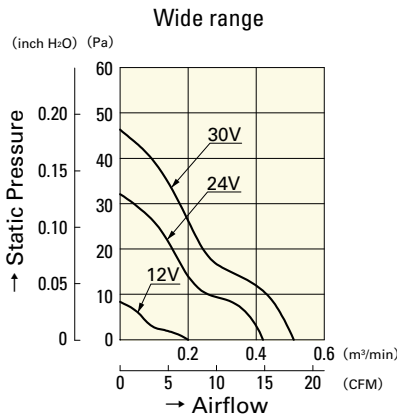


Mass : 11g

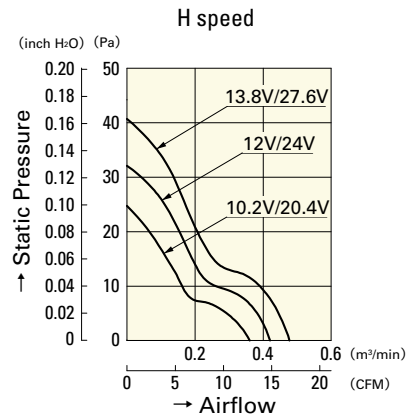
Airflow - Static Pressure Characteristics



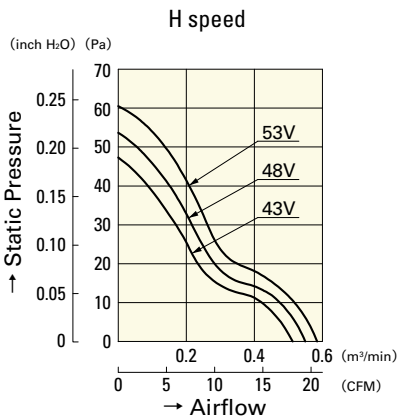
109P0612W601



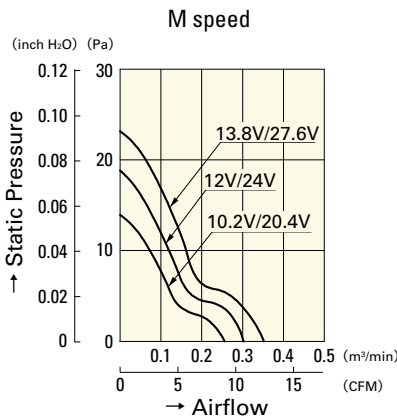
109P0624W601



109P0612H601
109P0624H601



109P0648H601



109P0612M601
109P0624M601

60mm 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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

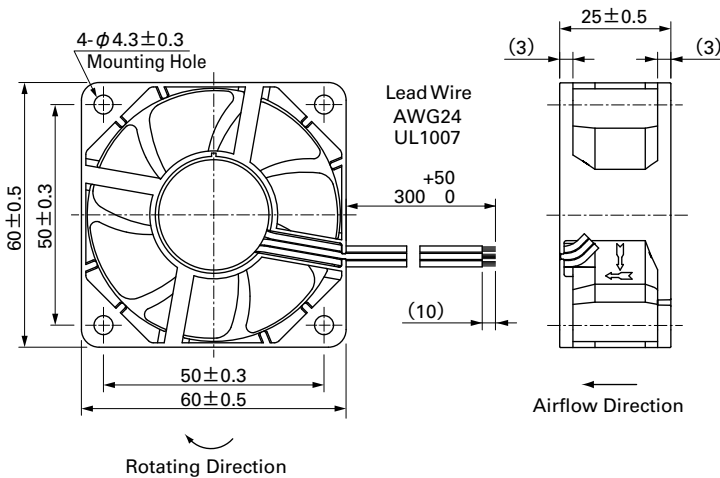
60×60×25mm (Mass : 55g) 9S type Silent Fan

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

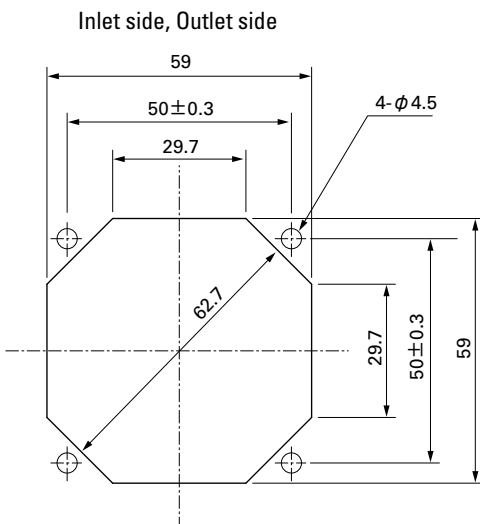
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9S0612S401	12	5.0 to 13.8	0.20	2.40	5,000	0.74 26.1	65.7 0.26	31	-10 to +70	40,000/60°C
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)

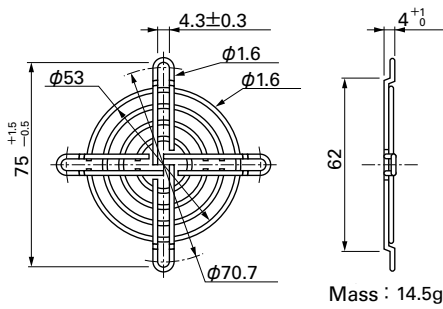


Options (unit: mm)

Finger Guards

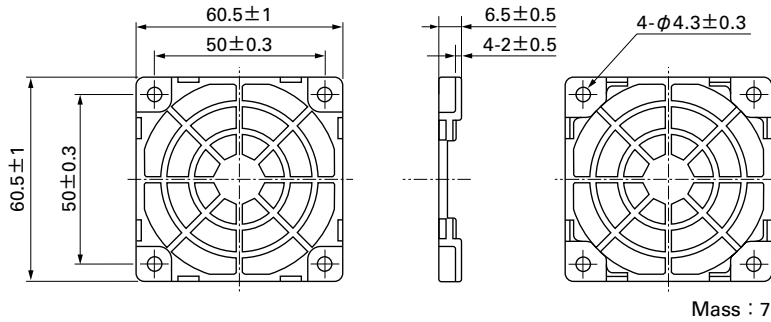
Model : 109-139E Surface treatment : Nickel-chrome plating (silver) Color
 : 109-139H : Cation electropainting (black)

Inlet side, Outlet side



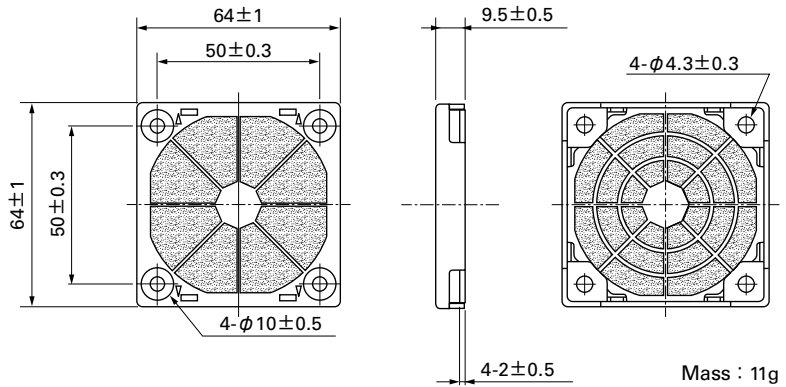
Resin Finger Guards

Model : 109-1003G

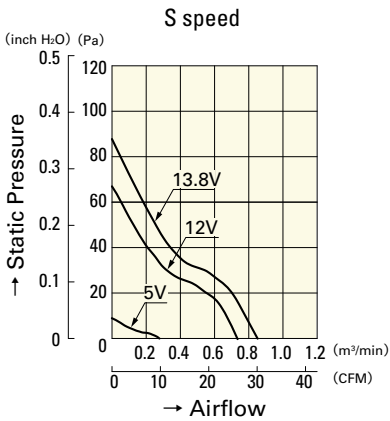


Resin Filter Kits

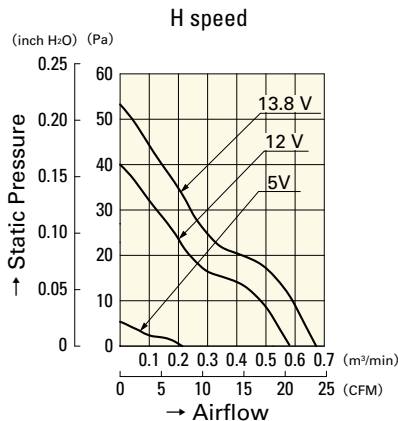
Model : 109-1003F13 (13PPI), 109-1003F20 (20PPI)
 : 109-1003F30 (30PPI), 109-1003F40 (40PPI)



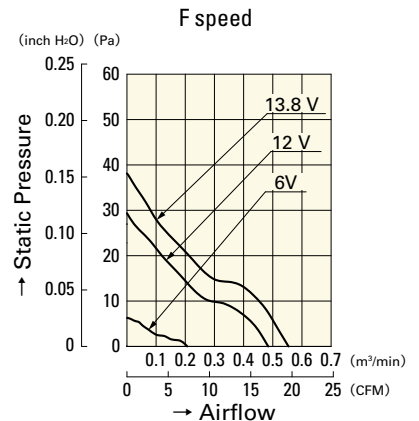
Airflow - Static Pressure Characteristics



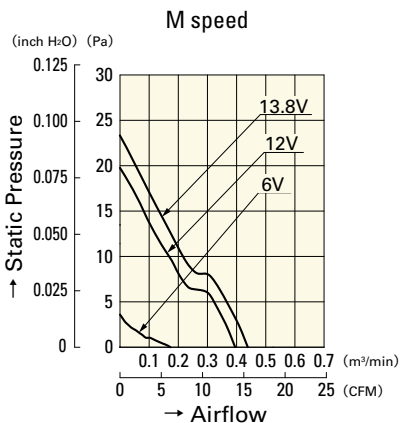
9S0612S401



9S0612H401



9S0612F401



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

60×60×25mm (Mass : 90g) **9G type**

Specifications

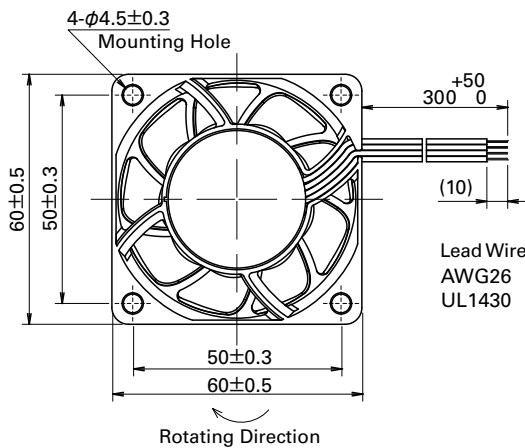
The following nos. **have PWM controls, pulse sensors, and ribs.** For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle* [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [InchH ₂ O]	SPL [dB(A)]	Operating Temperature Range [°C]	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°C (70,000/40°C)
			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		

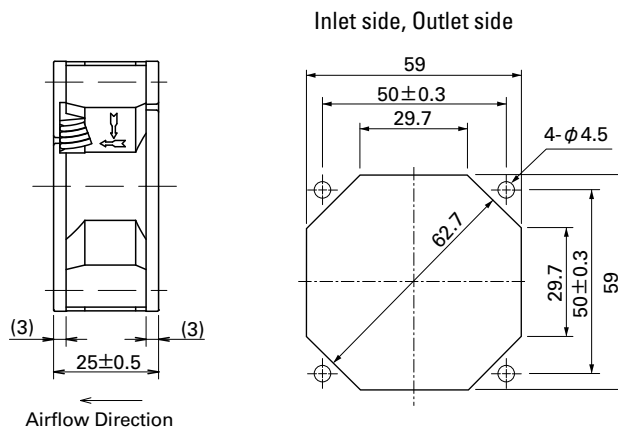
※PWM Frequency : 25kHz

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)

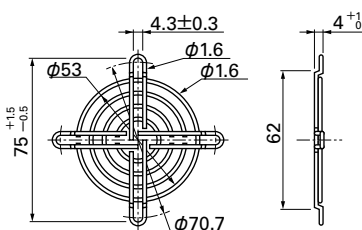


Options (unit: mm)

Finger Guards

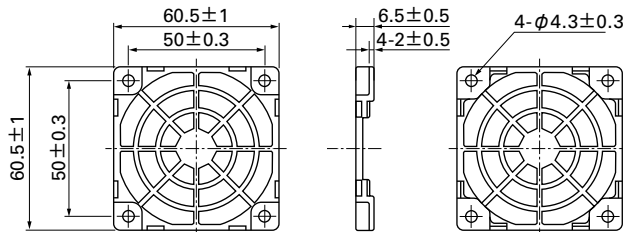
Model : 109-139E Surface treatment : Nickel-chrome plating (silver)
: 109-139H : Cation electropainting (black)

Inlet side, Outlet side



Resin Finger Guards

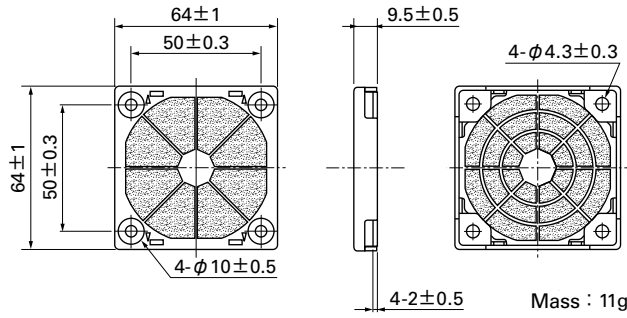
Model : 109-1003G



Options (unit: mm)

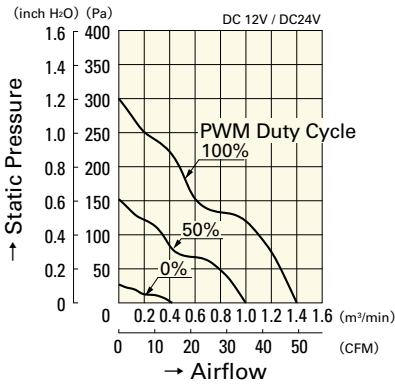
Resin Filter Kits

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

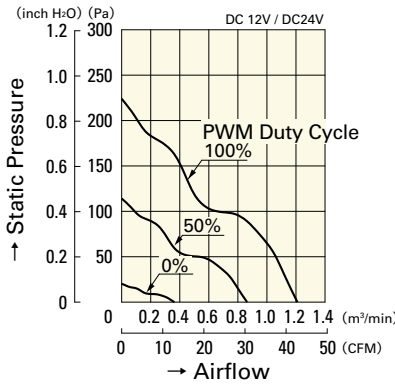


Airflow - Static Pressure Characteristics

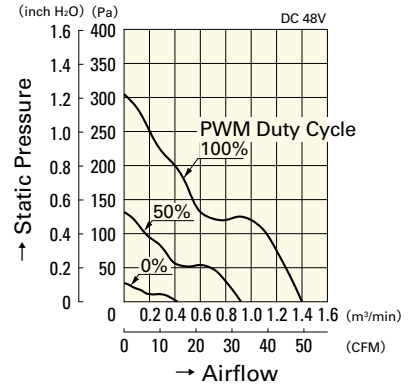
PWM Duty Cycle



9G0612P4S001
9G0624P4S001

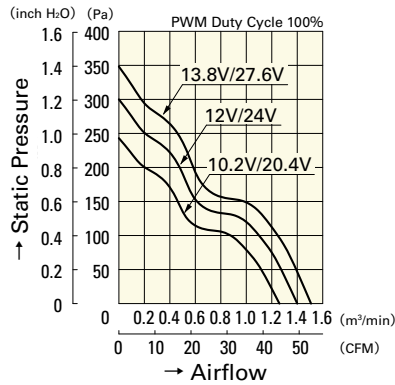


9G0612P4H001
9G0624P4H001

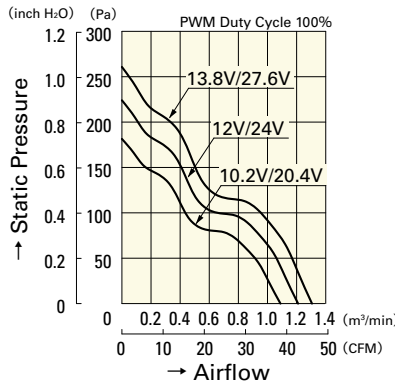


9G0648P4S001

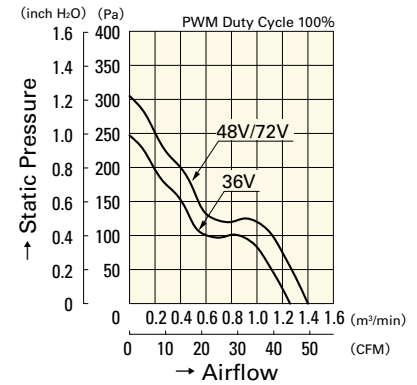
Operating Voltage Range



9G0612P4S001
9G0624P4S001

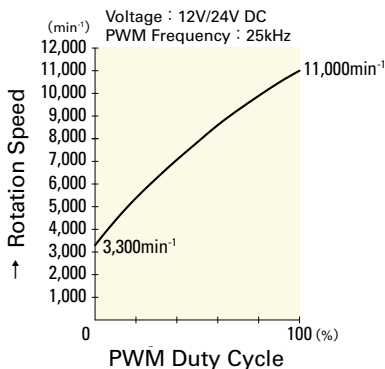


9G0612P4H001
9G0624P4H001

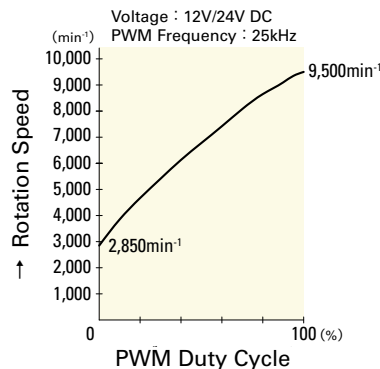


9G0648P4S001

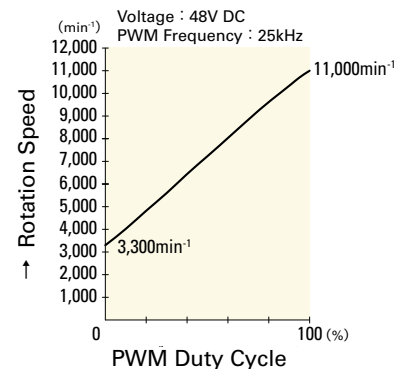
PWM Duty - Speed Characteristics Example



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

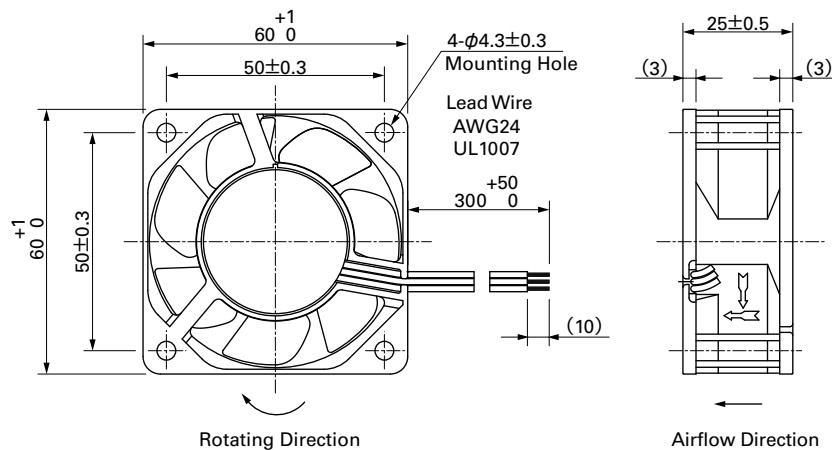
60×60×25mm (Mass : 90g) **9R** type

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 [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C	
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°C	
109R0612G401			0.24	2.88	5,600	0.78 27.5	87.3 0.351	39	-20 to +70		
109R0612D401		10.2 to 13.8	0.21	2.52	5,150	0.72 25.4	73.5 0.295	37	-20 to +70		
109R0612S401			6 to 13.8	0.17	2.04	4,600	0.65 23.0	56.8 0.228	33		-20 to +70
109R0612H401				0.11	1.32	3,800	0.53 18.7	40.1 0.161	28		-20 to +70
109R0612F401		7 to 13.8	6 to 13.8	0.09	1.08	3,200	0.44 15.5	29.4 0.118	24		-20 to +70
109R0612M401				0.06	0.72	2,600	0.36 12.7	19.6 0.079	20		-20 to +70
109R0624J401				24	21.6 to 26.4	0.24	5.76	7,600	1.06 37.1		155.0 0.622
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	-20 to +70		
109R0624S401		0.08	1.92		4,600	0.65 23.0	56.8 0.228	33	-20 to +70		
109R0624H401		0.06	1.44		3,800	0.53 18.7	40.2 0.161	28	-20 to +70		
109R0624F401	14 to 27.6	14 to 27.6	0.05		1.20	3,200	0.44 15.5	29.4 0.118	24	-20 to +70	
109R0624M401			0.04		0.96	2,600	0.36 12.7	19.6 0.079	20	-20 to +70	
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	
109R0648G401		43 to 53	0.07	3.36	5,600	0.78 27.5	87.3 0.351	39	-20 to +70		
109R0648H401		40 to 53	0.04	1.92	3,800	0.53 18.7	40.2 0.161	28	-20 to +70		

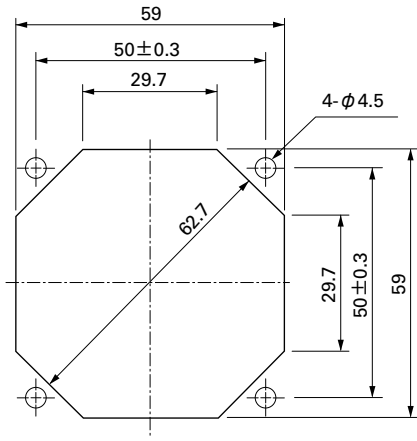
Other sensor specifications are available as options. Please refer to the index (pp. 498 to 499).

Dimensions (unit: mm) (With ribs)



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

Inlet side, Outlet side

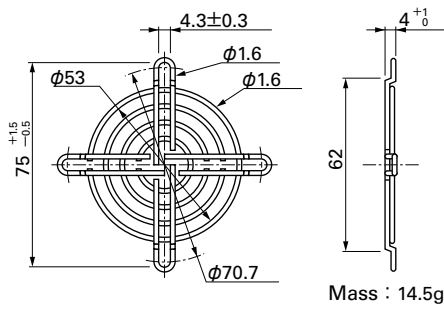


Options (unit: mm)

Finger Guards

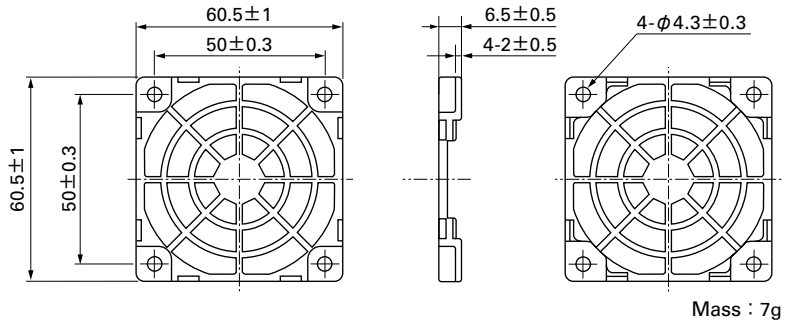
Model : 109-139E Surface treatment : Nickel-chrome plating (silver) Color : 109-139H Cation electropainting (black)

Inlet side, Outlet side



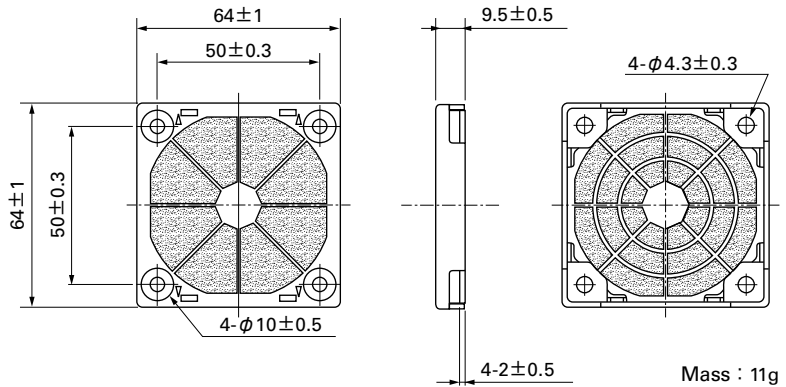
Resin Finger Guards

Model : 109-1003G



Resin Filter Kits

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

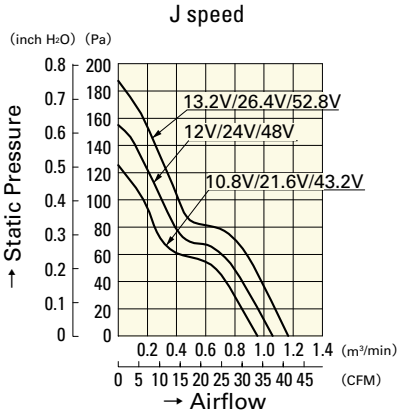


60mm sq.

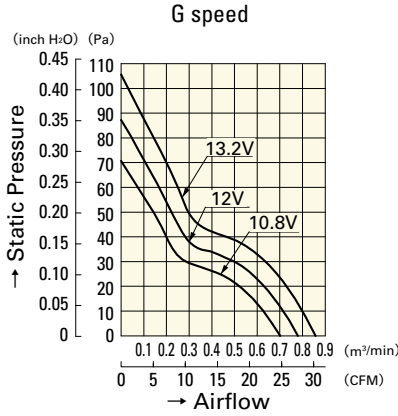
San Ace 60

60×60×25mm [Mass : 90g]

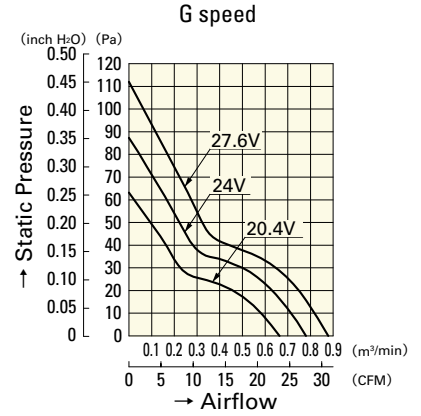
Airflow - Static Pressure Characteristics



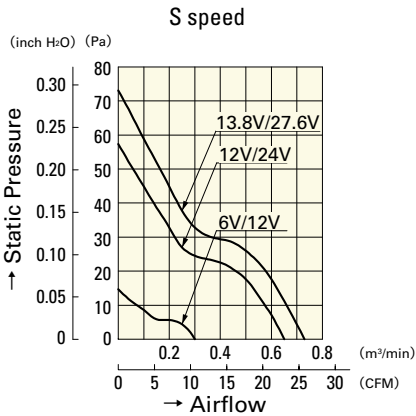
109R0612J401
109R0624J401
109R0648J401



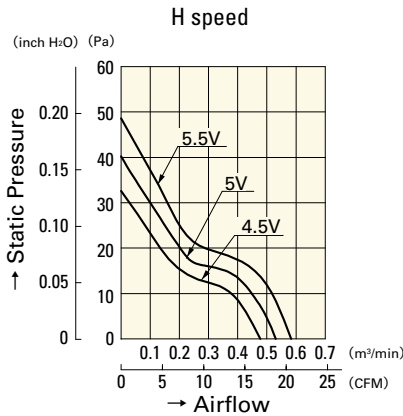
109R0612G401



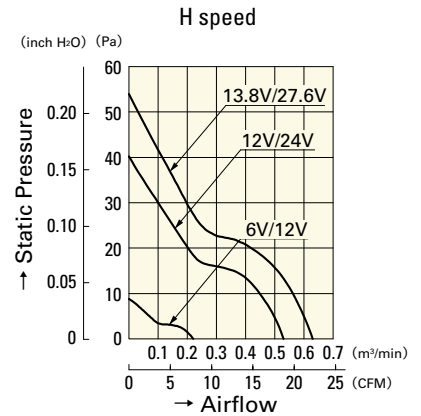
109R0624G401



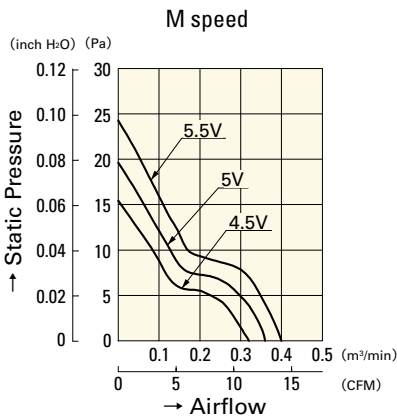
109R0612S401
109R0624S401



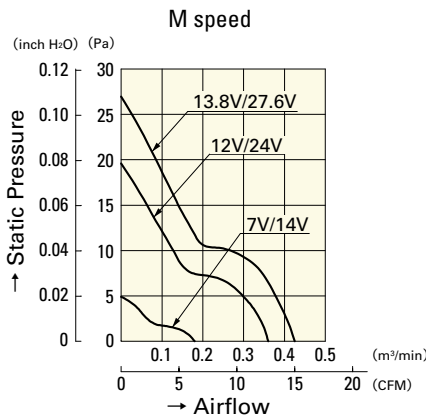
109R0605H401



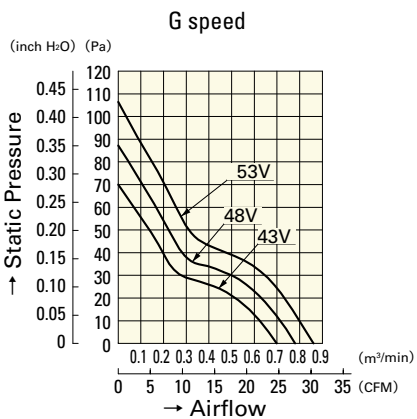
109R0612H401
109R0624H401



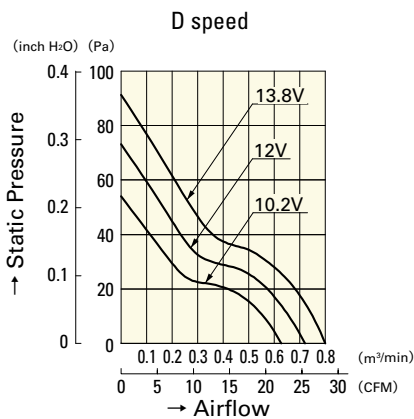
109R0605M401



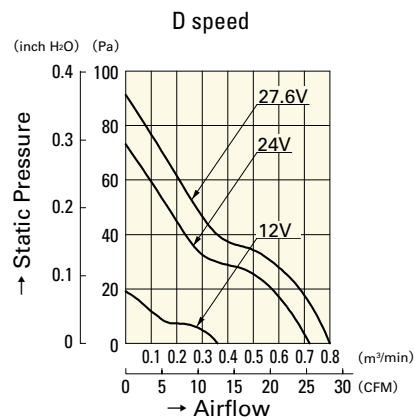
109R0612M401
109R0624M401



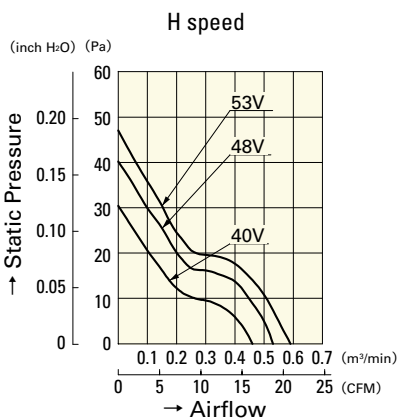
109R0648G401



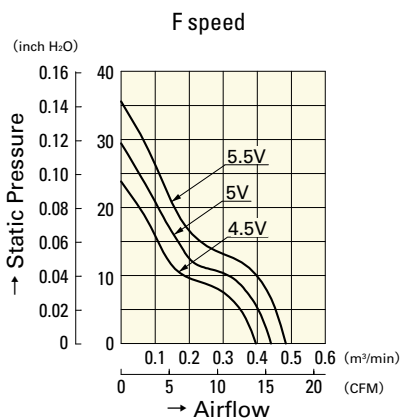
109R0612D401



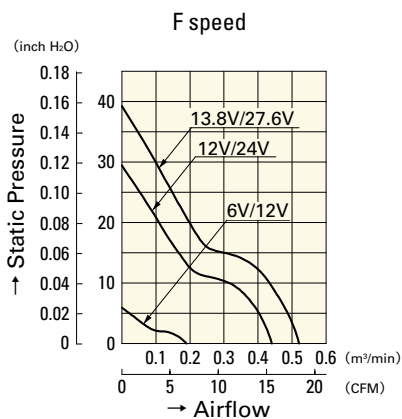
109R0624D401



109R0648H401



109R0605F401



109R0612F401

109R0624F401

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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

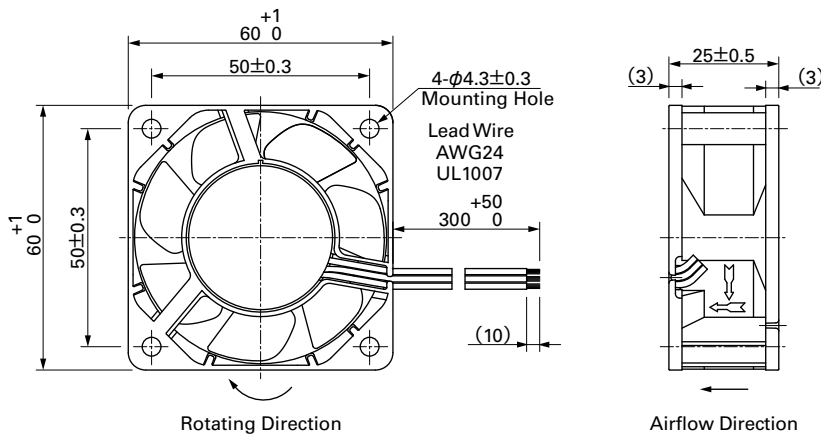
60×60×25mm (Mass : 80g) 9Atype San Cooler

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

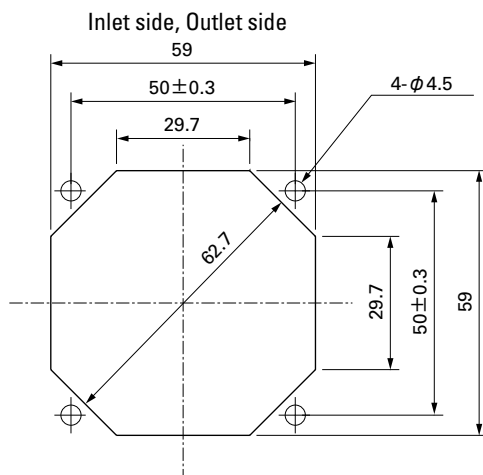
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]		
9A0612G401	12	6 to 13.2	0.24	2.88	5,600	0.78 27.6	87.3 0.351	39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

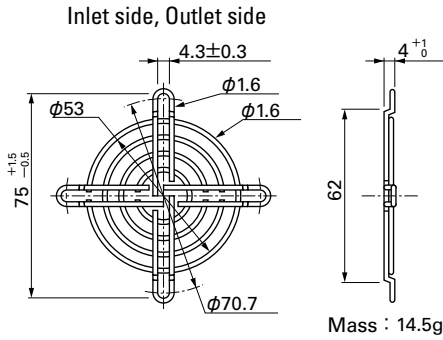


Options (unit: mm)

Finger Guards

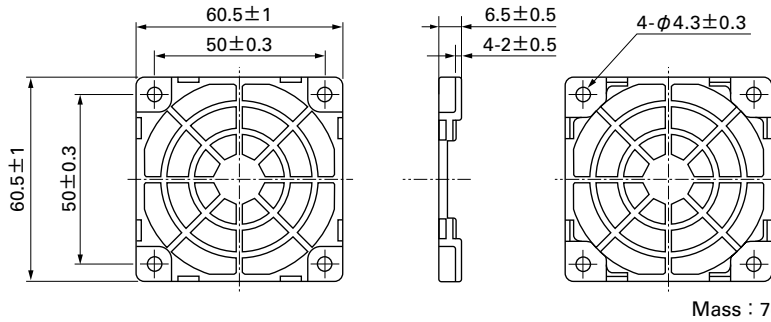
Model : 109-139E Surface treatment : Nickel-chrome plating (silver)
 : 109-139H : Cation electropainting (black)

Color



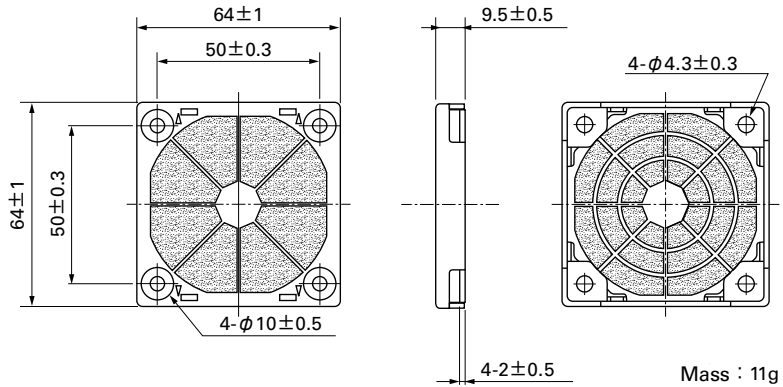
Resin Finger Guards

Model : 109-1003G

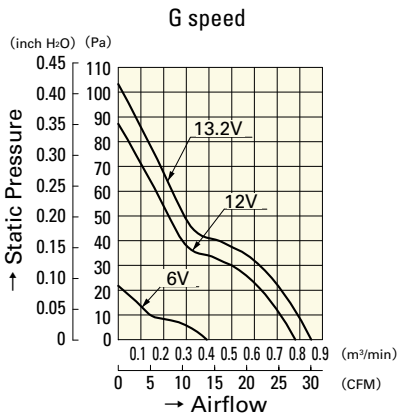


Resin Filter Kits

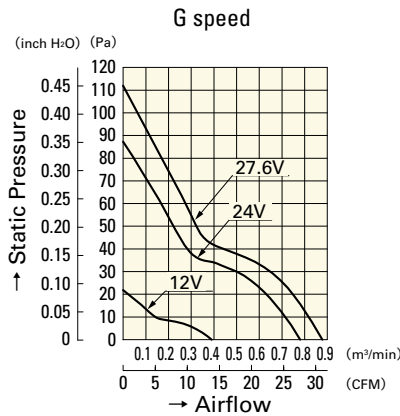
Model : 109-1003F13 (13PPI), 109-1003F20 (20PPI)
 : 109-1003F30 (30PPI), 109-1003F40 (40PPI)



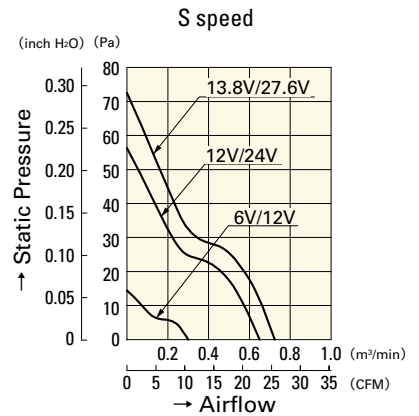
Airflow - Static Pressure Characteristics



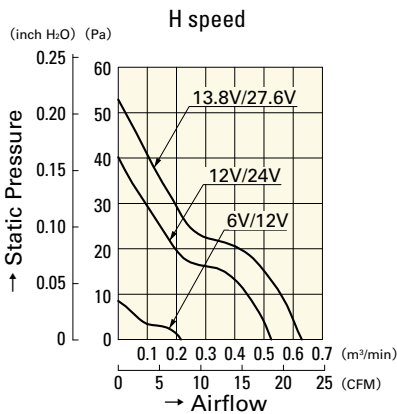
9A0612G401



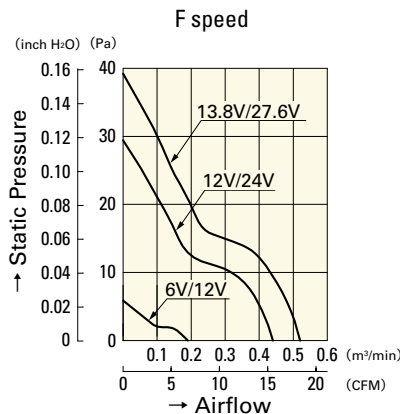
9A0624G401



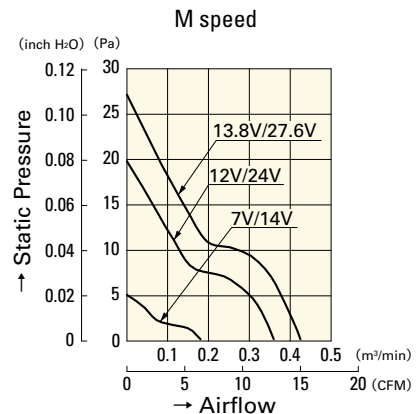
9A0612S401
9A0624S401



9A0612H401
9A0624H401



9A0612F401
9A0624F401



9A0612M401
9A0624M401

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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

60×60×38mm (Mass : 135g) 9HV type

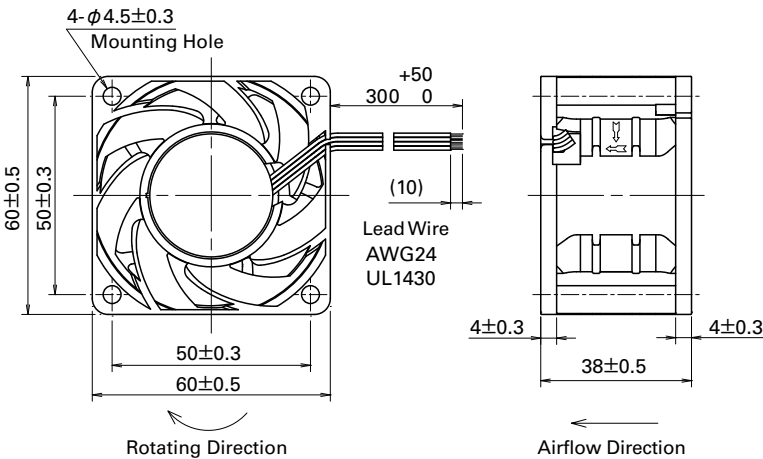
Specifications The following nos. **have PWM controls, pulse sensors, and ribs.** For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle ^{*)} [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [InchH ₂ O]	SPL [dB(A)]	Operating Temperature Range [°C]	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°C (70,000/40°C)
			20	0.17	2.04	5,300	0.43 15.2	102 0.41	34		

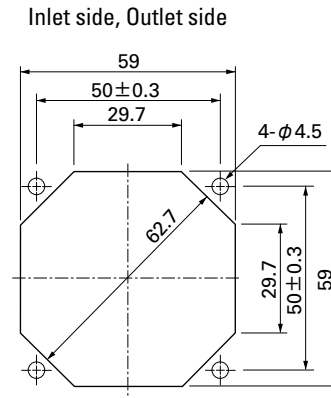
Note: Fan does not rotate when PWM duty cycle is 0%.

*)PWM Frequency : 25kHz

Dimensions (unit: mm) (With ribs)



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

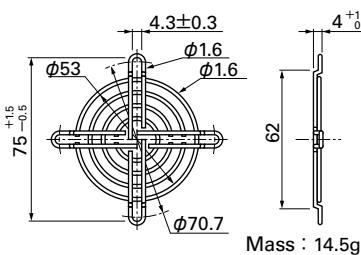


Options (unit: mm)

Finger Guards

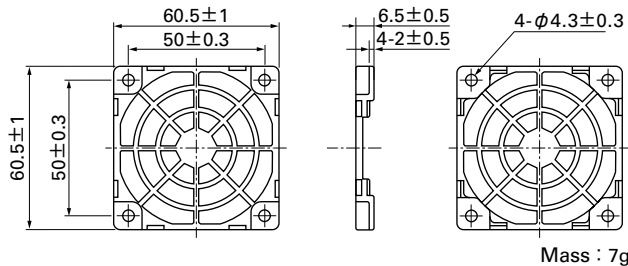
Model : 109-139E Surface treatment : Nickel-chrome plating (silver) Color : 109-139H : Cation electropainting (black)

Inlet side, Outlet side



Resin Finger Guards

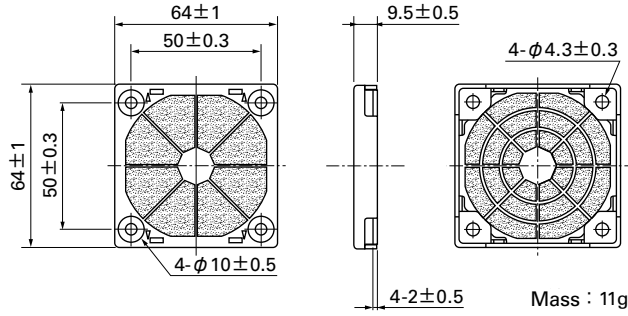
Model : 109-1003G



Options (unit: mm)

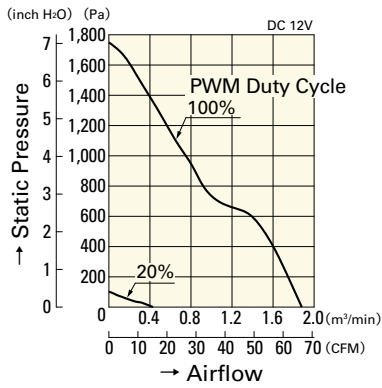
Resin Filter Kits

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



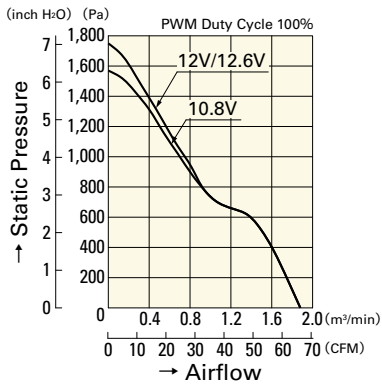
Airflow - Static Pressure Characteristics

PWM Duty Cycle



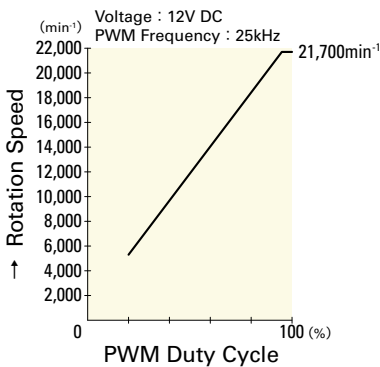
9HV0612P1J001

Operating Voltage Range



9HV0612P1J001

PWM Duty - Speed Characteristics Example



9HV0612P1J001

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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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

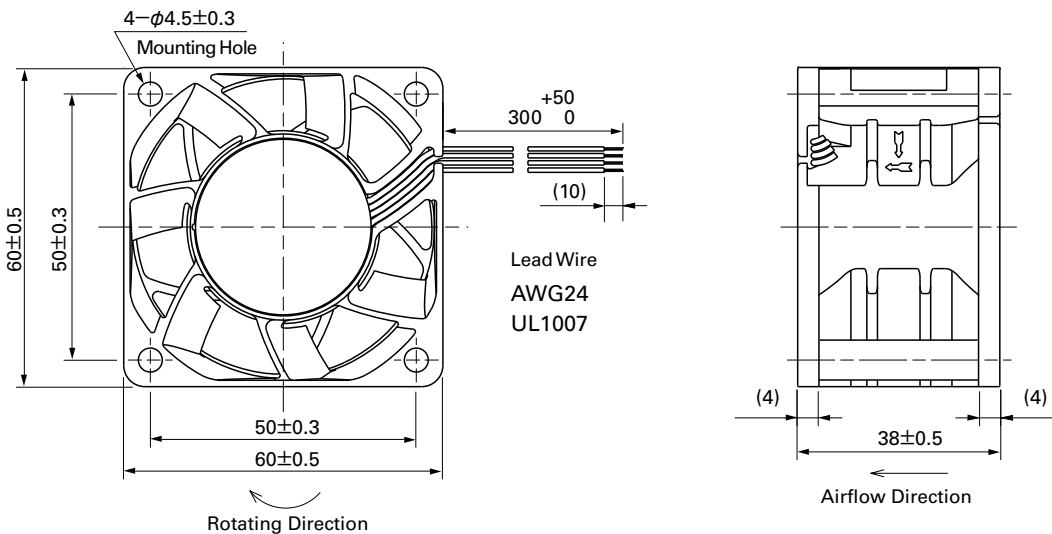
Specifications The following nos. **have PWM controls, pulse sensors, and ribs.** For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle ^{*)} [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [InchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C (70,000/40°C)	
			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		12	10.8 to 13.2	100	0.55	6.60	11,500	1.15 40	375 1.5	52		-20 to +60
				20	0.06	0.72	2,600	0.27 9.5	20 0.08	19		
9GA0612P1K60	10.8 to 13.2		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			

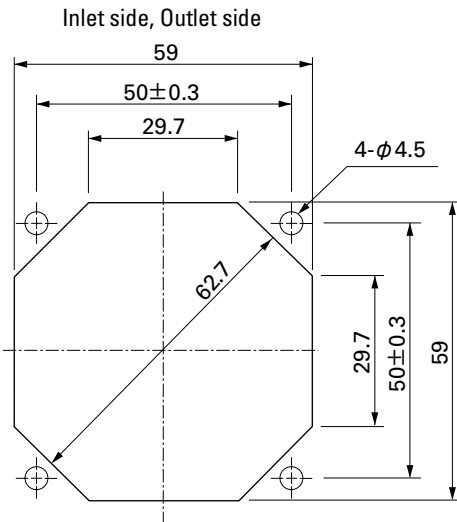
Note: 9GA0612P1J03, 9GA0612P1K03, 9GA0612P1H03, 9GA0624P1J03, 9GA0624P1K03 does not rotate when PWM duty cycle is 0%. *PWM Frequency : 25kHz

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)

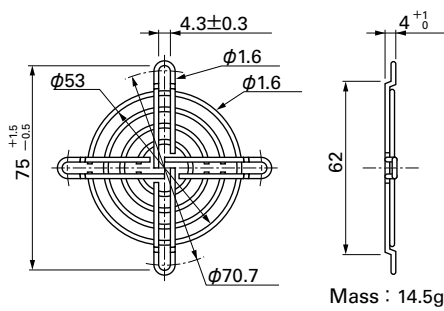


Options (unit: mm)

Finger Guards

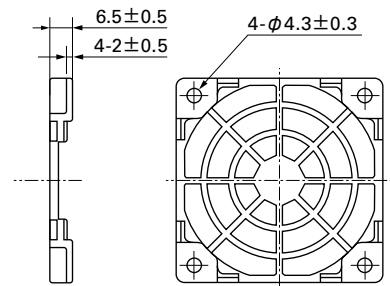
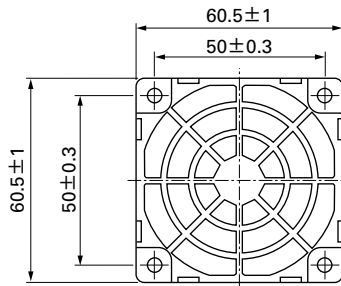
Model : 109-139E Surface treatment : Nickel-chrome plating (silver) Color : 109-139H : Cation electropainting (black)

Inlet side, Outlet side



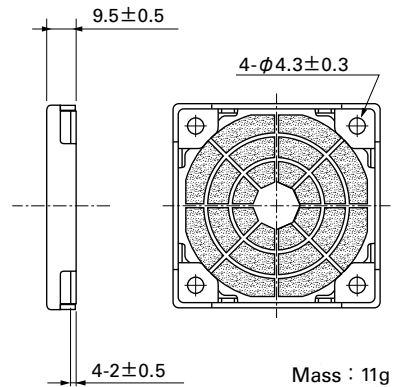
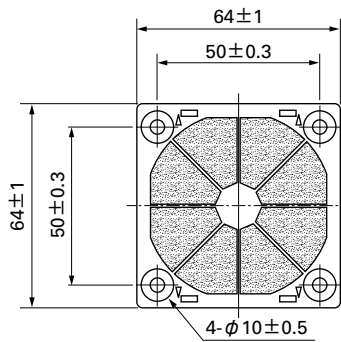
Resin Finger Guards

Model : 109-1003G



Resin Filter Kits

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



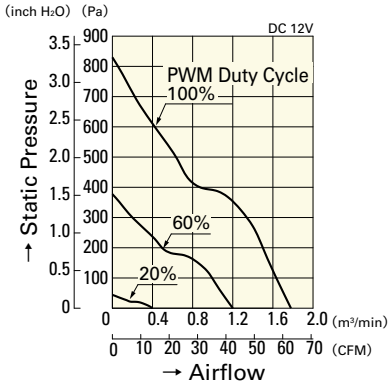
60mm sq.

San Ace 60

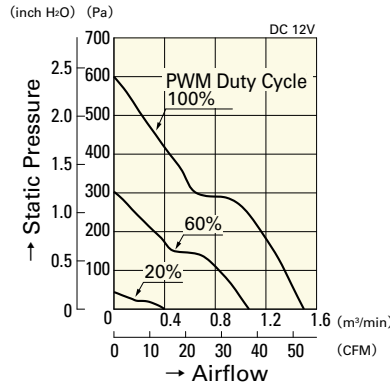
60×60×38mm [Mass : 130g]

Airflow - Static Pressure Characteristics

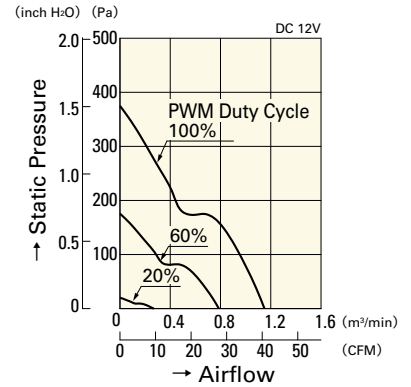
PWM Duty Cycle



9GA0612P1J03

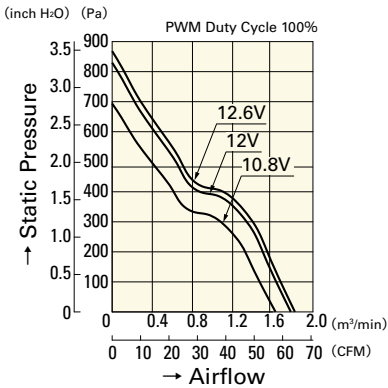


9GA0612P1K03

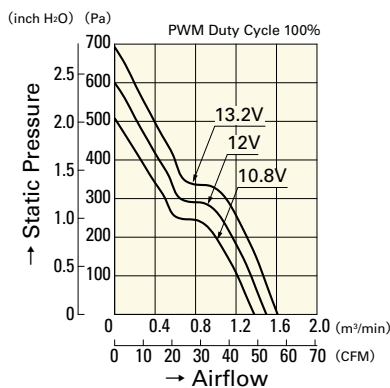


9GA0612P1H03

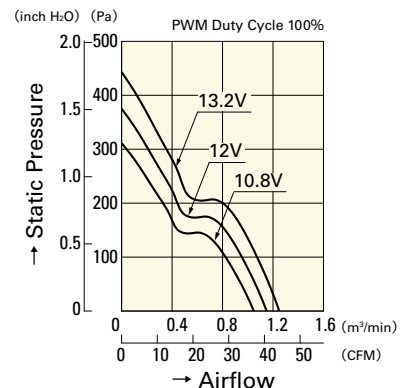
Operating Voltage Range



9GA0612P1J03

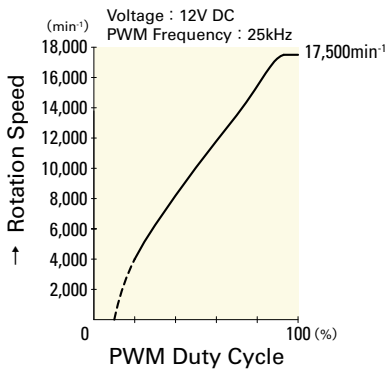


9GA0612P1K03

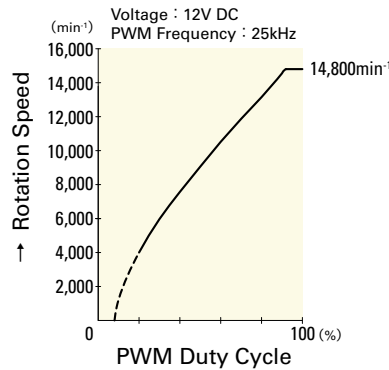


9GA0612P1H03

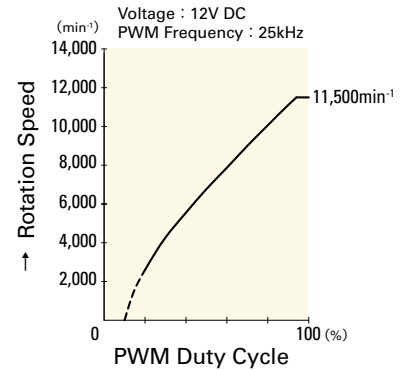
PWM Duty - Speed Characteristics Example



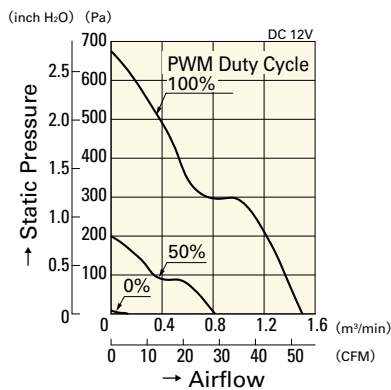
9GA0612P1J03



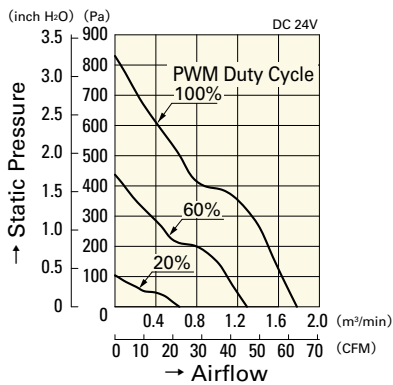
9GA0612P1K03



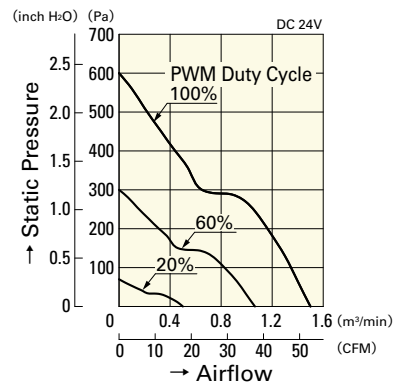
9GA0612P1H03



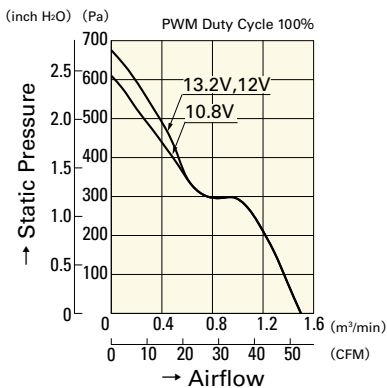
9GA0612P1K60



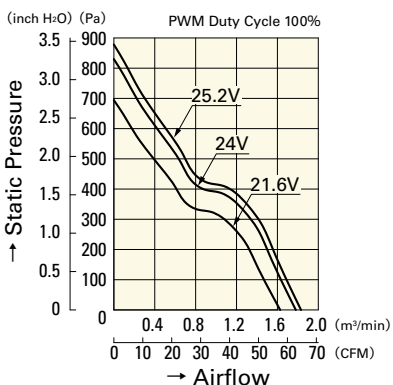
9GA0624P1J03



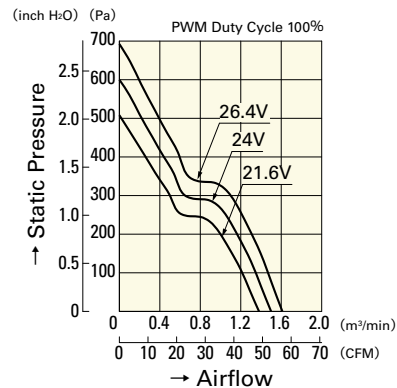
9GA0624P1K03



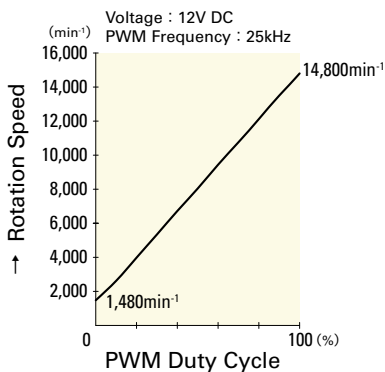
9GA0612P1K60



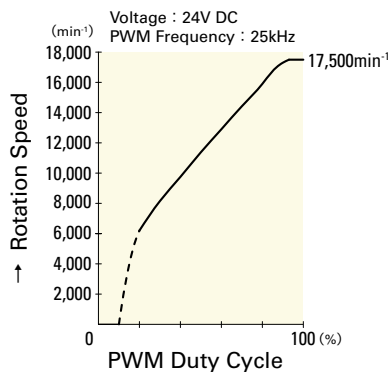
9GA0624P1J03



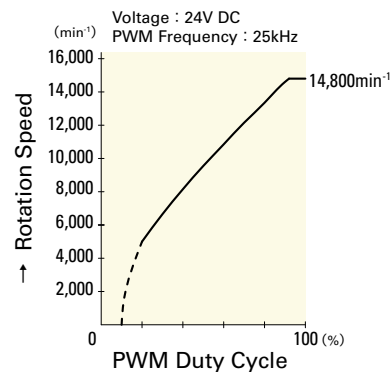
9GA0624P1K03



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

60×60×38mm (Mass : 130g) 9GV type

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

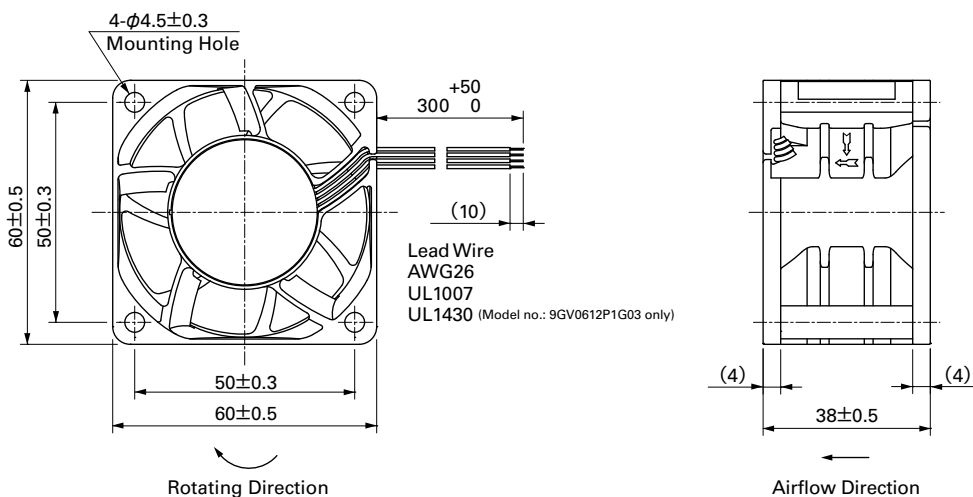
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle* [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [InchH ₂ O]	SPL [dB(A)]	Operating Temperature Range [°C]	Expected Life [h]
9GV0612P1G03	12	8.0 to 13.8	100	2.8	33.6	16,000	2.37 84	751 3.02	66	-20 to +70	40,000/60°C
			0	0.12	1.5	3,100	0.44 15	26 0.10	25		
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			
9GV0612P1H03		10.8 to 13.8	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			
9GV0612P1M03	24	20.4 to 27.6	100	0.7	8.4	10,000	1.49 52.6	293 1.17	52		
9GV0612P1L01 ^{Note)}			100	1.4	33.6	16,000	2.37 84	751 3.02	66		
9GV0624P1G03	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

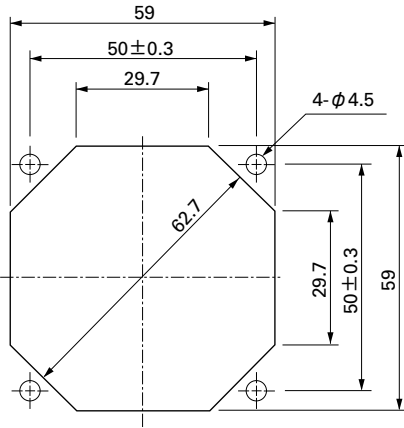
Other sensor specifications are available as options. Please refer to the index (p. 507).

Dimensions (unit: mm) (With ribs)



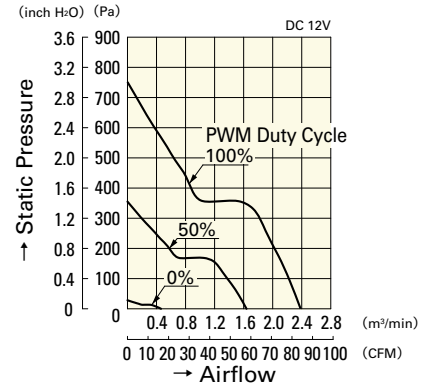
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)

Inlet side, Outlet side



Airflow - Static Pressure Characteristics

PWM Duty Cycle



9GV0612P1G03

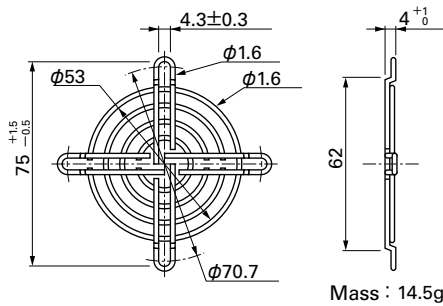
Options (unit: mm)

Finger Guards

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

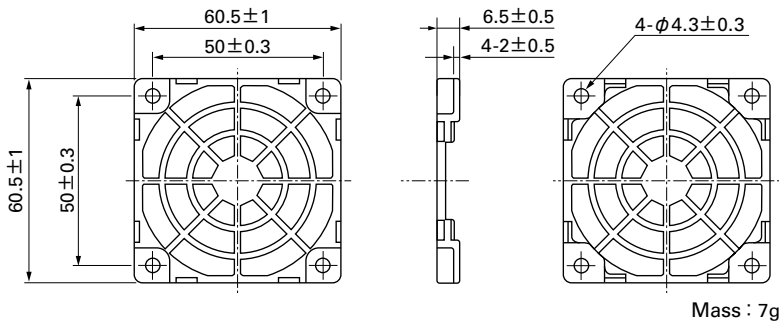
Color

Inlet side, Outlet side



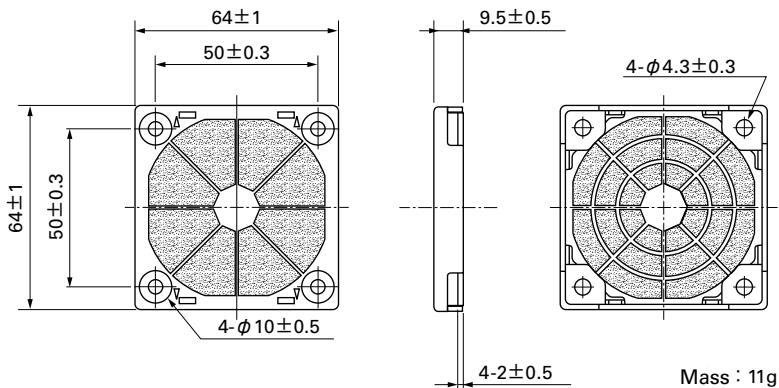
Resin Finger Guards

Model : 109-1003G

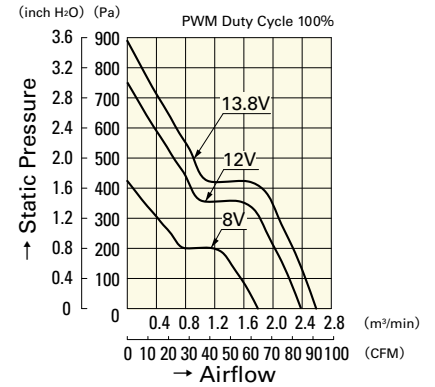


Resin Filter Kits

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

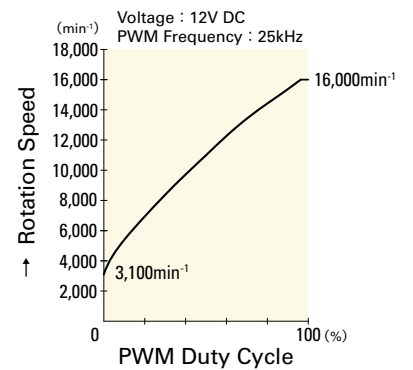


Operating Voltage Range



9GV0612P1G03

PWM Duty - Speed Characteristics Example



9GV0612P1G03

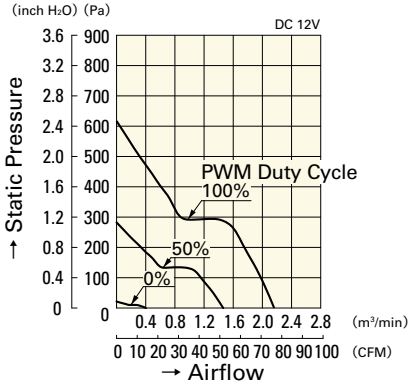
60mm sq.

San Ace 60

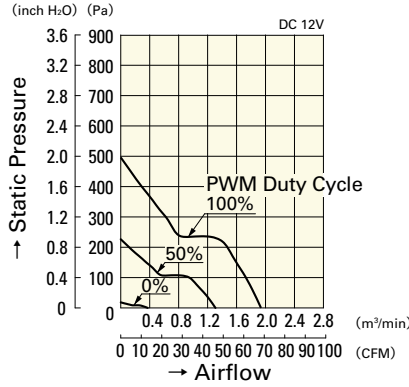
60×60×38mm [Mass : 130g]

Airflow - Static Pressure Characteristics

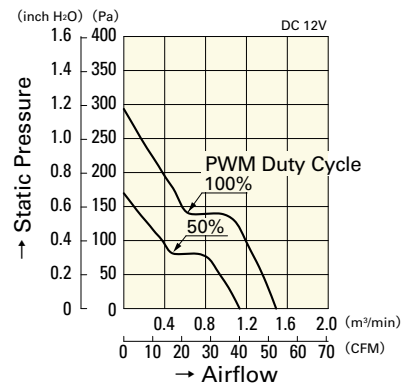
PWM Duty Cycle



9GV0612P1H03

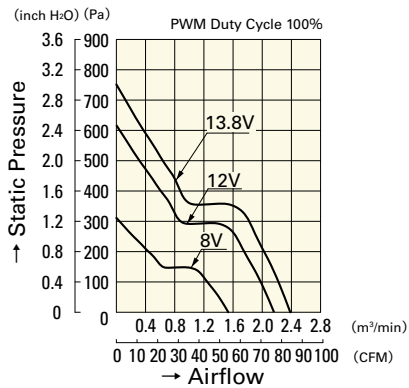


9GV0612P1M03

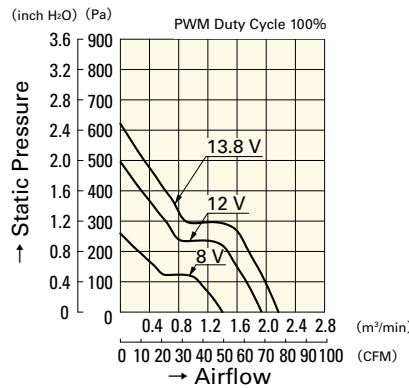


9GV0612P1L01

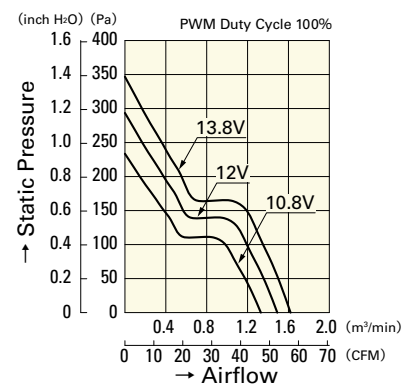
Operating Voltage Range



9GV0612P1H03

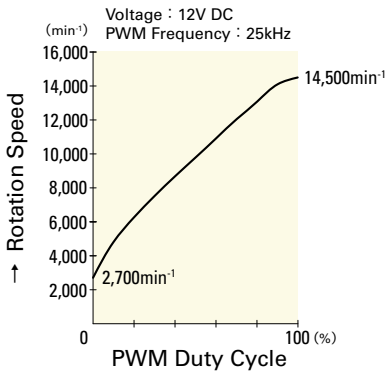


9GV0612P1M03

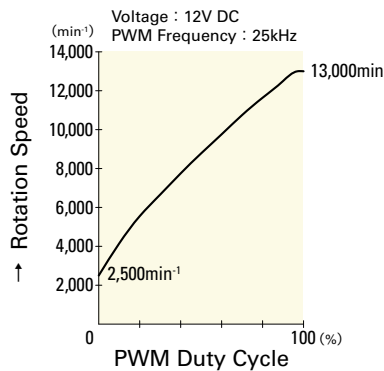


9GV0612P1L01

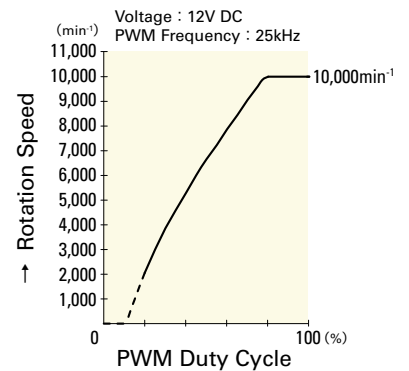
PWM Duty - Speed Characteristics Example



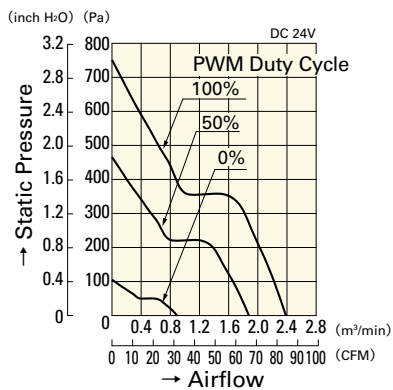
9GV0612P1H03



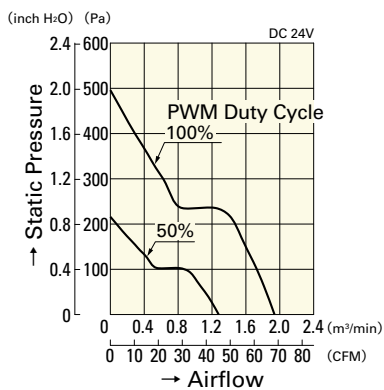
9GV0612P1M03



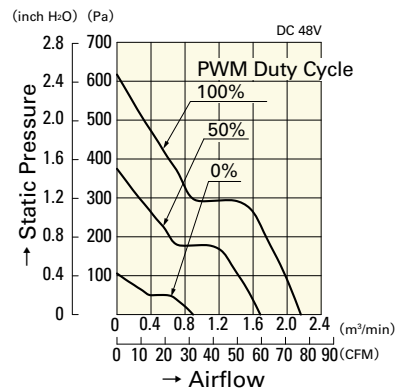
9GV0612P1L01



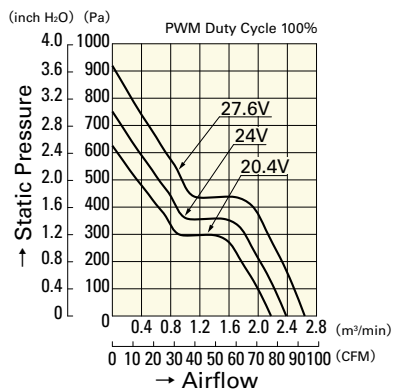
9GV0624P1G03



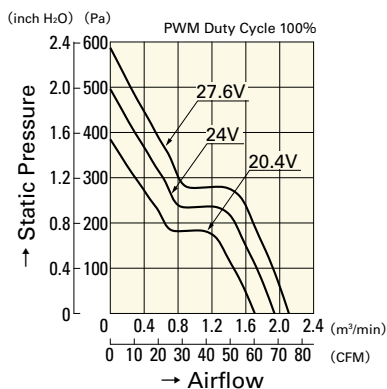
9GV0624P1M03



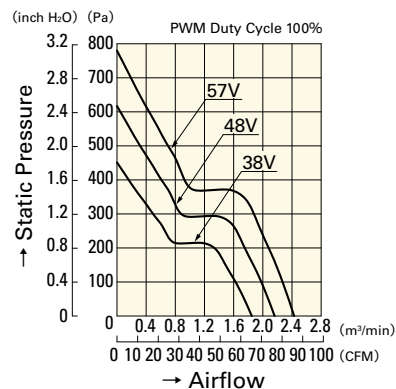
9GV0648P1H03



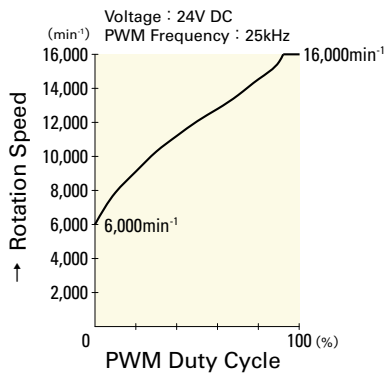
9GV0624P1G03



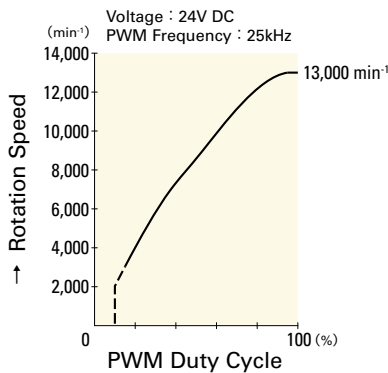
9GV0624P1M03



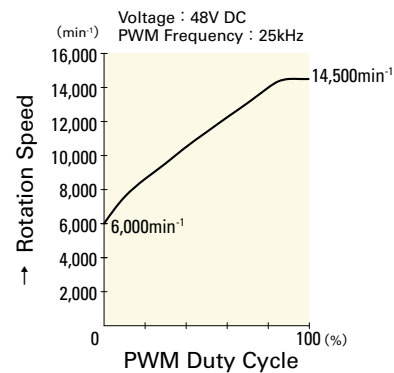
9GV0648P1H03



9GV0624P1G03



9GV0624P1M03



9GV0648P1H03

60mm 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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

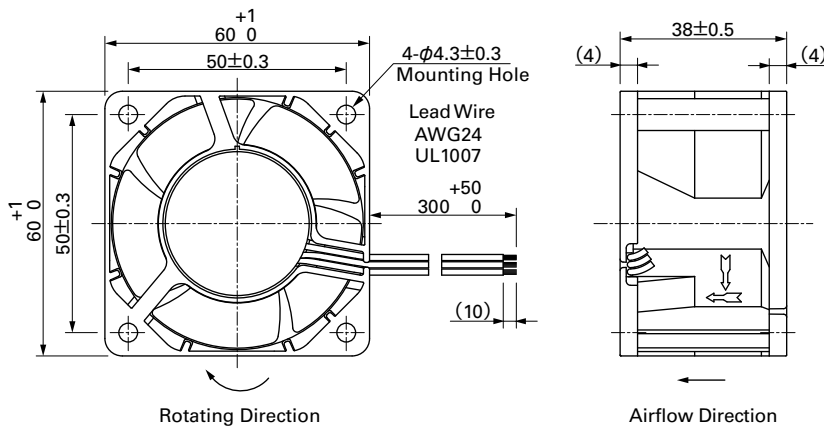
60×60×38mm (Mass : 110g) **9G type**

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

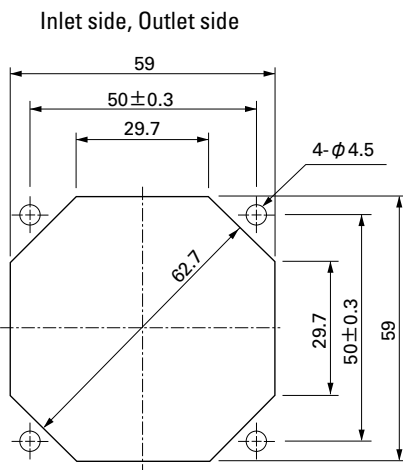
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9G0612G101	12	7.0 to 13.8	1.54	18.5	11,800	1.84 65	435 1.747	58	-20 to +70	40,000/60°C
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)

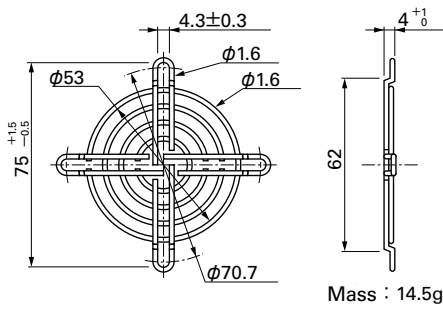


Options (unit: mm)

Finger Guards

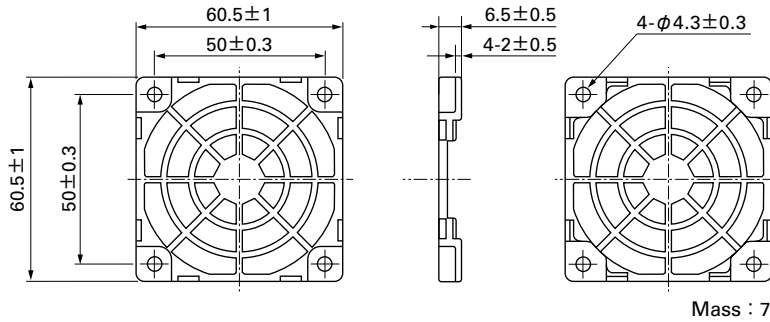
Model : 109-139E Surface treatment : Nickel-chrome plating (silver) Color
 : 109-139H : Cation electropainting (black)

Inlet side, Outlet side



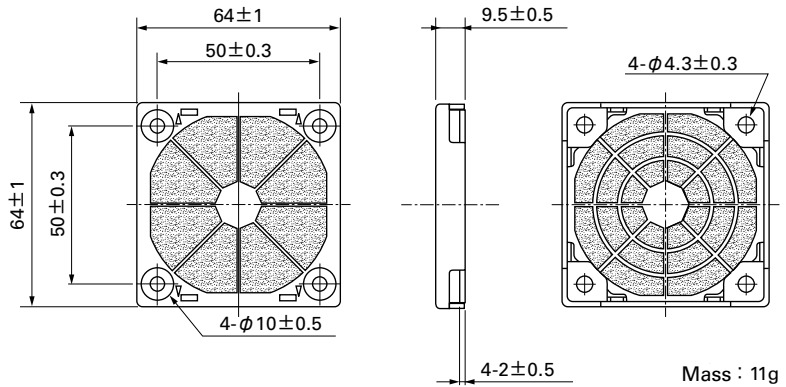
Resin Finger Guards

Model : 109-1003G

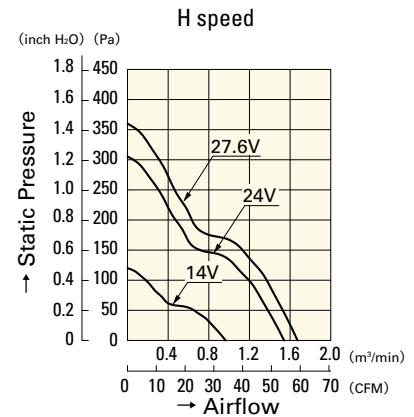
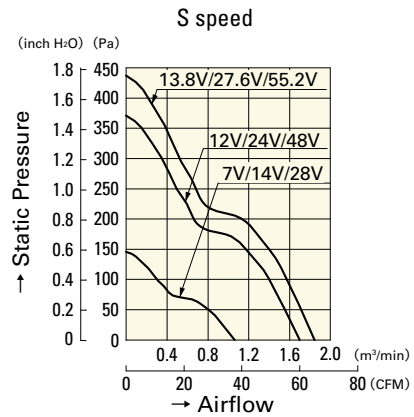
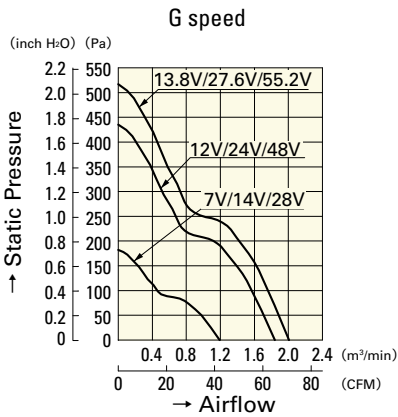


Resin Filter Kits

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



Airflow - Static Pressure Characteristics



9G0612G101
9G0624G101
9G0648G101

9G0612S101
9G0624S101
9G0648S101

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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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

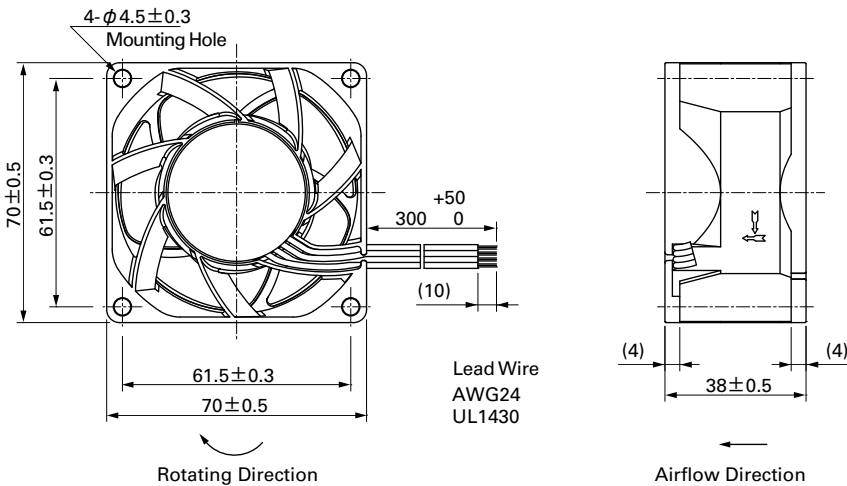


Specifications The following nos. **have PWM controls, pulse sensors, and ribs.** For ribless, append "1" to the model no.

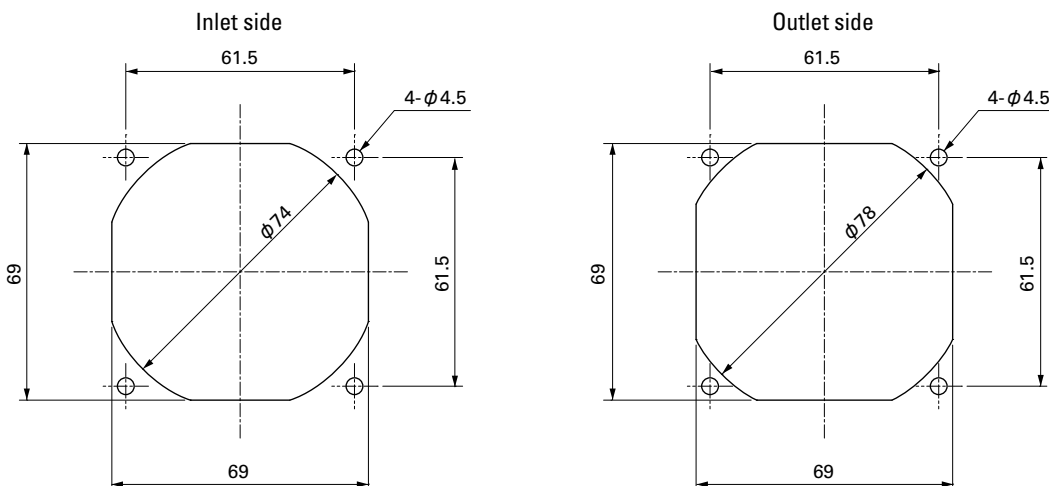
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle* [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9GA0712P1G001	12	10.8 to 13.2	100	2.6	31.2	16,500	2.65 93.6	860 3.45	65	-20 to +70	40,000/60°C (70,000/40°C)
			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)



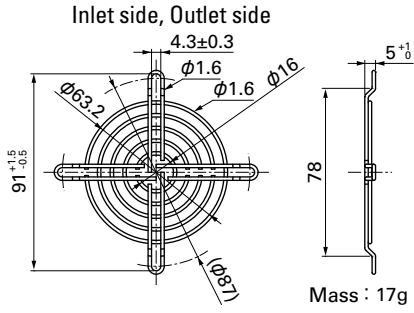
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

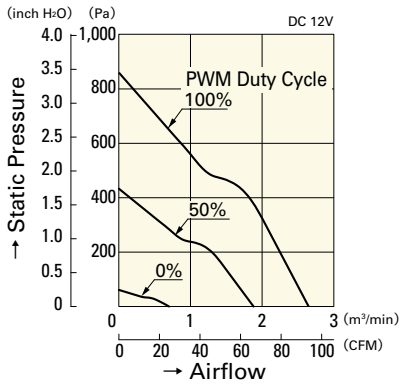
Finger Guards

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

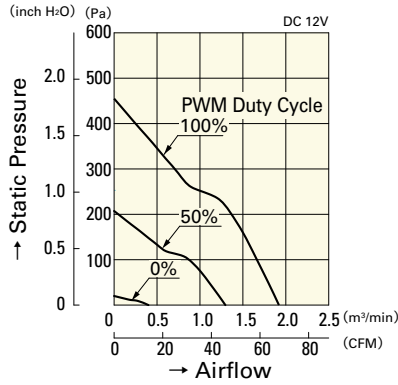


Airflow - Static Pressure Characteristics

PWM Duty Cycle

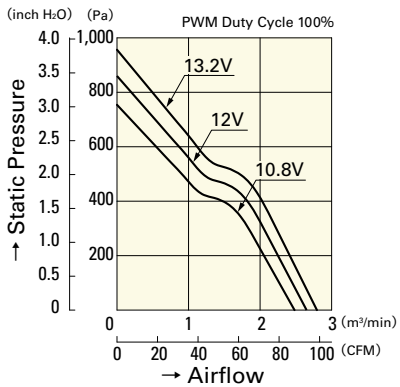


9GA0712P1G001

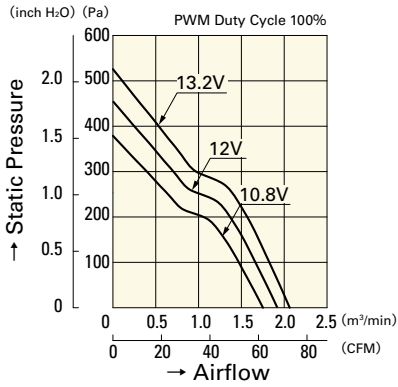


9GA0712P1H001

Operating Voltage Range

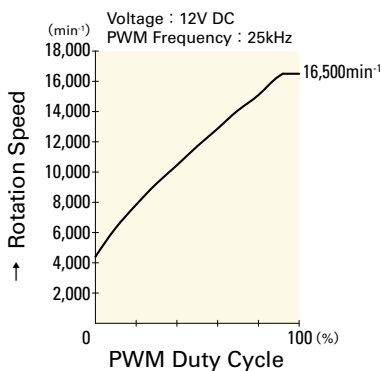


9GA0712P1G001

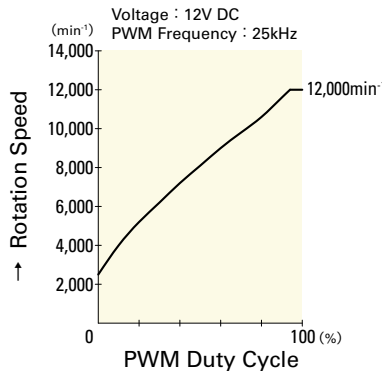


9GA0712P1H001

PWM Duty - Speed Characteristics Example



9GA0712P1G001



9GA0712P1H001

80mm sq.

San Ace 80



Model no. 9GA0812H7001 is not certified.

General Specifications

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

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 ^{Note①} [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C (70,000/40°C)
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

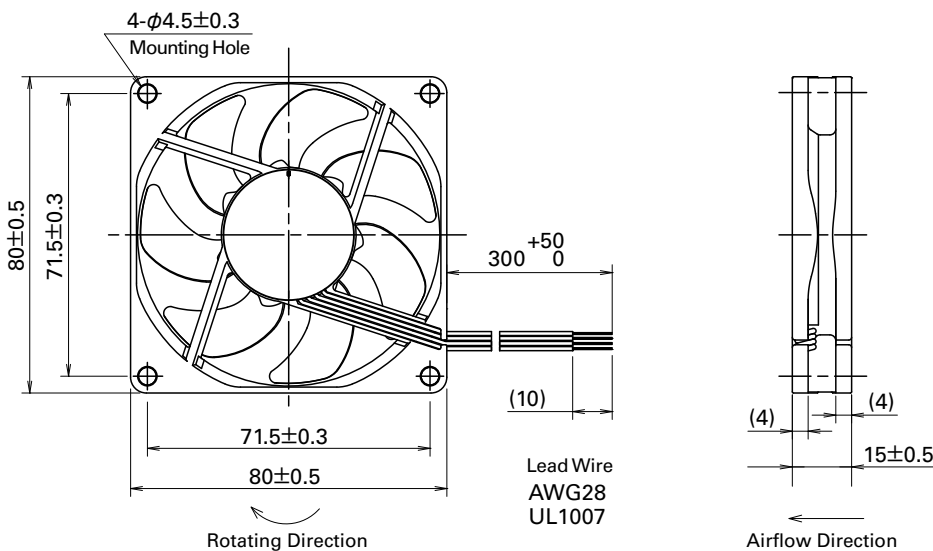
The following nos. **have pulse sensors and ribs.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C (70,000/40°C)
9GA0824H7001	24	12 to 26.4	0.05	1.20	3,800	0.89 31.4	32.6 0.13	29		

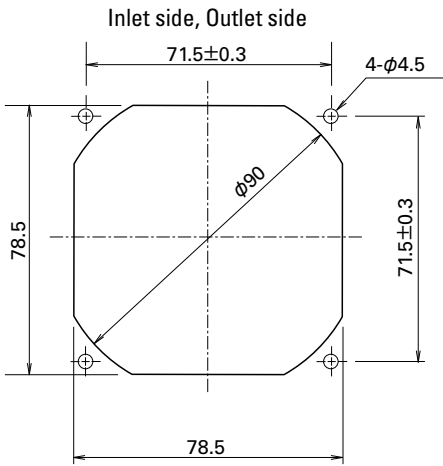
Other sensor specifications are available as options. Please refer to the index (pp. 505 to 506).

Dimensions (unit: mm)

(With PWM control function · With pulse sensor)



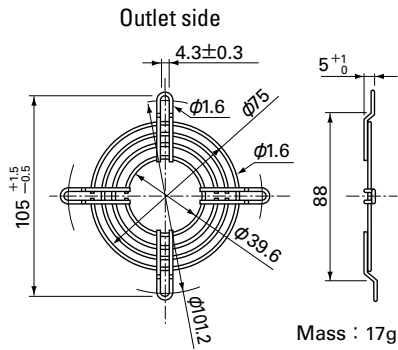
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

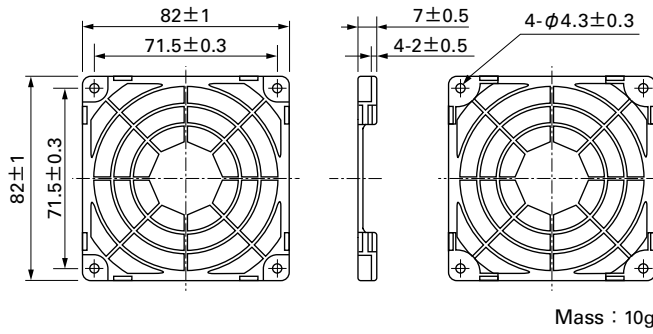
Finger Guards

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

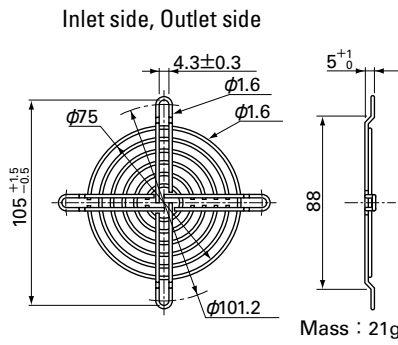


Resin Finger Guards

Model : 109-1002G

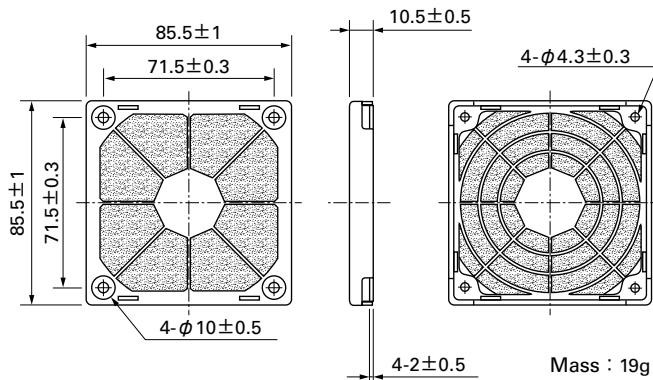


Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color : Nickel-chrome plating (silver)
: 109-049H : Cation electropainting (black)



Resin Filter Kits

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



80mm sq.

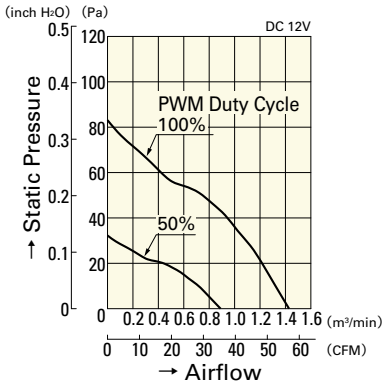
San Ace 80

80×80×15mm [Mass : 65g]

Airflow - Static Pressure Characteristics

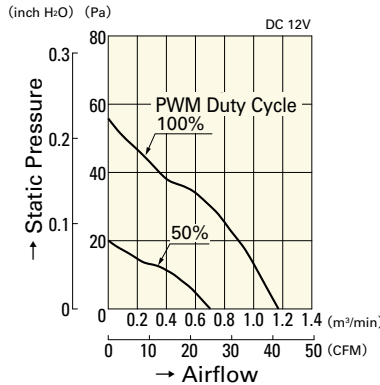
PWM Duty Cycle

With PWM control function · With pulse sensor



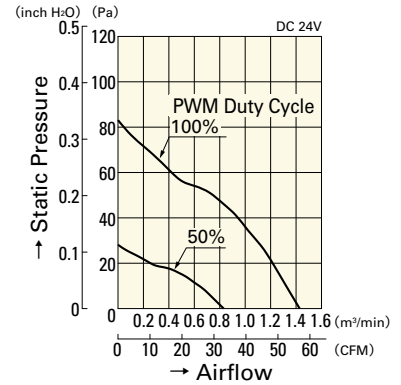
9GA0812P7G001

With PWM control function · With pulse sensor



9GA0812P7S001

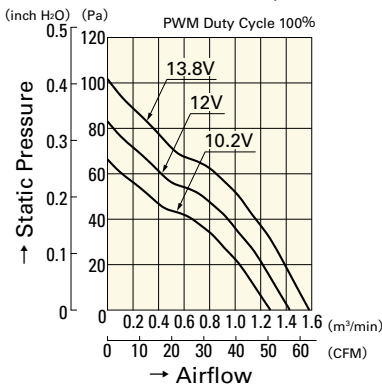
With PWM control function · With pulse sensor



9GA0824P7G001

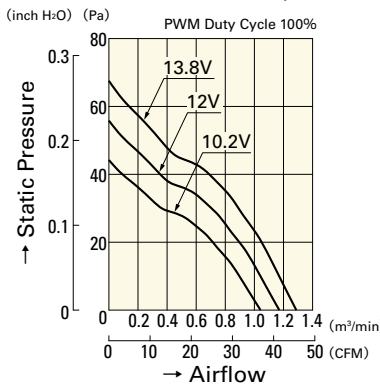
Operating Voltage Range

With PWM control function · With pulse sensor



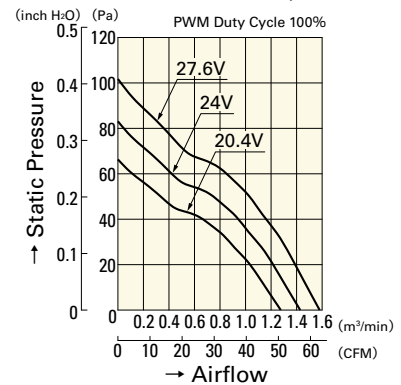
9GA0812P7G001

With PWM control function · With pulse sensor



9GA0812P7S001

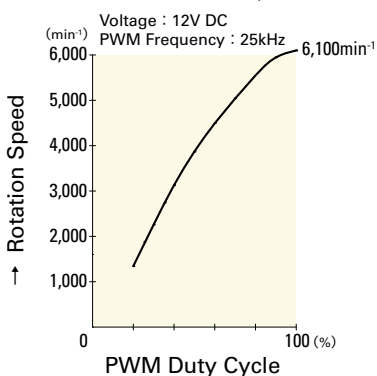
With PWM control function · With pulse sensor



9GA0824P7G001

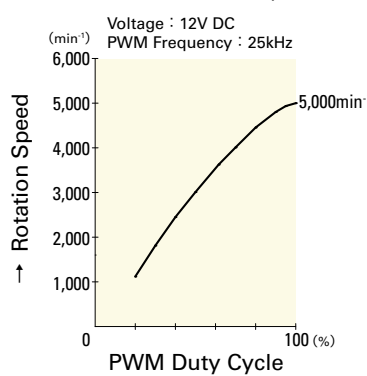
PWM Duty - Speed Characteristics Example

With PWM control function · With pulse sensor



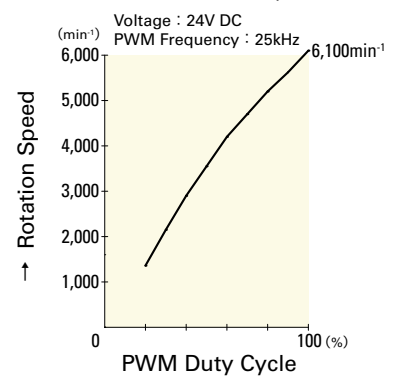
9GA0812P7G001

With PWM control function · With pulse sensor



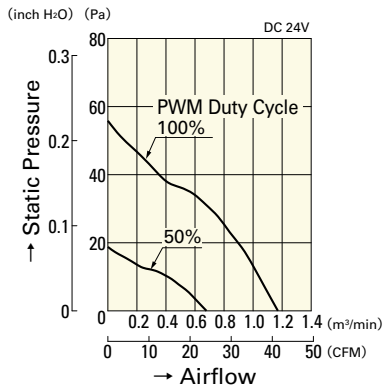
9GA0812P7S001

With PWM control function · With pulse sensor



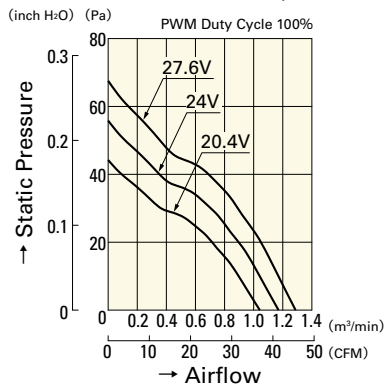
9GA0824P7G001

With PWM control function · With pulse sensor



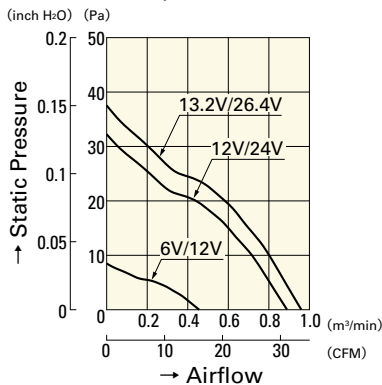
9GA0824P7S001

With PWM control function · With pulse sensor



9GA0824P7S001

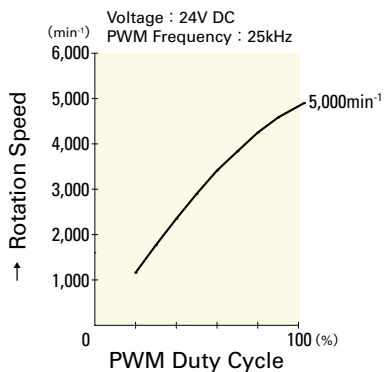
With pulse sensor



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

80×80×15 mm (Mass : 68g) **9P** type

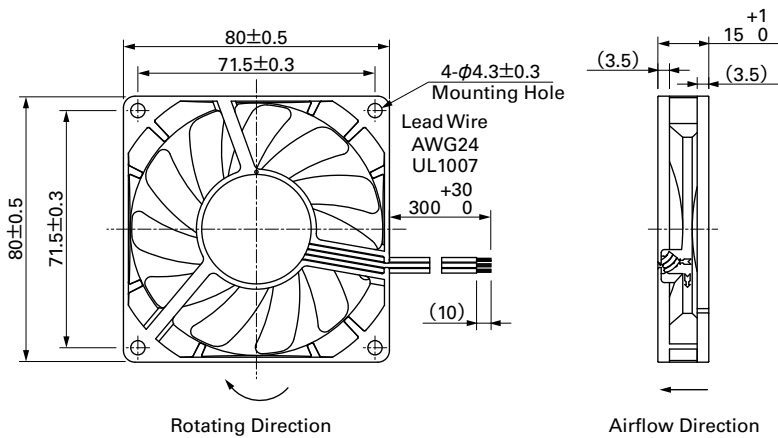
Specifications

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

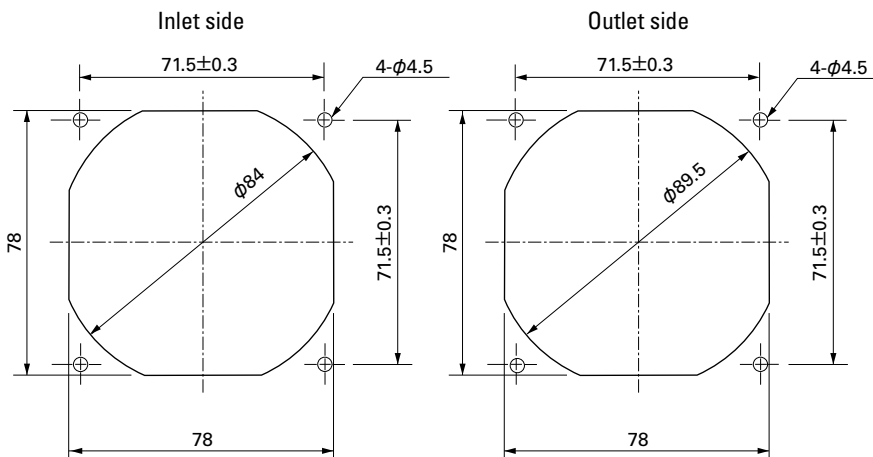
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]	
109P0812H701	12	7 to 13.8	0.2	2.4	3,100	0.91	32.1	29.4	0.118	31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

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

Dimensions (unit: mm)



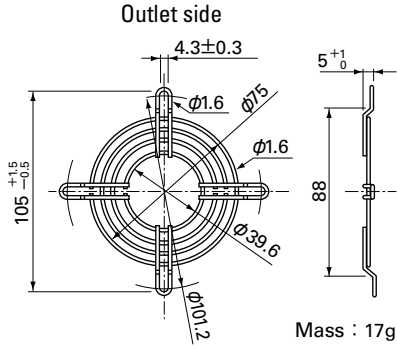
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

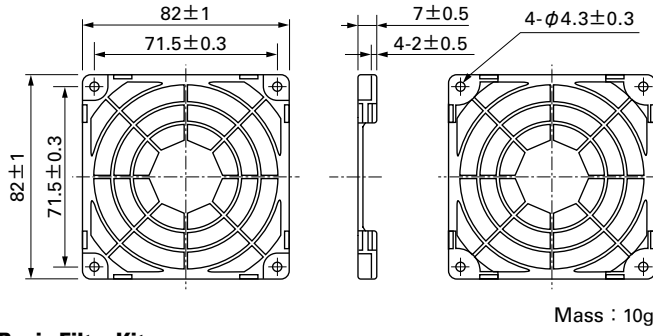
Finger Guards

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



Resin Finger Guards

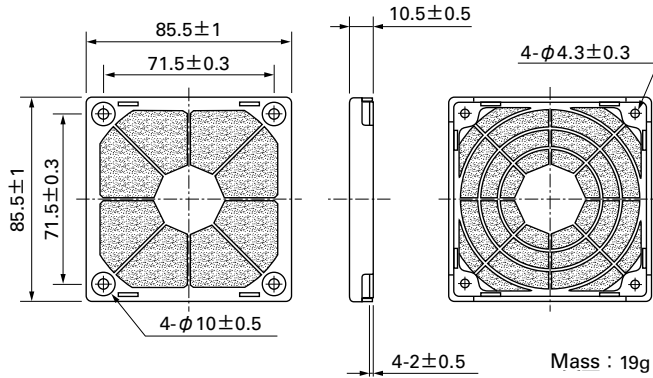
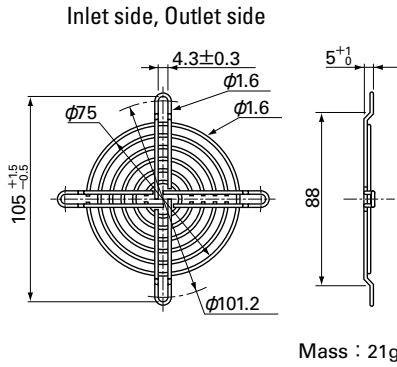
Model : 109-1002G



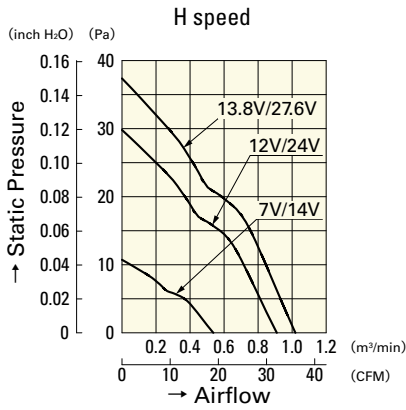
Model : 109-049E Color : Nickel-chrome plating (silver)
 Surface treatment : Nickel-chrome plating (silver)
 : 109-049H : Cation electropainting (black)

Resin Filter Kits

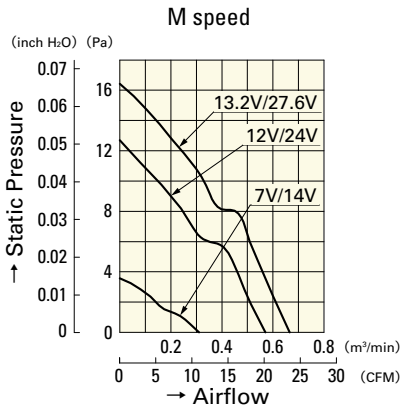
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
 : 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Airflow - Static Pressure Characteristics



109P0812H701
109P0824H701



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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



Specifications

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

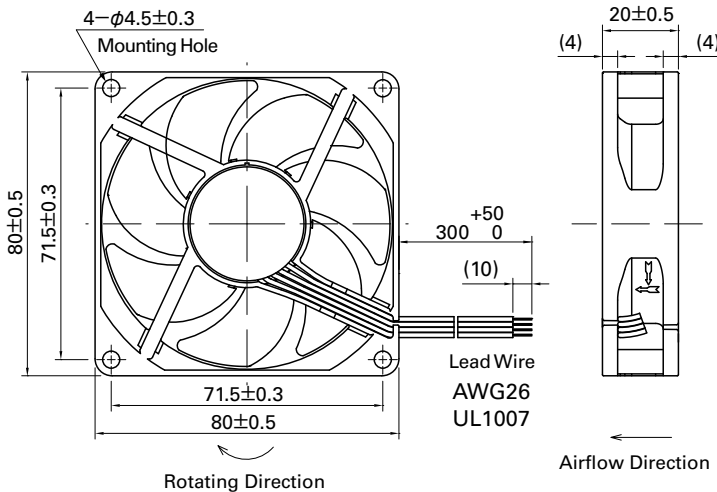
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle ^{Note)1)} [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9GA0812P6G001	12	10.2 to 13.8	100	0.3	3.6	5,850	1.72 60.78	110 0.44	45	-20 to +70	40,000/60°C (70,000/40°C)
9GA0812P6M001				0.06	0.72	2,900	0.84 29.68	27 0.11	26.5		60,000/60°C
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°C (70,000/40°C)
9GA0824P6M001				0.03	0.72	2,900	0.84 29.68	27 0.11	26.5		60,000/60°C

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

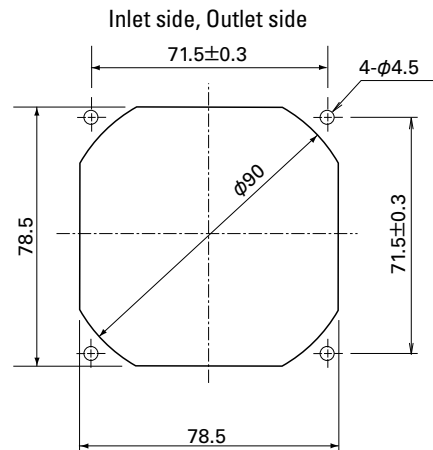
※PWM Frequency : 25kHz

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)



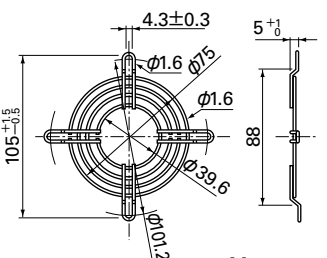
Options (unit: mm)

Finger Guards

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

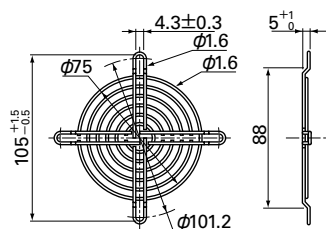
Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color : silver
Model : 109-049H Surface treatment : Cation electropainting (black) Color : black

Outlet side



Mass : 17g

Inlet side, Outlet side

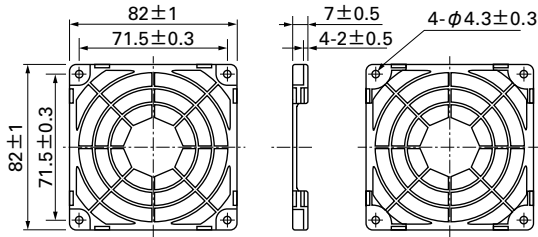


Mass : 21g

Options (unit: mm)

Resin Finger Guards

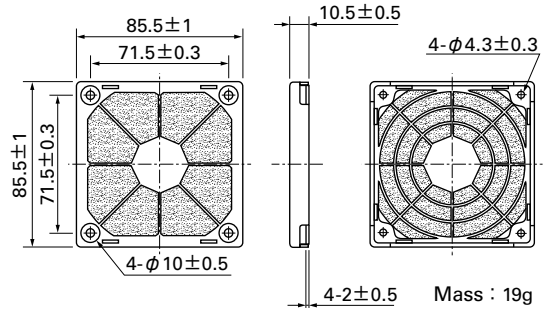
Model : 109-1002G



Mass : 10g

Resin Filter Kits

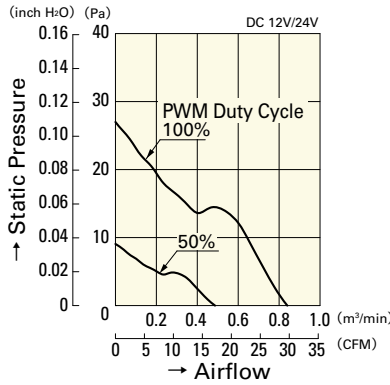
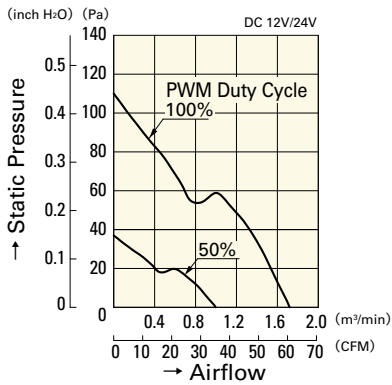
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



Mass : 19g

Airflow - Static Pressure Characteristics

PWM Duty Cycle



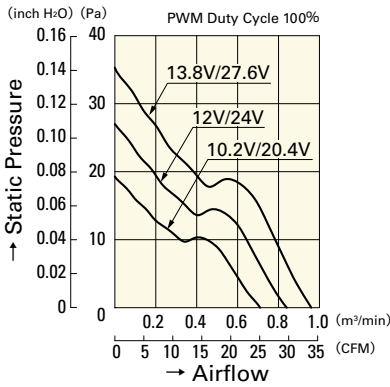
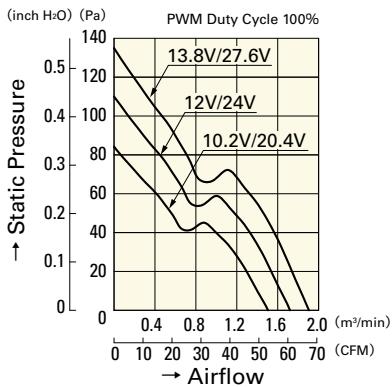
9GA0812P6G001

9GA0824P6G001

9GA0812P6M001

9GA0824P6M001

Operating Voltage Range



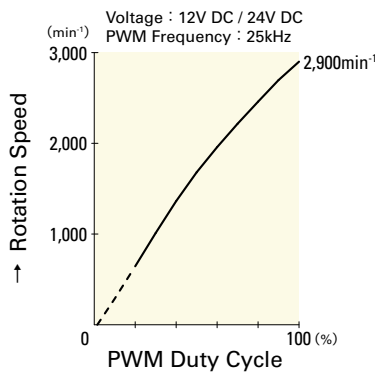
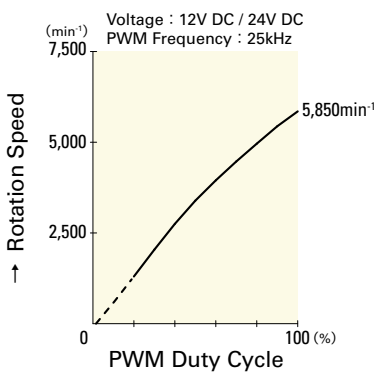
9GA0812P6G001

9GA0824P6G001

9GA0812P6M001

9GA0824P6M001

PWM Duty - Speed Characteristics Example



9GA0812P6G001

9GA0824P6G001

9GA0812P6M001

9GA0824P6M001

80 mm sq.

San Ace 80



Model no. 109P0812C601 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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

80×80×20mm (Mass : 100g) **9P** type

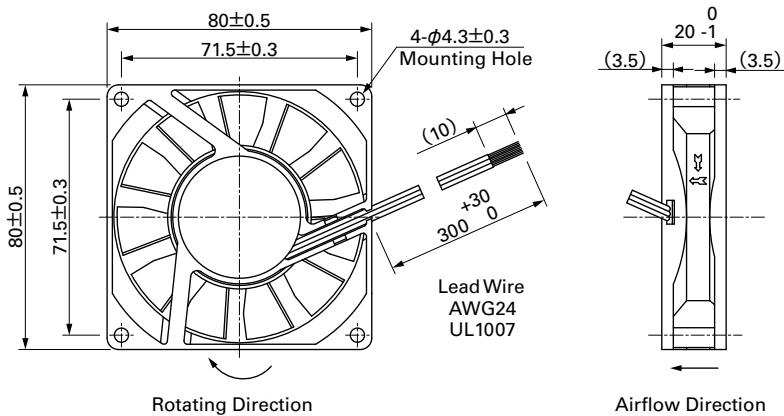
Specifications

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

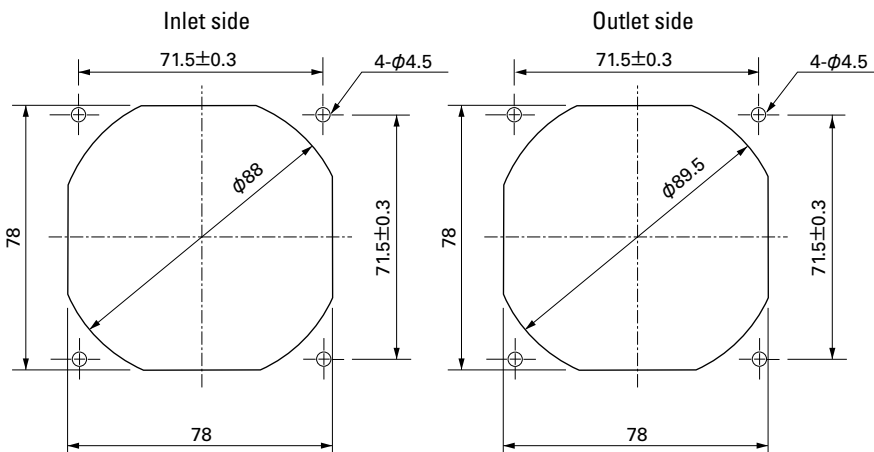
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
109P0812C601	12	10.2 to 13.8	0.29	3.48	3,700	1.07 37.8	46 0.185	39	-20 to +60	60,000/60°C
109P0812H601			0.21	2.52	2,900	0.84 29.7	29.4 0.118	31		
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	-20 to +70	
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	
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)



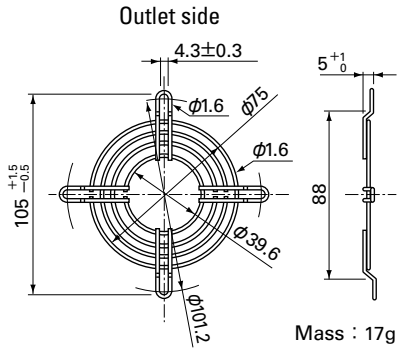
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

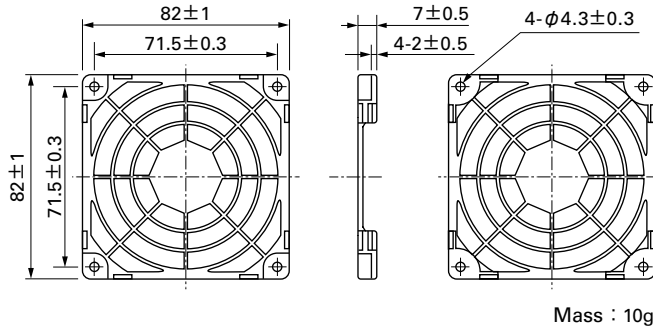
Finger Guards

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



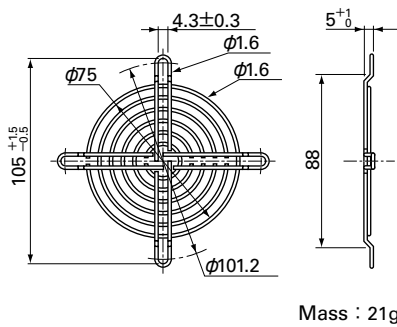
Resin Finger Guards

Model : 109-1002G



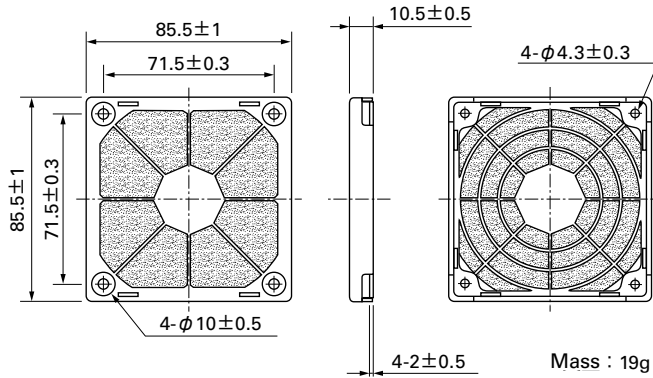
Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color : 109-049H : Cation electropainting (black)

Inlet side, Outlet side

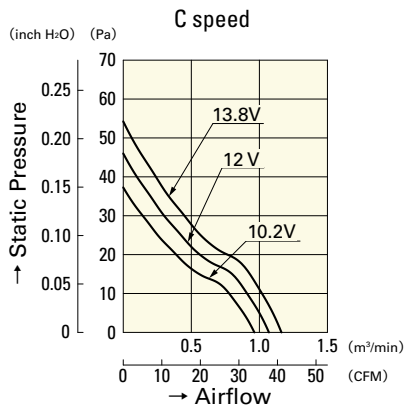


Resin Filter Kits

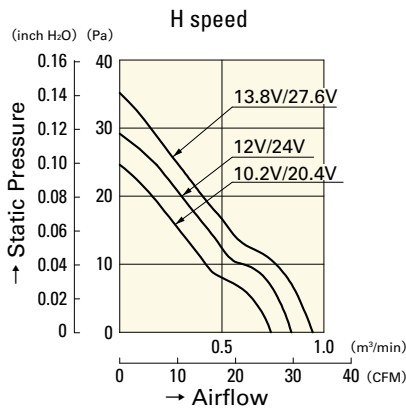
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI) : 109-1002F30 (30PPI), 109-1002F40 (40PPI)



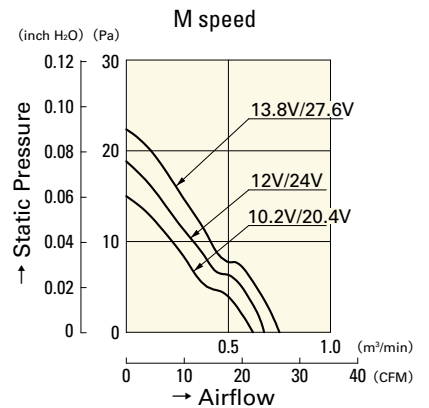
Airflow - Static Pressure Characteristics



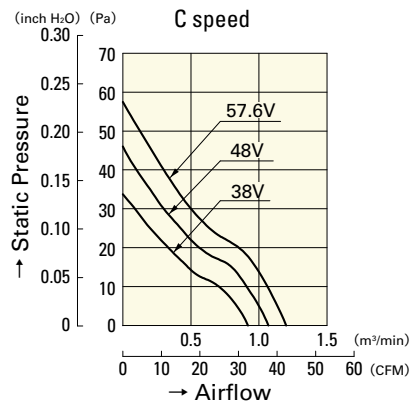
109P0812C601



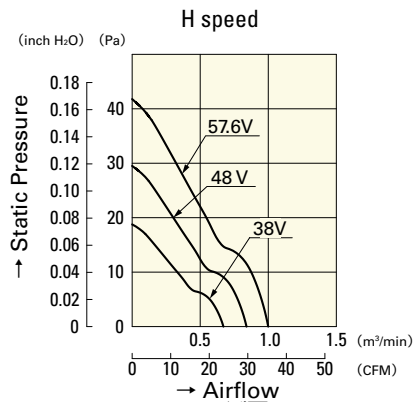
109P0812H601
109P0824H601



109P0812M601
109P0824M601



109P0848C601



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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.

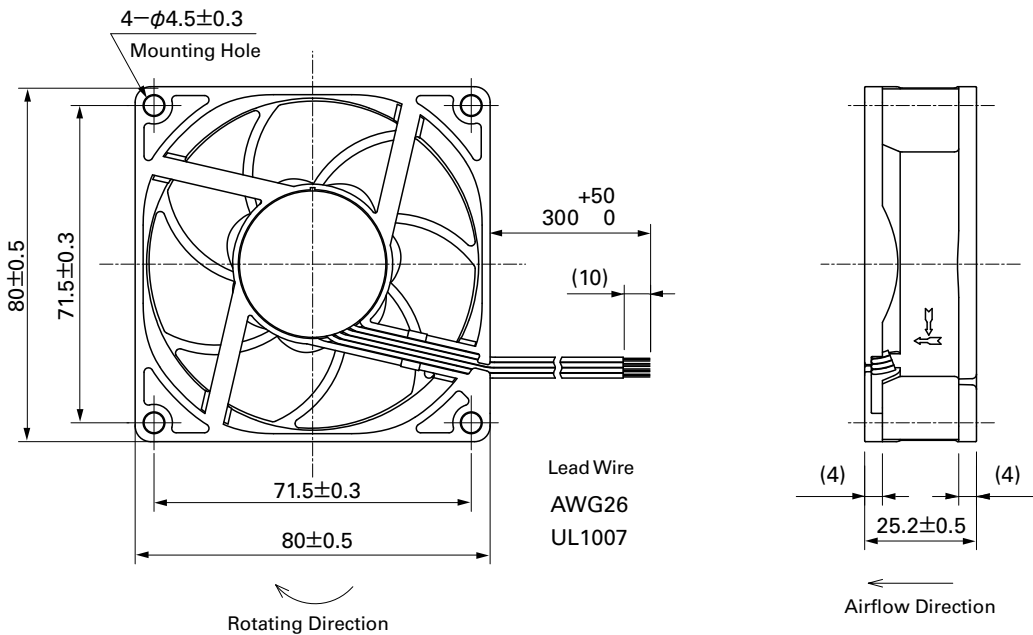
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle ^{Note①} [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9GA0812P4J001	12	10.8 to 13.2	100	0.6	7.2	7,400	2.07 73.0	177.6 0.7	48	-20 to +70	40,000/60°C (70,000/40°C)
			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%.

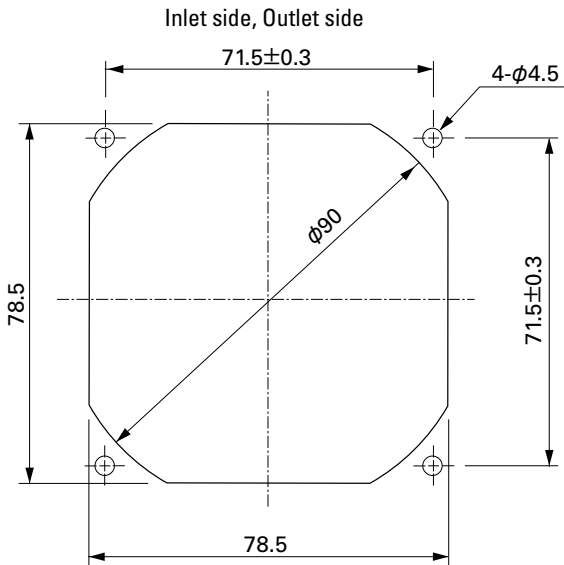
※PWM Frequency : 25kHz

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

Dimensions (unit: mm) (With ribs)



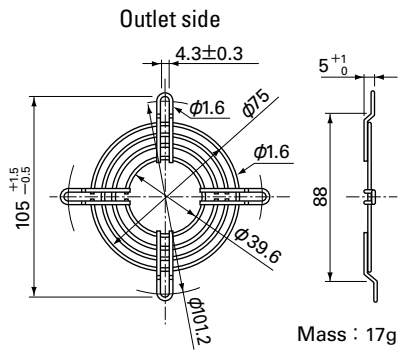
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

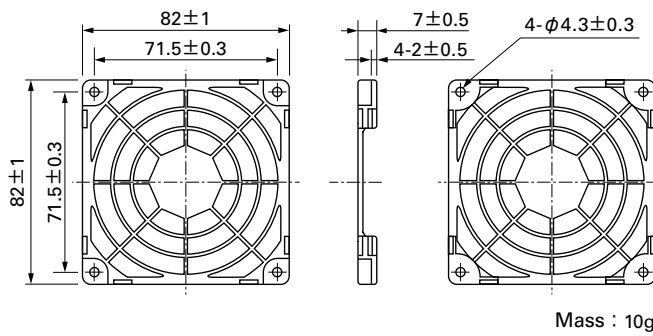
Finger Guards

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



Resin Finger Guards

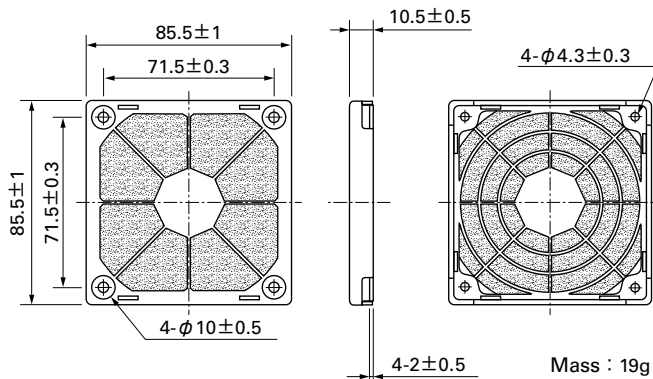
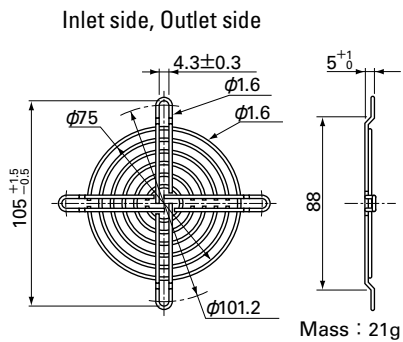
Model : 109-1002G



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

Resin Filter Kits

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



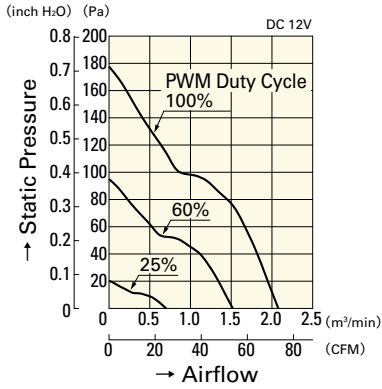
80 mm sq.

San Ace 80

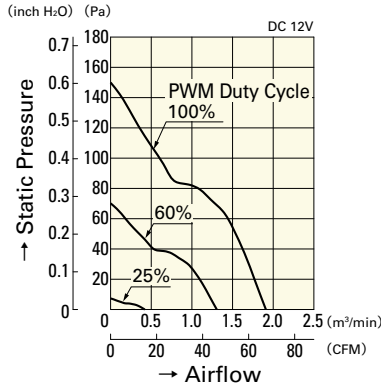
80×80×25mm [Mass : 110g]

Airflow - Static Pressure Characteristics

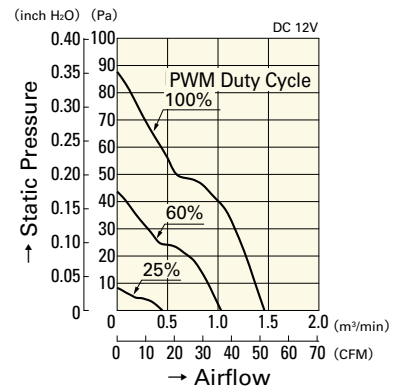
PWM Duty Cycle



9GA0812P4J001

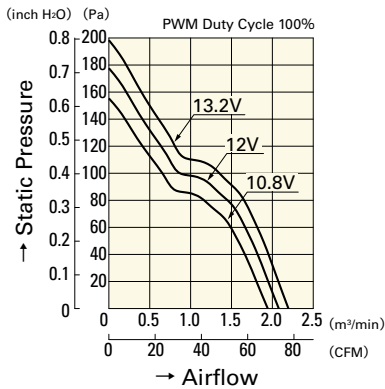


9GA0812P4G001

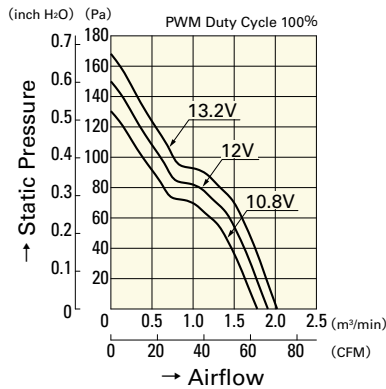


9GA0812P4H001

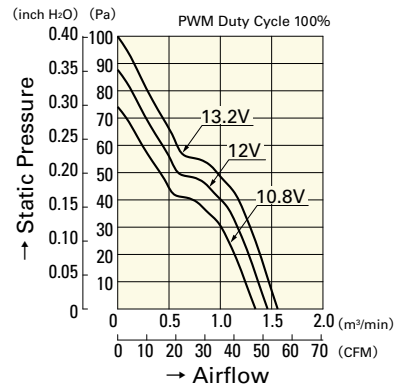
Operating Voltage Range



9GA0812P4J001

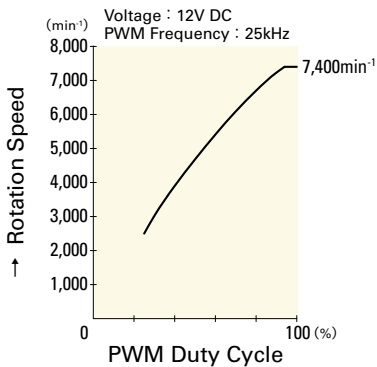


9GA0812P4G001

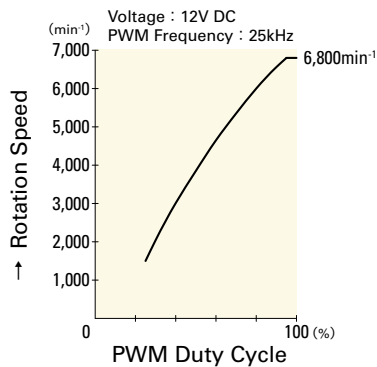


9GA0812P4H001

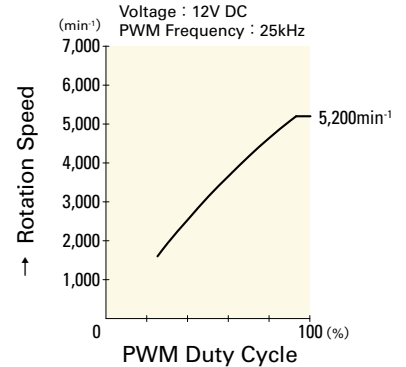
PWM Duty - Speed Characteristics Example



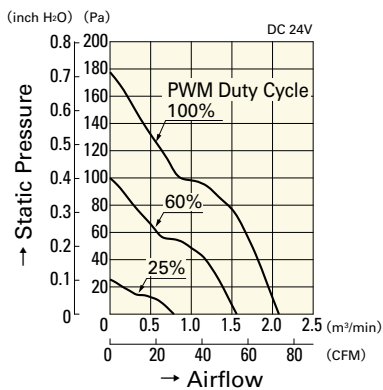
9GA0812P4J001



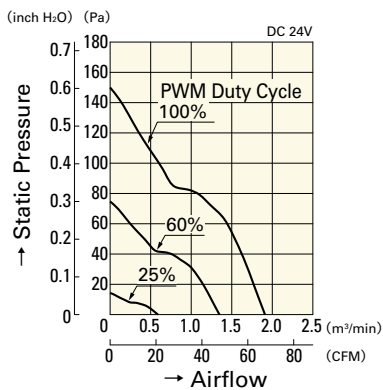
9GA0812P4G001



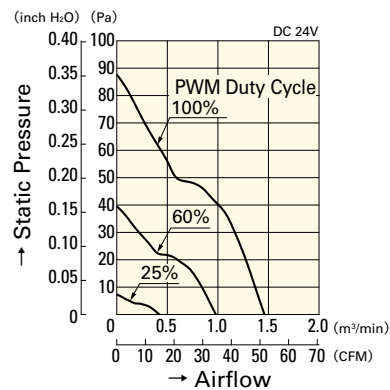
9GA0812P4H001



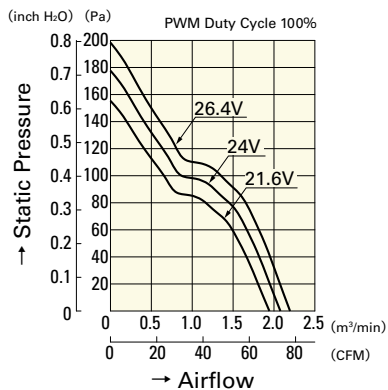
9GA0824P4J001



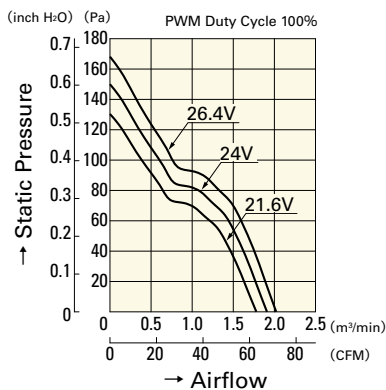
9GA0824P4G001



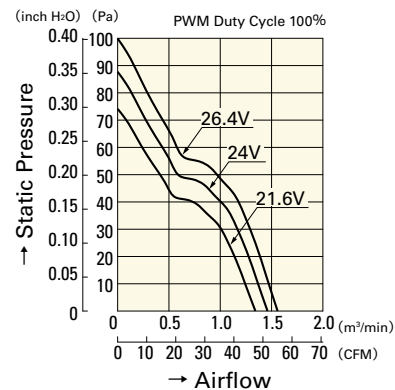
9GA0824P4H001



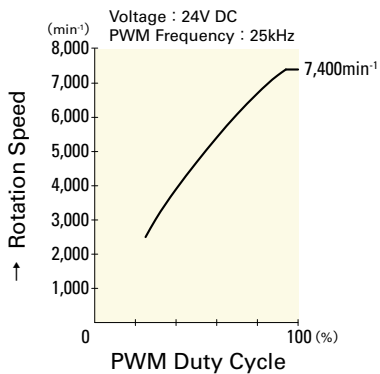
9GA0824P4J001



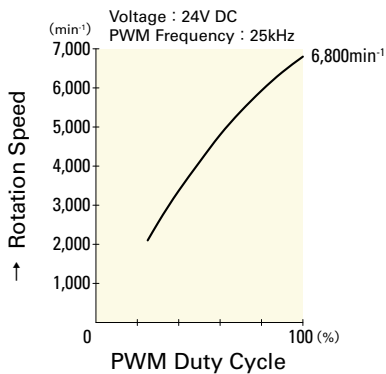
9GA0824P4G001



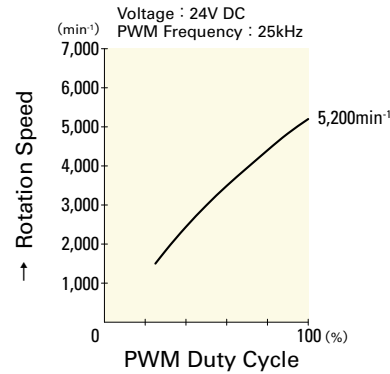
9GA0824P4H001



9GA0824P4J001



9GA0824P4G001



9GA0824P4H001

80 mm sq.

San Ace 80



Model no. 9S0812H401 is not TÜV 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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

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

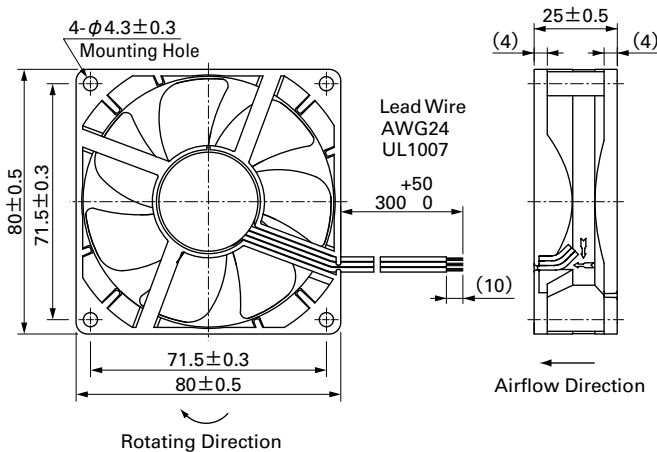
Specifications

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 [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C
9S0812F401		5.0 to 13.8	0.11	1.32	2,800	0.93 32.8	35.5 0.143	24		
9S0812M401		6.0 to 13.8	0.08	0.96	2,500	0.83 29.3	27.5 0.110	22		
9S0812L401	24	10 to 26.4	0.06	1.44	2,500	0.83 29.3	27.5 0.110	22		
9S0824M401			0.04	0.96	2,000	0.66 23.3	18.1 0.073	16		
9S0824L401										

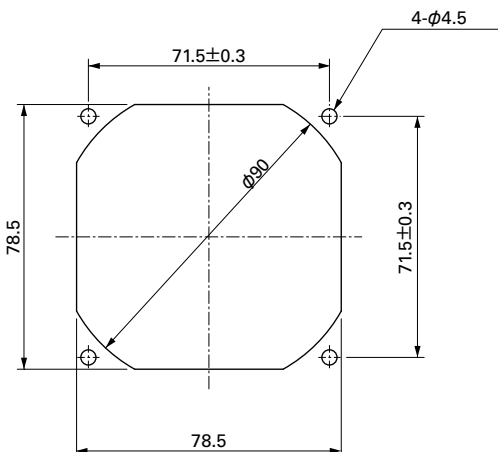
Other sensor specifications are available as options. Please refer to the index (p. 510).

Dimensions (unit: mm) (With ribs)



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

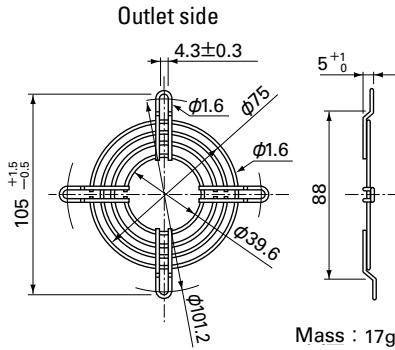
Inlet side, Outlet side



Options (unit: mm)

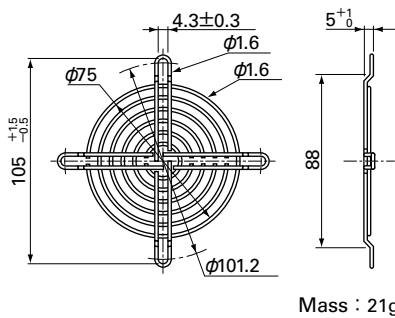
Finger Guards

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



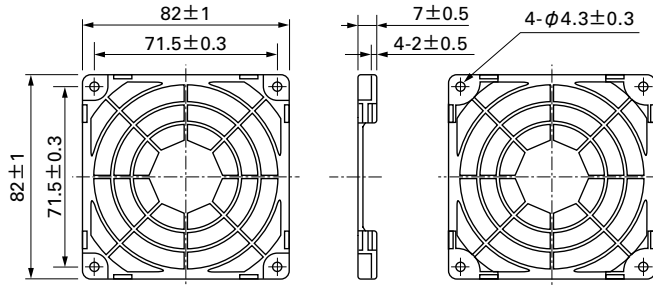
Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color : Nickel-chrome plating (silver)
 Model : 109-049H Surface treatment : Cation electropainting (black) Color : Cation electropainting (black)

Inlet side, Outlet side



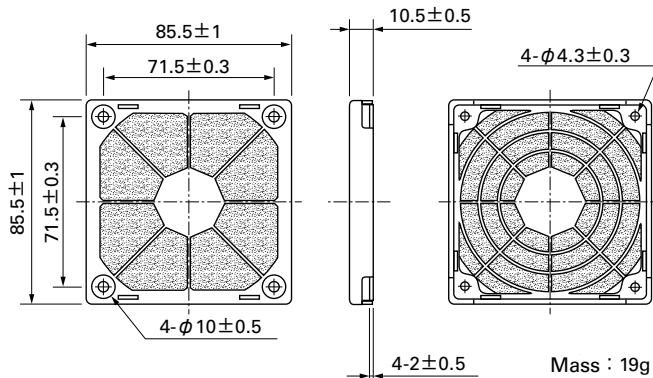
Resin Finger Guards

Model : 109-1002G

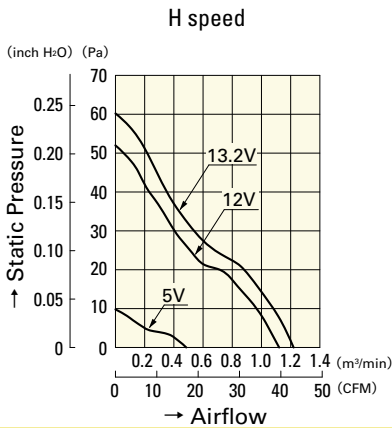


Resin Filter Kits

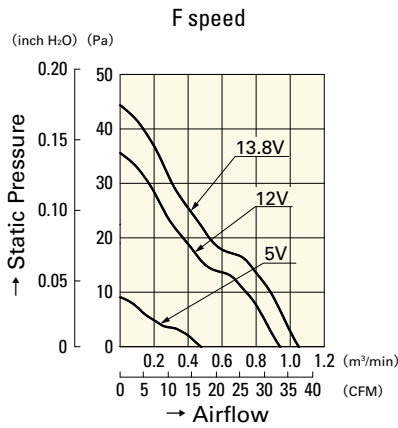
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI), 109-1002F30 (30PPI), 109-1002F40 (40PPI)



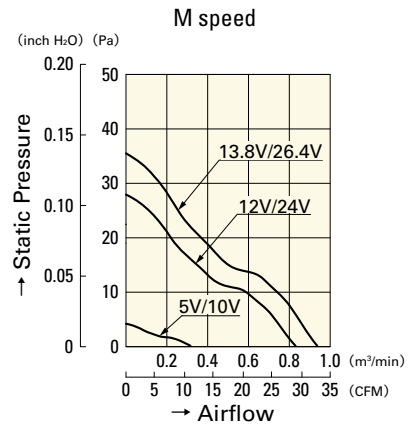
Airflow - Static Pressure Characteristics



9S0812H401

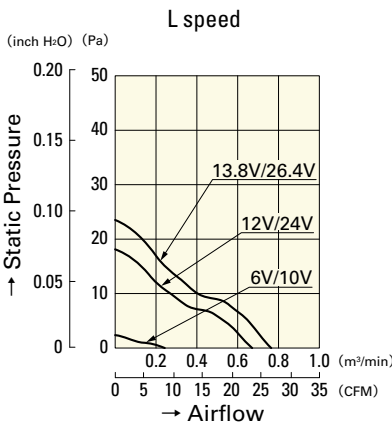


9S0812F401



9S0812M401

9S0824M401



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

80×80×25mm (Mass : 125g) **9GV type**

Specifications

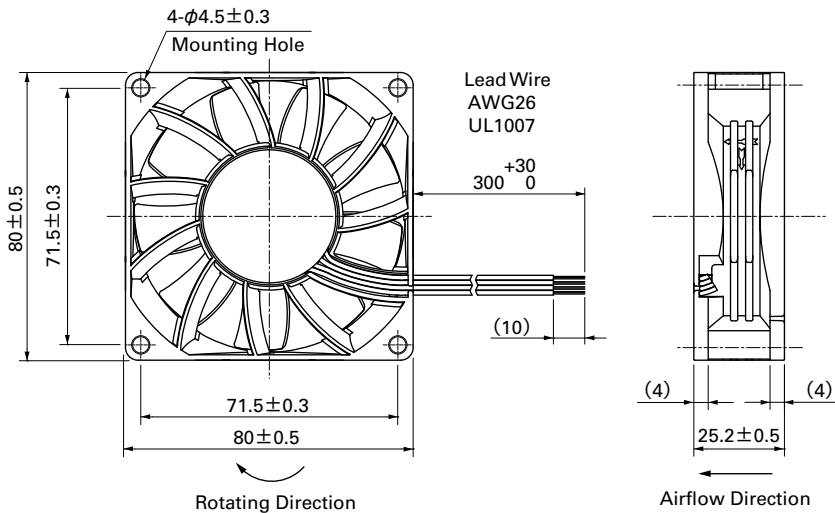
The following nos. **have PWM controls, pulse sensors, and ribs.** For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle* [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C
			0	0.10	1.2	1,400	0.50 18.7	10.3 0.04	18		
9GV0812P4J03	12	10.2 to 13.8	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		

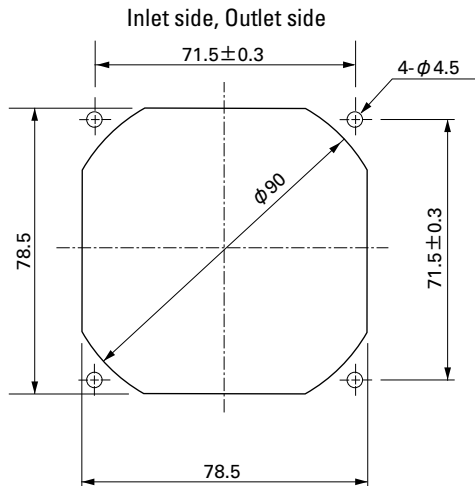
*PWM Frequency : 25kHz

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)



Options (unit: mm)

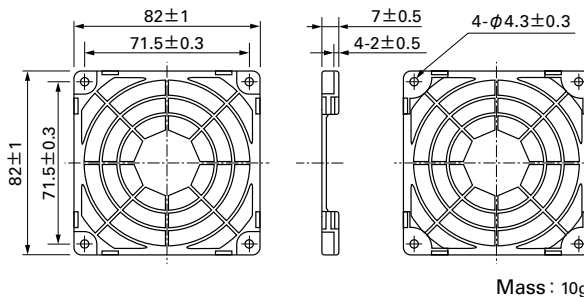
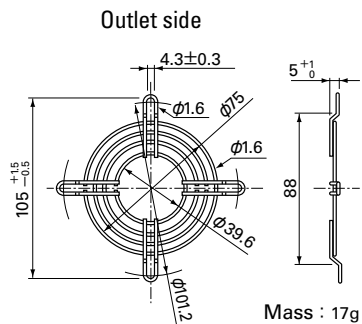
Finger Guards

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

Color

Resin Finger Guards

Model : 109-1002G

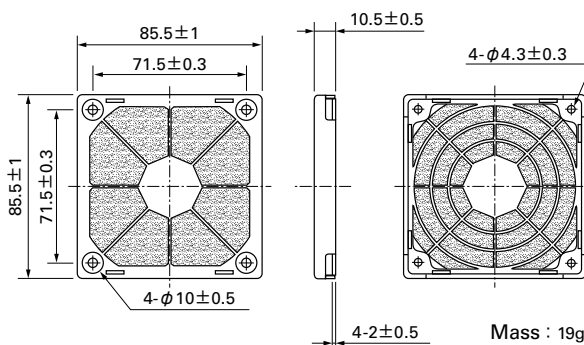
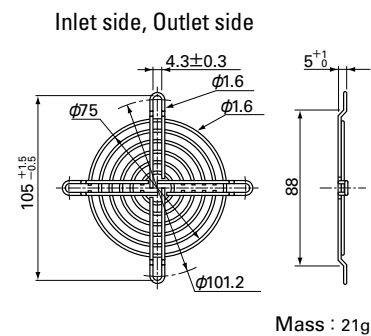


Model : 109-049E Surface treatment : Nickel-chrome plating (silver)
 : 109-049H : Cation electropainting (black)

Color

Resin Filter Kits

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



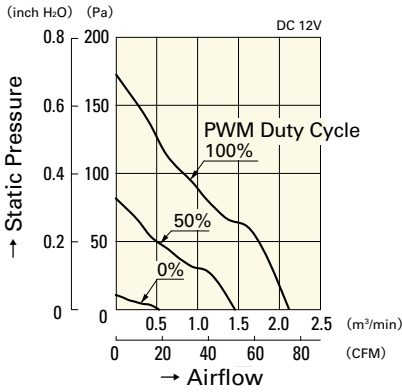
80 mm sq.

San Ace 80

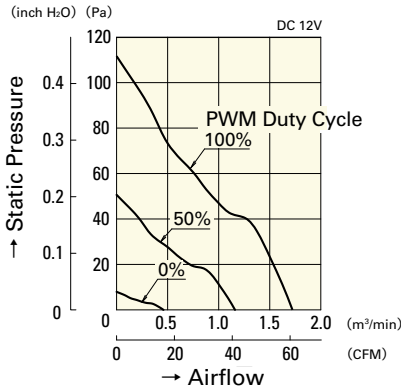
80×80×25mm [Mass : 125g]

Airflow - Static Pressure Characteristics

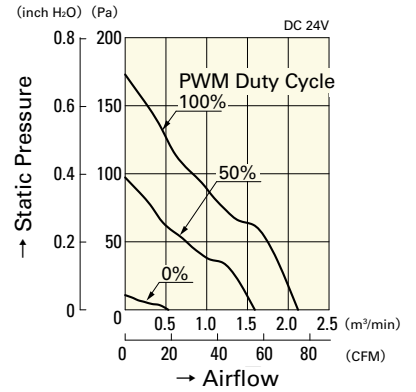
PWM Duty Cycle



9GV0812P4K03

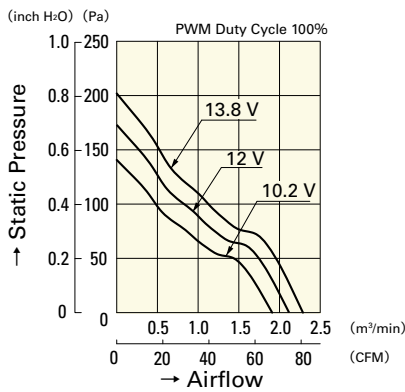


9GV0812P4J03

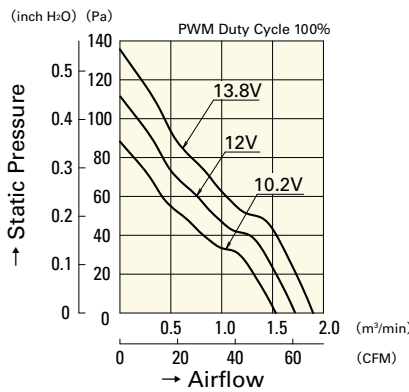


9GV0824P4K01

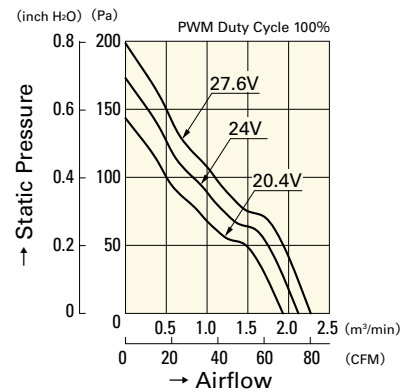
Operating Voltage Range



9GV0812P4K03

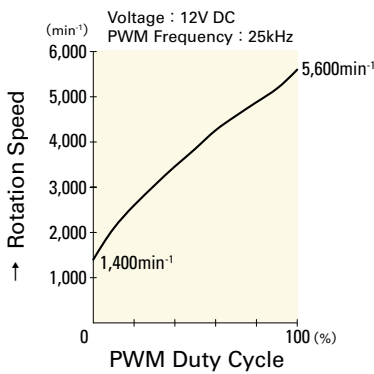


9GV0812P4J03

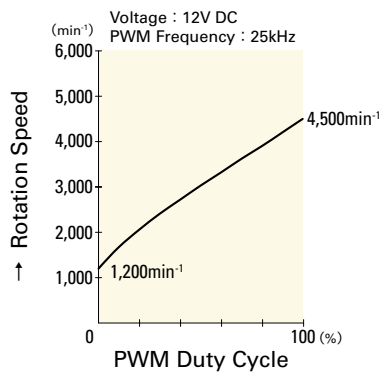


9GV0824P4K01

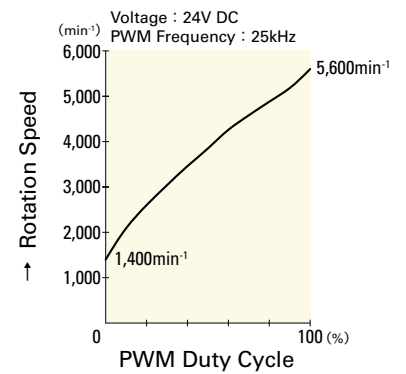
PWM Duty - Speed Characteristics Example



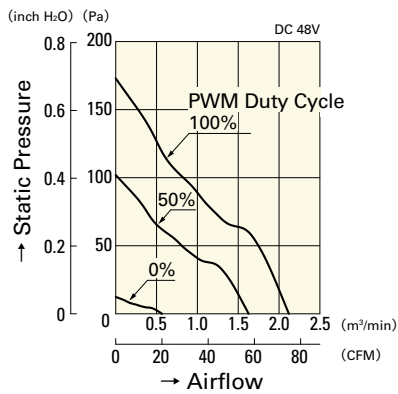
9GV0812P4K03



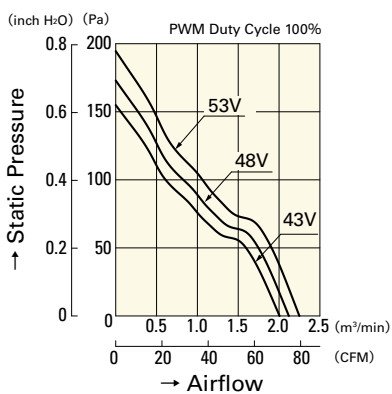
9GV0812P4J03



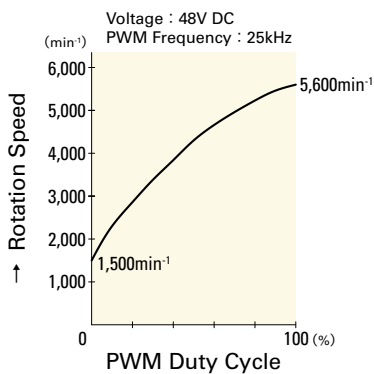
9GV0824P4K01



9GV0848P4K03



9GV0848P4K03



9GV0848P4K03

80 mm sq.

San Ace 80



Model no. 109R0812E401 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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

80×80×25mm (Mass : 110g) **9R** type

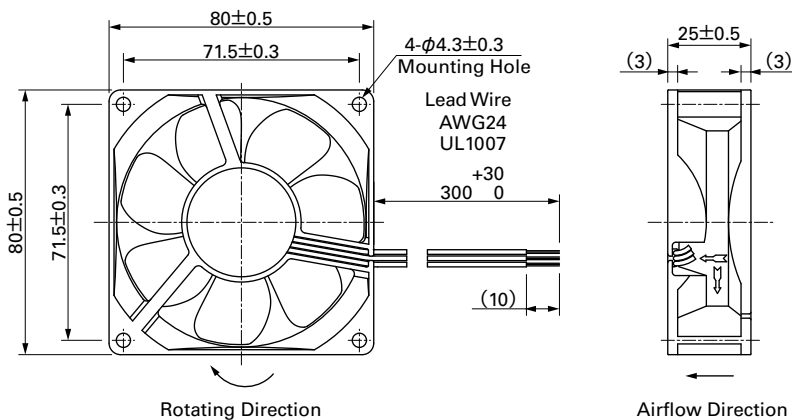
Specifications

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

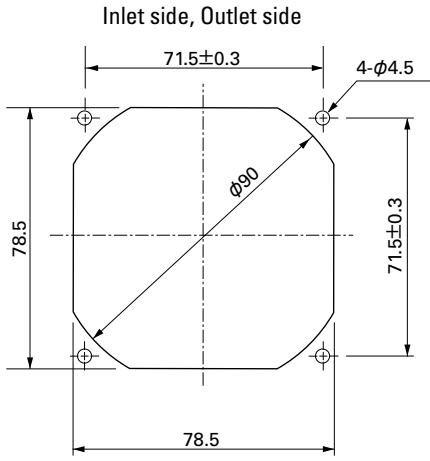
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]		
109R0805F401	5	4.5 to 5.5	0.25	1.25	2,600	0.92	32.5	28.4	0.114	26	-20 to +70	60,000/60°C
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°C
109R0812E401			0.24	2.88	3,700	1.31	46.3	57.8	0.232	35		
109R0812S401		6 to 13.8	0.18	2.16	3,400	1.20	42.4	48.0	0.193	34	-20 to +70	60,000/60°C
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
109R0824S401	0.10			2.40	3,400	1.20	42.4	48.0	0.193	34		
109R0824H401	12 to 27.6		0.07	1.68	2,900	1.03	36.4	35.3	0.142	29	-20 to +70	60,000/60°C
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			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°C
109R0848S401			0.06	2.88	3,400	1.20	42.4	48.0	0.193	34	-20 to +70	60,000/60°C

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

Dimensions (unit: mm) (With ribs)



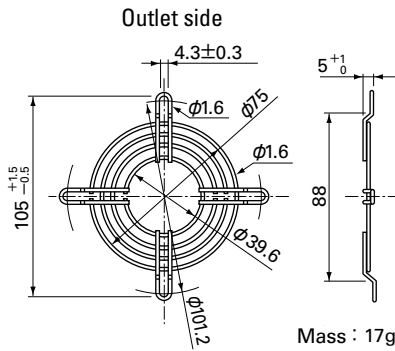
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

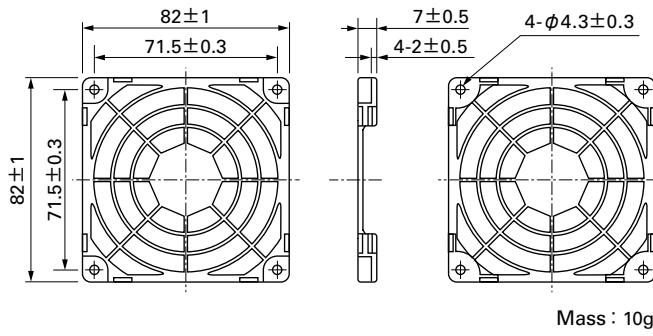
Finger Guards

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



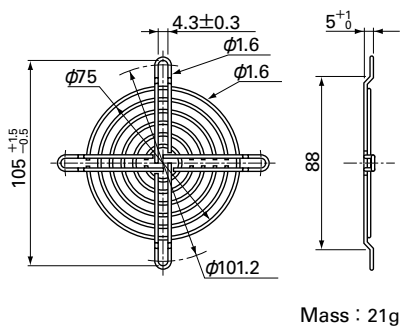
Resin Finger Guards

Model : 109-1002G



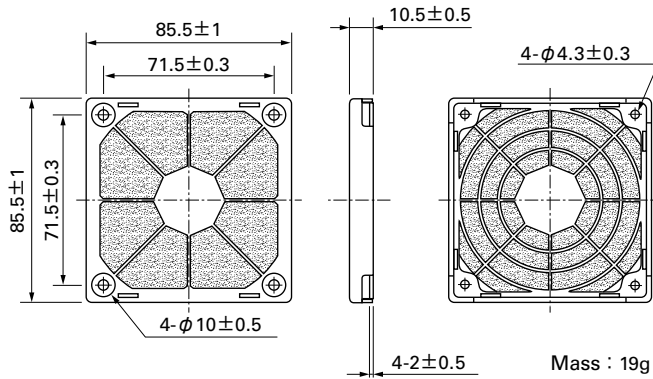
Model : 109-049E Color : Nickel-chrome plating (silver)
 : 109-049H : Cation electropainting (black)

Inlet side, Outlet side



Resin Filter Kits

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

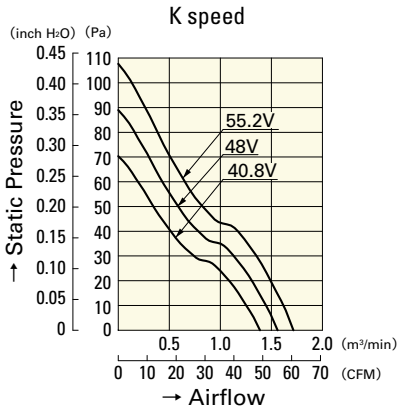


80 mm sq.

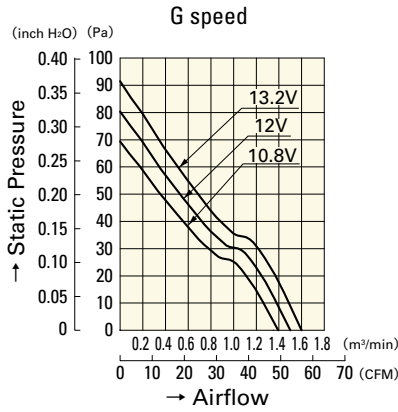
San Ace 80

80×80×25mm [Mass : 110g]

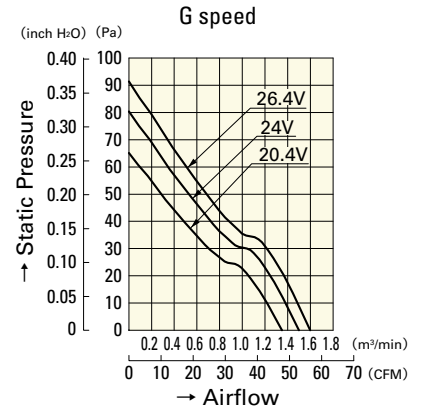
Airflow - Static Pressure Characteristics



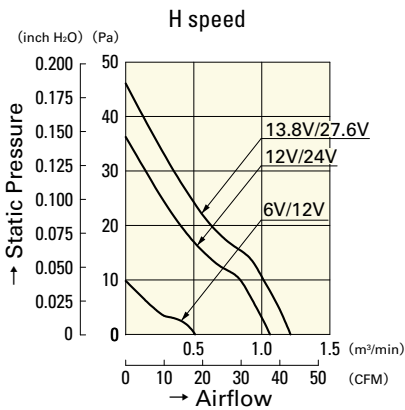
109R0848K401



109R0812G401

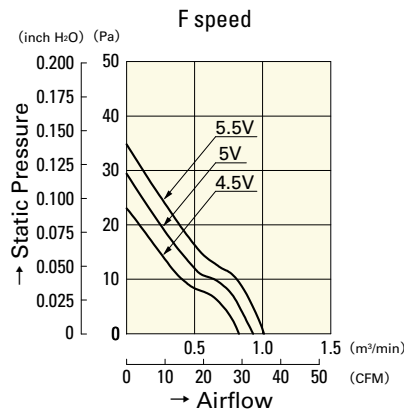


109R0824G401

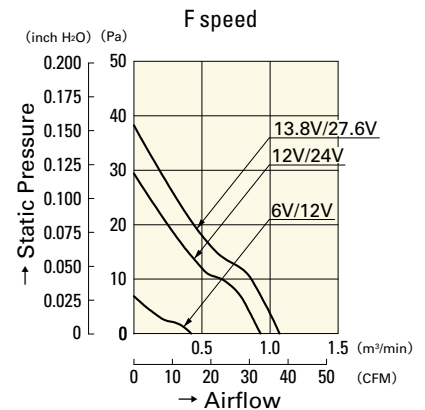


109R0812H401

109R0824H401

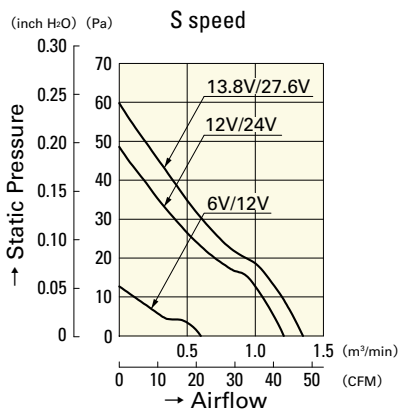


109R0805F401

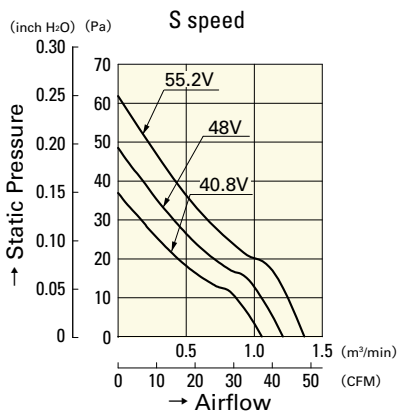


109R0812F401

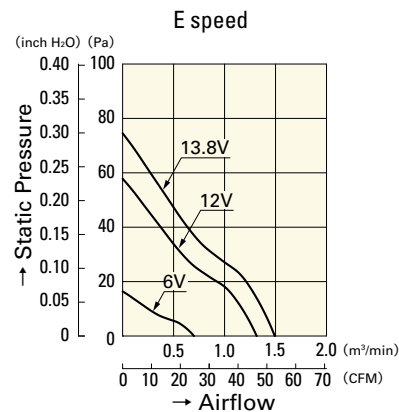
109R0824F401



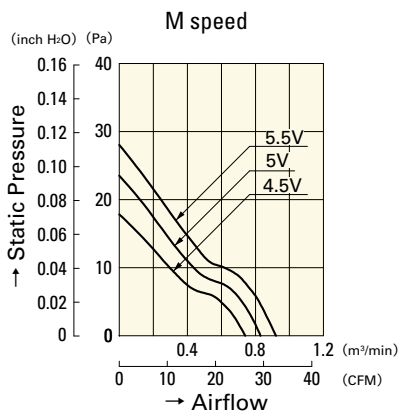
109R0812S401
109R0824S401



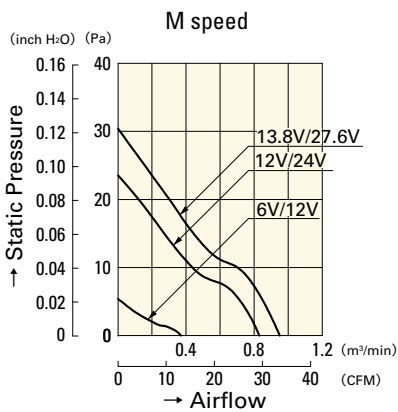
109R0848S401



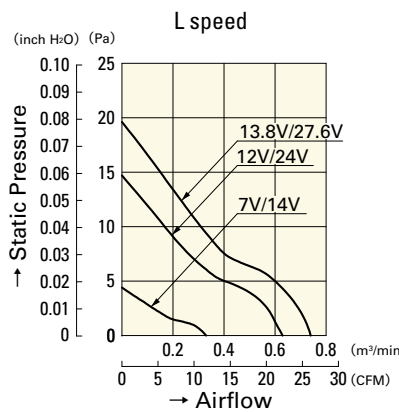
109R0812E401



109R0805M401



109R0812M401
109R0824M401



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

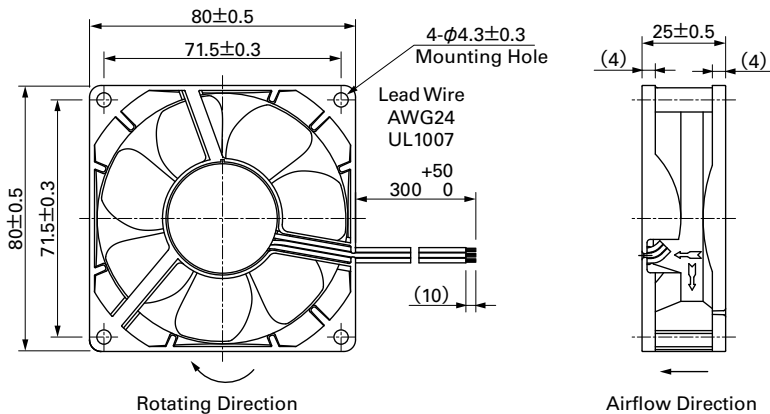
80×80×25mm (Mass : 90g) 9A type San Cooler

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

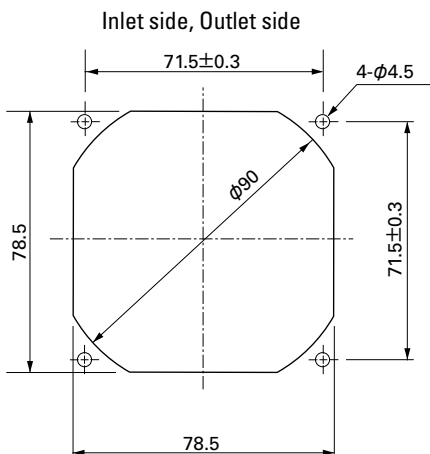
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]				
9A0812G401	12	6 to 13.2	0.38	4.56	4,500	1.5	53.0	80.3	0.323	40	-20 to +60	30,000/60°C		
9A0812S401			0.18	2.16	3,400	1.2	42.4	48	0.193	34				
9A0812H401		6 to 13.8	0.13	1.56	2,900	1.03	36.4	35.3	0.142	29			-20 to +70	40,000/60°C
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			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°C		
9A0824S401			0.1	2.4	3,400	1.2	42.4	48	0.193	34				
9A0824H401		12 to 27.6	0.07	1.68	2,900	1.03	36.4	35.3	0.142	29			-20 to +70	40,000/60°C
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			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)



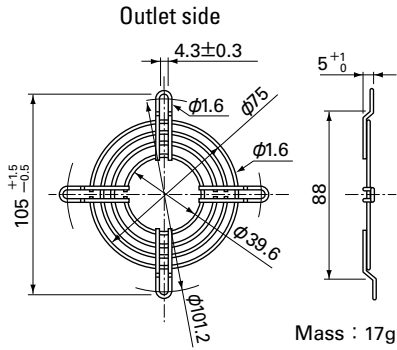
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

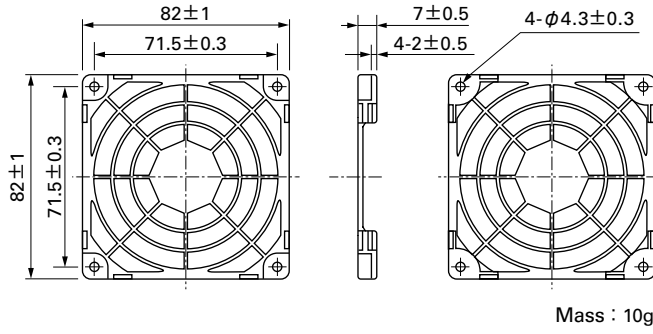
Finger Guards

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



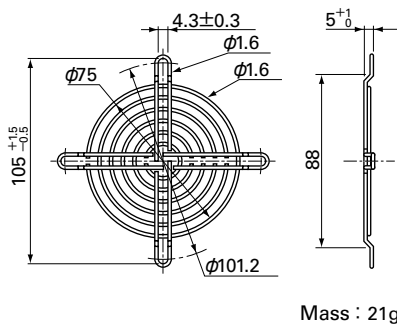
Resin Finger Guards

Model : 109-1002G



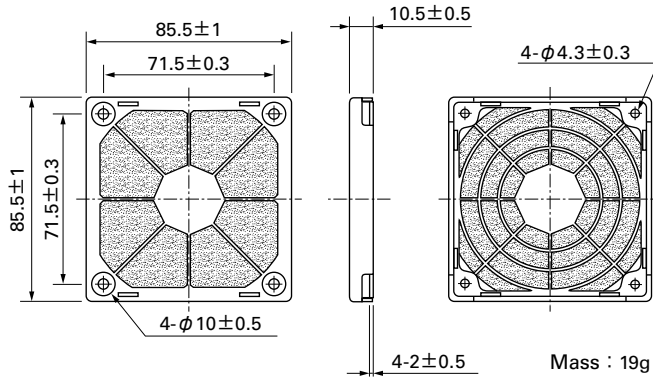
Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color : 109-049H : Cation electropainting (black)

Inlet side, Outlet side

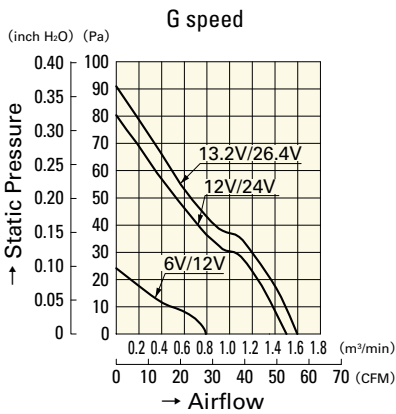


Resin Filter Kits

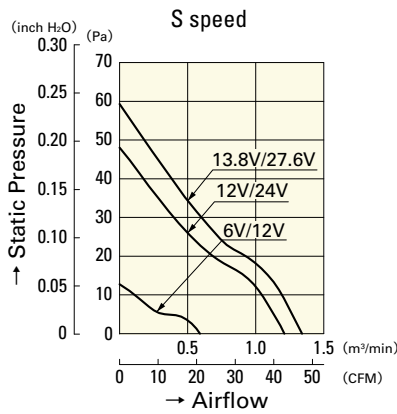
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI) : 109-1002F30 (30PPI), 109-1002F40 (40PPI)



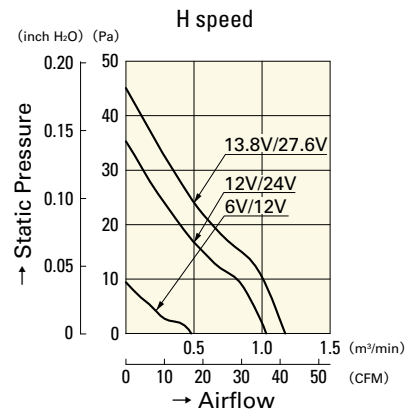
Airflow - Static Pressure Characteristics



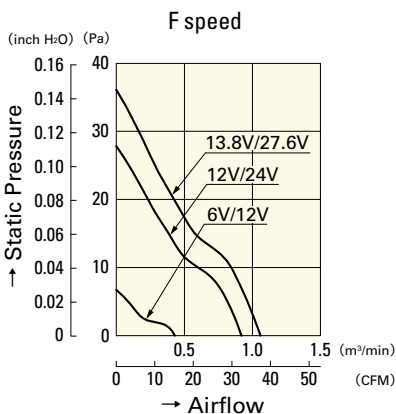
9A0812G401
9A0824G401



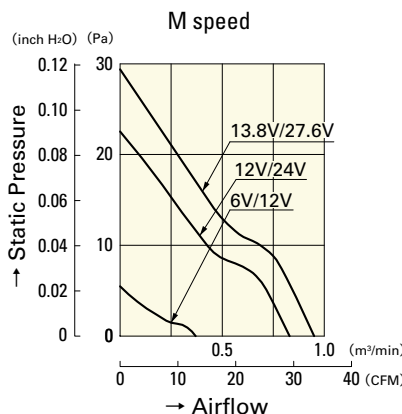
9A0812S401
9A0824S401



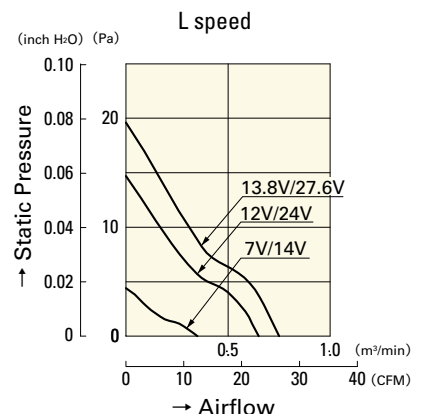
9A0812H401
9A0824H401



9A0812F401
9A0824F401



9A0812M401
9A0824M401



9A0812L401
9A0824L401

80mm 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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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



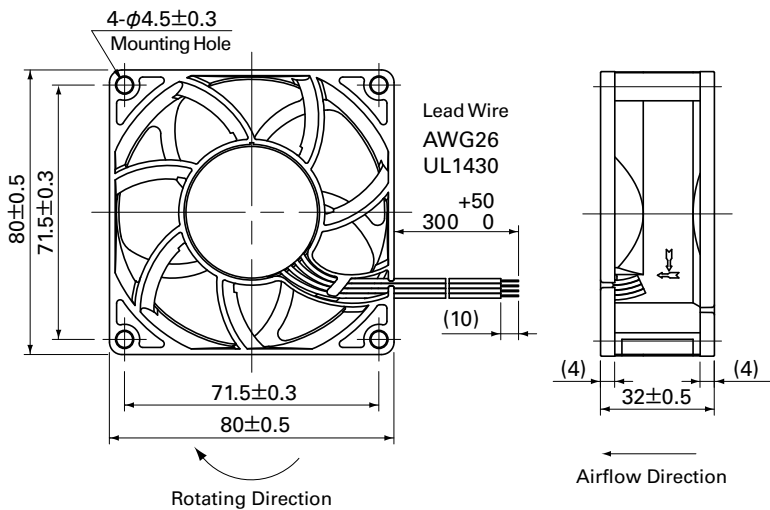
Specifications The following nos. **have PWM controls, pulse sensors, and ribs.** For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle* [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C	
			0	0.08	0.96	2,800	0.71 25.1	30 0.12	24			
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			

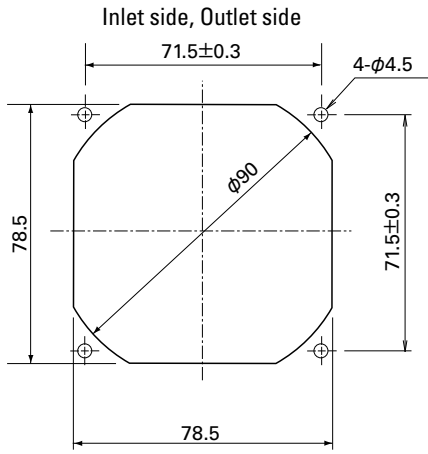
*PWM Frequency : 25kHz

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

Dimensions (unit: mm) (With ribs)



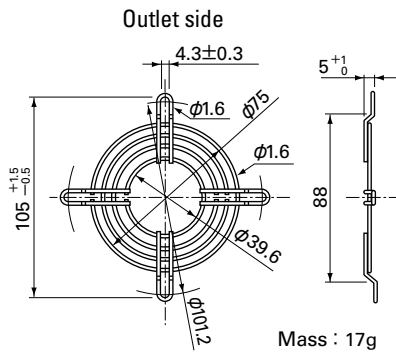
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

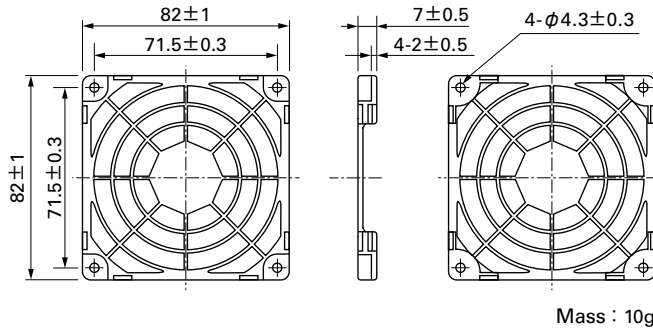
Finger Guards

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



Resin Finger Guards

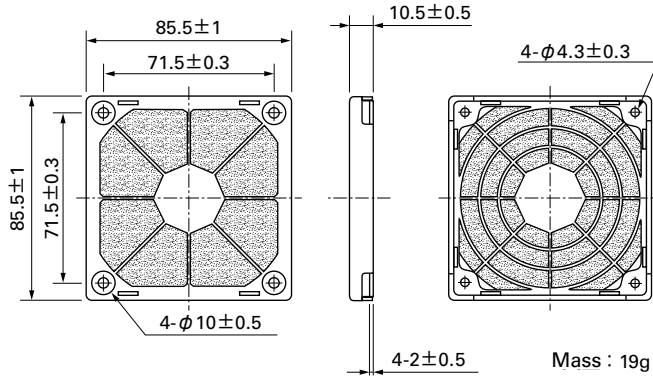
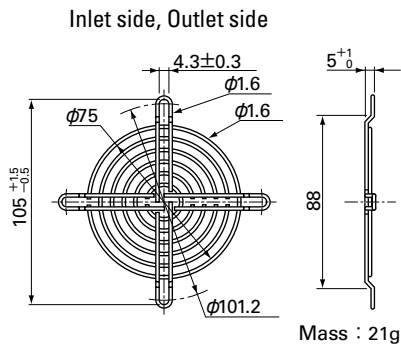
Model : 109-1002G



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

Resin Filter Kits

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



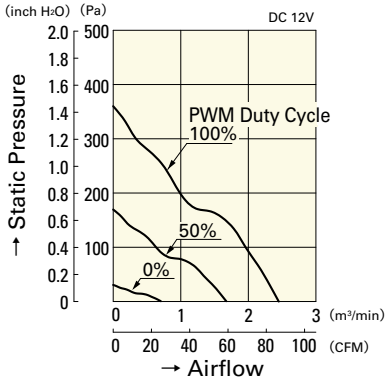
80mm sq.

San Ace 80

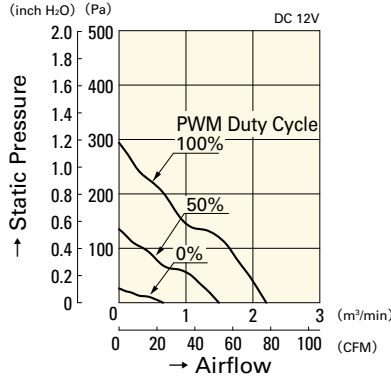
80×80×32mm [Mass : 130g]

Airflow - Static Pressure Characteristics

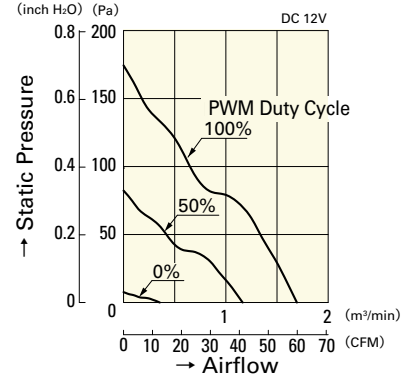
PWM Duty Cycle



9GA0812P2S001

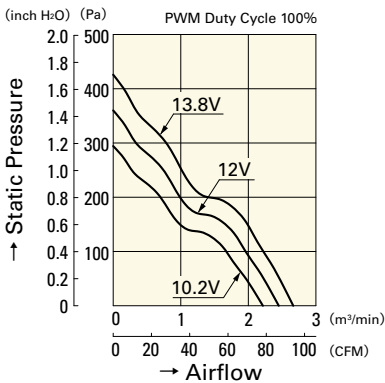


9GA0812P2H001

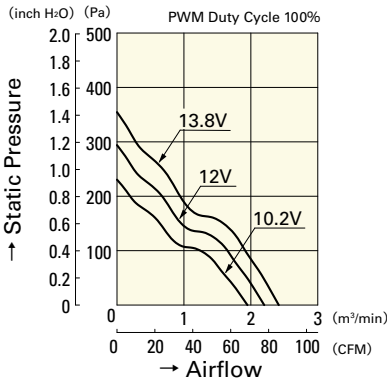


9GA0812P2M001

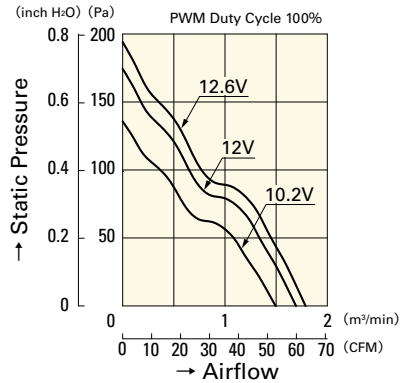
Operating Voltage Range



9GA0812P2S001

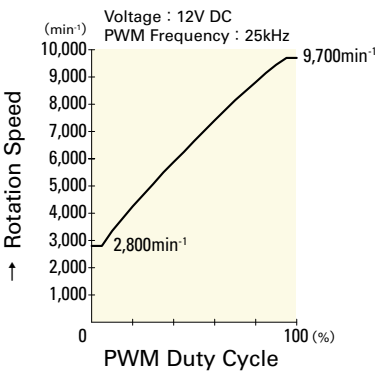


9GA0812P2H001

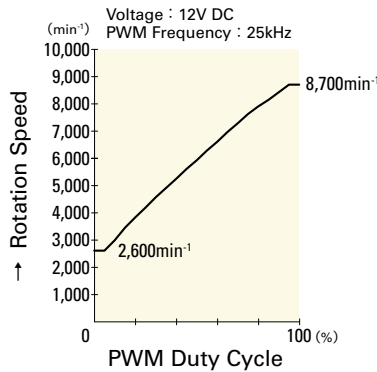


9GA0812P2M001

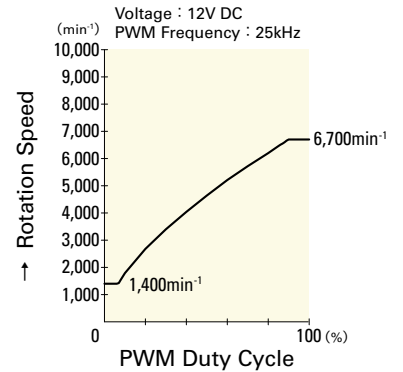
PWM Duty - Speed Characteristics Example



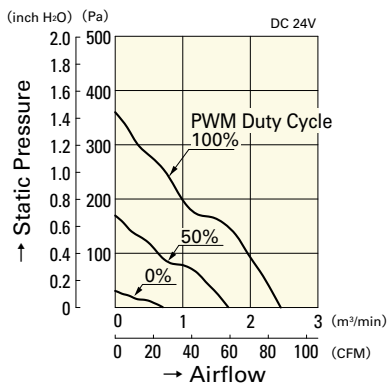
9GA0812P2S001



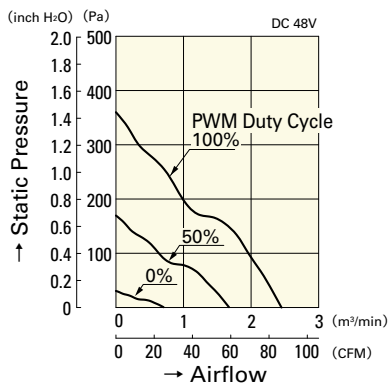
9GA0812P2H001



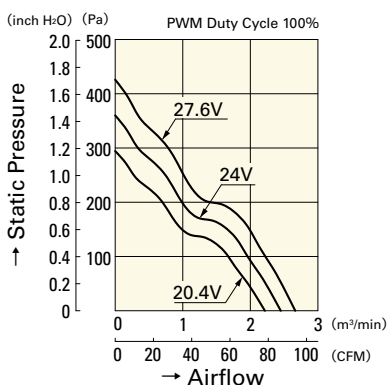
9GA0812P2M001



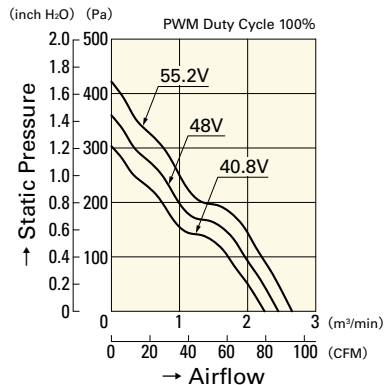
9GA0824P2S001



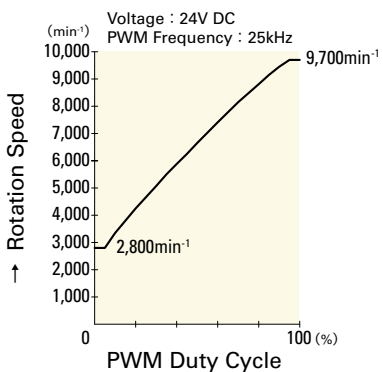
9GA0848P2S001



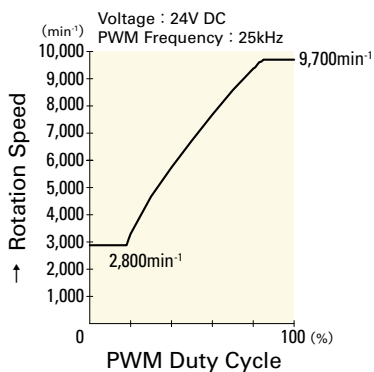
9GA0824P2S001



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

80×80×32mm (Mass : 150g) **9P** type

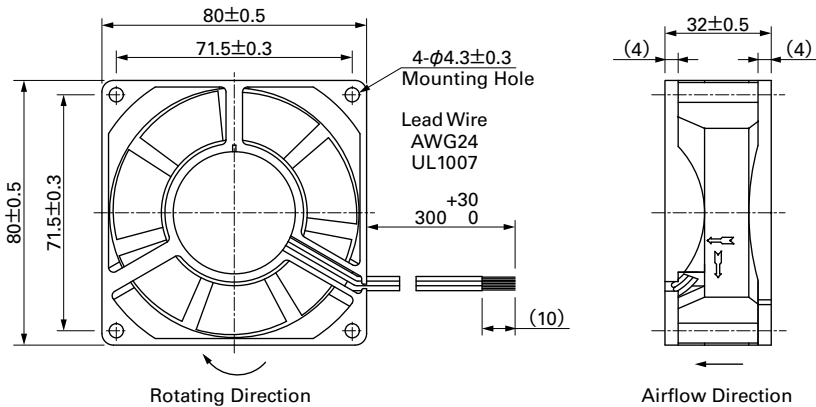
Specifications

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

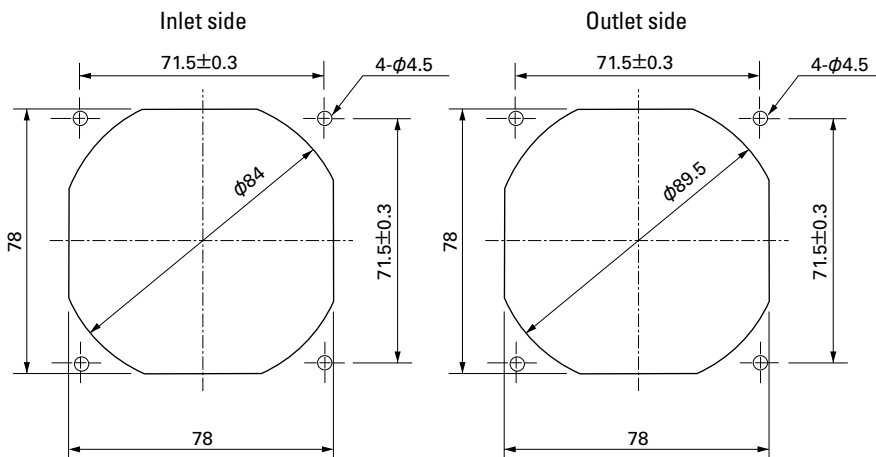
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]	
109P0812A201	12	6 to 13.2	0.56	6.72	4,600	1.52 53.7	91.1 0.366	45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

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

Dimensions (unit: mm) (With ribs)



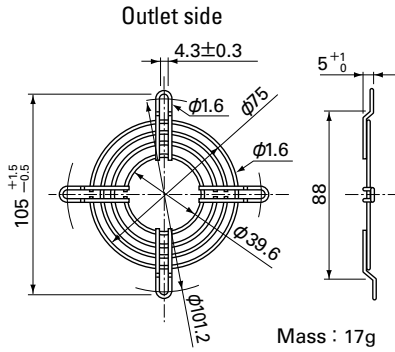
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

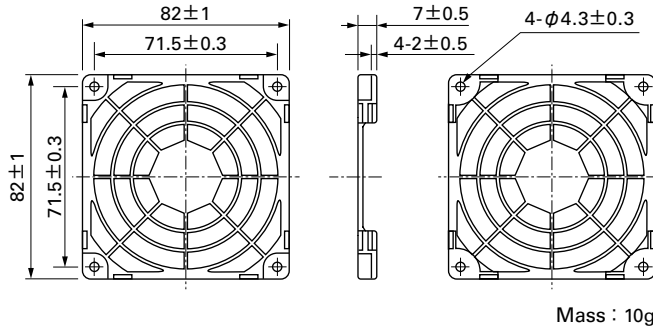
Finger Guards

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



Resin Finger Guards

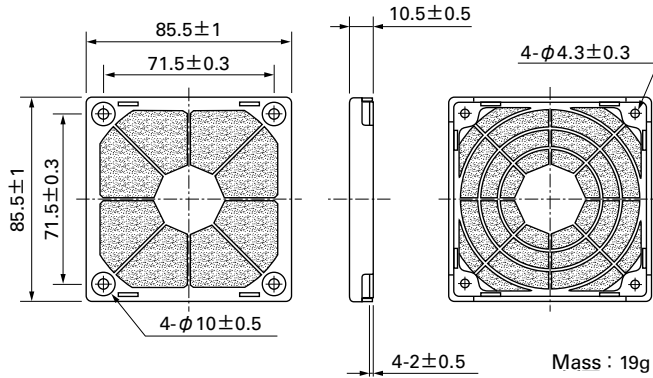
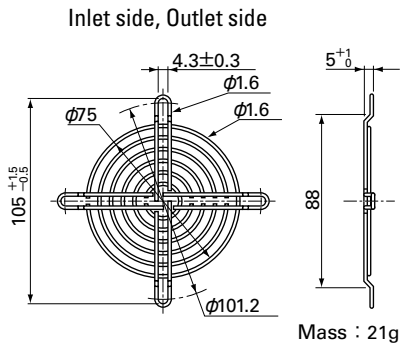
Model : 109-1002G



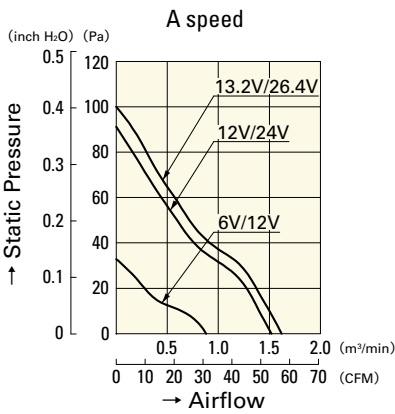
Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color : Nickel-chrome plating (silver)
: 109-049H : Cation electropainting (black)

Resin Filter Kits

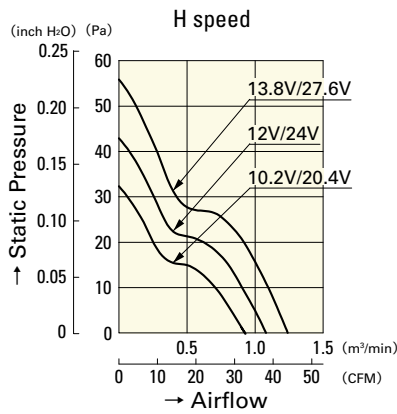
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
: 109-1002F30 (30PPI), 109-1002F40 (40PPI)



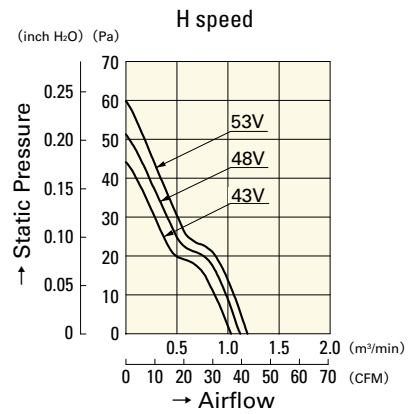
Airflow - Static Pressure Characteristics



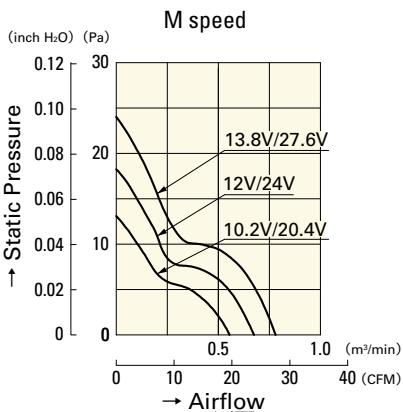
109P0812A201
109P0824A201



109P0812H201
109P0824H201



109P0848H201



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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.

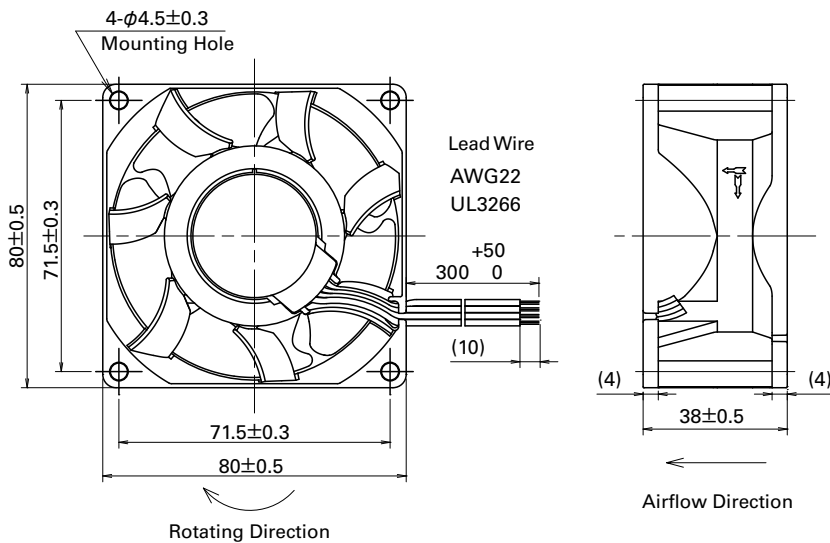
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle ^{Note)1)} [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9HVA0812P1G001	12	10.8 to 13.2	100	3.5	42	16,100	3.75 132	1,350 5.4	73	-20 to +70	40,000/60°C (70,000/40°C)
			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).

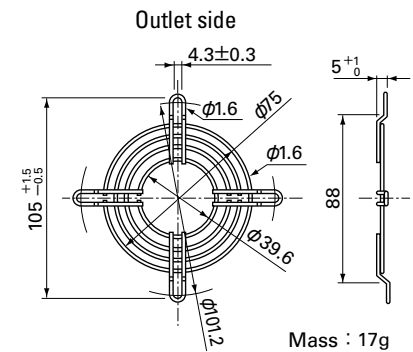
Dimensions (unit: mm) (With ribs)



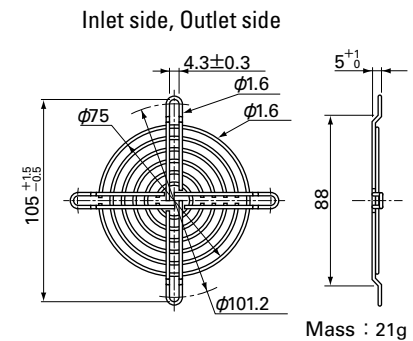
Options (unit: mm)

Finger Guards

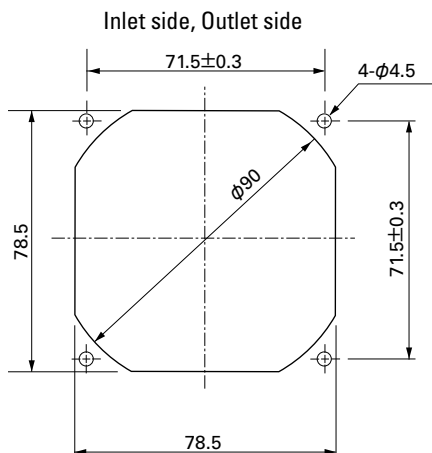
Model : 109-049C Surface treatment : Nickel-chrome plating (silver) Color



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



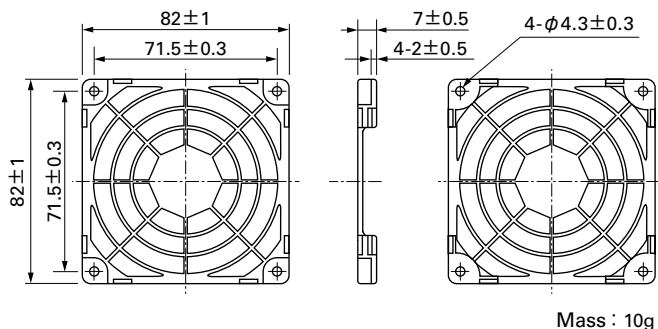
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

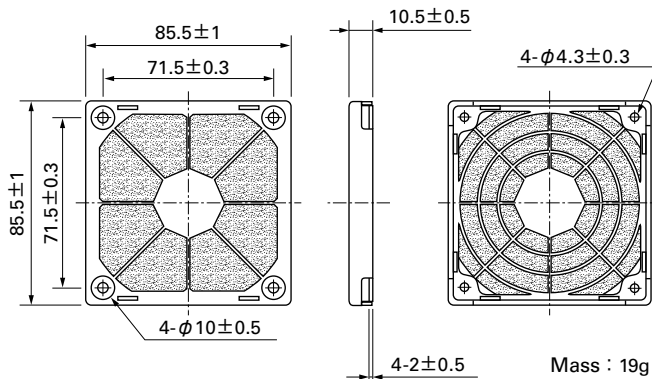
Resin Finger Guards

Model : 109-1002G



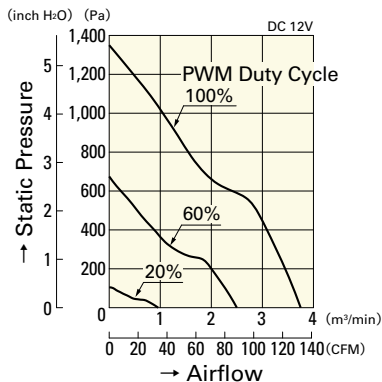
Resin Filter Kits

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



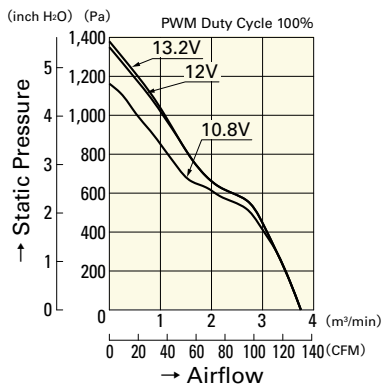
Airflow - Static Pressure Characteristics

PWM Duty Cycle



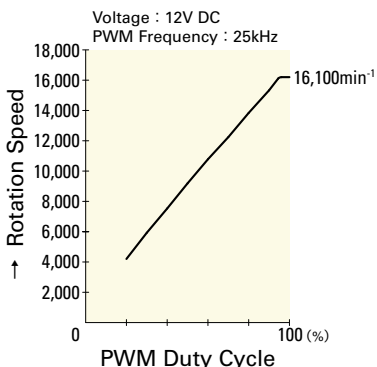
9HVA0812P1G001

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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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 [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C (70,000/40°C)
			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		

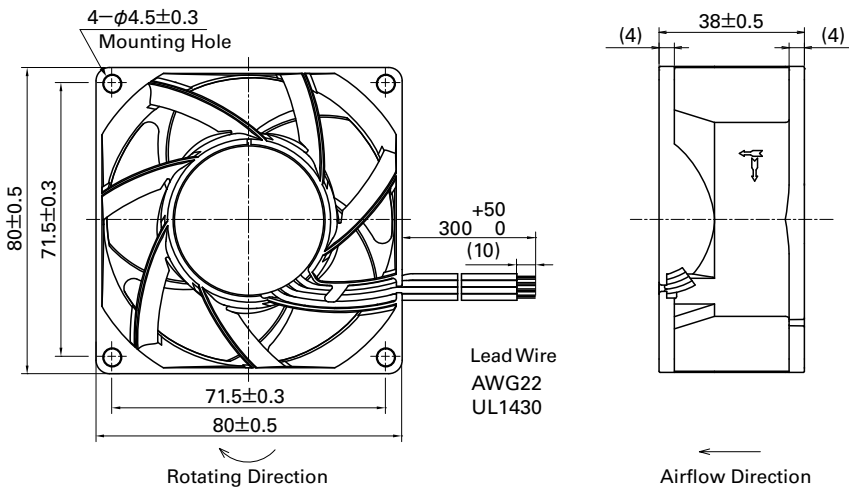
Note 1: Fan does not rotate when PWM duty cycle is 0%.

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).

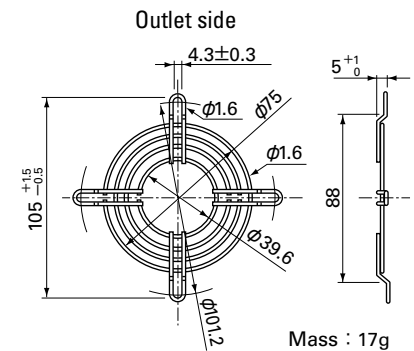
Dimensions (unit: mm) (With ribs)



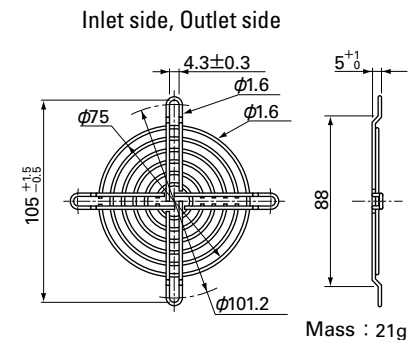
Options (unit: mm)

Finger Guards

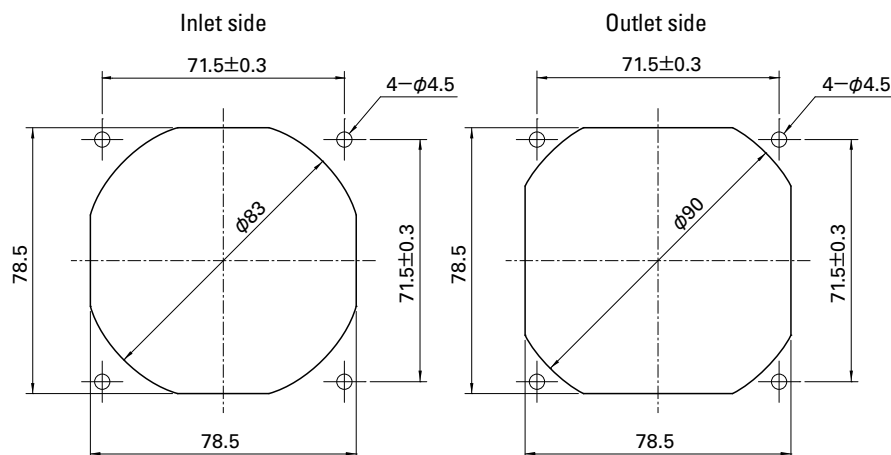
Model : 109-049C Surface treatment : Nickel-chrome plating (silver) Color



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



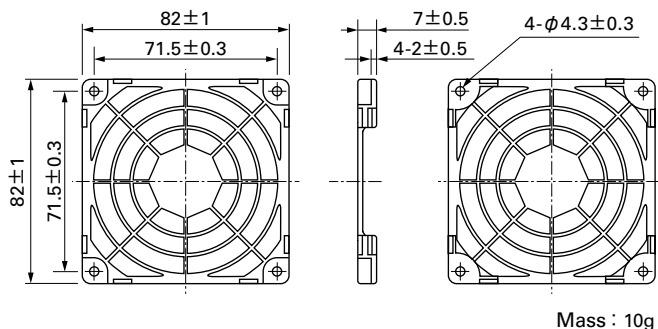
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

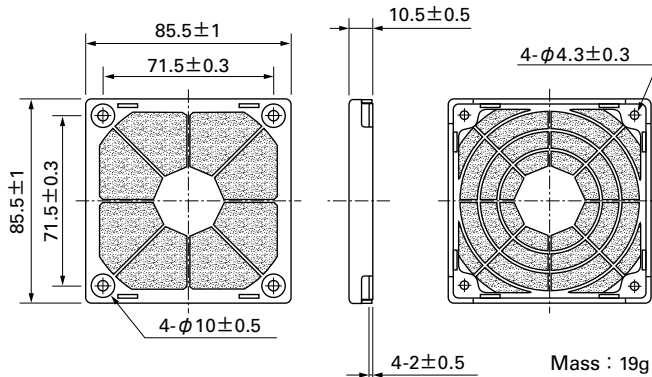
Resin Finger Guards

Model : 109-1002G



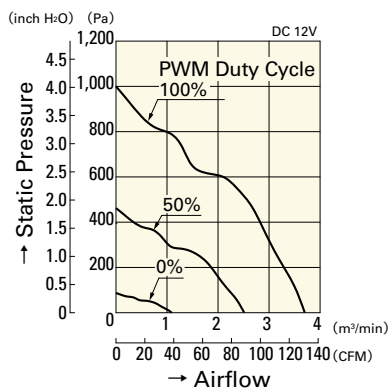
Resin Filter Kits

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

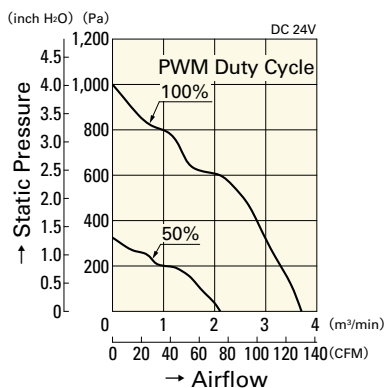


Airflow - Static Pressure Characteristics

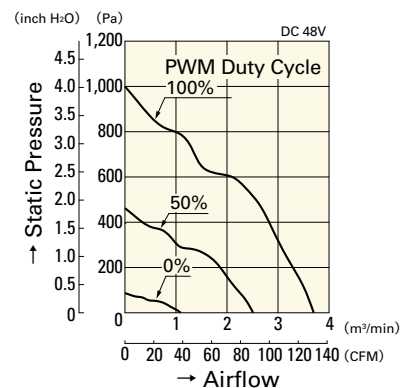
PWM Duty Cycle



9HV0812P1G001

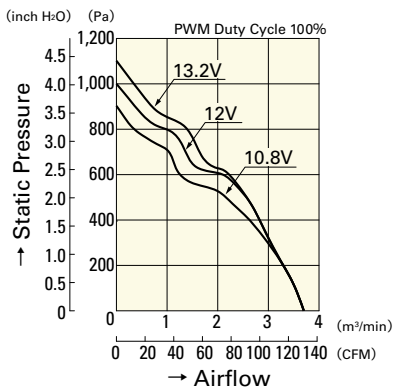


9HV0824P1G003

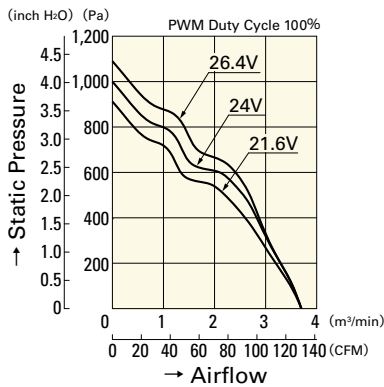


9HV0848P1G001

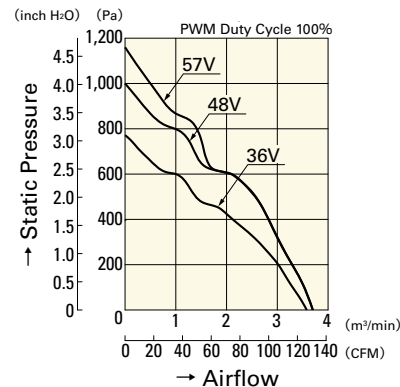
Operating Voltage Range



9HV0812P1G001

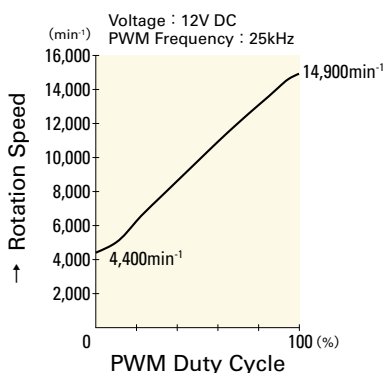


9HV0824P1G003

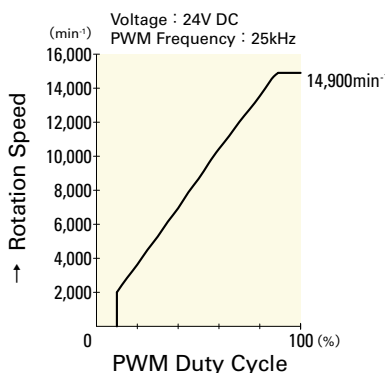


9HV0848P1G001

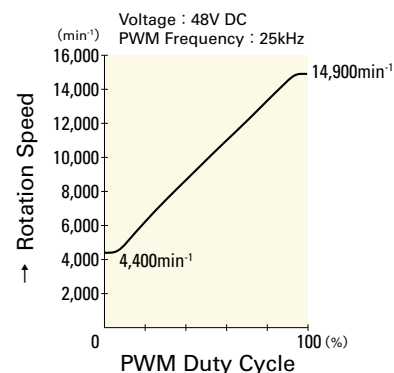
PWM Duty - Speed Characteristics Example



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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



Specifications

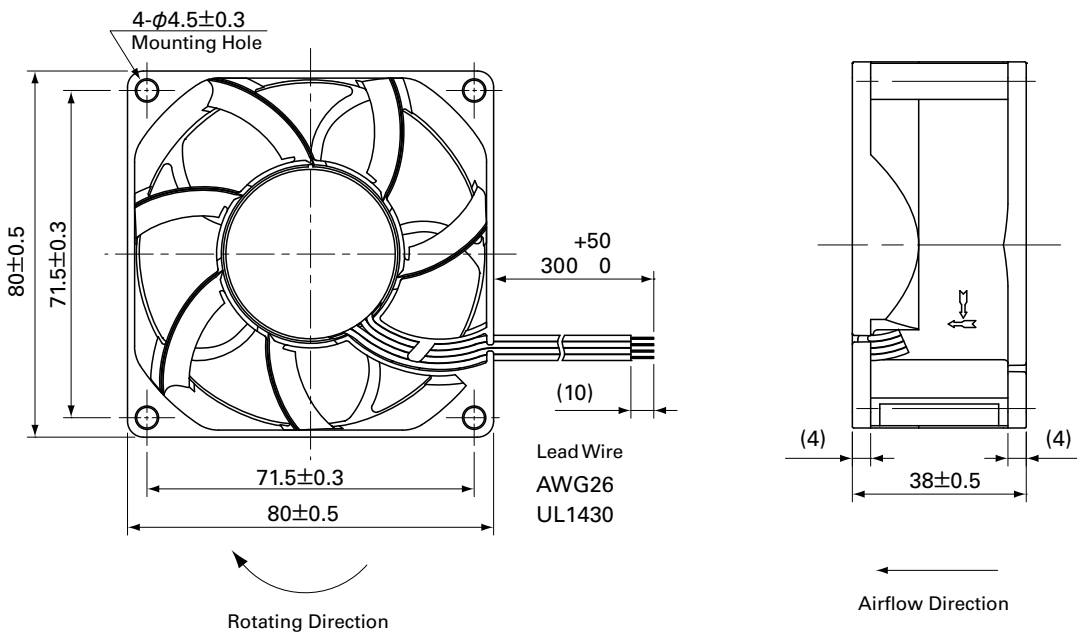
The following nos. **have PWM controls, pulse sensors, and ribs.** For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle* [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C (70,000/40°C)		
			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

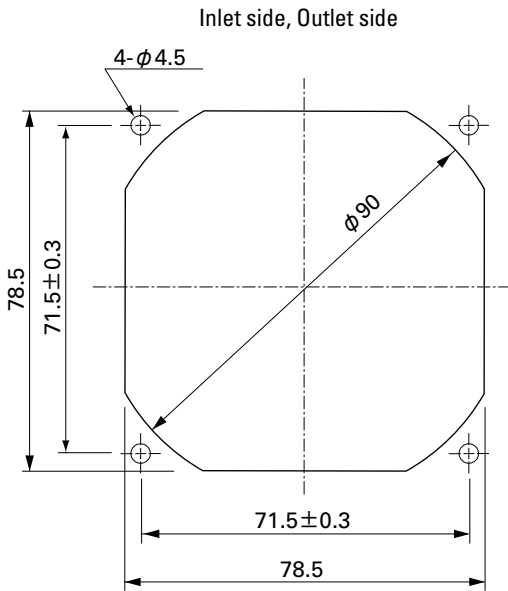
*PWM Frequency : 25kHz

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

Dimensions (unit: mm) (With ribs)



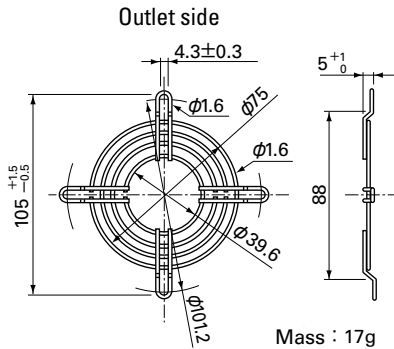
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

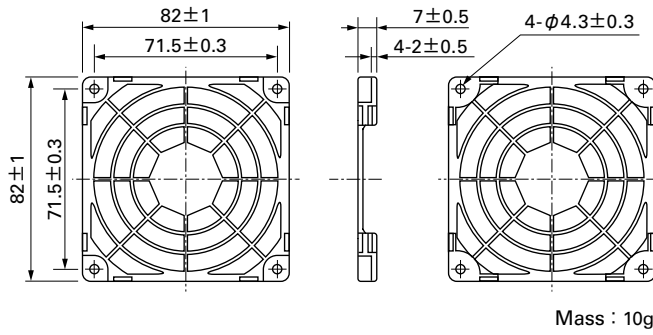
Finger Guards

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



Resin Finger Guards

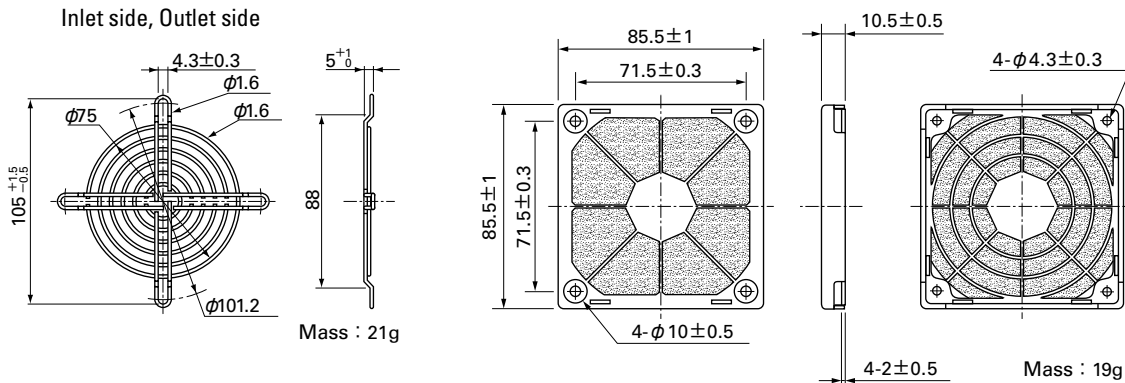
Model : 109-1002G



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

Resin Filter Kits

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



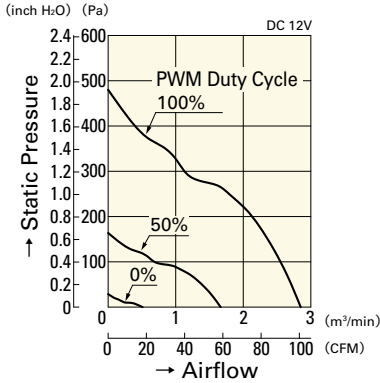
80 mm sq.

San Ace 80

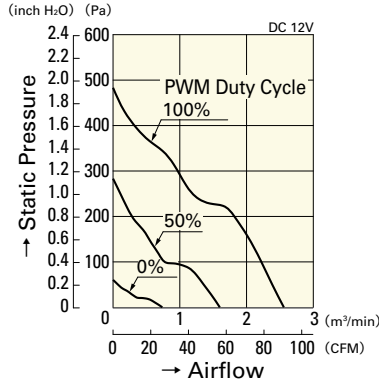
80×80×38mm [Mass : 160g]

Airflow - Static Pressure Characteristics

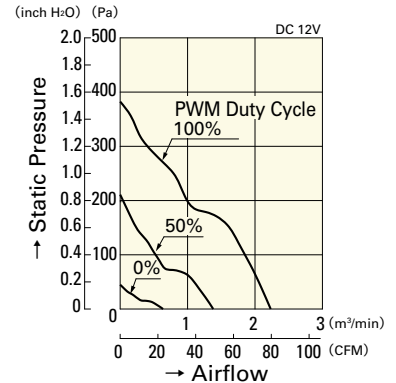
PWM Duty Cycle



9GA0812P1G61

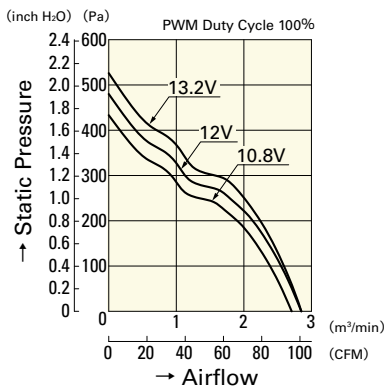


9GA0812P1S61

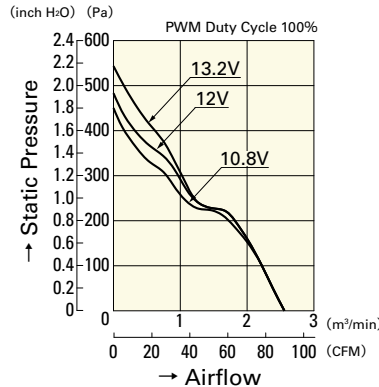


9GA0812P1H61

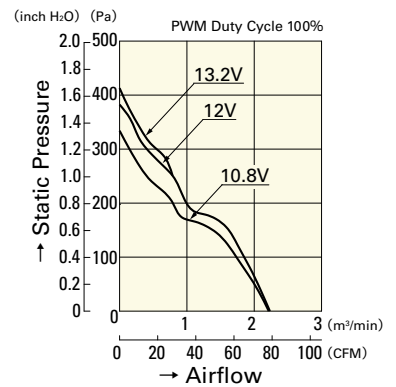
Operating Voltage Range



9GA0812P1G61

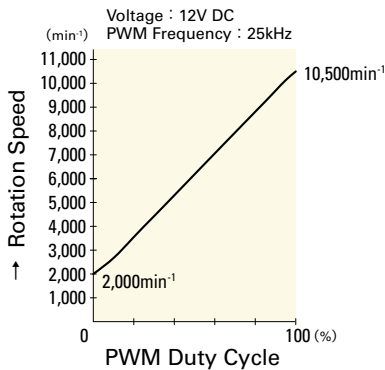


9GA0812P1S61

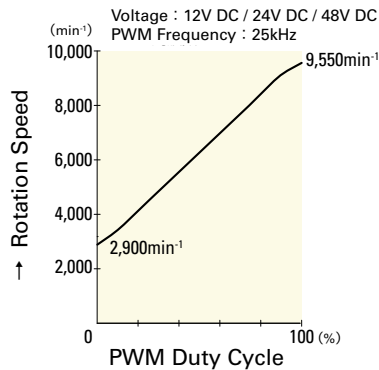


9GA0812P1H61

PWM Duty - Speed Characteristics Example



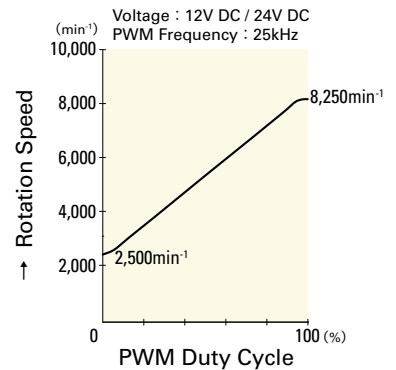
9GA0812P1G61



9GA0812P1S61

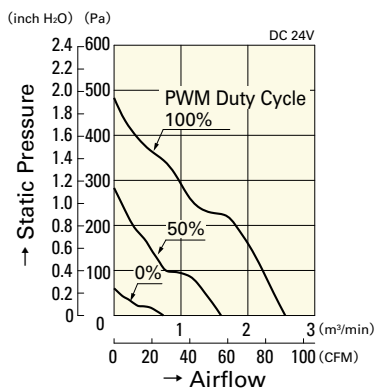
9GA0824P1S61

9GA0848P1S61

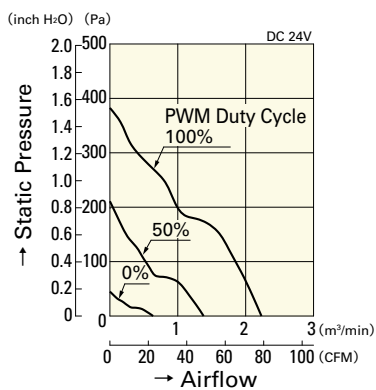


9GA0812P1H61

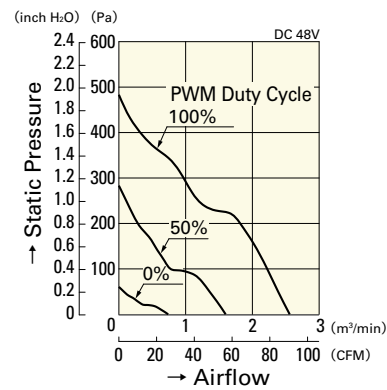
9GA0824P1H61



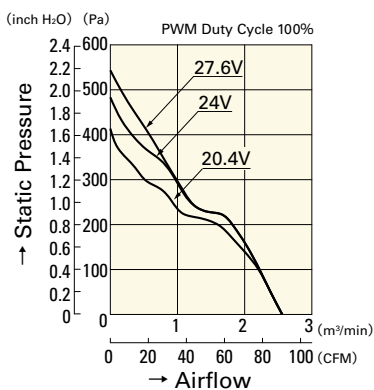
9GA0824P1S61



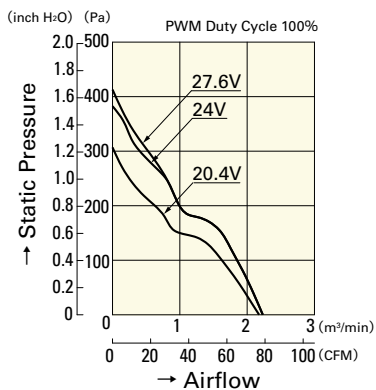
9GA0824P1H61



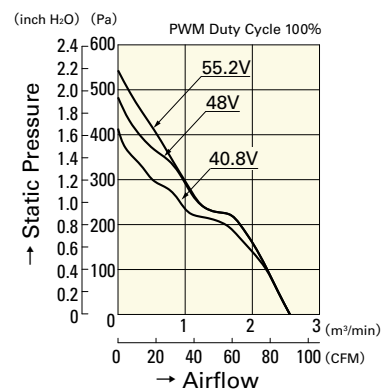
9GA0848P1S61



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

80×80×38mm (Mass : 220g) **9GV type**

Specifications

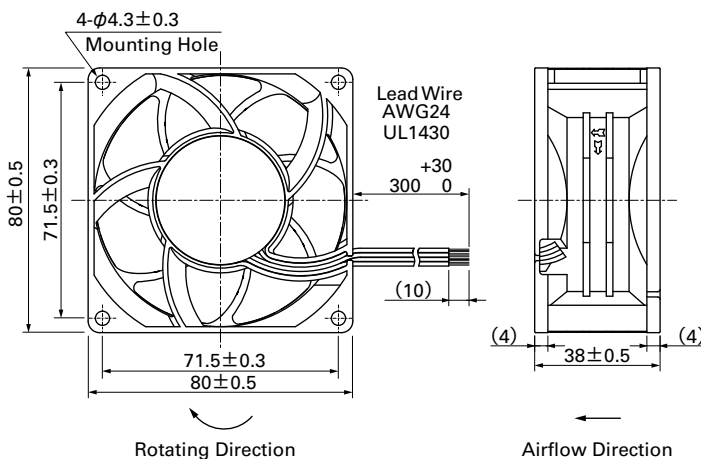
The following nos. **have PWM controls, pulse sensors, and ribs.** For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C	
			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
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			

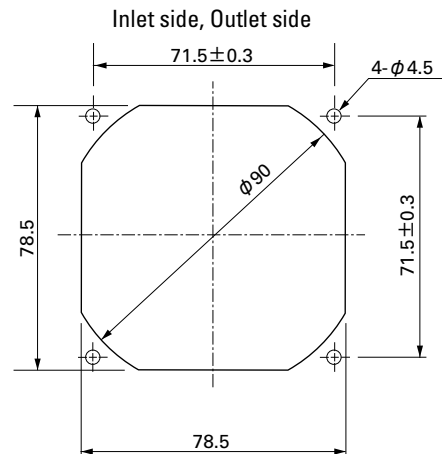
※PWM Frequency : 25kHz

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

Dimensions (unit: mm) (With ribs)

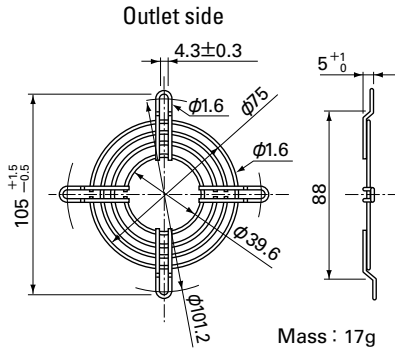


Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



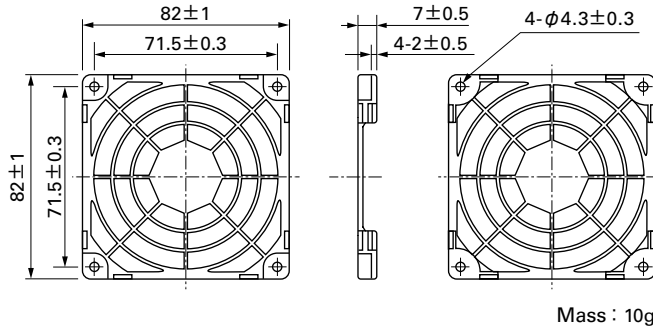
Finger Guards

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



Resin Finger Guards

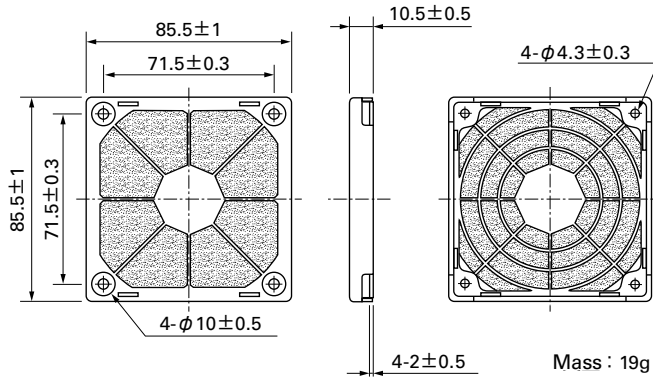
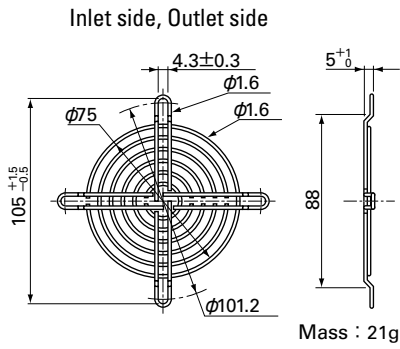
Model : 109-1002G



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

Resin Filter Kits

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



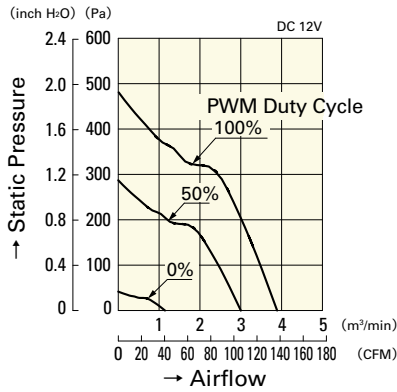
80 mm sq.

San Ace 80

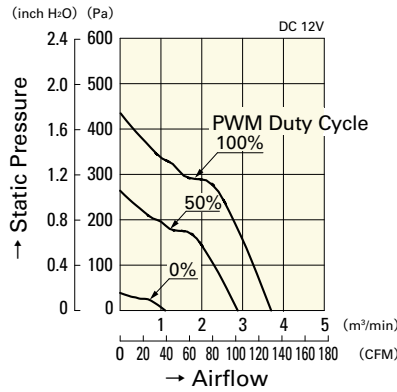
80×80×38mm [Mass : 220g]

Airflow - Static Pressure Characteristics

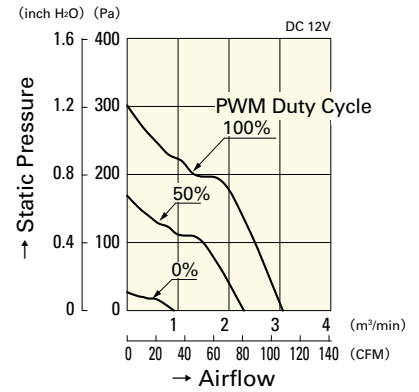
PWM Duty Cycle



9GV0812P1G03

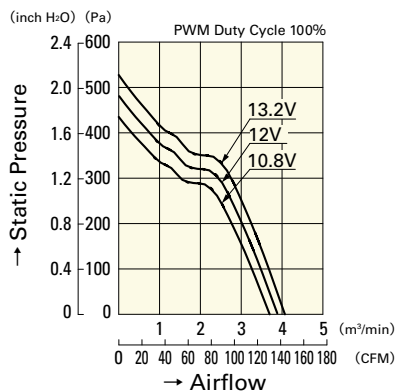


9GV0812P1H03

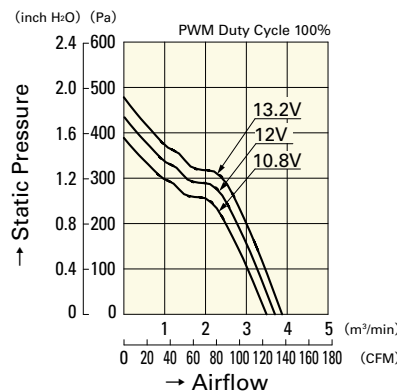


9GV0812P1F03

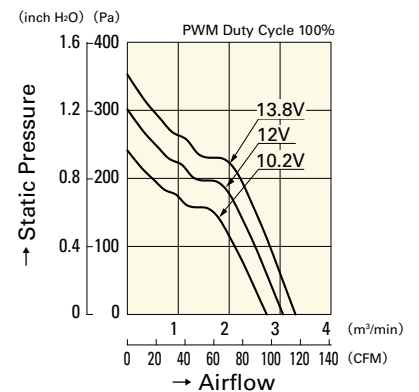
Operating Voltage Range



9GV0812P1G03

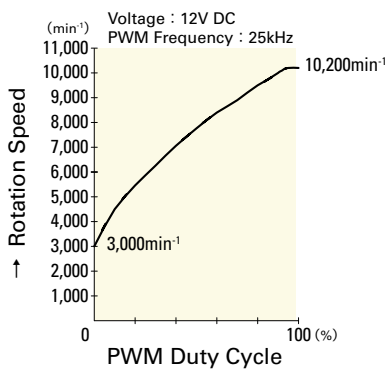


9GV0812P1H03

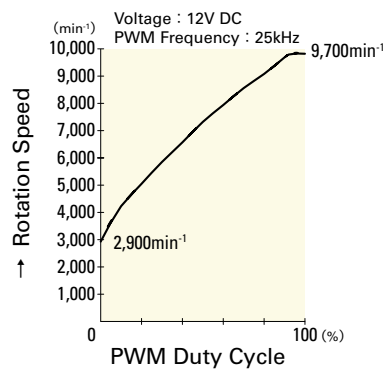


9GV0812P1F03

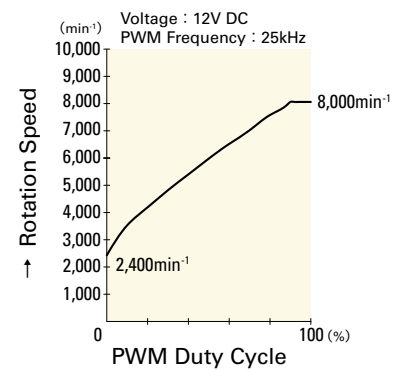
PWM Duty - Speed Characteristics Example



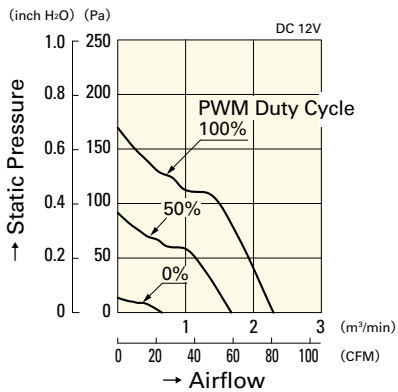
9GV0812P1G03



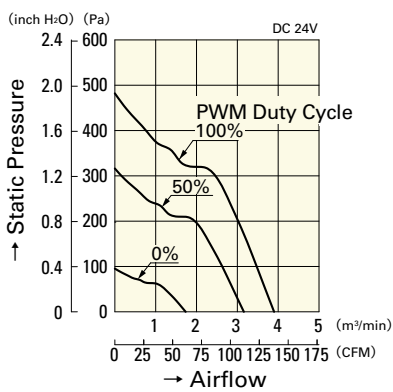
9GV0812P1H03



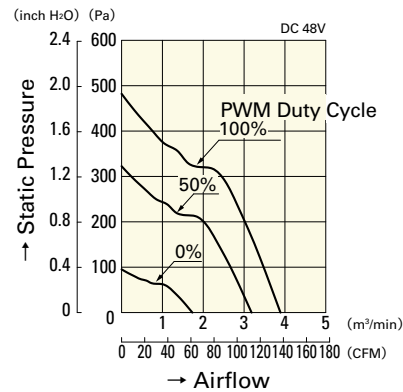
9GV0812P1F03



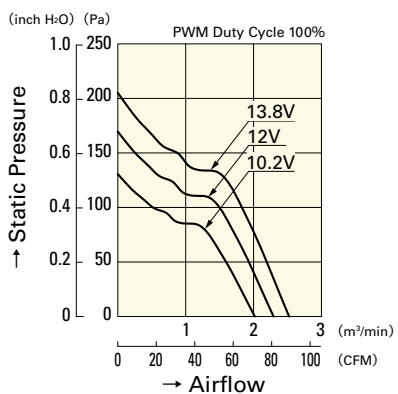
9GV0812P1M03



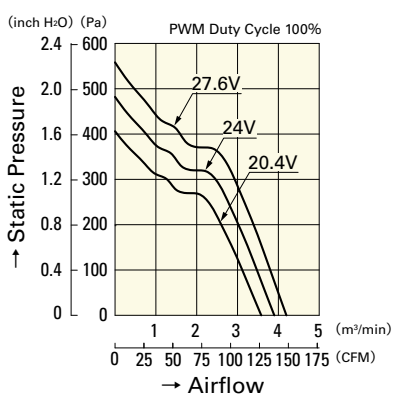
9GV0824P1G03



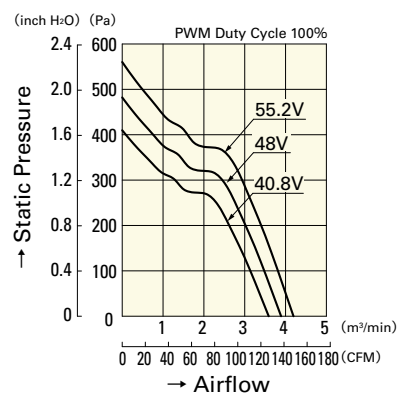
9GV0848P1G03



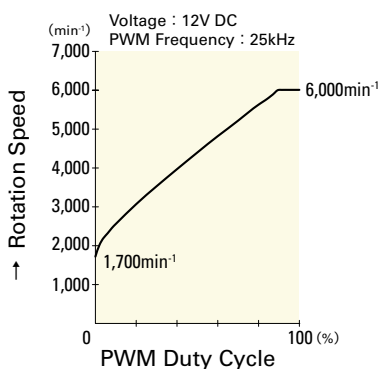
9GV0812P1M03



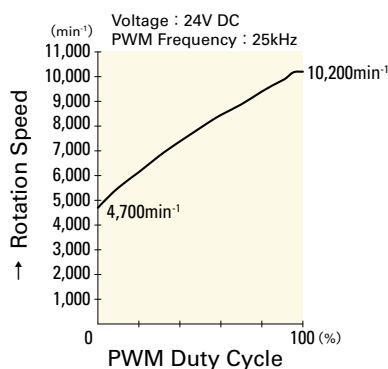
9GV0824P1G03



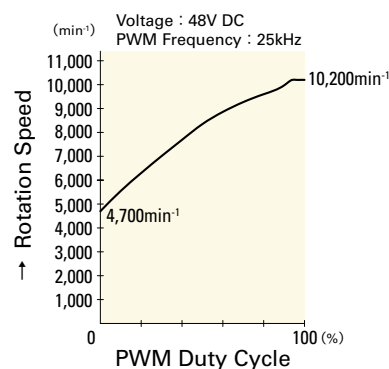
9GV0848P1G03



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

80×80×38mm (Mass : 170g) **9G type**

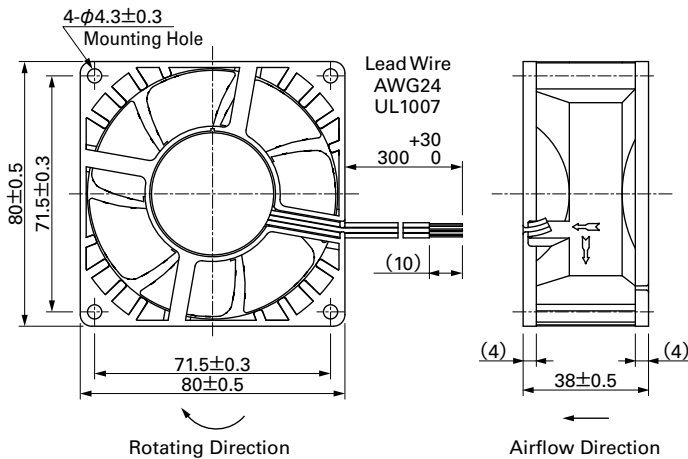
Specifications

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

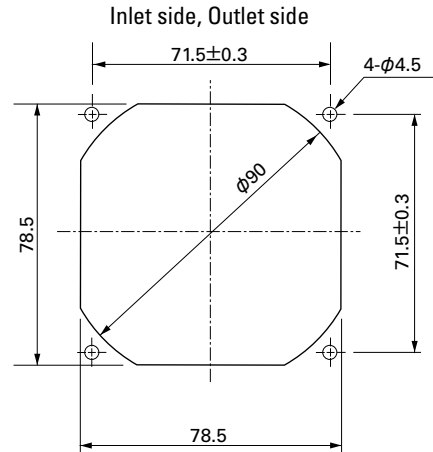
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9G0812K101	12	10.8 to 13.2	1.8	21.6	7,800	3.10 107.3	310 1.285	58	-20 to +60	40,000/60°C
9G0812G101		7 to 13.8	1.1	13.2	6,300	2.55 90	211 0.847	51		
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)



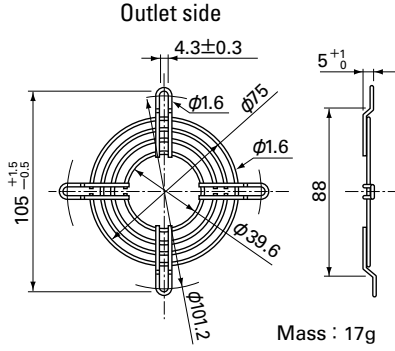
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

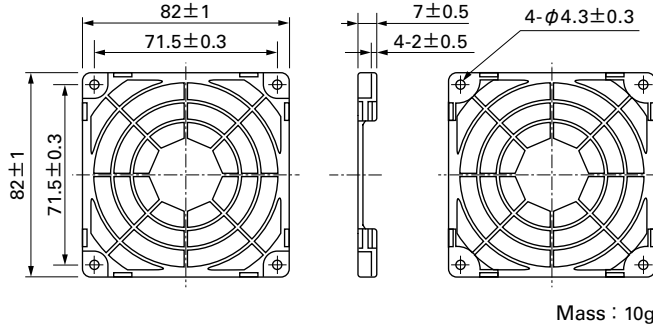
Finger Guards

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



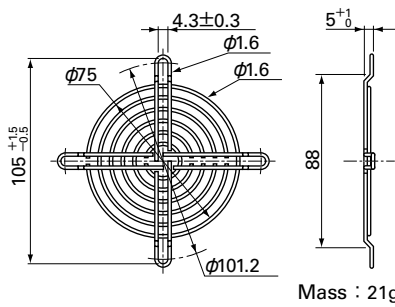
Resin Finger Guards

Model : 109-1002G



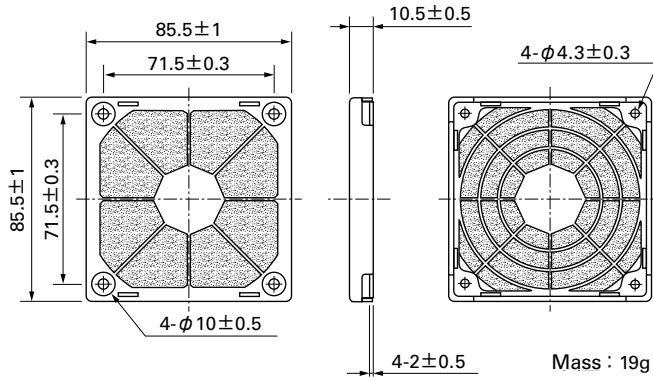
Model : 109-049E Surface treatment : Nickel-chrome plating (silver) Color : Nickel-chrome plating (silver)
 : 109-049H : Cation electropainting (black)

Inlet side, Outlet side

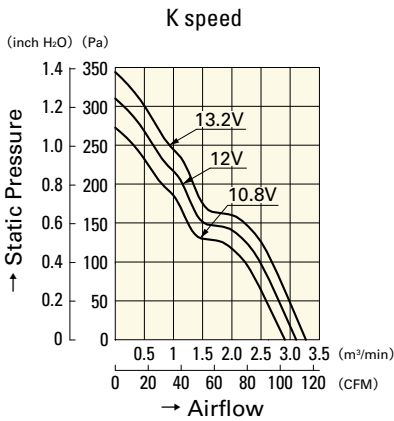


Resin Filter Kits

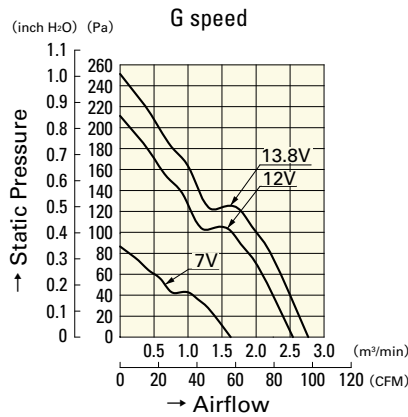
Model : 109-1002F13 (13PPI), 109-1002F20 (20PPI)
 : 109-1002F30 (30PPI), 109-1002F40 (40PPI)



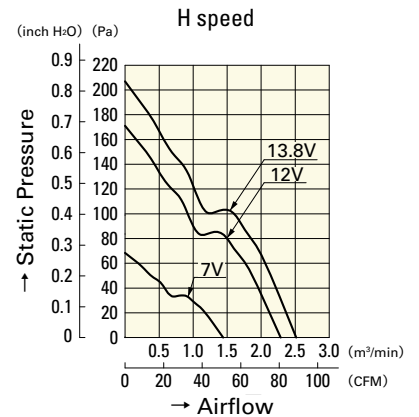
Airflow - Static Pressure Characteristics



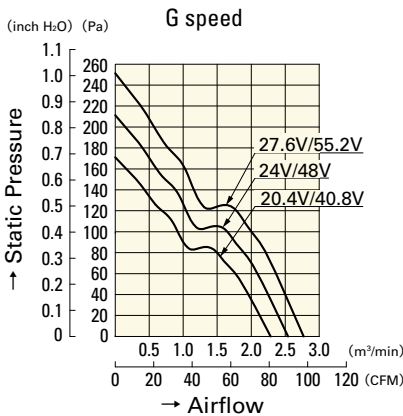
9G0812K101



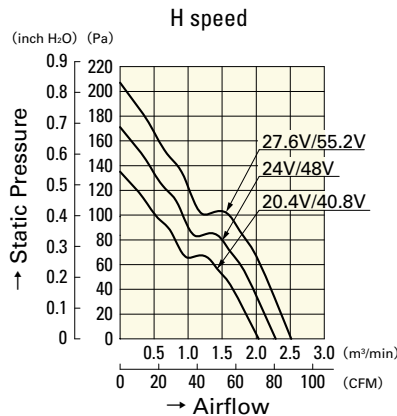
9G0812G101



9G0812H101



9G0824G101
 9G0848G101



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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



Specifications

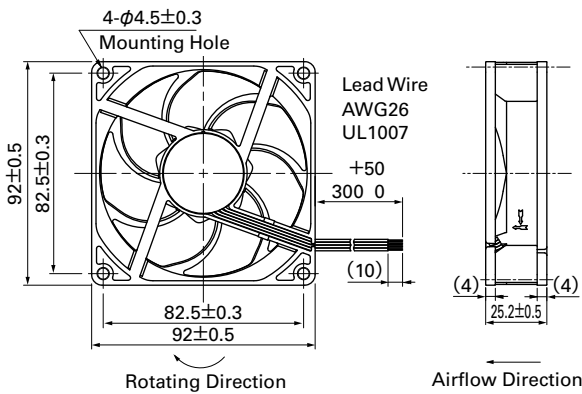
The following nos. **have PWM controls, pulse sensors, and ribs.** For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle※ [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C
			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		

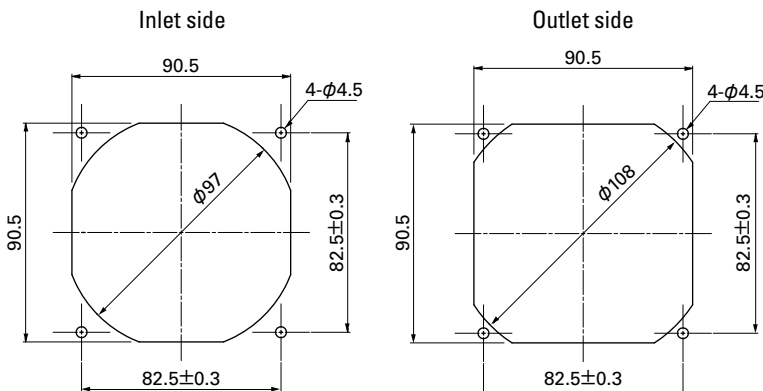
※PWM Frequency : 25kHz

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

Dimensions (unit: mm) (With ribs)



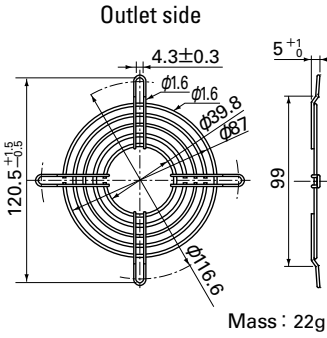
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



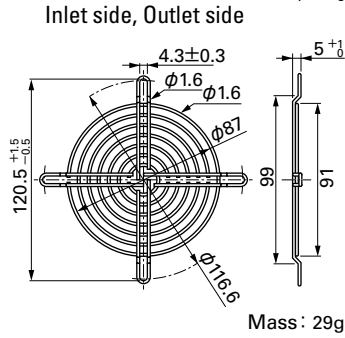
Options (unit: mm)

Finger Guards

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

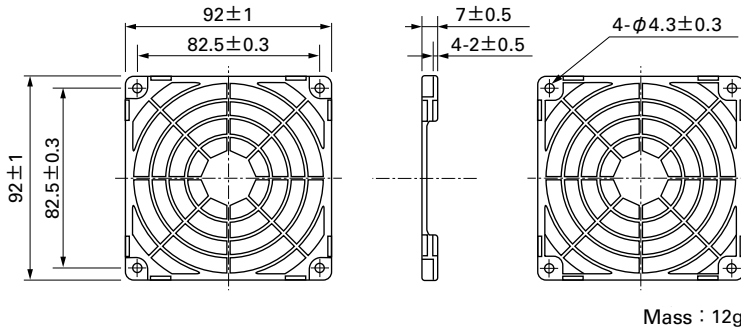


Model : 109-099E Surface treatment : Nickel-chrome plating (silver) Color (silver)
 : 109-099H : Cation electropainting (black)



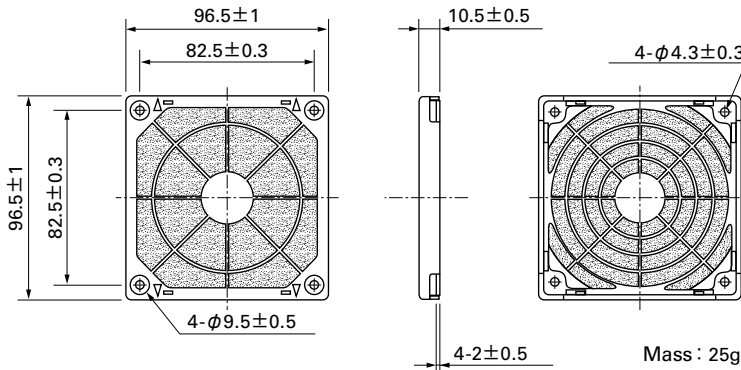
Resin Finger Guards

Model : 109-1001G



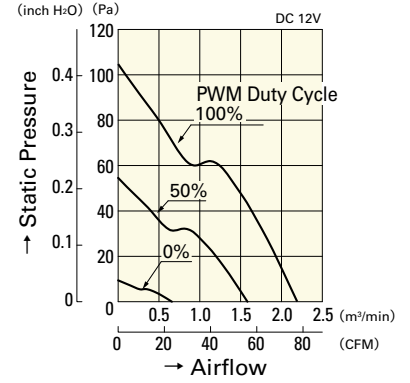
Resin Filter Kits

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



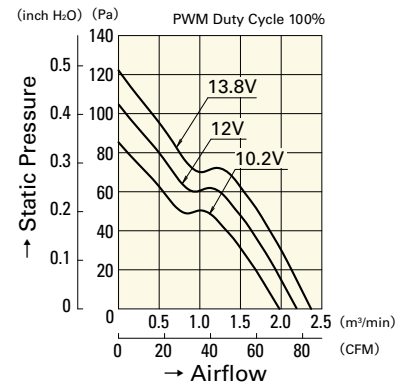
Airflow - Static Pressure Characteristics

PWM Duty Cycle



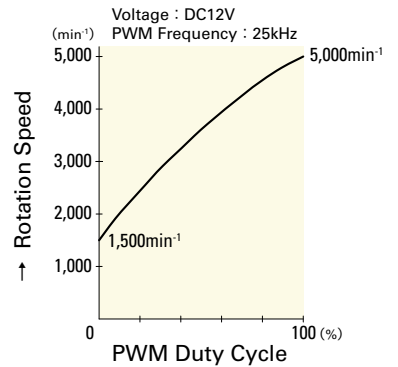
9GA0912P4J03

Operating Voltage Range



9GA0912P4J03

PWM Duty - Speed Characteristics Example



9GA0912P4J03

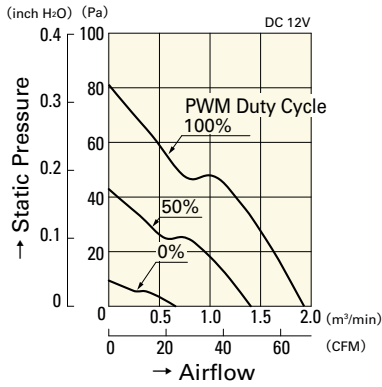
92mm sq.

San Ace 92

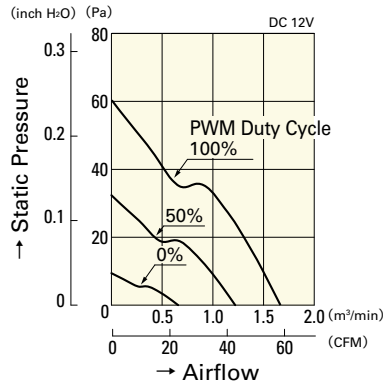
92×92×25mm [Mass : 125g]

Airflow - Static Pressure Characteristics

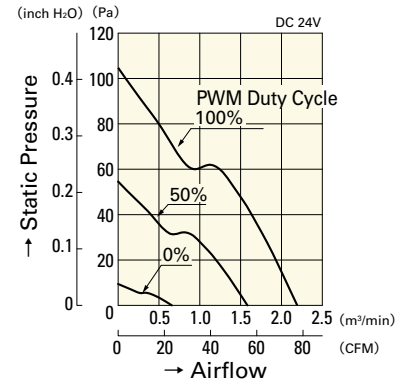
PWM Duty Cycle



9GA0912P4G03

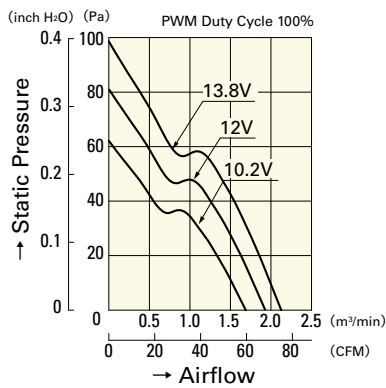


9GA0912P4S03

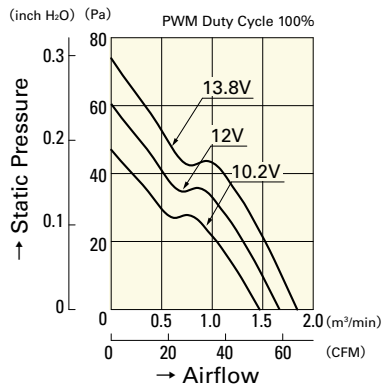


9GA0924P4J03

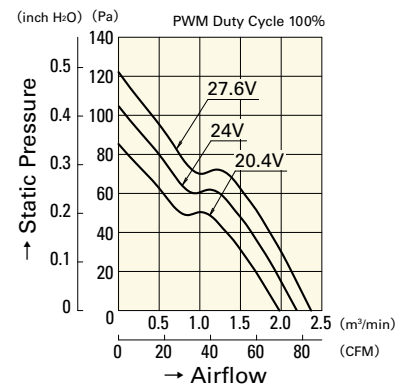
Operating Voltage Range



9GA0912P4G03

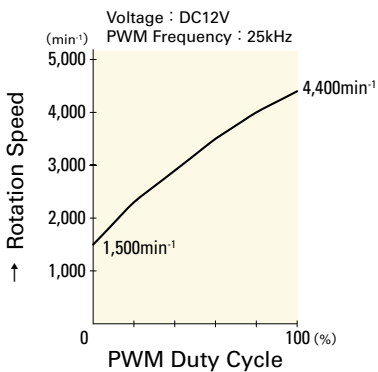


9GA0912P4S03

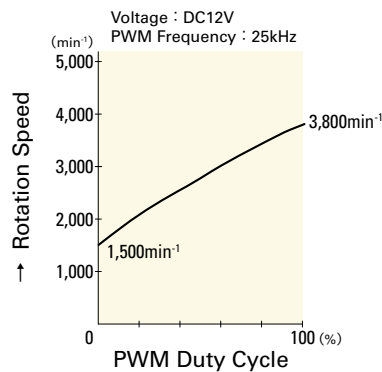


9GA0924P4J03

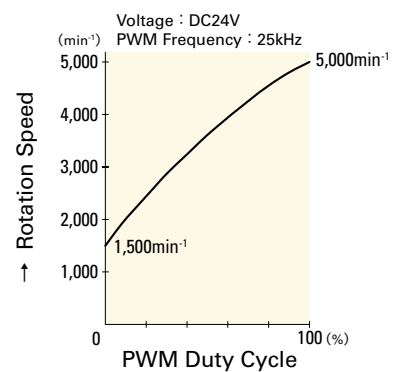
PWM Duty - Speed Characteristics Example



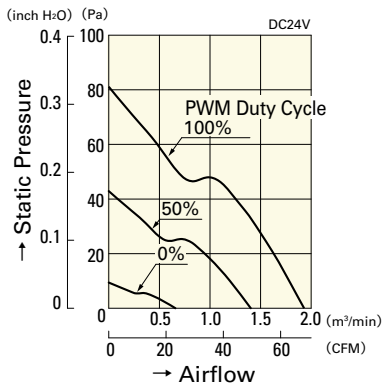
9GA0912P4G03



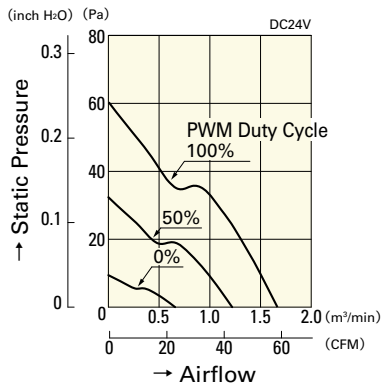
9GA0912P4S03



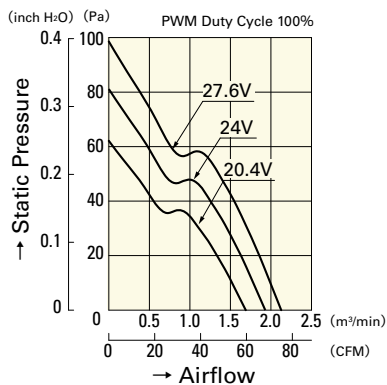
9GA0924P4J03



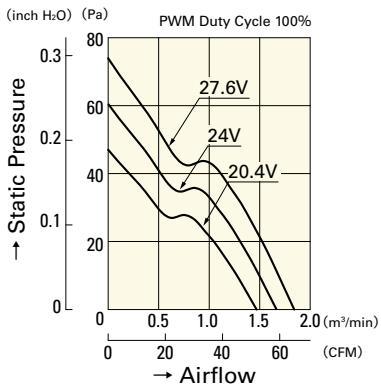
9GA0924P4G03



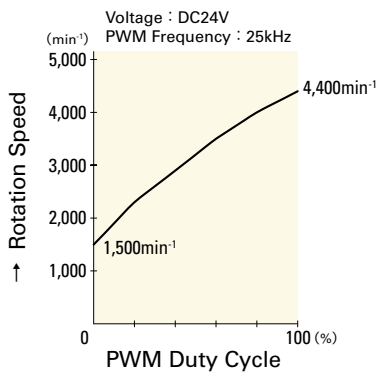
9GA0924P4S03



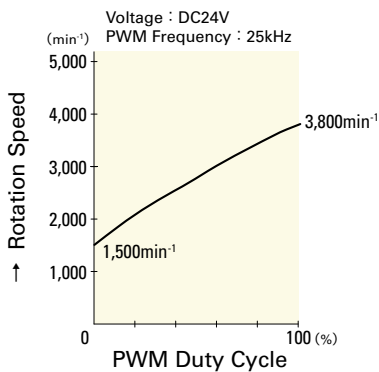
9GA0924P4G03



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

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

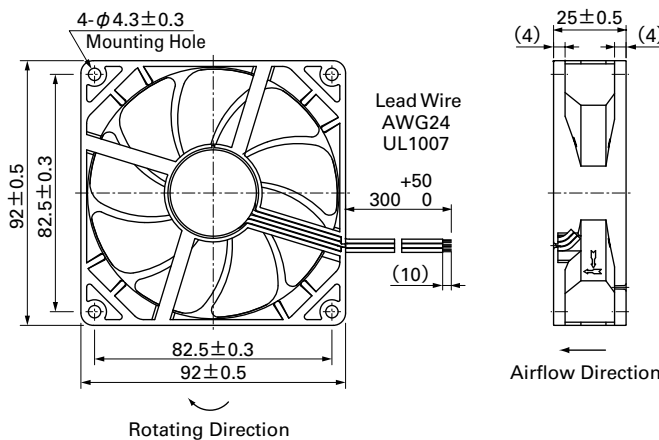
Specifications

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

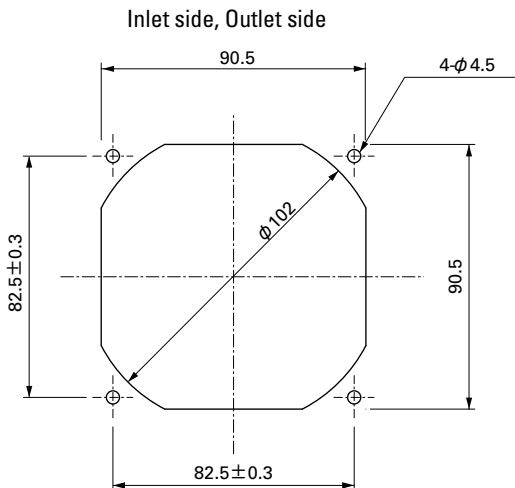
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]		
9S0912F401	12	5.0 to 13.8	0.14	1.68	2,650	1.26	44.5	30.0	0.120	- 10 to +70	40,000/60°C	
9S0912M401			0.11	1.32	2,250	1.07	37.8	21.6	0.087			27
9S0912L401		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			
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)



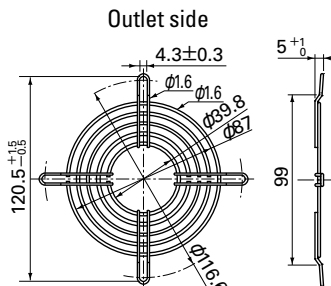
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

Finger Guards

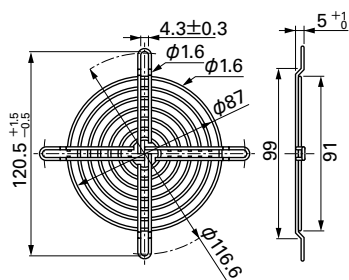
Model : 109-099C Surface treatment : Nickel-chrome plating (silver) Color



Mass 22g

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

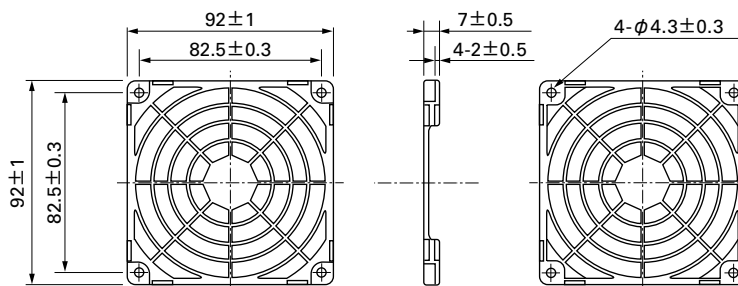
Inlet side, Outlet side



Mass : 29g

Resin Finger Guards

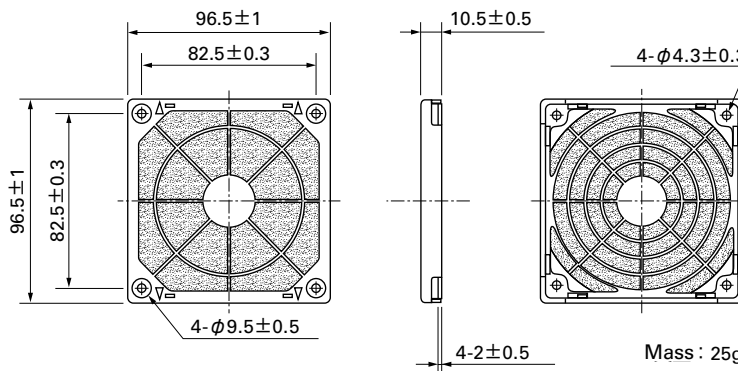
Model : 109-1001G



Mass : 12g

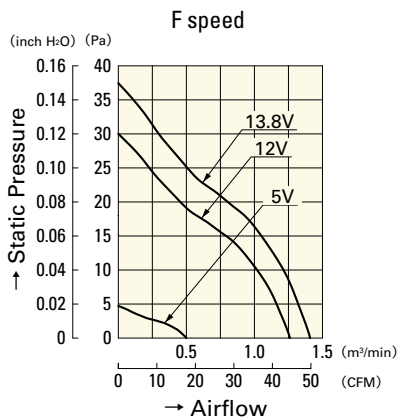
Resin Filter Kits

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

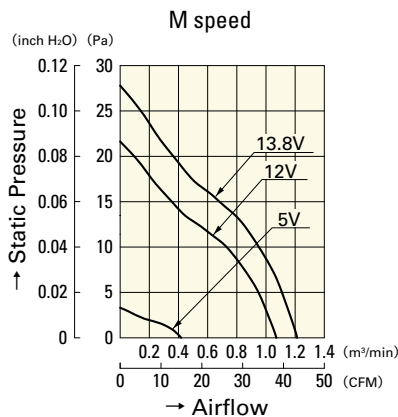


Mass : 25g

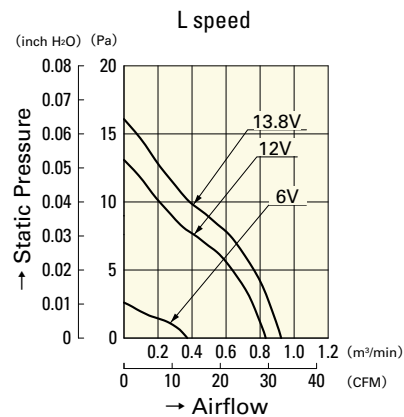
Airflow - Static Pressure Characteristics



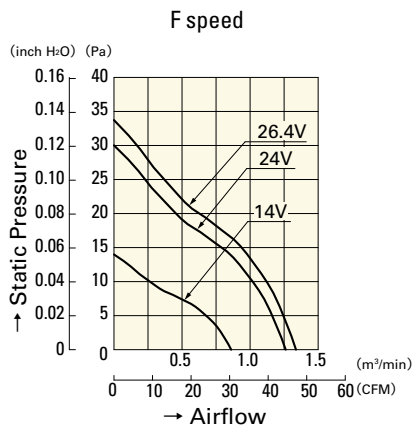
9S0912F401



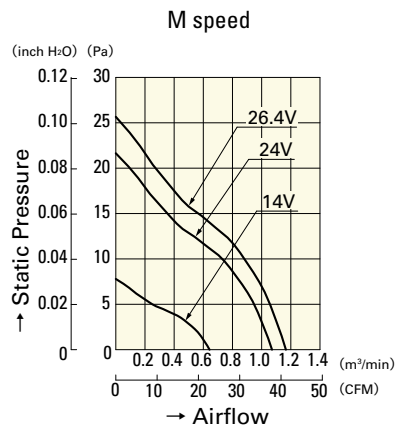
9S0912M401



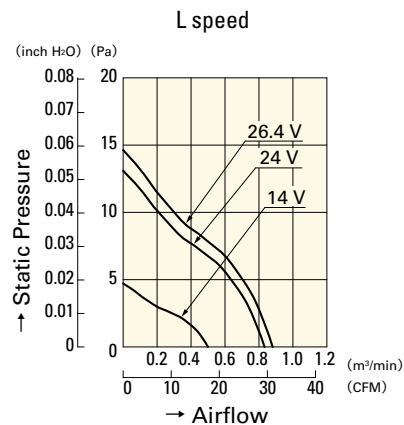
9S0912L401



9S0924F401



9S0924M401



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

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

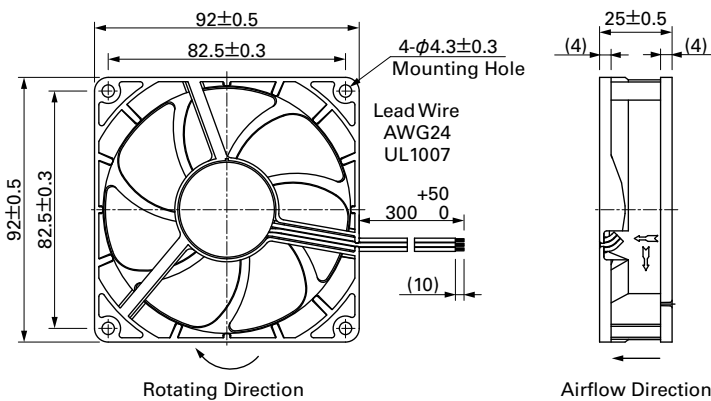
Specifications

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 [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	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°C
9A0912S401			0.27	3.24	3,550	1.66 58.6	56.1 0.225	39		
9A0912H401			0.21	2.52	3,150	1.45 51.2	44 0.177	33		
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			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°C
9A0924S401			0.15	3.6	3,550	1.66 58.6	56.1 0.225	39		
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			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	40,000/60°C

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

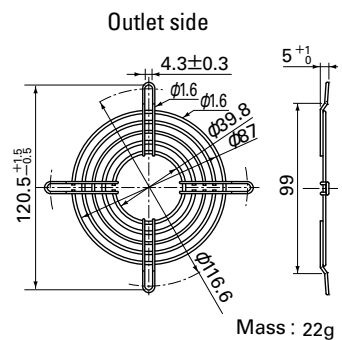
Dimensions (unit: mm) (With ribs)



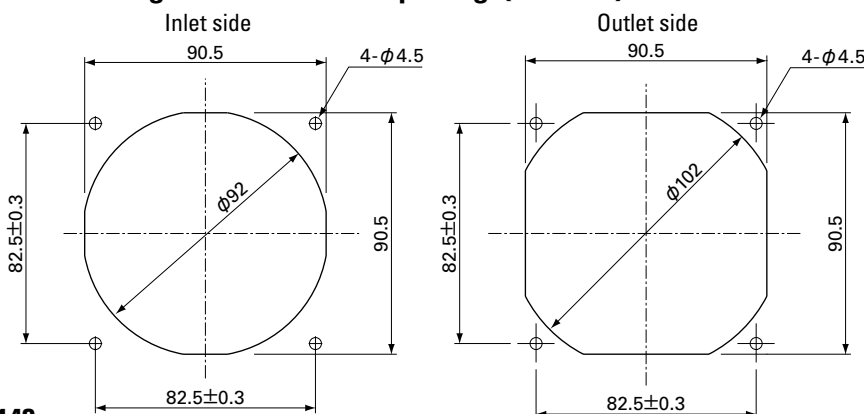
Options (unit: mm)

Finger Guards

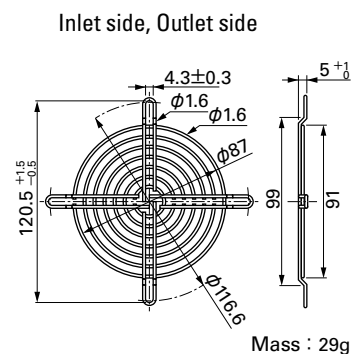
Model : 109-099C Surface treatment : Nickel-chrome plating (silver) Color



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



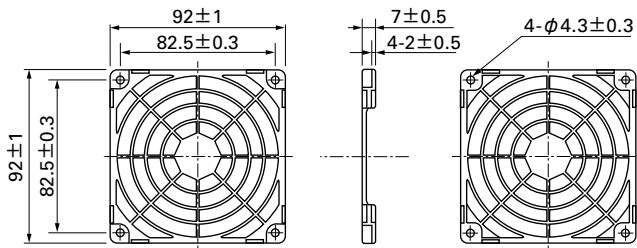
Model : 109-099E Surface treatment : Nickel-chrome plating (silver) Color
: 109-099H : Cation electropainting (black)



Options (unit: mm)

Resin Finger Guards

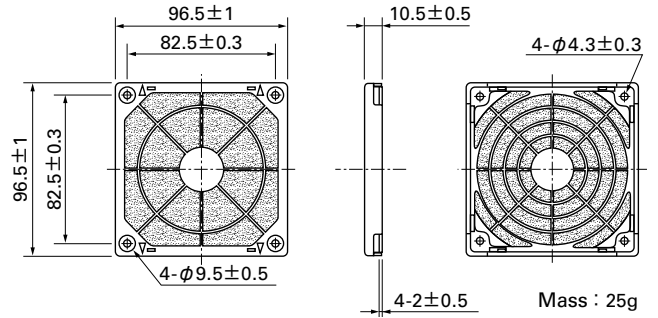
Model : 109-1001G



Mass : 12g

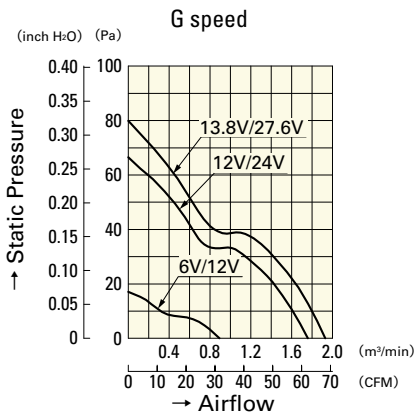
Resin Filter Kits

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

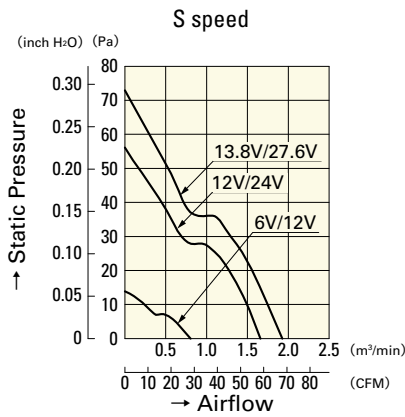


Mass : 25g

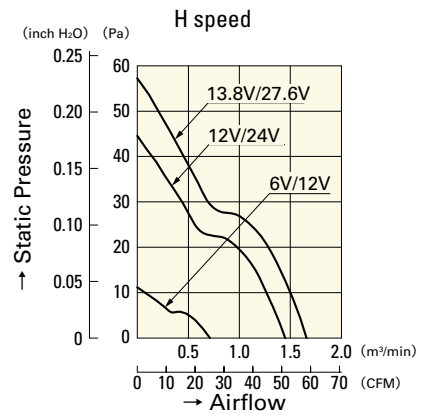
Airflow - Static Pressure Characteristics



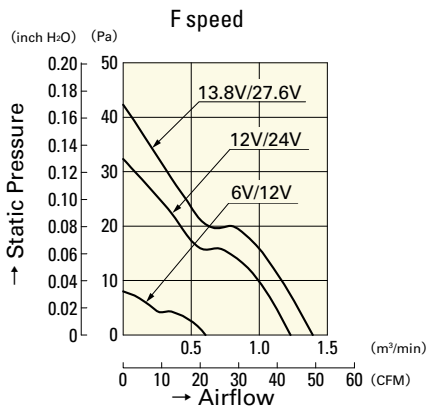
9A0912G401
9A0924G401



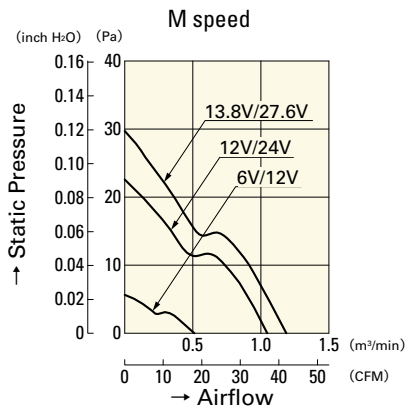
9A0912S401
9A0924S401



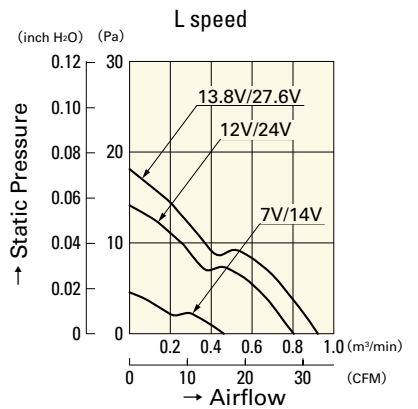
9A0912H401
9A0924H401



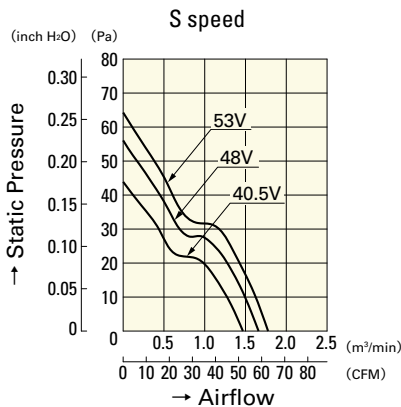
9A0912F401
9A0924F401



9A0912M401
9A0924M401



9A0912L401
9A0924L401



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black or blue (Sensor) yellow
- Storage Temperature -30°C to +70°C (Non-condensing)

92×92×32mm (Mass : 170g) **9G type**

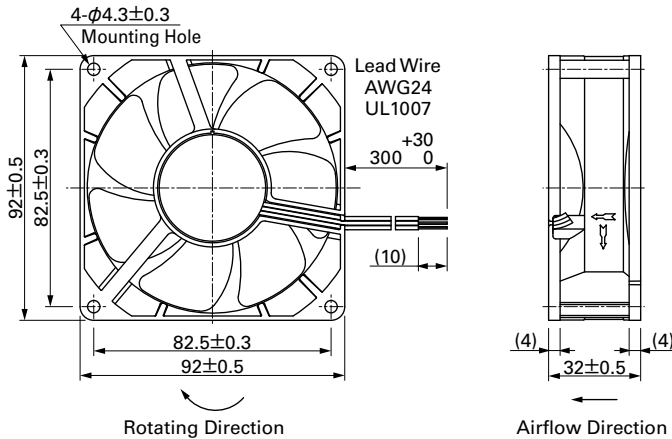
Specifications

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

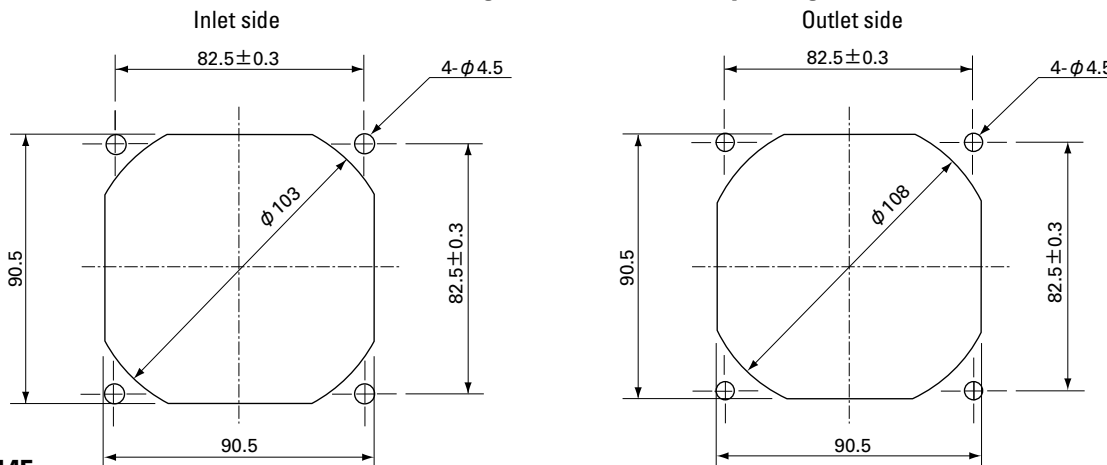
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9G0912A201	12	10.2 to 13.8	0.58	6.96	4,300	2.50 88.3	115 0.462	44	-20 to +70	40,000/60°C
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		
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	-20 to +70	
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)



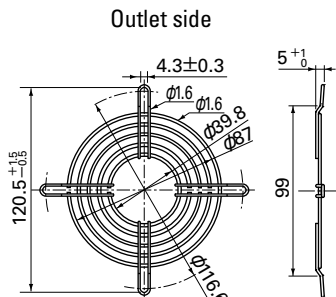
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

Finger Guards

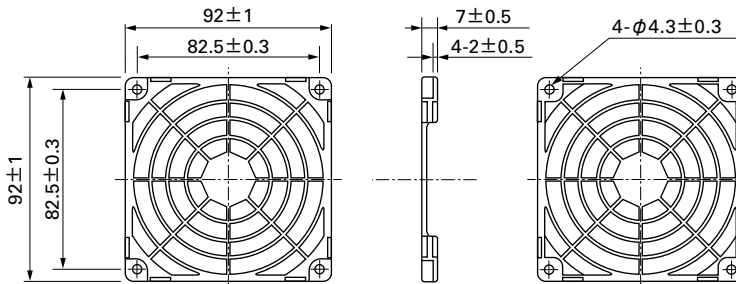
Model : 109-099C Surface treatment : Nickel-chrome plating (silver) Color : 109-099H Surface treatment : Cation electropainting (black)



Mass : 22g

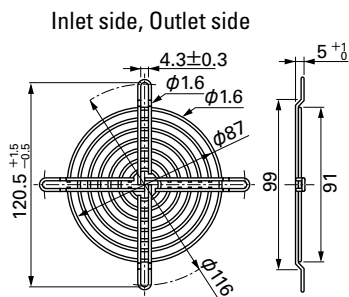
Resin Finger Guards

Model : 109-1001G



Mass : 12g

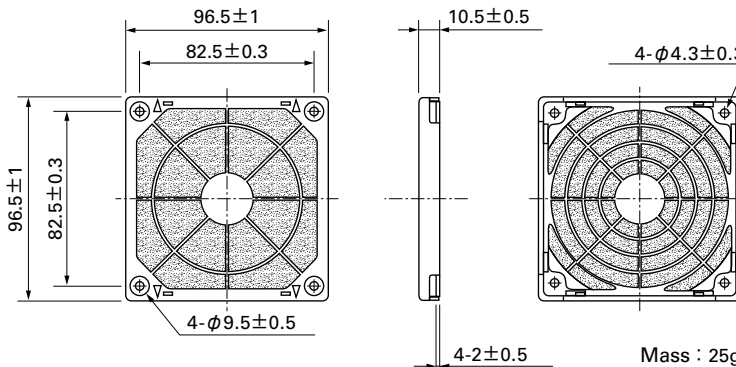
Model : 109-099E Surface treatment : Nickel-chrome plating (silver) : 109-099H Surface treatment : Cation electropainting (black)



Mass : 29g

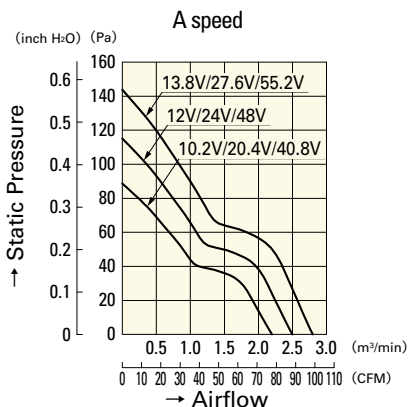
Resin Filter Kits

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

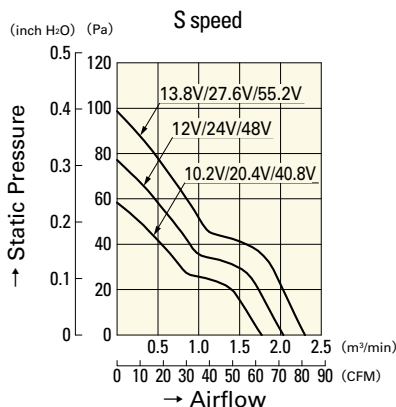


Mass : 25g

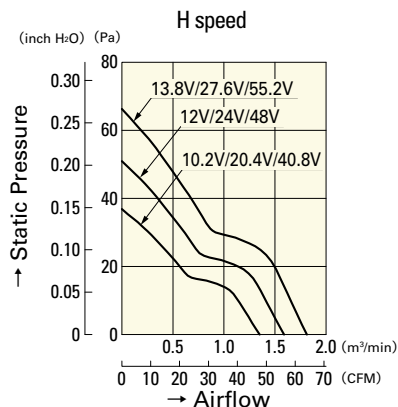
Airflow - Static Pressure Characteristics



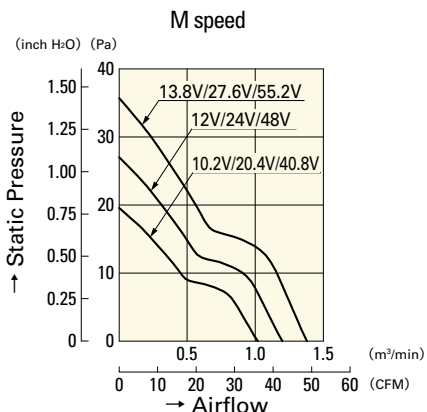
- 9G0912A201
- 9G0924A201
- 9G0948A201



- 9G0912S201
- 9G0924S201
- 9G0948S201



- 9G0912H201
- 9G0924H201
- 9G0948H201



- 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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

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.

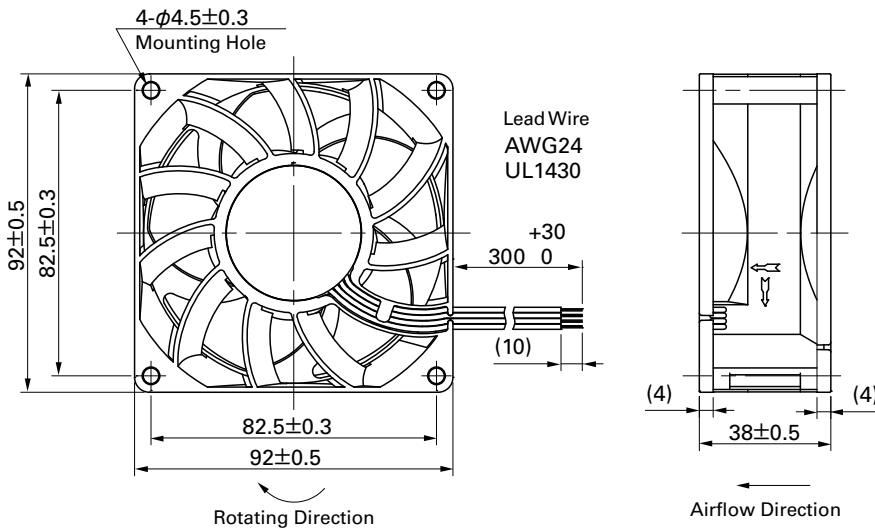
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle* [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9GA0912P1H03	12	10.2 to 13.8	100	2.10	25.2	9,700	4.00 141	500 2.01	63	-20 to +70	40,000/60°C (70,000/40°C)
			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	
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%.

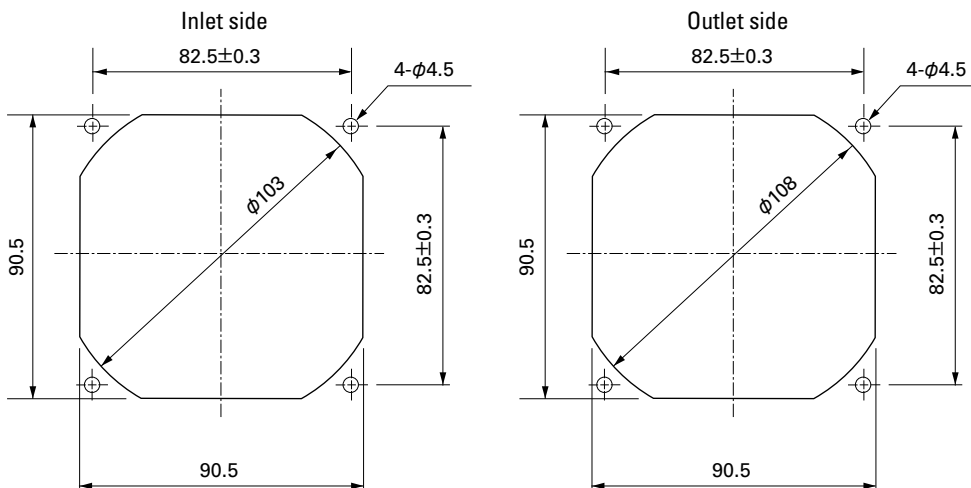
※PWM Frequency : 25kHz

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

Dimensions (unit: mm) (With ribs)



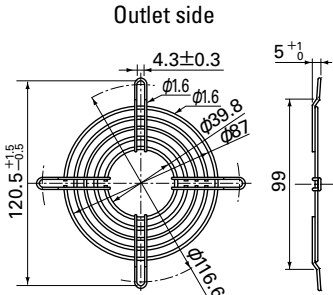
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Options (unit: mm)

Finger Guards

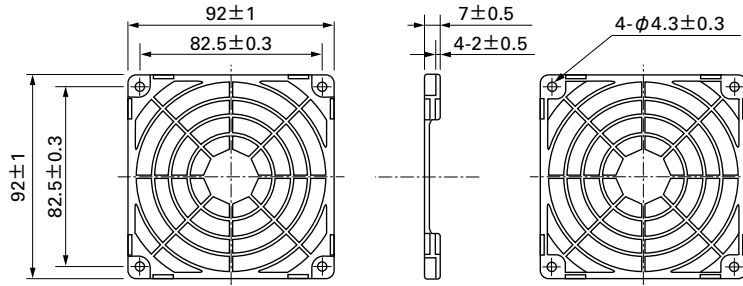
Model : 109-099C Color : Nickel-chrome plating (silver)



Mass : 22g

Resin Finger Guards

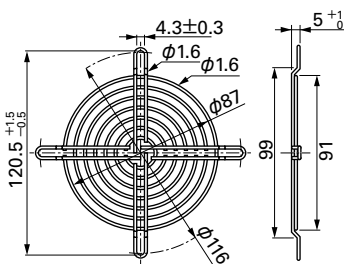
Model : 109-1001G



Mass : 12g

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

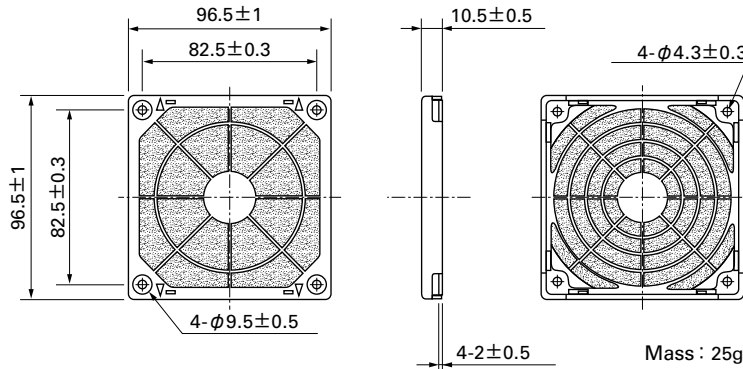
Inlet side, Outlet side



Mass : 29g

Resin Filter Kits

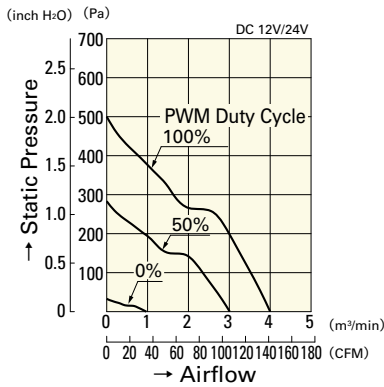
Model : 109-1001F13 (13PPI), 109-1001F20 (20PPI)
Model : 109-1001F30 (30PPI), 109-1001F40 (40PPI)



Mass : 25g

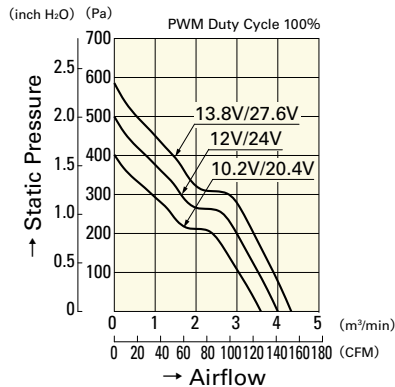
Airflow - Static Pressure Characteristics

PWM Duty Cycle



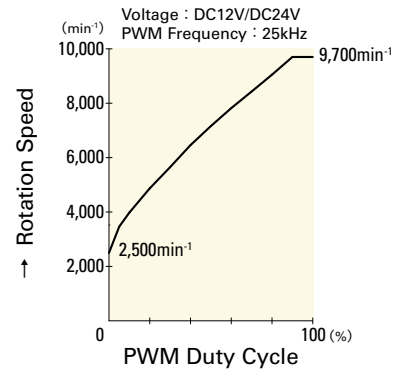
9GA0912P1H03
9GA0924P1H01

Operating Voltage Range

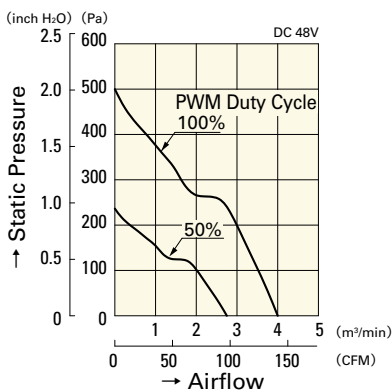


9GA0912P1H03
9GA0924P1H01

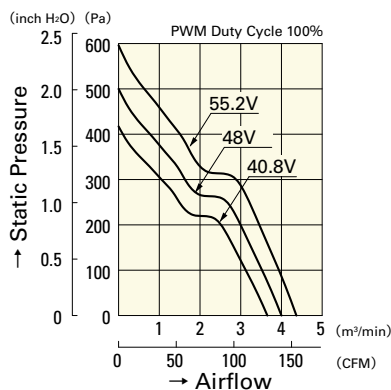
PWM Duty - Speed Characteristics Example



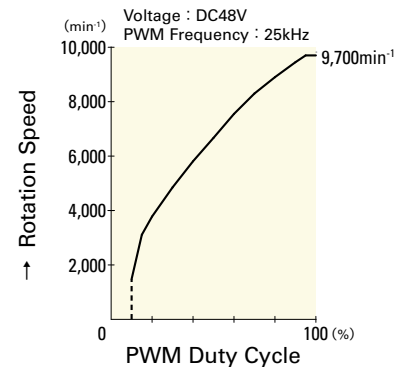
9GA0912P1H03
9GA0924P1H01



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°C ,
rated voltage, and continuously run in a free air state)
- Lead Wire ⊕red ⊖black (Sensor) yellow (Control) brown
- Storage Temperature -30°C to +70°C (Non-condensing)

92×92×38mm (Mass : 250g)

9HV type



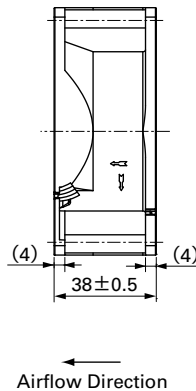
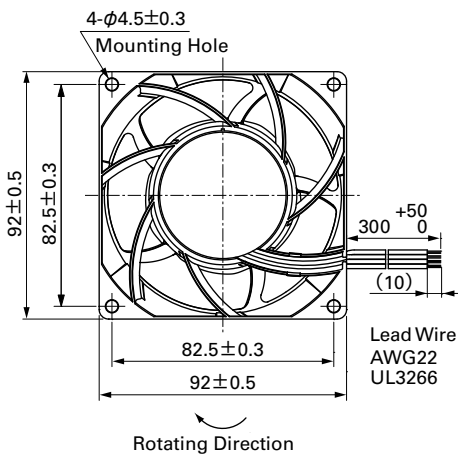
Specifications

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

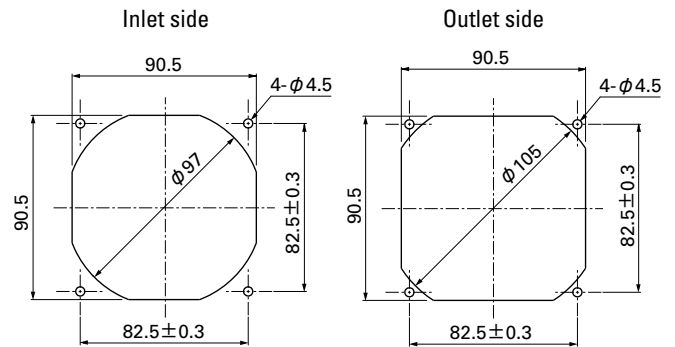
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM duty cycle* [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Airflow [m ³ /min] [CFM]	Max. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9HV0912P1G001	12	8 to 12.6	100	5.2	62.4	14,900	5.1 180	1,100 4.42	72	-20 to +70	40,000/60°C (70,000/40°C)
			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)

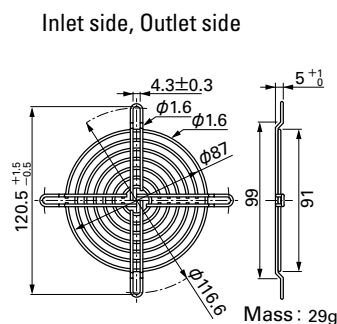
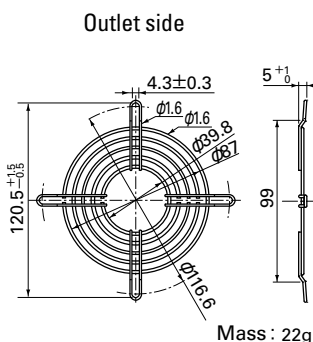


Options (unit: mm)

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)



Вентилятор sanyo denki san ace , Минск тел. +375447584780

www.fotorele.net www.tiristor.by радиодетали, электронные компоненты

email minsk17@tut.by tel.+375 29 758 47 80 МТС

каталог, описание, технические, характеристики, datasheet, параметры, маркировка, габариты, фото

QR код



9GT type

Wide Temperature Range Fan DC

These fans achieve an operating temperature range of -40°C to +85°C. They operate in a wide temperature range, serving in various applications where conventional fans could not be used. They are suitable for refrigerators and freezers, lighting devices, communications devices, PV inverters, and rapid EV charging stations.

40mm sq. to 120mm sq.
⇒pp. 359 to 370



9AD type

ACDC Fan AC

This fan operates by internally converting AC power into DC power. It provides the superior performance of a DC fan with the flexibility of AC input.

92x92x38mm
⇒pp. 413 to 416

120x120x38mm
⇒pp. 417 to 420



9RF type

Reversible Flow Fan DC

Multiple fans are usually used to blow air in both directions to ventilate houses, and to cool drink vending machines, and food display cases. With reversible flow fans, the wind direction can be switched so fewer fans are required.

φ136x28mm
⇒pp. 243 to 244

