



**Motion Control Systems**



**DC COOLING FAN  
CATALOGUE**

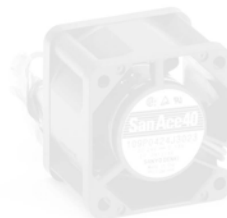
**SANYO DENKI** **San Ace**  
COOLING SYSTEMS

# DC COOLING FAN

## catalogue

### SANYO DENKI

**San Ace**  
COOLING SYSTEMS



#### Warning

- The sole purpose of this catalogue is as a general introduction to our products, in order to allow an orientation as well as a choice among them. Detailed information concerning limitations and installation/utilization procedures are described in the manuals Sanyo Denki relating to each product. It is therefore essential to strictly refer to these enclosed technical manuals for a correct use, in accordance with current standards.
- R.T.A. reserves the right to modify the products at any time and without prior notice (including, but not limited to, characteristics, availability and prices).

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## DC FAN

➤ □ 36<sub>mm</sub> FRAME

6

➤ □ 40<sub>mm</sub> FRAME

7

➤ □ 60<sub>mm</sub> FRAME

11

➤ □ 80<sub>mm</sub> FRAME

17

➤ □ 92<sub>mm</sub> FRAME

21

➤ □ 120<sub>mm</sub> FRAME

24

➤ Ø 172<sub>mm</sub> FRAME

27

## CONVERSION TABLE

1m<sup>3</sup>/min = 35.31 (CFM)1CFM = 0.0283m<sup>3</sup>/min1m<sup>3</sup>/min = 16.67 l/sec

1CFM = 0.472 l/sec

1l/sec = 0.06 m<sup>3</sup>/min

## R.T.A. GROUP



R.T.A. - HEADQUARTERS



R.T.A. DEUTSCHLAND

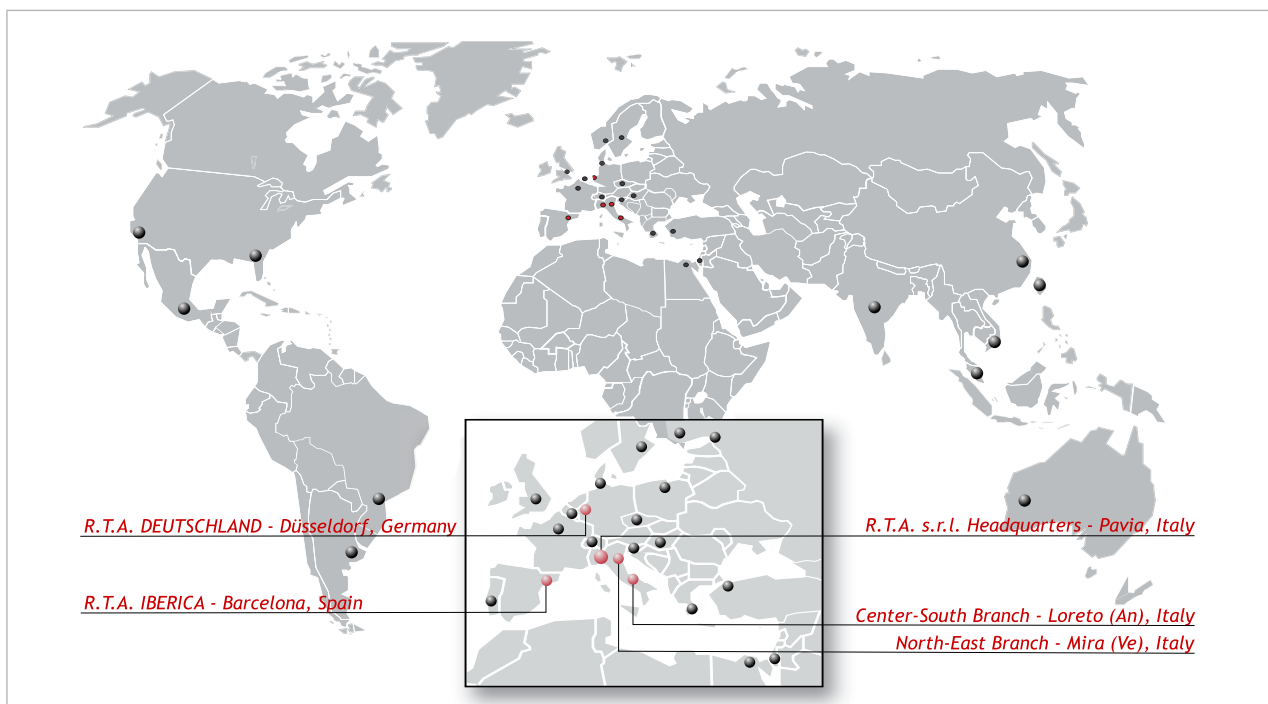


R.T.A. IBERICA

- R.T.A. Group is a leading network of companies in the motion control industry. It is number one in Italy in the stepping systems market and number three in Europe in the stepping motor drives segment.  
[Source: IMS Research 2012]
- The Group is based on three operational companies: the headquarters, R.T.A. s.r.l. (ITALY), founded in 1976, R.T.A. Deutschland (GERMANY), founded in 2001 and R.T.A. IBERICA (SPAIN), founded in 2008.
- R.T.A. has been producing stepper motor drives since 1976: since then more than 750.000 stepping motor drives have been sold in Italy and in more than 39 countries worldwide.
- Production and sales process quality is guaranteed by a Quality Assurance System certified under the UNI EN ISO 9001 (TUV-50 100 2153) Norm.
- Over time, R.T.A. product line has been enriched through the creation of a partnership with SANYO DENKI, a leading Japanese company producing stepping motors, brushless systems and fans. The Group has been its Italian sole distributor since 1989, while distributorship has been granted in 2001 for Germany and in 2008 for Spain.

## R.T.A. WORLDWIDE

- Since its origins, the Group has always had a strong commitment for international business; that was the reason leading to the decision opening direct branches in Germany and Spain.
- R.T.A. is also active worldwide through a wide network of distributors, composed by 29 companies operating in more than 39 countries.





## R&D, PRODUCTION AND WAREHOUSE

### R&D AND FIELD APPLICATION



- More than 30-years experience in the motion control industry
- 6 engineers fully dedicated to R&D
- 3 full-time field application engineers

### STEPPING MOTOR DRIVES PRODUCTION



- More than 40.000 stepping motor drives produced yearly
- More than 750.000 drives sold since 1976
- Computerized testing line: every single drive is tested twice, by two different operators, guaranteeing a very high reliability
- Warranty: 24 months

### INDUSTRIAL STRENGTH



- Wide warehouse of SANYO DENKI products:
  - more than 50.000 stepping motors
  - more than 3.000 AC servosystems
  - more than 5.000 cooling fans
- Very short time-to-market: 97% of orders is processed within one week from order.

## ONLINE SALES: [www.rta-store.com](http://www.rta-store.com)



- A wide selection of stepping motor drives available online
- SANYO DENKI stepping motors with flange size from 28 mm up to 106 mm and with holding torque from 12.5 Ncm to 2460 Ncm
- SANYO DENKI cooling fans with frame size from 36 mm to 172 mm.



## PRODUCTION and FACTORIES



Fujiyama Works (Japan)



Subic Works (Philippines)

### ■ Total Production: 2,700,000 fans / month

- AC fans 50,000
- DC fans 2,650,000

### ■ Factories: Fujiyama (Japan) & Subic (Philippines)

#### ■ Fujiyama (Japan) Works:

- Since 1990
- 400 kpcs/month production capacity

#### ■ Subic (Philippines) Works:

- Since 2000
- 2,300 kpcs/month production capacity

## SANYO DENKI BENEFITS



### Technology Center

- The main product research and development facility
- Since 1997

### ■ High Reliability & Quality

- Sound experience in manufacturing since 1960
- ISO 9001 & 14001 certification
- Manufacturing process control vertical integration and focus on process control
- Technology Center

### ■ Factory Support & Flexibility

- 2 factories with large production capacity: 2,700,000 fans/month
- European stock: around 75,000 fans

### ■ Technology Directions

- High performance: high airflow, high static pressure
- Low power consumption
- Low noise and good sound quality
- Harsh environment: long life, splash proof, oil proof, temperature

### ■ Largest Product Portfolio in the Industry & Technology Leader

- DC axial, AC axial, Blower, Centrifugal, Silent, Counter Rotating
- 5, 12, 24, 32 and 48VDC models, AC, AC/DC Technology
- 13 frame sizes (DC axial)



Acoustic radio wave anechoic chamber



Laboratories

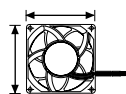


Production line



Design rooms

## CONCEPT: High Performance, High Reliability, High Quality



Frame Size

36mm

40mm

60mm

80mm

92mm

120mm

Ø172mm



Air Flow

0.18m<sup>3</sup>/min

8.5m<sup>3</sup>/min



















6.4CFM

300CFM

### Main Features

- 1 All fans equipped with dual ball bearings
- 2 Voltage input: 5VDC to 48VDC
- 3 Standard life expectancy: 40,000 hours at 60°C - Plastic bushing  
60,000 hours at 60°C - Brass bushing
- 4 Standard operating temperature: -20°C to +70°C
- 5 Models with PWM control function, pulse, lock or low speed control sensors

## TYPICAL SOLUTIONS FOR VARIOUS APPLICATIONS

<b>High performance</b> <ul style="list-style-type: none"> <li>Information &amp; communication industry: storages, PSU, servers...</li> <li>High impedance systems</li> </ul>	 <p>GV guide vane</p>	 <p>GA low power</p>	 <p>CR counter rotating</p>	 <p>PWM control</p>
<b>Low noise / low vibration</b> <ul style="list-style-type: none"> <li>Home devices</li> <li>Audio &amp; video systems</li> <li>Office automation, medical...</li> <li>Storage, telecommunication &amp; information systems</li> </ul>	 <p>S silent</p>	 <p>GE low vibration</p>	 <p>PWM control</p>	
<b>Harsh environment</b> <ul style="list-style-type: none"> <li>Outdoor base stations</li> <li>Heat exchanger,</li> <li>Solar &amp; wind inverters</li> <li>Factory automation</li> </ul>	 <p>W IP54 IP55 IP68 splash proof</p>	 <p>WF oil proof</p>	 <p>L long life</p>	 <p>W1T centrif. splash proof</p>
<b>Low power consumption</b> <ul style="list-style-type: none"> <li>Information &amp; communication: servers, storages...</li> <li>Battery chargers</li> </ul>	 <p>GA low power</p>	 <p>PWM control</p>		
<b>Space saving</b> <ul style="list-style-type: none"> <li>Information, communication, industry, office automation, heat exchanger...</li> </ul>	 <p>Small size □ 36 38 40</p>	 <p>Side cut</p>	 <p>B blower</p>	 <p>Centrifugal</p>
<b>Safety</b> <ul style="list-style-type: none"> <li>All types of applications : information, communication, factory automation, medical...</li> </ul>				

**36x36x28<sub>mm</sub>**

**12 V**

GV type

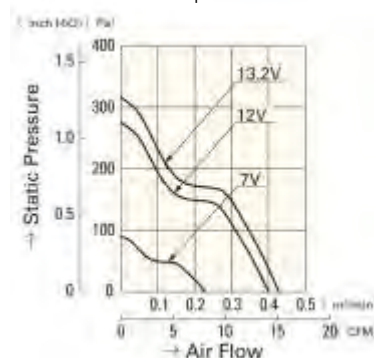


## General Specifications

- **Material:**
  - Frame: Plastics
  - Impeller: Plastics
- **Expected Life: 40,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)**
- **Tach output**
- **Lead Wire: ⊕ red ⊖ black Sensor yellow**
- **Storage Temperature: -20 °C to +70 °C (Non-condensing)**
- **Ball bearings**
- **International Standards: UL/CSA, TÜV, RoHS**

## Air Flow - Static Pressure Characteristics

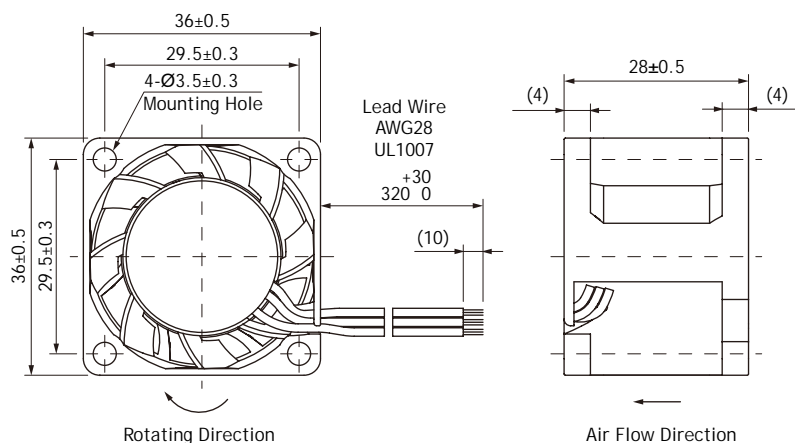
### Air Flow - Static Pressure Characteristics



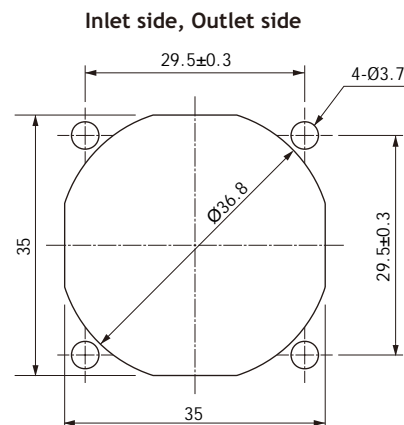
## Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min] [CFM]		Max. Static Pressure [Pa] [InchH <sub>2</sub> O]		SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
<b>9GV3612G301</b>	12	7.0 to 13.2	0.34	4.08	14,000	0.40	14.1	275	1.104	52.0	-20 to +60	40,000

### Dimensions (Unit:mm)



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



**36** mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)



40x40x15 mm

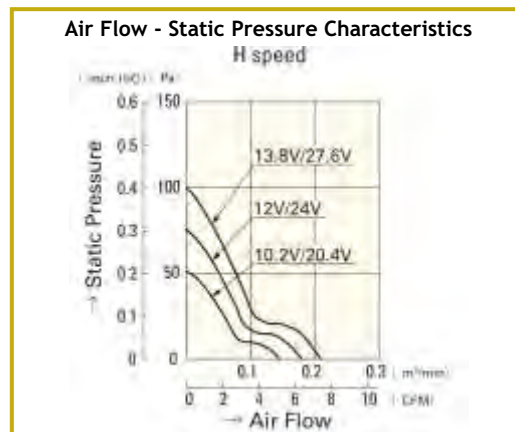
24 V



## General Specifications

- **Material:**
  - Frame: Plastics
  - Impeller: Plastics
- **Expected Life:** 60,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black or blue
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

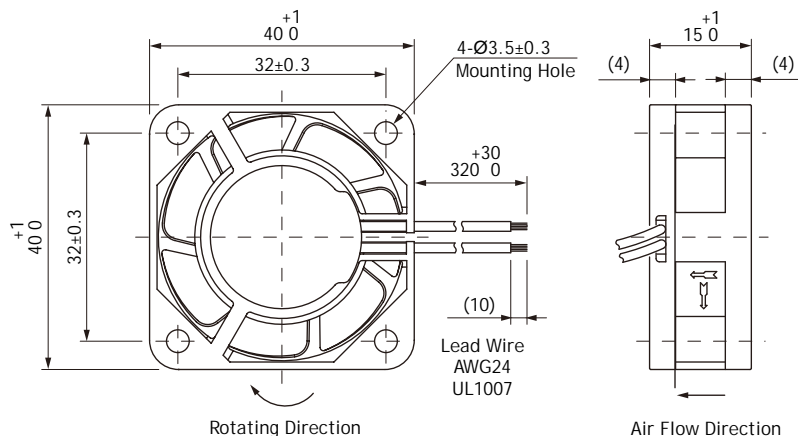
## Air Flow - Static Pressure Characteristics



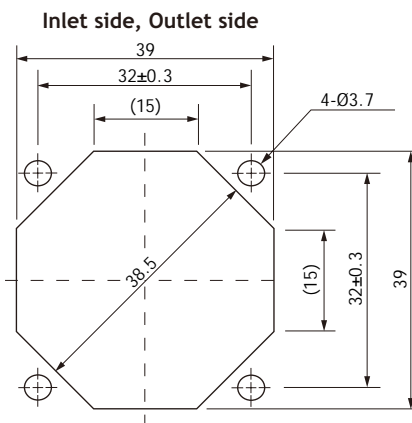
## Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min]	Max. Static Pressure [Pa]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
109P0424H702	24	20.4 to 27.6	0.08	1.92	7,700	0.18    6.4	75.5    0.303	28	-20 to +70	60,000

## Dimensions (Unit:mm)



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



40 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)

40x40x20 mm

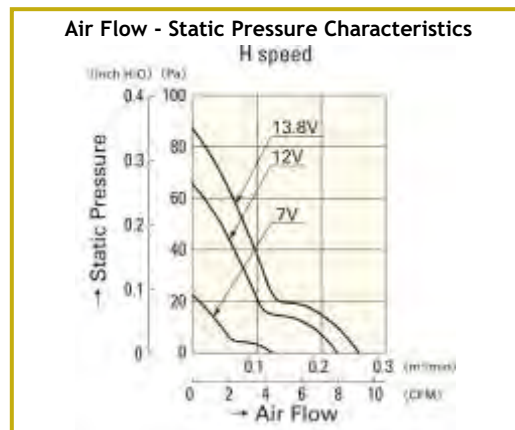
12 V



## General Specifications

- **Material:**
  - Frame: Plastics
  - Impeller: Plastics
- **Expected Life:** 60,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black or blue
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

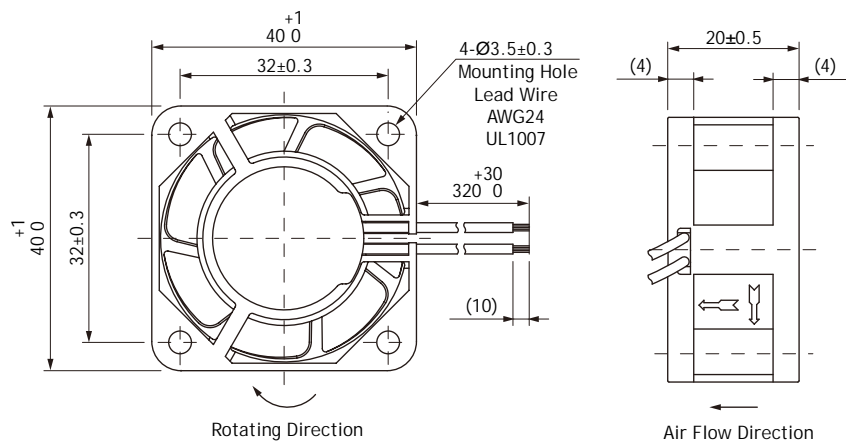
## Air Flow - Static Pressure Characteristics



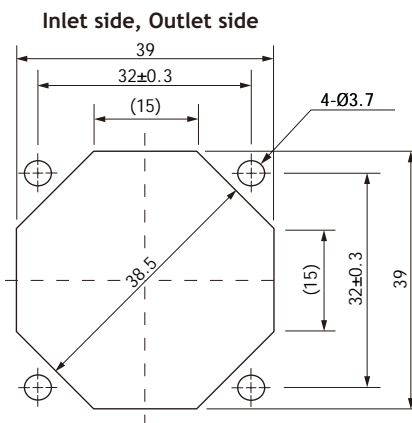
## Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min]	Max. Air Flow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
109P0412H602	12	7 to 13.8	0.11	1.32	8,000	0.225	8.0	65.7	0.264	33	-20 to +70	60,000

## Dimensions (Unit:mm)



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



40 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)

40x40x20 mm

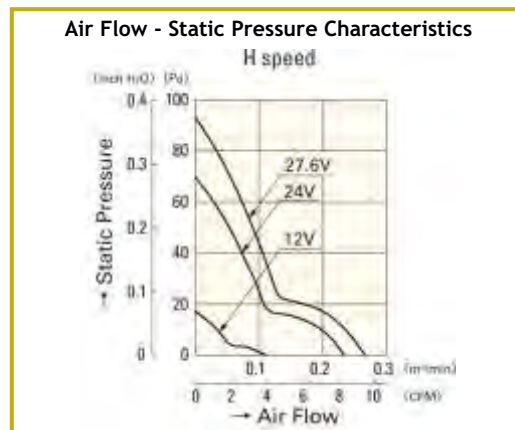
24 V



## General Specifications

- **Material:**
  - Frame: Plastics
  - Impeller: Plastics
- **Expected Life:** 60,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black or blue
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

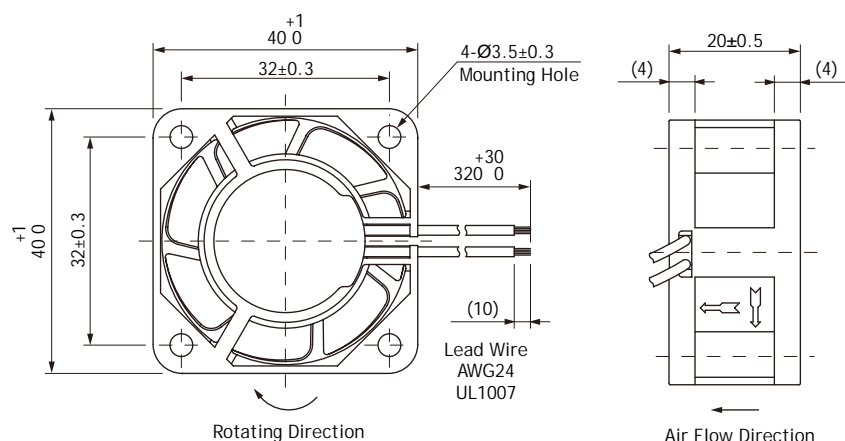
## Air Flow - Static Pressure Characteristics



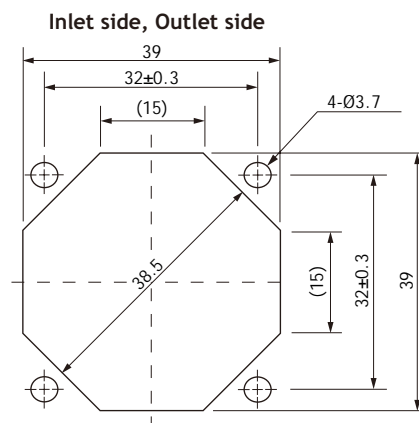
## Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min] [CFM]	Max. Static Pressure [Pa] [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
109P0424H602	24	12 to 27.6	0.07	1.68	8,300	0.233 8.2	69.6 0.280	35	-20 to +70	60,000

## Dimensions (Unit:mm)



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



40 mm sq.



- Model always available on stock at R.T.A.
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40x40x28 mm

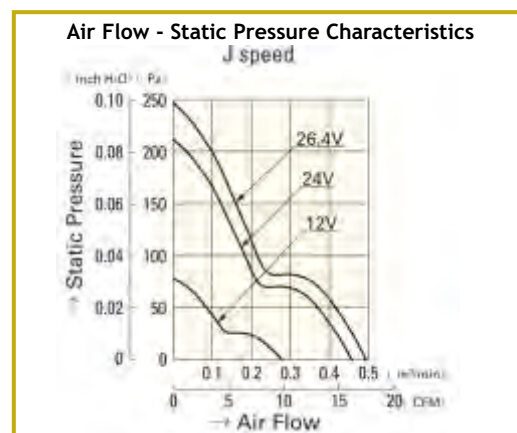
24 V



## General Specifications

- **Material:**
  - Frame: Plastics
  - Impeller: Plastics
- **Expected Life:** 40,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black or blue
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

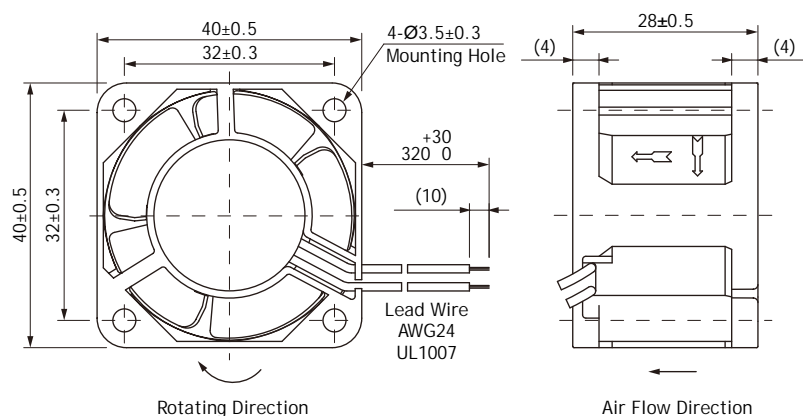
## Air Flow - Static Pressure Characteristics



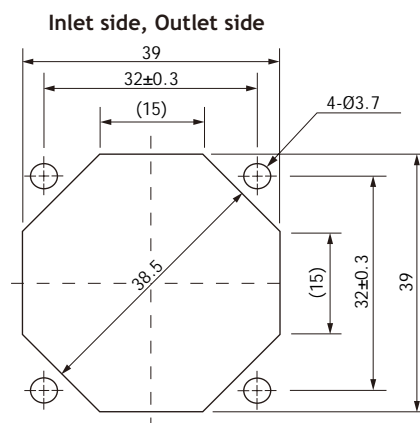
## Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min] [CFM]	Max. Static Pressure [Pa] [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
109P0424J3023	24	12 to 26.4	0.18	4.32	12,500	0.46 16.2	210 0.843	44	-20 to +60	40,000

## Dimensions (Unit:mm)



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



40 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)



60x60x15 mm

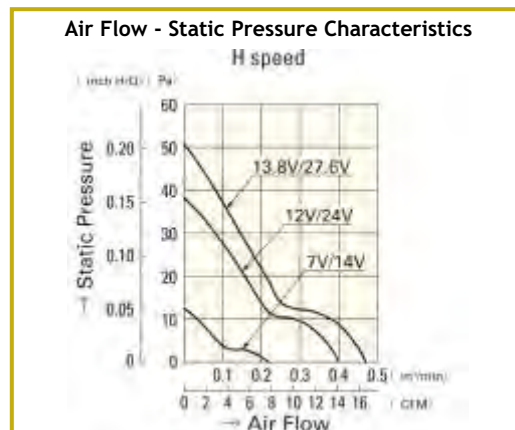
24 V



## General Specifications

- **Material:**
  - Frame: Plastics
  - Impeller: Plastics
- **Expected Life:** 60,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black or blue
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

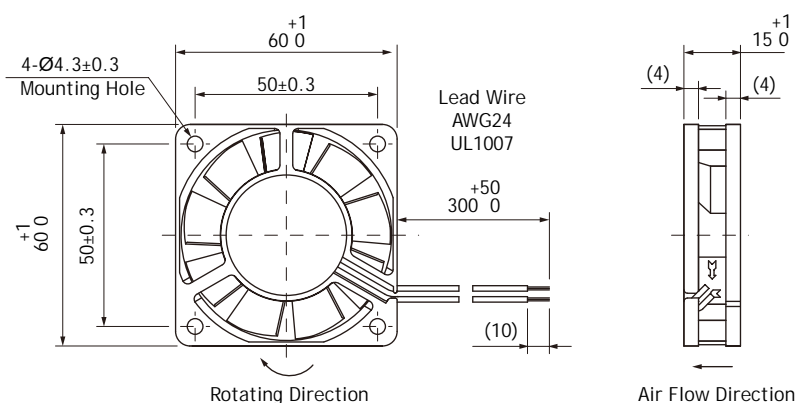
## Air Flow - Static Pressure Characteristics



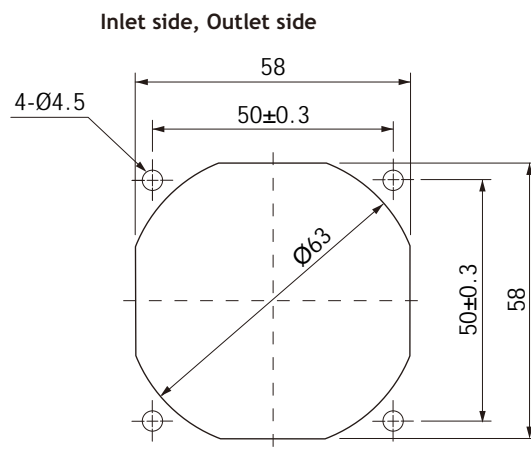
## Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min] [CFM]		Max. Static Pressure [Pa] [inchH <sub>2</sub> O]		SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
109P0624H702	24	14 to 27.6	0.06	1.44	4,100	0.40	14.1	38.2	0.153	32	-20 to +70	60,000

## Dimensions (Unit:mm)



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



60 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)

60x60x25 mm

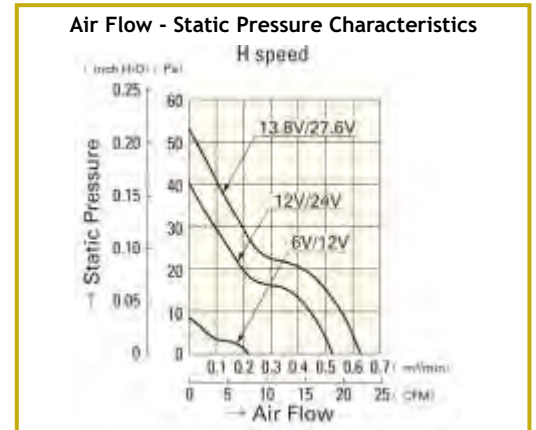
12 V



#### General Specifications

- **Material:**
  - Frame: Plastics
  - Impeller: Plastics
- **Expected Life:** 40,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black or blue
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

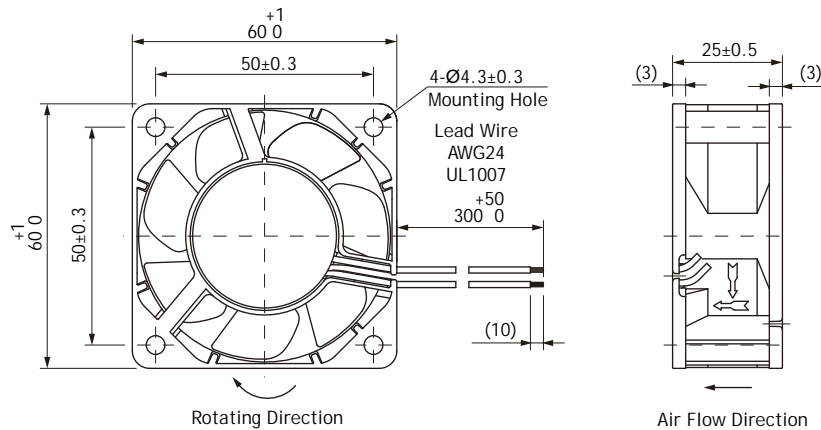
#### Air Flow - Static Pressure Characteristics



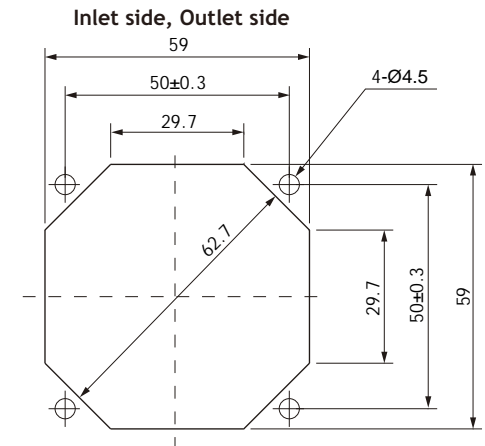
#### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min] [CFM]	Max. Static Pressure [Pa]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9A0612H402	12	6 to 13.8	0.11	1.32	3,800	0.53 18.7	40.2 0.161	28	-20 to +70	40,000

#### Dimensions (Unit:mm)



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



60 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)

60x60x25 mm

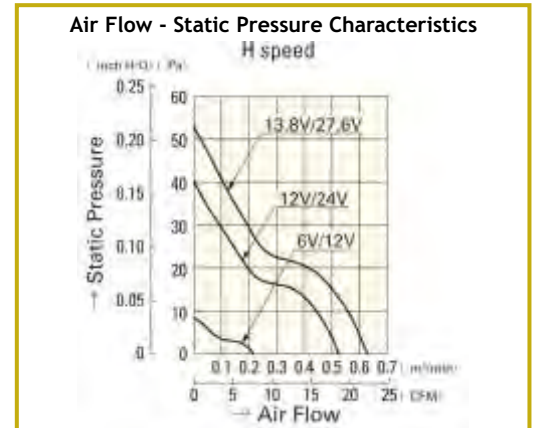
24 V



#### General Specifications

- **Material:**
  - Frame: Plastics
  - Impeller: Plastics
- **Expected Life:** 40,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black or blue
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

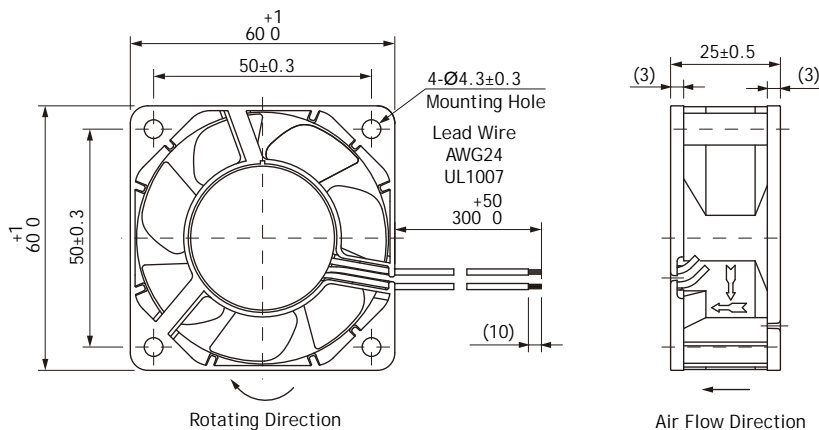
#### Air Flow - Static Pressure Characteristics



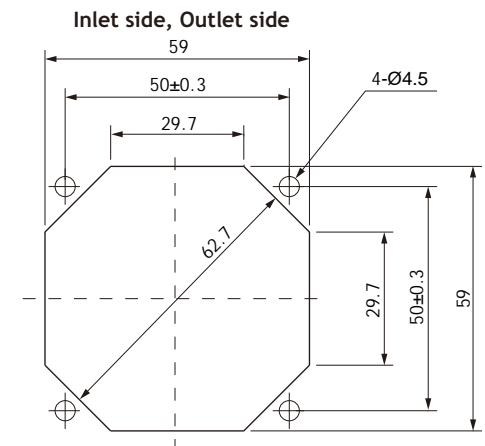
#### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min]	Max. Air Flow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inch H <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9A0624H402	24	12 to 27.6	0.06	1.44	3,800	0.53	18.7	40.2	0.161	28	-20 to +70	40,000

#### Dimensions (Unit:mm)



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



60 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)

60x60x25 mm

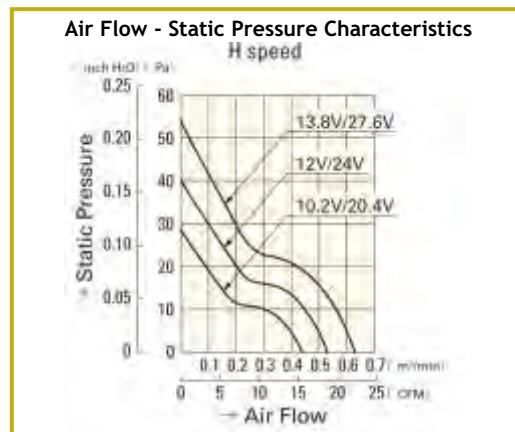
12 V | IP 68 | WP type



#### General Specifications

- Material:
  - Frame: Plastics
  - Impeller: Plastics
- Expected Life: 60,000 h (Indoor, L10:Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
- Lead Wire: ⊕ red ⊖ black
- Storage Temperature: -30°C to +70°C (Non-condensing)
- Ball bearings
- International Standards: UL/CSA, TÜV, RoHS

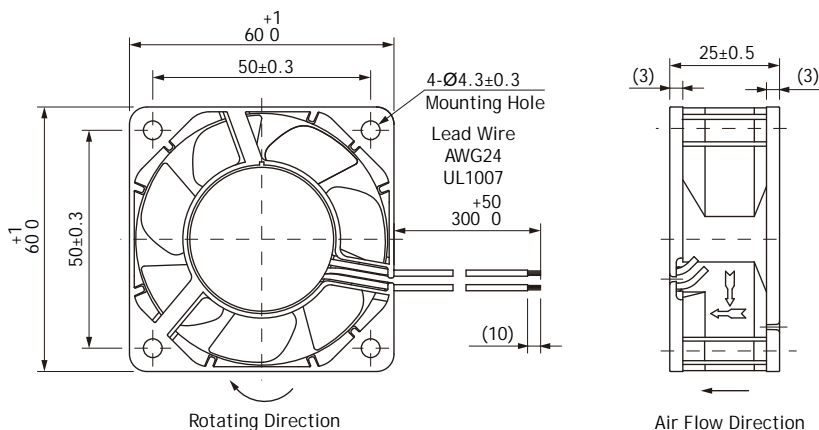
#### Air Flow - Static Pressure Characteristics



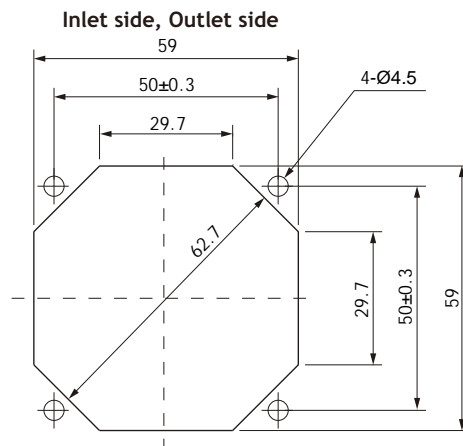
#### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min] [CFM]		Max. Static Pressure [Pa] [inchH <sub>2</sub> O]		SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9WP0612H402	12	10.2 to 13.8	0.11	1.32	3,800	0.53	18.7	40.2	0.161	28	-20 to +70	60,000

#### Dimensions (Unit:mm)



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



60 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)



60x60x25 mm

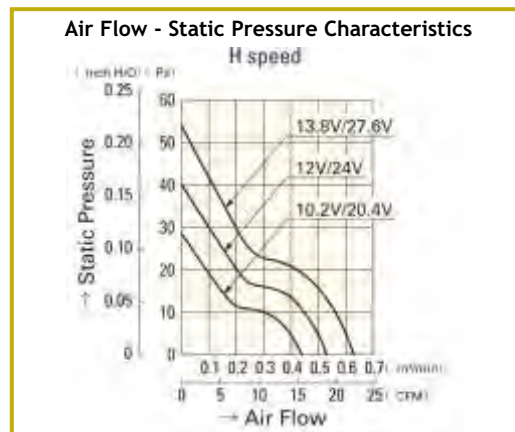
24 V | IP 68 | WP type



#### General Specifications

- **Material:**
  - Frame: Plastics
  - Impeller: Plastics
- **Expected Life:** 60,000 h (Indoor, L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

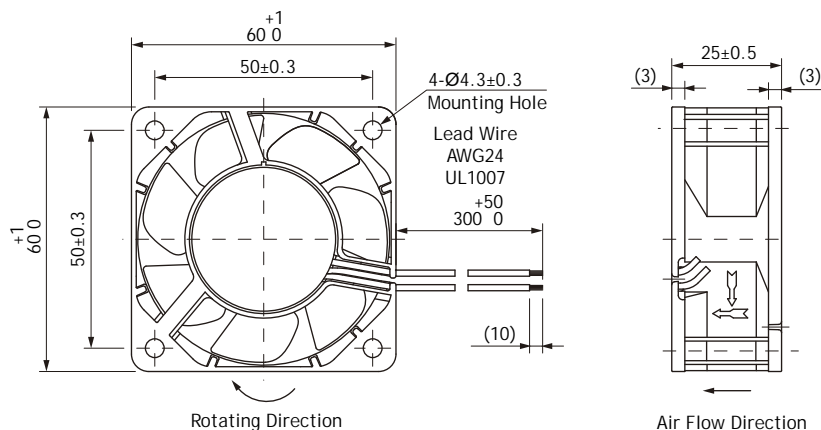
#### Air Flow - Static Pressure Characteristics



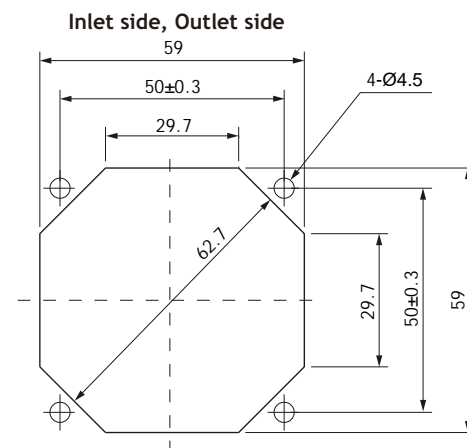
#### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min] [CFM]		Max. Static Pressure [Pa] [inchH <sub>2</sub> O]		SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9WP0624H402	24	20.4 to 27.6	0.06	1.44	3,800	0.53	18.7	40.2	0.161	28	-20 to +70	60,000

#### Dimensions (Unit:mm)



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



60 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)

60x60x25 mm

24 V

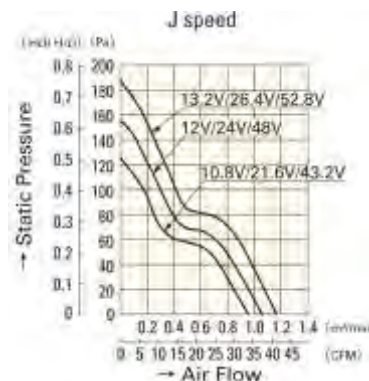


#### General Specifications

- **Material:**
  - Frame: Plastics
  - Impeller: Plastics
- **Expected Life:** 40,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black or blue
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

#### Air Flow - Static Pressure Characteristics

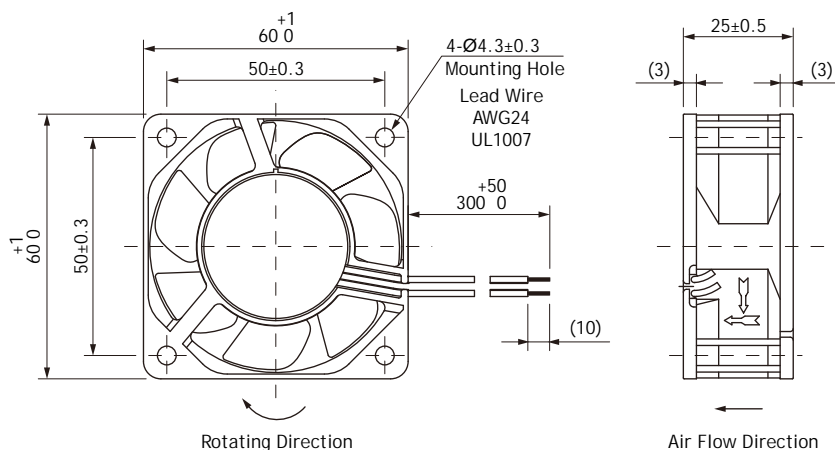
Air Flow - Static Pressure Characteristics



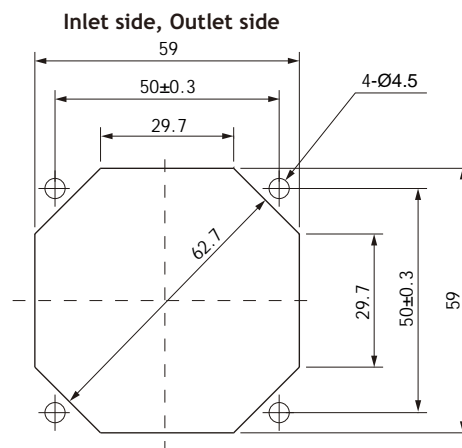
#### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min] [CFM]	Max. Static Pressure [Pa] [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
109R0624J402	24	21.6 to 26.4	0.24	5.76	7,600	1.06 37.1	155.0 0.622	44	-20 to +60	40,000

#### Dimensions (Unit:mm)



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



60 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)

80x80x25 mm

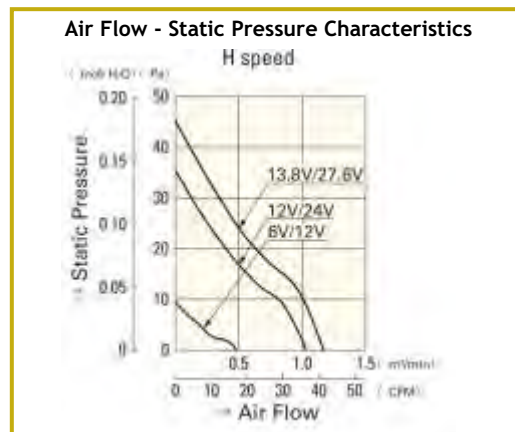
12 V



#### General Specifications

- **Material:**  
- Frame: Plastics  
- Impeller: Plastics
- **Expected Life:** 40,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black or blue
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

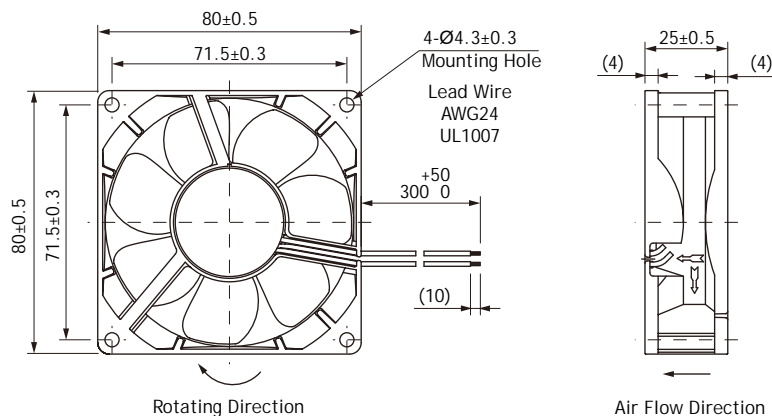
#### Air Flow - Static Pressure Characteristics



#### Specifications

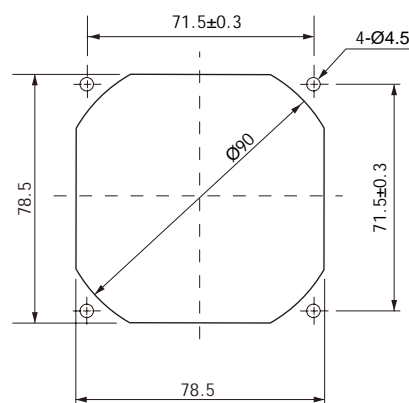
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m³/min]	Max. Air Flow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9A0812H402	12	6 to 13.8	0.13	1.56	2,900	1.03	36.4	35.3	0.142	29	-20 to +70	40,000

#### Dimensions (Unit:mm)



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

Inlet side, Outlet side



80 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)

80x80x25 mm

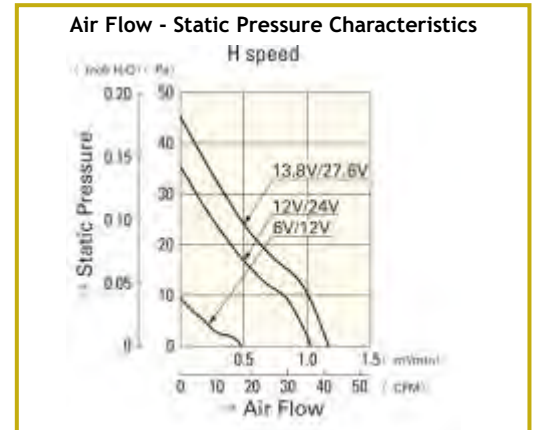
24 V



#### General Specifications

- Material:
  - Frame: Plastics
  - Impeller: Plastics
- Expected Life: 40,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- Lead Wire: ⊕ red ⊖ black or blue
- Storage Temperature: -30 °C to +70 °C (Non-condensing)
- Ball bearings
- International Standards: UL/CSA, TÜV, RoHS

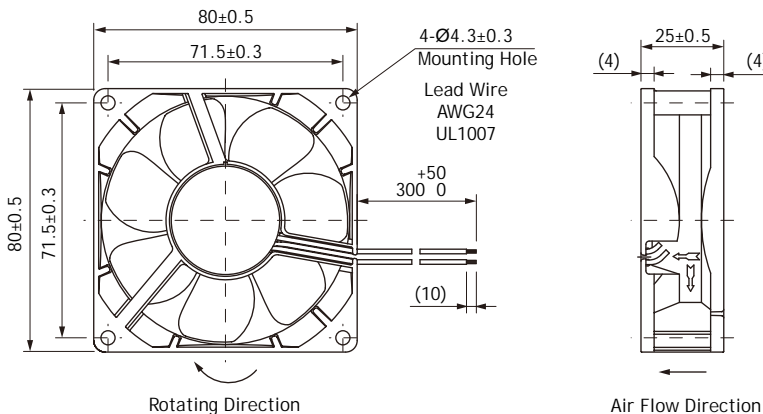
#### Air Flow - Static Pressure Characteristics



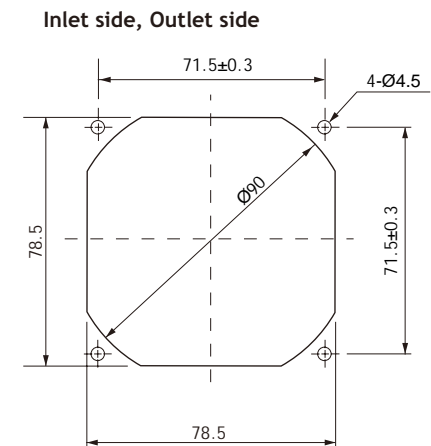
#### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min]	Max. Air Flow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9A0824H402	24	12 to 27.6	0.07	1.68	2,900	1.03	36.4	35.3	0.142	29	-20 to +70	40,000

#### Dimensions (Unit:mm)



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



80 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)



80x80x25 mm

24 V

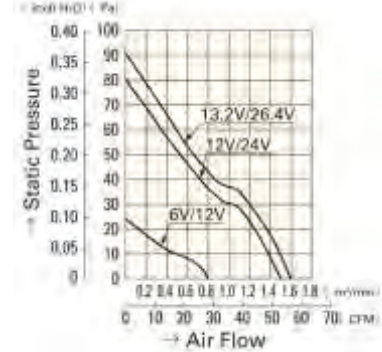


#### General Specifications

- **Material:**
  - Frame: Plastics
  - Impeller: Plastics
- **Expected Life:** 30,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black or blue
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

#### Air Flow - Static Pressure Characteristics

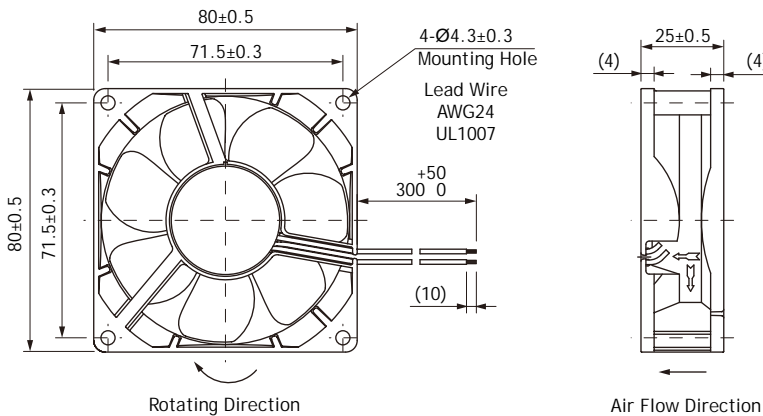
Air Flow - Static Pressure Characteristics  
G speed



#### Specifications

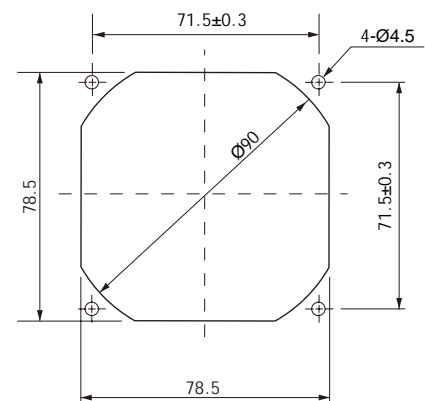
Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min]	Max. Air Flow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9A0824G402	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

#### Dimensions (Unit:mm)



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

Inlet side, Outlet side



80 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)

80x80x38 mm

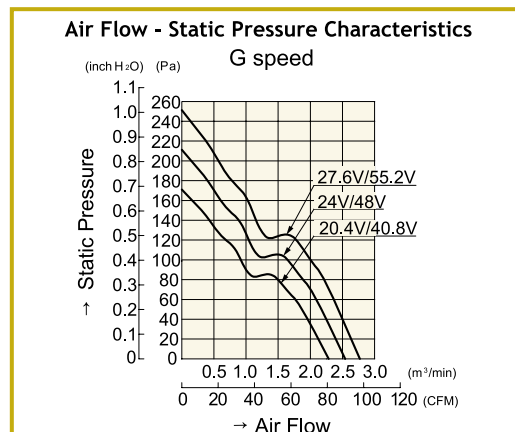
24 V



## General Specifications

- **Material:**
  - Frame: Plastics
  - Impeller: Plastics
- **Expected Life:** 40,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

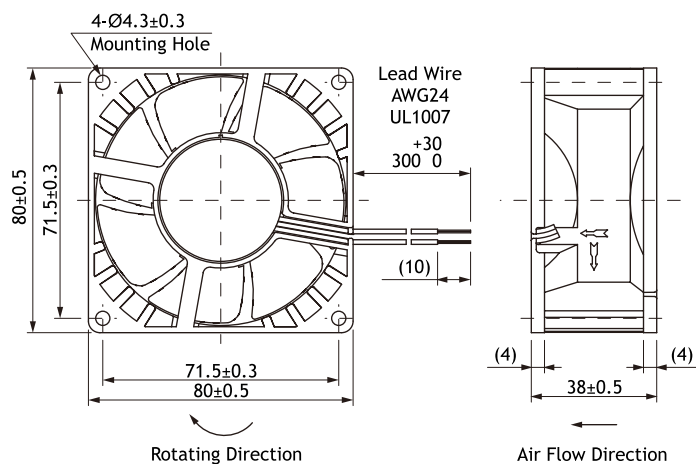
## Air Flow - Static Pressure Characteristics



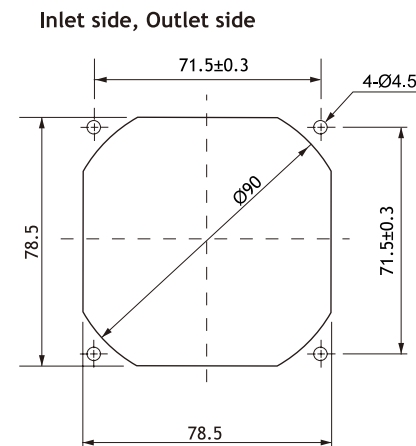
## Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min]	Max. Air Flow [CFM]	Max. Static Pressure [Pa]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9G0824G102	24	20.4 to 27.6	0.56	13.4	6,300	2.55	90	211	51	-20 to +70	40,000

## Dimensions (Unit:mm)



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



80 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)

92x92x25 mm

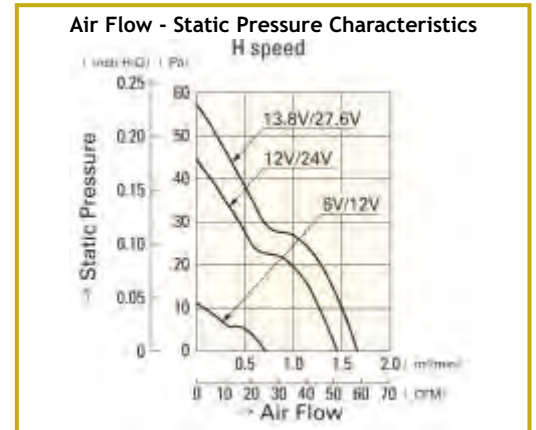
12 V



#### General Specifications

- **Material:**
  - Frame: Plastics
  - Impeller: Plastics
- **Expected Life:** 40,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black or blue
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

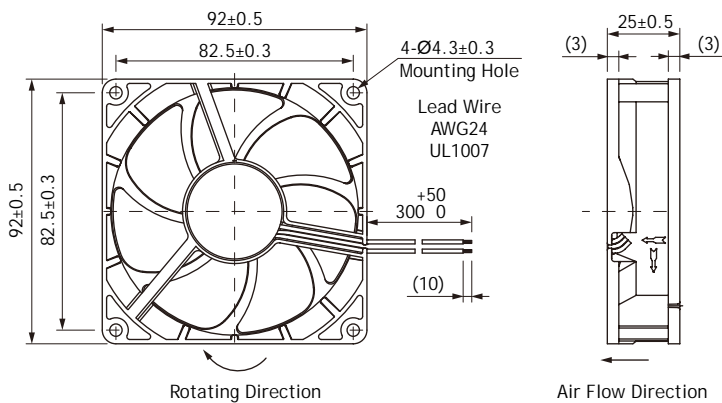
#### Air Flow - Static Pressure Characteristics



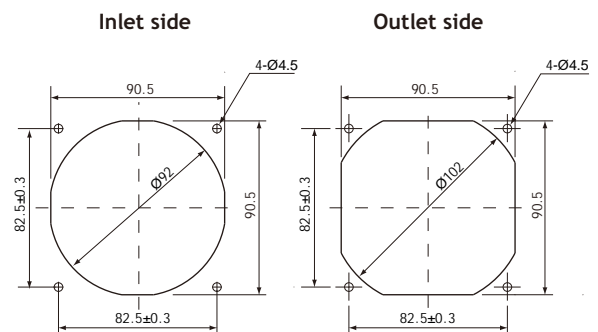
#### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min] [CFM]	Max. Static Pressure [Pa] [inch H <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9A0912H402	12	6 to 13.8	0.21	2.52	3,150	1.45 51.2	44 0.177	33	-20 to +70	40,000

#### Dimensions (Unit:mm)



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



92 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)

92x92x25 mm

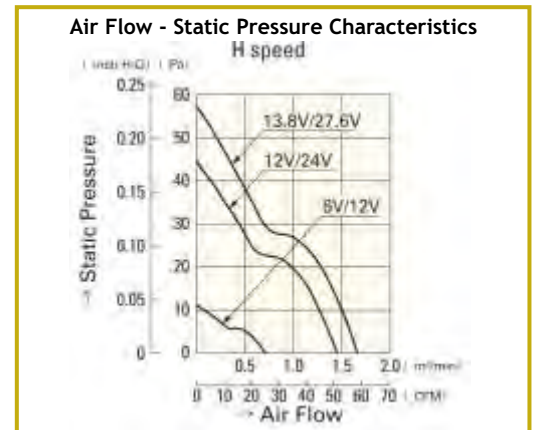
24 V



#### General Specifications

- **Material:**  
- Frame: Plastics  
- Impeller: Plastics
- **Expected Life:** 40,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black or blue
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

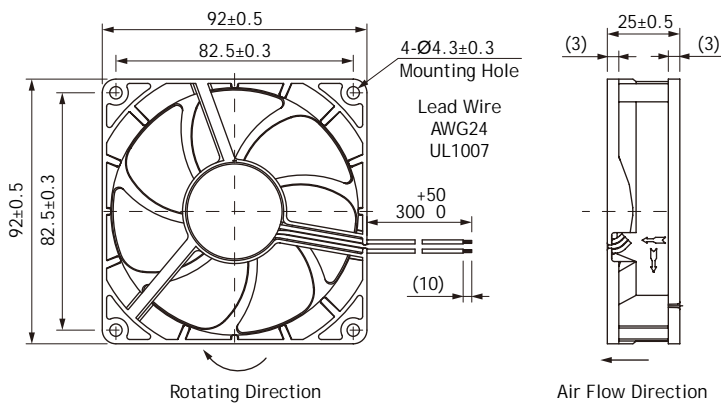
#### Air Flow - Static Pressure Characteristics



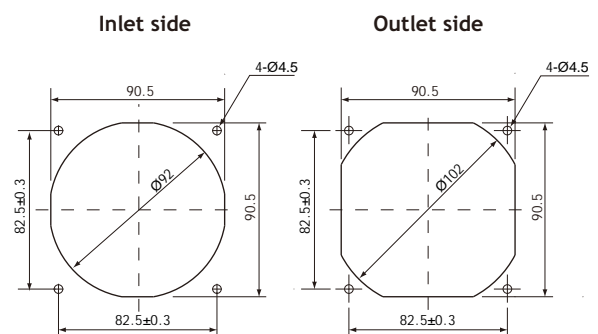
#### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min]	Max. Air Flow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9A0924H402	24	12 to 27.6	0.1	2.4	3,150	1.45	51.2	44	0.177	33	-20 to +70	40,000

#### Dimensions (Unit:mm)



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



92 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)



92x92x25 mm

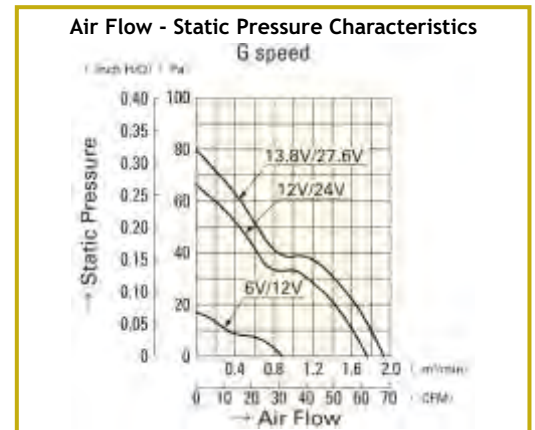
12 V Ribless



#### General Specifications

- **Material:**
  - Frame: Plastics
  - Impeller: Plastics
- **Expected Life:** 30,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- **Lead Wire:** ⊕ red ⊖ black or blue
- **Storage Temperature:** -30 °C to +70 °C (Non-condensing)
- **Ball bearings**
- **International Standards:** UL/CSA, TÜV, RoHS

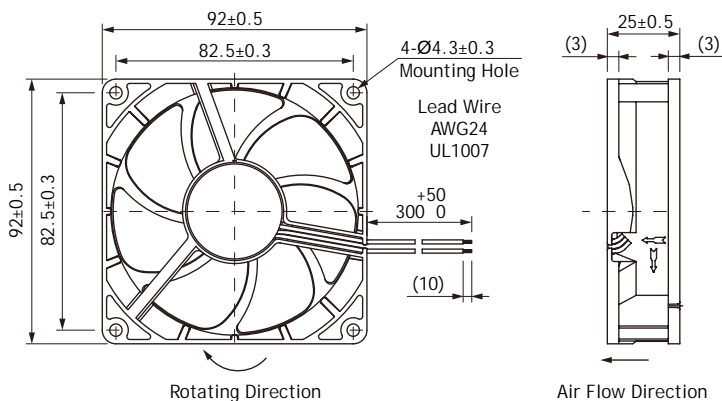
#### Air Flow - Static Pressure Characteristics



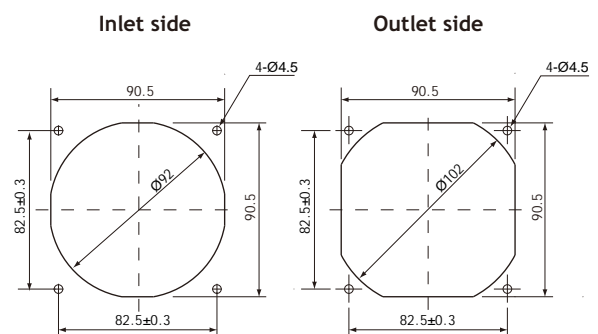
#### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min]	Max. Air Flow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9A0912G4021	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

#### Dimensions (Unit:mm)



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



92 mm sq.



- **Model always available on stock at R.T.A.**
- **Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)**

120x120x25 mm

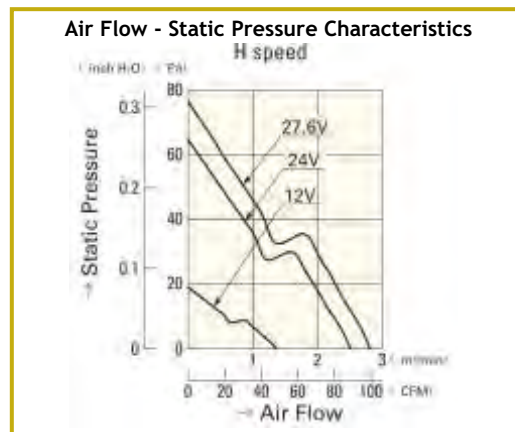
24 V



### General Specifications

- Material:
  - Frame: Plastics
  - Impeller: Plastics
- Expected Life: 40,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- Lead Wire: ⊕ red ⊖ black or blue
- Storage Temperature: -30 °C to +70 °C (Non-condensing)
- Ball bearings
- International Standards: UL/CSA, TÜV, RoHS

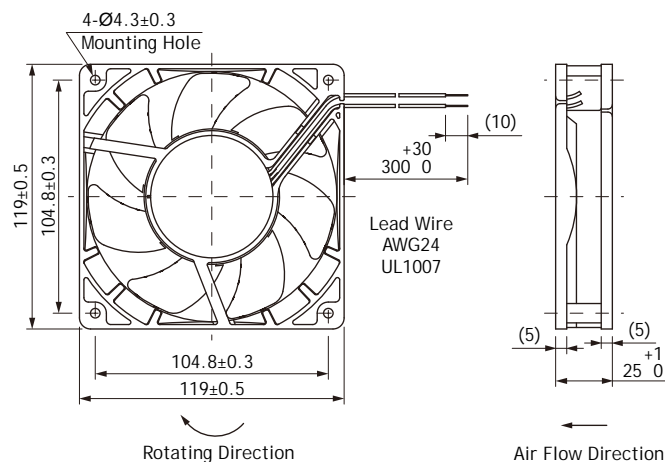
### Air Flow - Static Pressure Characteristics



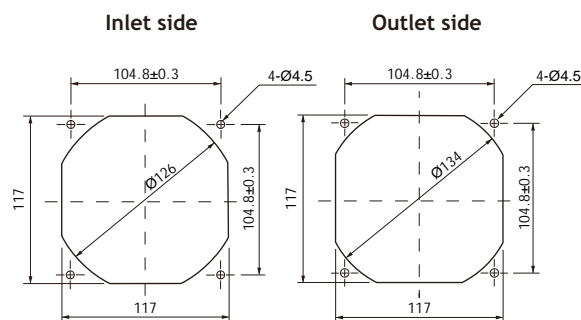
### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m³/min]	Max. Air Flow [CFM]	Max. Static Pressure [Pa]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9G1224H402	24	12 to 27.6	0.17	4.08	2,850	2.50	88	64	40	-20 to +70	40,000

### Dimensions (Unit:mm)



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



120 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)

120x120x38 mm

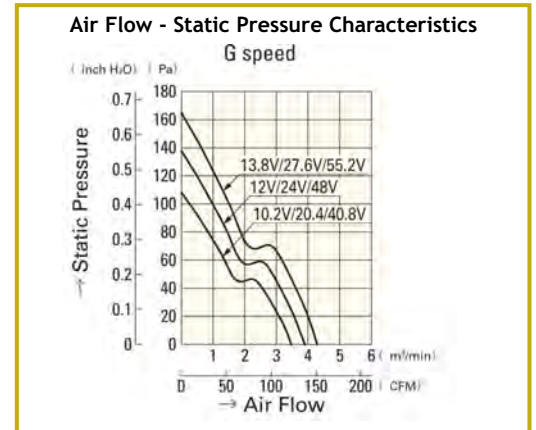
24 V



#### General Specifications

- Material:
  - Frame: Plastics
  - Impeller: Plastics
- Expected Life: 40,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- Lead Wire: ⊕ red ⊖ black or blue
- Storage Temperature: -30 °C to +70 °C (Non-condensing)
- Ball bearings
- International Standards: UL/CSA, TÜV, RoHS

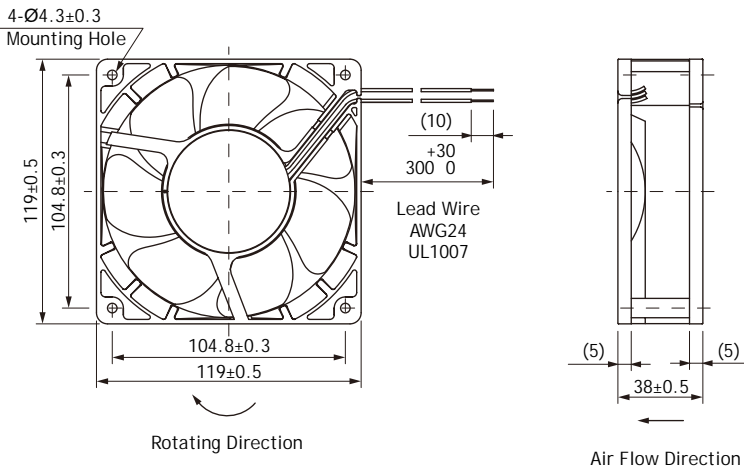
#### Air Flow - Static Pressure Characteristics



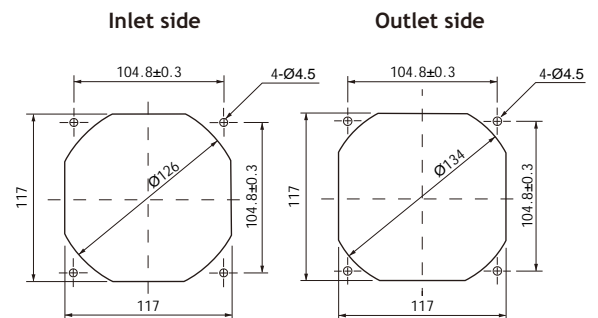
#### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min]	Max. Air Flow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9G1224G102	24	20.4 to 27.6	0.50	12	3,600	3.88	137	135	0.542	49	-20 to +70	40,000

#### Dimensions (Unit:mm)



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



120 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)

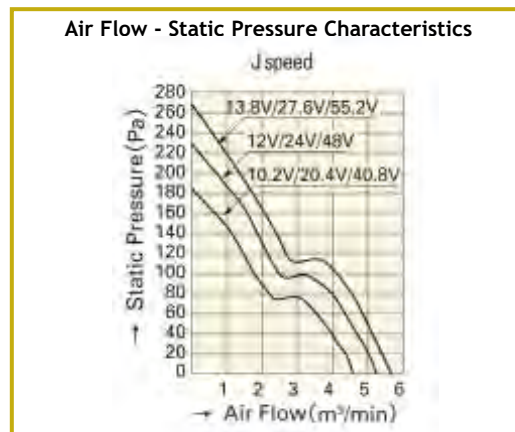
120x120x38 mm **24 V LONG LIFE**



#### General Specifications

- Material:
  - Frame: Aluminum
  - Impeller: Plastics
- Expected Life: 60,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- Lead Wire: ⊕ red ⊖ black or blue
- Storage Temperature: -30 °C to +70 °C (Non-condensing)
- Ball bearings
- International Standards: UL/CSA, TÜV, RoHS

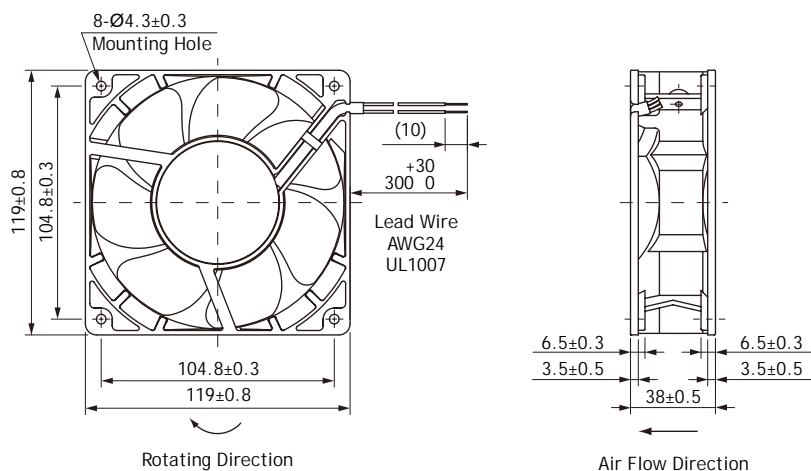
#### Air Flow - Static Pressure Characteristics



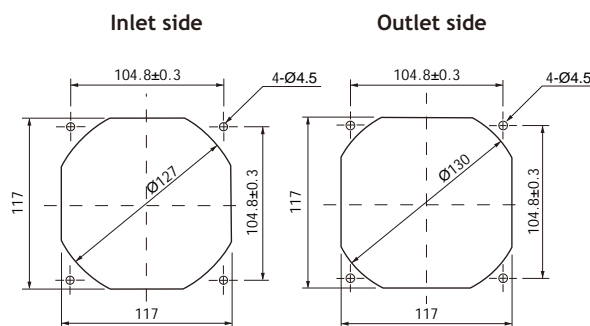
#### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min]	Max. Air Flow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9GL1224J102	24	20.4 to 27.6	1.0	24	4,800	5.10	180	230	0.924	57	-10 to +70	60,000

#### Dimensions (Unit:mm)



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



120 mm sq.



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)

172x150x51 mm

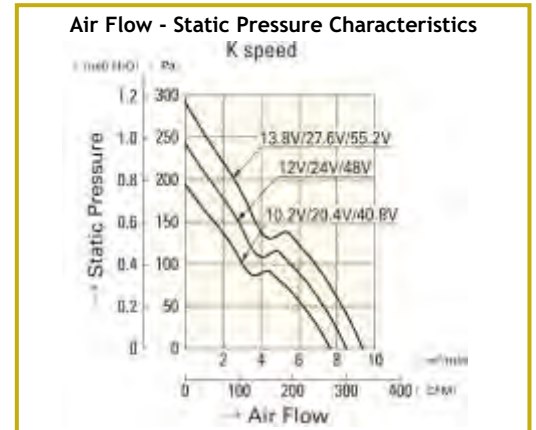
24 V



#### General Specifications

- Material:
  - Frame: Aluminum
  - Impeller: Plastics
- Expected Life: 40,000 h (L10:Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- Tach output
- Lead Wire: ⊕ red ⊖ black or blue (Sensor) yellow
- Storage Temperature: -30 °C to +70 °C (Non-condensing)
- Ball bearings
- International Standards: UL/CSA, TÜV, RoHS

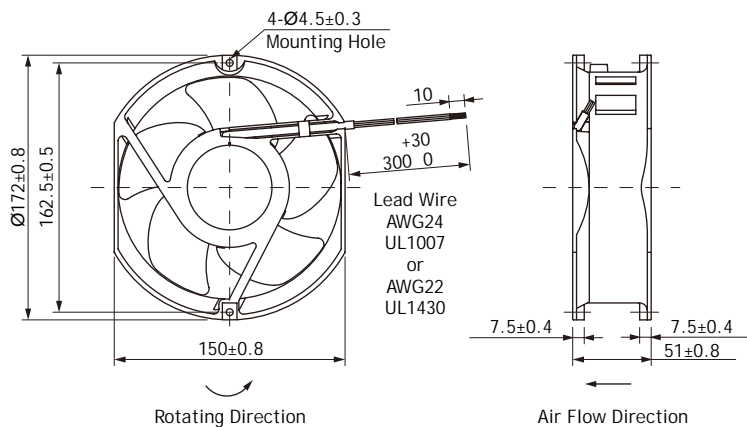
#### Air Flow - Static Pressure Characteristics



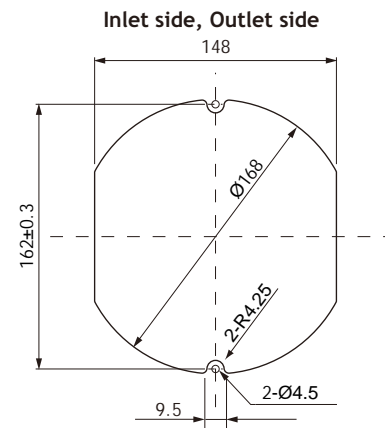
#### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min]	Max. Air Flow [CFM]	Max. Static Pressure [Pa]	Max. Static Pressure [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
109E5724K501	24	20.4 to 27.6	1.3	31.2	4,100	8.5	300	243.0	0.976	60	-20 to +70	40,000

#### Dimensions (Unit:mm)



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



Ø172 mm



- Model always available on stock at R.T.A.
- Also available for online purchasing at [www.rta-store.com](http://www.rta-store.com)



## SAFETY STANDARDS

### UL ratings (USA)



Underwriters Laboratories Inc. was established by the American Union of Fire Insurance Underwriters. The purpose of UL is to ensure safety of machines, equipment, and materials and protect human lives and property from fire and other accidents. To that end, UL has conducted numerous tests and extensive research and, as a result, set up UL ratings. Any seller of products in any of the majority of the states of the USA must produce their products according to the UL ratings, have them pass UL-specified safety inspections, and have them listed in UL's registration book. Therefore, to export and sell any product in the United States, one must in most cases apply for UL-listing.

Additionally, UL is accredited by The Standards Council of Canada (SCC) as both a Certification Organization (CO) and a Testing Organization (TO) and is officially recognized in all provinces and territories throughout Canada. Accordingly, our products can be tested by UL for compliance with Canadian safety standards. Certified products are entitled to display the C-UL Mark, which authorizes their use and sale in Canada. If products are deemed to be compliant with both U.S. and Canadian standards, then both the UL Mark and C-UL Mark can be displayed or a combination U.S. and Canadian mark (bottom left).

Our products are certified as satisfying all UL507 requirements.

### CSA standards (Canada)



The Canadian Standards Association (CSA) was set up in response to the advice of the Canadian government.

In Canada, the law prohibits the use and sale of any product other than those approved under CSA in terms of safety. CSA has set up CSA standards as inspection procedures and other requirements to ensure product safety.

Our products are certified as satisfying the CSA standard C22.2 No. 113.

### EN standards (EU members)



In the EU territory, the harmonization of industrial standards and safety standards of different countries is under way. The unified standards are called Harmonized Standards. Each of these standards is marked EN above the standard number. EN standards offer the grounds in design and manufacture when one exports a product to the EU territory. In order for a product to receive a safety marking, the product must be found to conform to TÜV, VDE, or other relevant standard.

Our products are certified as satisfying all TÜV Rheinland EN60950 requirements.

### JIS: Japanese Industrial Standards

Japan's national standards related to mining and manufacturing industries

### IEC : International Electrotechnical Commission

This is an international commission on electrical standardization. This commission promotes the unification and cooperation of international standards related to electric and electronics engineering and issues IEC standards in order eventually to allow different countries to conform to the international standards.

### DIN : Deutsches Institut für Normung e.V.

This is a German standards institute. The institute uses a wide-range set of standards covering many industrial sectors. The set of standards includes basic standards.

### VDE : Verband Deutscher Elektrotechniker e.V.

It is a German association of electric engineers. VDE establishes safety standards related to electrical engineering and issues them as DIN-VDE standards.

## **RoHS DIRECTIVE**

Since October 2012, all the products in this catalog have complied with the maximum concentration values of the hazardous substances referred to in the Annex II to EU RoHS Directive 2011/65/EU,\* except for the exempted applications specified in the Annex III to the Directive.

Please note that SANYO DENKI does not use exemption 7(c)-III: Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC, for those products.

\* Lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE)

RoHS Directive:

DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.



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**Motion Control Systems**



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