

DC Fan



60×60×25 mm

San Ace 60 9G type

General Specifications

- Material Frame: Plastic (Flammability: UL 94V-0), Impeller: Plastic (Flammability: UL 94V-0)
- Expected life See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage)
Expected life at 40°C is for reference only.
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 573.
- Dielectric strength 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- Sound pressure level (SPL) At 1 m away from the air inlet
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire ⊕Red ⊖Black Sensor Yellow Control Brown
- Mass 90 g

Specifications

The models listed below **have ribs and pulse sensors with PWM control function.** For models without ribs, append "1" to the end of model numbers.

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]
9G0612P4S001	12	10.2 to 13.8	100	0.67	8.04	11000	1.4 49.4	300 1.2	53	-20 to +70	40000/60°C (70000/40°C)
9G0612P4H001			0	0.07	0.84	3300	0.42 14.8	27 0.11	19		
9G0612P4H001	24	20.4 to 27.6	100	0.5	6.0	9500	1.21 42.7	224 0.9	49		
9G0624P4S001			0	0.06	0.72	2850	0.36 12.7	20.2 0.08	18		
9G0624P4S001	24	20.4 to 27.6	100	0.34	8.16	11000	1.4 49.4	300 1.2	53		
9G0624P4H001			0	0.04	0.96	3300	0.42 14.8	27 0.11	19		
9G0624P4H001			100	0.25	6.0	9500	1.21 42.7	224 0.9	49		
9G0624P4F001			0	0.04	0.96	2850	0.36 12.7	20.2 0.08	18		
9G0624P4F001	48	36 to 72	100	0.17	4.08	7800	1.0 35.3	150 0.6	43		
9G0648P4S001			20	0.03	0.72	1800	0.23 8.1	8 0.03	14		
9G0648P4S001	48	36 to 72	100	0.18	8.64	11000	1.4 49.4	305 1.22	53		
9G0648P4S001			0	0.02	0.96	3300	0.42 14.8	27.4 0.11	19		

* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

The following sensor and control options are available for selection.

Differs according to the model. Refer to the table on p. 600. Without sensor Pulse sensor Lock sensor

The mark indicates Short Lead Time Service applicable models. See p. 626 for details.

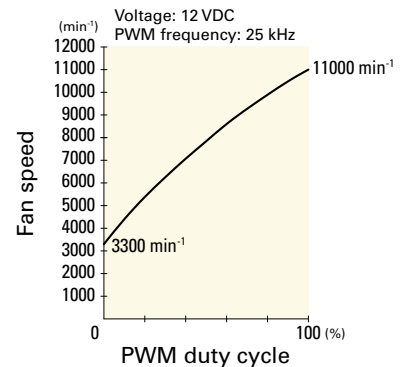
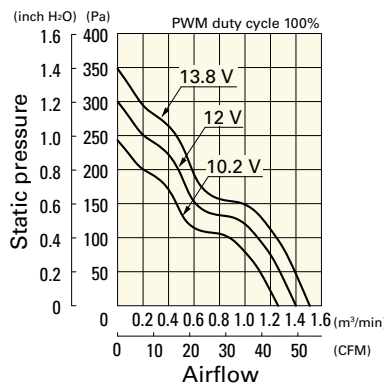
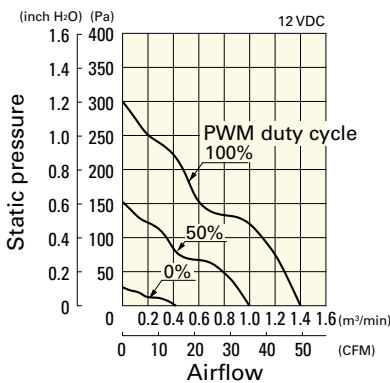
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9G0612P4S001 With pulse sensor with PWM control function

PWM duty cycle

Operating voltage range

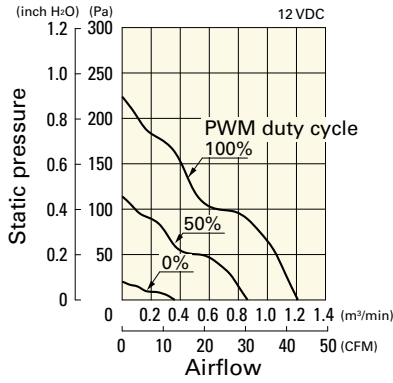
PWM duty - Speed characteristics example



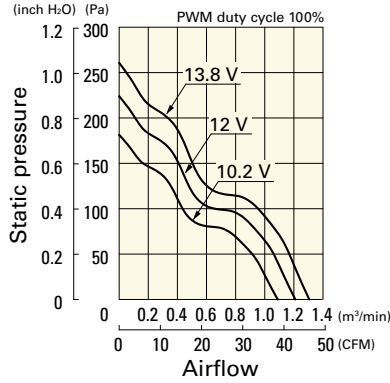
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9G0612P4H001 With pulse sensor with PWM control function

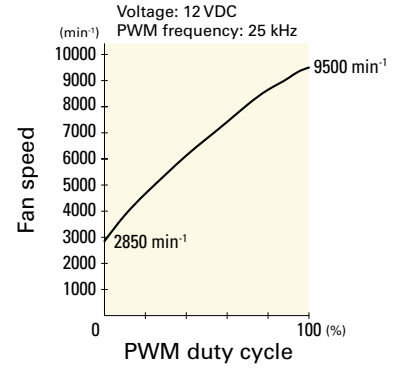
PWM duty cycle



Operating voltage range

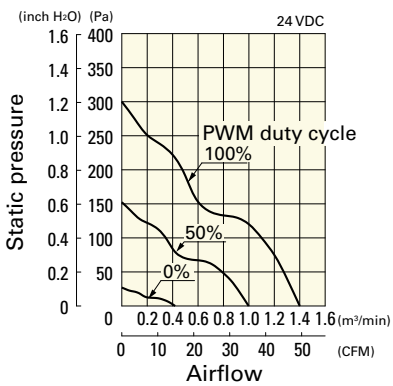


PWM duty - Speed characteristics example

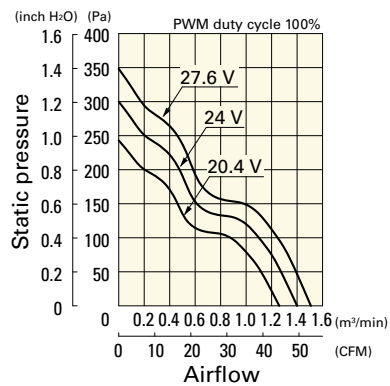


9G0624P4S001 With pulse sensor with PWM control function

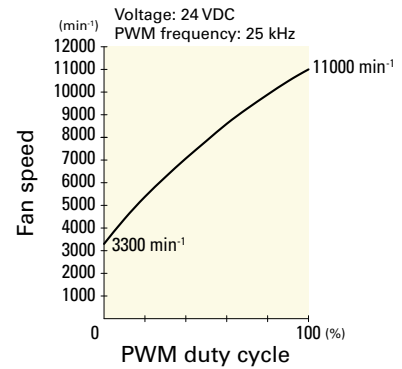
PWM duty cycle



Operating voltage range

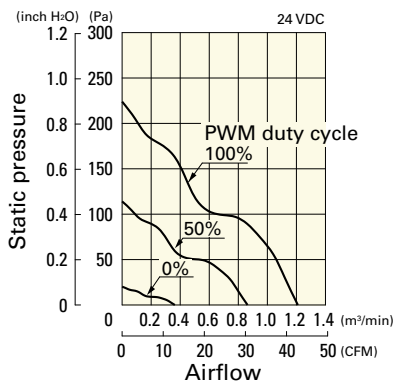


PWM duty - Speed characteristics example

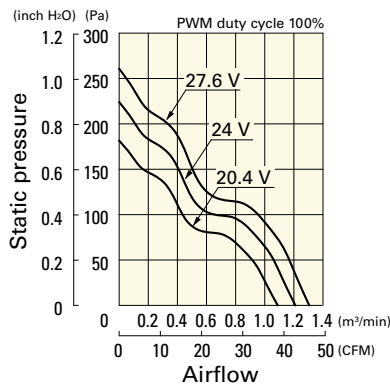


9G0624P4H001 With pulse sensor with PWM control function

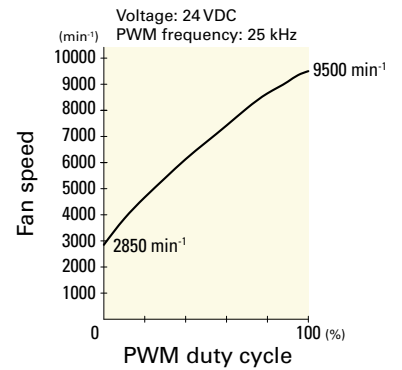
PWM duty cycle



Operating voltage range

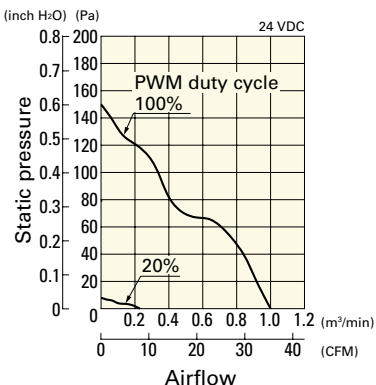


PWM duty - Speed characteristics example

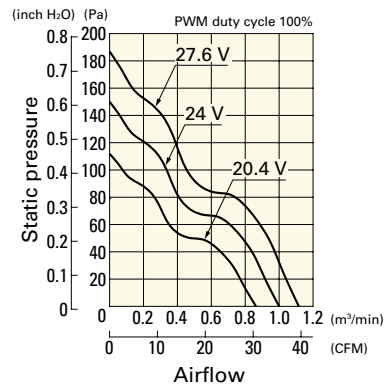


9G0624P4F001 With pulse sensor with PWM control function

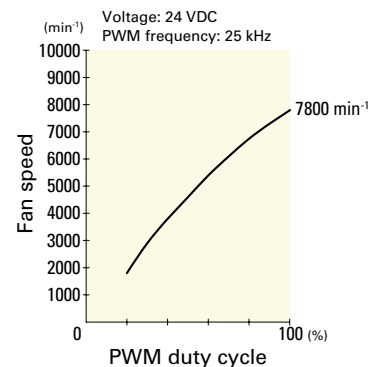
PWM duty cycle



Operating voltage range



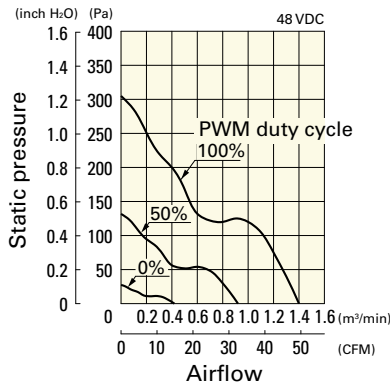
PWM duty - Speed characteristics example



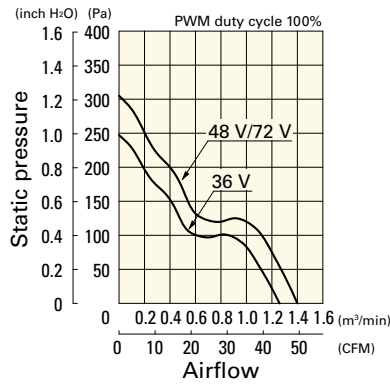
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9G0648P4S001 With pulse sensor with PWM control function

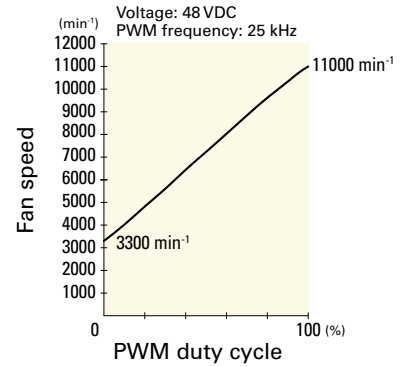
PWM duty cycle



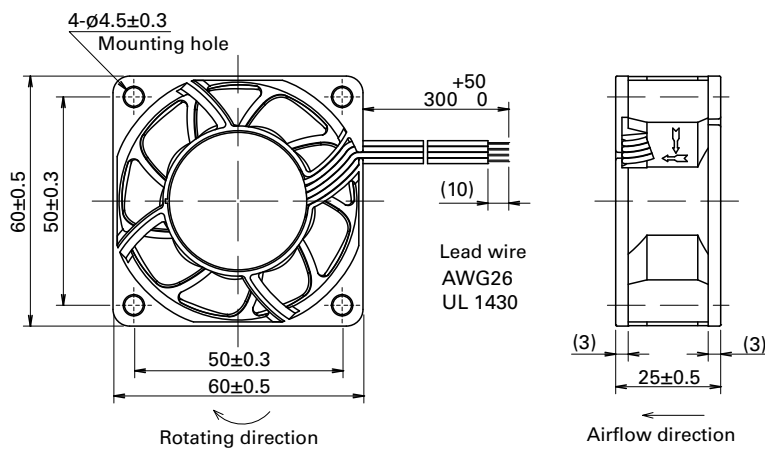
Operating voltage range



PWM duty - Speed characteristics example

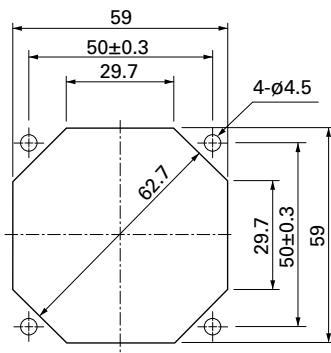


Dimensions (unit: mm) (With ribs)



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

Inlet side, Outlet side



Options

Finger guards

page: p. 558

Model no.: 109-139E, 109-139H

Resin finger guards

page: p. 565

Model no.: 109-1003G

Resin filter kits

page: p. 566

Model no.: 109-1003F13 (13PPI), 109-1003F20 (20PPI), 109-1003F30 (30PPI), 109-1003F40 (40PPI)

60×60×25 mm

San Ace 60 9R type



General Specifications

- Material Frame: Plastic (Flammability: UL 94V-0), Impeller: Plastic (Flammability: UL 94V-1)
- Expected life See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage)
Expected life at 40°C is for reference only.
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 573.
- Dielectric strength 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- Sound pressure level (SPL) At 1 m away from the air inlet
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire ⊕Red ⊖Black or Blue Sensor Yellow
- Mass 90 g

Specifications

The models listed below **have ribs and pulse sensors**. For models without ribs, append "1" to the end of model numbers.

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	1.7	3800	0.53	18.7	40.2	0.161	28	-20 to +70	60000/60°C (90000/40°C)
» 109R0605F401			0.2	1.0	3200	0.44	15.5	29.4	0.118	24	-20 to +60	
» 109R0605M401			0.13	0.65	2600	0.36	12.7	19.6	0.079	20	-20 to +70	
» 109R0612J401	12	10.8 to 13.2	0.47	5.64	7600	1.06	37.1	155.0	0.622	44	-20 to +60	40000/60°C (70000/40°C)
» 109R0612G401			0.24	2.88	5600	0.78	27.5	87.3	0.351	39	-20 to +70	
» 109R0612D401		10.2 to 13.8	0.21	2.52	5150	0.72	25.4	73.5	0.295	37		
» 109R0612S401		6 to 13.8	0.17	2.04	4600	0.65	23.0	56.8	0.228	33		
» 109R0612H401			0.11	1.32	3800	0.53	18.7	40.1	0.161	28		
» 109R0612F401			0.09	1.08	3200	0.44	15.5	29.4	0.118	24		
» 109R0612M401		7 to 13.8	0.06	0.72	2600	0.36	12.7	19.6	0.079	20		
» 109R0624J401		24	21.6 to 26.4	0.24	5.76	7600	1.06	37.1	155.0	0.622	44	-20 to +60
» 109R0624G401	20.4 to 27.6		0.13	3.12	5600	0.78	27.5	87.3	0.351	39	-20 to +70	60000/60°C (90000/40°C)
» 109R0624D401	12 to 27.6		0.12	2.88	5150	0.72	25.4	73.5	0.295	37		
» 109R0624S401			0.08	1.92	4600	0.65	23.0	56.8	0.228	33		
» 109R0624H401			0.06	1.44	3800	0.53	18.7	40.2	0.161	28		
» 109R0624F401	0.05		1.2	3200	0.44	15.5	29.4	0.118	24			
» 109R0624M401	14 to 27.6		0.04	0.96	2600	0.36	12.7	19.6	0.079	20		
» 109R0648J401	48		43.2 to 52.8	0.12	5.76	7600	1.06	37.1	155.0	0.622	44	-20 to +60
» 109R0648G401		43 to 53	0.07	3.36	5600	0.78	27.5	87.3	0.351	39	-20 to +70	60000/60°C (90000/40°C)
» 109R0648H401		40 to 53	0.04	1.92	3800	0.53	18.7	40.2	0.161	28		

The following sensor and control options are available for selection.

Available for all models. **Without sensor**

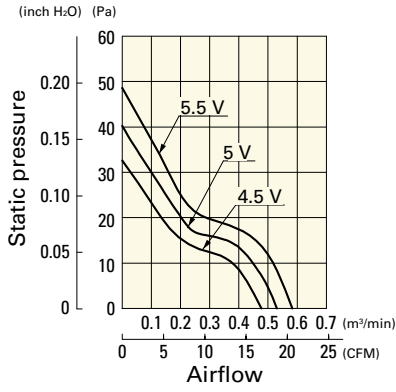
Differs according to the model. Refer to the table on pp. 596 to 597. **Lock sensor** **PWM control**

The » mark indicates Short LeadTime Service applicable models. See p. 626 for details.

Airflow - Static Pressure Characteristics

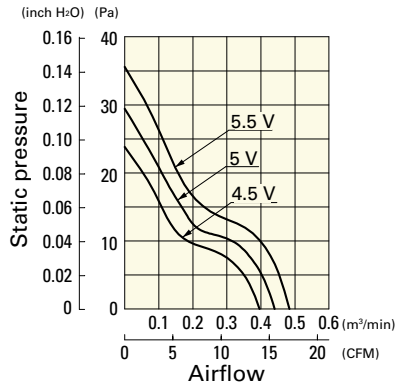
109R0605H401 With pulse sensor

Operating voltage range



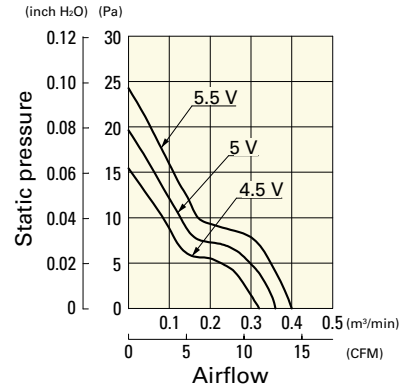
109R0605F401 With pulse sensor

Operating voltage range



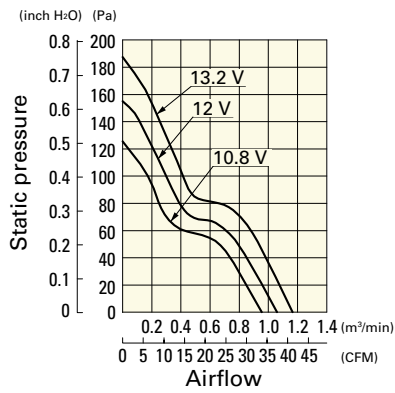
109R0605M401 With pulse sensor

Operating voltage range



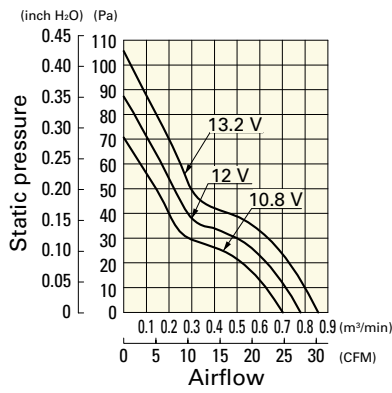
109R0612J401 With pulse sensor

Operating voltage range



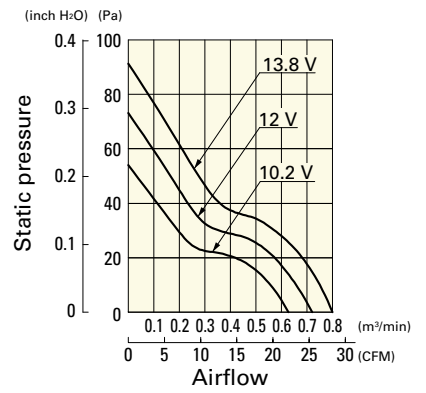
109R0612G401 With pulse sensor

Operating voltage range



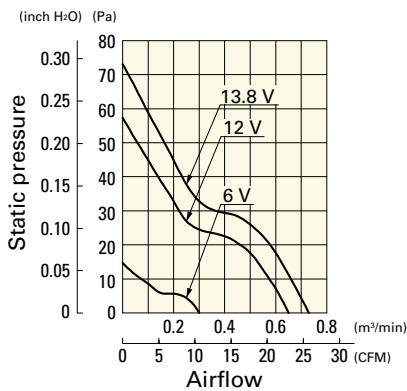
109R0612D401 With pulse sensor

Operating voltage range



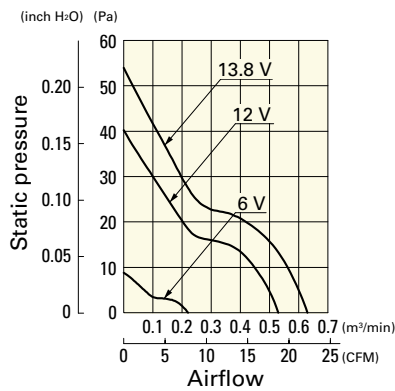
109R0612S401 With pulse sensor

Operating voltage range



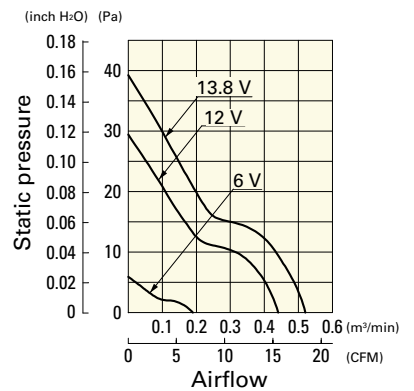
109R0612H401 With pulse sensor

Operating voltage range



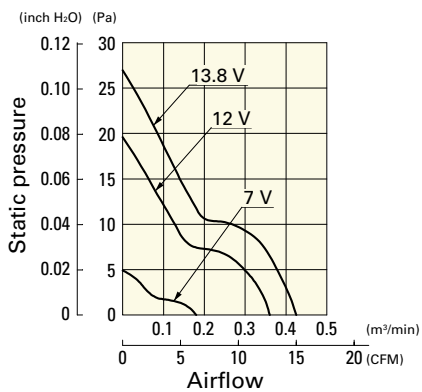
109R0612F401 With pulse sensor

Operating voltage range



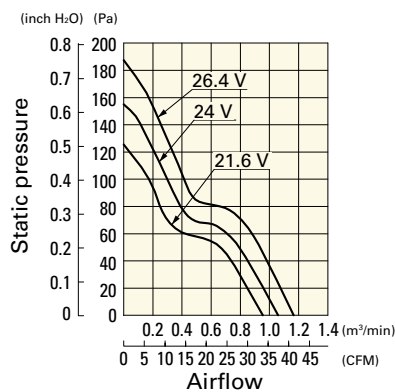
109R0612M401 With pulse sensor

Operating voltage range



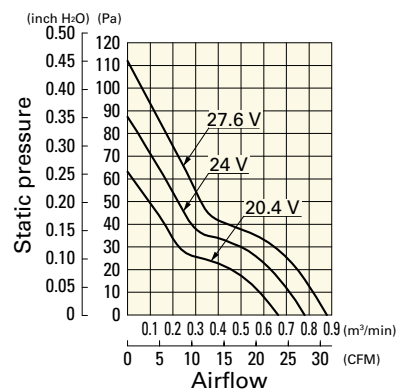
109R0624J401 With pulse sensor

Operating voltage range



109R0624G401 With pulse sensor

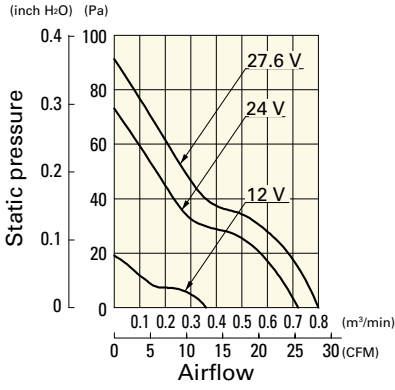
Operating voltage range



Airflow - Static Pressure Characteristics

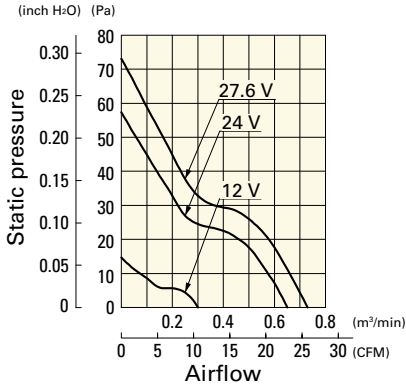
109R0624D401 With pulse sensor

Operating voltage range



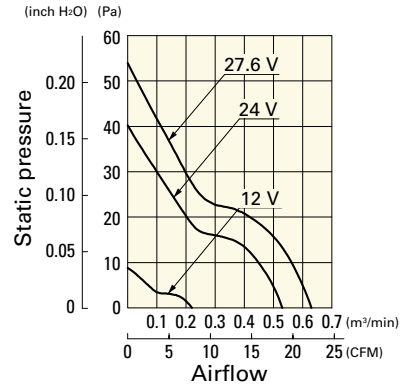
109R0624S401 With pulse sensor

Operating voltage range



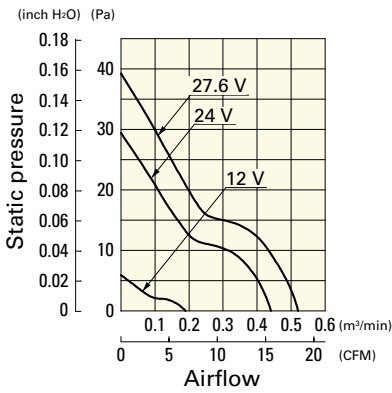
109R0624H401 With pulse sensor

Operating voltage range



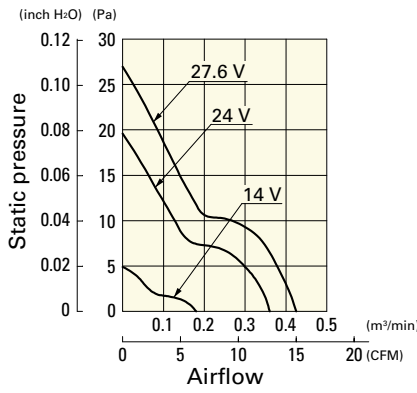
109R0624F401 With pulse sensor

Operating voltage range



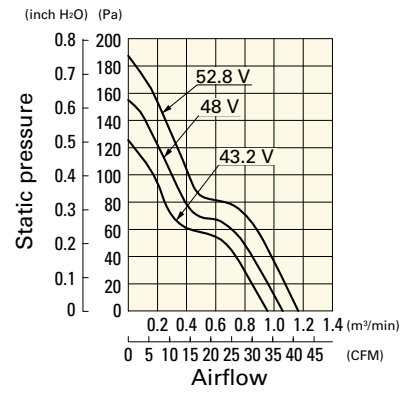
109R0624M401 With pulse sensor

Operating voltage range



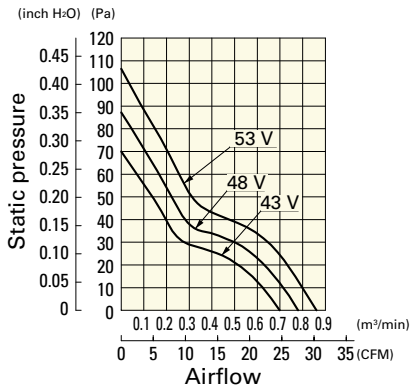
109R0648J401 With pulse sensor

Operating voltage range



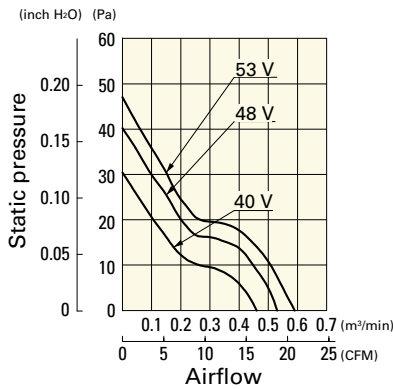
109R0648G401 With pulse sensor

Operating voltage range

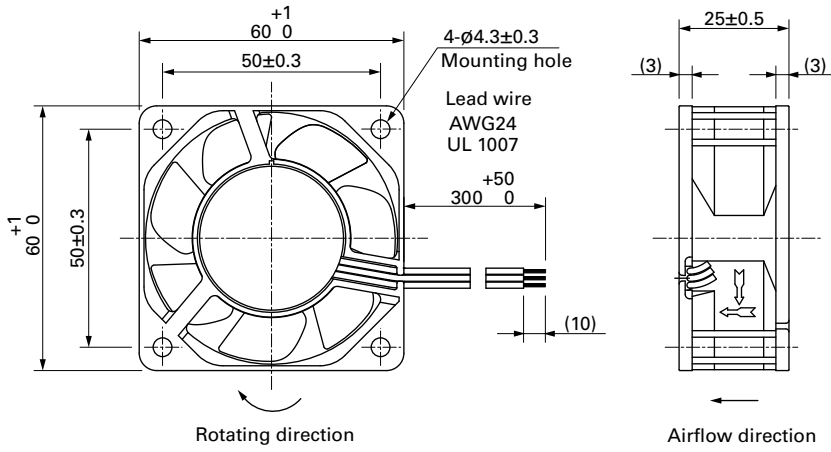


109R0648H401 With pulse sensor

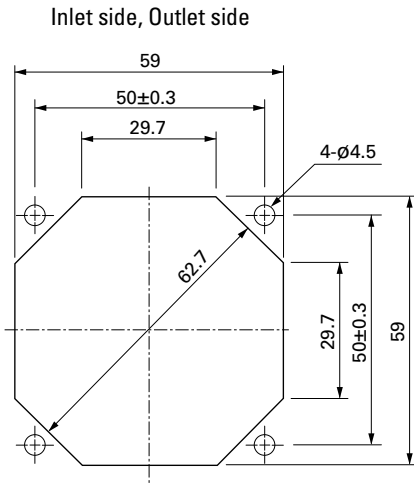
Operating voltage range



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards page: p. 558
 Model no.: 109-139E, 109-139H

Resin finger guards page: p. 565
 Model no.: 109-1003G

Resin filter kits page: p. 566
 Model no.: 109-1003F13 (13PPI), 109-1003F20 (20PPI),
 109-1003F30 (30PPI), 109-1003F40 (40PPI)



60×60×25 mm

San Ace 60 9S type Silent Fan

General Specifications

- Material Frame: Plastic (Flammability: UL 94V-0), Impeller: Plastic (Flammability: UL 94V-1)
- Expected life See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage)
Expected life at 40°C is for reference only.
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 573.
- Dielectric strength 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- Sound pressure level (SPL) At 1 m away from the air inlet
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire ⊕Red ⊖Black Sensor Yellow
- Mass 55 g

Specifications

The models listed below **have ribs and pulse sensors**. For models without ribs, append "1" to the end of model numbers.

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	0.2	2.4	5000	0.74 26.1	65.7 0.26	31	-10 to +70	40000/60°C (70000/40°C)
» 9S0612H401			0.11	1.32	3900	0.58 20.5	40.0 0.16	24		
» 9S0612F401		6.0 to 13.8	0.08	0.96	3300	0.49 17.3	29.3 0.12	20		
» 9S0612M401			0.07	0.84	2700	0.4 14.1	19.7 0.08	16		

The following sensor and control options are available for selection.

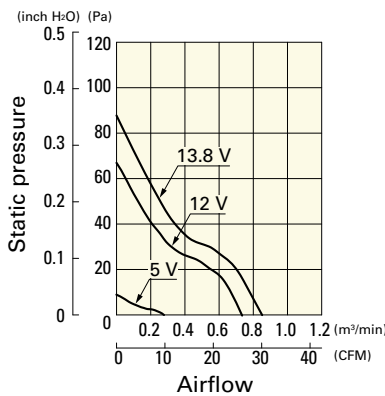
Differs according to the model. Refer to the table on p. 609. Without sensor Lock sensor PWM control

The » mark indicates Short LeadTime Service applicable models. See p. 626 for details.

Airflow - Static Pressure Characteristics

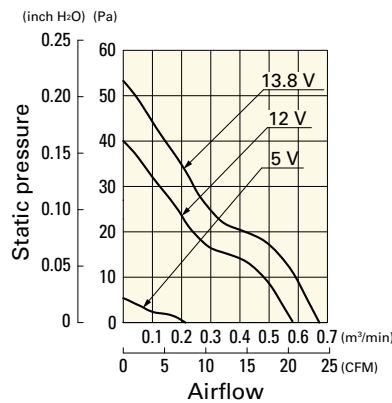
9S0612S401 With pulse sensor

Operating voltage range



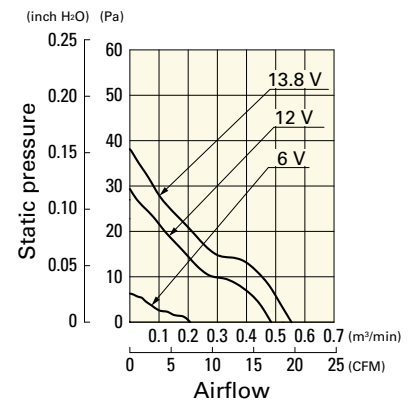
9S0612H401 With pulse sensor

Operating voltage range



9S0612F401 With pulse sensor

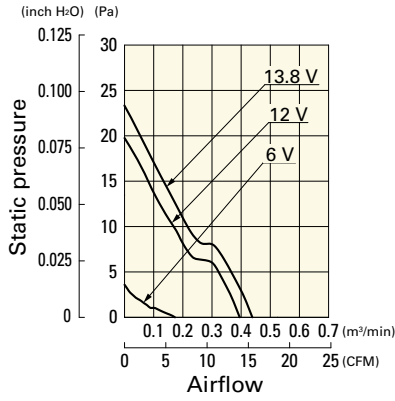
Operating voltage range



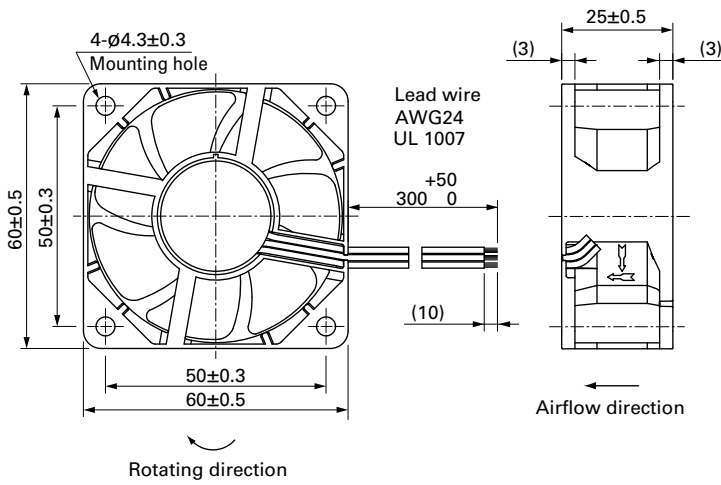
Airflow - Static Pressure Characteristics

9S0612M401 With pulse sensor

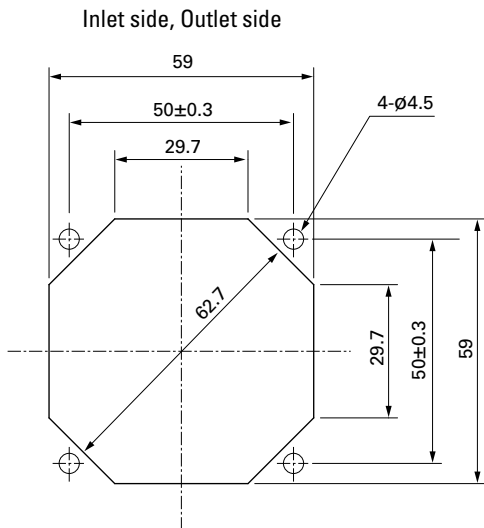
Operating voltage range



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards

page: p. 558

Model no.: 109-139E, 109-139H

Resin finger guards

page: p. 565

Model no.: 109-1003G

Resin filter kits

page: p. 566

Model no.: 109-1003F13 (13PPI), 109-1003F20 (20PPI),
109-1003F30 (30PPI), 109-1003F40 (40PPI)

60x60x25 mm

San Cooler 60 9A type   



General Specifications

- Material Frame: Plastic (Flammability: UL 94V-0), Impeller: Plastic (Flammability: UL 94V-0)
- Expected life See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage)
Expected life at 40°C is for reference only.
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 573.
- Dielectric strength 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- Sound pressure level (SPL) At 1 m away from the air inlet
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire ⊕Red ⊖Black or Blue Sensor Yellow
- Mass 80 g

Specifications

The models listed below **have ribs and pulse sensors**. For models without ribs, append "1" to the end of model numbers.

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	5600	0.78 27.6	87.3 0.351	39	-20 to +60	30000/60°C (53000/40°C)
▶▶ 9A0612S401			0.17	2.04	4600	0.65 23.0	56.8 0.228	33		
▶▶ 9A0612H401		6 to 13.8	0.11	1.32	3800	0.53 18.7	40.2 0.161	28	-20 to +70	40000/60°C (70000/40°C)
▶▶ 9A0612F401			0.09	1.08	3200	0.44 15.5	29.4 0.118	24		
▶▶ 9A0612M401			0.06	0.72	2600	0.36 12.7	19.6 0.079	20		
▶▶ 9A0624G401	24	12 to 27.6	0.13	3.12	5600	0.78 27.6	87.3 0.351	39	-20 to +60	30000/60°C (53000/40°C)
▶▶ 9A0624S401			0.08	1.92	4600	0.65 23.0	56.8 0.228	33		
▶▶ 9A0624H401		12 to 27.6	0.06	1.44	3800	0.53 18.7	40.2 0.161	28	-20 to +70	40000/60°C (70000/40°C)
▶▶ 9A0624F401			0.05	1.2	3200	0.44 15.5	29.4 0.118	24		
▶▶ 9A0624M401			0.04	0.96	2600	0.36 12.7	19.6 0.079	20		

The following sensor and control options are available for selection.

Available for all models. **Without sensor**

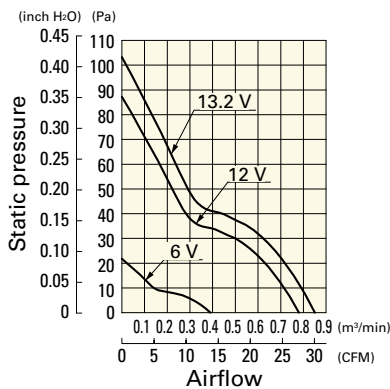
Differs according to the model. Refer to the table on pp. 597 to 598. **Lock sensor** **PWM control**

The ▶▶ mark indicates Short Lead Time Service applicable models. See p. 626 for details.

Airflow - Static Pressure Characteristics

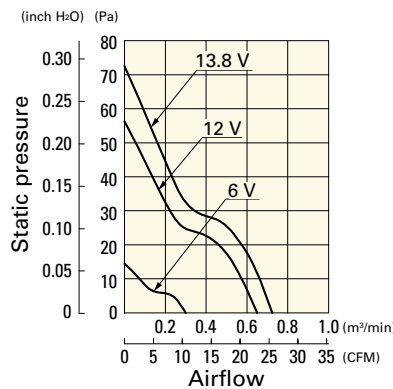
9A0612G401 With pulse sensor

Operating voltage range



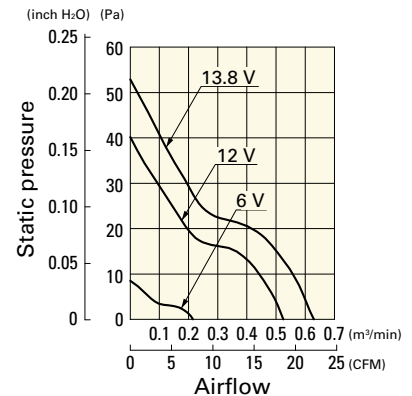
9A0612S401 With pulse sensor

Operating voltage range



9A0612H401 With pulse sensor

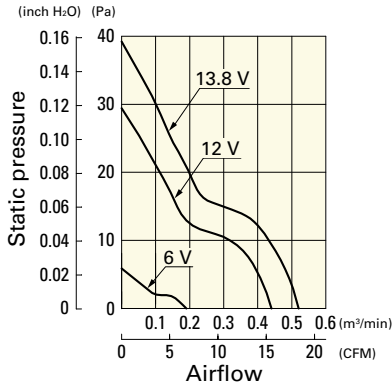
Operating voltage range



Airflow - Static Pressure Characteristics

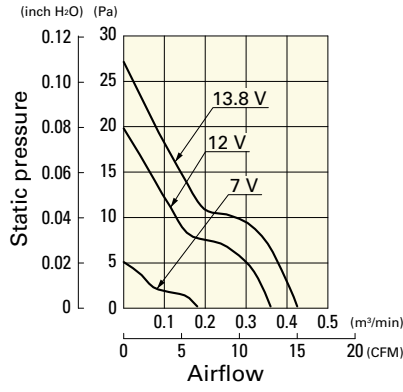
9A0612F401 With pulse sensor

Operating voltage range



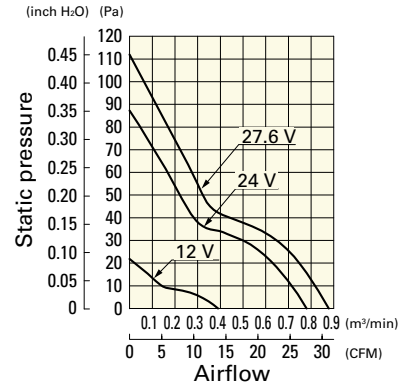
9A0612M401 With pulse sensor

Operating voltage range



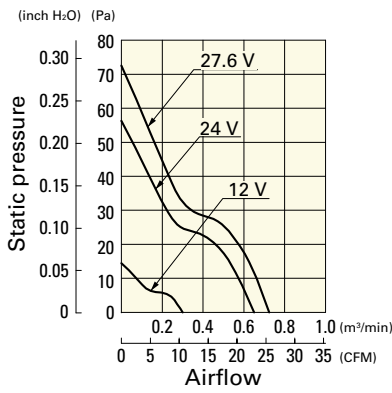
9A0624G401 With pulse sensor

Operating voltage range



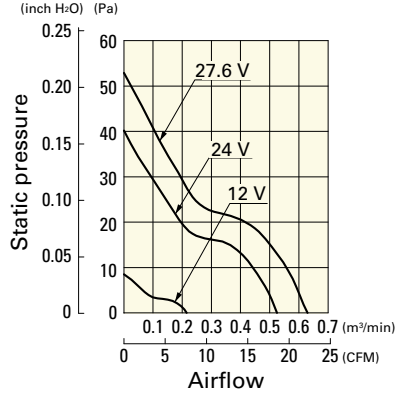
9A0624S401 With pulse sensor

Operating voltage range



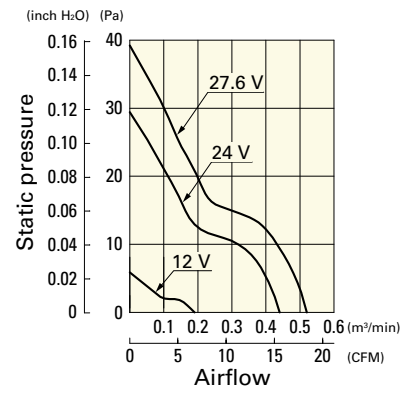
9A0624H401 With pulse sensor

Operating voltage range



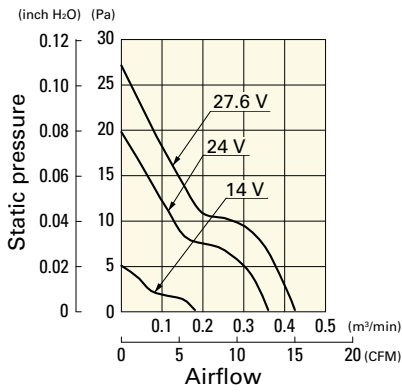
9A0624F401 With pulse sensor

Operating voltage range

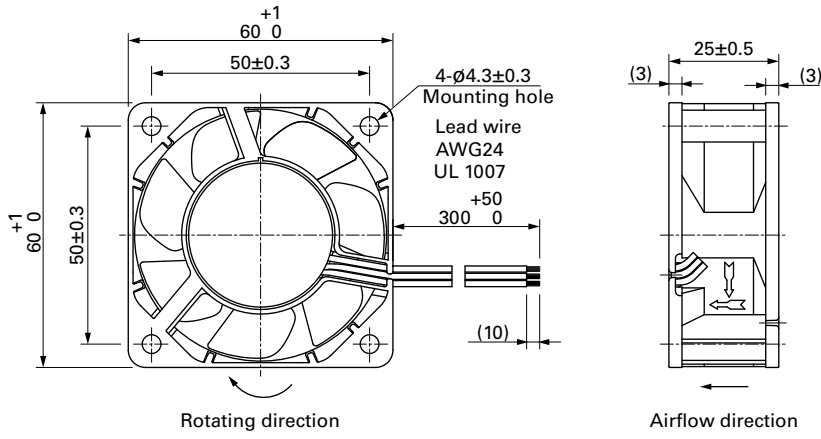


9A0624M401 With pulse sensor

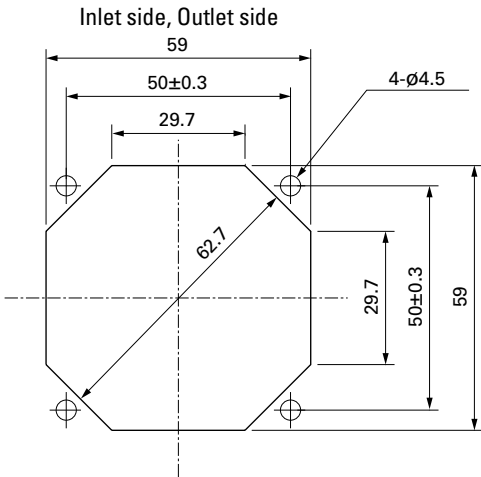
Operating voltage range



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards page: p. 558
Model no.: 109-139E, 109-139H

Resin finger guards page: p. 565
Model no.: 109-1003G

Resin filter kits page: p. 566
Model no.: 109-1003F13 (13PPI), 109-1003F20 (20PPI),
109-1003F30 (30PPI), 109-1003F40 (40PPI)