



92x92x25 mm

San Ace 92 9GA type Low Power Consumption Fan

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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 125 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]
9GA0912P4J03	12	10.2 to 13.8	100	0.39	4.68	5000	2.2 77.7	105 0.42	43	-20 to +70	60000/60°C
			0	0.06	0.72	1500	0.65 23.3	9.4 0.04	14		
9GA0912P4G03			100	0.28	3.36	4400	1.93 68.2	81 0.33	39		
			0	0.06	0.72	1500	0.65 23.3	9.4 0.04	14		
9GA0912P4S03			100	0.2	2.4	3800	1.67 59.0	60.6 0.24	35		
			0	0.06	0.72	1500	0.65 23.3	9.4 0.04	14		
9GA0924P4J03	24	20.4 to 27.6	100	0.2	4.8	5000	2.2 77.7	105 0.42	43		
			0	0.04	0.96	1500	0.65 23.3	9.4 0.04	14		
9GA0924P4G03			100	0.15	3.6	4400	1.93 68.2	81 0.33	39		
			0	0.04	0.96	1500	0.65 23.3	9.4 0.04	14		
9GA0924P4S03			100	0.12	2.88	3800	1.67 59.0	60.6 0.24	35		
			0	0.04	0.96	1500	0.65 23.3	9.4 0.04	14		

* PWM frequency: 25 kHz

Other sensor specifications are available as options. Refer to the index (p. 553).

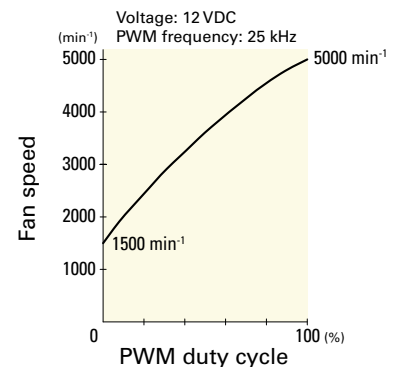
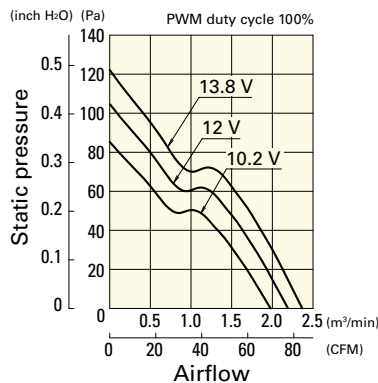
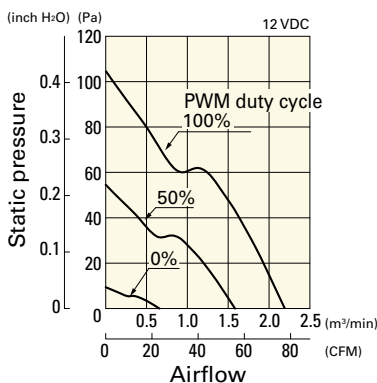
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GA0912P4J03 With pulse sensor with PWM control function

PWM duty cycle

Operating voltage range

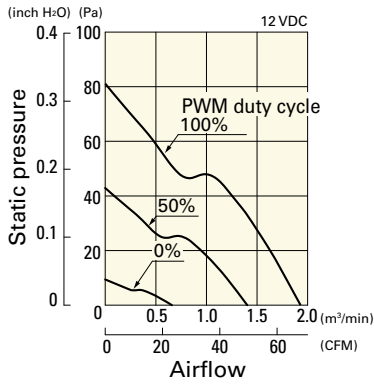
PWM duty - Speed characteristics example



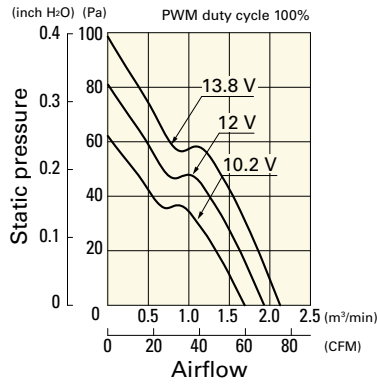
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GA0912P4G03 With pulse sensor with PWM control function

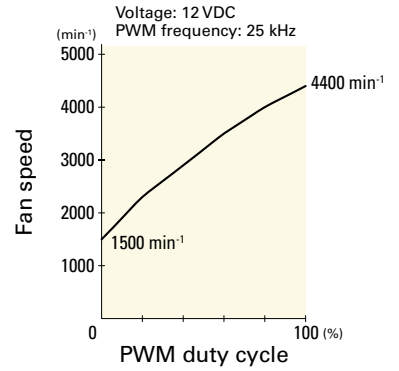
PWM duty cycle



Operating voltage range

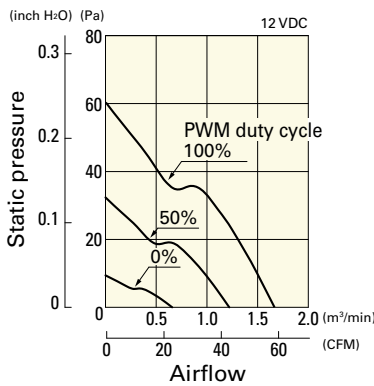


PWM duty - Speed characteristics example

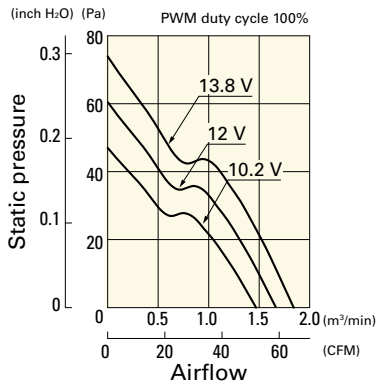


9GA0912P4S03 With pulse sensor with PWM control function

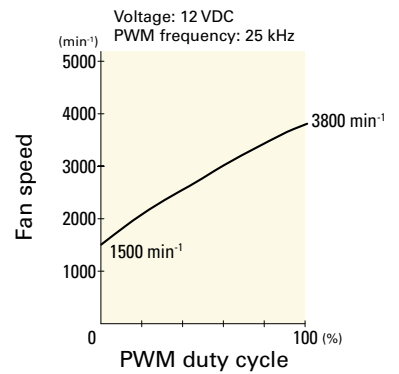
PWM duty cycle



Operating voltage range

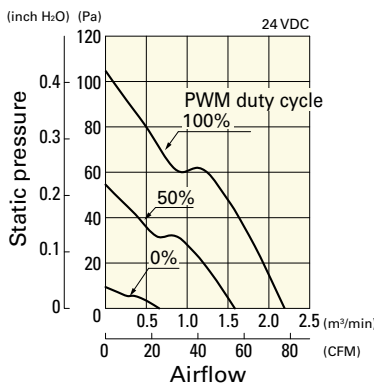


PWM duty - Speed characteristics example

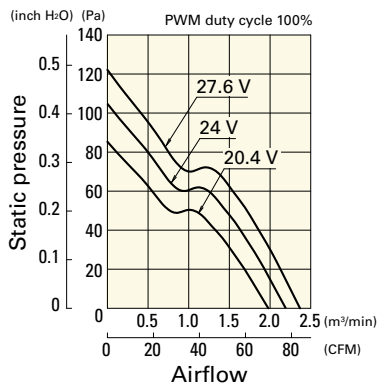


9GA0924P4J03 With pulse sensor with PWM control function

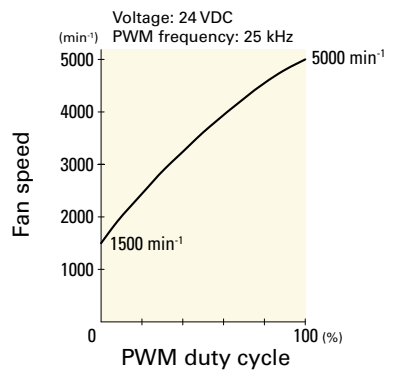
PWM duty cycle



Operating voltage range

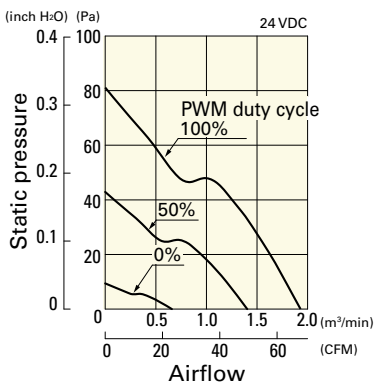


PWM duty - Speed characteristics example

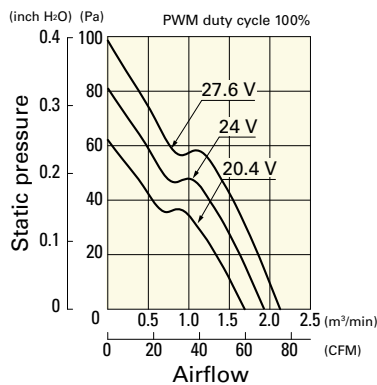


9GA0924P4G03 With pulse sensor with PWM control function

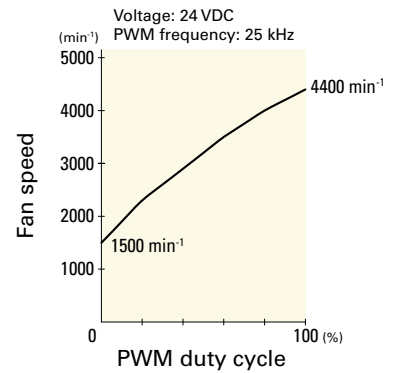
PWM duty cycle



Operating voltage range



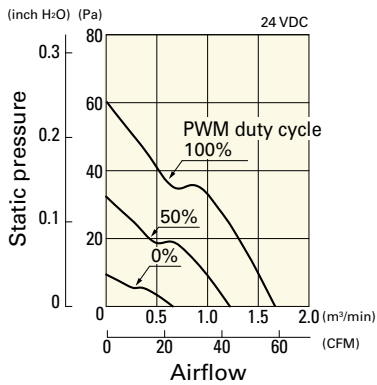
PWM duty - Speed characteristics example



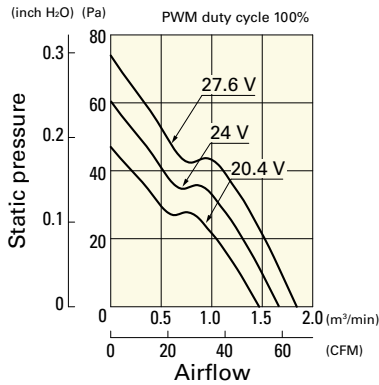
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GA0924P4S03 With pulse sensor with PWM control function

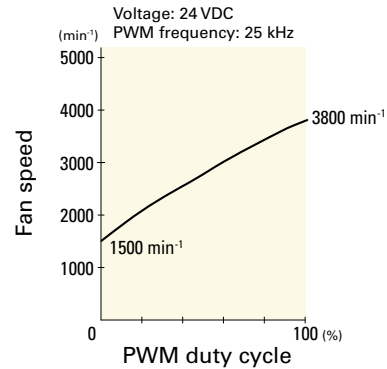
PWM duty cycle



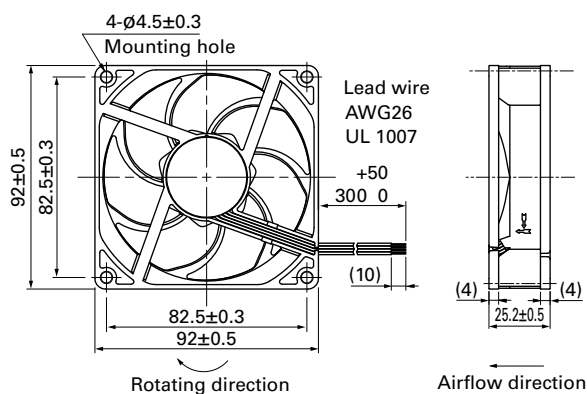
Operating voltage range



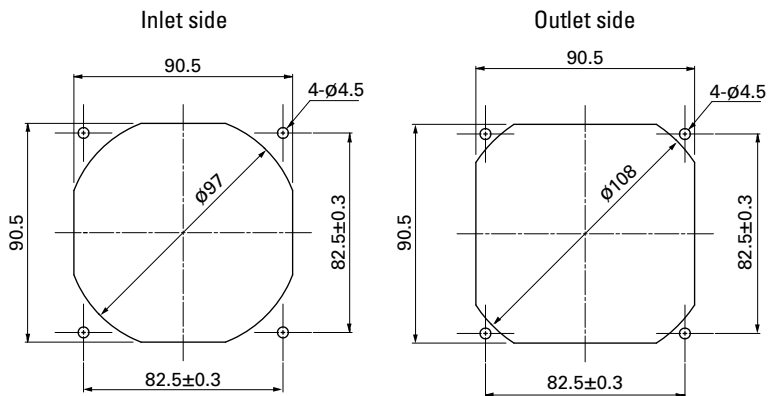
PWM duty - Speed characteristics example



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards page: p. 513
Model no.: 109-099C, 109-099E, 109-099H

Resin finger guards page: p. 520
Model no.: 109-1001G

Resin filter kits page: p. 521
Model no.: 109-1001F13 (13PPI), 109-1001F20 (20PPI),
109-1001F30 (30PPI), 109-1001F40 (40PPI)

92x92x25 mm

San Ace 92 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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 100 g

Specifications

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

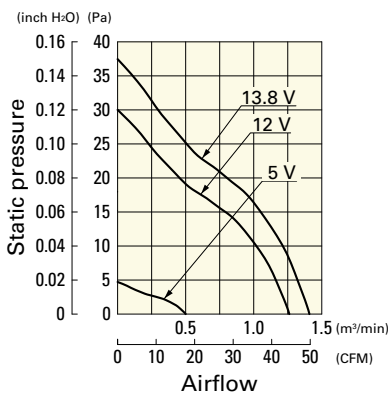
Model no.	Rated voltage [V]	Operating voltage range [V]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9S0912F401	12	5.0 to 13.8	0.14	1.68	2650	1.26 44.5	30.0 0.12	27	-10 to +70	40000/60°C
9S0912M401			0.11	1.32	2250	1.07 37.8	21.6 0.087	22		
9S0912L401		6.0 to 13.8	0.07	0.84	1750	0.83 29.3	13.1 0.053	17		
9S0924F401	24	14 to 26.4	0.09	2.16	2650	1.26 44.5	30.0 0.12	27		
9S0924M401			0.07	1.68	2250	1.07 37.8	21.6 0.087	22		
9S0924L401			0.04	0.96	1750	0.83 29.3	13.1 0.053	17		

Other sensor specifications are available as options. Refer to the index (p. 557).

Airflow - Static Pressure Characteristics

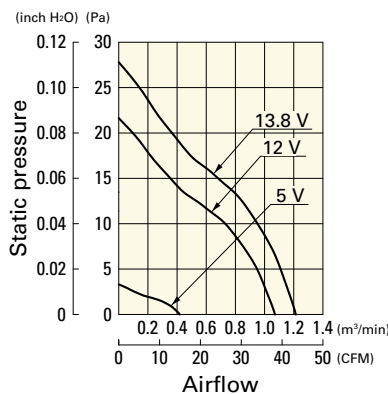
9S0912F401 With pulse sensor

Operating voltage range



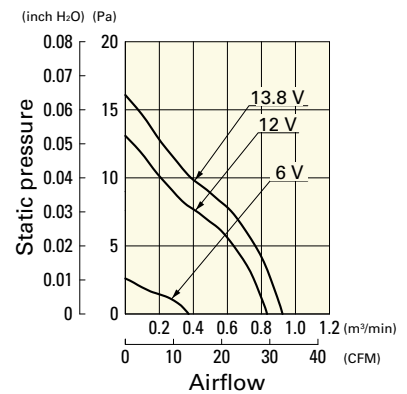
9S0912M401 With pulse sensor

Operating voltage range



9S0912L401 With pulse sensor

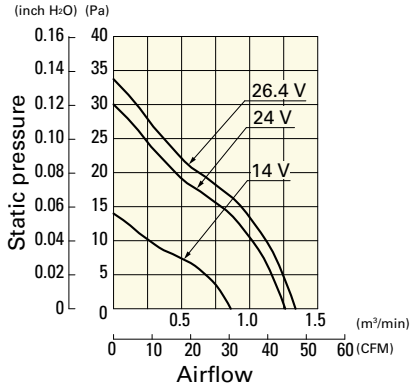
Operating voltage range



Airflow - Static Pressure Characteristics

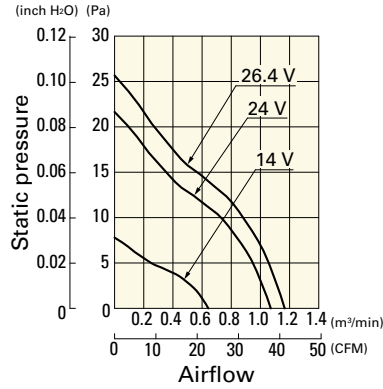
9S0924F401 With pulse sensor

Operating voltage range



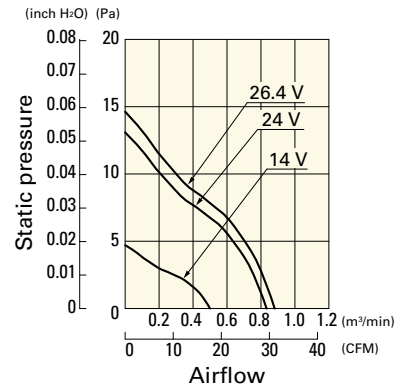
9S0924M401 With pulse sensor

Operating voltage range

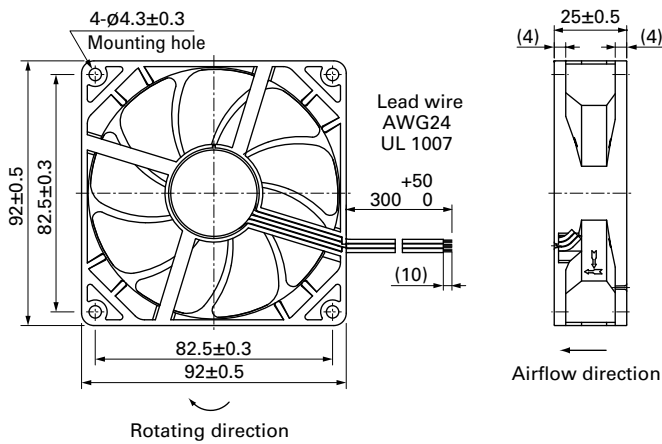


9S0924L401 With pulse sensor

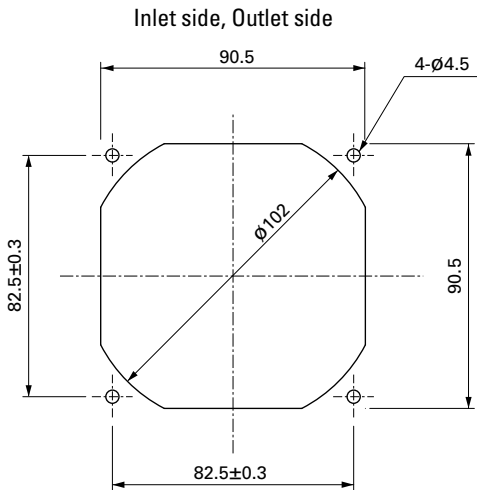
Operating voltage range



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards

page: p. 513

Model no.: 109-099C, 109-099E, 109-099H

Resin finger guards

page: p. 520

Model no.: 109-1001G

Resin filter kits

page: p. 521

Model no.: 109-1001F13 (13PPI), 109-1001F20 (20PPI),
109-1001F30 (30PPI), 109-1001F40 (40PPI)

92x92x25 mm

San Cooler 92 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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 100 g

Specifications

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

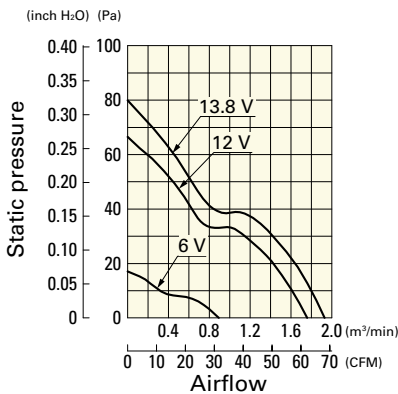
Model no.	Rated voltage [V]	Operating voltage range [V]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min]	Max. static pressure [CFM]	Max. static pressure [Pa]	Max. static pressure [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9A0912G401	12	6 to 13.8	0.39	4.68	3900	1.76	62.1	66.5	0.267	43	-20 to +60	30000/60°C
9A0912S401			0.27	3.24	3550	1.66	58.6	56.1	0.225	39		
9A0912H401			0.21	2.52	3150	1.45	51.2	44	0.177	33		
9A0912F401			0.14	1.68	2650	1.24	43.8	32.2	0.129	30		
9A0912M401			0.12	1.44	2250	1.04	36.7	22.6	0.091	27		
9A0912L401			0.07	0.84	1750	0.8	28.2	13.4	0.054	23		
9A0924G401	24	12 to 27.6	0.19	4.56	3900	1.76	62.1	66.5	0.267	43	-20 to +60	30000/60°C
9A0924S401			0.15	3.6	3550	1.66	58.6	56.1	0.225	39		
9A0924H401			0.1	2.4	3150	1.45	51.2	44	0.177	33		
9A0924F401			0.08	1.92	2650	1.24	43.8	32.2	0.129	30		
9A0924M401			0.05	1.2	2250	1.04	36.7	22.6	0.091	27		
9A0924L401			0.04	0.96	1750	0.8	28.2	13.4	0.054	23		
9A0948S401	48	40.5 to 53	0.08	3.84	3550	1.66	58.6	56.1	0.225	39	-20 to +60	

Other sensor specifications are available as options. Refer to the index (p. 547).

Airflow - Static Pressure Characteristics

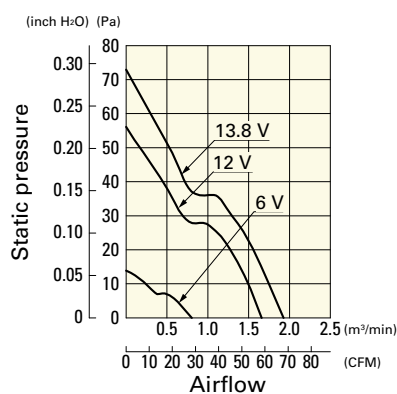
9A0912G401 With pulse sensor

Operating voltage range



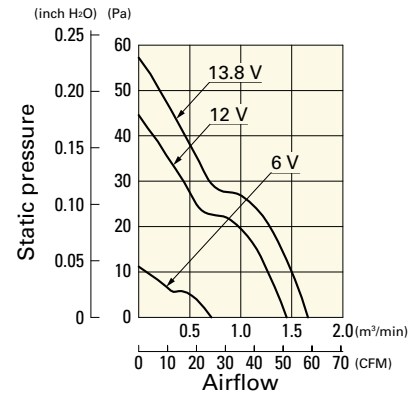
9A0912S401 With pulse sensor

Operating voltage range



9A0912H401 With pulse sensor

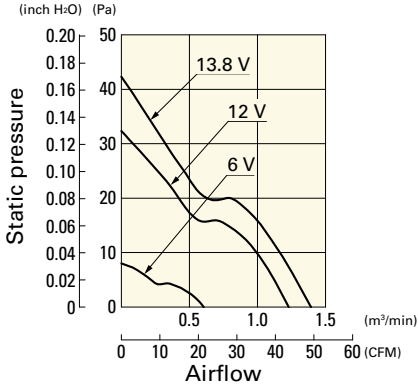
Operating voltage range



Airflow - Static Pressure Characteristics

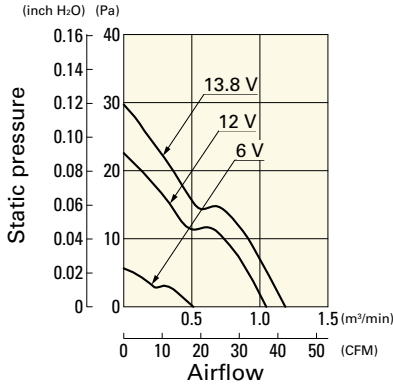
9A0912F401 With pulse sensor

Operating voltage range



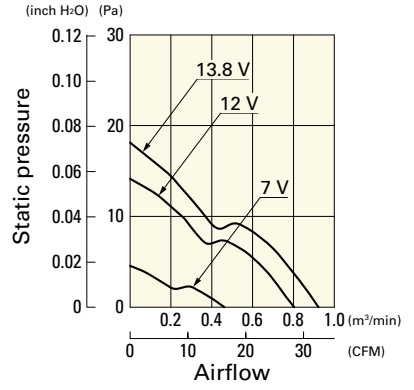
9A0912M401 With pulse sensor

Operating voltage range



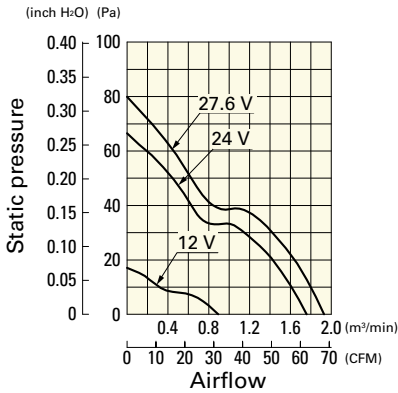
9A0912L401 With pulse sensor

Operating voltage range



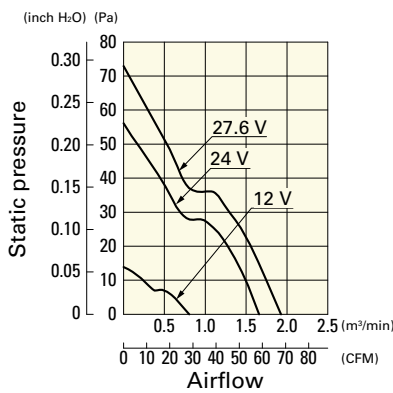
9A0924G401 With pulse sensor

Operating voltage range



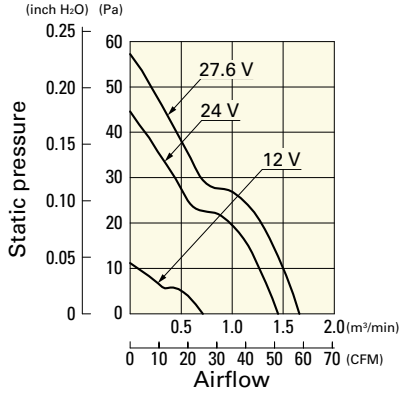
9A0924S401 With pulse sensor

Operating voltage range



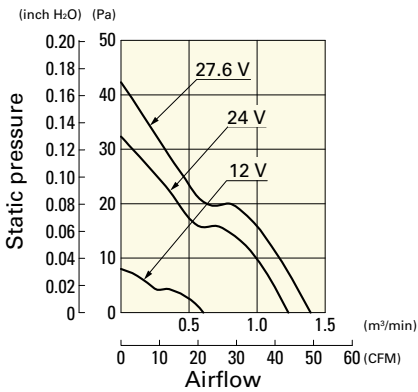
9A0924H401 With pulse sensor

Operating voltage range



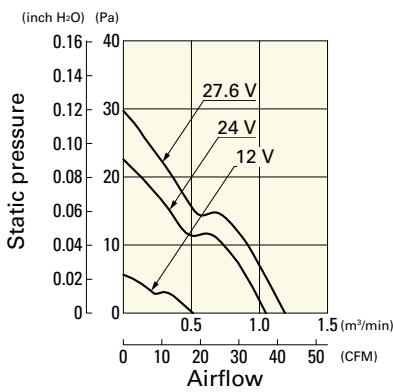
9A0924F401 With pulse sensor

Operating voltage range



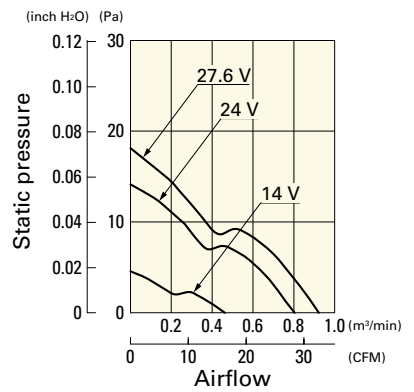
9A0924M401 With pulse sensor

Operating voltage range



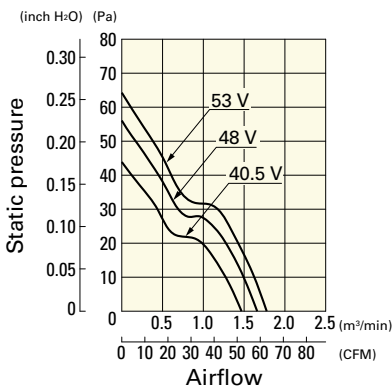
9A0924L401 With pulse sensor

Operating voltage range

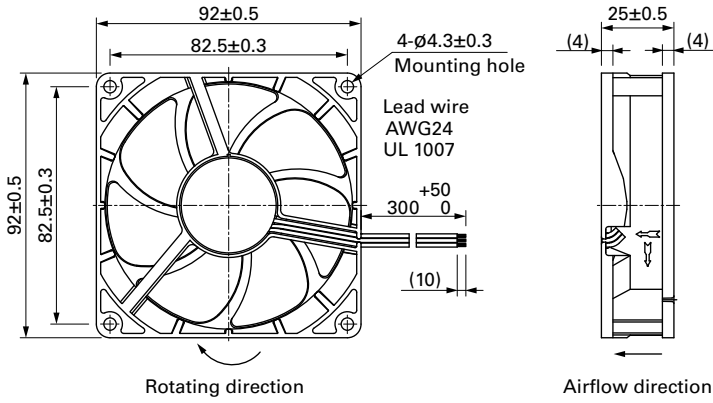


9A0948S401 With pulse sensor

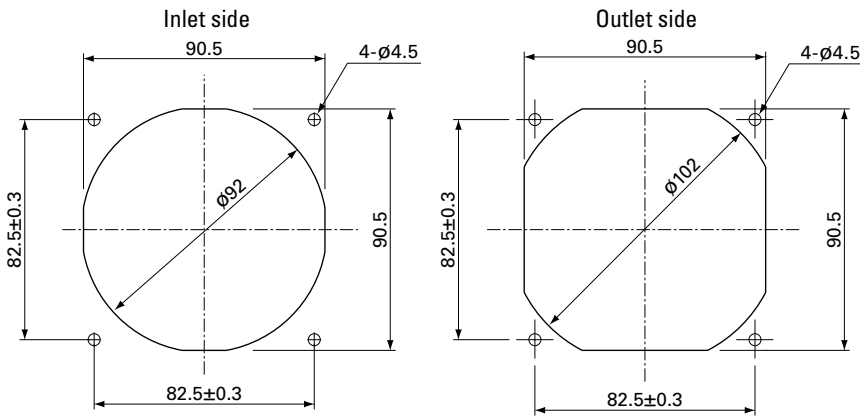
Operating voltage range



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards

page: p. 513

Model no.: 109-099C, 109-099E, 109-099H

Resin finger guards

page: p. 520

Model no.: 109-1001G

Resin filter kits

page: p. 521

Model no.: 109-1001F13 (13PPI), 109-1001F20 (20PPI),
109-1001F30 (30PPI), 109-1001F40 (40PPI)



92x92x32 mm

San Ace 92 9G 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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 170 g

Specifications

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

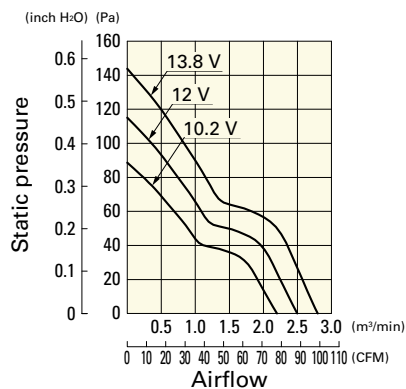
Model no.	Rated voltage [V]	Operating voltage range [V]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]		
9G0912A201	12	10.2 to 13.8	0.58	6.96	4300	2.5 88.3	115 0.462	44	-20 to +70	40000/60°C		
9G0912S201			0.38	4.56	3500	2.0 70.7	77 0.309	38				
9G0912H201			0.23	2.76	2850	1.59 56.2	51 0.205	32				
9G0912M201			0.13	1.56	2100	1.2 42.4	27 0.108	25				
9G0924A201	24	20.4 to 27.6	0.3	7.2	4300	2.5 88.3	115 0.462	44	-20 to +60		40000/60°C	
9G0924S201			0.19	4.56	3500	2.0 70.7	77 0.309	38				
9G0924H201			0.12	2.88	2850	1.59 56.2	51 0.205	32				
9G0924M201			0.08	1.92	2100	1.2 42.4	27 0.108	25				
9G0948A201	48	40.8 to 55.2	0.16	7.68	4300	2.5 88.3	115 0.462	44	-20 to +70			40000/60°C
9G0948S201			0.11	5.28	3500	2.0 70.7	77 0.309	38				
9G0948H201			0.08	3.84	2850	1.59 56.2	51 0.205	32				
9G0948M201			0.05	2.4	2100	1.2 42.4	27 0.108	25				

Other sensor specifications are available as options. Refer to the index (p. 549).

Airflow - Static Pressure Characteristics

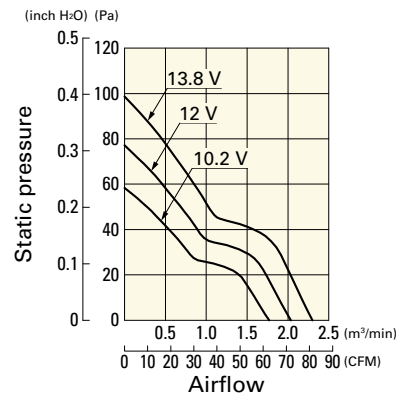
9G0912A201 With pulse sensor

Operating voltage range



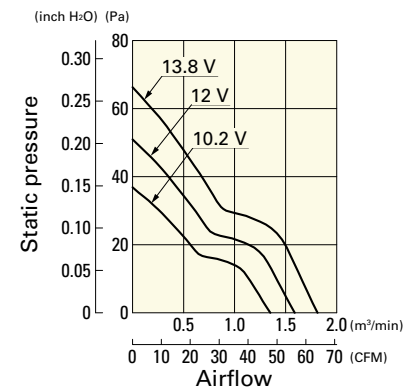
9G0912S201 With pulse sensor

Operating voltage range



9G0912H201 With pulse sensor

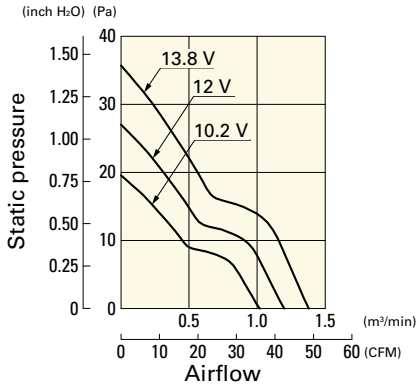
Operating voltage range



Airflow - Static Pressure Characteristics

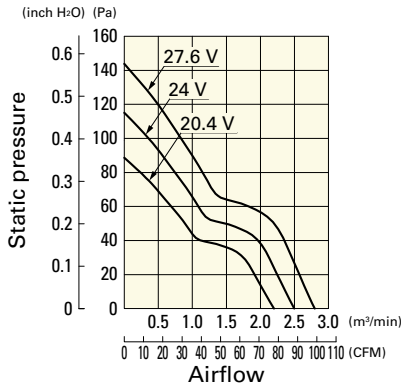
9G0912M201 With pulse sensor

Operating voltage range



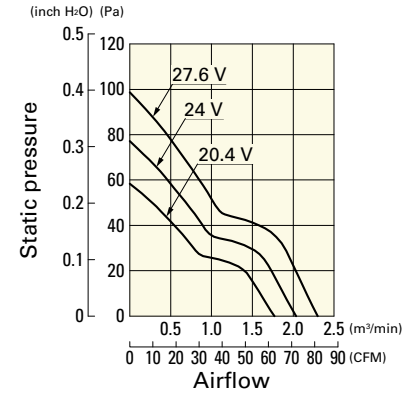
9G0924A201 With pulse sensor

Operating voltage range



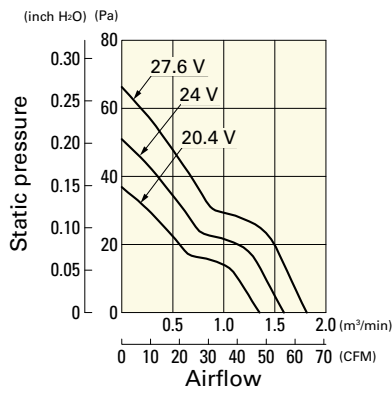
9G0924S201 With pulse sensor

Operating voltage range



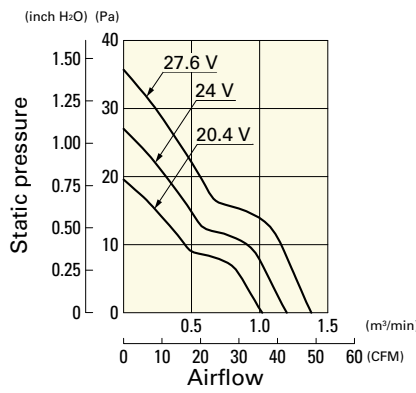
9G0924H201 With pulse sensor

Operating voltage range



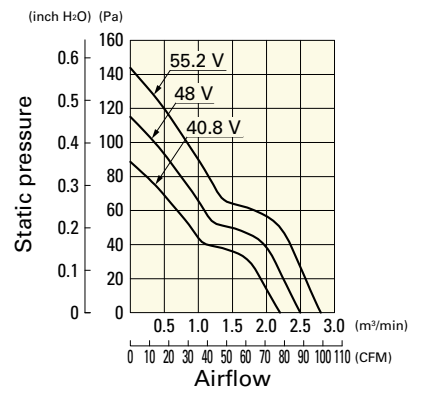
9G0924M201 With pulse sensor

Operating voltage range



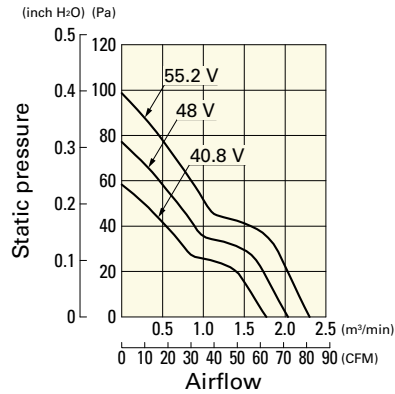
9G0948A201 With pulse sensor

Operating voltage range



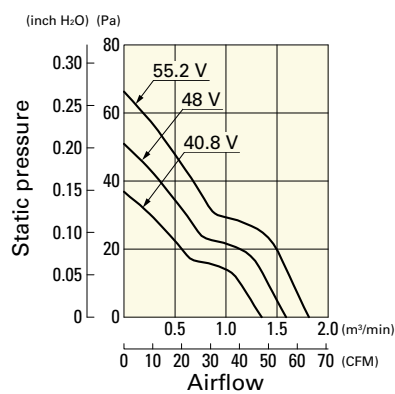
9G0948S201 With pulse sensor

Operating voltage range



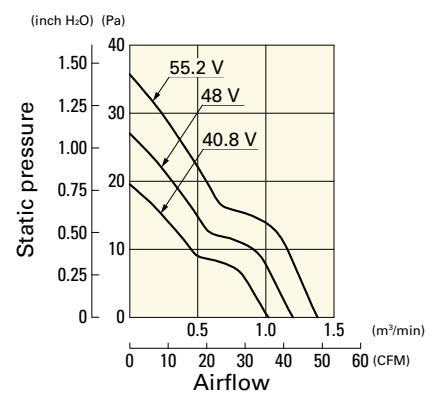
9G0948H201 With pulse sensor

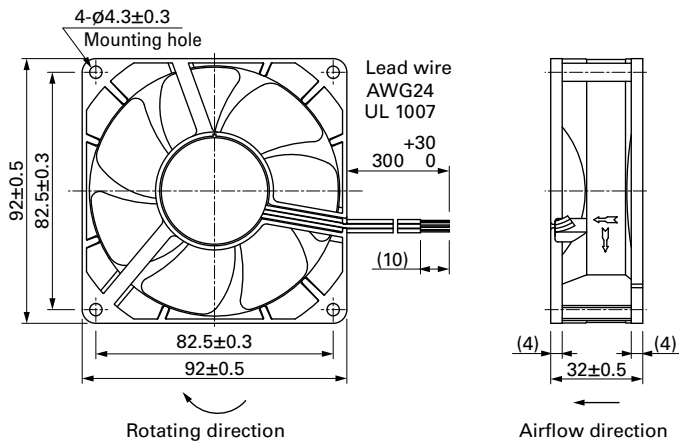
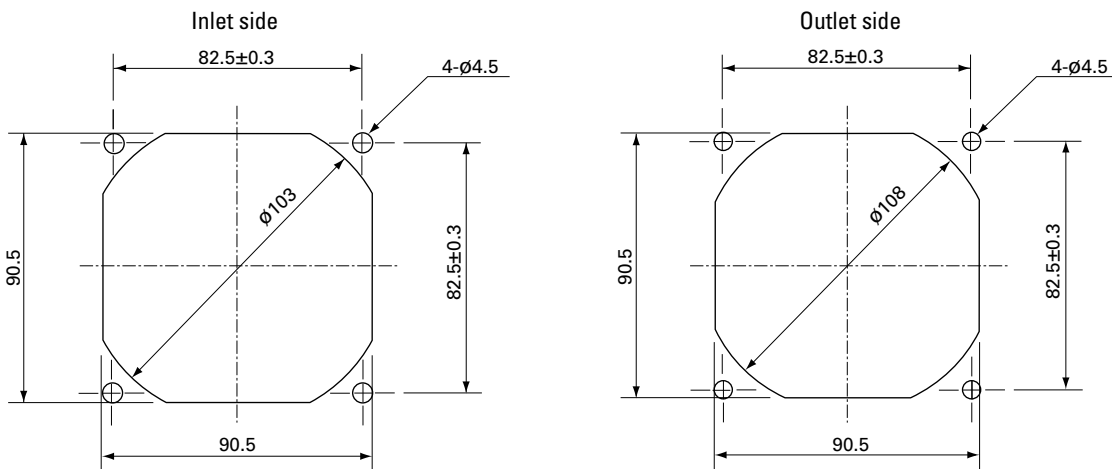
Operating voltage range



9G0948M201 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. 513

Model no.: 109-099C, 109-099E, 109-099H

Resin finger guards

page: p. 520

Model no.: 109-1001G

Resin filter kits

page: p. 521

Model no.: 109-1001F13 (13PPI), 109-1001F20 (20PPI),
109-1001F30 (30PPI), 109-1001F40 (40PPI)



92x92x38 mm

San Ace 92 9GA type Low Power Consumption Fan

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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 240 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]
9GA0912P1H03	12	10.2 to 13.8	100	2.1	25.2	9700	4.0 141	500 2.01	63	-20 to +70	40000/60°C (70000/40°C)
			0	0.16	1.92	2500	0.97 34.3	33 0.13	29		
9GA0924P1H01	24	20.4 to 27.6	100	1.1	26.4	9700	4.0 141	500 2.01	63	-10 to +70	
			0	0.07	1.68	2500	0.97 34.3	33 0.13	29		
9GA0948P1H03**	48	40.8 to 55.2	100	0.55	26.4	9700	4.0 141	500 2.01	63	-20 to +70	

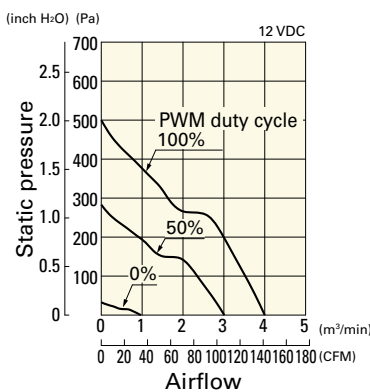
* PWM frequency: 25 kHz ** Fan does not rotate when PWM duty cycle is 0%.

Other sensor specifications are available as options. Refer to the index (p. 553).

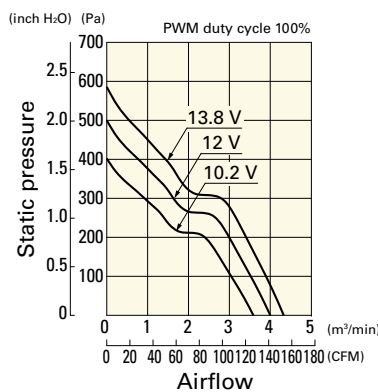
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GA0912P1H03 With pulse sensor with PWM control function

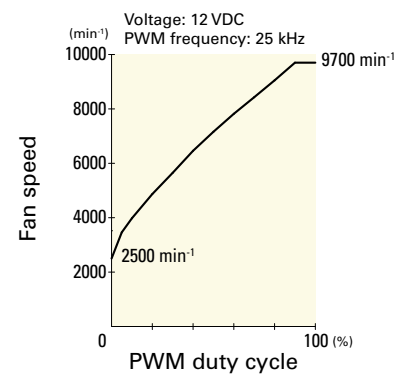
PWM duty cycle



Operating voltage range



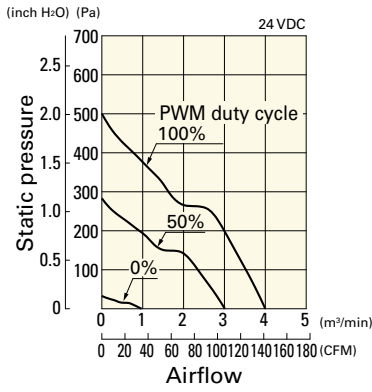
PWM duty - Speed characteristics example



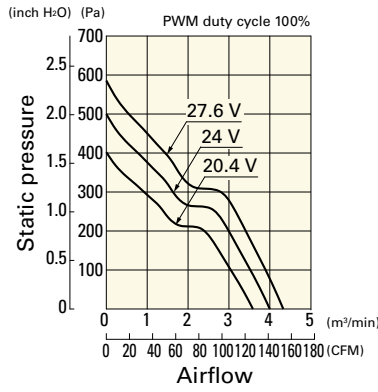
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GA0924P1H01 With pulse sensor with PWM control function

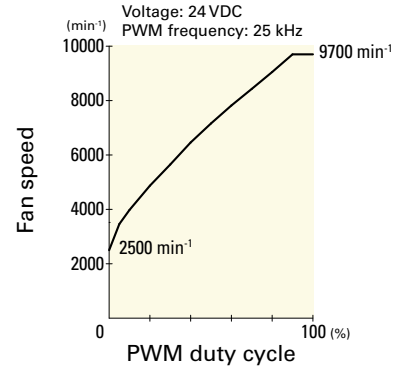
PWM duty cycle



Operating voltage range

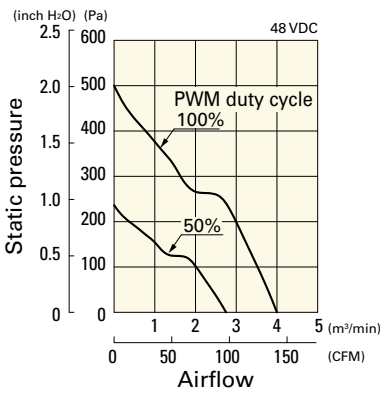


PWM duty - Speed characteristics example

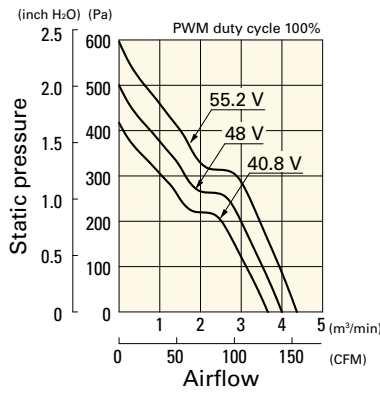


9GA0948P1H03 With pulse sensor with PWM control function

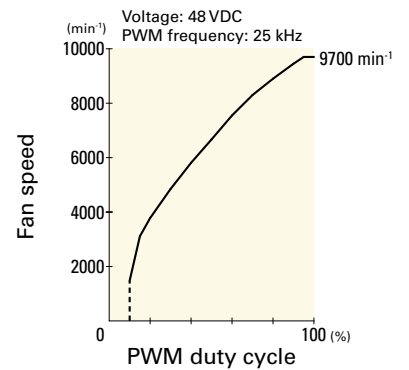
PWM duty cycle



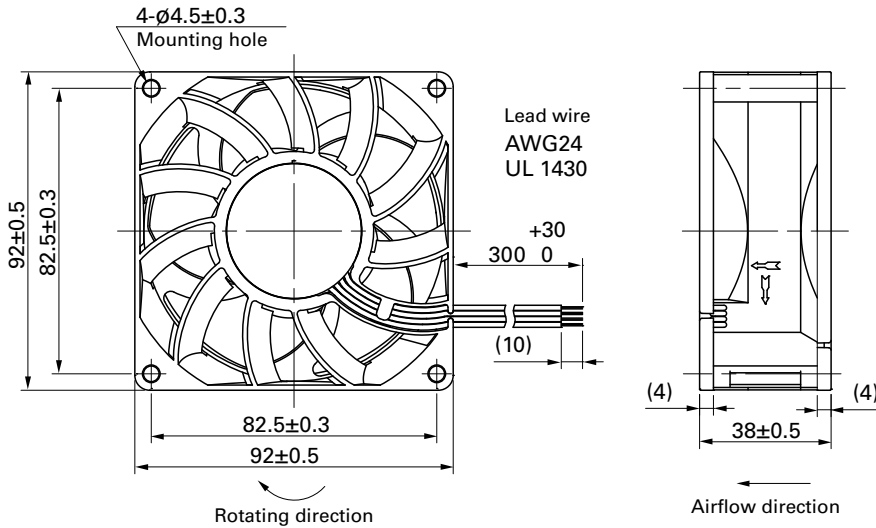
Operating voltage range



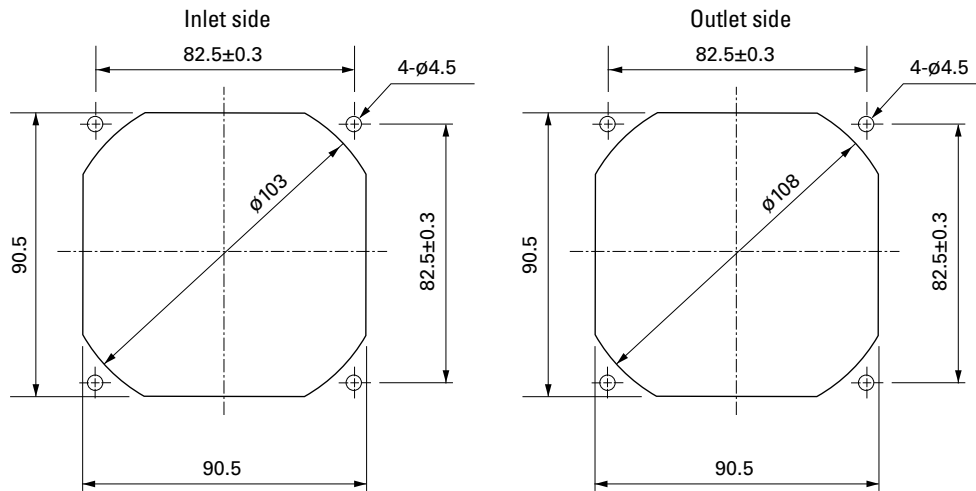
PWM duty - Speed characteristics example



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards

page: p. 513

Model no.: 109-099C, 109-099E, 109-099H

Resin finger guards

page: p. 520

Model no.: 109-1001G

Resin filter kits

page: p. 521

Model no.: 109-1001F13 (13PPI), 109-1001F20 (20PPI),
109-1001F30 (30PPI), 109-1001F40 (40PPI)



92x92x38 mm

San Ace 92 9HV 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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 250 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.

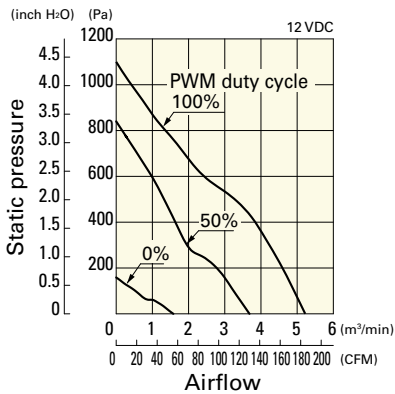
Model no.	Rated voltage [V]	Operating voltage range [V]	PWM duty cycle* [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9HV0912P1G001	12	8 to 12.6	100	5.2	62.4	14900	5.1 180	1100 4.42	72	-20 to +70	40000/60°C (70000/40°C)
			0	0.8	9.6	4500	1.54 54.4	160 0.64	44		
9HV0948P1G001	48	36 to 60	100	1.2	57.6	14900	5.1 180	1100 4.42	72		
			0	0.15	7.2	4500	1.54 54.4	160 0.64	44		

* PWM frequency: 25 kHz

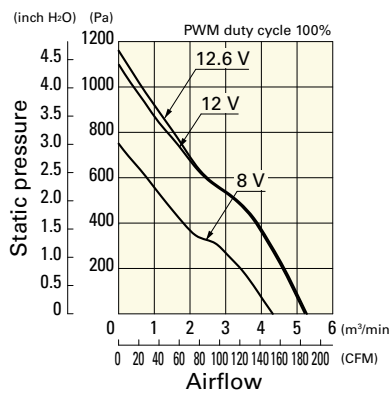
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9HV0912P1G001 With pulse sensor with PWM control function

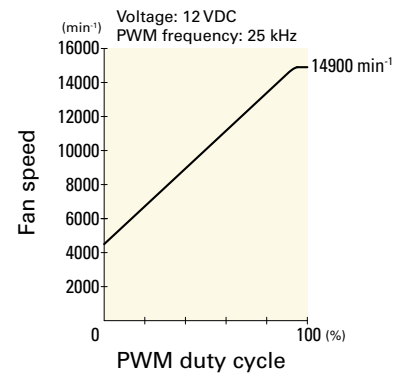
PWM duty cycle



Operating voltage range

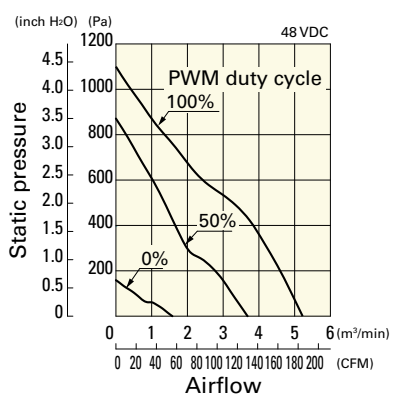


PWM duty - Speed characteristics example

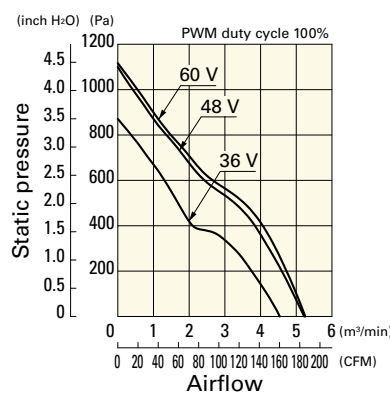


9HV0948P1G001 With pulse sensor with PWM control function

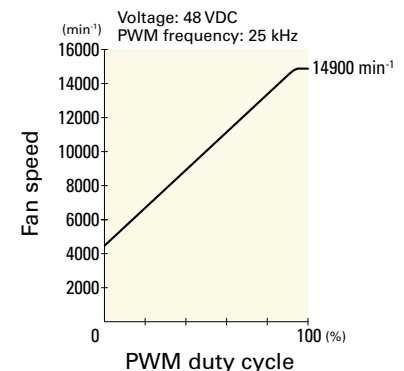
PWM duty cycle



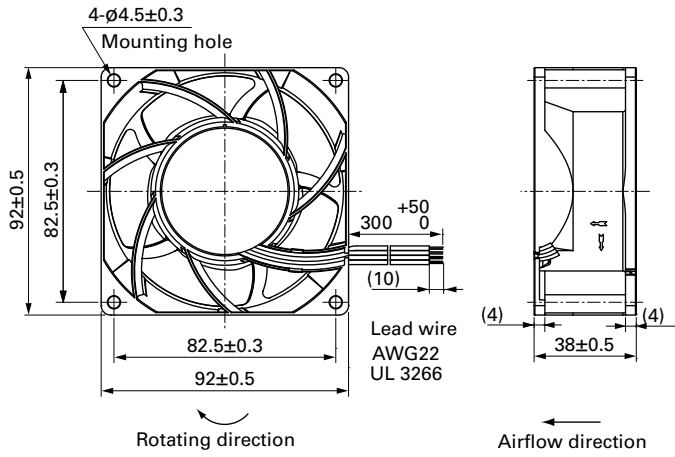
Operating voltage range



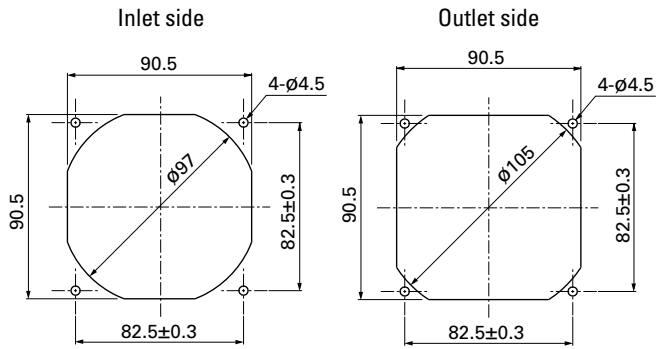
PWM duty - Speed characteristics example



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards

page: p. 513

Model no.: 109-099C, 109-099E, 109-099H

Resin finger guards

page: p. 520

Model no.: 109-1001G

Resin filter kits

page: p. 521

Model no.: 109-1001F13 (13PPI), 109-1001F20 (20PPI),
109-1001F30 (30PPI), 109-1001F40 (40PPI)



92x92x38 mm

San Ace 92 9GV 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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 250 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]	
9GV0912P1G03	12	10.8 to 13.2	100	4.1	49.2	9000	5.35 189.0	430.0 1.73	68	-20 to +70	40000/60°C	
			0	0.33	4.0	2900	1.72 60.8	44.6 0.18	37			
10.2 to 13.8		100	3.5	42.0	8500	5.05 178.0	385.0 1.55	64	-10 to +70			
		0	0.29	3.5	2700	1.6 56.5	38.8 0.16	34				
9GV0912P1F03		48	40.8 to 55.2	100	1.9	22.8	7000	4.15 146.6	261 1.05	59		-20 to +70
				0	0.16	1.92	2200	1.3 45.9	25.7 0.1	31		
9GV0948P1H03	48		40.8 to 55.2	100	0.82	39.4	8500	5.05 178.0	385.0 1.55	64	-20 to +70	
				0	0.14	6.7	4000	2.37 83.7	85.2 0.34	45		
9GV0948P1F03			48	40.8 to 55.2	100	0.48	23.04	7000	4.15 146.6	261 1.05	59	-10 to +70
					0	0.12	5.76	3500	2.07 73.1	65.2 0.26	42	

* PWM frequency: 25 kHz

Other sensor specifications are available as options. Refer to the index (p. 555).

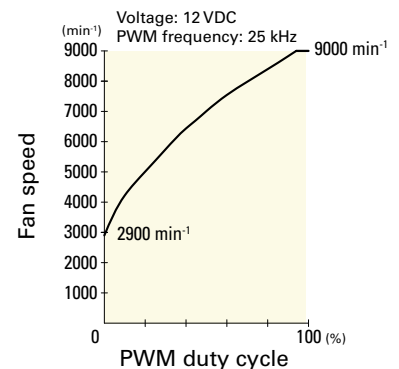
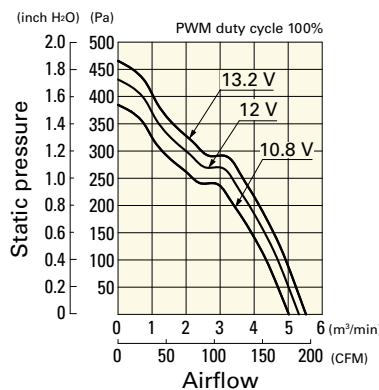
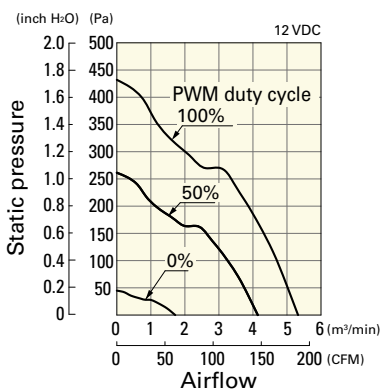
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GV0912P1G03 With pulse sensor with PWM control function

PWM duty cycle

Operating voltage range

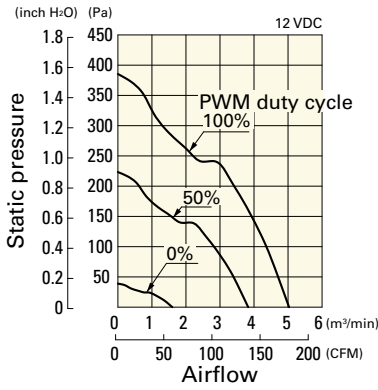
PWM duty - Speed characteristics example



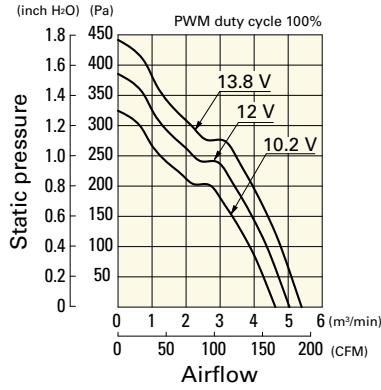
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GV0912P1H03 With pulse sensor with PWM control function

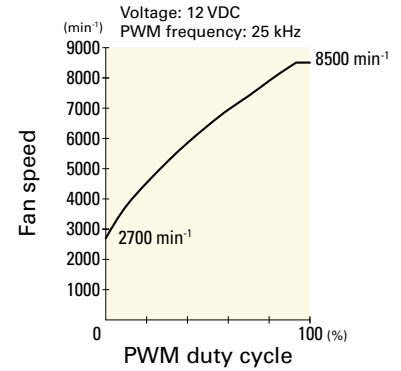
PWM duty cycle



Operating voltage range

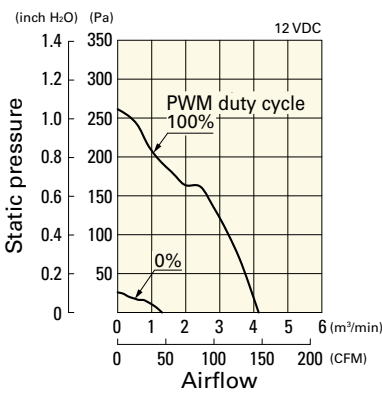


PWM duty - Speed characteristics example

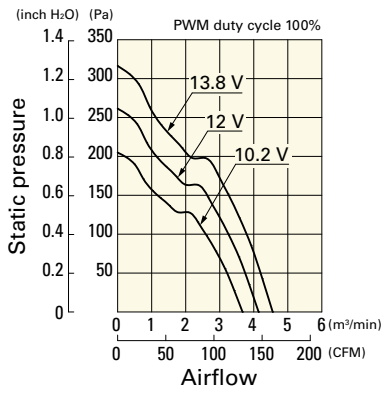


9GV0912P1F03 With pulse sensor with PWM control function

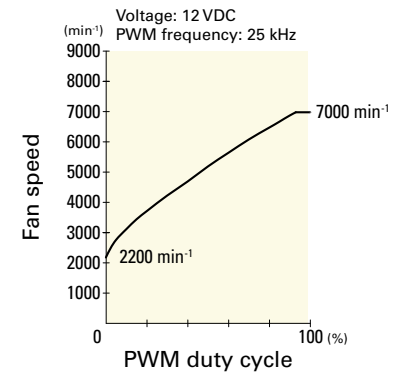
PWM duty cycle



Operating voltage range

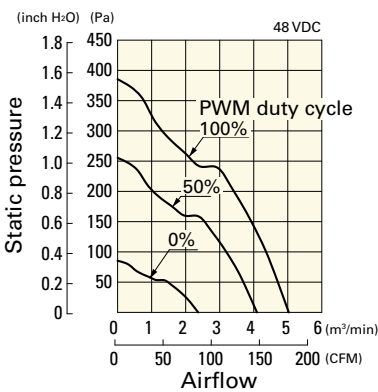


PWM duty - Speed characteristics example

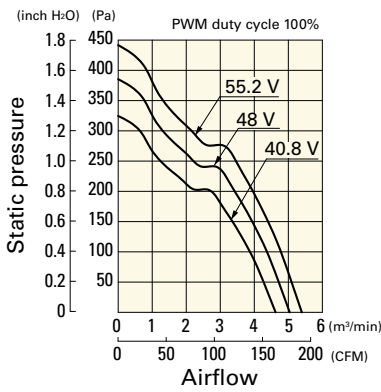


9GV0948P1H03 With pulse sensor with PWM control function

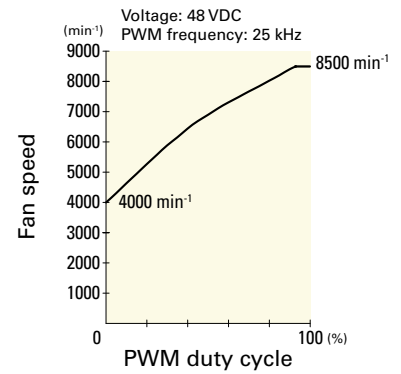
PWM duty cycle



Operating voltage range

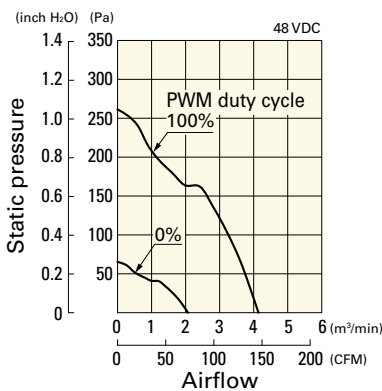


PWM duty - Speed characteristics example

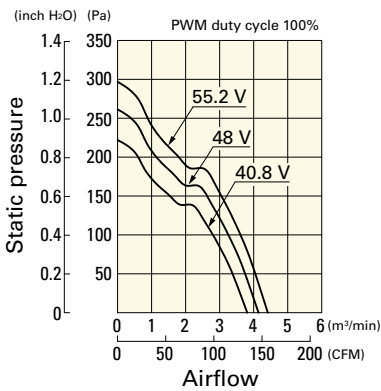


9GV0948P1F03 With pulse sensor with PWM control function

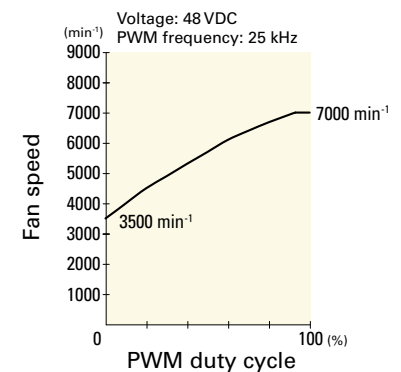
PWM duty cycle



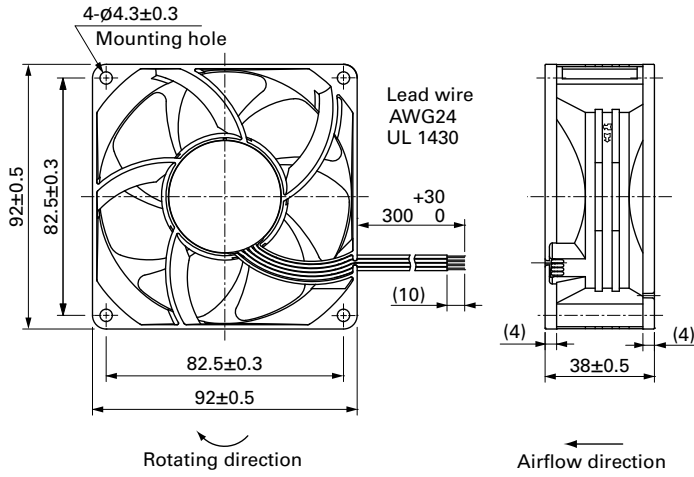
Operating voltage range



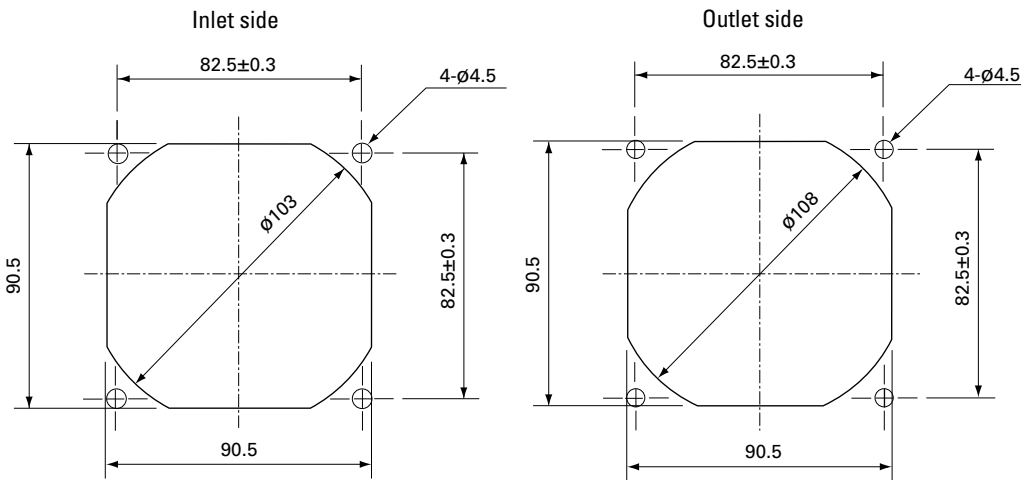
PWM duty - Speed characteristics example



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards

page: p. 513

Model no.: 109-099C, 109-099E, 109-099H

Resin finger guards

page: p. 520

Model no.: 109-1001G

Resin filter kits

page: p. 521

Model no.: 109-1001F13 (13PPI), 109-1001F20 (20PPI),
109-1001F30 (30PPI), 109-1001F40 (40PPI)



92x92x38 mm

San Ace 92 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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 180 g

Specifications

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

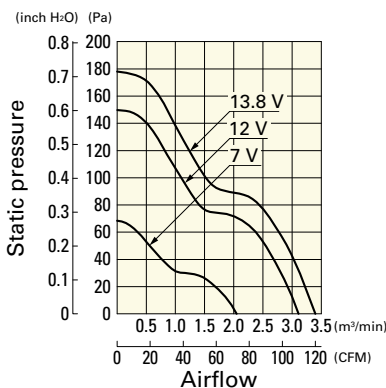
Model no.	Rated voltage [V]	Operating voltage range [V]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9G0912G101	12	7.0 to 13.8	1.1	13.2	5000	3.1 110	150 0.602	50	-20 to +60	40000/60°C
9G0912H101			0.58	6.96	4000	2.54 90	100 0.402	43		
9G0924G101	24	20.4 to 27.6	0.55	13.2	5000	3.1 110	150 0.602	50		
9G0924H101			0.3	7.2	4000	2.54 90	100 0.402	43		
9G0948J101	48	40.8 to 55.2	0.32	15.36	5500	3.41 120.49	178 0.715	55	-20 to +70	
9G0948G101			0.27	12.96	5000	3.1 110	150 0.602	50	-20 to +60	
9G0948H101			0.16	7.68	4000	2.54 90	100 0.402	43		

Other sensor specifications are available as options. Refer to the index (p. 549).

Airflow - Static Pressure Characteristics

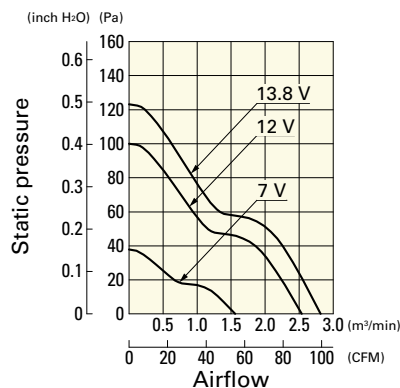
9G0912G101 With pulse sensor

Operating voltage range



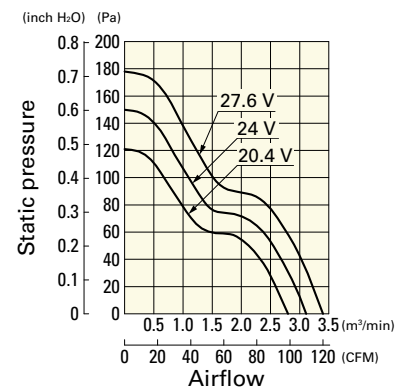
9G0912H101 With pulse sensor

Operating voltage range



9G0924G101 With pulse sensor

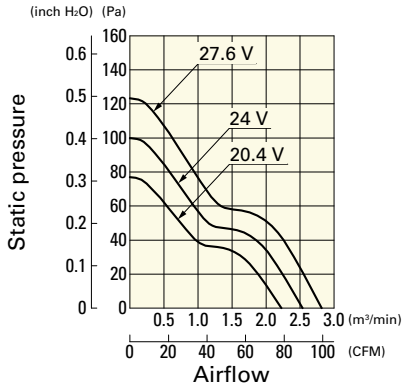
Operating voltage range



Airflow - Static Pressure Characteristics

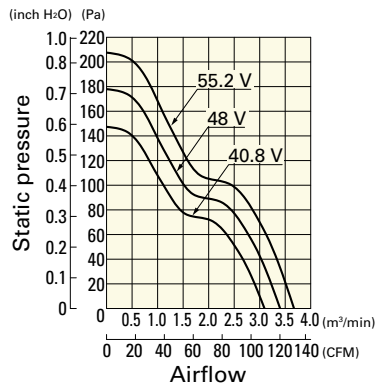
9G0924H101 With pulse sensor

Operating voltage range



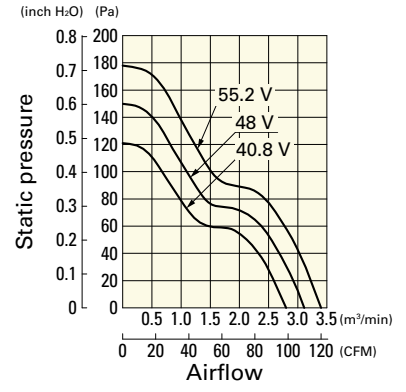
9G0948J101 With pulse sensor

Operating voltage range



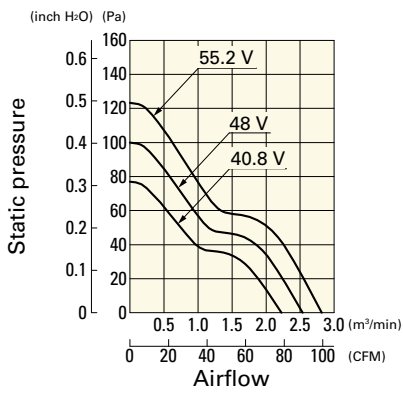
9G0948G101 With pulse sensor

Operating voltage range

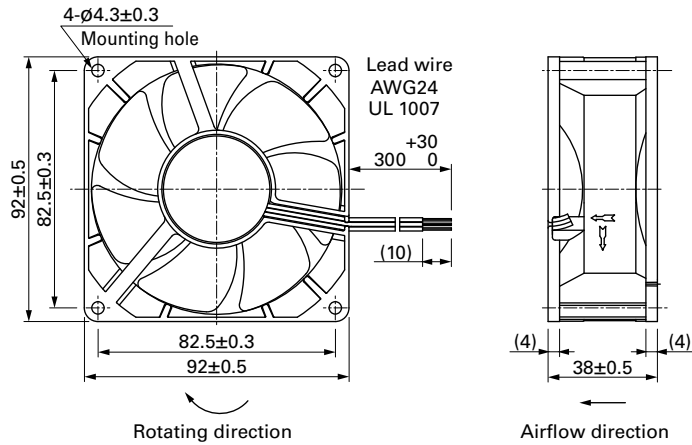


9G0948H101 With pulse sensor

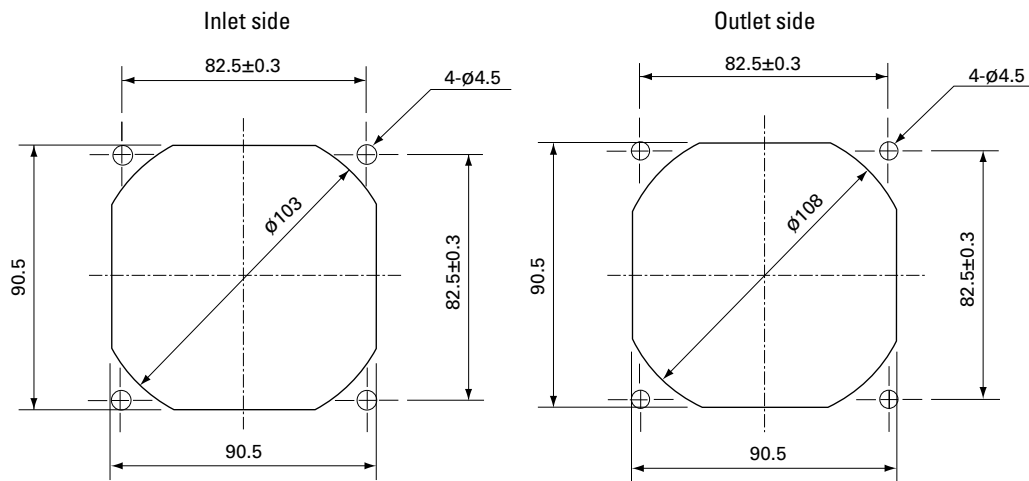
Operating voltage range



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards

page: p. 513

Model no.: 109-099C, 109-099E, 109-099H

Resin finger guards

page: p. 520

Model no.: 109-1001G

Resin filter kits

page: p. 521

Model no.: 109-1001F13 (13PPI), 109-1001F20 (20PPI),
109-1001F30 (30PPI), 109-1001F40 (40PPI)

Reversible Flow Fan

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

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

9RF	13	12	P	3	H	001
Type name	Frame size	Voltage	PWM control function	Frame thickness	Speed code	Individual customer's spec

Type name	9RF	
Frame size (mm)	09	13
	∅92	∅136
Voltage (V)	12	24
	12	24
Frame thickness (mm)	1	3
	38	28
Speed code	H	

How to Read Specifications (DC fan)

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	13100	0.36	12.7	192	0.77	42	-20 to +70	40000/60°C (70000/40°C)

- Rated voltage This is the necessary voltage to drive the fan. E.g.) 12 VDC, 24 VDC, 48 VDC
- Operating voltage range The voltage range over which fan operation is guaranteed.
- Rated current The current when the fan is operating at rated voltage (at free air).
- Rated input The power value when the fan is operating at rated voltage (at free air).
- Rated speed The speed when the fan is operating at rated voltage (at free air).
- Max. airflow The maximum airflow that the fan can generate during rated operation (measured with our double chamber measuring device).
Airflow is the volume of air generated by the fan per unit of time.
- Max. static pressure The maximum static pressure value that the fan can produce during rated operation (measured with our double chamber measuring device).
Static pressure indicates a fan's ability to move air against resistance due to the internal structure of the device to which the fan is installed.
- SPL SPL stands for Sound Pressure Level. The noise level during the fan's rated operation.
Please refer to the technical material section for the measurement method.
- Operating temperature The temperature range over which fan operation is guaranteed (Non- condensing).
- Expected life Service life hours that 90% of bearings will survive without failing when continuously operated at the rated voltage and 60°C temperature. Expected life at 40°C is for reference only.
For more information, please refer to the technical material section.



∅92×38 mm

San Ace 92RF 9RF 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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 150 g

Specifications

The models listed below **have pulse sensors with PWM control function.**

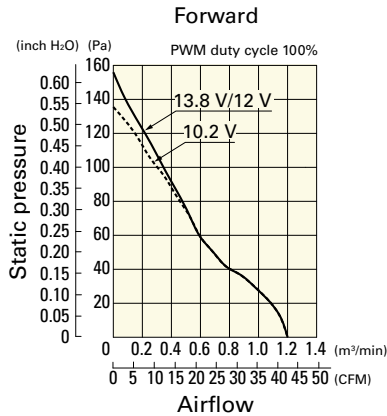
Model no.	Airflow direction	Rated voltage [V]	Operating voltage range [V]	PWM duty cycle* [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9RF0912P1H001	Forward	12	10.2 to 13.8	100	0.17	2.0	5500	1.2 42.4	156 0.63	39	-20 to +70	40000/60°C (70000/40°C)
	Reverse			0								
9RF0924P1H001	Forward	24	20.4 to 27.6	100	0.09	2.2	5500	1.2 42.4	156 0.63	39		
	Reverse			0								

* PWM frequency: 25 kHz

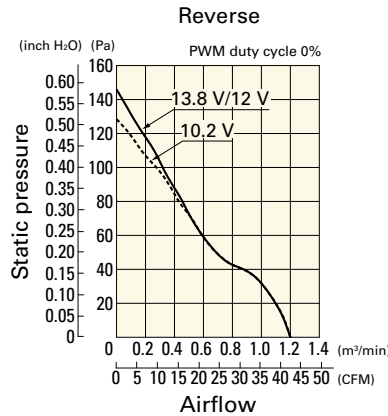
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9RF0912P1H001 With pulse sensor with PWM control function

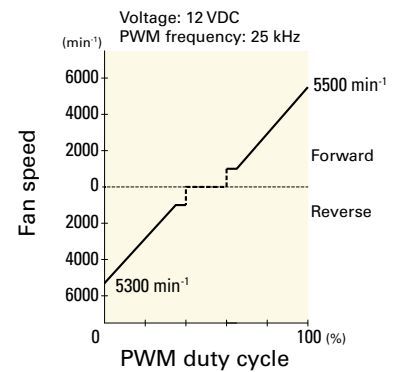
Operating voltage range



Operating voltage range



PWM duty - Speed characteristics example



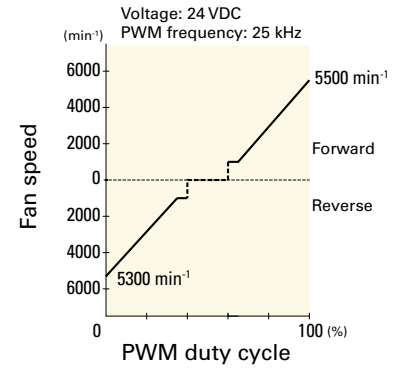
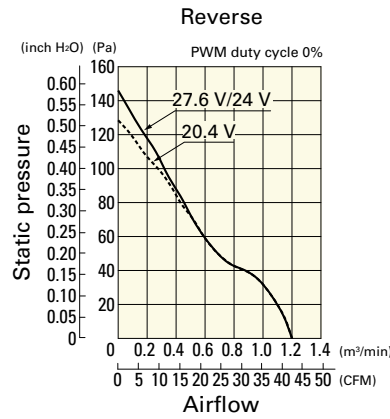
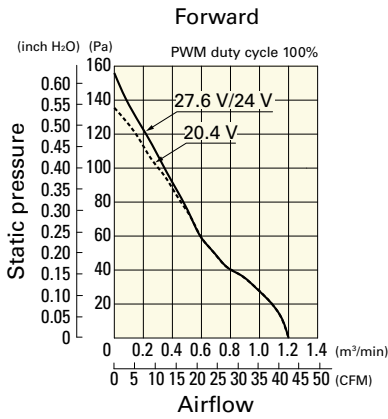
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9RF0924P1H001 With pulse sensor with PWM control function

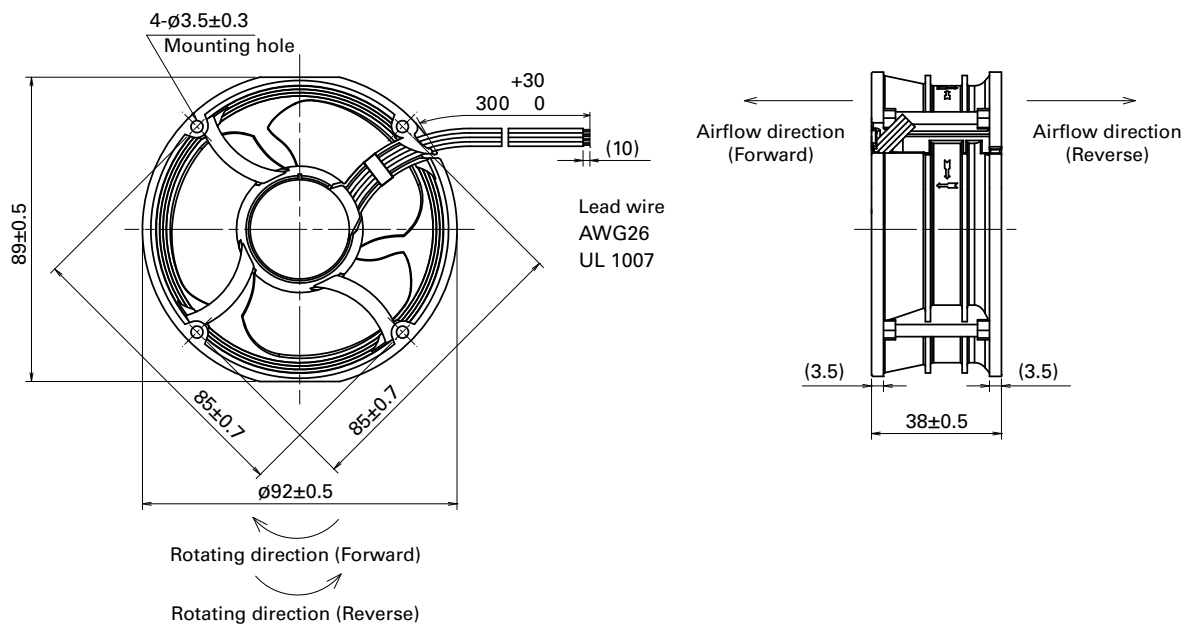
Operating voltage range

Operating voltage range

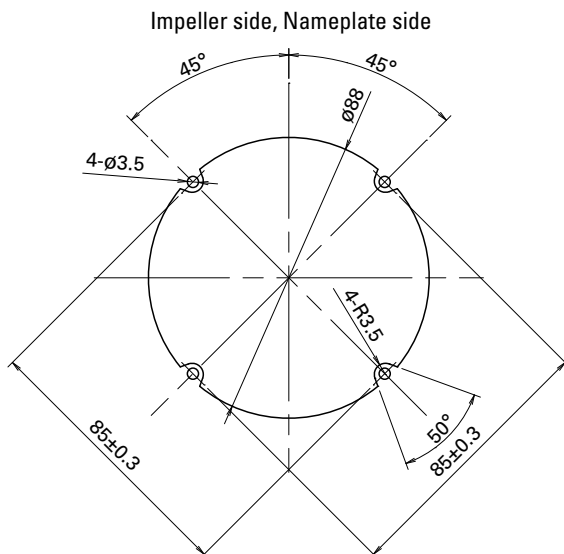
PWM duty - Speed characteristics example



Dimensions (unit: mm)



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



Options

Finger guards

page: p. 513

Model no.: 109-1147

DC
Reversible Flow Fan ø92 mm

120×120×25 mm

San Ace 120 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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 140 g

Specifications

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

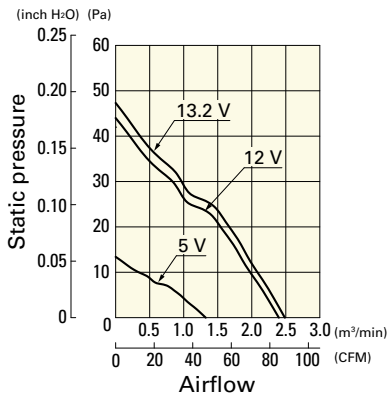
Model no.	Rated voltage [V]	Operating voltage range [V]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9S1212H401	12	5.0 to 13.2	0.39	4.68	2700	2.45 86.5	45.2 0.18	36	-10 to +60	40000/60°C
9S1212F401		5.0 to 13.8	0.19	2.28	2200	2.0 70.6	30.0 0.12	30		
9S1212M401		6.0 to 13.8	0.13	1.56	1850	1.66 58.6	22.7 0.09	24		
9S1212L401		7.0 to 13.8	0.08	0.96	1500	1.36 48.1	14.9 0.06	17		
9S1224M401		24	14 to 26.4	0.06	1.44	1850	1.66 58.6	22.7 0.09		

Other sensor specifications are available as options. Refer to the index (pp. 557 to 558).

Airflow - Static Pressure Characteristics

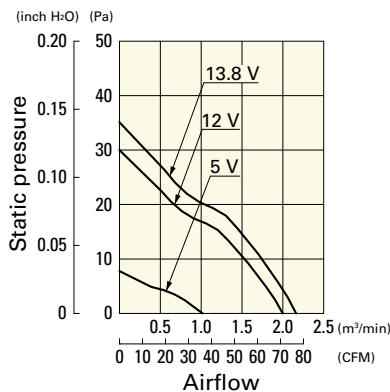
9S1212H401 With pulse sensor

Operating voltage range



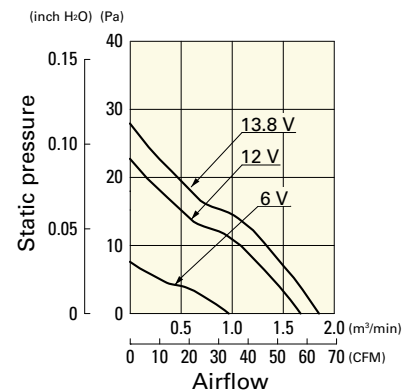
9S1212F401 With pulse sensor

Operating voltage range



9S1212M401 With pulse sensor

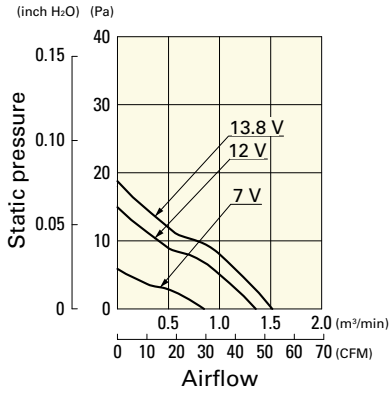
Operating voltage range



Airflow - Static Pressure Characteristics

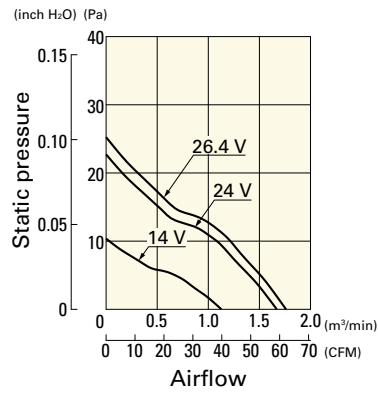
9S1212L401 With pulse sensor

Operating voltage range

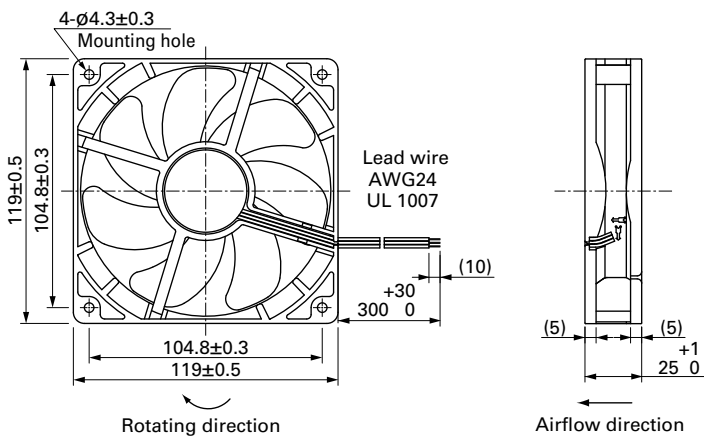


9S1224M401 With pulse sensor

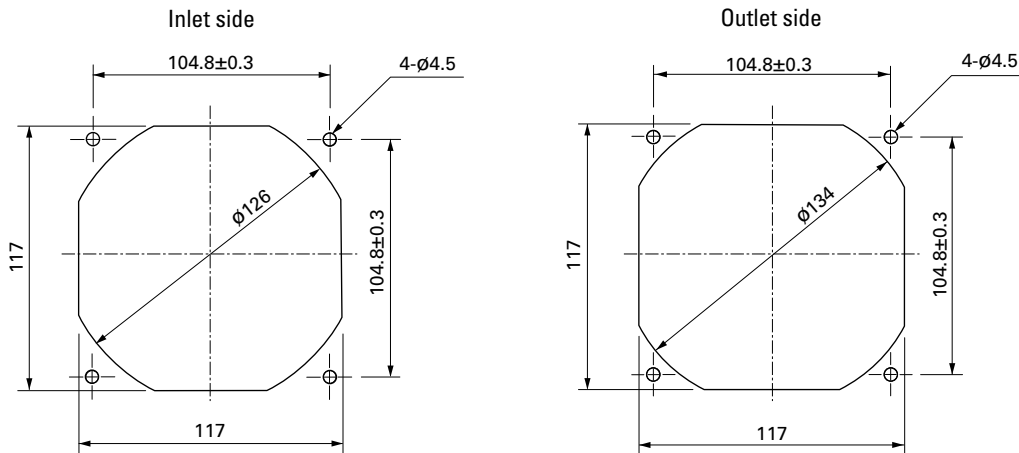
Operating voltage range



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards

page: p. 514

Model no.: 109-019C, 109-019H, 109-019E, 109-019K

Resin finger guards

page: p. 520

Model no.: 109-1000G




Resin filter kits

page: p. 521

Model no.: 109-1000F13 (13PPI), 109-1000F20 (20PPI),
109-1000F30 (30PPI), 109-1000F40 (40PPI)



120×120×25 mm

San Ace 120 9GA type Low Power Consumption Fan   

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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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
(For models without PWM control function, there is no speed control wiring.)
- Mass 280 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]
9GA1212P4G001	12	10.2 to 13.8	100	0.93	11.16	6400	3.8 134	365 1.47	57	-20 to +70	40000/60°C (70000/40°C)
			25	0.16	1.92	2550	1.5 53	60 0.24	34		
9GA1212P4S001			100	0.61	7.32	5400	3.2 113	260 1.04	54		
			25	0.16	1.92	2550	1.5 53	60 0.24	34		
9GA1224P4G001	24	20.4 to 27.6	100	0.47	11.28	6400	3.8 134	365 1.47	57		
			25	0.1	2.4	2550	1.5 53	60 0.24	34		
9GA1224P4S001			100	0.31	7.44	5400	3.2 113	260 1.04	54		
			25	0.1	2.4	2550	1.5 53	60 0.24	34		
9GA1248P4G001	48	40.8 to 53	100	0.24	11.52	6400	3.8 134	365 1.47	57		
			25	0.08	3.84	2550	1.5 53	60 0.24	34		
9GA1248P4S001			100	0.16	7.68	5400	3.2 113	260 1.04	54		
			25	0.08	3.84	2550	1.5 53	60 0.24	34		

* PWM frequency: 25 kHz. Fan does not rotate when PWM duty cycle is 0%.

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

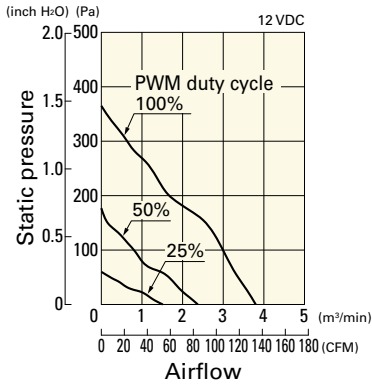
Model no.	Rated voltage [V]	Operating voltage range [V]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9GA1212G4001	12	7 to 13.8	0.93	11.16	6400	3.8 134	365 1.47	57	-20 to +70	40000/60°C (70000/40°C)
9GA1212S4001			0.61	7.32	5400	3.2 113	260 1.04	54		
9GA1224G4001	24	14 to 27.6	0.47	11.28	6400	3.8 134	365 1.47	57		
9GA1224S4001			0.31	7.44	5400	3.2 113	260 1.04	54		
9GA1248G4001	48	36 to 53	0.24	11.52	6400	3.8 134	365 1.47	57		
9GA1248S4001			0.16	7.68	5400	3.2 113	260 1.04	54		

Other sensor specifications are available as options. Refer to the index (p. 553).

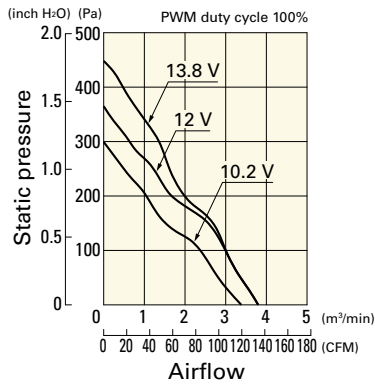
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GA1212P4G001 With pulse sensor with PWM control function

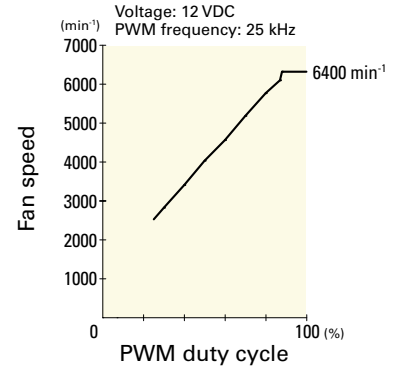
PWM duty cycle



Operating voltage range

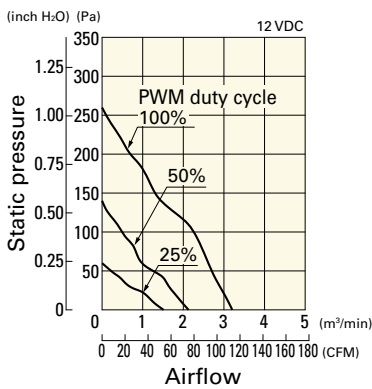


PWM duty - Speed characteristics example

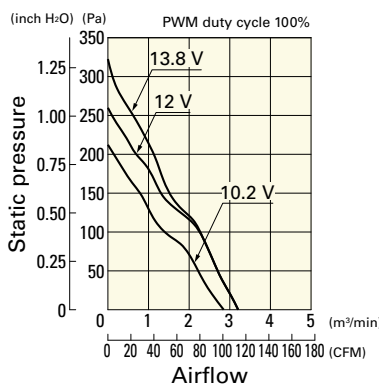


9GA1212P4S001 With pulse sensor with PWM control function

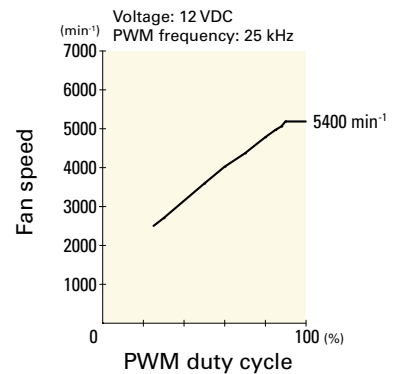
PWM duty cycle



Operating voltage range

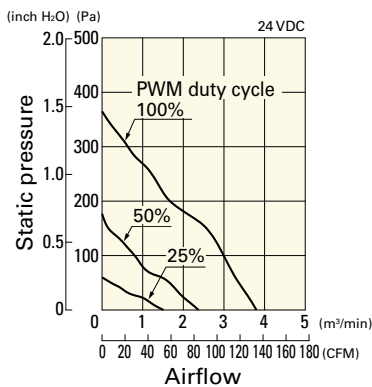


PWM duty - Speed characteristics example

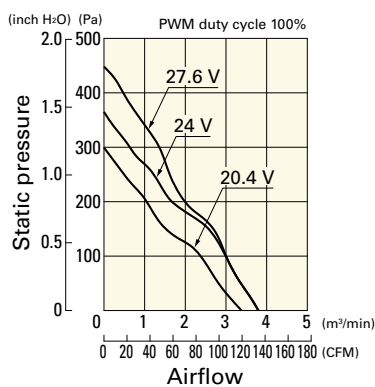


9GA1224P4G001 With pulse sensor with PWM control function

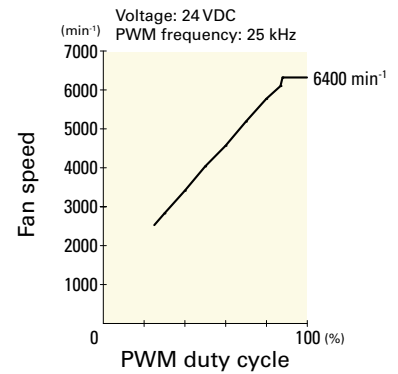
PWM duty cycle



Operating voltage range

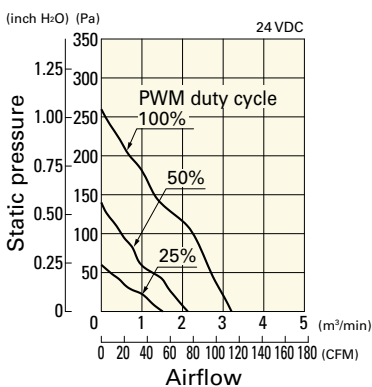


PWM duty - Speed characteristics example

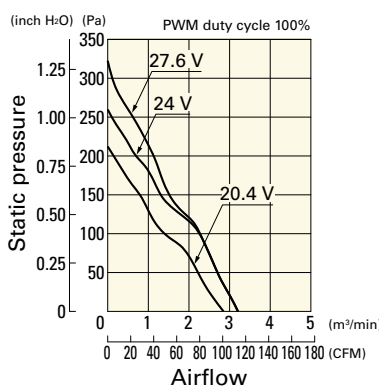


9GA1224P4S001 With pulse sensor with PWM control function

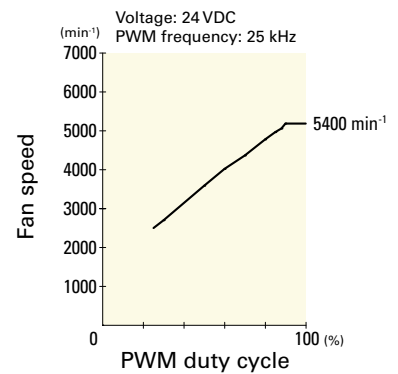
PWM duty cycle



Operating voltage range



PWM duty - Speed characteristics example



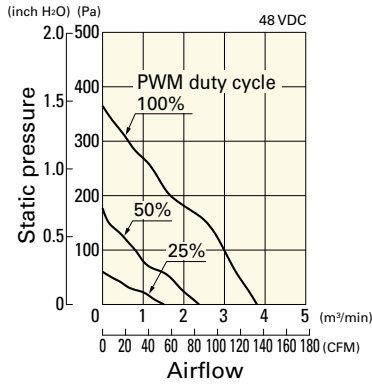
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

DC

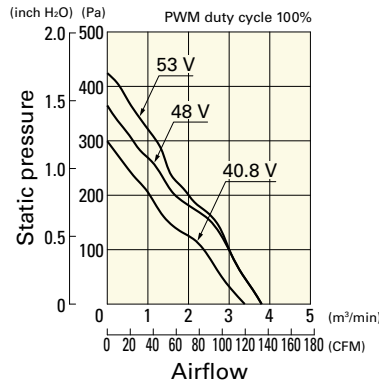
DC Fan 120 mm sq.

9GA1248P4G001 With pulse sensor with PWM control function

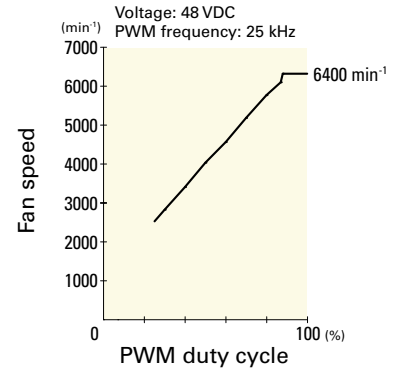
PWM duty cycle



Operating voltage range

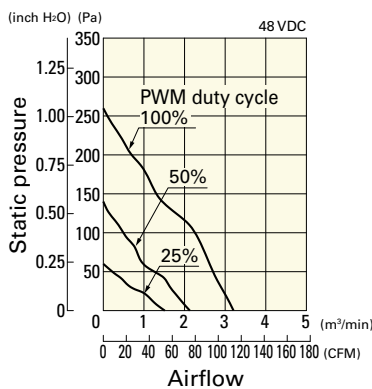


PWM duty - Speed characteristics example

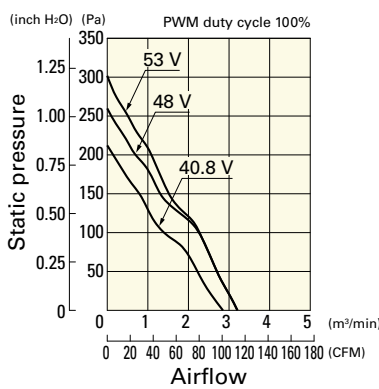


9GA1248P4S001 With pulse sensor with PWM control function

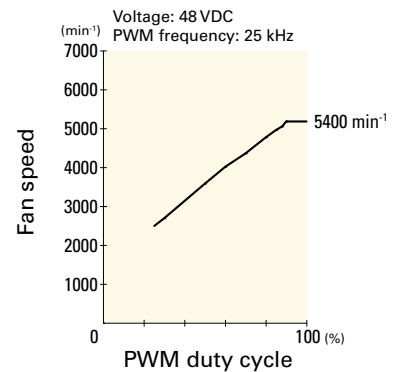
PWM duty cycle



Operating voltage range

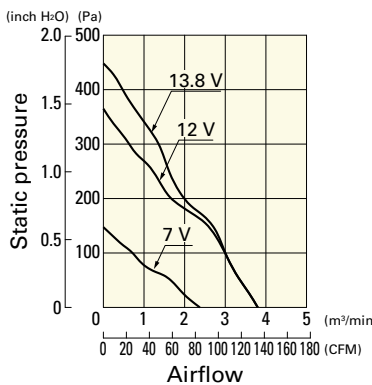


PWM duty - Speed characteristics example



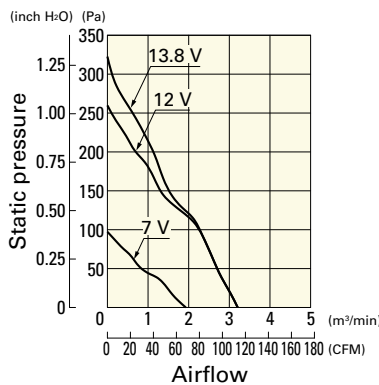
9GA1212G4001 With pulse sensor

Operating voltage range



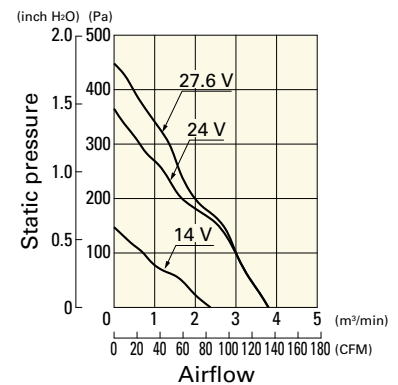
9GA1212S4001 With pulse sensor

Operating voltage range



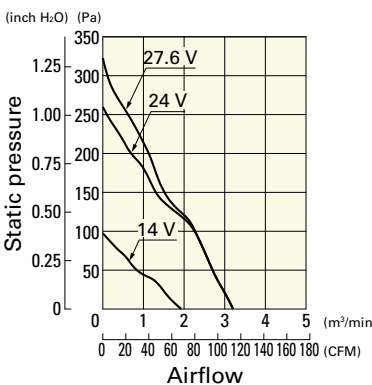
9GA1224G4001 With pulse sensor

Operating voltage range



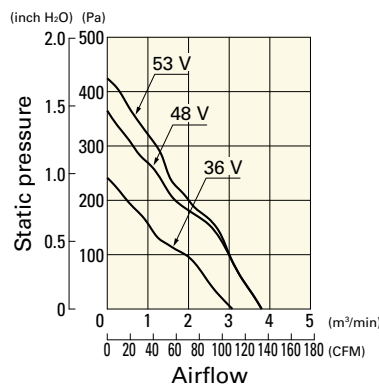
9GA1224S4001 With pulse sensor

Operating voltage range



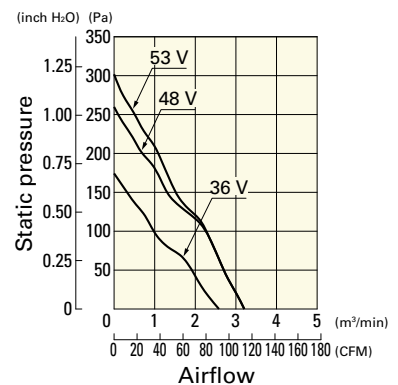
9GA1248G4001 With pulse sensor

Operating voltage range

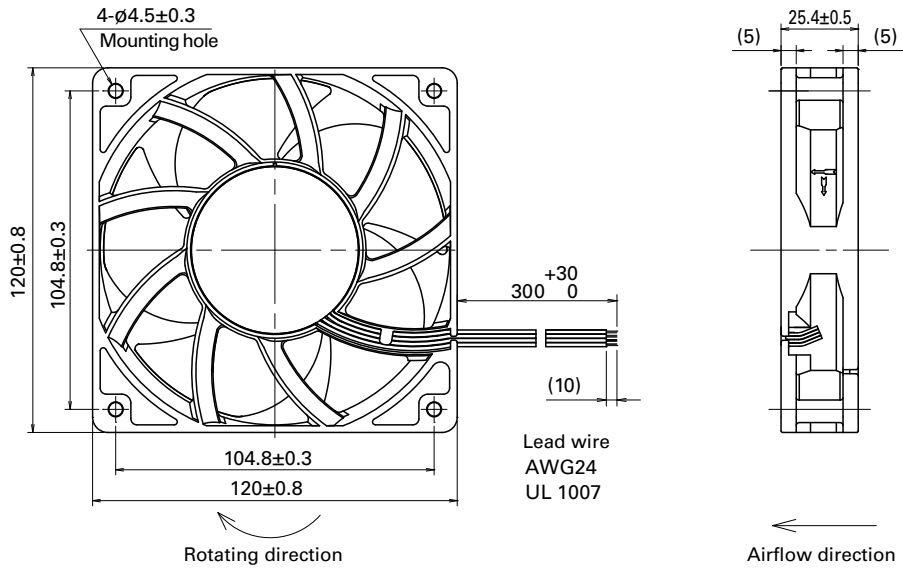


9GA1248S4001 With pulse sensor

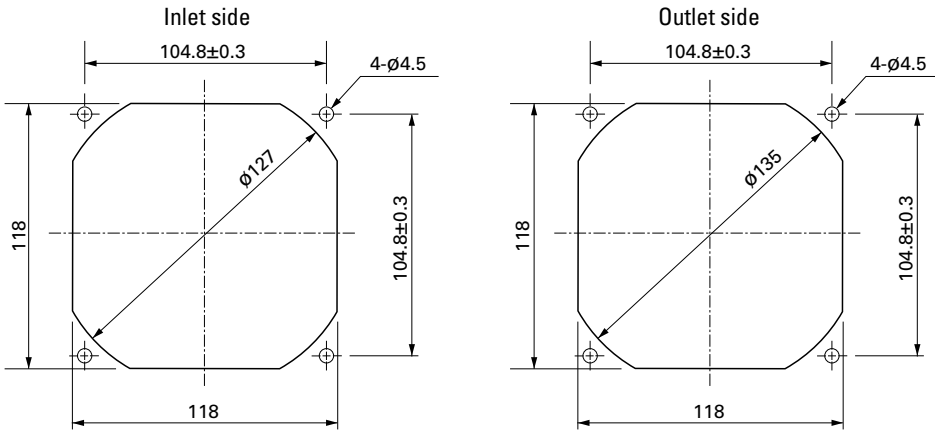
Operating voltage range



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



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



Options

Finger guards page: p. 514

Model no.: 109-019C, 109-019H, 109-019E, 109-019K

Resin finger guards page: p. 520

Model no.: 109-1000G

Resin filter kits page: p. 521

Model no.: 109-1000F13 (13PPI), 109-1000F20 (20PPI),
109-1000F30 (30PPI), 109-1000F40 (40PPI)



120×120×25 mm

San Ace 120 9GV 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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 260 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]
9GV1212P4G01	12	10.2 to 13.8	100	1.68	20.16	5100	4.83 171	224 0.9	58	-20 to +70	40000/60°C
			0	0.18	2.16	1650	1.56 55.1	23.5 0.09	30		
9GV1224P4G01	24	20.4 to 27.6	100	0.84	20.16	5100	4.83 171	224 0.9	58		
			0	0.13	3.12	1650	1.56 55.1	23.5 0.09	30		
9GV1248P4J01	48	40.8 to 55.2	100	0.5	24.0	5400	5.11 180	251 1.01	59		
			0	0.15	7.2	3000	2.84 100	77.5 0.31	47		
9GV1248P4G01	48	40.8 to 60.0	100	0.42	20.16	5100	4.83 171	224 0.9	58		
			0	0.07	3.36	1650	1.56 55.1	23.5 0.09	30		
9GV1248P4H01	48	40.8 to 60.0	100	0.33	15.84	4600	4.35 154	182 0.73	55		
			0	0.07	3.36	1650	1.56 55.1	23.5 0.09	30		

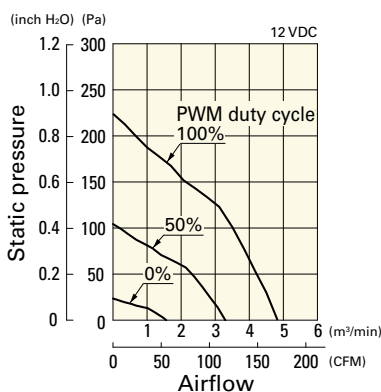
* PWM frequency: 25 kHz

Other sensor specifications are available as options. Refer to the index (p. 555).

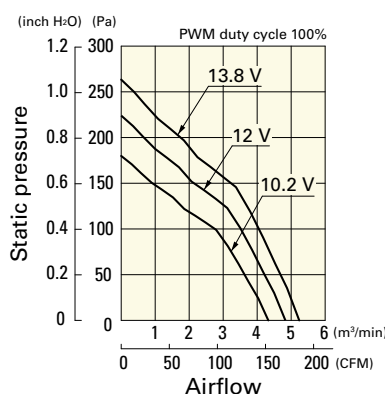
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GV1212P4G01 With pulse sensor with PWM control function

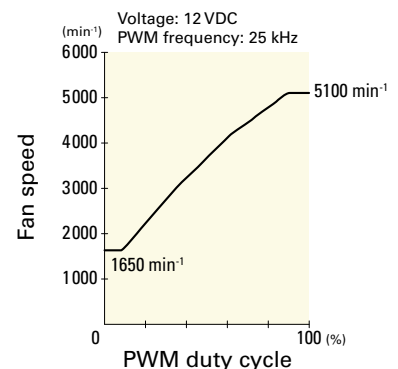
PWM duty cycle



Operating voltage range



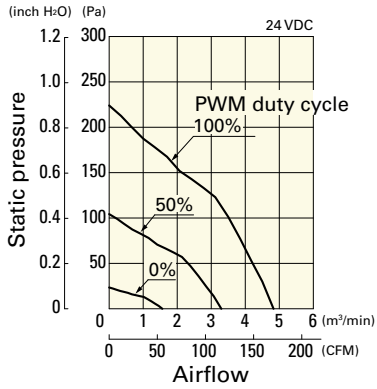
PWM duty - Speed characteristics example



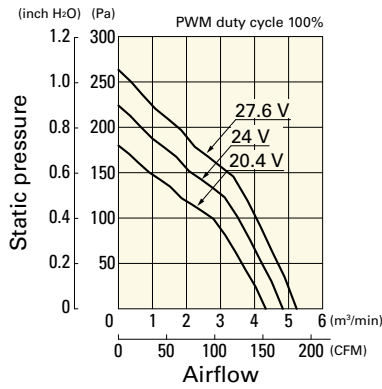
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GV1224P4G01 With pulse sensor with PWM control function

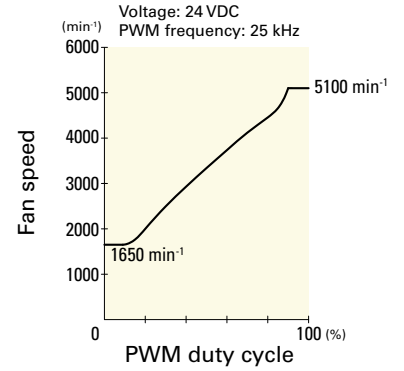
PWM duty cycle



Operating voltage range

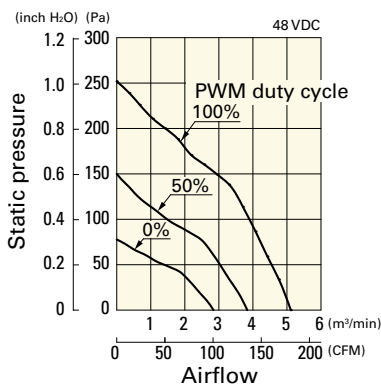


PWM duty - Speed characteristics example

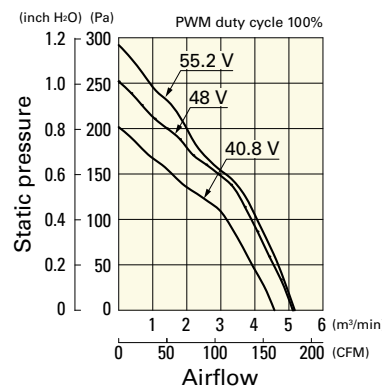


9GV1248P4J01 With pulse sensor with PWM control function

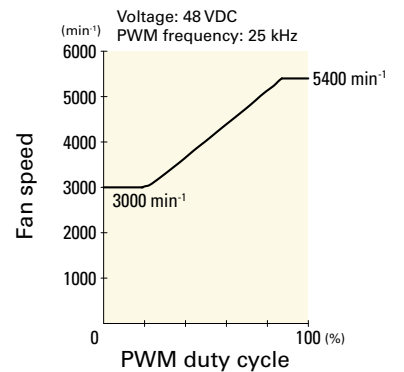
PWM duty cycle



Operating voltage range

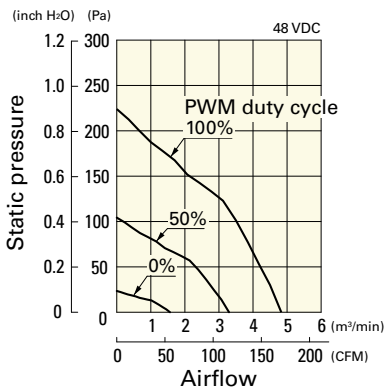


PWM duty - Speed characteristics example

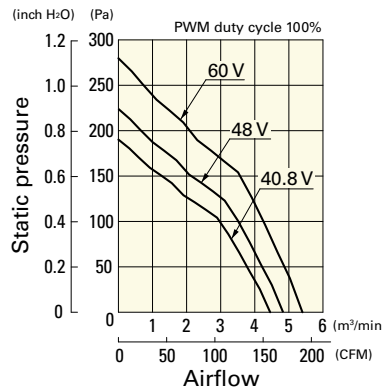


9GV1248P4G01 With pulse sensor with PWM control function

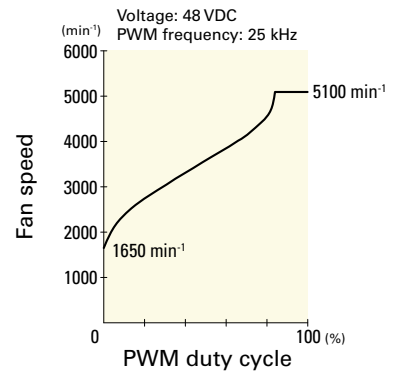
PWM duty cycle



Operating voltage range

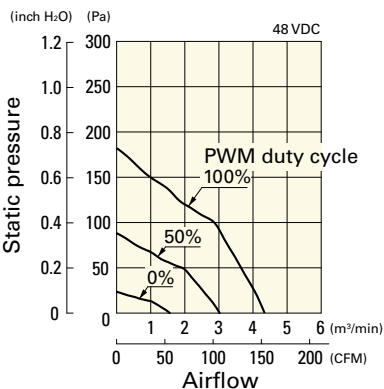


PWM duty - Speed characteristics example

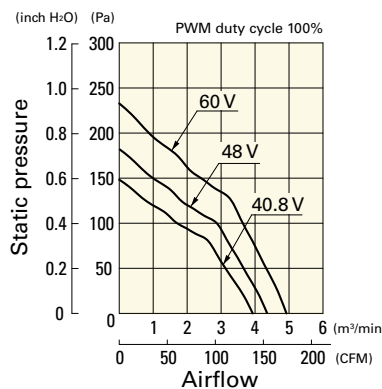


9GV1248P4H01 With pulse sensor with PWM control function

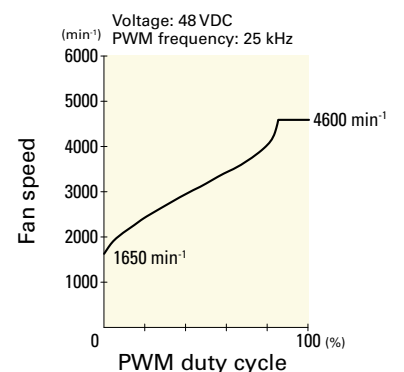
PWM duty cycle



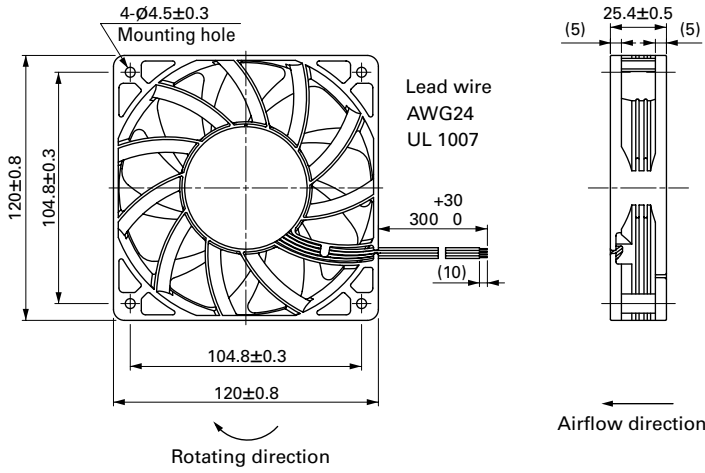
Operating voltage range



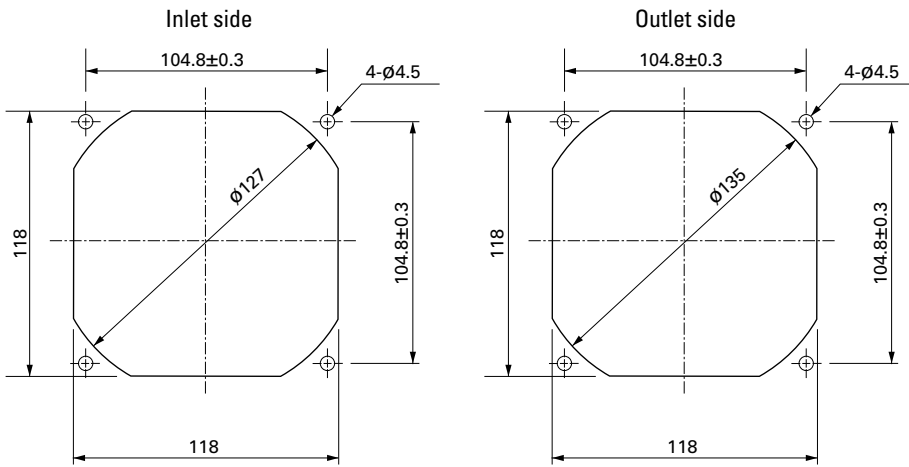
PWM duty - Speed characteristics example



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards page: p. 514

Model no.: 109-019C, 109-019H, 109-019E, 109-019K

Resin finger guards page: p. 520

Model no.: 109-1000G

Resin filter kits page: p. 521

Model no.: 109-1000F13 (13PPI), 109-1000F20 (20PPI),
109-1000F30 (30PPI), 109-1000F40 (40PPI)



120×120×25 mm

San Ace 120 9G type Model 9G1212B401 is not certified.

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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 240 g

Specifications

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

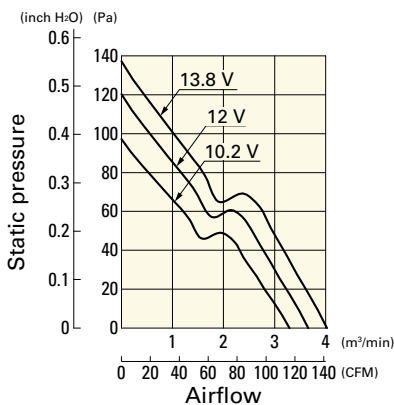
Model no.	Rated voltage [V]	Operating voltage range [V]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9G1212G401	12	10.2 to 13.8	0.9	10.8	4100	3.68 130	120 0.482	51	-20 to +70	40000/60°C
9G1212E401			0.58	6.96	3650	3.25 115	98 0.394	48		
9G1212A401			0.4	4.8	3150	2.83 100	77 0.309	44		
9G1212H401		6 to 13.8	0.31	3.72	2850	2.5 88	64 0.257	40		
9G1212F401		7 to 13.8	0.19	2.28	2250	1.98 70	42 0.169	35		
9G1212M401			0.14	1.68	1950	1.66 59	31 0.124	29		
9G1212B401		10.2 to 13.8	0.06	0.72	1000	0.88 31	9.6 0.039	18		
9G1224G401	24	20.4 to 27.6	0.47	11.28	4100	3.68 130	120 0.482	51		
9G1224E401			0.37	8.88	3650	3.25 115	98 0.394	48		
9G1224A401			0.21	5.04	3150	2.83 100	77 0.309	44		
9G1224H401		12 to 27.6	0.17	4.08	2850	2.5 88	64 0.257	40		
9G1224F401		20.4 to 27.6	0.1	2.4	2250	1.98 70	42 0.169	35		
9G1224M401			0.08	1.92	1950	1.66 59	31 0.124	29		
9G1248G401		48	40.8 to 55.2	0.23	11.04	4100	3.68 130	120 0.482		
9G1248E401	0.16			7.68	3650	3.25 115	98 0.394	48		
9G1248A401	0.13			6.24	3150	2.83 100	77 0.309	44		
9G1248H401	0.1			4.8	2850	2.5 88	64 0.257	40		
9G1248F401	0.06			2.88	2250	1.98 70	42 0.169	35		
9G1248M401	0.05			2.4	1950	1.66 59	31 0.124	29		

Other sensor specifications are available as options. Refer to the index (pp. 549 to 551).

Airflow - Static Pressure Characteristics

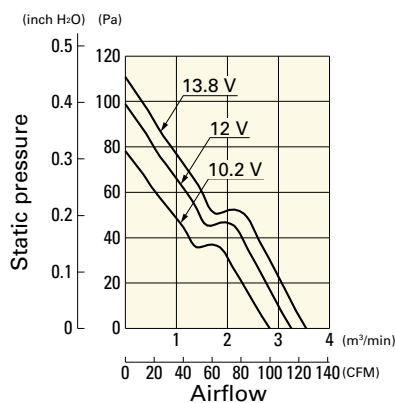
9G1212G401 With pulse sensor

Operating voltage range



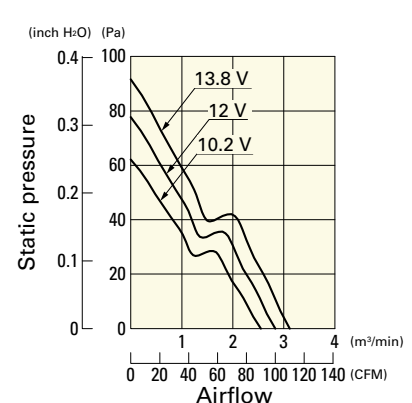
9G1212E401 With pulse sensor

Operating voltage range



9G1212A401 With pulse sensor

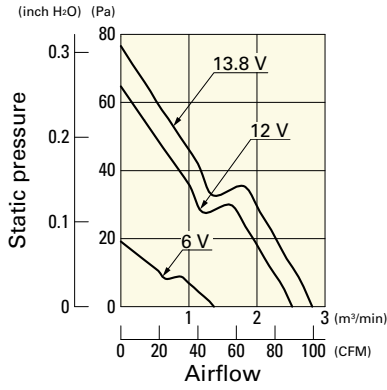
Operating voltage range



Airflow - Static Pressure Characteristics

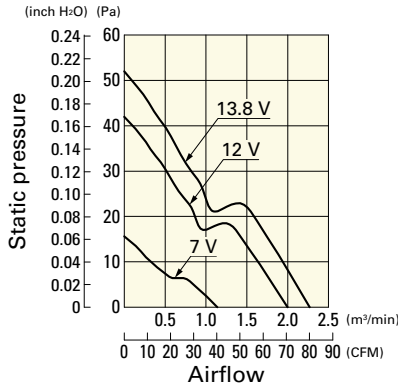
9G1212H401 With pulse sensor

Operating voltage range



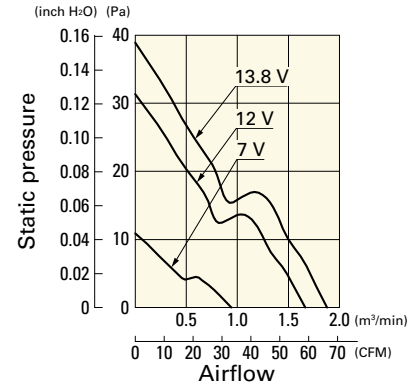
9G1212F401 With pulse sensor

Operating voltage range



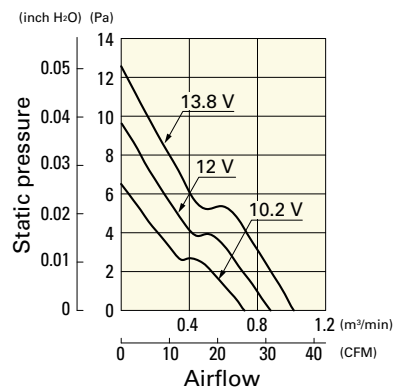
9G1212M401 With pulse sensor

Operating voltage range



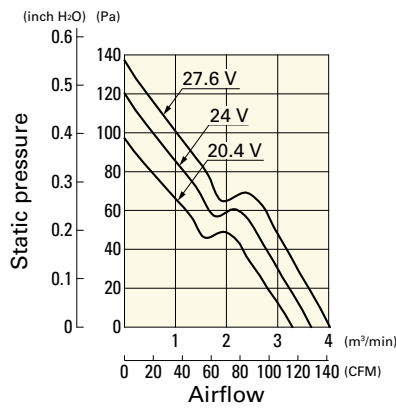
9G1212B401 With pulse sensor

Operating voltage range



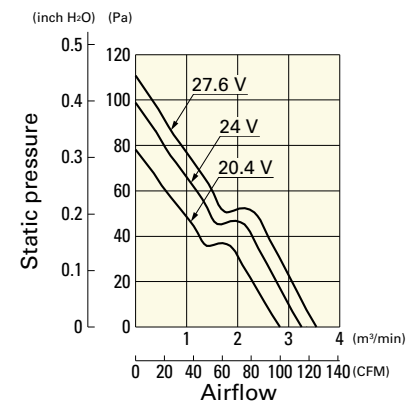
9G1224G401 With pulse sensor

Operating voltage range



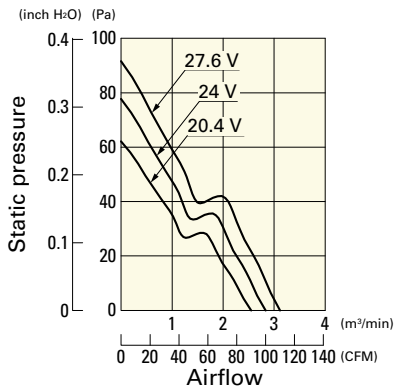
9G1224E401 With pulse sensor

Operating voltage range



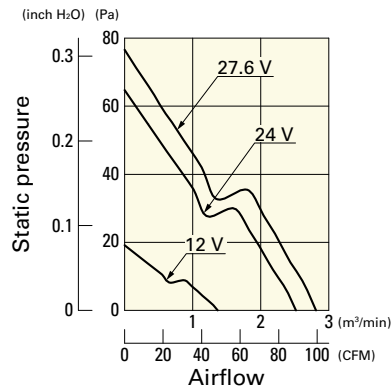
9G1224A401 With pulse sensor

Operating voltage range



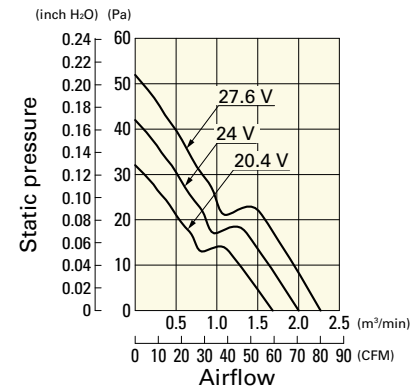
9G1224H401 With pulse sensor

Operating voltage range



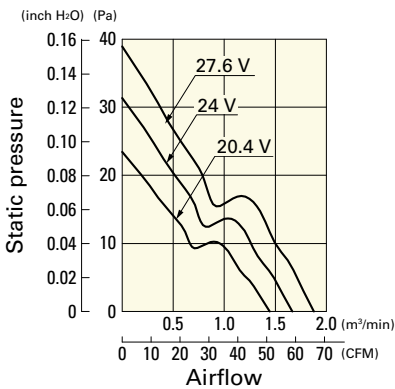
9G1224F401 With pulse sensor

Operating voltage range



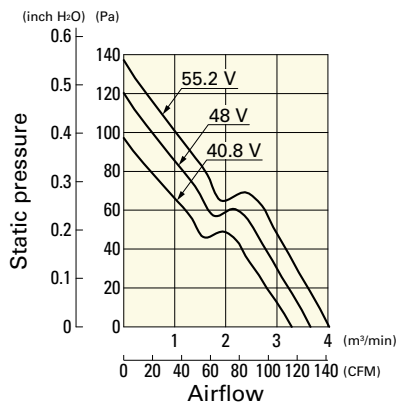
9G1224M401 With pulse sensor

Operating voltage range



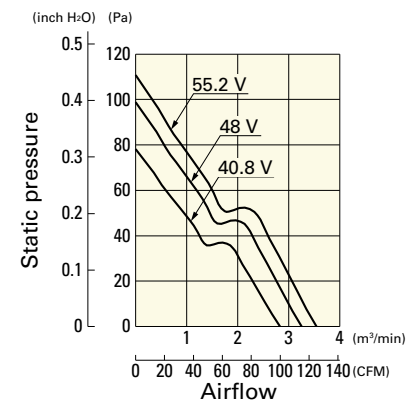
9G1248G401 With pulse sensor

Operating voltage range



9G1248E401 With pulse sensor

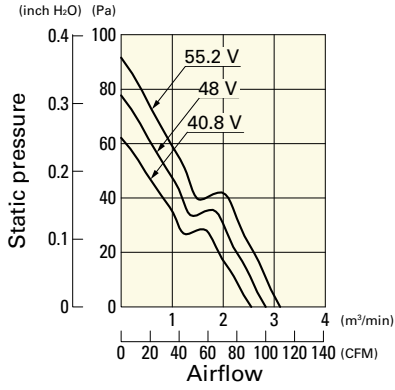
Operating voltage range



Airflow - Static Pressure Characteristics

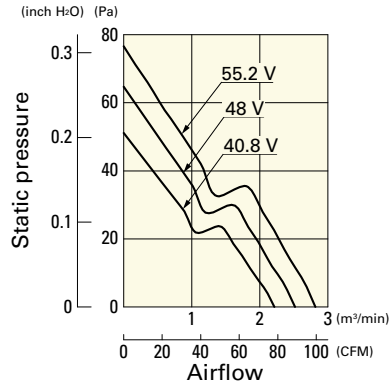
9G1248A401 With pulse sensor

Operating voltage range



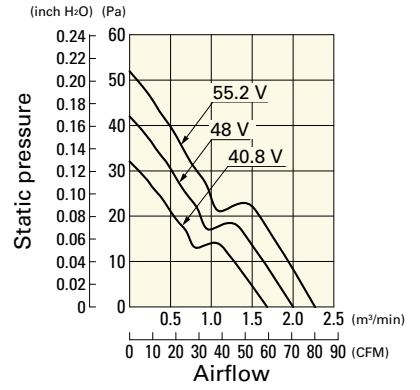
9G1248H401 With pulse sensor

Operating voltage range



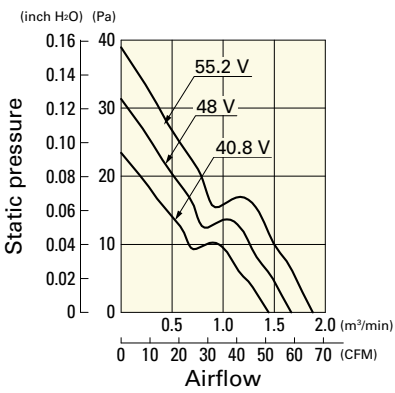
9G1248F401 With pulse sensor

Operating voltage range

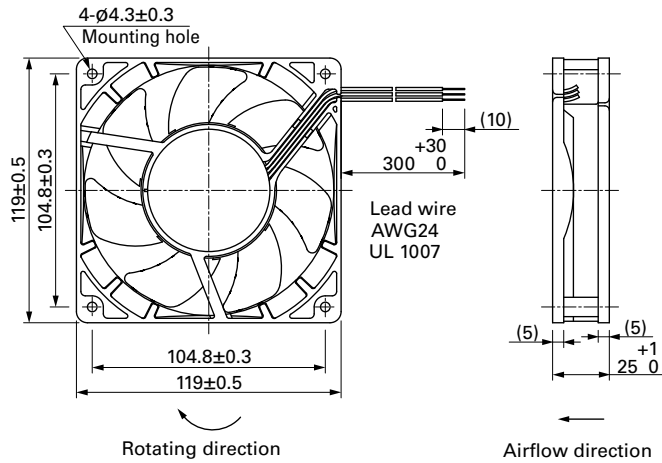


9G1248M401 With pulse sensor

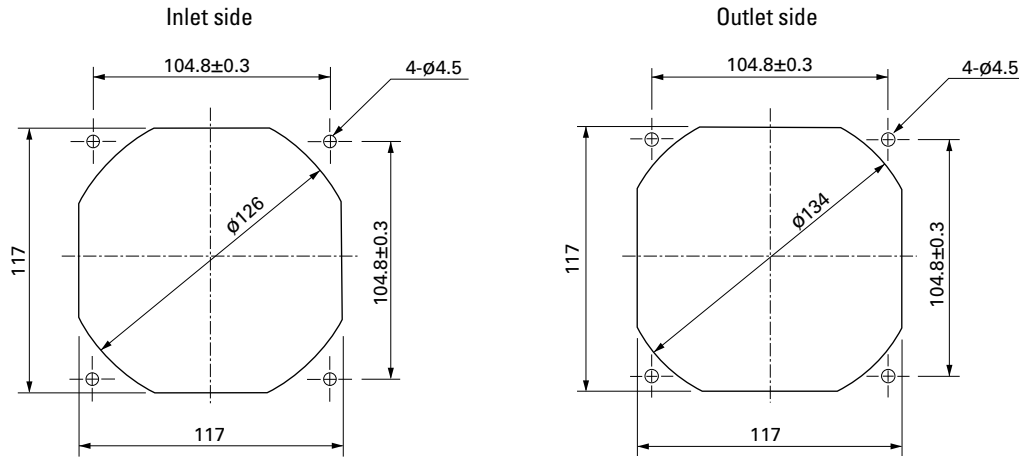
Operating voltage range



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards

page: p. 514

Model no.: 109-019C, 109-019H, 109-019E, 109-019K

Resin finger guards

page: p. 520

Model no.: 109-1000G

Resin filter kits

page: p. 521

Model no.: 109-1000F13 (13PPI), 109-1000F20 (20PPI),
109-1000F30 (30PPI), 109-1000F40 (40PPI)



120×120×38 mm

San Ace 120 9HV type

General Specifications

- Material Frame: Aluminum, 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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 460 g

Specifications

The models listed below **have pulse sensors with PWM control function.**

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]
9HV1224P1A001	24	21.6 to 26.4	100	2.4	57.6	9600	7.0 247	950 3.82	71	-20 to +70	40000/60°C (70000/40°C)
			0	0.37	8.88	3800	2.7 95	161 0.65	46		
9HV1248P1G001	48	36 to 60	100	2.0	96	11500	8.3 293	1300 5.22	75		
			0	0.23	11	3800	2.7 95	161 0.65	46		
9HV1248P1H001	48	36 to 60	100	1.4	67	10000	7.2 254	1050 4.22	72		
			0	0.23	11	3800	2.7 95	161 0.65	46		

* PWM frequency: 25 kHz

Other sensor specifications are available as options. Refer to the index (p. 556).

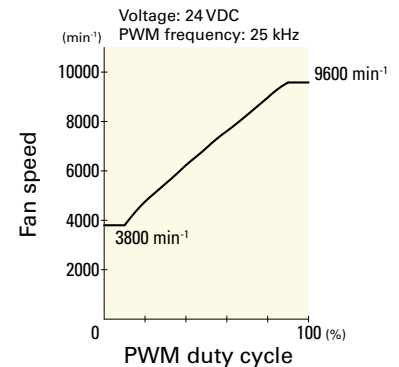
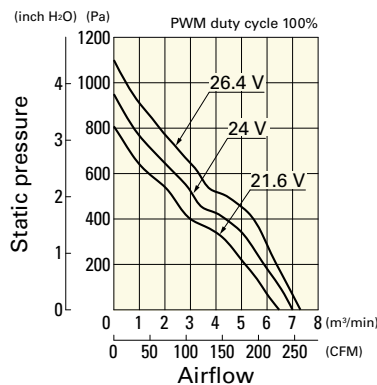
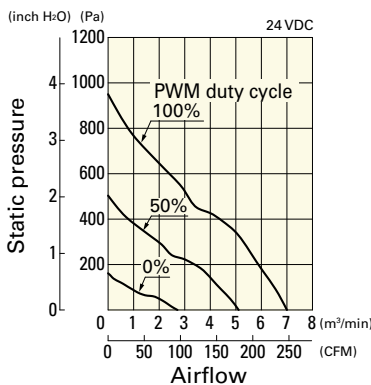
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9HV1224P1A001 With pulse sensor with PWM control function

PWM duty cycle

Operating voltage range

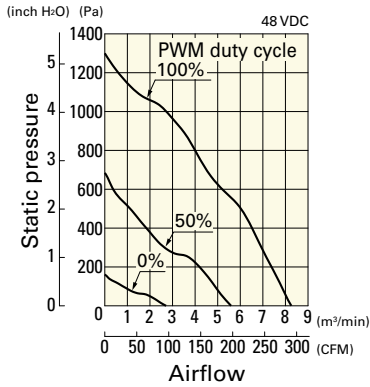
PWM duty - Speed characteristics example



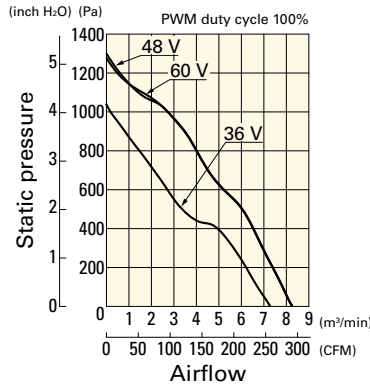
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9HV1248P1G001 With pulse sensor with PWM control function

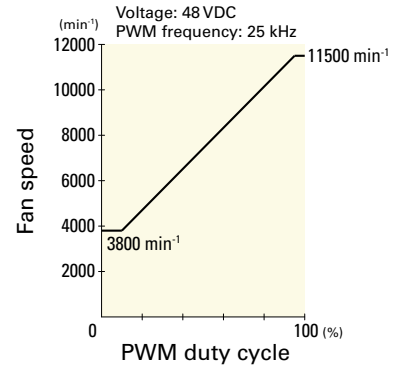
PWM duty cycle



Operating voltage range

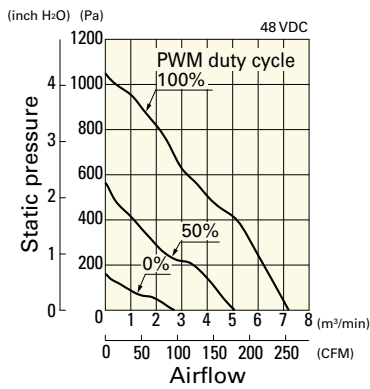


PWM duty - Speed characteristics example

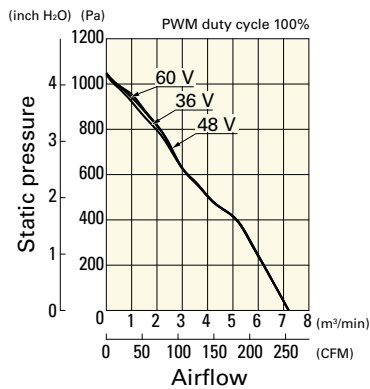


9HV1248P1H001 With pulse sensor with PWM control function

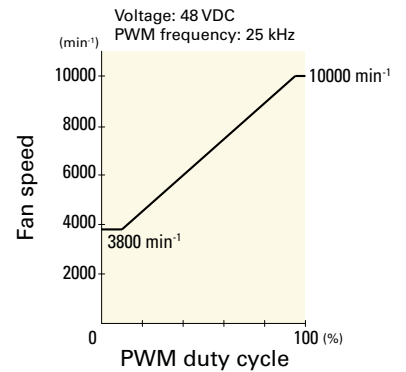
PWM duty cycle



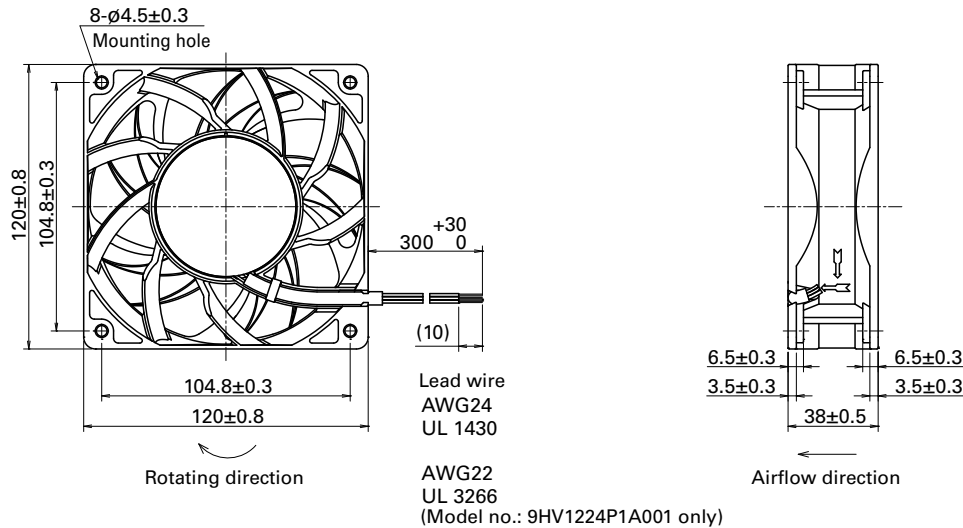
Operating voltage range



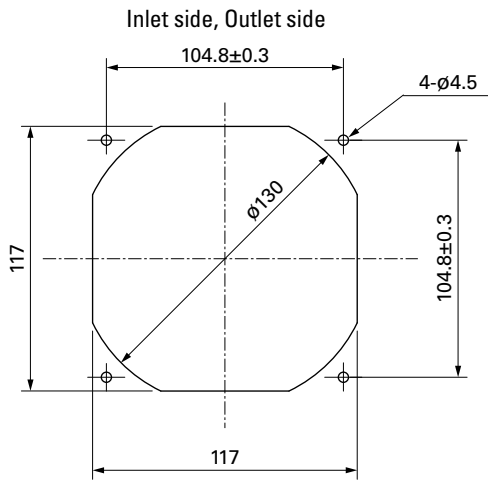
PWM duty - Speed characteristics example



Dimensions (unit: mm)



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



Options

Finger guards

page: p. 514

Model no.: 109-019C, 109-019H, 109-019E, 109-019K

Resin finger guards

page: p. 520

Model no.: 109-1000G

Resin filter kits

page: p. 521

Model no.: 109-1000F13 (13PPI), 109-1000F20 (20PPI),
109-1000F30 (30PPI), 109-1000F40 (40PPI)



120×120×38 mm

San Ace 120 9GV 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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 360 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]
9GV1212P1J01	12	10.2 to 13.8	100	3.0	36.0	6400	6.35 224.0	360.0 1.45	64	-20 to +70	40000/60°C
			0	0.19	2.28	1500	1.49 52.6	19.8 0.08	33		
9GV1212P1G01	12	10.2 to 13.8	100	2.1	25.2	5500	5.45 192.6	265 1.06	60		
			0	0.19	2.28	1500	1.49 52.6	19.8 0.08	33		
9GV1224P1J01**	24	20.4 to 27.6	100	1.5	36.0	6400	6.35 224.0	360 1.45	64		
9GV1224P1H01**			100	0.8	19.2	5200	5.16 182.3	237 0.95	58		
9GV1248P1J01	48	40.8 to 55.2	100	0.75	36.0	6400	6.35 224.0	360.0 1.45	64		
			0	0.06	2.88	1500	1.49 52.6	26.1 0.106	33		

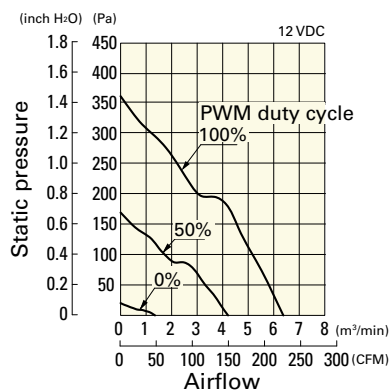
* PWM frequency: 25 kHz ** Fan does not rotate when PWM duty cycle is 0%.

Other sensor specifications are available as options. Refer to the index (p. 555).

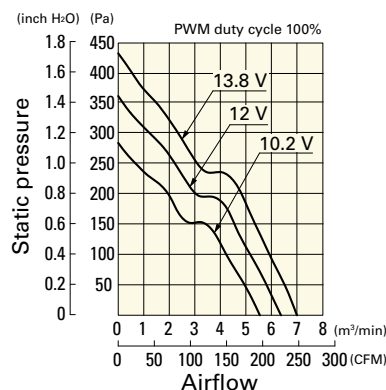
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GV1212P1J01 With pulse sensor with PWM control function

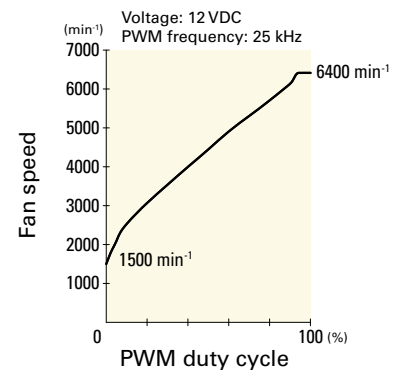
PWM duty cycle



Operating voltage range



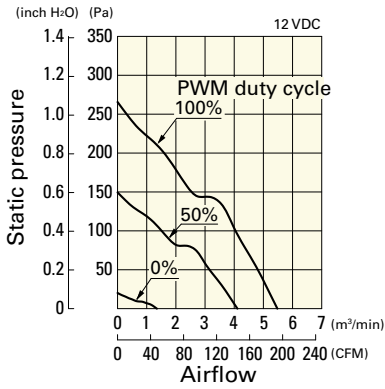
PWM duty - Speed characteristics example



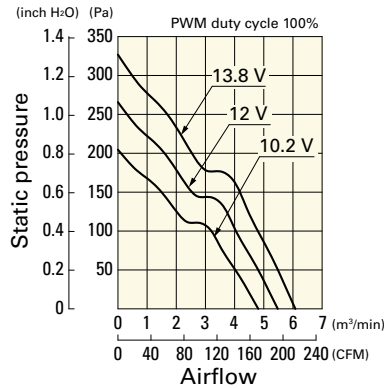
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GV1212P1G01 With pulse sensor with PWM control function

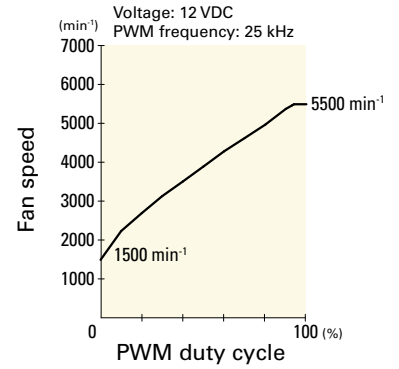
PWM duty cycle



Operating voltage range

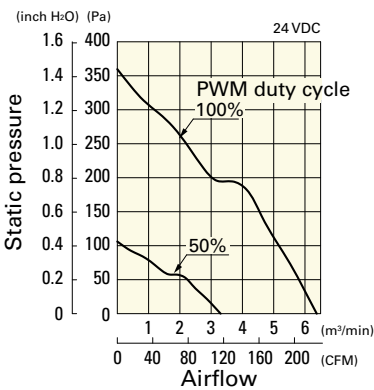


PWM duty - Speed characteristics example

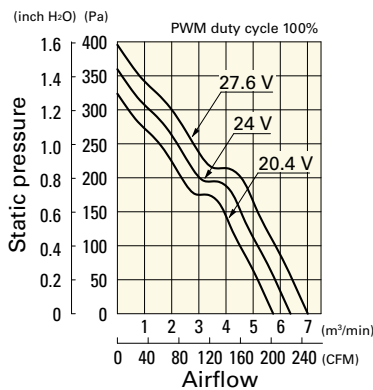


9GV1224P1J01 With pulse sensor with PWM control function

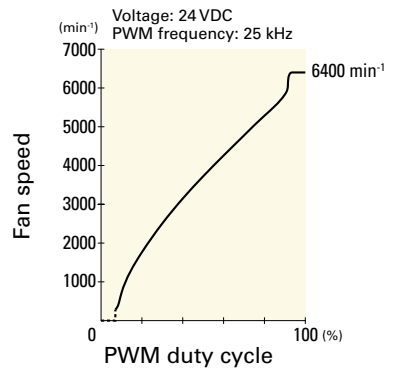
PWM duty cycle



Operating voltage range

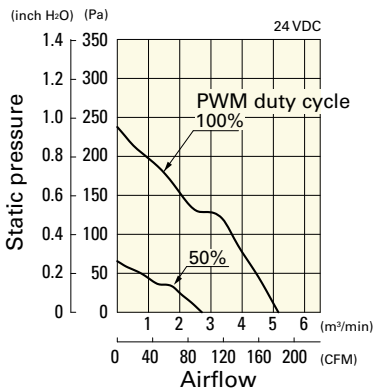


PWM duty - Speed characteristics example

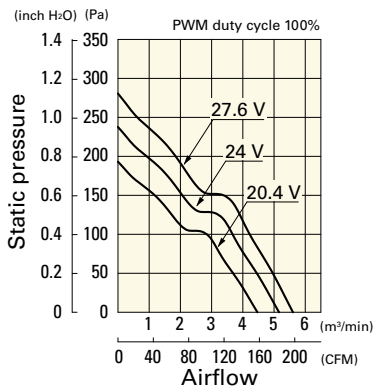


9GV1224P1H01 With pulse sensor with PWM control function

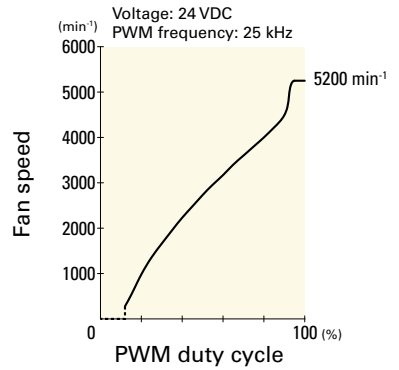
PWM duty cycle



Operating voltage range

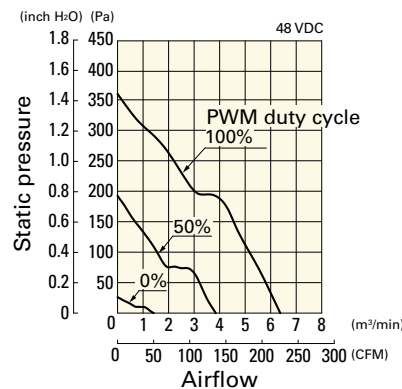


PWM duty - Speed characteristics example

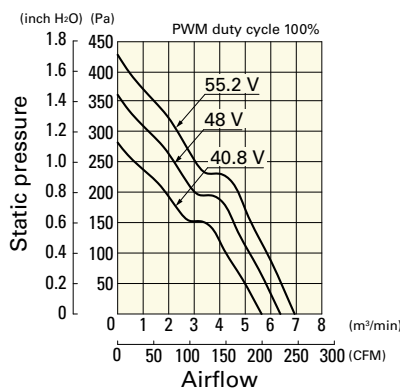


9GV1248P1J01 With pulse sensor with PWM control function

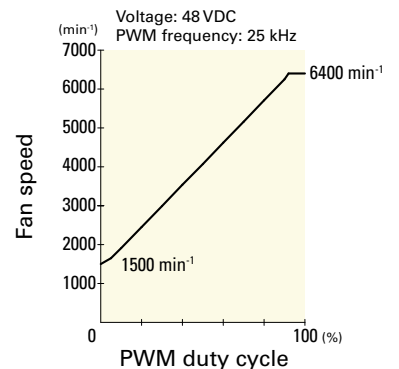
PWM duty cycle

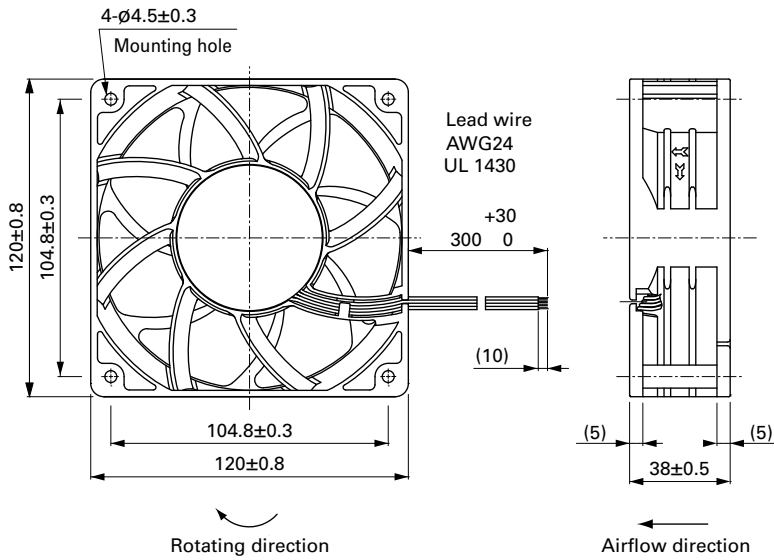
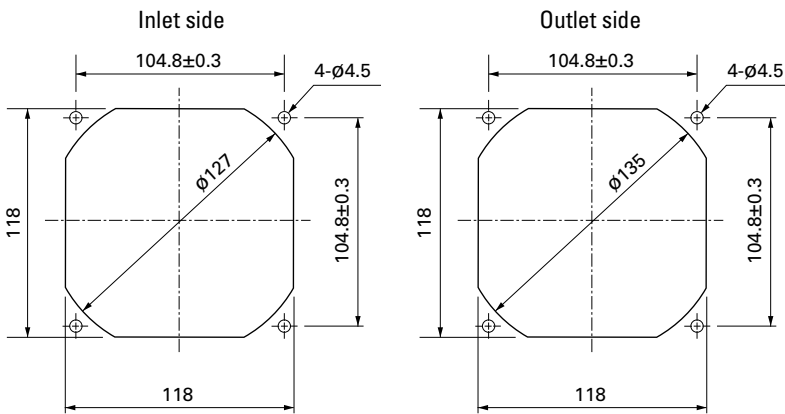


Operating voltage range



PWM duty - Speed characteristics example



Dimensions (unit: mm) (With ribs)**Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)****Options****Finger guards**

page: p. 514

Model no.: 109-019C, 109-019H, 109-019E, 109-019K

Resin finger guards

page: p. 520

Model no.: 109-1000G

Resin filter kits

page: p. 521

Model no.: 109-1000F13 (13PPI), 109-1000F20 (20PPI),
109-1000F30 (30PPI), 109-1000F40 (40PPI)



120×120×38 mm

San Ace 120 9G 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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 330 g

Specifications

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

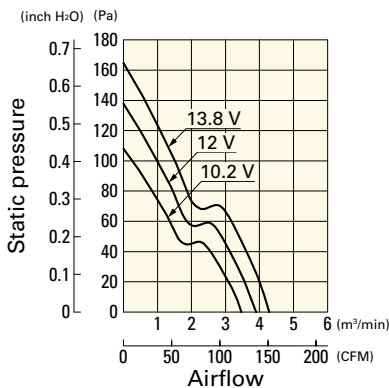
Model no.	Rated voltage [V]	Operating voltage range [V]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9G1212G101	12	10.2 to 13.8	0.98	11.76	3600	3.88 137	135 0.542	49	-20 to +70	40000/60°C
9G1212E101			0.61	7.32	3100	3.34 118	100 0.402	46		
9G1212H101		7 to 13.8	0.38	4.56	2600	2.8 99	70.4 0.283	39		
9G1212F101			0.28	3.36	2280	2.45 87	54.2 0.218	36		
9G1212M101			0.21	2.52	1950	2.1 74	39.6 0.159	32		
9G1224G101	24	20.4 to 27.6	0.5	12	3600	3.88 137	135 0.542	49		
9G1224E101			0.34	8.16	3100	3.34 118	100 0.402	46		
9G1224H101		14 to 27.6	0.22	5.28	2600	2.8 99	70.4 0.283	39		
9G1224F101			0.16	3.84	2280	2.45 87	54.2 0.218	36		
9G1224M101			0.11	2.64	1950	2.1 74	39.6 0.159	32		
9G1248G101	48	40.8 to 55.2	0.25	12	3600	3.88 137	135 0.542	49		
9G1248E101			0.17	8.16	3100	3.34 118	100 0.402	46		
9G1248H101			0.11	5.28	2600	2.8 99	70.4 0.283	39		
9G1248F101			0.09	4.32	2280	2.45 87	54.2 0.218	36		
9G1248M101			0.07	3.36	1950	2.1 74	39.6 0.159	32		

Other sensor specifications are available as options. Refer to the index (pp. 549 to 550).

Airflow - Static Pressure Characteristics

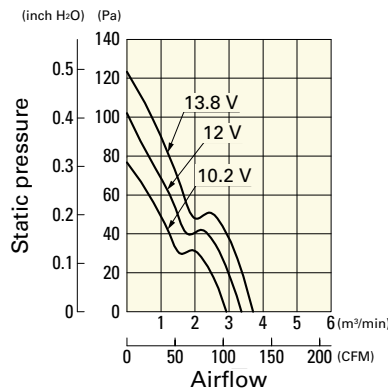
9G1212G101 With pulse sensor

Operating voltage range



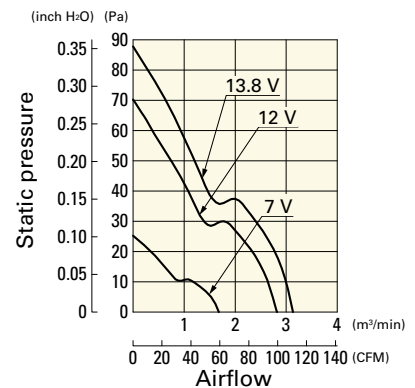
9G1212E101 With pulse sensor

Operating voltage range



9G1212H101 With pulse sensor

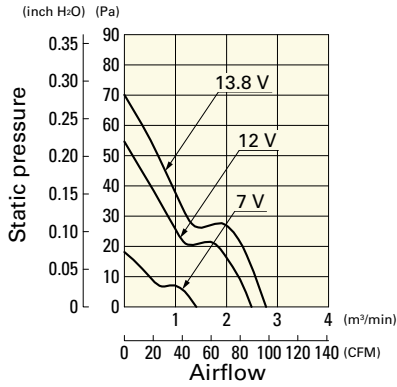
Operating voltage range



Airflow - Static Pressure Characteristics

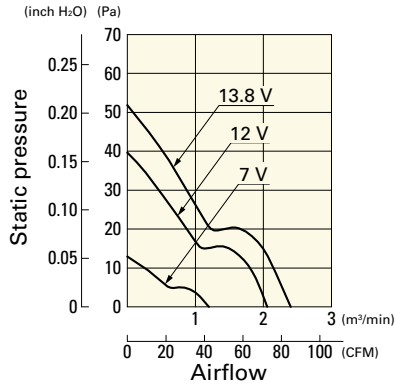
9G1212F101 With pulse sensor

Operating voltage range



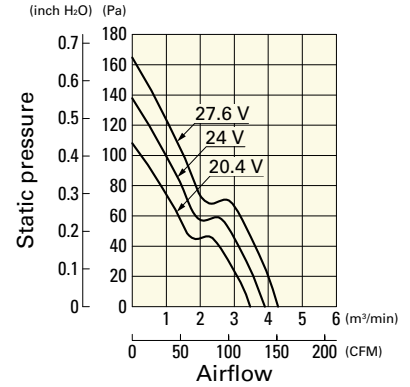
9G1212M101 With pulse sensor

Operating voltage range



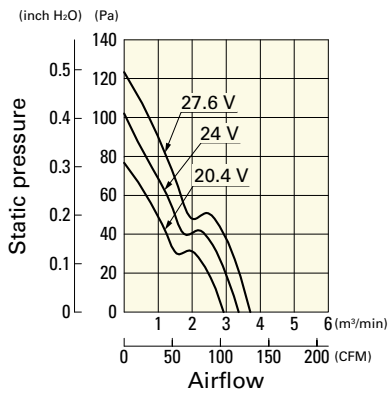
9G1224G101 With pulse sensor

Operating voltage range



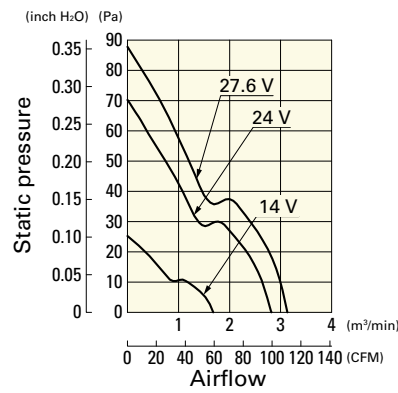
9G1224E101 With pulse sensor

Operating voltage range



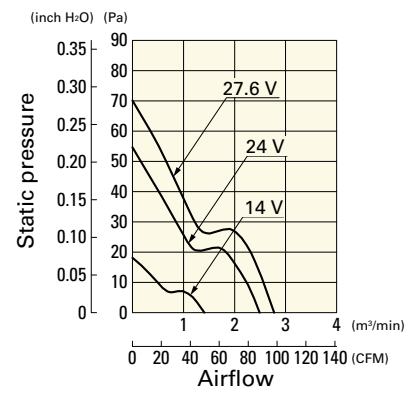
9G1224H101 With pulse sensor

Operating voltage range



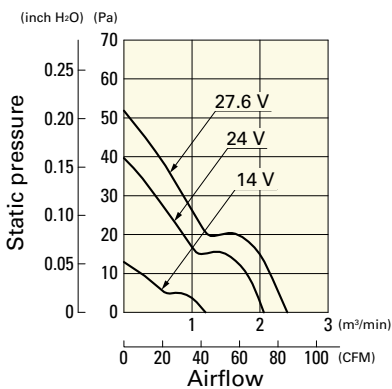
9G1224F101 With pulse sensor

Operating voltage range



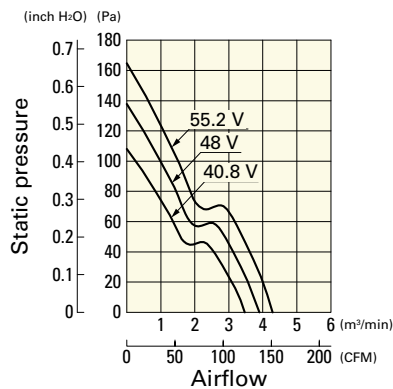
9G1224M101 With pulse sensor

Operating voltage range



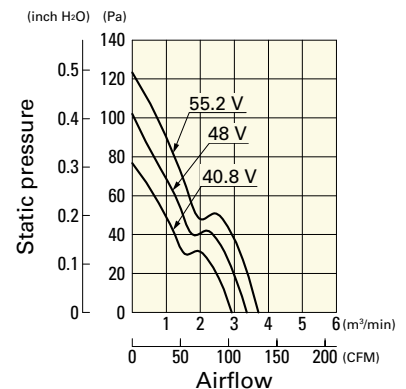
9G1248G101 With pulse sensor

Operating voltage range



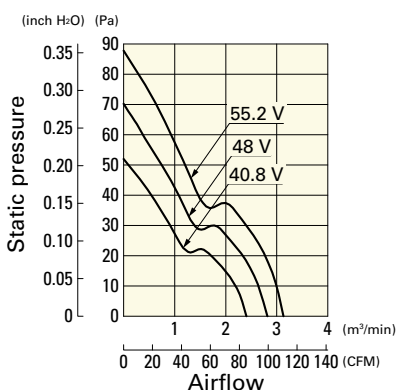
9G1248E101 With pulse sensor

Operating voltage range



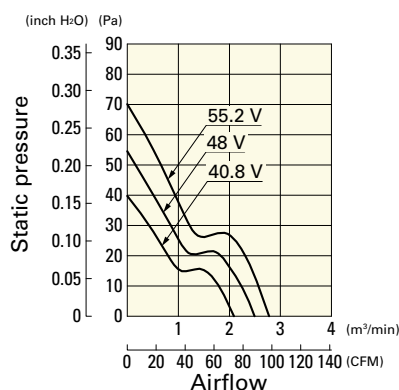
9G1248H101 With pulse sensor

Operating voltage range



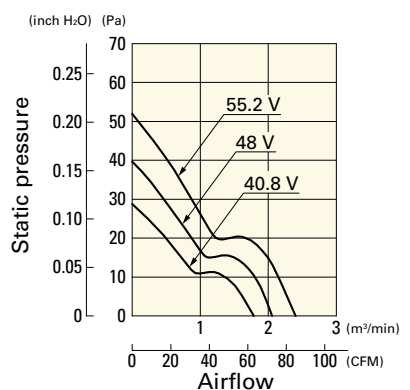
9G1248F101 With pulse sensor

Operating voltage range

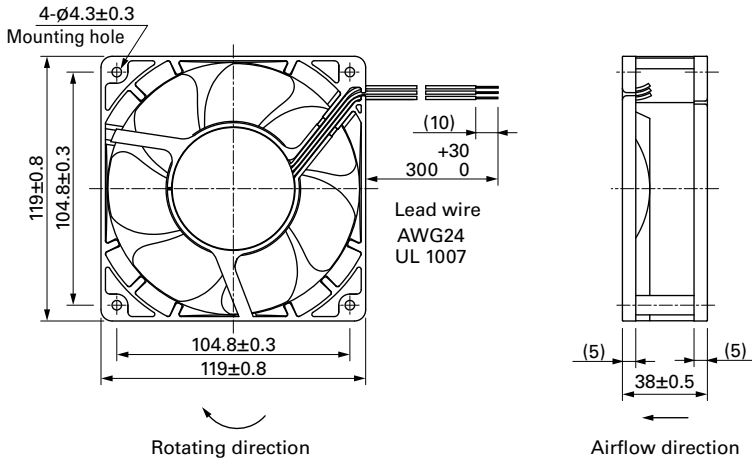


9G1248M101 With pulse sensor

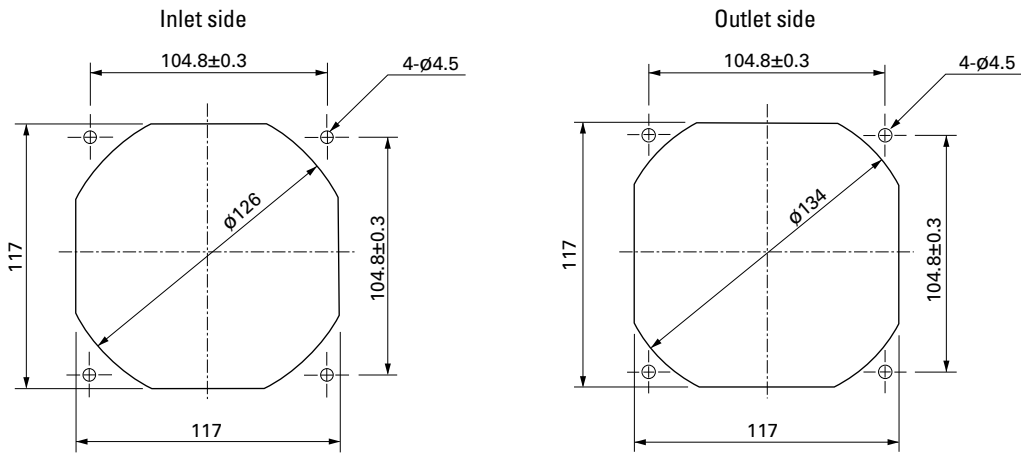
Operating voltage range



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards

page: p. 514

Model no.: 109-019C, 109-019H, 109-019E, 109-019K

Resin finger guards

page: p. 520

Model no.: 109-1000G

Resin filter kits

page: p. 521

Model no.: 109-1000F13 (13PPI), 109-1000F20 (20PPI),
109-1000F30 (30PPI), 109-1000F40 (40PPI)



120×120×38 mm

San Ace 120 9SG type Model 9SG1224H101 is not certified.

General Specifications

- Material Frame: Aluminum, 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)
- Motor protection function Locked rotor burnout protection, Reverse polarity protection
For details, please refer to p. 529.
- 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 400 g

Specifications

The models listed below **have pulse sensors**.

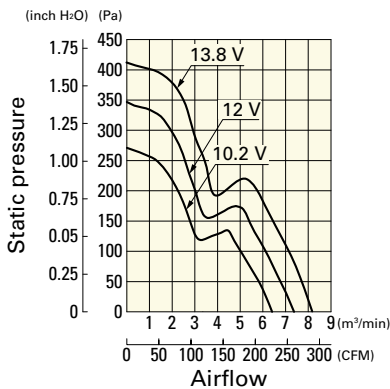
Model no.	Rated voltage [V]	Operating voltage range [V]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9SG1212G101	12	10.2 to 13.8	4.0	48.0	6000	7.35 260	340 1.37	64	-20 to +70	40000/60°C
9SG1224G101	24	20.4 to 27.6	2.0	48.0	6000	7.35 260	340 1.37	64		
9SG1224H101			0.46	11.0	3400	4.02 142	126 0.51	48		
9SG1248G101	48	40.8 to 55.2	1.0	48.0	6000	7.35 260	340 1.37	64		

Other sensor specifications are available as options. Refer to the index (p. 558).

Airflow - Static Pressure Characteristics

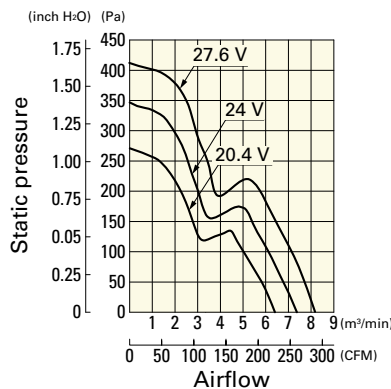
9SG1212G101 With pulse sensor

Operating voltage range



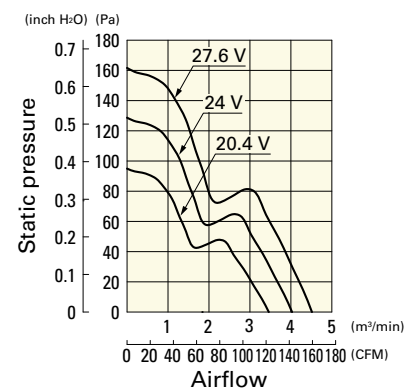
9SG1224G101 With pulse sensor

Operating voltage range



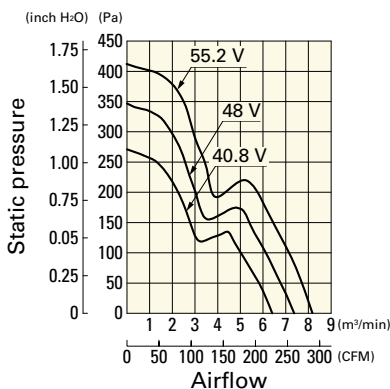
9SG1224H101 With pulse sensor

Operating voltage range

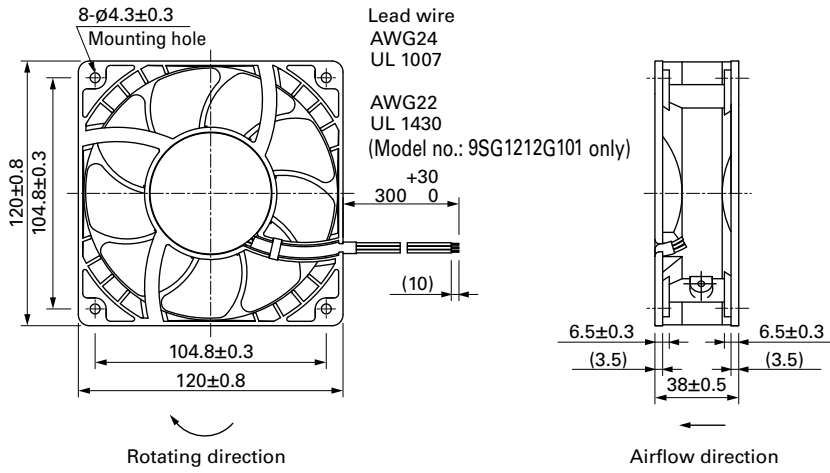


9SG1248G101 With pulse sensor

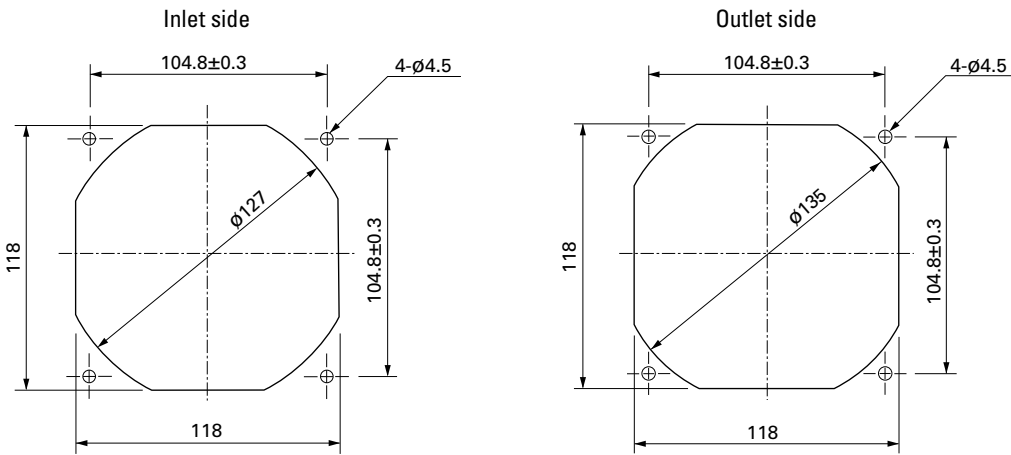
Operating voltage range



Dimensions (unit: mm)



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



Options

Finger guards

page: p. 514

Model no.: 109-019C, 109-019H, 109-019E, 109-019K

Resin finger guards

page: p. 520

Model no.: 109-1000G

Resin filter kits

page: p. 521

Model no.: 109-1000F13 (13PPI), 109-1000F20 (20PPI),
109-1000F30 (30PPI), 109-1000F40 (40PPI)