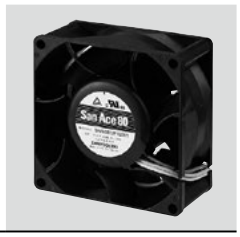
80×80×38 mm

San Ace 80 9HVA type



General Specifications

- Material ..... Frame: Plastic (Flammability: UL 94V-0), Impeller: Plastic (Flammability: UL 94V-0)
- Expected life ..... See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60˚C, rated voltage) Expected life at 40°C is for reference only.
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection For details, please refer to p. 573.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- Sound pressure level (SPL) ..... At 1 m away from the air inlet
- Storage temperature ..... -30 to +70˚C (Non-condensing)
- Lead wire ..... ⊕Red ⊖Black Sensor Yellow Control Brown
- Mass ..... 220 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 [m³/min]	Max. airflow [CFM]	Max. static pressure [Pa]	Max. static pressure [inchH₂O]	SPL [dB (A)]	Operating temperature [˚C]	Expected life [h]
9HVA0812P1G001	12	10.8 to 13.2	100	3.5	42	16100	3.75	132	1350	5.4	73	-20 to +70	40000/60˚C (70000/40˚C)
			20	0.2	2.4	4200	0.96	33.9	105	0.42	44		
9HVA0848P1G601	48	36 to 57	100	0.9	43.2	16100	3.75	132	1250	5.0	73		
			20	0.07	3.36	4200	0.96	33.9	105	0.42	44		

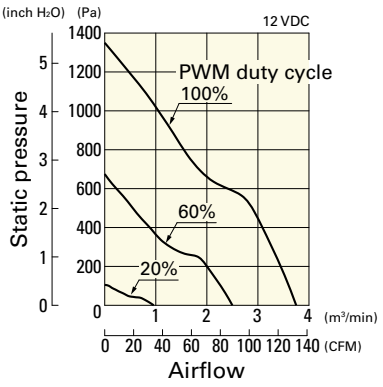
* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

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

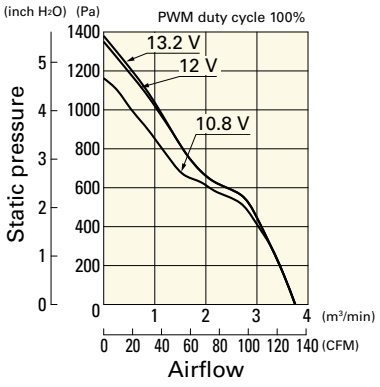
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9HVA0812P1G001 With pulse sensor with PWM control function

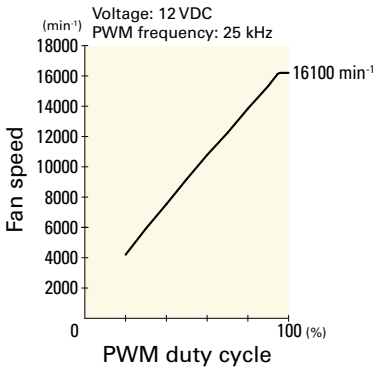
PWM duty cycle



Operating voltage range



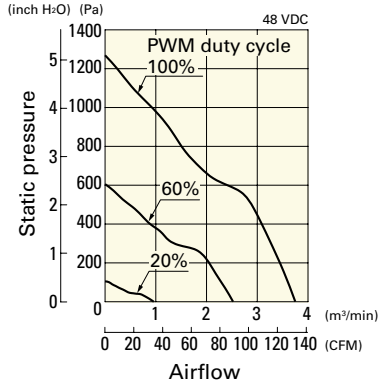
PWM duty - Speed characteristics example



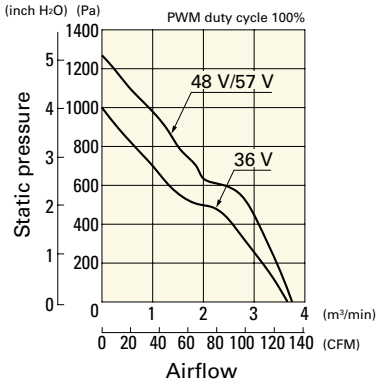
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9HVA0848P1G601 With pulse sensor with PWM control function

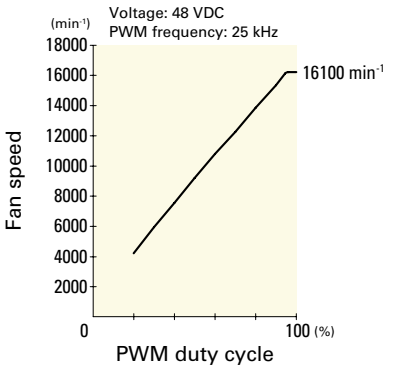
PWM duty cycle



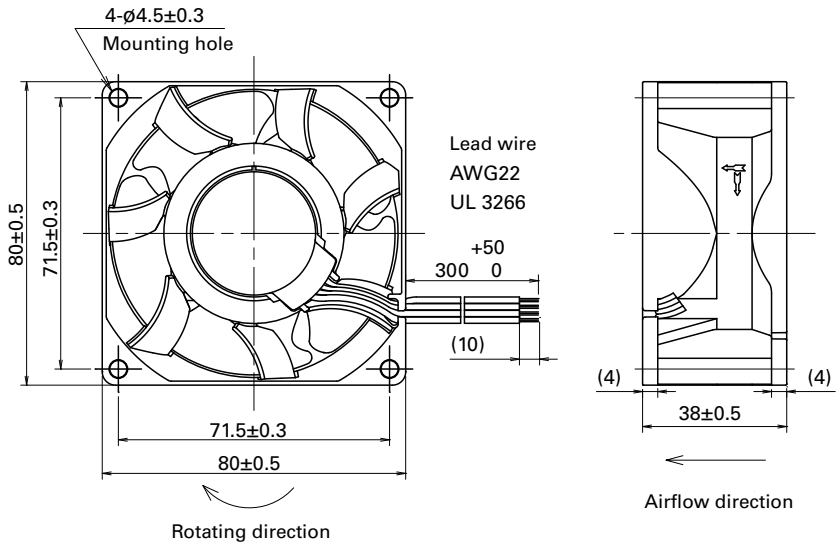
Operating voltage range



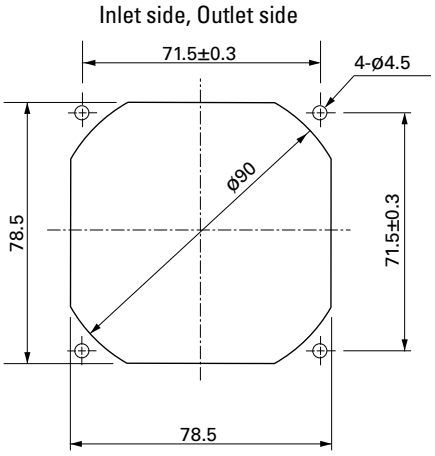
PWM duty - Speed characteristics example



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards page: p. 558

Model no.: 109-049E, 109-049H, 109-049C

Resin finger guards page: p. 565

Model no.: 109-1002G

Resin filter kits page: p. 566

Model no.: 109-1002F13 (13PPI), 109-1002F20 (20PPI),
109-1002F30 (30PPI), 109-1002F40 (40PPI)

80×80×38 mm

San Ace 80 9HV type

General Specifications

- Material ..... Frame: Plastic (Flammability: UL 94V-0), Impeller: Plastic (Flammability: UL 94V-0)
- Expected life ..... See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60˚C, rated voltage) Expected life at 40°C is for reference only.
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection For details, please refer to p. 573.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- Sound pressure level (SPL) ..... At 1 m away from the air inlet
- Storage temperature ..... -30 to +70˚C (Non-condensing)
- Lead wire ..... ⊕Red ⊖Black (Sensor) Yellow (Control) Brown
- Mass ..... 230 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 [m³/min]	Max. airflow [CFM]	Max. static pressure [Pa]	Max. static pressure [inchH₂O]	SPL [dB (A)]	Operating temperature [˚C]	Expected life [h]
9HV0812P1G601	12	10.8 to 13.2	100	3.4	40.8	14900	3.7	130.7	1000	4.0	69	-20 to +70	40000/60˚C (70000/40˚C)
			0	0.25	3	4400	1.06	37.5	87.2	0.35	40		
9HV0824P1G003	24	21.6 to 26.4	100	1.7	40.8	14900	3.7	130.7	1000	4.0	69		
9HV0848P1G001	48	36 to 57	100	0.85	40.8	14900	3.7	130.7	1000	4.0	69	-10 to +70	
			0	0.13	6.24	4400	1.06	37.5	87.2	0.35	40		

* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.
The model number of the ribless model for 9HV0824P1G003 is 9HV0824P1G0011.

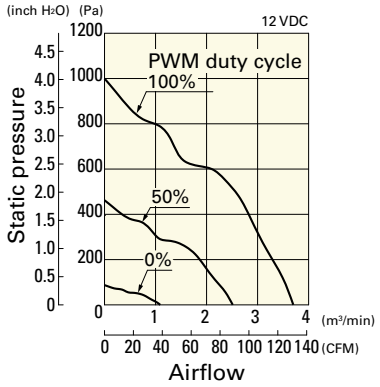
The following sensor and control options are available for selection.

Differs according to the model. Refer to the table on p. 607. Without sensor | Pulse sensor | Lock sensor
The ≫ mark indicates Short Lead Time Service applicable models. See p. 626 for details.

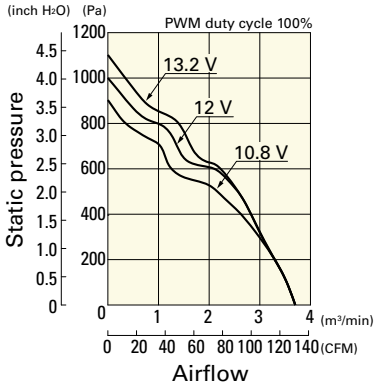
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9HV0812P1G601 With pulse sensor with PWM control function

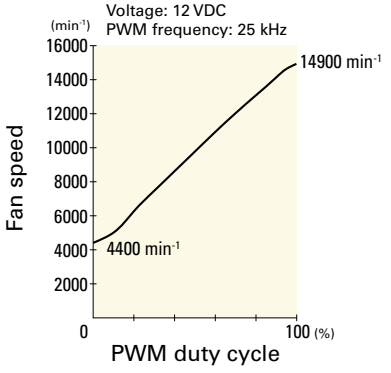
PWM duty cycle



Operating voltage range



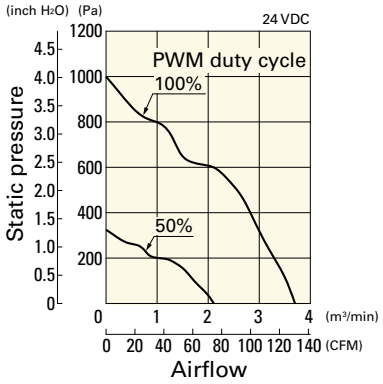
PWM duty - Speed characteristics example



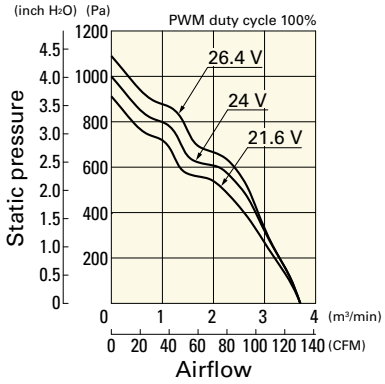
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9HV0824P1G003 With pulse sensor with PWM control function

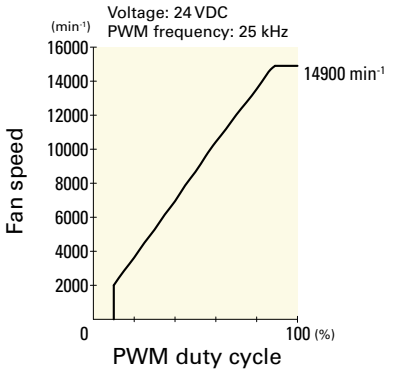
PWM duty cycle



Operating voltage range

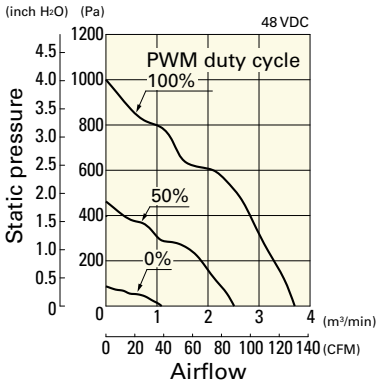


PWM duty - Speed characteristics example

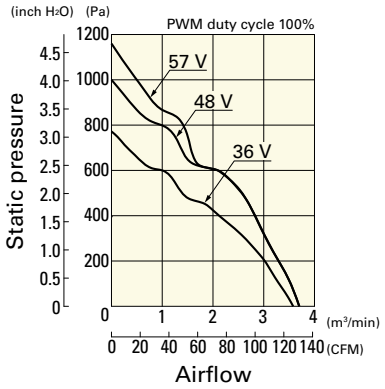


9HV0848P1G001 With pulse sensor with PWM control function

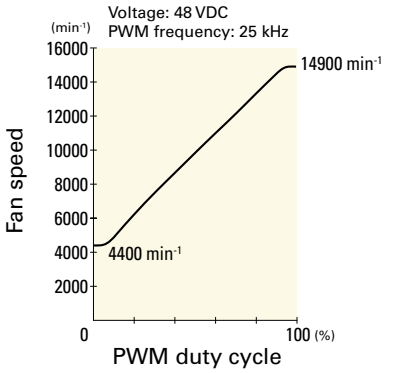
PWM duty cycle



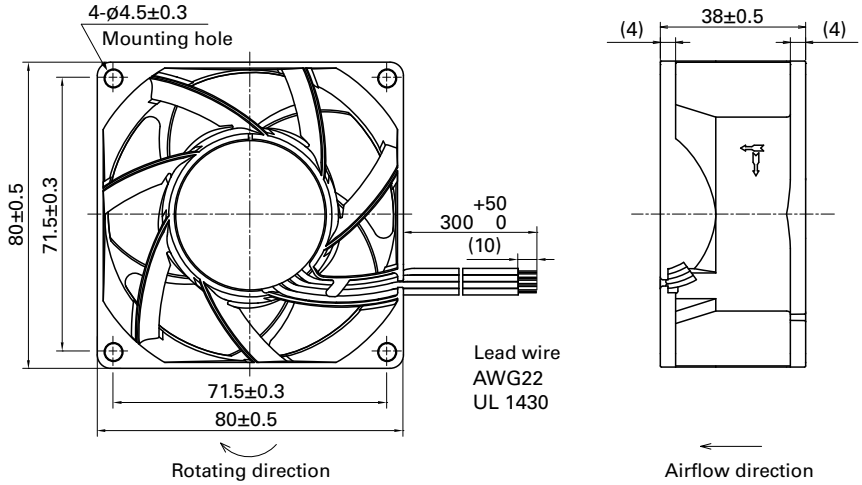
Operating voltage range



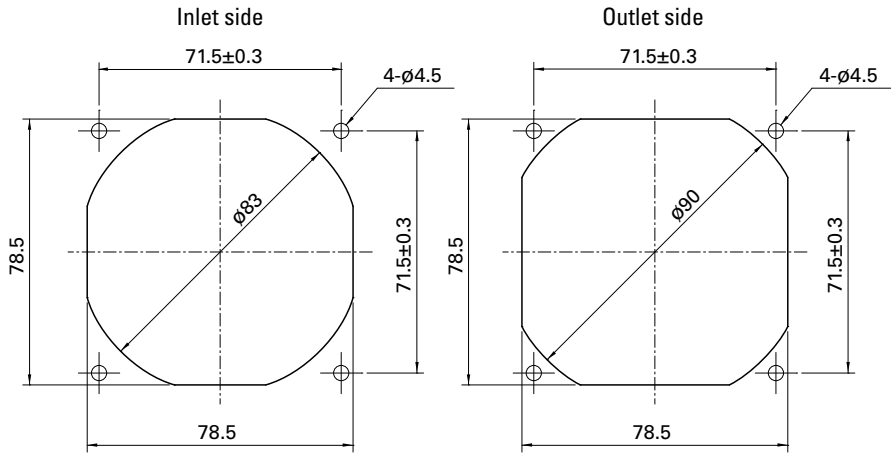
PWM duty - Speed characteristics example



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards
page: p. 558

Model no.: 109-049E, 109-049H, 109-049C

Resin filter kits
page: p. 566

Model no.: 109-1002F13 (13PPI), 109-1002F20 (20PPI),
109-1002F30 (30PPI), 109-1002F40 (40PPI)

Resin finger guards
page: p. 565

Model no.: 109-1002G

DC Fan

80×80×38 mm

San Ace 80 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) Expected life at 40°C is for reference only.
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection For details, please refer to p. 573.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- Sound pressure level (SPL) ..... At 1 m away from the air inlet
- Storage temperature ..... -30 to +70˚C (Non-condensing)
- Lead wire ..... ⊕Red ⊖Black Sensor Yellow Control Brown
- Mass ..... 160 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 [m³/min]	Max. airflow [CFM]	Max. static pressure [Pa]	Max. static pressure [inchH₂O]	SPL [dB (A)]	Operating temperature [˚C]	Expected life [h]
9GA0812P1G61	12	10.8 to 13.2	100	1.2	14.4	10500	2.85	100.6	480	1.93	60	-20 to +70	40000/60˚C (70000/40˚C)
			0	0.04	0.48	2000	0.51	18.0	28.7	0.11	21		
9GA0812P1S61			100	0.94	11.28	9550	2.6	91.8	480	1.93	59		
			0	0.1	1.2	2900	0.74	26.1	60	0.24	27		
9GA0812P1H61			100	0.6	7.2	8250	2.25	79.4	380	1.53	55		
			0	0.08	0.96	2500	0.64	22.6	45	0.18	24		
9GA0824P1S61	24	20.4 to 27.6	100	0.47	11.28	9550	2.6	91.8	480	1.93	59		
			0	0.06	1.44	2900	0.74	26.1	60	0.24	27		
9GA0824P1H61			100	0.3	7.2	8250	2.25	79.4	380	1.53	55		
			0	0.05	1.2	2500	0.64	22.6	45	0.18	24		
9GA0848P1S61	48	40.8 to 55.2	100	0.25	12	9550	2.6	91.8	480	1.93	59		
			0	0.04	1.92	2900	0.74	26.1	60	0.24	27		

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

The following sensor and control options are available for selection.

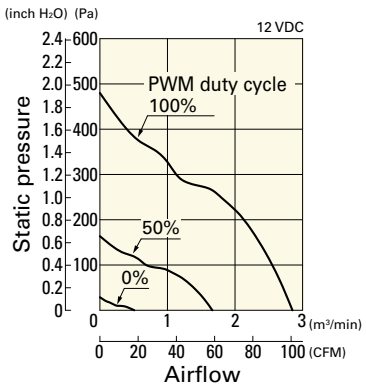
Differs according to the model. Refer to the table on pp. 603 to 604. Without sensor Pulse sensor Lock sensor

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

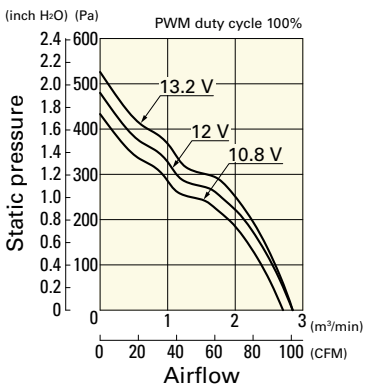
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GA0812P1G61 With pulse sensor with PWM control function

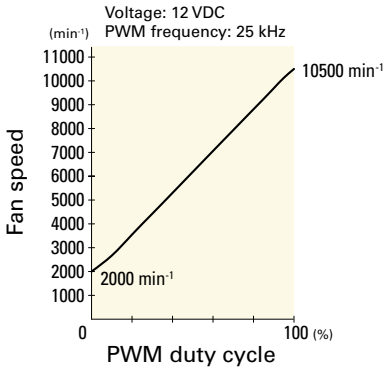
PWM duty cycle



Operating voltage range



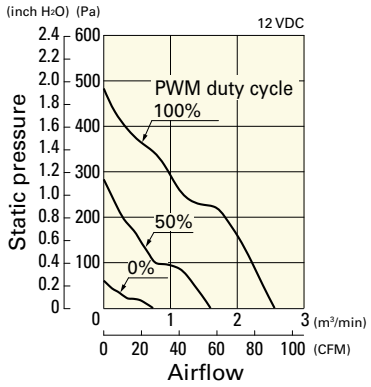
PWM duty - Speed characteristics example



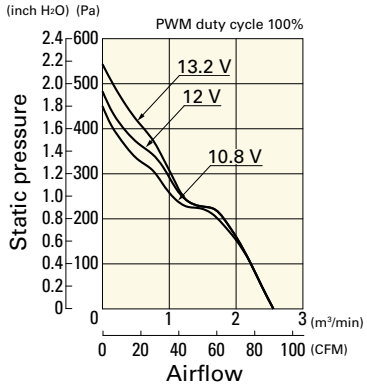
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GA0812P1S61 With pulse sensor with PWM control function

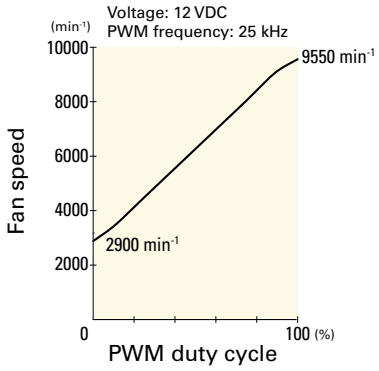
PWM duty cycle



Operating voltage range

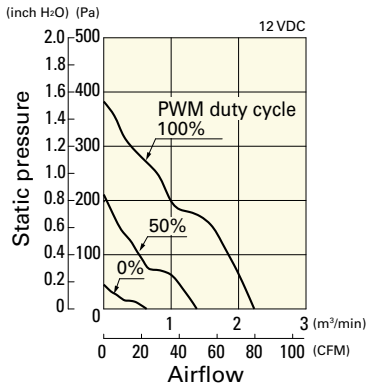


PWM duty - Speed characteristics example

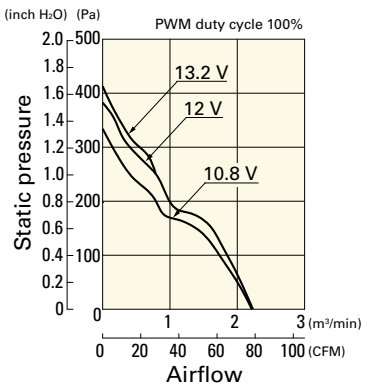


9GA0812P1H61 With pulse sensor with PWM control function

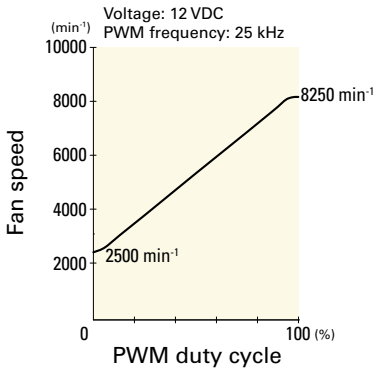
PWM duty cycle



Operating voltage range

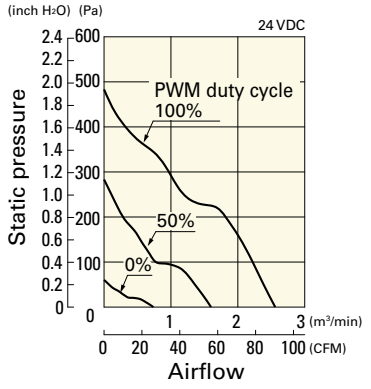


PWM duty - Speed characteristics example

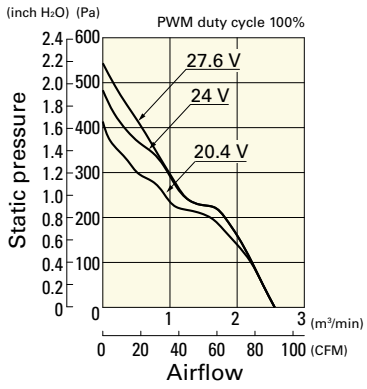


9GA0824P1S61 With pulse sensor with PWM control function

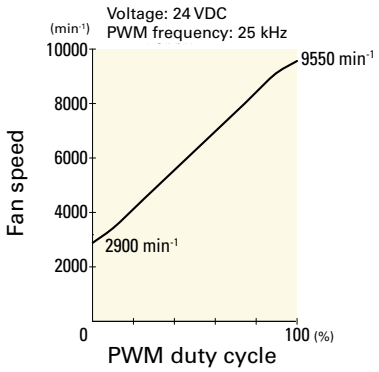
PWM duty cycle



Operating voltage range

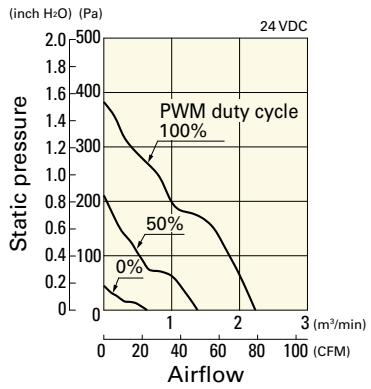


PWM duty - Speed characteristics example

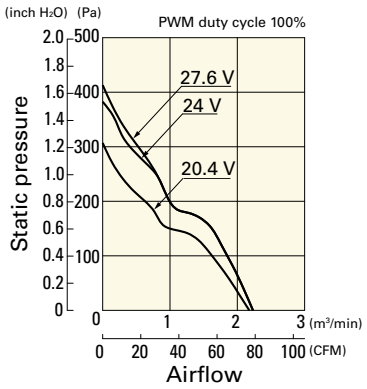


9GA0824P1H61 With pulse sensor with PWM control function

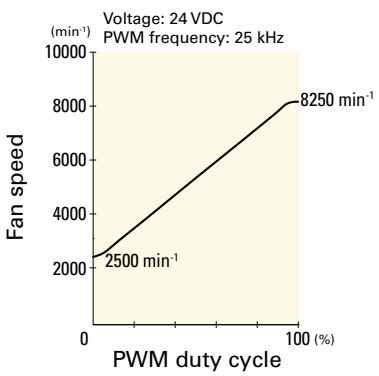
PWM duty cycle



Operating voltage range



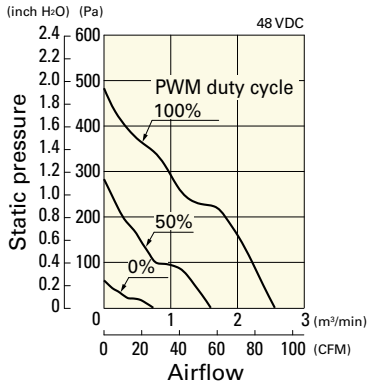
PWM duty - Speed characteristics example



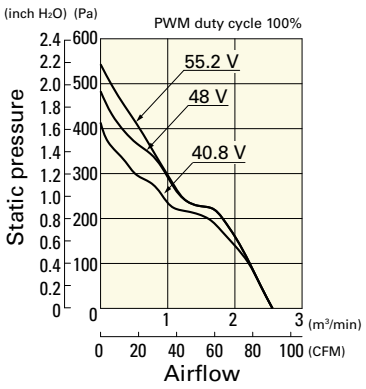
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GA0848P1S61 With pulse sensor with PWM control function

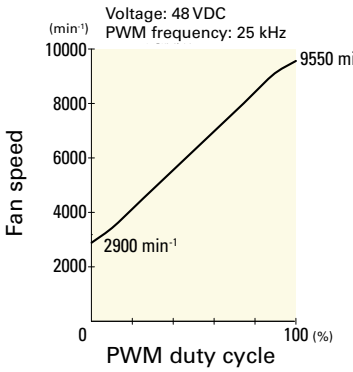
PWM duty cycle



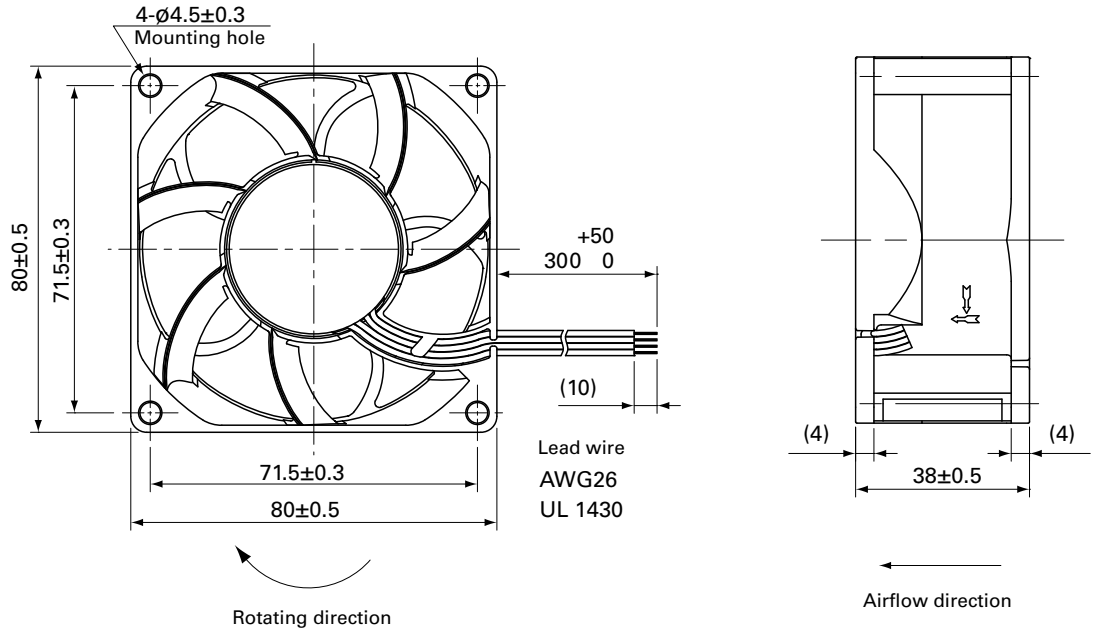
Operating voltage range



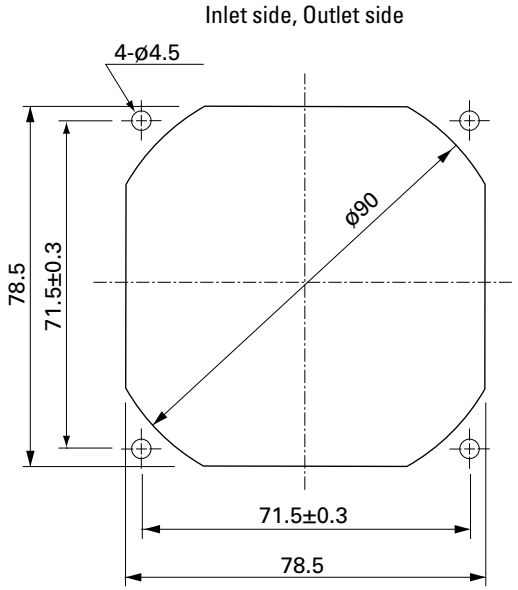
PWM duty - Speed characteristics example



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards
page: p. 558

Model no.: 109-049E, 109-049H, 109-049C

Resin filter kits
page: p. 566

Model no.: 109-1002F13 (13PPI), 109-1002F20 (20PPI),
109-1002F30 (30PPI), 109-1002F40 (40PPI)

Resin finger guards
page: p. 565

Model no.: 109-1002G

DC Fan

80×80×38 mm

San Ace 80 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) Expected life at 40°C is for reference only.
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection For details, please refer to p. 573.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- Sound pressure level (SPL) ..... At 1 m away from the air inlet
- Storage temperature ..... -30 to +70˚C (Non-condensing)
- Lead wire ..... ⊕Red ⊖Black (Sensor) Yellow (Control) Brown
- Mass ..... 220 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 [m³/min]	Max. airflow [CFM]	Max. static pressure [Pa]	Max. static pressure [inchH₂O]	SPL [dB (A)]	Operating temperature [˚C]	Expected life [h]
9GV0812P1G03	12	10.8 to 13.2	100	3.8	45.6	10200	3.9	138.0	490.0	1.97	65	-20 to +70	40000/60˚C (70000/40˚C)
			0	0.32	3.84	3000	1.15	40.6	42.4	0.17	34		
9GV0812P1H03			100	3.0	36.0	9700	3.7	131.0	440.0	1.77	63		
			0	0.2	2.4	2900	1.11	39.2	39.0	0.16	34		
9GV0812P1F03		10.2 to 13.8	100	1.5	18	8000	3.05	108.0	301.0	1.21	58		
			0	0.12	1.44	2400	0.92	32.0	27.1	0.11	26		
9GV0812P1M03			100	0.75	9	6000	2.29	81.0	169.0	0.68	51		
			0	0.09	1.08	1700	0.65	23.0	13.6	0.05	19		
9GV0824P1G03	24	20.4 to 27.6	100	1.6	38.4	10200	3.9	138.0	490.0	1.97	65		
			0	0.3	7.2	4700	1.79	63.2	104.0	0.41	44		
9GV0848P1G03	48	40.8 to 55.2	100	0.84	40.32	10200	3.9	138.0	490.0	1.97	65		
			0	0.15	7.2	4700	1.79	63.2	104.0	0.41	44		

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

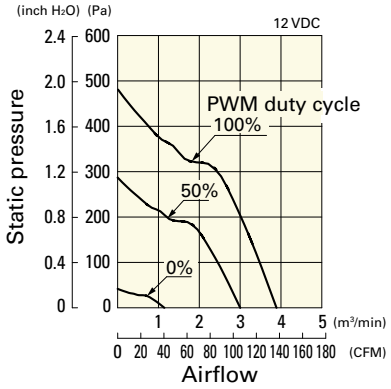
The following sensor and control options are available for selection.

Differs according to the model. Refer to the table on p. 606. **Without sensor** **Pulse sensor** **Lock sensor**

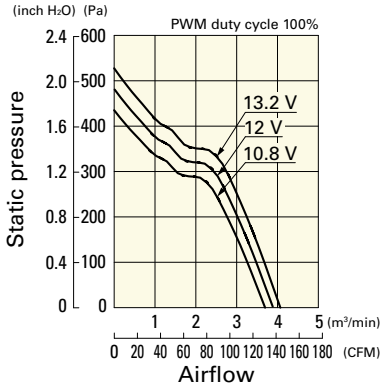
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GV0812P1G03 With pulse sensor with PWM control function

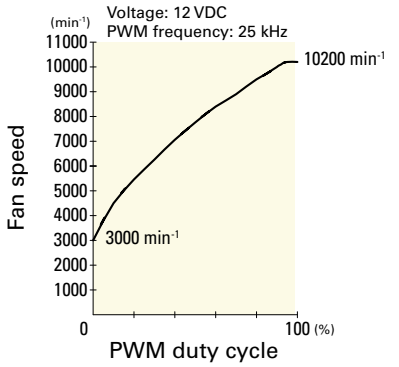
PWM duty cycle



Operating voltage range



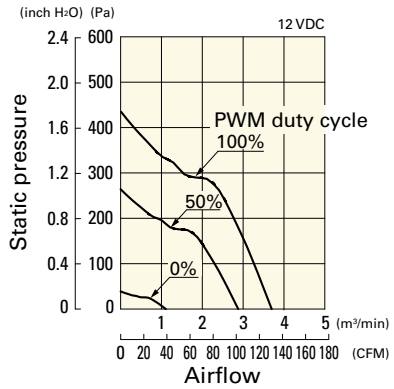
PWM duty - Speed characteristics example



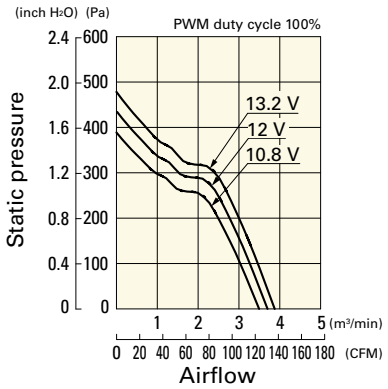
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GV0812P1H03 With pulse sensor with PWM control function

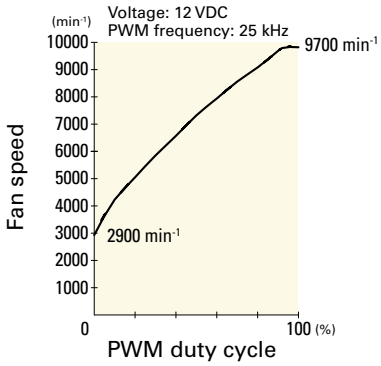
PWM duty cycle



Operating voltage range

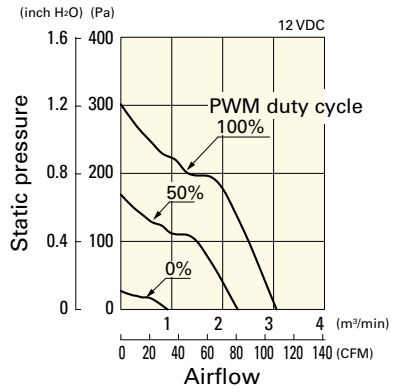


PWM duty - Speed characteristics example

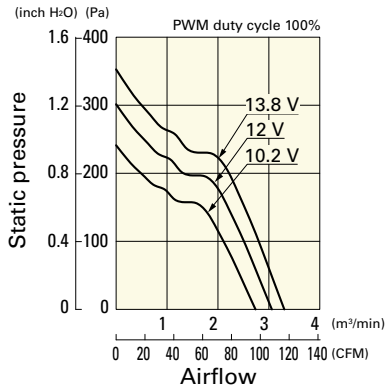


9GV0812P1F03 With pulse sensor with PWM control function

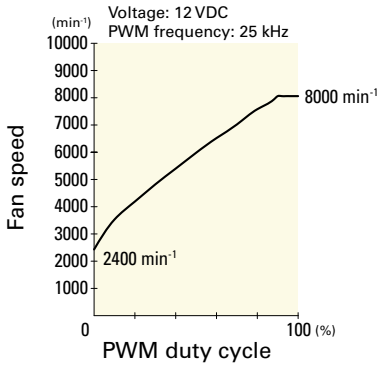
PWM duty cycle



Operating voltage range

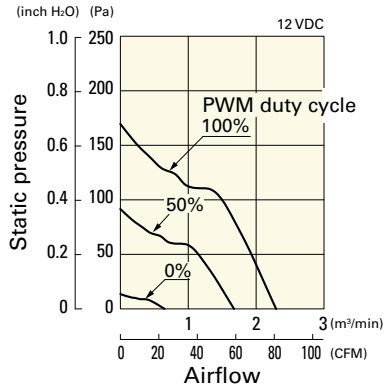


PWM duty - Speed characteristics example

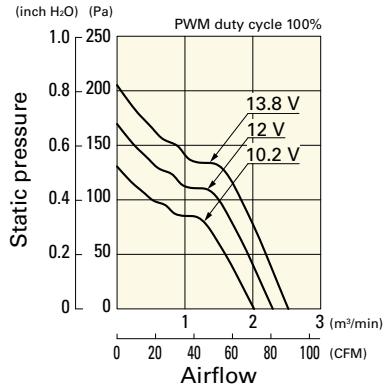


9GV0812P1M03 With pulse sensor with PWM control function

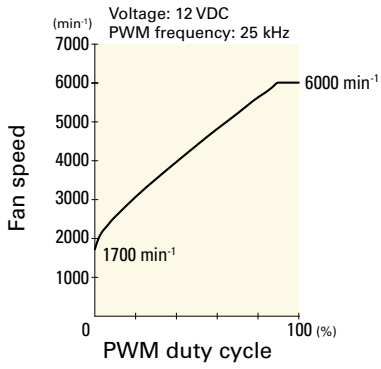
PWM duty cycle



Operating voltage range

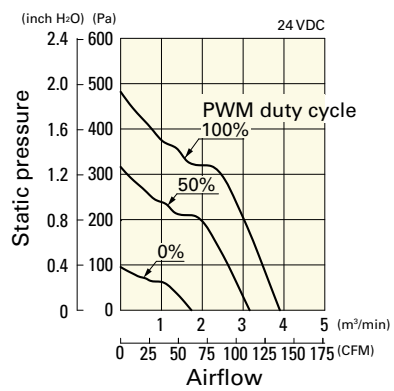


PWM duty - Speed characteristics example

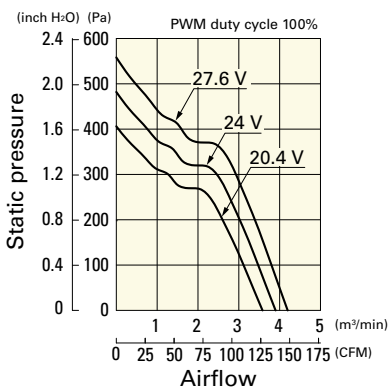


9GV0824P1G03 With pulse sensor with PWM control function

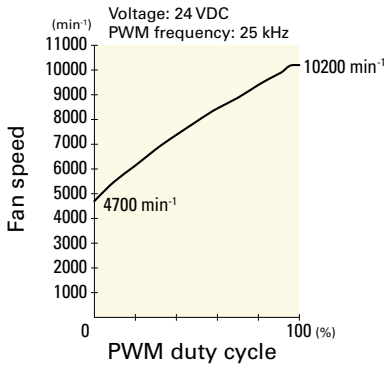
PWM duty cycle



Operating voltage range



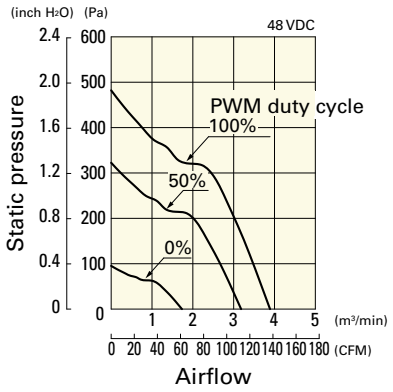
PWM duty - Speed characteristics example



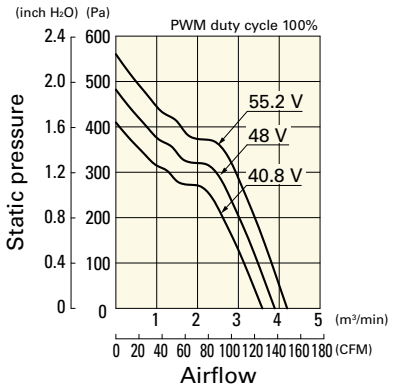
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GV0848P1G03 With pulse sensor with PWM control function

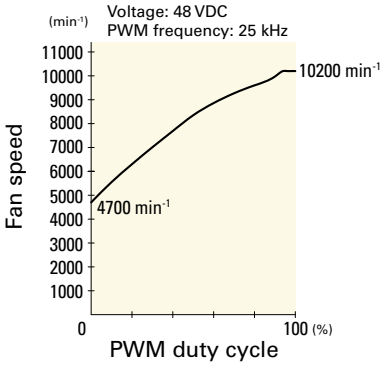
PWM duty cycle



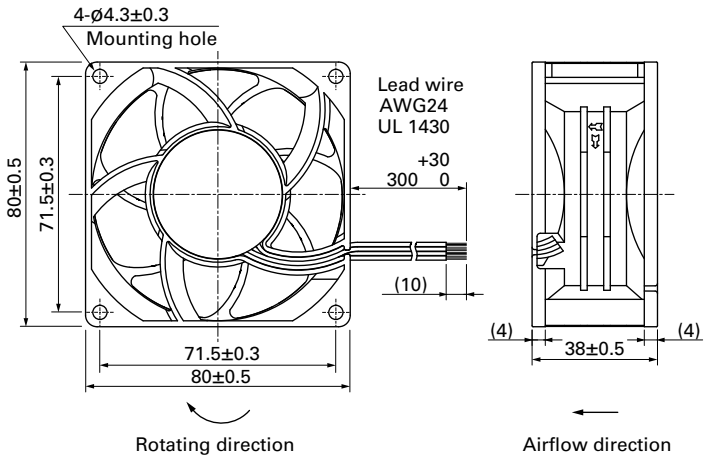
Operating voltage range



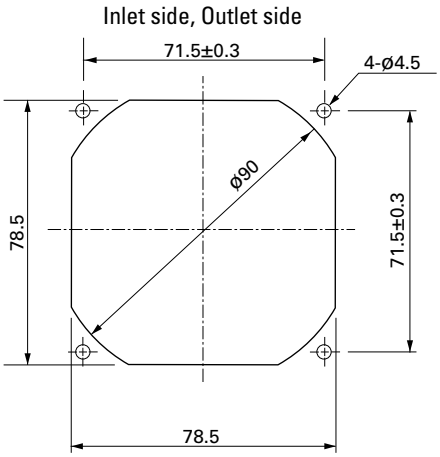
PWM duty - Speed characteristics example



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards page: p. 558

Model no.: 109-049E, 109-049H, 109-049C

Resin finger guards page: p. 565

Model no.: 109-1002G

Resin filter kits page: p. 566

Model no.: 109-1002F13 (13PPI), 109-1002F20 (20PPI),
109-1002F30 (30PPI), 109-1002F40 (40PPI)

80×80×38 mm

San Ace 80 9G type

General Specifications

- Material ..... Frame: Plastic (Flammability: UL 94V-0), Impeller: Plastic (Flammability: UL 94V-0)
- Expected life ..... See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60˚C, rated voltage) Expected life at 40°C is for reference only.
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection For details, please refer to p. 573.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- Sound pressure level (SPL) ..... At 1 m away from the air inlet
- Storage temperature ..... -30 to +70˚C (Non-condensing)
- Lead wire ..... ⊕Red ⊖Black (Sensor) Yellow
- 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 [m³/min]	Max. airflow [CFM]	Max. static pressure [Pa]	Max. static pressure [inchH₂O]	SPL [dB (A)]	Operating temperature [˚C]	Expected life [h]
9G0812K101	12	10.8 to 13.2	1.8	21.6	7800	3.1	107.3	310	1.285	58	-20 to +60	40000/60˚C (70000/40˚C)
9G0812G101		7 to 13.8	1.1	13.2	6300	2.55	90	211	0.847	51	-20 to +70	
9G0812H101			0.9	10.8	5700	2.28	80	171	0.687	49		
9G0824G101	24	20.4 to 27.6	0.56	13.4	6300	2.55	90	211	0.847	51		
9G0824H101			0.42	10.1	5700	2.28	80	171	0.687	49		
9G0848G101	48	40.8 to 55.2	0.27	13.0	6300	2.55	90	211	0.847	51		
9G0848H101			0.2	9.6	5700	2.28	80	171	0.687	49		

The following sensor and control options are available for selection.

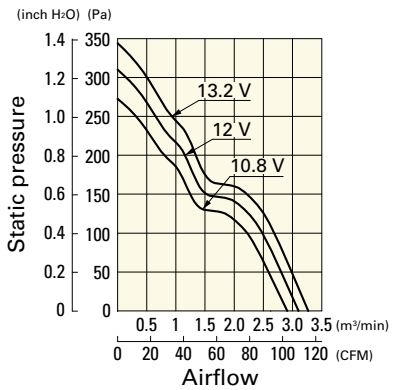
Available for all models. Without sensor

Differs according to the model. Refer to the table on p. 600. Lock sensor PWM control

Airflow - Static Pressure Characteristics

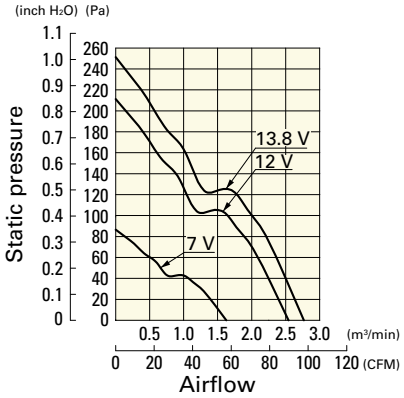
9G0812K101 With pulse sensor

Operating voltage range



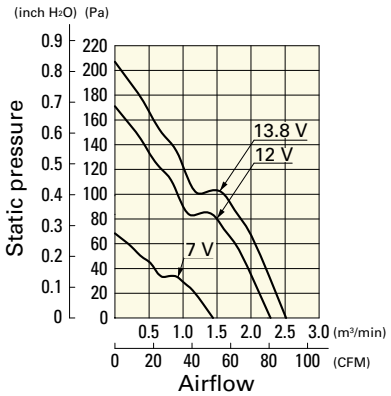
9G0812G101 With pulse sensor

Operating voltage range



9G0812H101 With pulse sensor

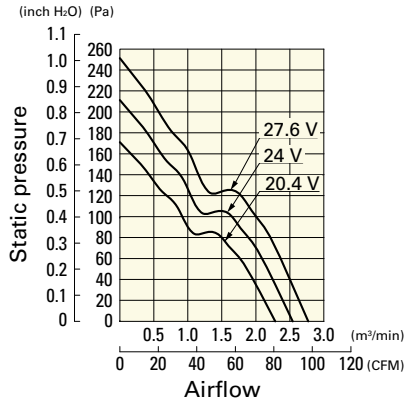
Operating voltage range



Airflow - Static Pressure Characteristics

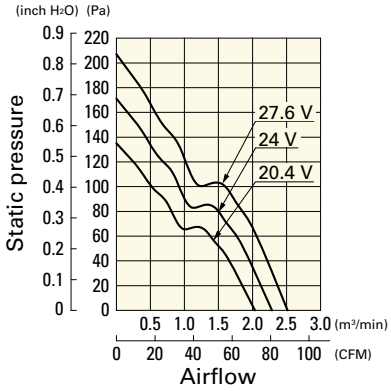
9G0824G101 With pulse sensor

Operating voltage range



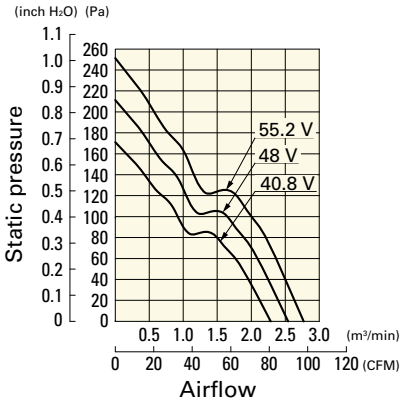
9G0824H101 With pulse sensor

Operating voltage range



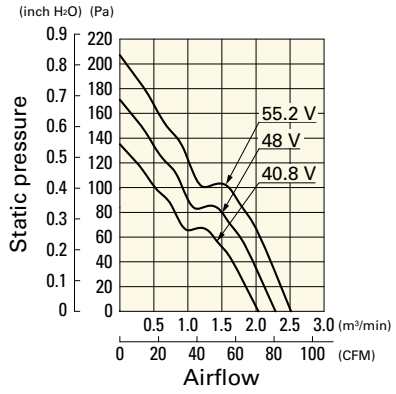
9G0848G101 With pulse sensor

Operating voltage range

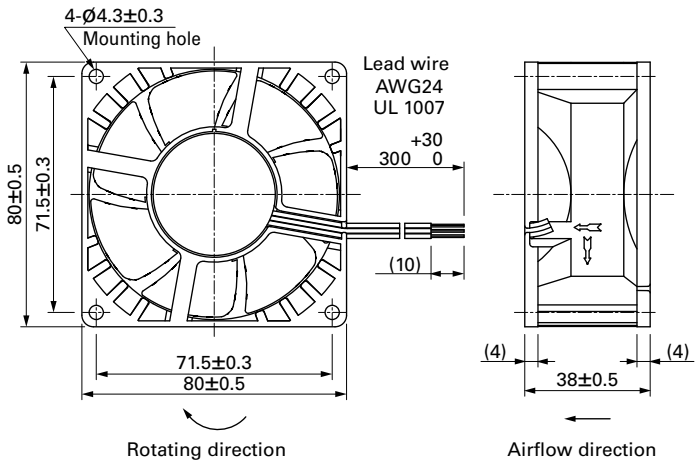


9G0848H101 With pulse sensor

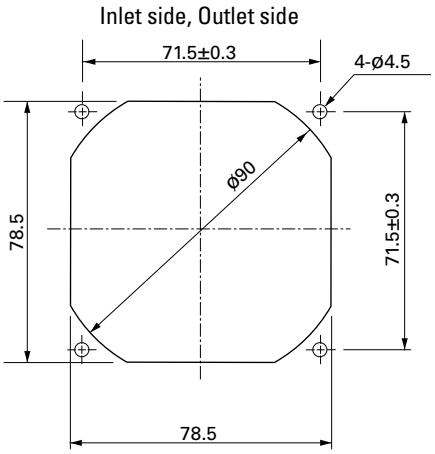
Operating voltage range



Dimensions (unit: mm) (With ribs)



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



Options

Finger guards
page: p. 558

Model no.: 109-049E, 109-049H, 109-049C

Resin filter kits
page: p. 566

Model no.: 109-1002F13 (13PPI), 109-1002F20 (20PPI),
109-1002F30 (30PPI), 109-1002F40 (40PPI)

Resin finger guards
page: p. 565

Model no.: 109-1002G