

Blower

Cooling fan specialized for high static pressure.

Model Numbering System

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

109B	C	12	H	C	2	-1
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Type name Frame size Voltage Speed code Sensor specifications Frame thickness Individual customer's spec

9B	MB	12	G	2	01	-1
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Type name Frame size Voltage Speed code Frame thickness Sensor specifications Individual customer's spec

Fans with PWM control function

9B	MB	12	P	2	G	01
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Type name Frame size Voltage PWM control function Frame thickness Speed code Individual customer's spec
(2 to 3 digits)

Type name	109B	9B									
Frame size (mm)	C	D	F, FB	G	J	M, MB, MC					
	52	76	120	160	127	97					
Voltage (V)	12	24									
	12	24									
Speed code	F	G	H	K	M	S	etc.				
Sensor specifications	A, 02		C, 01		D						
	Without a sensor		With a pulse sensor		With a lock sensor						
Frame thickness (mm)	1	2	7	6							
	40	30, 32, 33	15	20							

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 [m³/min] [CFM]	Max. static pressure [Pa] [inchH₂O]	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.

Blower

52x15 mm

San Ace B52 9BC 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. 547.
- 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  Yellow
- Mass 33 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 [m³/min]	Max. static pressure [Pa]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
109BC12GC7-1	12	6 to 13.8	0.12	1.44	6200	0.125	4.4	215	0.86	43
109BC12HC7-1			0.1	1.2	5600	0.112	4.0	165	0.66	40
109BC12FC7-1			0.08	0.96	5100	0.101	3.6	130	0.52	38
109BC12MC7-1			0.06	0.72	4600	0.091	3.2	100	0.4	35
109BC24GC7-1	24	12 to 27.6	0.07	1.68	6200	0.125	4.4	215	0.86	43
109BC24HC7-1			0.05	1.2	5600	0.112	4.0	165	0.66	40
109BC24FC7-1			0.04	0.96	5100	0.101	3.6	130	0.52	38

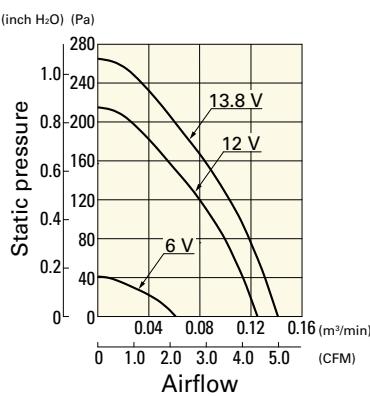
The following sensor and control options are available for selection.

Available for all models.  

Airflow - Static Pressure Characteristics

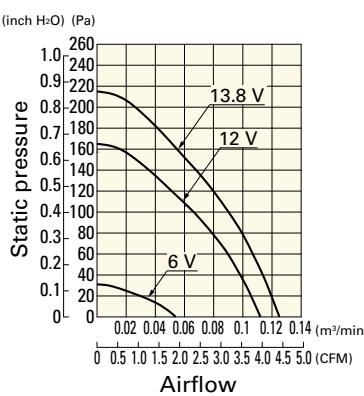
109BC12GC7-1 With pulse sensor

Operating voltage range



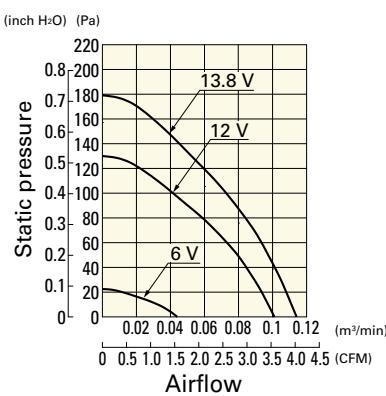
109BC12HC7-1 With pulse sensor

Operating voltage range



109BC12FC7-1 With pulse sensor

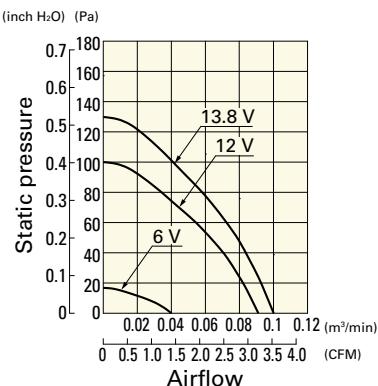
Operating voltage range



Airflow - Static Pressure Characteristics

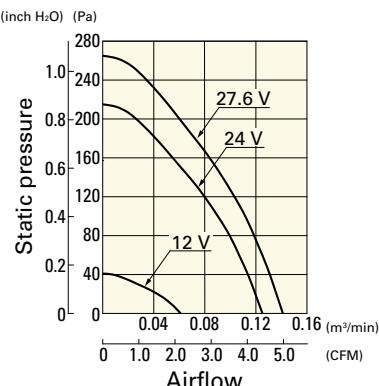
109BC12MC7-1 With pulse sensor

Operating voltage range



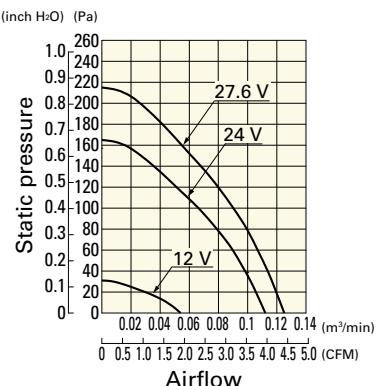
109BC24GC7-1 With pulse sensor

Operating voltage range



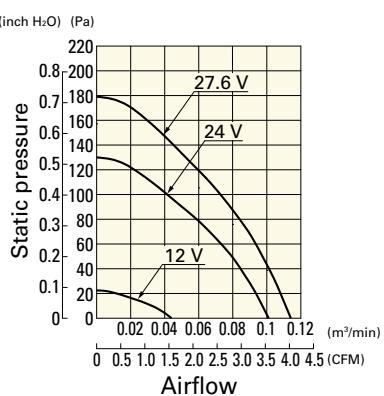
109BC24HC7-1 With pulse sensor

Operating voltage range

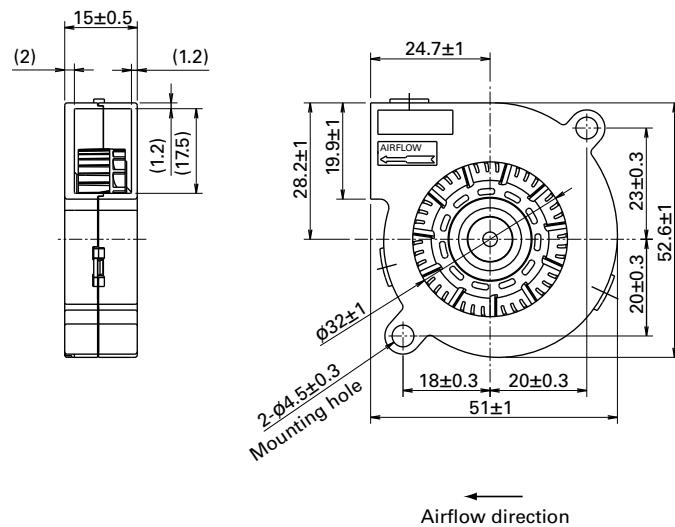
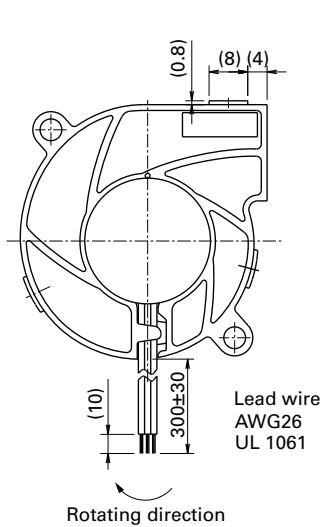


109BC24FC7-1 With pulse sensor

Operating voltage range



Dimensions (unit: mm)



76x20 mm

San Ace B76 9BD 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. 547.
- 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  Yellow
- Mass 58 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 [m³/min] [CFM]	Max. static pressure [Pa] [inch H₂O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9BD12SC6-1	12	5 to 13.8	0.28	3.36	4500	0.29 10.2	300 1.2	43	-20 to +70 40000/60°C (70000/40°C)	
9BD12HC6-1		5.5 to 13.8	0.21	2.52	4200	0.27 9.5	230 0.92	41		
9BD12FC6-1		5.5 to 13.8	0.18	2.16	3900	0.25 8.8	200 0.8	39		
9BD24SC6-1		10 to 27.6	0.14	3.36	4500	0.29 10.2	300 1.2	43		
9BD24HC6-1		10 to 27.6	0.12	2.88	4200	0.27 9.5	230 0.92	41		
9BD24FC6-1		10 to 27.6	0.1	2.4	3900	0.25 8.8	200 0.8	39		

The following sensor and control options are available for selection.

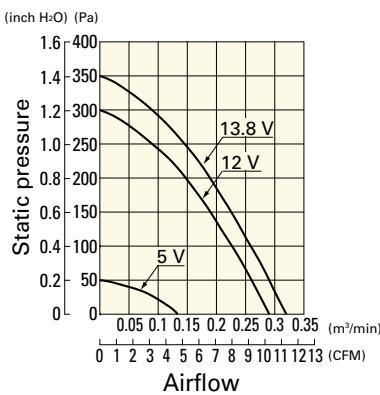
Available for all models.  

Differs according to the model. Refer to the table on p. 566. 

Airflow - Static Pressure Characteristics

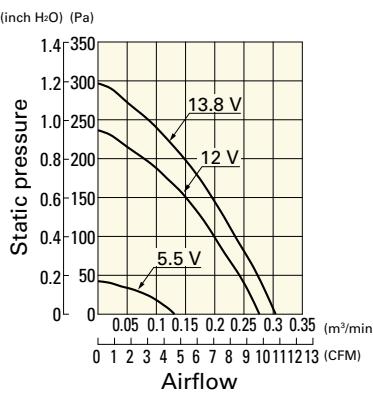
9BD12SC6-1 With pulse sensor

Operating voltage range



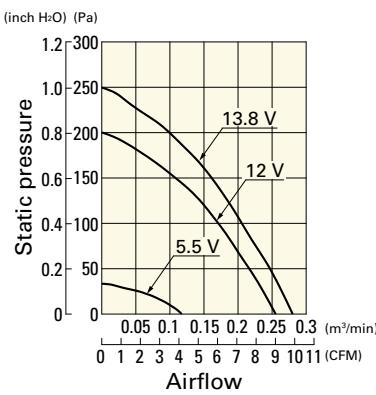
9BD12HC6-1 With pulse sensor

Operating voltage range



9BD12FC6-1 With pulse sensor

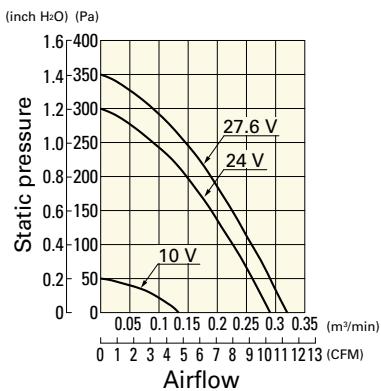
Operating voltage range



Airflow - Static Pressure Characteristics

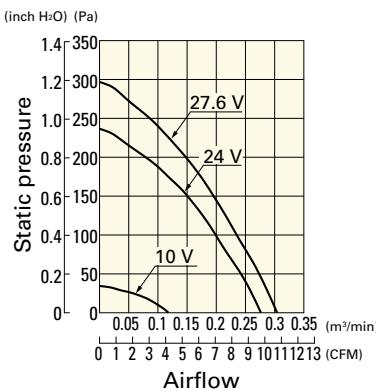
9BD24SC6-1 With pulse sensor

Operating voltage range



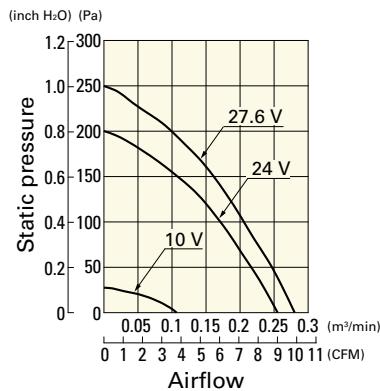
9BD24HC6-1 With pulse sensor

Operating voltage range

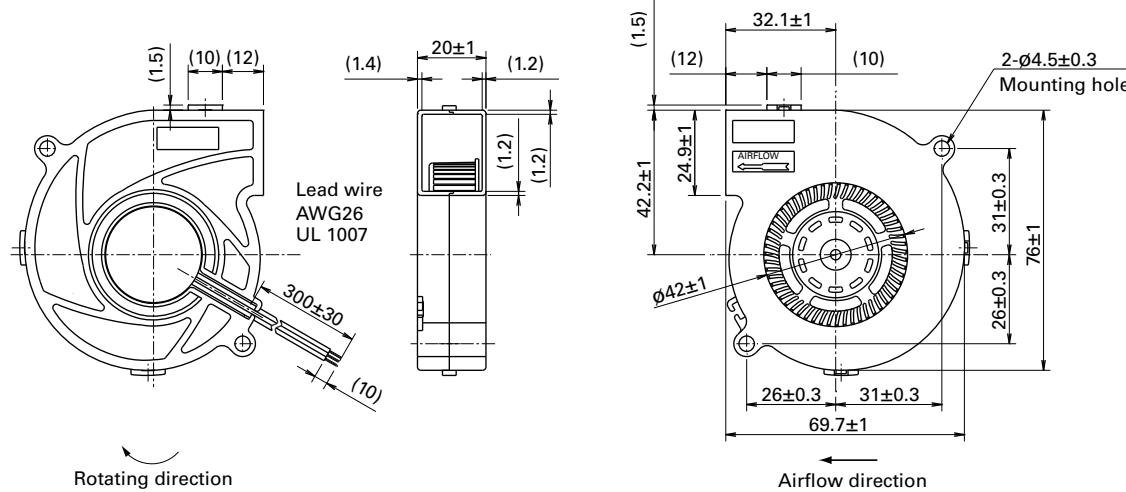


9BD24FC6-1 With pulse sensor

Operating voltage range



Dimensions (unit: mm)



76x30 mm

San Ace B76 9BD 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. 547.
- 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  Yellow
- Mass 100 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 [m³/min] [CFM]	Max. static pressure [Pa] [inch H₂O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
109BD12HC2	12	10.2 to 13.8	0.37	4.44	3000	0.36	12.7	151.9 0.61	41.5	-20 to +60
109BD12FC2			0.27	3.24	2600	0.31	10.9	98 0.394	37	-20 to +70
109BD12MC2			0.14	1.68	2100	0.25	8.8	58.8 0.236	32.5	
109BD24HC2	24	20.4 to 27.6	0.17	4.08	3000	0.36	12.7	151.9 0.61	41.5	-20 to +60
109BD24FC2			0.14	3.36	2600	0.31	10.9	98 0.394	37	-20 to +70
109BD24MC2			0.1	2.4	2100	0.25	8.8	58.8 0.236	32.5	

The following sensor and control options are available for selection.

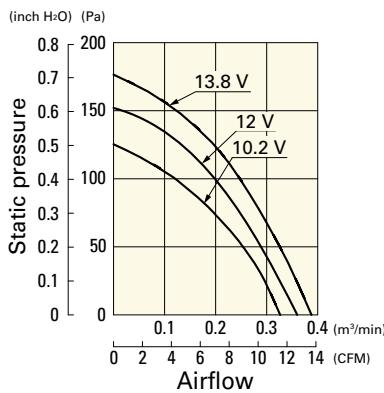
Available for all models.  

Differs according to the model. Refer to the table on p. 561. 

Airflow - Static Pressure Characteristics

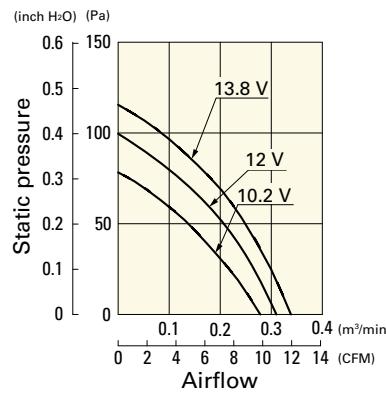
109BD12HC2 With pulse sensor

Operating voltage range



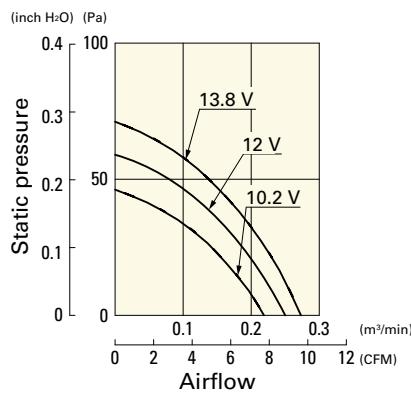
109BD12FC2 With pulse sensor

Operating voltage range



109BD12MC2 With pulse sensor

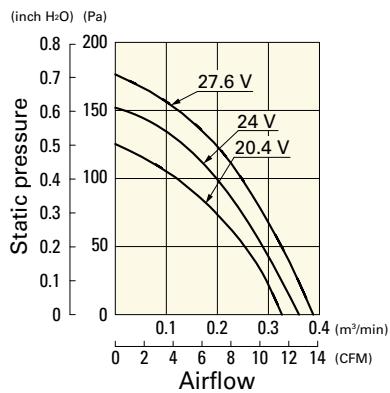
Operating voltage range



Airflow - Static Pressure Characteristics

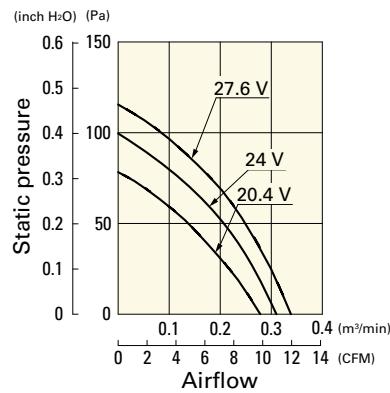
109BD24HC2 With pulse sensor

Operating voltage range



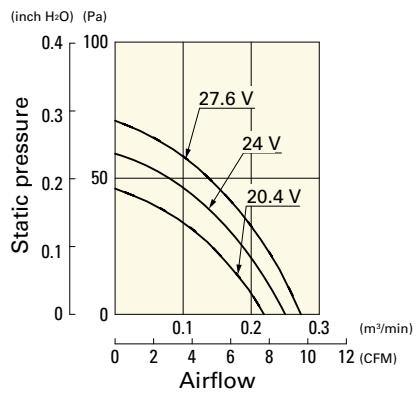
109BD24FC2 With pulse sensor

Operating voltage range

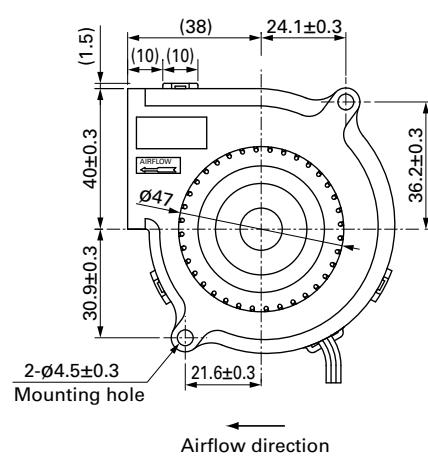
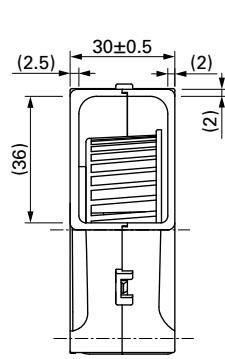
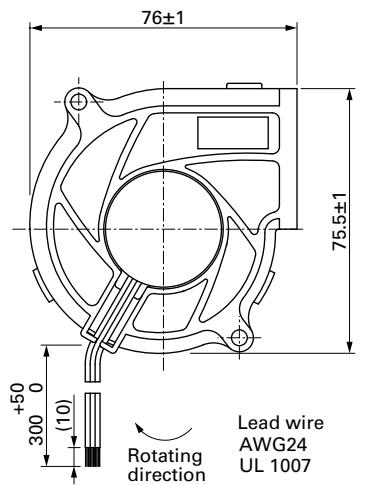


109BD24MC2 With pulse sensor

Operating voltage range



■ Dimensions (unit: mm)



Blower 76 mm DC

97x33 mm

San Ace B97 9BMC 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. 547.
- 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  Yellow  Brown
- Mass 200 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 [m³/min] [CFM]	Max. static pressure [Pa] [inchH₂O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9BMC12P2G001	12	10.8 to 13.2	100	6.2	74.4	8200	1.85 65.3	1950 7.83	69	-20 to +70	40000/60°C (70000/40°C)
			20	0.38	4.56	2800	0.58 20.4	121.0 0.48	44		
9BMC24P2G001	24	21.6 to 26.4	100	3.1	74.4	8200	1.85 65.3	1950 7.83	69		
			20	0.19	4.56	2800	0.58 20.4	121.0 0.48	44		

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

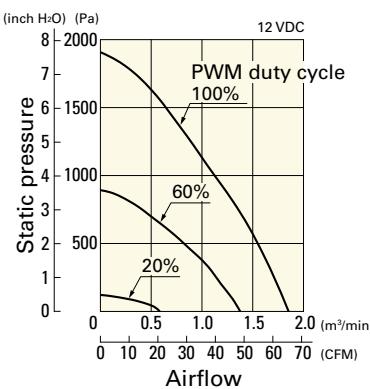
The following sensor and control options are available for selection.

Differs according to the model. Refer to the table on p. 567. 

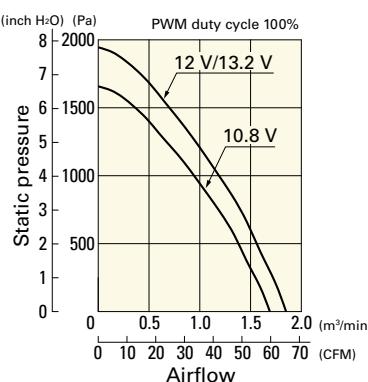
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9BMC12P2G001 With pulse sensor with PWM control function

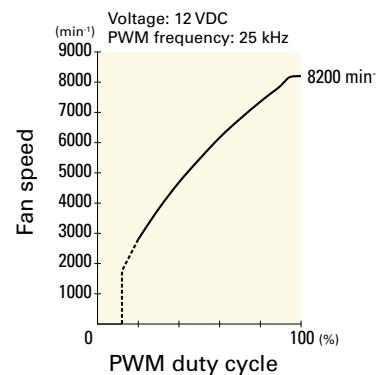
PWM duty cycle



Operating voltage range



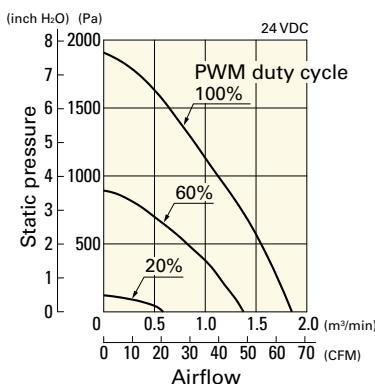
PWM duty - Speed characteristics example



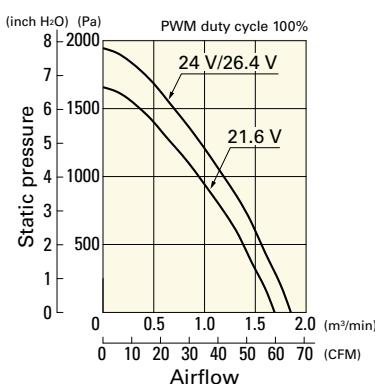
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9BMC24P2G001 With pulse sensor with PWM control function

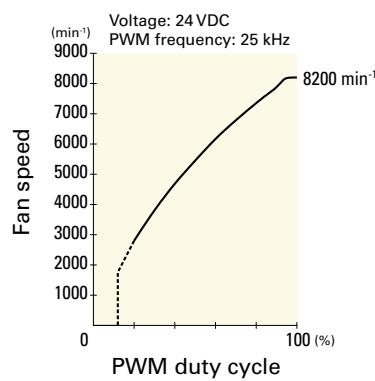
PWM duty cycle



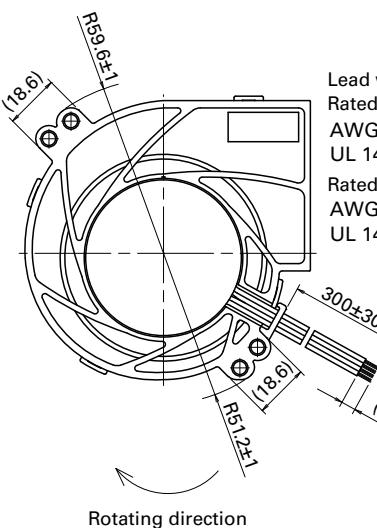
Operating voltage range



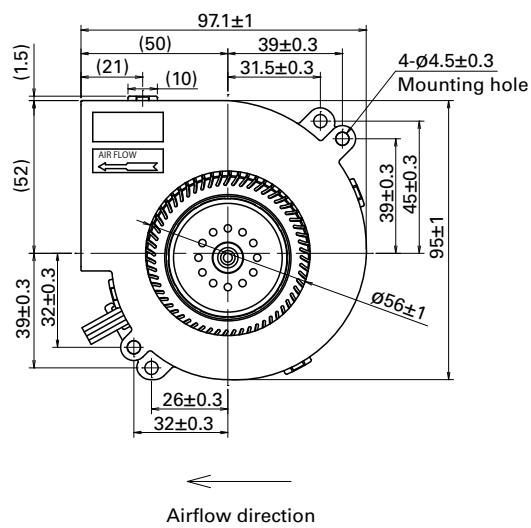
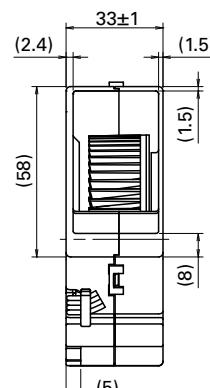
PWM duty - Speed characteristics example



Dimensions (unit: mm)



Lead wire
Rated voltage 12 V fan
AWG 20
UL 1430
Rated voltage 24 V fan
AWG 24
UL 1430



Airflow direction

Blower 97 mm DC



97x33 mm

San Ace B97 9BMB 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. 547.
- 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
(For models without PWM control function, there is no speed control wiring.)
- Mass 190 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 [m³/min] [CFM]	Max. static pressure [Pa] [inchH₂O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9BMB12P2K01	12	10.8 to 13.2	100	3.4	40.8	6850	1.61 56.8	1280 5.14	66	-20 to +70	40000/60°C
9BMB12P2G01			100	1.8	21.6	5750	1.34 47.3	760 3.05	61		
9BMB12P2S01			100	1.4	16.8	5250	1.22 43.1	610 2.45	59		
9BMB12P2H01			100	1.1	13.2	4850	1.11 39.2	490 1.968	57		
9BMB12P2F01			100	0.9	10.8	4500	1.04 36.7	410 1.64	56		
9BMB24P2K01	24	21.6 to 26.4	100	1.62	38.88	6850	1.61 56.8	1280 5.14	66		
9BMB24P2G01			100	0.83	19.92	5750	1.34 47.3	760 3.05	61		
9BMB24P2S01			100	0.7	16.8	5250	1.22 43.1	610 2.45	59		
9BMB24P2H01			100	0.55	13.2	4850	1.11 39.2	490 1.968	57		
9BMB24P2F01			100	0.45	10.8	4500	1.04 36.7	410 1.64	56		

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

The following sensor and control options are available for selection.

Available for all models.

Differs according to the model. Refer to the table on pp. 566 to 567.

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 [m³/min] [CFM]	Max. static pressure [Pa] [inchH₂O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9BMB12K201	12	7 to 13.2	3.4	40.8	6850	1.61 56.8	1280 5.14	66	-20 to +70	40000/60°C
9BMB12G201			1.8	21.6	5750	1.34 47.3	760 3.052	61		
9BMB12S201			1.4	16.8	5250	1.22 43.1	610 2.45	59		
9BMB12H201			1.1	13.2	4850	1.11 39.2	490 1.968	57		
9BMB12F201			0.9	10.8	4500	1.04 36.7	410 1.647	56		
9BMB24K201	24	21.6 to 26.4	1.62	38.88	6850	1.61 56.8	1280 5.14	66		
9BMB24G201			0.83	19.9	5750	1.34 47.3	760 3.052	61		
9BMB24S201			0.7	16.8	5250	1.22 43.1	610 2.45	59		
9BMB24H201			0.55	13.2	4850	1.11 39.2	490 1.968	57		
9BMB24F201			0.45	10.8	4500	1.04 36.7	410 1.647	56		

The following sensor and control options are available for selection.

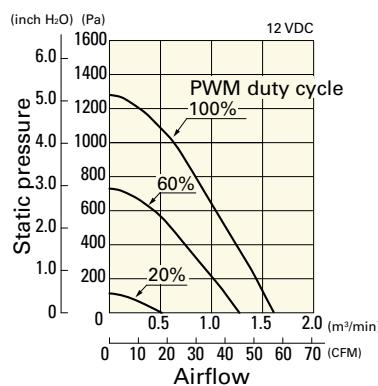
Available for all models.

Differs according to the model. Refer to the table on pp. 566 to 567.

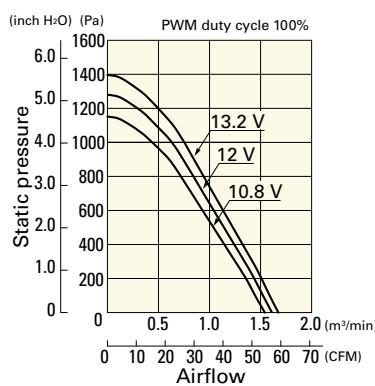
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9BMB12P2K01 With pulse sensor with PWM control function

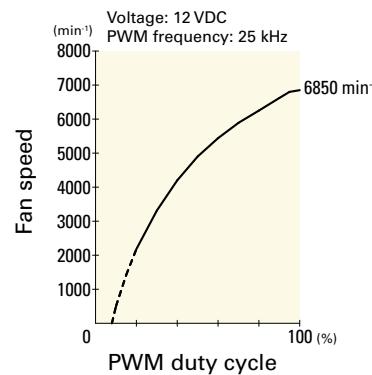
PWM duty cycle



Operating voltage range

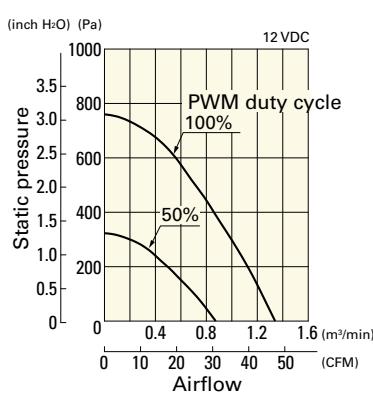


PWM duty - Speed characteristics example

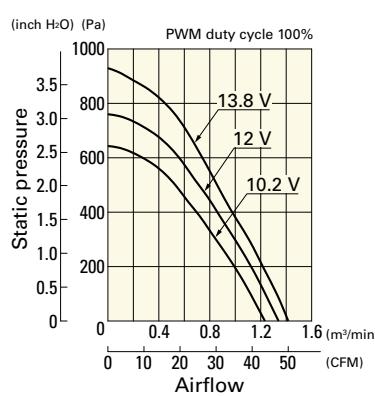


9BMB12P2G01 With pulse sensor with PWM control function

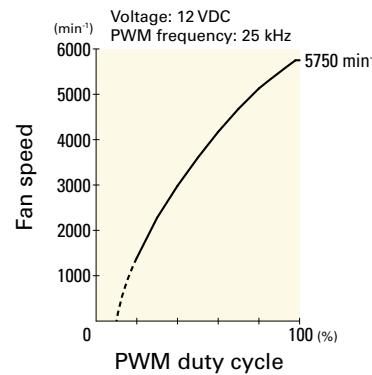
PWM duty cycle



Operating voltage range

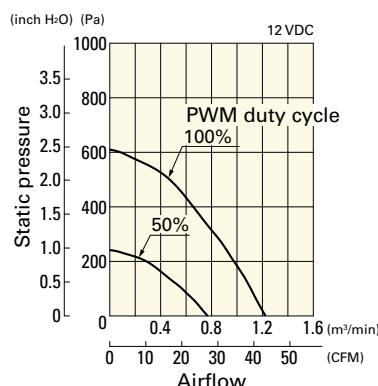


PWM duty - Speed characteristics example

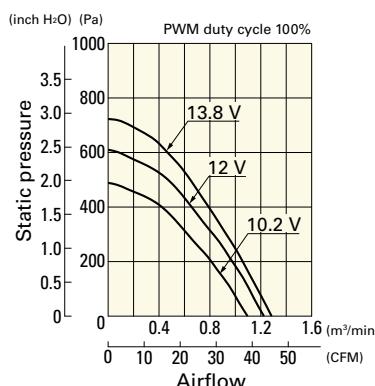


9BMB12P2S01 With pulse sensor with PWM control function

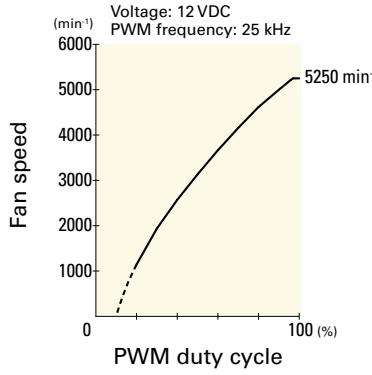
PWM duty cycle



Operating voltage range

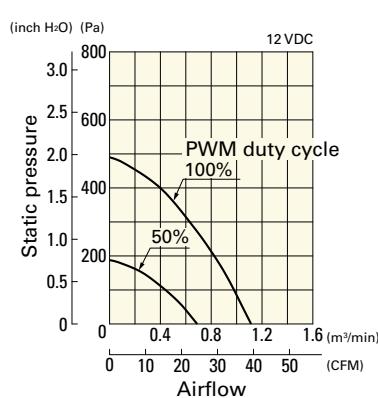


PWM duty - Speed characteristics example

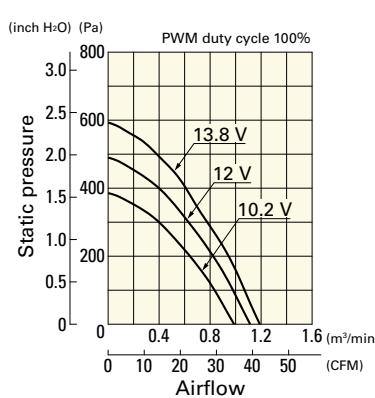


9BMB12P2H01 With pulse sensor with PWM control function

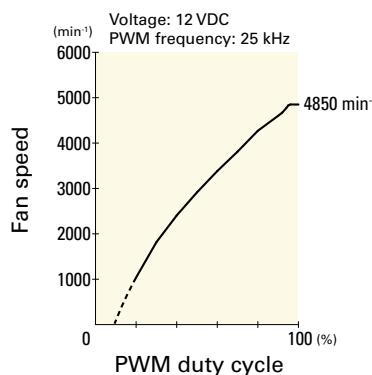
PWM duty cycle



Operating voltage range



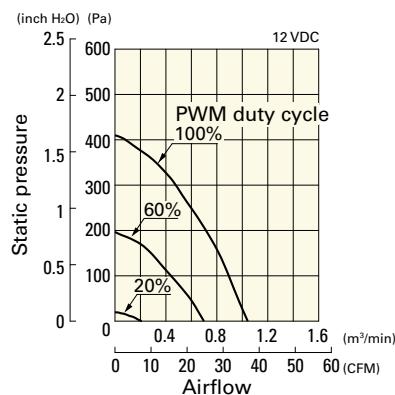
PWM duty - Speed characteristics example



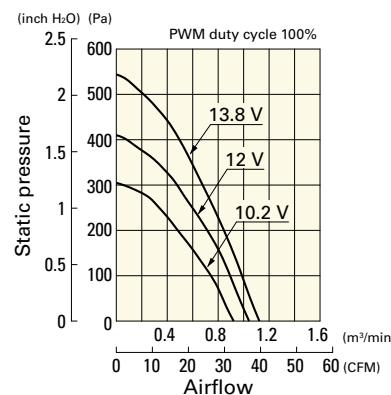
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9BMB12P2F01 With pulse sensor with PWM control function

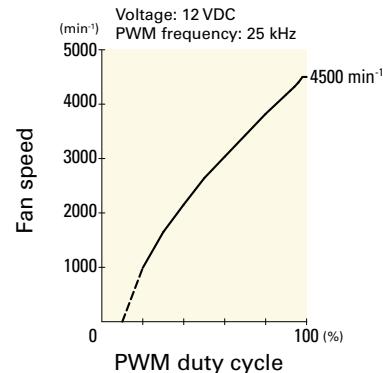
PWM duty cycle



Operating voltage range

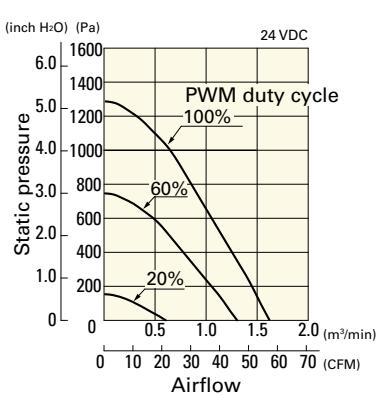


PWM duty - Speed characteristics example

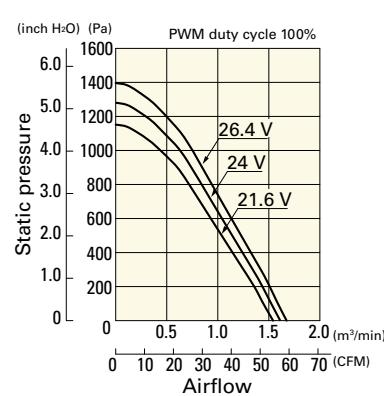


9BMB24P2K01 With pulse sensor with PWM control function

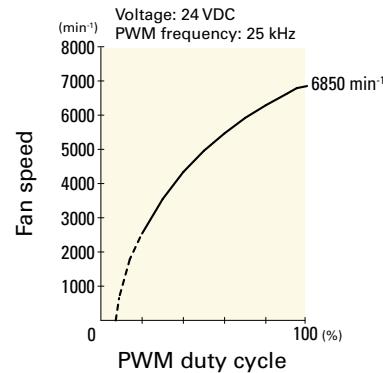
PWM duty cycle



Operating voltage range

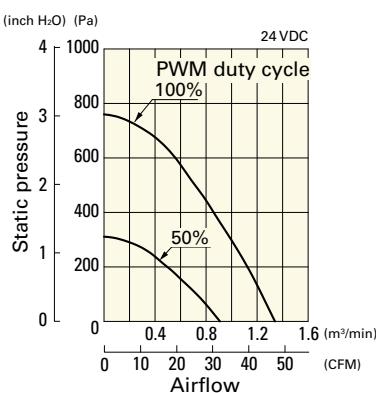


PWM duty - Speed characteristics example

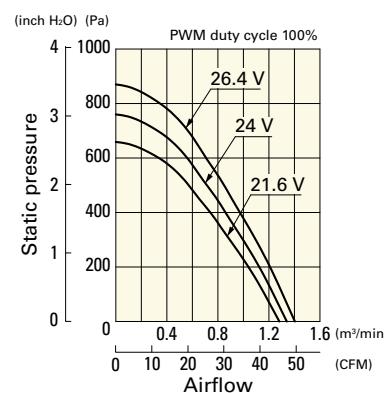


9BMB24P2G01 With pulse sensor with PWM control function

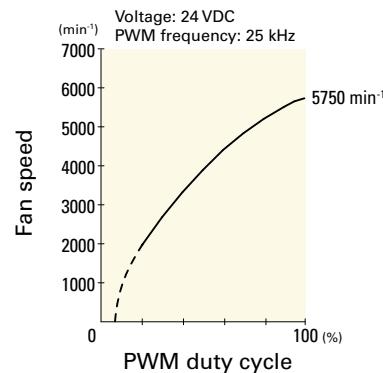
PWM duty cycle



Operating voltage range

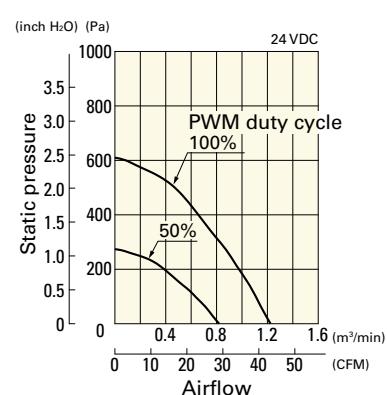


PWM duty - Speed characteristics example

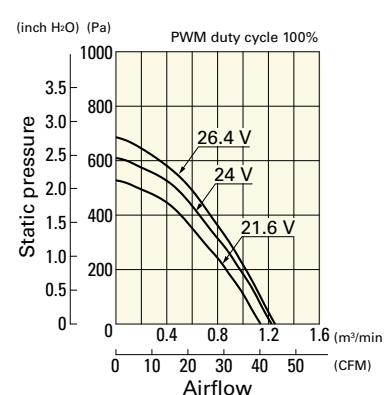


9BMB24P2S01 With pulse sensor with PWM control function

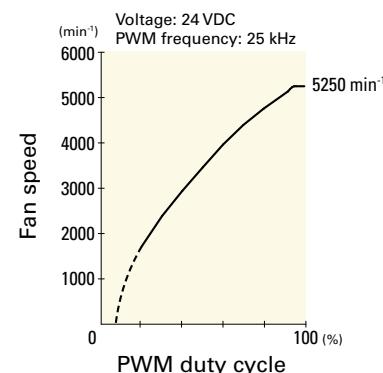
PWM duty cycle



Operating voltage range



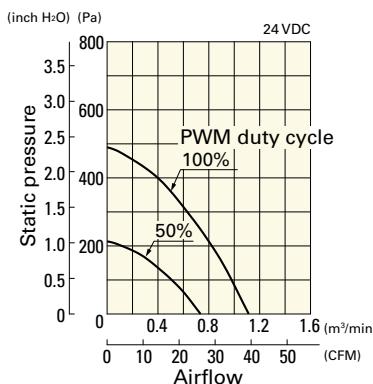
PWM duty - Speed characteristics example



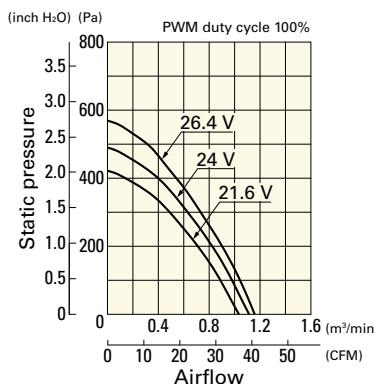
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9BMB24P2H01 With pulse sensor with PWM control function

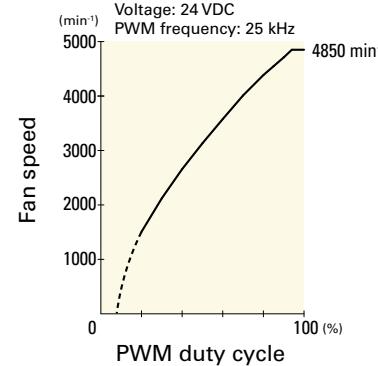
PWM duty cycle



Operating voltage range

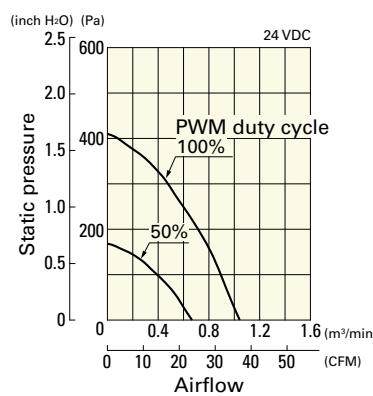


PWM duty - Speed characteristics example

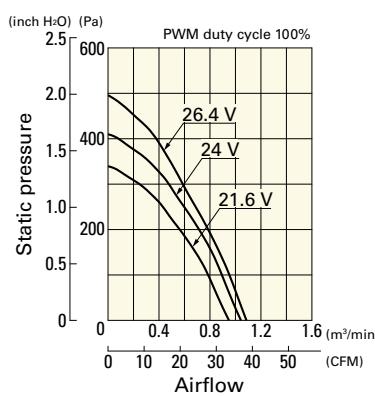


9BMB24P2F01 With pulse sensor with PWM control function

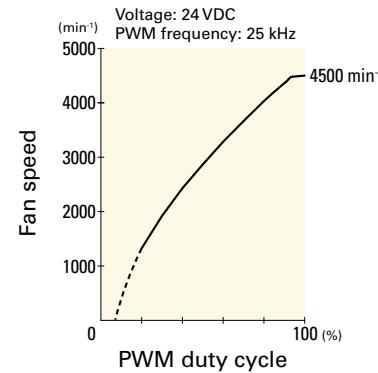
PWM duty cycle



Operating voltage range

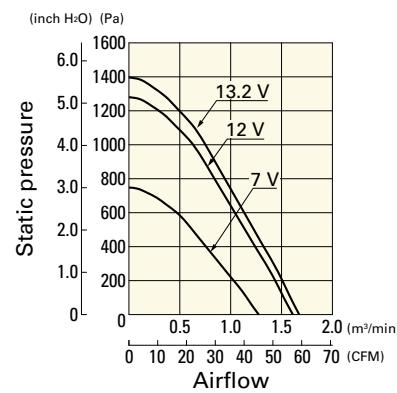


PWM duty - Speed characteristics example



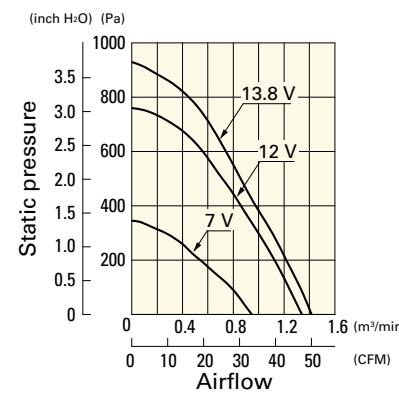
9BMB12K201 With pulse sensor

Operating voltage range



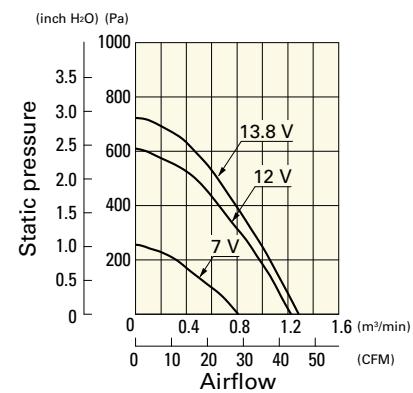
9BMB12G201 With pulse sensor

Operating voltage range



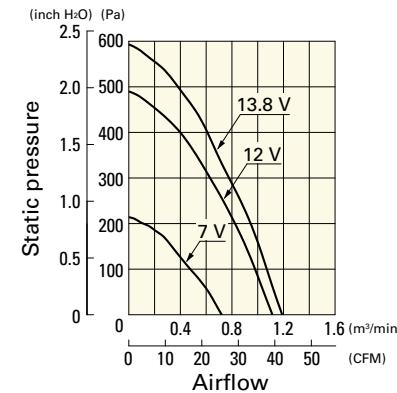
9BMB12S201 With pulse sensor

Operating voltage range



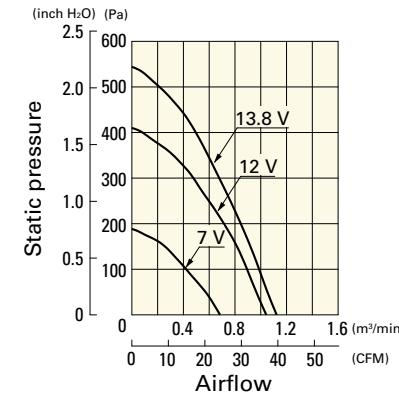
9BMB12H201 With pulse sensor

Operating voltage range



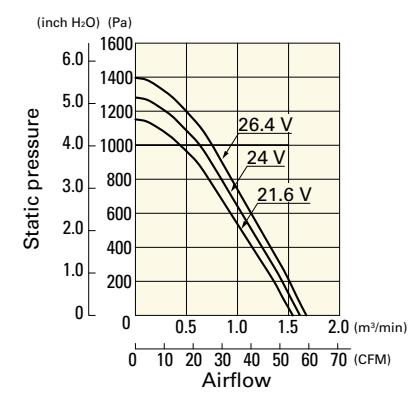
9BMB12F201 With pulse sensor

Operating voltage range



9BMB24K201 With pulse sensor

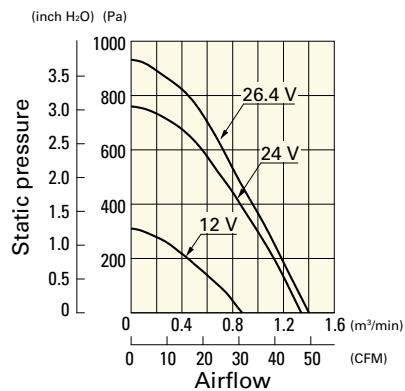
Operating voltage range



Airflow - Static Pressure Characteristics

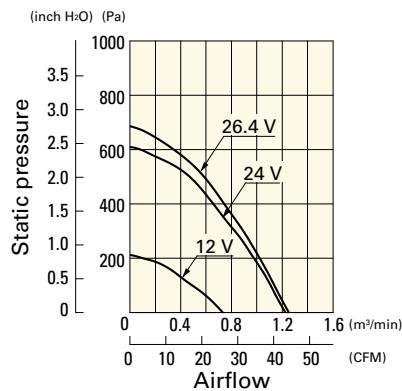
9BMB24G201 With pulse sensor

Operating voltage range



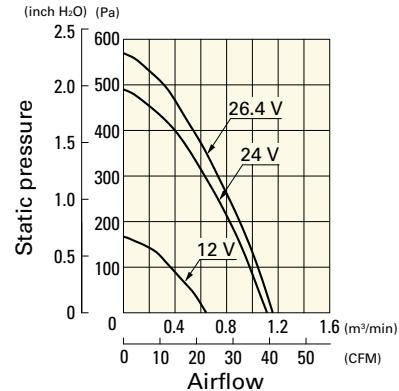
9BMB24S201 With pulse sensor

Operating voltage range



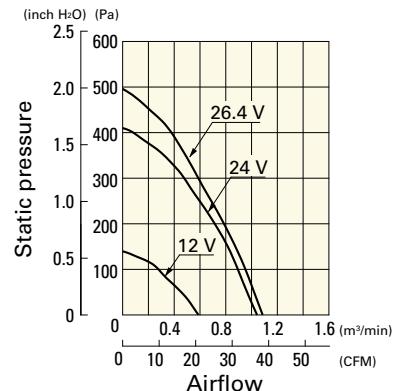
9BMB24H201 With pulse sensor

Operating voltage range

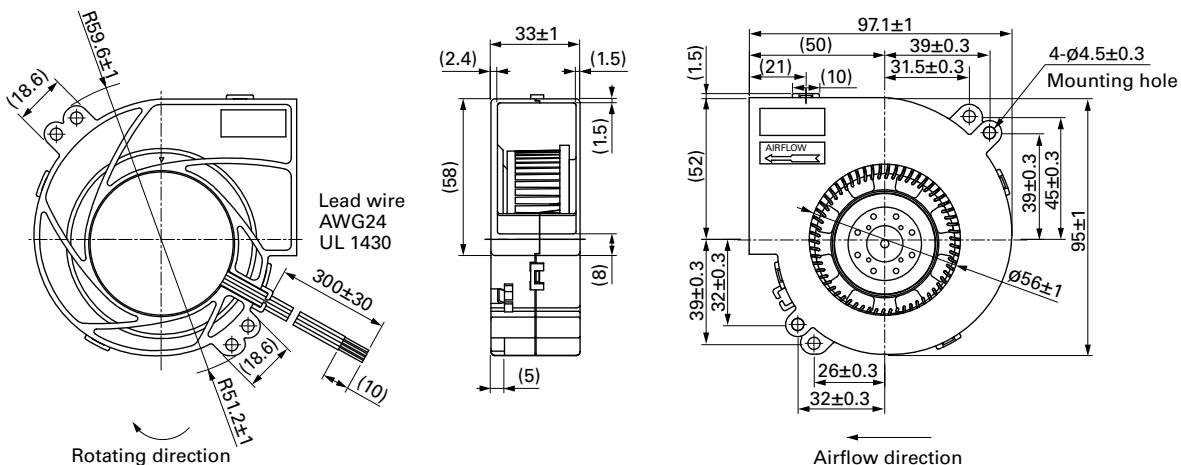


9BMB24F201 With pulse sensor

Operating voltage range



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



97x33 mm

San Ace B97 9BM 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. 547.
- 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  Yellow
- Mass 175 g

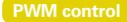
Specifications

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 [m³/min]	Max. static pressure [Pa]	Max. static pressure [inchH₂O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
109BM12GC2-1	12	7 to 13.8	0.6	7.2	3800	0.82	28.9	281	1.129	51.5	40000/60°C (70000/40°C)
109BM12HC2-1			0.4	4.8	3300	0.71	25.1	204	0.819	48.5	
109BM12MC2-1			0.26	3.12	2700	0.58	20.5	119	0.478	43.5	
109BM24GC2-1	24	12 to 27.6	0.31	7.44	3800	0.82	28.9	281	1.129	51.5	-20 to +70
109BM24HC2-1			0.26	6.24	3300	0.71	25.1	204	0.819	48.5	
109BM24MC2-1			0.15	3.6	2700	0.58	20.5	119	0.478	43.5	

The following sensor and control options are available for selection.

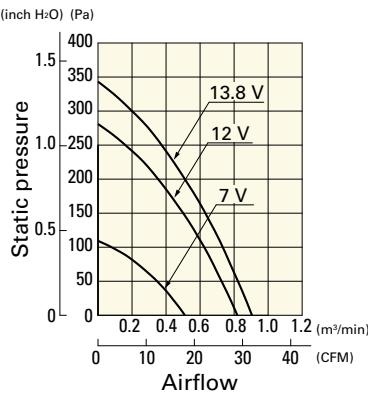
Available for all models.  

Differs according to the model. Refer to the table on p. 561. 

Airflow - Static Pressure Characteristics

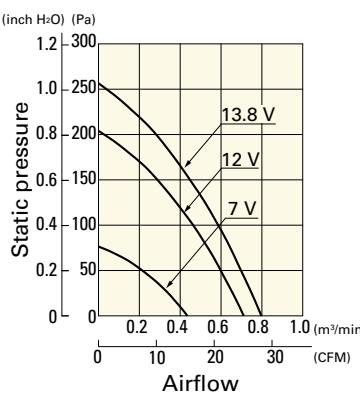
109BM12GC2-1 With pulse sensor

Operating voltage range



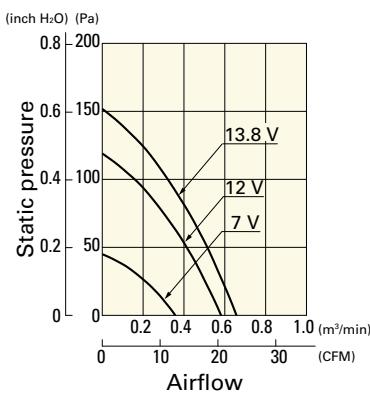
109BM12HC2-1 With pulse sensor

Operating voltage range



109BM12MC2-1 With pulse sensor

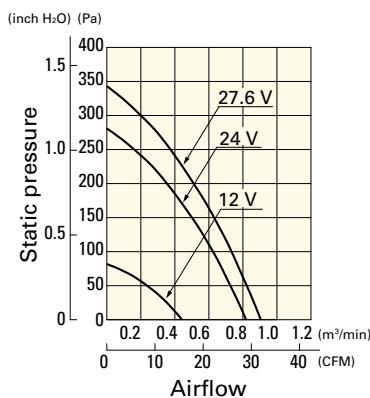
Operating voltage range



Airflow - Static Pressure Characteristics

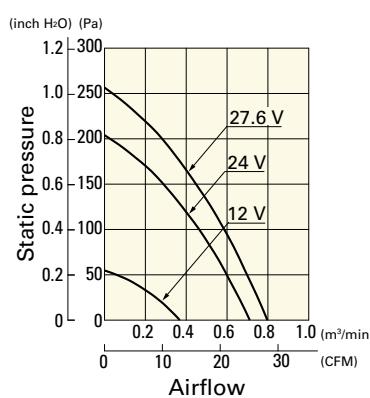
109BM24GC2-1 With pulse sensor

Operating voltage range



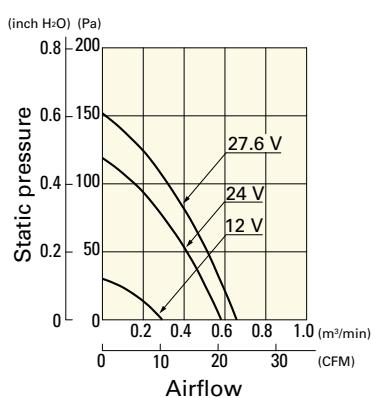
109BM24HC2-1 With pulse sensor

Operating voltage range

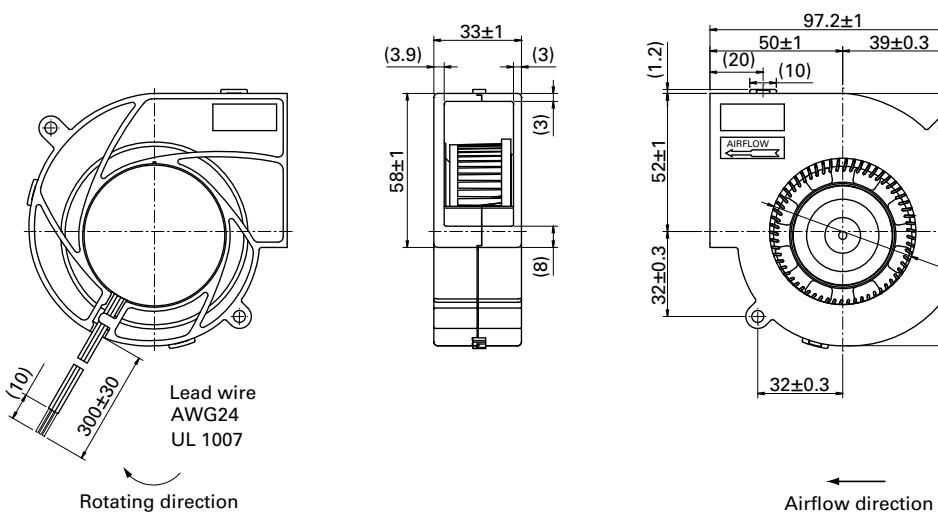


109BM24MC2-1 With pulse sensor

Operating voltage range



■ Dimensions (unit: mm)





120x32 mm

San Ace B120 9BFB 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. 547.
- 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 340 g

Specifications

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

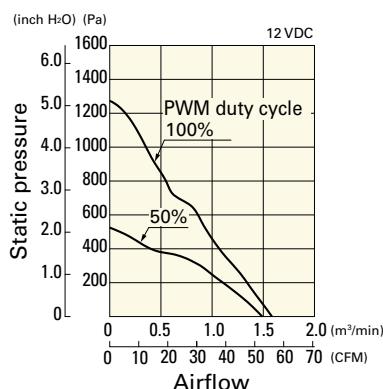
Model no.	Rated voltage [V]	Operating voltage range [V]	PWM duty cycle* [%]	Rated current [A]	Rated input [W]	Rated speed [min⁻¹]	Max. airflow [m³/min] [CFM]	Max. static pressure [Pa] [inchH₂O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9BFB12P2H003**	12	10.8 to 13.2	100	2.3	27.6	3750	1.6 56.5	1250 5.02	62	-20 to +70	40000/60°C (70000/40°C)
9BFB24P2H003	24	21.6 to 26.4		1.1	26.4	3750	1.6 56.5	1250 5.02	62		
			0	0.12	2.88	1300	0.46 16.2	43 0.17	41		

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

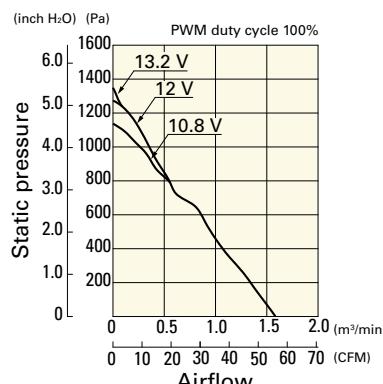
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9BFB12P2H003 With pulse sensor with PWM control function

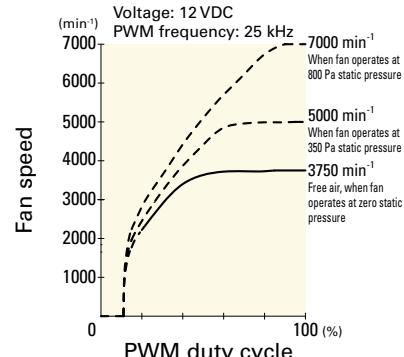
PWM duty cycle



Operating voltage range

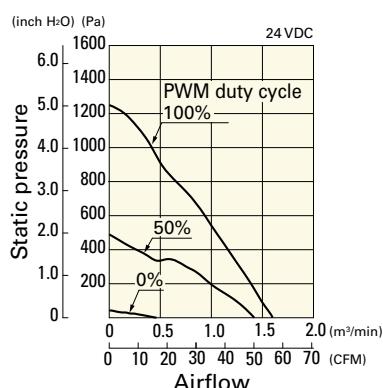


PWM duty - Speed characteristics example

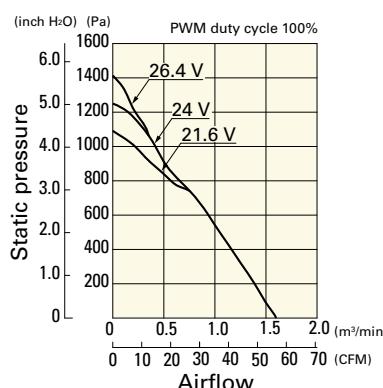


9BFB24P2H003 With pulse sensor with PWM control function

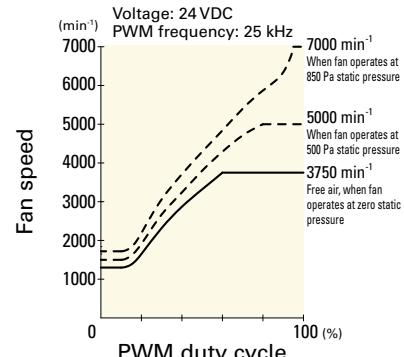
PWM duty cycle



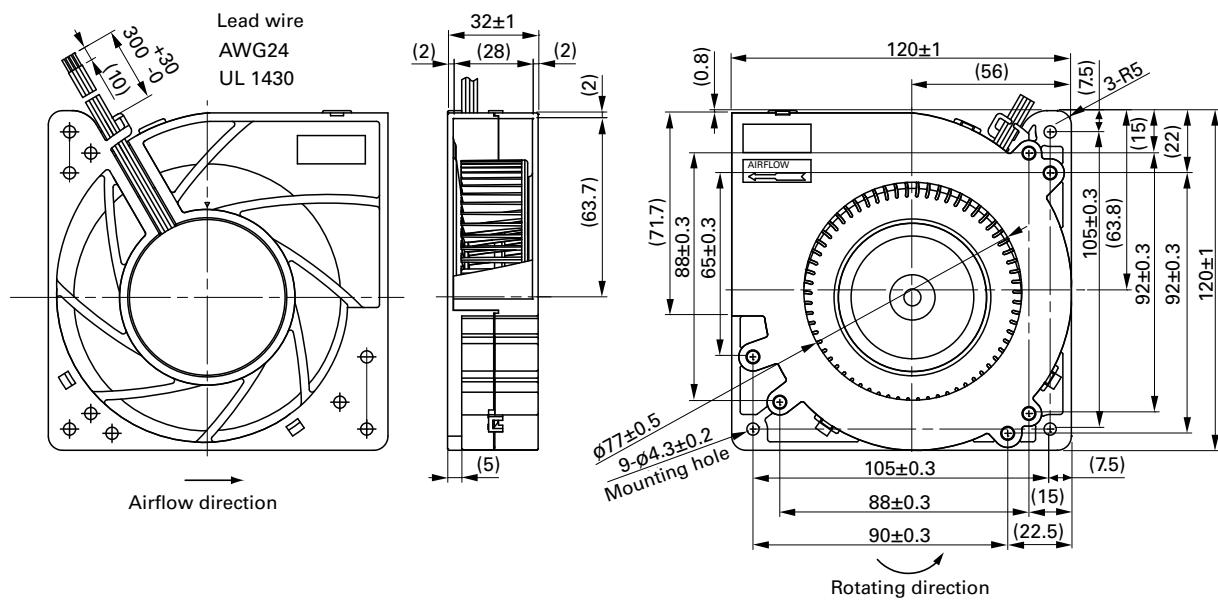
Operating voltage range



PWM duty - Speed characteristics example



■ Dimensions (unit: mm)



127x32 mm

San Ace B127 9BJ 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. 547.
- 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  Yellow
- Mass 290 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 [m³/min] [CFM]	Max. static pressure [Pa] [inch H₂O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
109BJ12HC2	12	10.2 to 13.8	0.52	6.24	2400	0.78	27.5	205.8 0.826	46	-20 to +70
109BJ12MC2			0.29	3.48	1900	0.61	21.5	109.8 0.441	40	
109BJ24HC2	24	20.4 to 27.6	0.26	6.24	2400	0.78	27.5	205.8 0.826	46	-20 to +60
109BJ24MC2			0.15	3.6	1900	0.61	21.5	109.8 0.441	40	

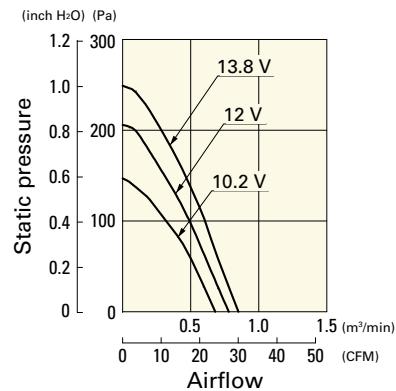
The following sensor and control options are available for selection.

Available for all models.  

Airflow - Static Pressure Characteristics

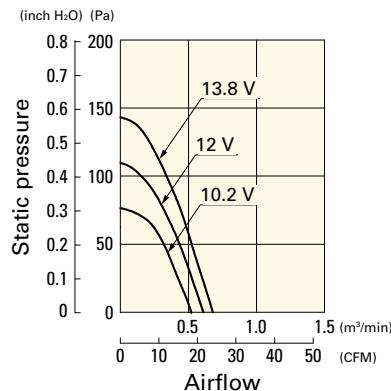
109BJ12HC2 With pulse sensor

Operating voltage range



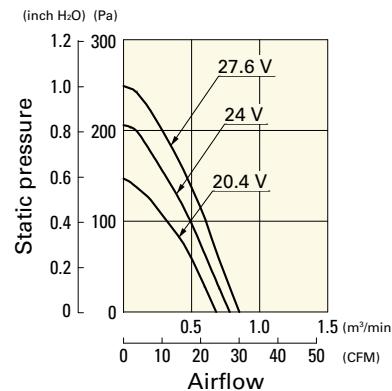
109BJ12MC2 With pulse sensor

Operating voltage range



109BJ24HC2 With pulse sensor

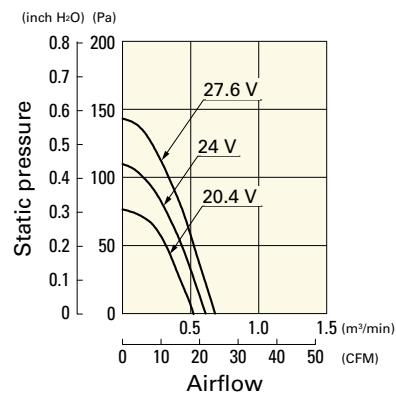
Operating voltage range



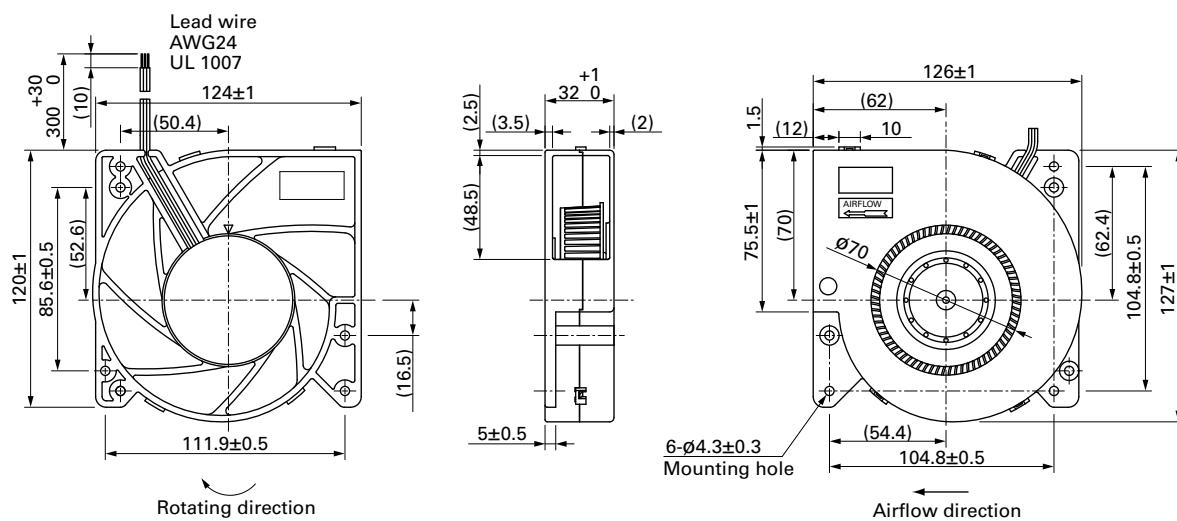
Airflow - Static Pressure Characteristics

109BJ24MC2 With pulse sensor

Operating voltage range



Dimensions (unit: mm)



160x40 mm

San Ace B160 9BG 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. 547.
- 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  Yellow
- Mass 580 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 [m³/min]	Max. static pressure [Pa]	Max. static pressure [inch H₂O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
109BG12HC1	12	10.2 to 13.8	1.3	15.6	2300	1.62	57.2	313.6	1.259	55	-20 to +60
109BG12MC1			0.64	7.68	1800	1.26	44.5	156.8	0.629	50	
109BG24HC1			0.62	14.88	2300	1.62	57.2	313.6	1.259	55	
109BG24MC1			0.31	7.44	1800	1.26	44.5	156.8	0.629	50	

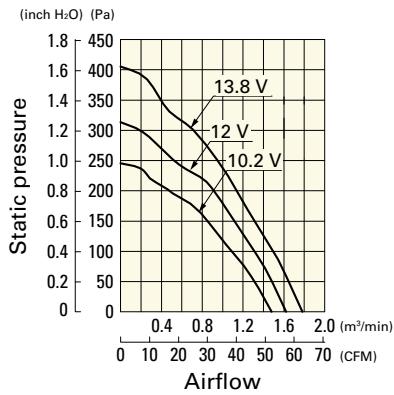
The following sensor and control options are available for selection.

Available for all models.  

Airflow - Static Pressure Characteristics

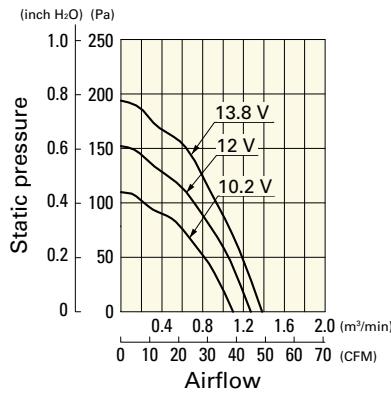
109BG12HC1 With pulse sensor

Operating voltage range



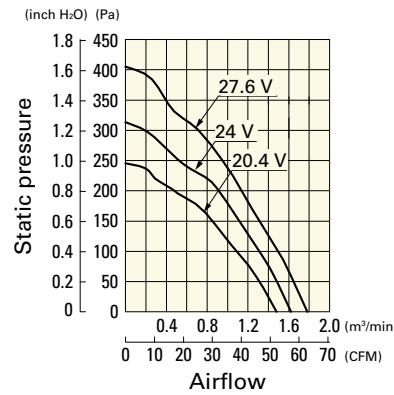
109BG12MC1 With pulse sensor

Operating voltage range



109BG24HC1 With pulse sensor

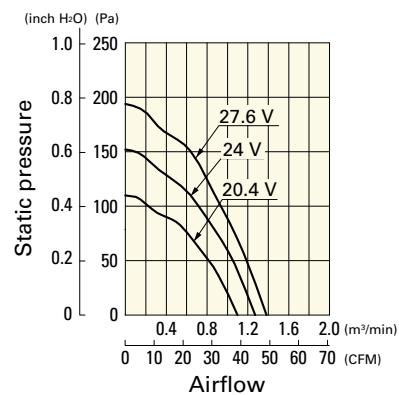
Operating voltage range



Airflow - Static Pressure Characteristics

109BG24MC1 With pulse sensor

Operating voltage range



Dimensions (unit: mm)

