

Ø70x20 mm


San Ace C70 9TD type **US**

General Specifications

- Material Motor case: Aluminum (Black coating), 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. 599.
- Dielectric strength 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and motor case)
- Sound pressure level (SPL) At 1 m away from the air inlet
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire ⊕Red ⊖Black Sensor Yellow Control Brown
- Mass 90 g

Specifications

When the optional inlet nozzle (109-1106) is mounted.

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]
9TD12P6G001	12	10.8 to 13.2	100	1.0	12	9200	1.13 39.9	560 2.24	61	-20 to +70	40000/60°C (70000/40°C)
			20	0.1	1.2	2000	0.23 8.1	25 0.10	30		

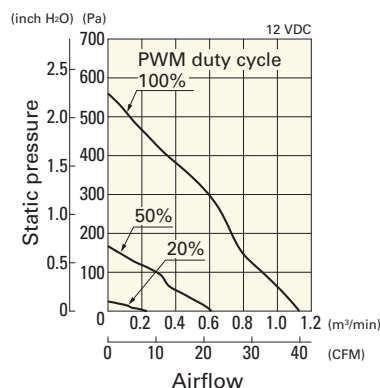
* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

Note: The maximum rated input value is 12.6 W.

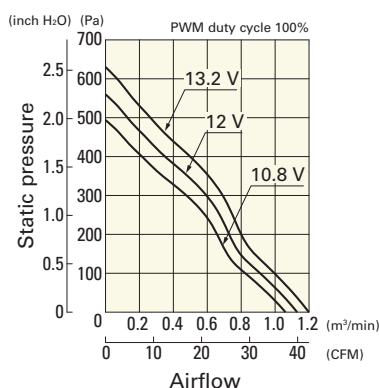
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9TD12P6G001 With pulse sensor with PWM control function

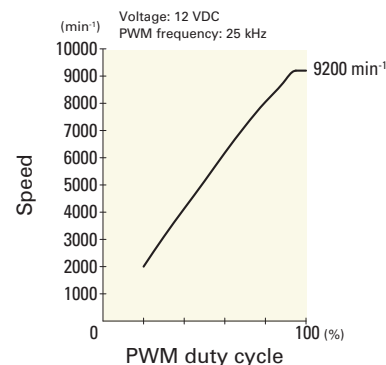
PWM duty cycle



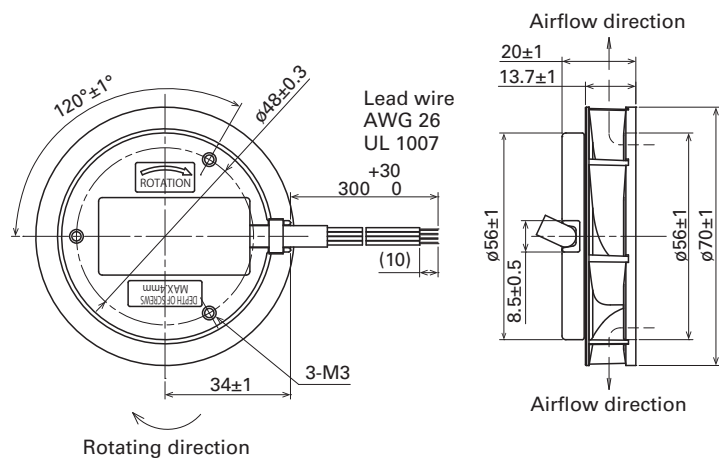
Operating voltage range



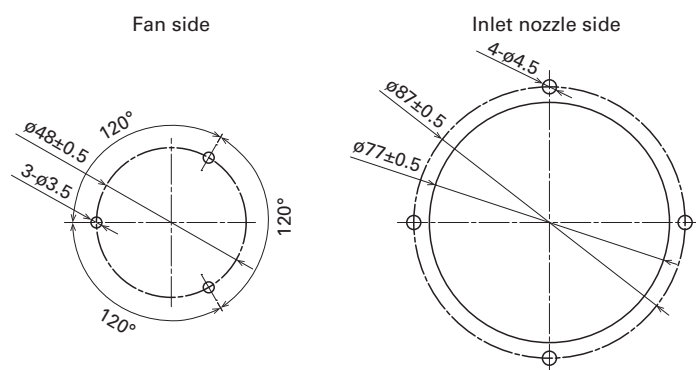
PWM duty - Speed characteristics example



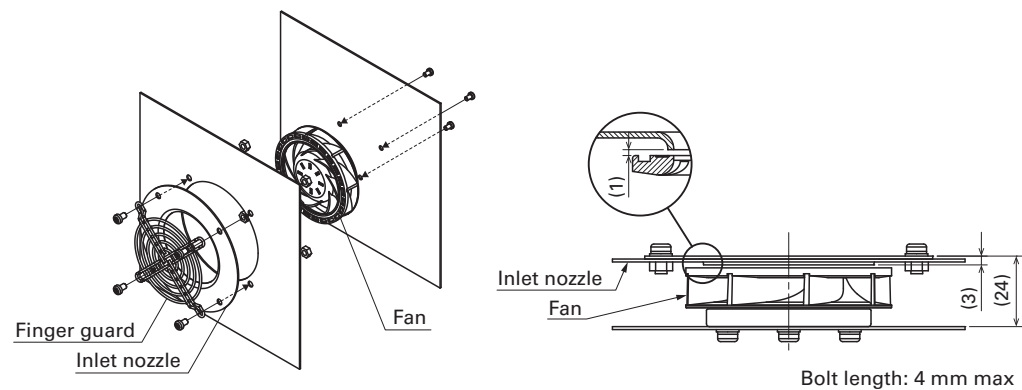
Dimensions (unit: mm)



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



Reference Diagram for Mounting



Options

Finger guards

page: p. 584

Model no.: 109-1128

Inlet nozzle

page: p. 589

Model no.: 109-1106

Ø100x25 mm


San Ace C100 9TM type

General Specifications

- Material Motor case: Aluminum (Black coating), 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. 599.
- Dielectric strength 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and motor case)
- 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 When the optional inlet nozzle (109-1080) is mounted.

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]
9TM24P4H01	24	21.6 to 26.4	100	0.44	10.56	6400	1.77 62.5	560 2.25	60	-20 to +70	40000/60°C (70000/40°C)
			0	0.05	1.2	2000	0.51 18.0	48 0.19	34		
9TM48P4H01	48	36 to 60	100	0.22	10.56	6400	1.77 62.5	560 2.25	60		
			0	0.04	1.92	2000	0.51 18.0	48 0.19	34		

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

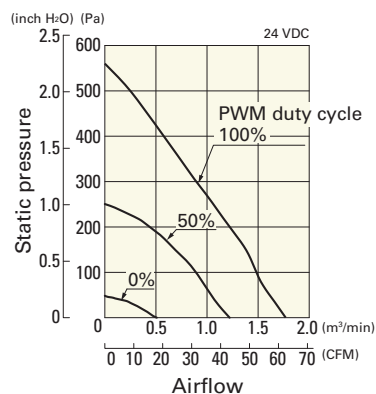
Note 1: The maximum rated input value is 14 W.

Note 2: Sensor and control options are available for selection. Refer to the table on p. 636.

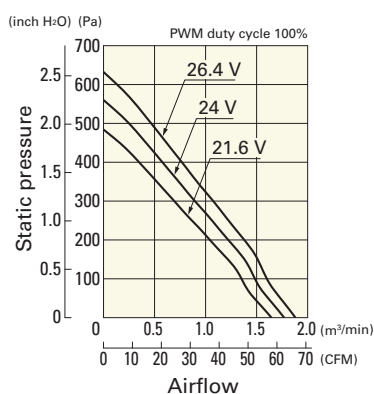
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9TM24P4H01 With pulse sensor with PWM control function

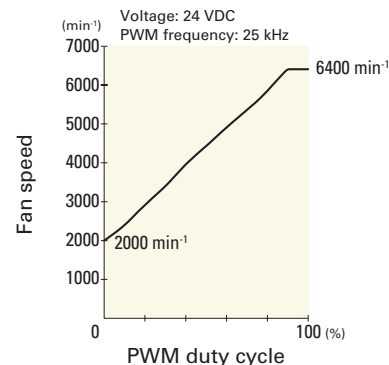
PWM duty cycle



Operating voltage range



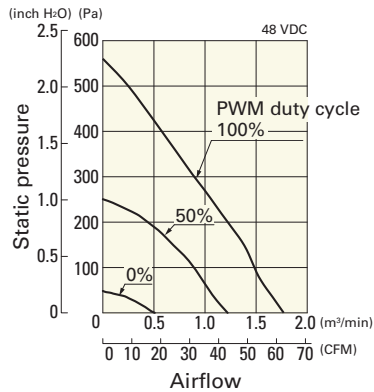
PWM duty - Speed characteristics example



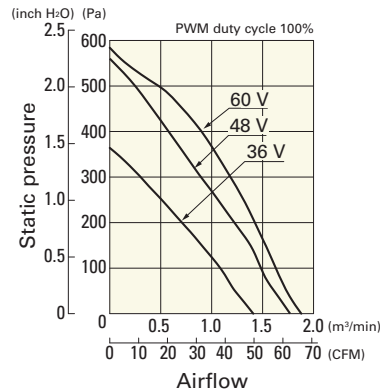
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9TM48P4H01 With pulse sensor with PWM control function

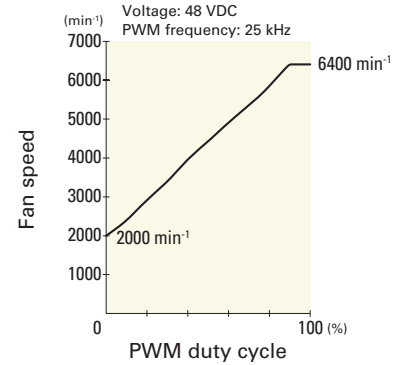
PWM duty cycle



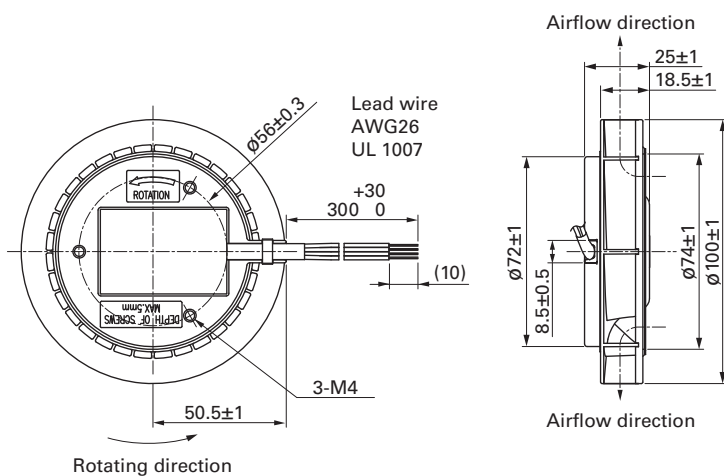
Operating voltage range



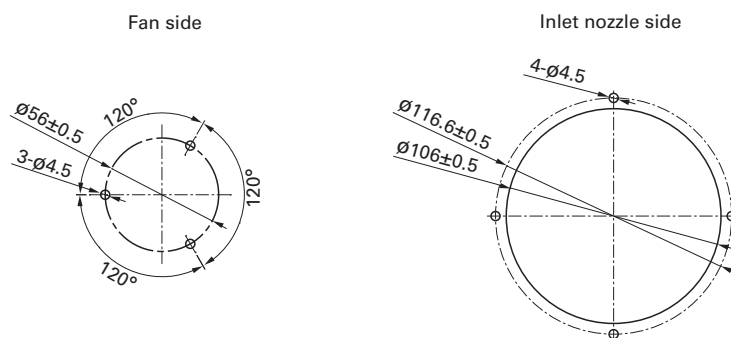
PWM duty - Speed characteristics example



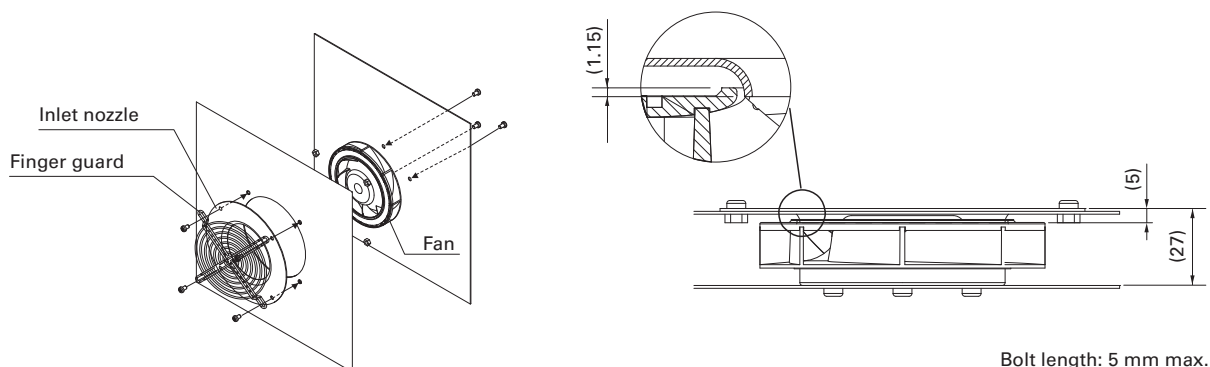
Dimensions (unit: mm)



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



Reference Diagram for Mounting



DC
Centrifugal Fan $\phi 100$ mm

Options

Finger guards page: p. 584

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

Inlet nozzle page: p. 589

Model no.: 109-1080, 109-1080H

Ø133x91 mm

San Ace C133 9TJ type



General Specifications

- Material Motor case: Aluminum (Black coating), 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. 599.
- Dielectric strength 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and motor case)
- 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 660 g

Specifications When the optional inlet nozzle (109-1069) is mounted.

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

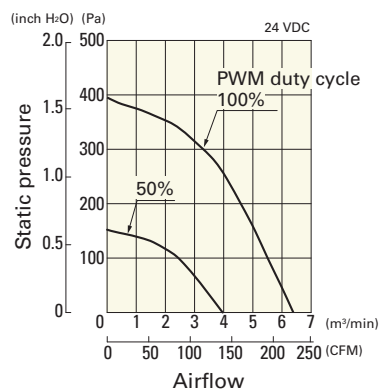
Model no.	Rated voltage [V]	Operating voltage range [V]	PWM duty cycle [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9TJ24P0H61	24	20.4 to 27.6	100	1.2	28.8	4150	6.39 226	395 1.59	61	-20 to +70	40000/60°C (70000/40°C)
9TJ48P0H01	48	36 to 72	100	0.55	26.4	4150	6.39 226	395 1.59	61		

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

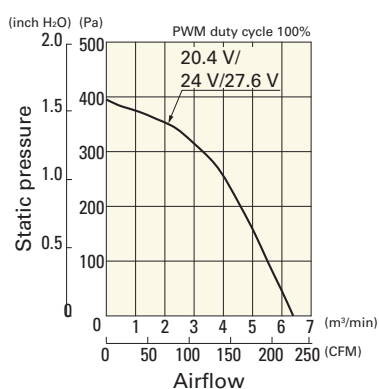
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9TJ24P0H61 With pulse sensor with PWM control function

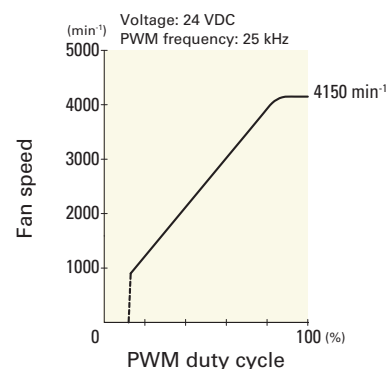
PWM duty cycle



Operating voltage range

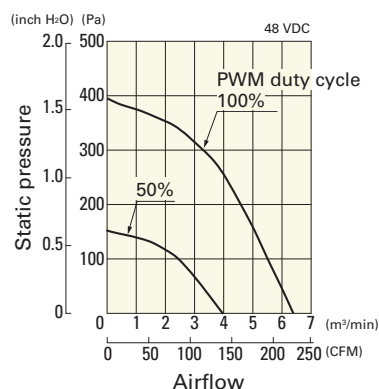


PWM duty - Speed characteristics example

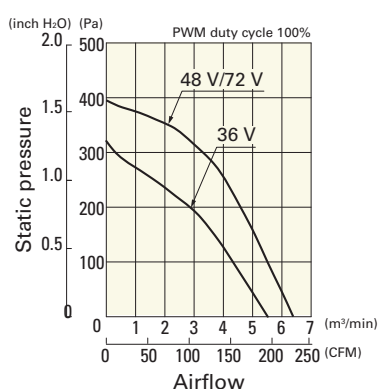


9TJ48P0H01 With pulse sensor with PWM control function

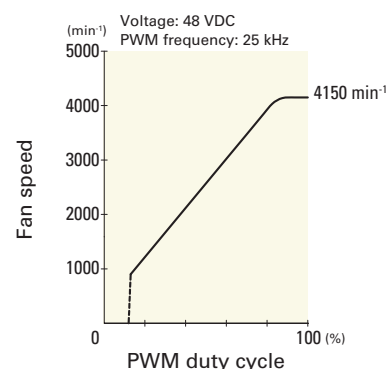
PWM duty cycle



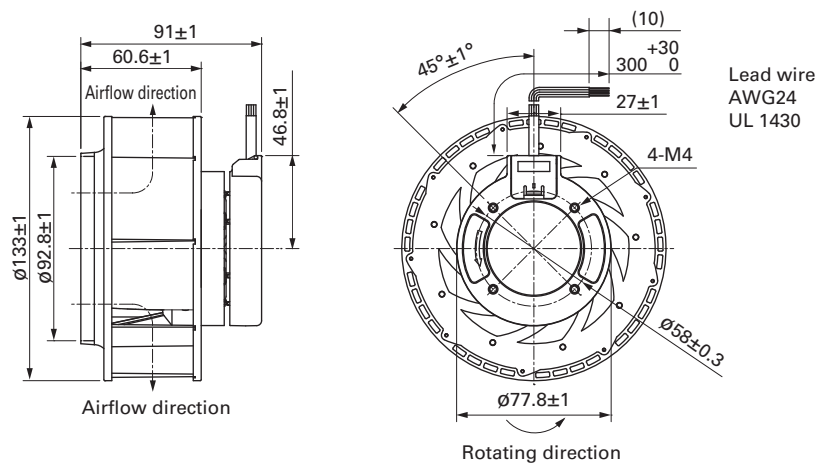
Operating voltage range



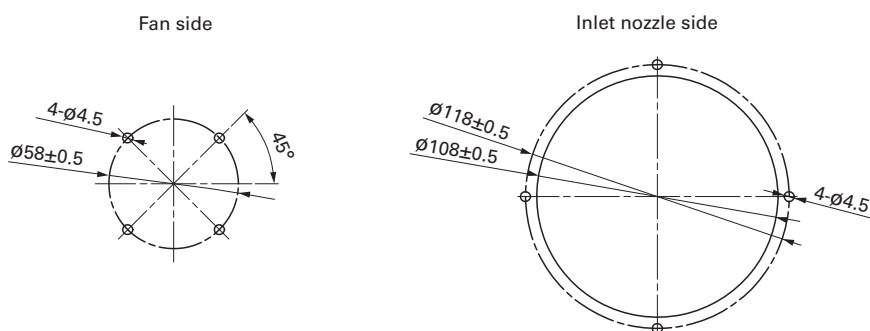
PWM duty - Speed characteristics example



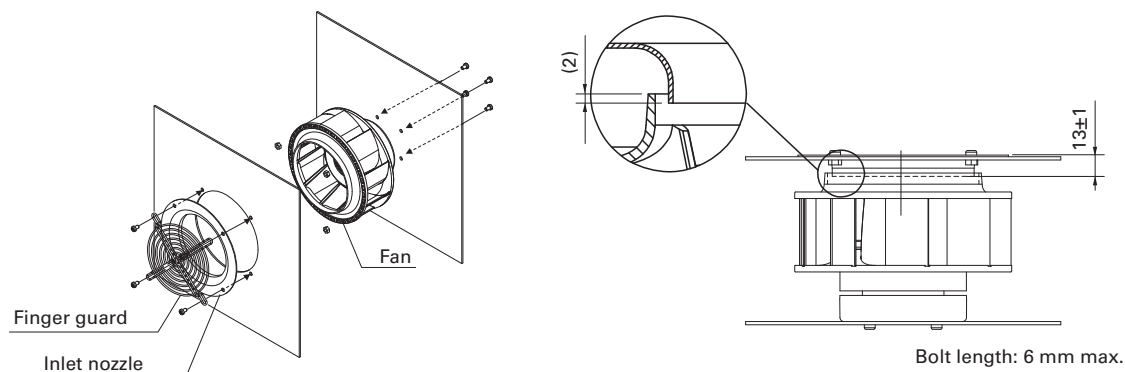
Dimensions (unit: mm)



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



Reference Diagram for Mounting



Options

Finger guards

page: p. 585

Model no.: 109-1112

Inlet nozzle

page: p. 589

Model no.: 109-1069, 109-1069H

Ø150×35 mm


San Ace C150 9TN type **US**

General Specifications

- Material Motor case: Aluminum (Black coating), 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. 599.
- Dielectric strength 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and motor case)
- 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 330 g

Specifications

When the optional inlet nozzle (109-1081) is mounted.

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]
9TN24P1H01	24	20.4 to 27.6	100	0.62	14.9	3800	3.83 135	410 1.65	59	-20 to +70	40000/60°C (70000/40°C)
9TN48P1H01	48	36.0 to 55.2	100	0.32	15.4	3800	3.83 135	390 1.57	59		

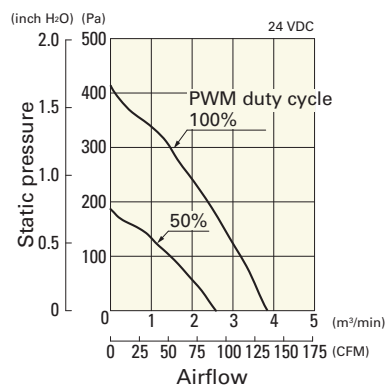
* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

Note: The maximum rated input value of 9TN24P1H01: 21.4 W and 9TN48P1H01: 22 W.

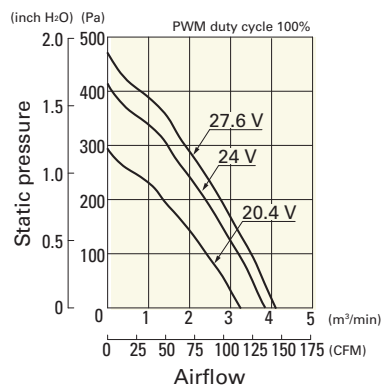
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9TN24P1H01 With pulse sensor with PWM control function

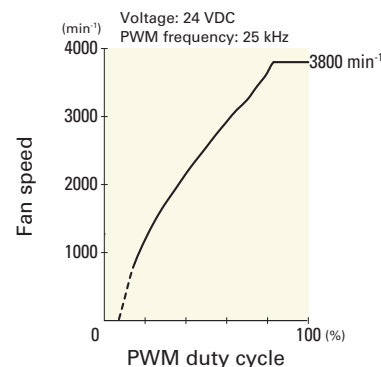
PWM duty cycle



Operating voltage range

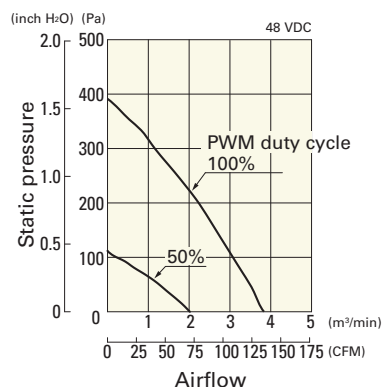


PWM duty - Speed characteristics example

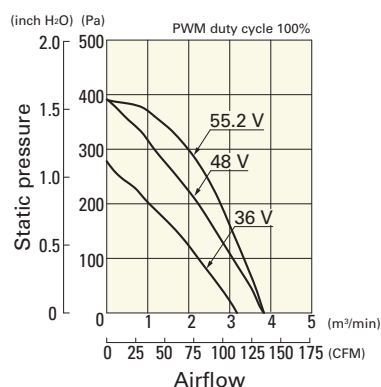


9TN48P1H01 With pulse sensor with PWM control function

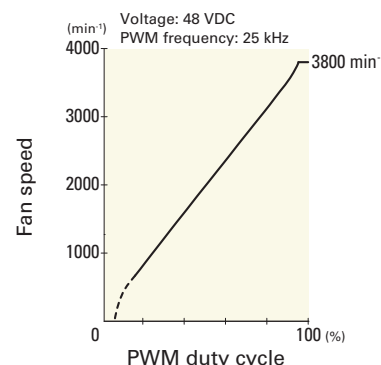
PWM duty cycle



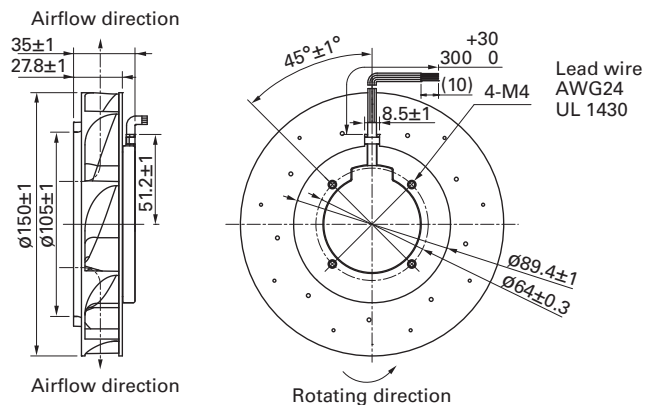
Operating voltage range



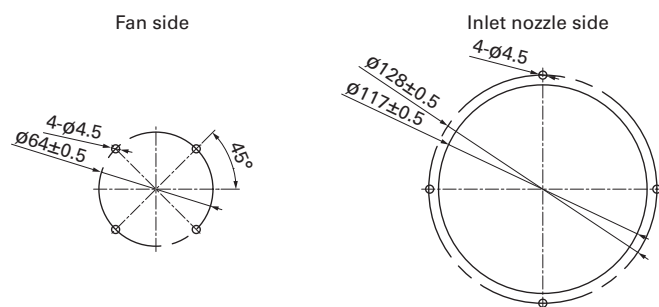
PWM duty - Speed characteristics example



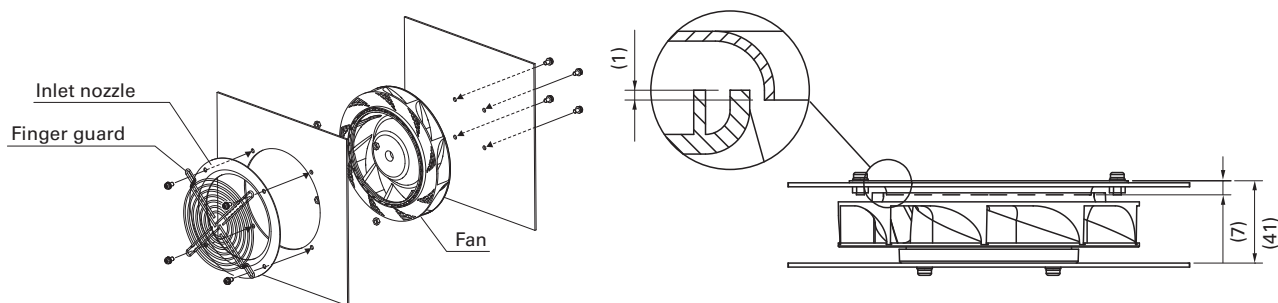
Dimensions (unit: mm)



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



Reference Diagram for Mounting



Bolt length: 4 to 6 mm.

Options

Finger guards

page: p. 585

Model no.: 109-1104, 109-1104H

Inlet nozzle

page: p. 589

Model no.: 109-1081, 109-1081H

Ø175×69 mm


San Ace C175 9TGA type

General Specifications

- Material Motor case: Aluminum (Black coating), 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. 599.
- Dielectric strength 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and motor case)
- 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 720 g

Specifications

When the optional inlet nozzle (109-1073) is mounted.

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]
9TGA24P0H001	24	16 to 36	100	4.8	115	4950	15.3 541	830 3.33	77	-20 to +70	40000/60°C (70000/40°C)
			15	0.14	3.36	800	2.5 88.3	21.8 0.088	38		
9TGA48P0G001	48	36 to 72	100	3.5	168	5700	17.6 622	1100 4.42	80		
			15	0.07	3.36	800	2.5 88.3	21.8 0.088	38		

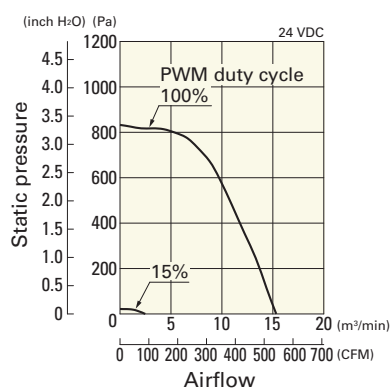
* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

Note: The maximum rated input value of 9TGA24P0H001: 210 W and 9TGA48P0G001: 325 W.

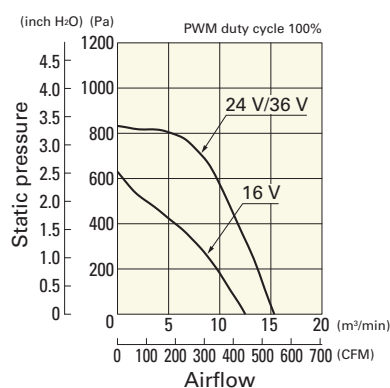
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9TGA24P0H001 With pulse sensor with PWM control function

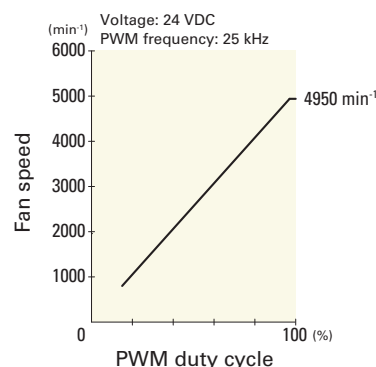
PWM duty cycle



Operating voltage range



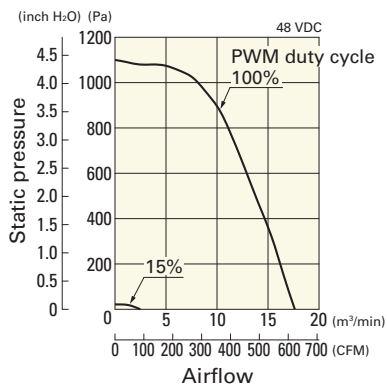
PWM duty - Speed characteristics example



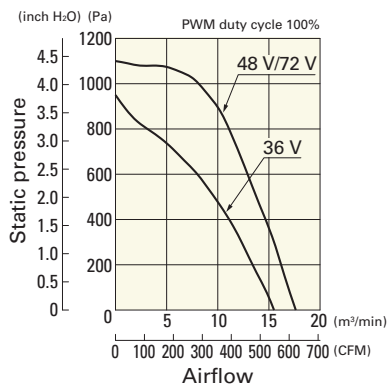
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9TGA48P0G001 With pulse sensor with PWM control function

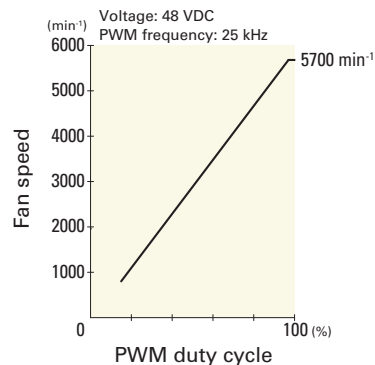
PWM duty cycle



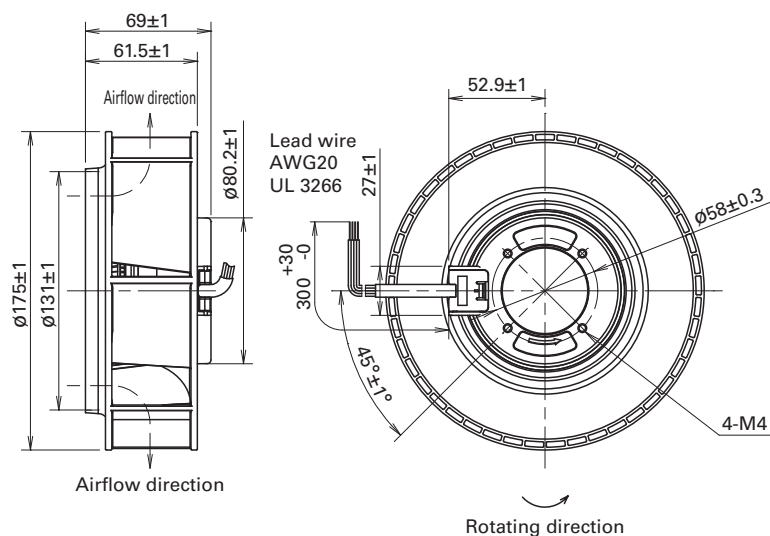
Operating voltage range



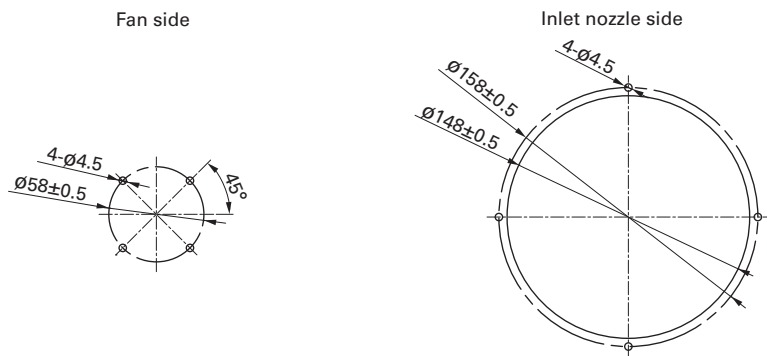
PWM duty - Speed characteristics example



Dimensions (unit: mm)

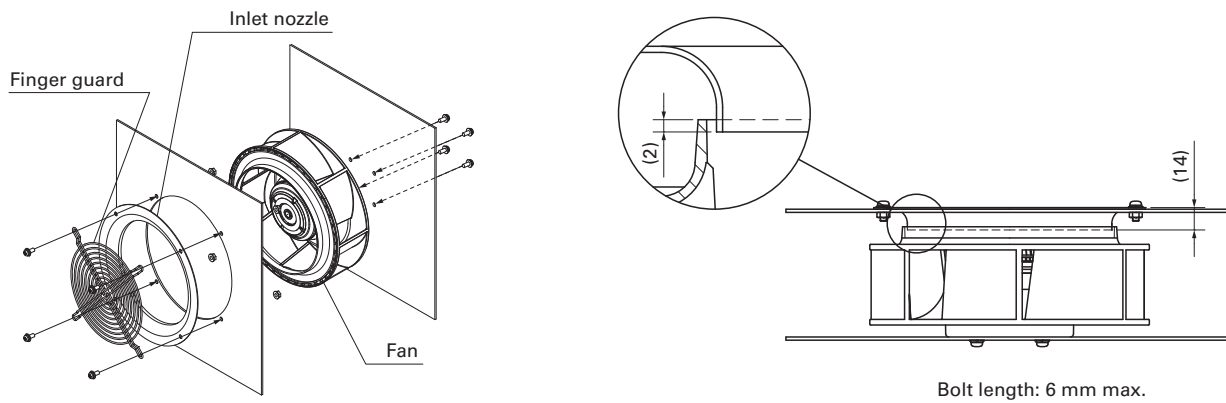


Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



DC Centrifugal Fan Ø175 mm

Reference Diagram for Mounting



Options

Finger guards

page: p. 585

Model no.: 109-722, 109-722H

Inlet nozzle

page: p. 589

Model no.: 109-1073, 109-1073H

Ø175×69 mm


San Ace C175 9TG type **US**

General Specifications

- Material Motor case: Aluminum (Black coating), 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. 599.
- Dielectric strength 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and motor case)
- 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 750 g

Specifications When the optional inlet nozzle (109-1073) is mounted.

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

Model no.	Rated voltage [V]	Operating voltage range [V]	PWM duty cycle ¹ [%]	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]
9TG24P0G01	24	20.4 to 27.6	100	3.9	93.6	4700	14.0 494.7	885 3.55	73	-20 to +60	40000/60°C (70000/40°C)
9TG24P0S01			100	2.35	56.4	3900	11.6 409.8	609 2.45	69	-20 to +70	
9TG48P0G01	48	36 to 55.2	100	1.95	93.6	4700	14.0 494.7	885 3.55	73		

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

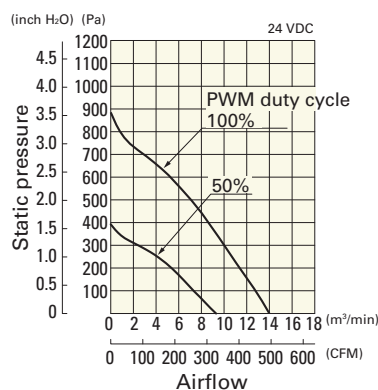
Note 1: The maximum rated input value is 130 W.

Note 2: Sensor and control options are available for selection. Refer to the table on p. 636.

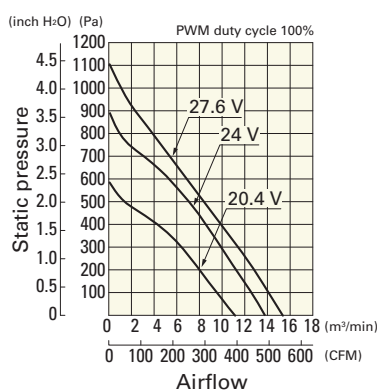
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9TG24P0G01 With pulse sensor with PWM control function

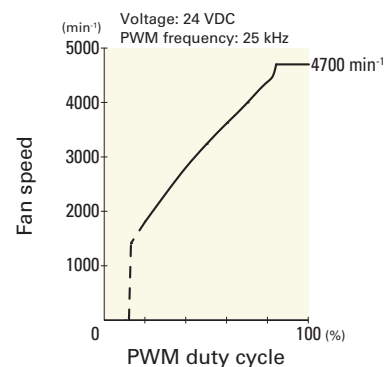
PWM duty cycle



Operating voltage range



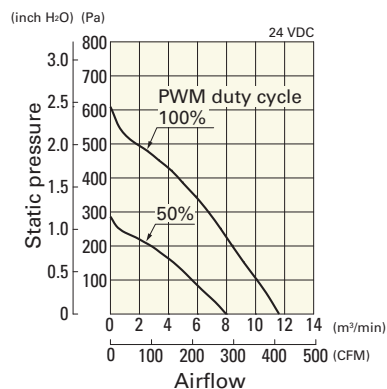
PWM duty - Speed characteristics example



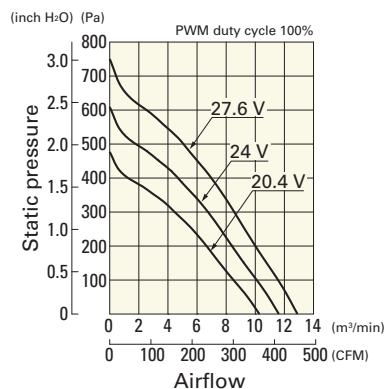
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9TG24P0S01 With pulse sensor with PWM control function

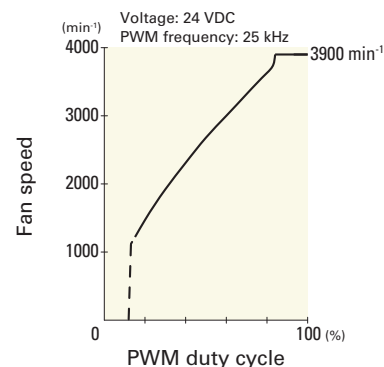
PWM duty cycle



Operating voltage range

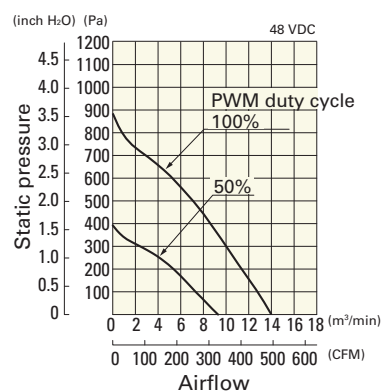


PWM duty - Speed characteristics example

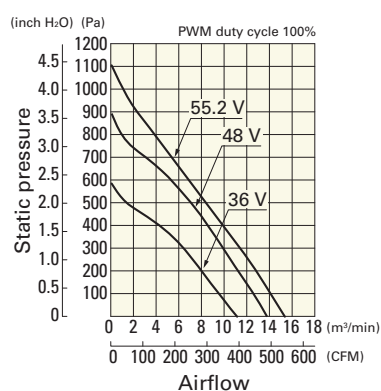


9TG48P0G01 With pulse sensor with PWM control function

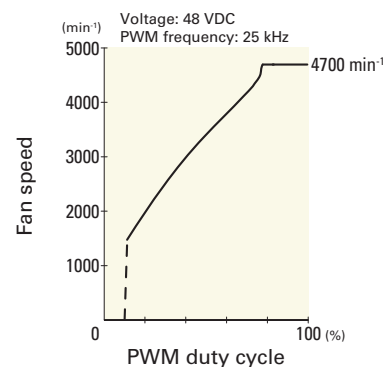
PWM duty cycle



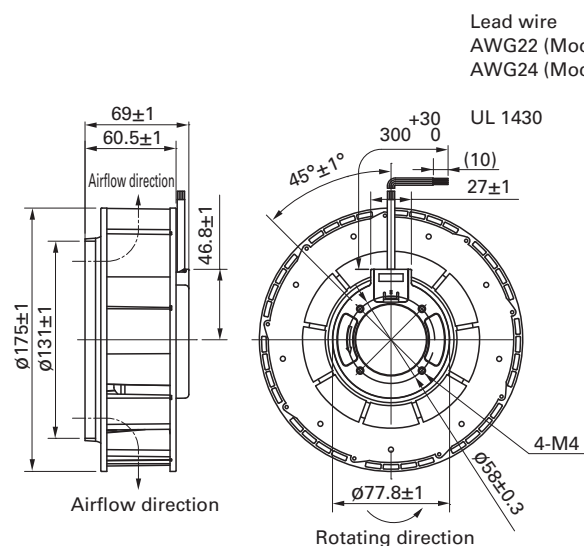
Operating voltage range



PWM duty - Speed characteristics example

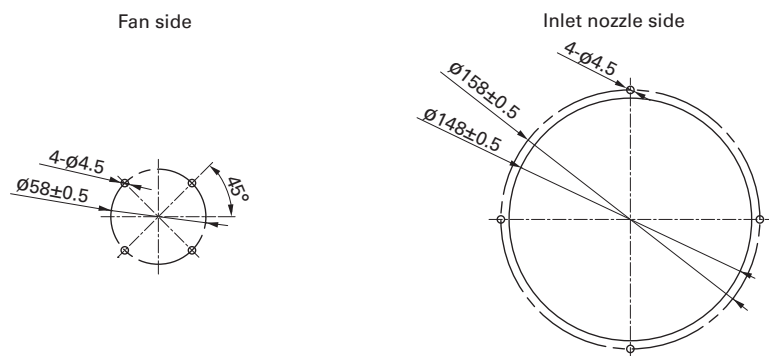


Dimensions (unit: mm)

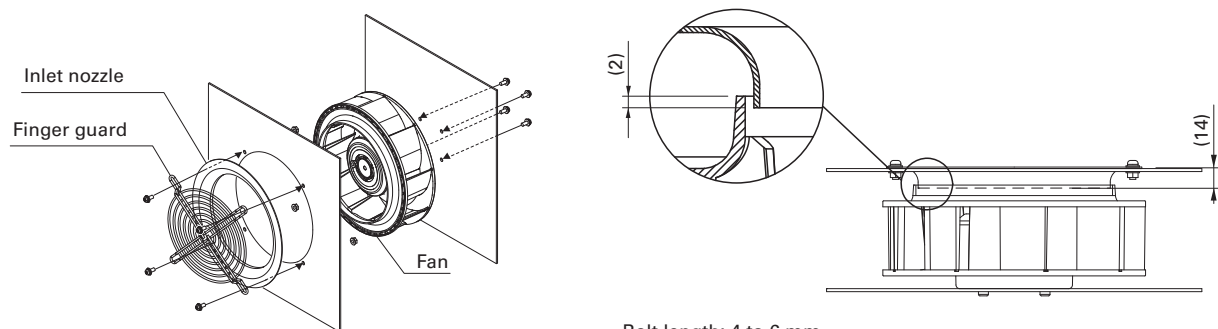


DC
Centrifugal Fan ø175 mm

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



Reference Diagram for Mounting



Bolt length: 4 to 6 mm.
To prevent bolts from loosening, use plain washers and spring washers.

Options

Finger guards

page: p. 585

Model no.: 109-722, 109-722H

Inlet nozzle

page: p. 589

Model no.: 109-1073, 109-1073H

Ø221×71 mm


San Ace C221 9TP type

General Specifications

- Material Motor case: Aluminum (Black coating), 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. 599.
- Dielectric strength 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and motor case)
- 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 1050 g

Specifications When the optional inlet nozzle (109-1135) is mounted.

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]
9TP24P0H001	24	16 to 36	100	3.2	76.8	3050	17.6 622	530 2.13	71	-20 to +70	40000/60°C (70000/40°C)
			15	0.4	9.6	1000	5.75 203	57.4 0.23	53	-20 to +70	
9TP48P0G001	48	36 to 72	100	2.75	132	3650	21 742	760 3.05	74	-20 to +60	
			15	0.2	9.6	1000	5.75 203	57.4 0.23	53	-20 to +60	
9TP48P0H001			100	1.6	76.8	3050	17.6 622	530 2.13	71	-20 to +70	
			15	0.2	9.6	1000	5.75 203	57.4 0.23	53	-20 to +70	

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

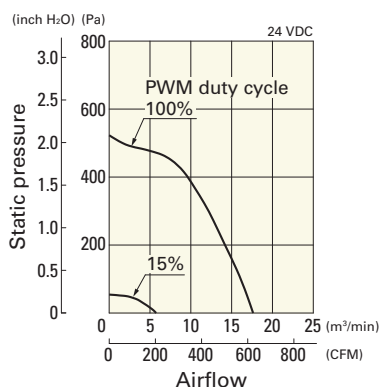
Note 1: The maximum rated input value of 9TP48P0G001: 280 W and 9TP24P0H001/9TP48P0H001: 160 W.

Note 2: Sensor and control options are available for selection. Refer to the table on p. 636.

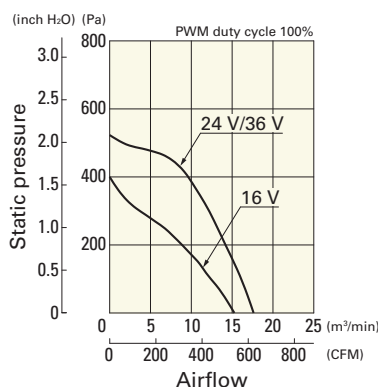
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9TP24P0H001 With pulse sensor with PWM control function

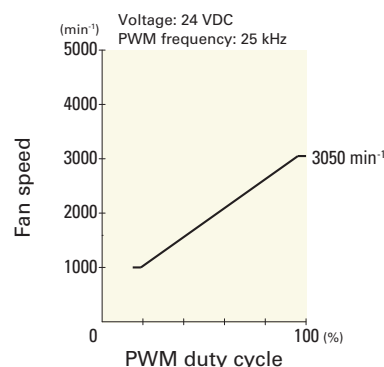
PWM duty cycle



Operating voltage range



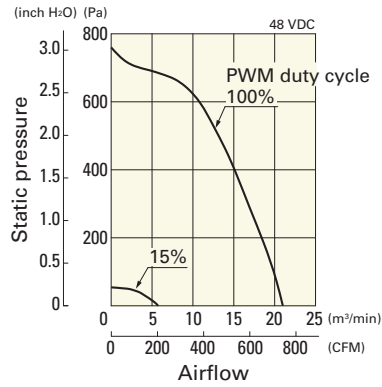
PWM duty - Speed characteristics example



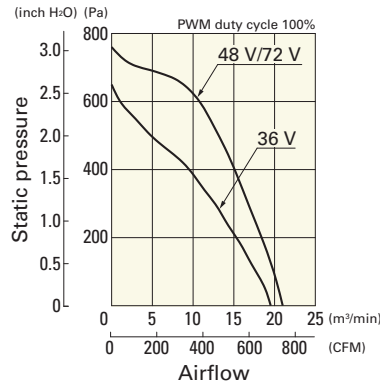
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9TP48P0G001 With pulse sensor with PWM control function

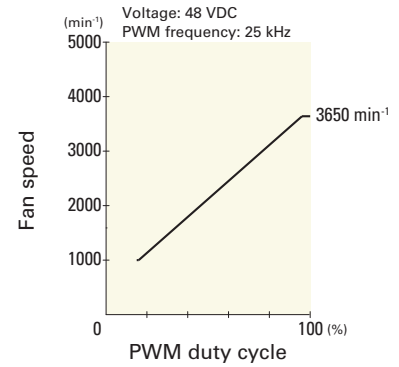
PWM duty cycle



Operating voltage range

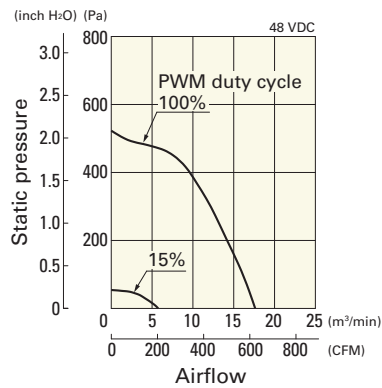


PWM duty - Speed characteristics example

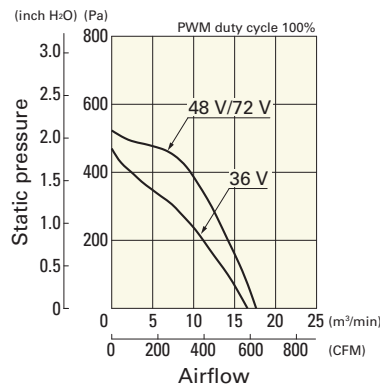


9TP48P0H001 With pulse sensor with PWM control function

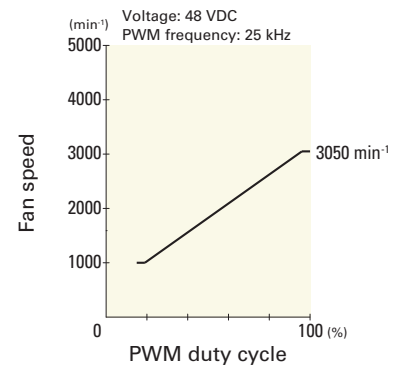
PWM duty cycle



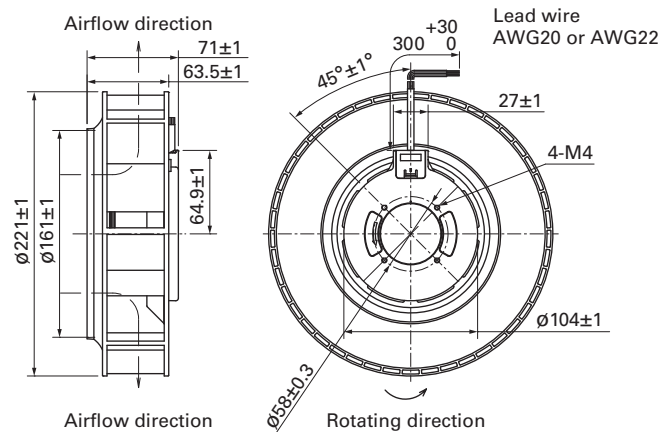
Operating voltage range



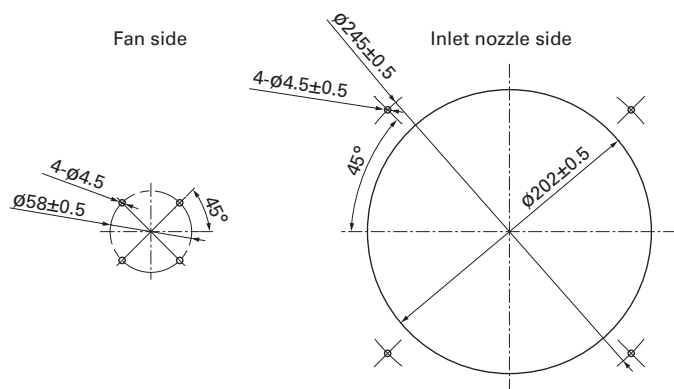
PWM duty - Speed characteristics example



Dimensions (unit: mm)

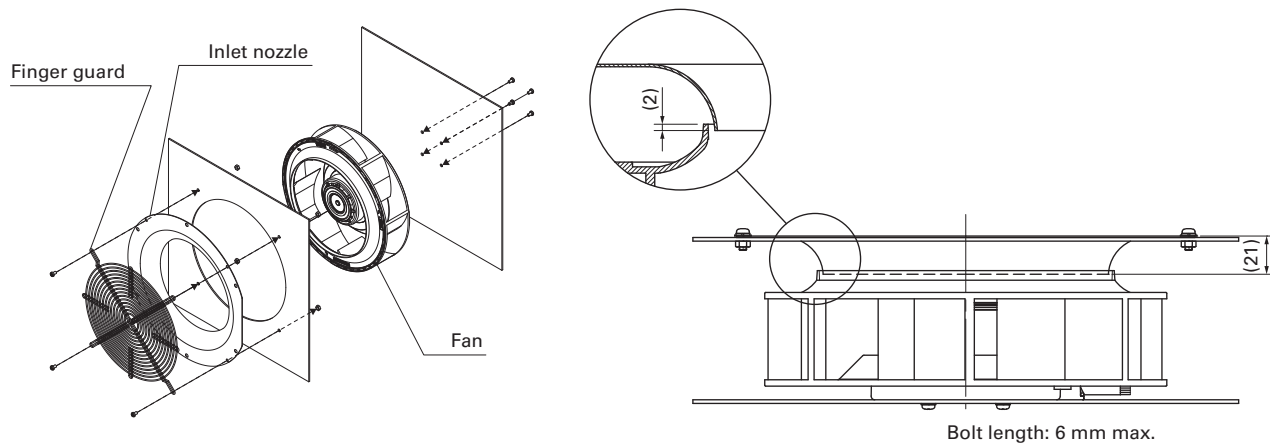


Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Reference Diagram for Mounting

Bracket-mounted model of this fan is available. For details, refer to pp. 485 to 487.



Options

Finger guards

page: p. 587

Model no.: 109-1138, 109-1138H

Inlet nozzle

page: p. 589

Model no.: 109-1135, 109-1135H

DC

Centrifugal Fan Ø221 mm

Ø225×99 mm


San Ace C225 9TS type

General Specifications

- Material Motor case: Aluminum (Black coating), 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. 599.
- Dielectric strength 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and motor case)
- 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 1220 g

Specifications When the optional inlet nozzle (109-1134) is mounted.

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

Model no.	Rated voltage [V]	Operating voltage range [V]	PWM duty cycle ¹ [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m³/min] [CFM]		Max. static pressure [Pa] [inchH ₂ O]		SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9TS48P0G001	48	36 to 72	100	3.65	175.2	3550	28.1	992	861	3.46	74.5	-20 to +60	40000/60°C (70000/40°C)
15			0.24	11.5	1000	7.85	277	68.5	0.28	52.0			
9TS48P0H001			100	2.08	99.8	2900	22.7	802	590	2.37	70.5	-20 to +70	
15			0.24	11.5	1000	7.85	277	68.5	0.28	52.0			

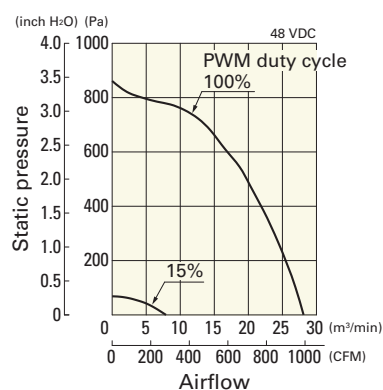
* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

Note: The maximum rated input value of 9TS48P0G001: 380 W and 9TS48P0H001: 200 W.

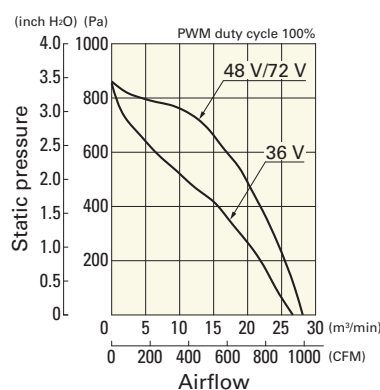
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9TS48P0G001 With pulse sensor with PWM control function

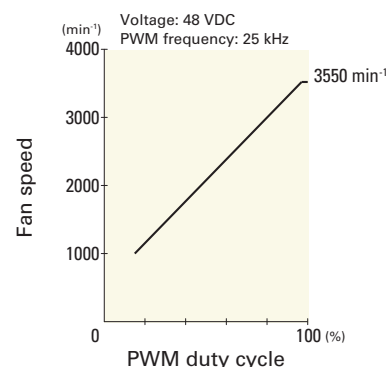
PWM duty cycle



Operating voltage range



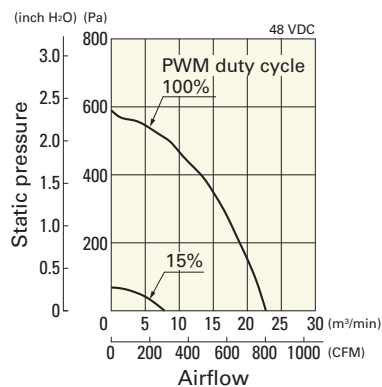
PWM duty - Speed characteristics example



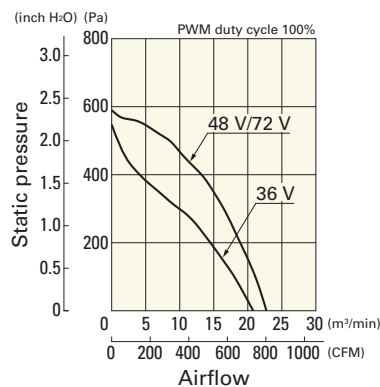
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9TS48P0H001 With pulse sensor with PWM control function

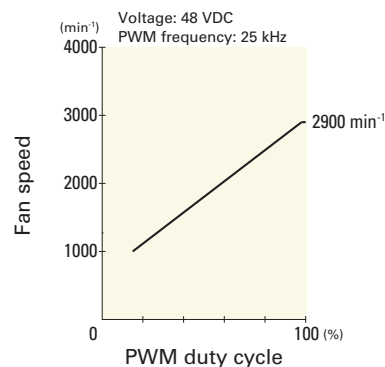
PWM duty cycle



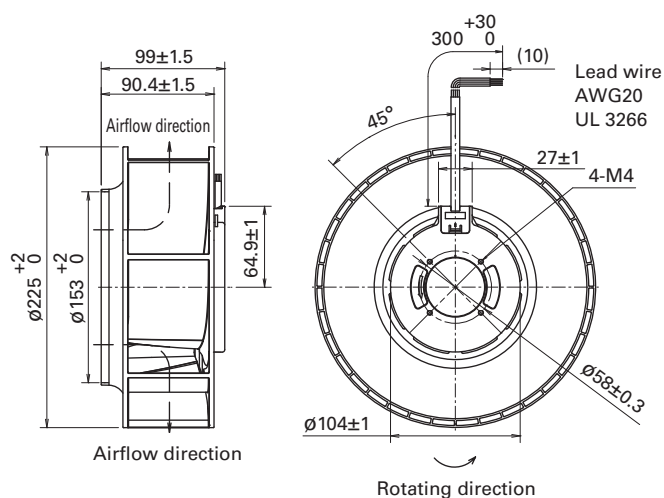
Operating voltage range



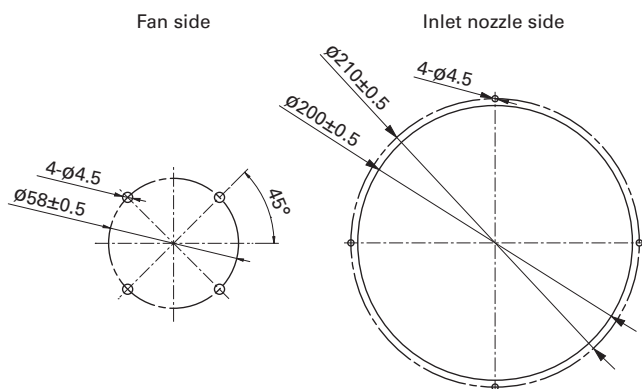
PWM duty - Speed characteristics example



Dimensions (unit: mm)



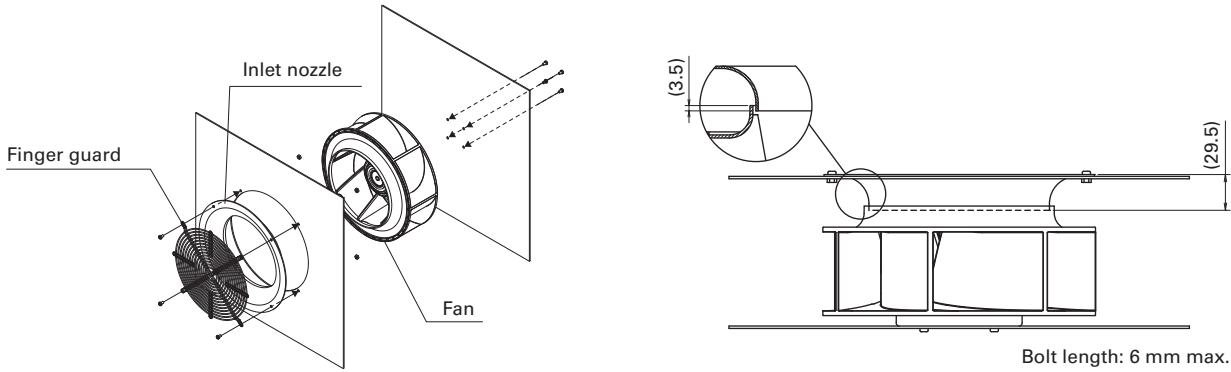
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



DC

Centrifugal Fan $\varnothing 225$ mm

Reference Diagram for Mounting Bracket-mounted model of this fan is available. For details, refer to pp. 488 to 490.



Options

Finger guards page: p. 587

Model no.: 109-1137, 109-1137H

Inlet nozzle page: p. 589

Model no.: 109-1134, 109-1134H

270×270×99 mm

San Ace C221 9B1TP type   **US**


General Specifications

- Material Motor case: Aluminum (Black coating), Impeller: Plastic (Flammability: UL 94V-0)
Bracket: Aluminum, 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. 599.
- Dielectric strength 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and bracket)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and bracket)
- 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 1700 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] [inchH ₂ O]		SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9B1TP24P0H001	24	16 to 36	100	3.2	76.8	3050	17.6	622	530	2.13	71	-20 to +70	40000/60°C (70000/40°C)
			15	0.4	9.6	1000	5.75	203	57.4	0.23	53		
9B1TP48P0G001	48	36 to 72	100	2.75	132	3650	21.0	742	760	3.05	74	-20 to +60	
			15	0.2	9.6	1000	5.75	203	57.4	0.23	53		
9B1TP48P0H001			100	1.6	76.8	3050	17.6	622	530	2.13	71	-20 to +70	

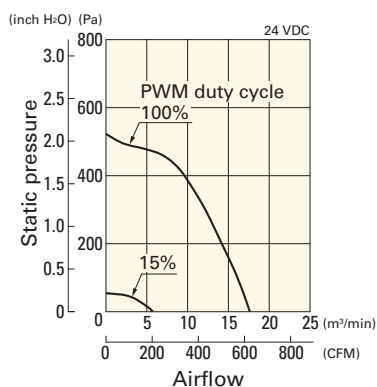
* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

Note: The maximum rated input value of 9B1TP24P0H001/9B1TP48P0H001: 160 W and 9B1TP48P0G001: 280 W.

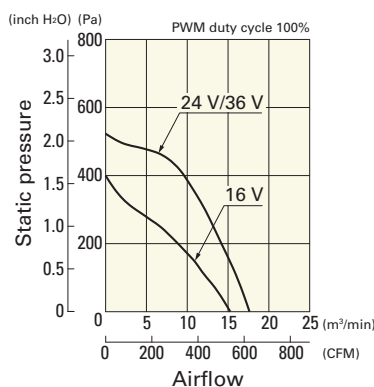
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9B1TP24P0H001 With pulse sensor with PWM control function

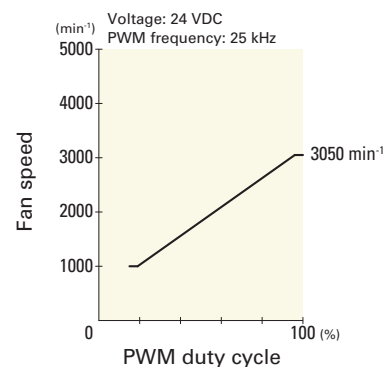
PWM duty cycle



Operating voltage range



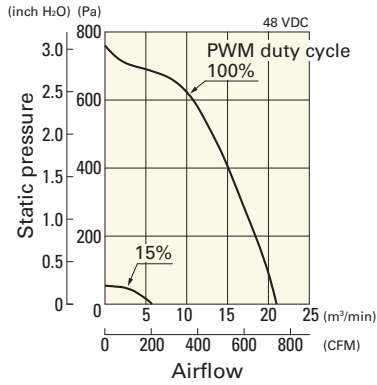
PWM duty - Speed characteristics example



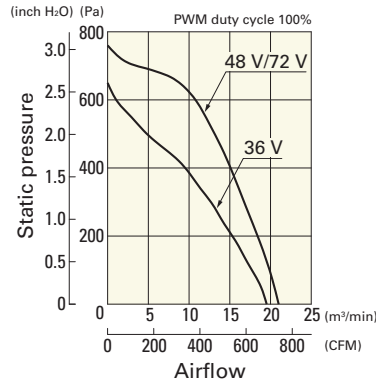
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9B1TP48P0G001 With pulse sensor with PWM control function

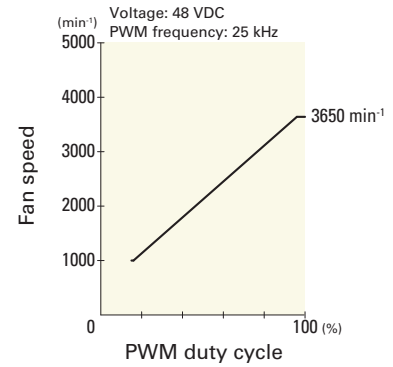
PWM duty cycle



Operating voltage range

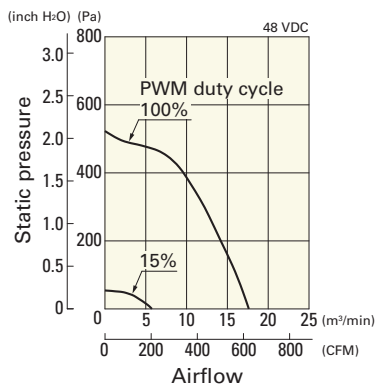


PWM duty - Speed characteristics example

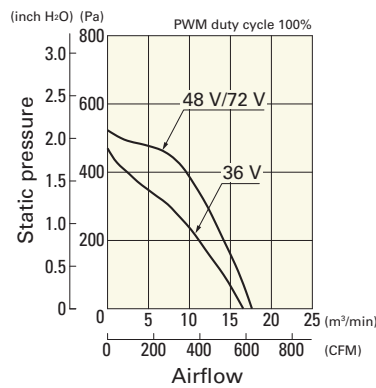


9B1TP48P0H001 With pulse sensor with PWM control function

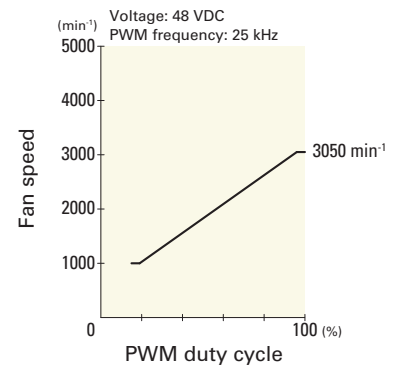
PWM duty cycle



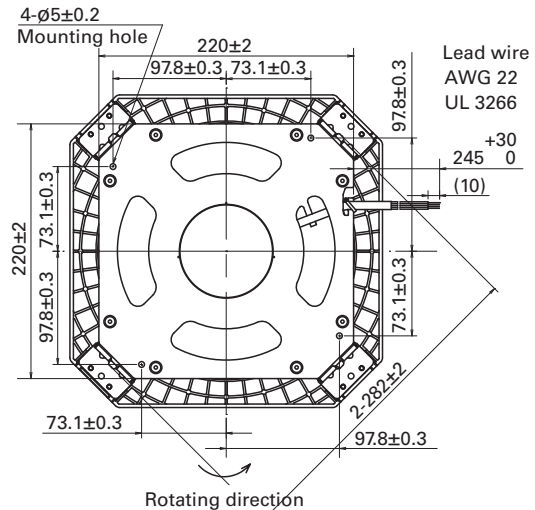
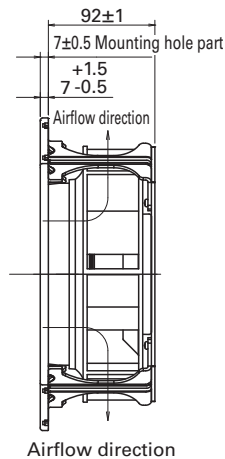
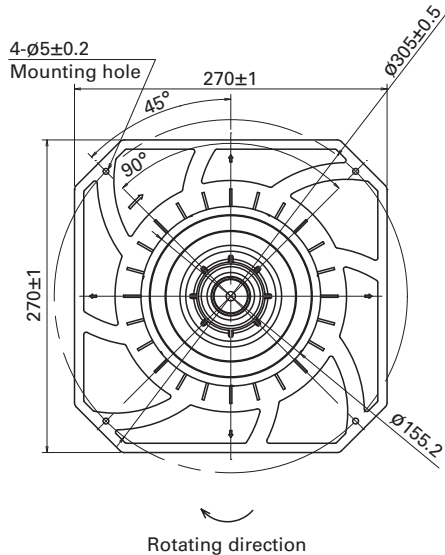
Operating voltage range



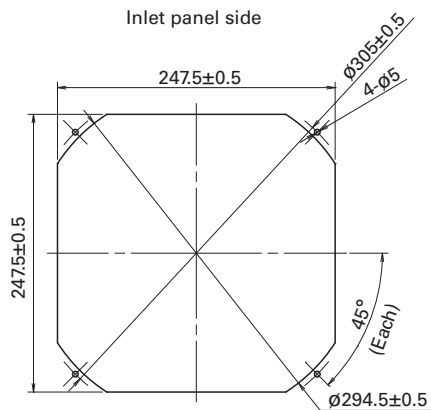
PWM duty - Speed characteristics example



Dimensions (unit: mm)

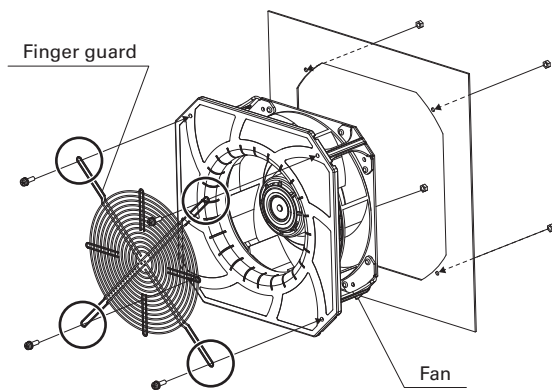


Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



Reference Diagram for Mounting

Finger guard 109-1146 and 109-1146H should be mounted with four holes as in the drawing.



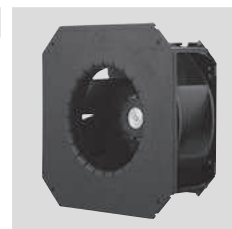
Options

Finger guards

page: p. 588

Model no.: 109-1146, 109-1146H

270×270×119 mm

San Ace C225 9B1TS type 


General Specifications

- Material Motor case: Aluminum (Black coating), Impeller: Plastic (Flammability: UL 94V-0)
Bracket: Aluminum, 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. 599.
- Dielectric strength 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and bracket)
- Insulation resistance 10 MΩ or more with a 500 VDC megger (between lead wire conductors and bracket)
- 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 1920 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] [inchH ₂ O]		SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9B1TS48P0G001	48	36 to 72	100	3.65	175.2	3550	28.1	992	861	3.46	74.5	-20 to +60	40000/60°C (70000/40°C)
15			0.24	11.5	1000	7.85	277	68.5	0.28	52.0			
9B1TS48P0H001			100	2.08	99.8	2900	22.7	802	590	2.37	70.5	-20 to +70	
			15	0.24	11.5	1000	7.85	277	68.5	0.28	52.0		

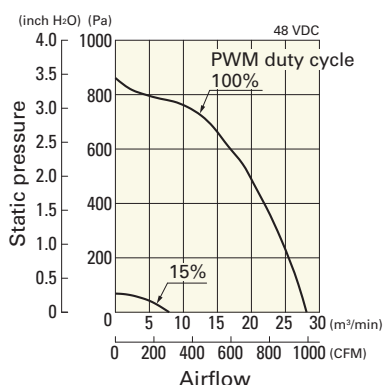
* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

Note: The maximum rated input value of 9B1TS48P0G001: 380 W and 9B1TS48P0H001: 200 W.

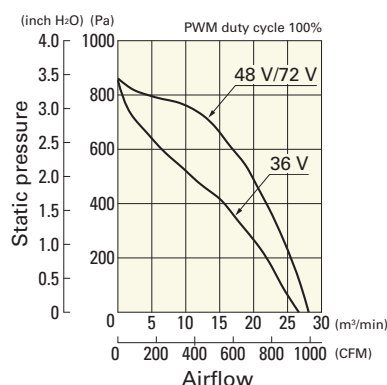
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9B1TS48P0G001 With pulse sensor with PWM control function

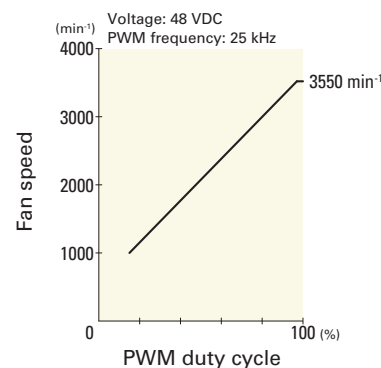
PWM duty cycle



Operating voltage range



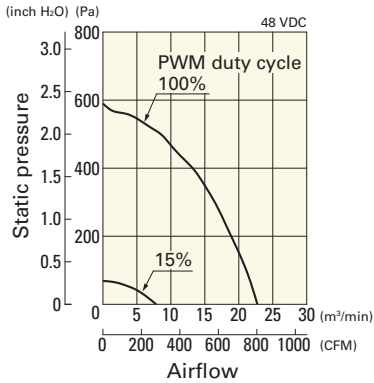
PWM duty - Speed characteristics example



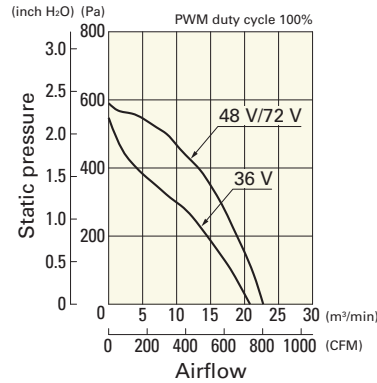
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9B1TS48P0H001 With pulse sensor with PWM control function

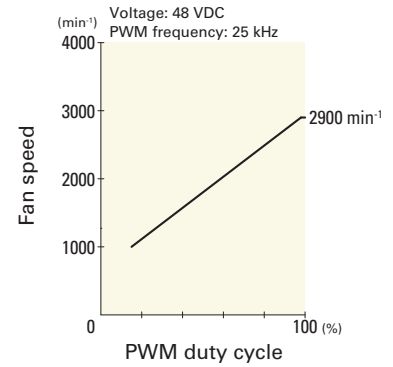
PWM duty cycle



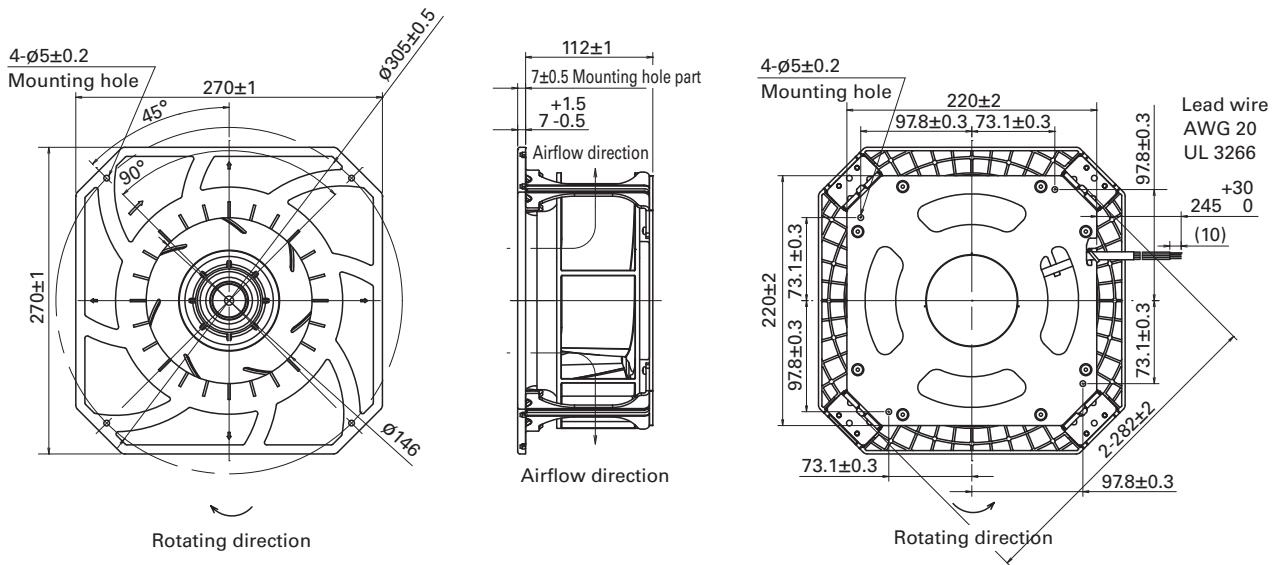
Operating voltage range



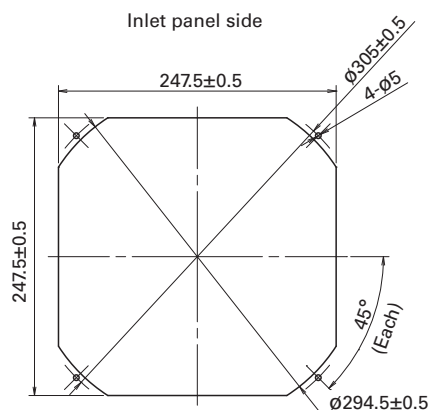
PWM duty - Speed characteristics example



Dimensions (unit: mm)



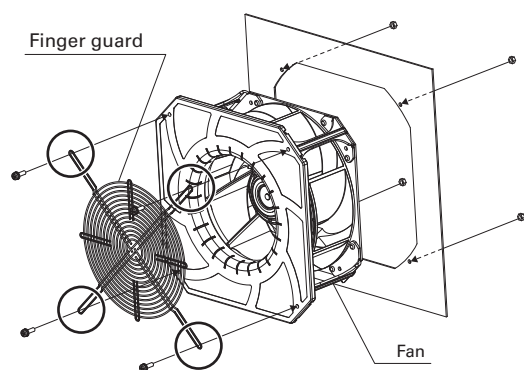
Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



DC
Centrifugal Fan 270 mm sq.

Reference Diagram for Mounting

Finger guard 109-1146 and 109-1146H should be mounted with four holes as in the drawing.



Options

Finger guards

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Model no.: 109-1146, 109-1146H