

ACDC Fan

This fan works while internally converting AC power into DC power, providing the superior performance of a DC fan with the flexibility of AC input.

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

9AD	09	01	H	1	2	
Type name	Frame size	Voltage	Speed code	Frame thickness	Sensor specifications	Frame form
Type name	9AD					
Frame size (mm)	09 12 92×92 120×120					
Voltage (V)	01 100 to 240					
Speed code	H M etc.					
Frame thickness (mm)	1 38					
Sensor specifications	2 Without a sensor		H With a low-speed sensor			
Frame form	Nil Plastic frame: Ribbed frame			1 Plastic frame: Ribless frame		

Centrifugal Fan

9ADT	S	11	P	0	G	001
Type name	Impeller size	Voltage	PWM control function	Thickness	Speed code	Individual customer's spec

Bracket-mounted Splash Proof Centrifugal Fan

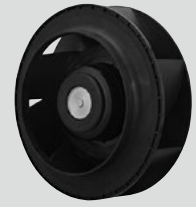
9ADB1T	S	11	P	0	G	001
Type name	Impeller size	Voltage	PWM control function	Thickness	Speed code	Individual customer's spec

Type name	9ADT 9ADW1T 9ADB1T 9ADB1W1T					
Impeller size (mm)	S ø225					
Voltage (V)	11 23 115 230					
Thickness (mm)	0 69 _{min.}					
Speed code	G H etc.					

How to Read Specifications (ACDC fan) The following is a sample. See respective product pages for detailed information.

Model no.	Rated voltage [V]	Operating voltage range [V]	Frequency [Hz]	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]
9AD0901H12	100 to 240	90 to 264	50/60	0.08	4.5	3850	1.5 53.0	90 0.36	40	-20 to +75	60000/60°C (90000/40°C)
9AD0901M12				0.06	3.0	3100	1.18 41.7	56 0.22	33		

- Rated voltage This is the necessary voltage to drive the fan. Single-phase 100 to 240 VAC are also available.
- Operating voltage range The voltage range over which fan operation is guaranteed.
- Frequency This is a frequency of alternating current (AC). The frequencies of 50 Hz and 60 Hz are existing in Japan.
- 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 airflow at 0 Pa static pressure when the fan is operating at rated voltage. (Measured using the double chamber method)
- Max. static pressure The static pressure at 0 m³/min airflow when the fan is operating at rated voltage. (Measured using the double chamber method)
- SPL A-weighted sound pressure level (SPL) when the fan operates at the rated speed.
For the measurement method, see the Technical Materials section in the catalog.
- 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.



Ø 190x88 mm

San Ace 190AD 9ADTU type **UL** **CE**

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 For details, please refer to p. 580.
- Dielectric strength 50/60 Hz, 1500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 MΩ min. at 500 VDC (between lead wire conductors and motor case)
- Sound pressure level (SPL) A-weighted sound pressure level (SPL) at 1 m away from the air inlet.
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire

AC power input	L: Orange	N: Gray	Ground	Yellow / Green
+10 VDC output	Red	Black	Sensor	Yellow
			Control	Brown
- Mass 1600 g

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

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

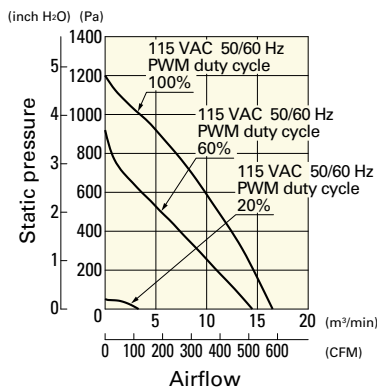
Model no.	Rated voltage [V]	Operating voltage range [V]	Frequency [Hz]	PWM duty cycle [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9ADTU11P0G001	115	90 to 132	50/60	100	2.5	150	4800	16.5 583	1200 4.82	72	-25 to +60	40000/60°C (70000/40°C)
				20	0.3	10	1000	3.3 116	52 0.21	43		
9ADTU23P0G001	230	180 to 264		100	1.3	150	4800	16.5 583	1200 4.82	72		
				20	0.2	10	1000	3.3 116	52 0.21	43		

* PWM frequency is 1 kHz. Models without ratings for 0% PWM duty cycle have zero speed at 0%. When control terminal is open, speed is the same as at 100% duty cycle.

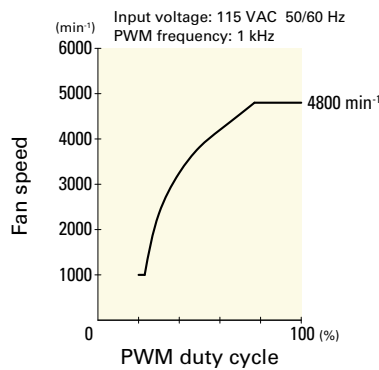
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9ADTU11P0G001 With pulse sensor with PWM control function

PWM duty cycle

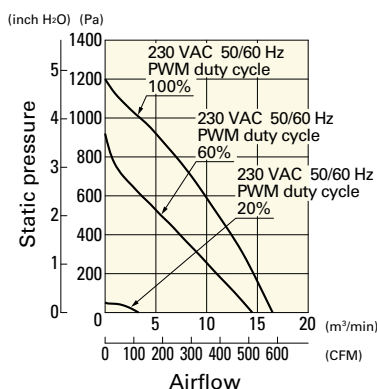


PWM duty - Speed characteristics example

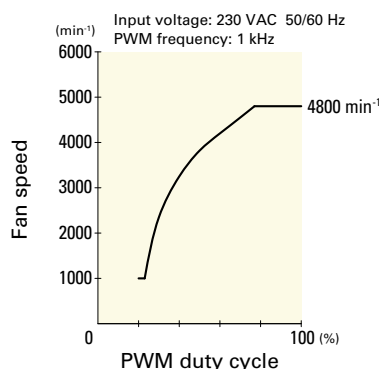


9ADTU23P0G001 With pulse sensor with PWM control function

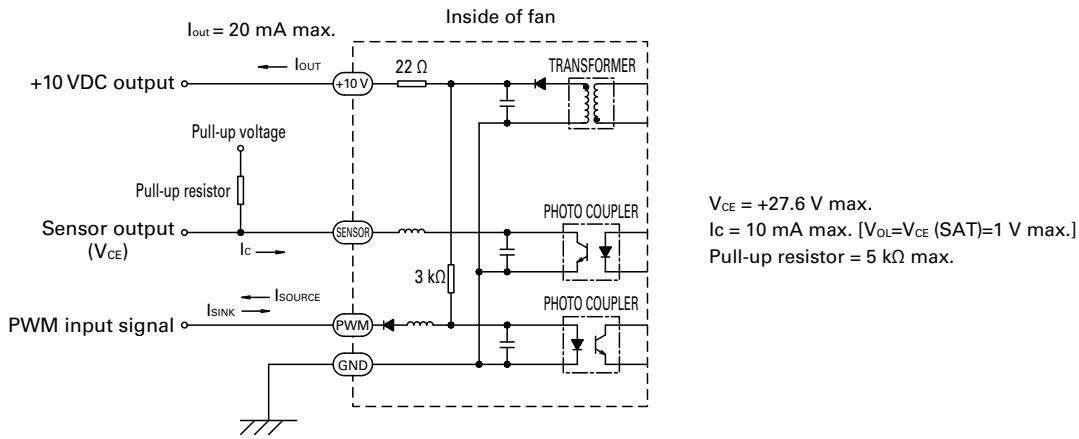
PWM duty cycle



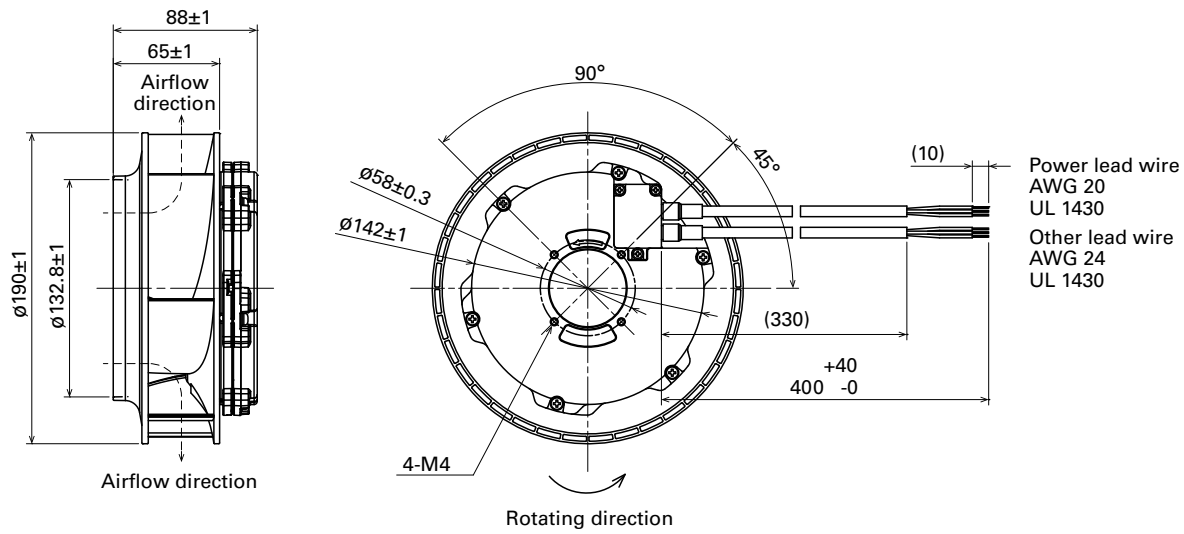
PWM duty - Speed characteristics example



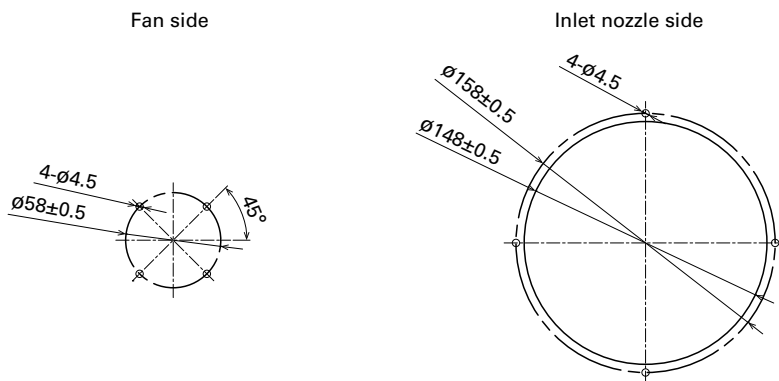
Connection Schematic



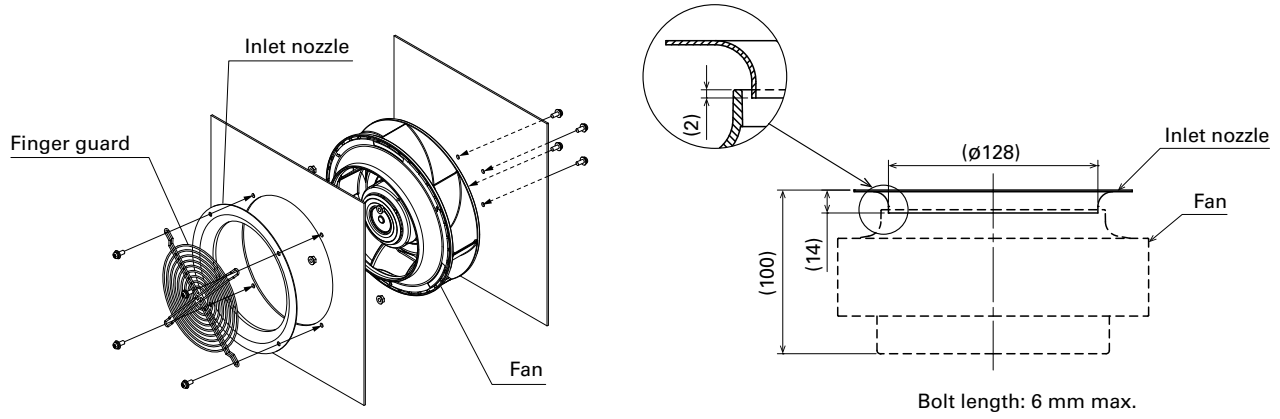
Dimensions (unit: mm)



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



Reference Diagram for Mounting (unit: mm)



Options

Finger guards

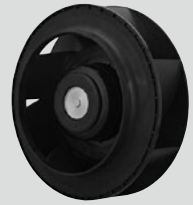
page: p. 565

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

Inlet nozzle

page: p. 569

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



Ø 190x88 mm

San Ace 190AD 9ADW1TU 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 indoor free air at 60°C, rated voltage) Expected life at 40°C is for reference only.
- Motor protection function Locked rotor burnout protection For details, please refer to p. 580.
- Dielectric strength 50/60 Hz, 1500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 MΩ min. at 500 VDC (between lead wire conductors and motor case)
- Sound pressure level (SPL) A-weighted sound pressure level (SPL) at 1 m away from the air inlet.
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire

AC power input	L: Orange	N: Gray	Ground	Yellow / Green
+10 VDC output	Red	Black	Sensor	Yellow
			Control	Brown
- Mass 1700 g
- Ingress protection IP56

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

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

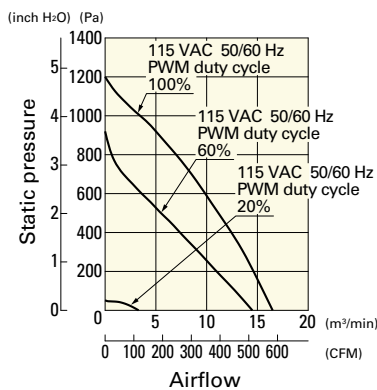
Model no.	Rated voltage [V]	Operating voltage range [V]	Frequency [Hz]	PWM duty cycle [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9ADW1TU11P0G001	115	90 to 132	50/60	100	2.5	150	4800	16.5 583	1200 4.82	72	-25 to +60	40000/60°C (70000/40°C)
				20	0.3	10	1000	3.3 116	52 0.21	43		
9ADW1TU23P0G001	230	180 to 264		100	1.3	150	4800	16.5 583	1200 4.82	72		
				20	0.2	10	1000	3.3 116	52 0.21	43		

* PWM frequency is 1 kHz. Models without ratings for 0% PWM duty cycle have zero speed at 0%. When control terminal is open, speed is the same as at 100% duty cycle.

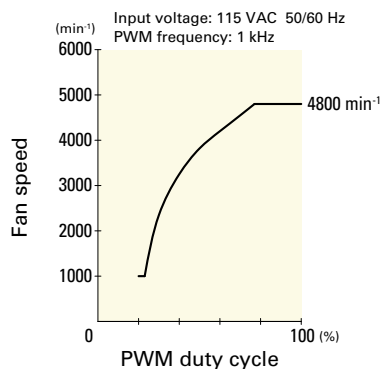
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9ADW1TU11P0G001 With pulse sensor with PWM control function

PWM duty cycle



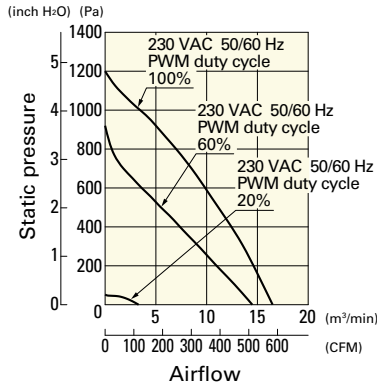
PWM duty - Speed characteristics example



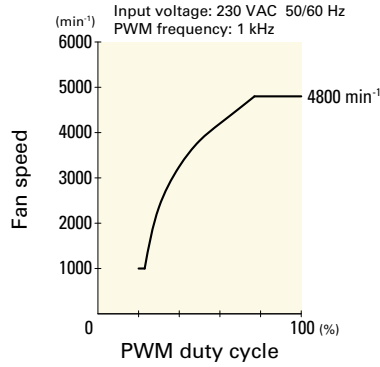
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9ADW1TU23P0G001 With pulse sensor with PWM control function

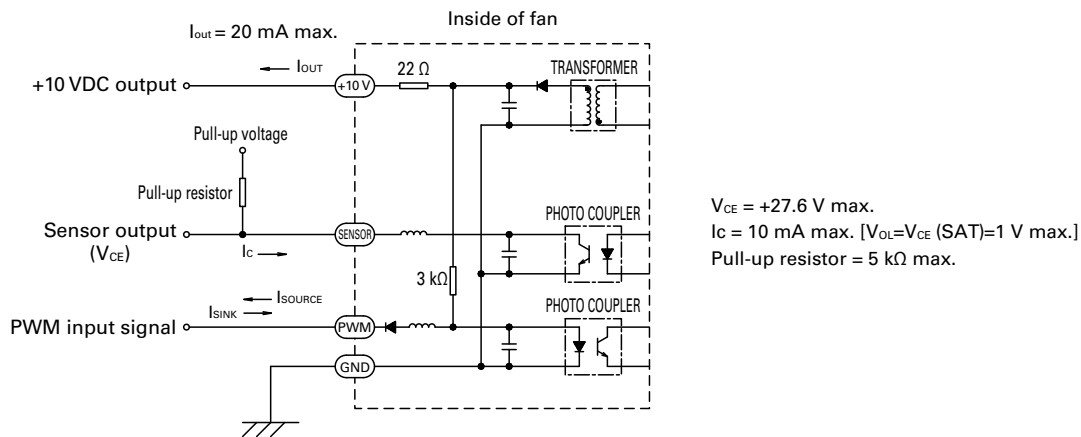
PWM duty cycle



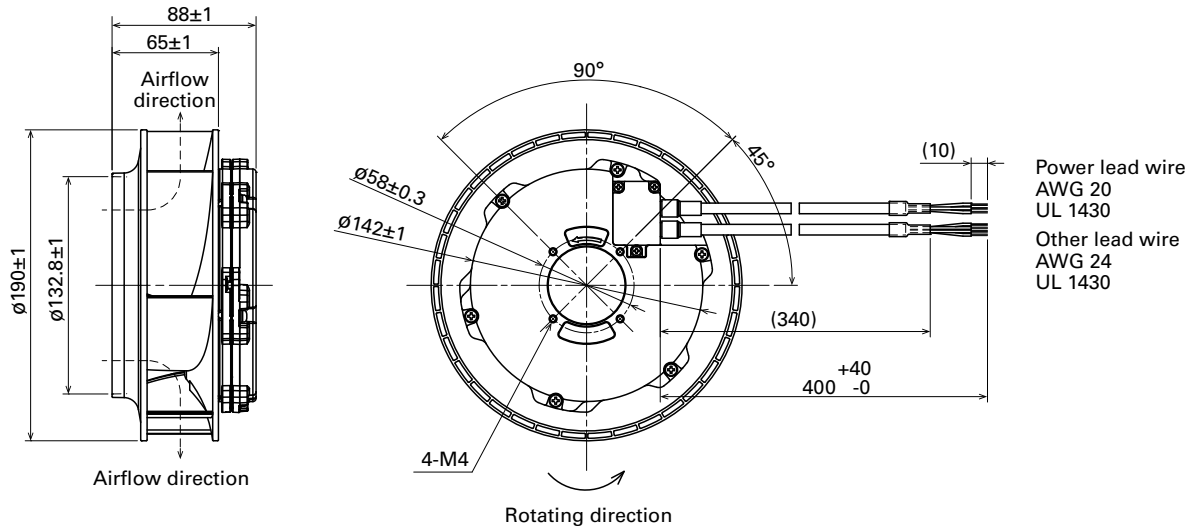
PWM duty - Speed characteristics example



Connection Schematic

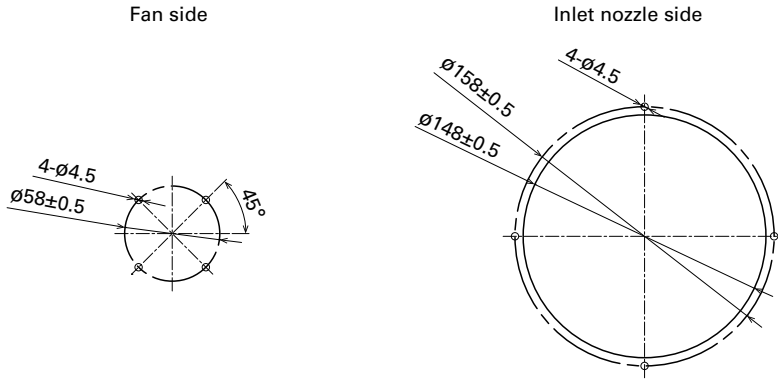


Dimensions (unit: mm)

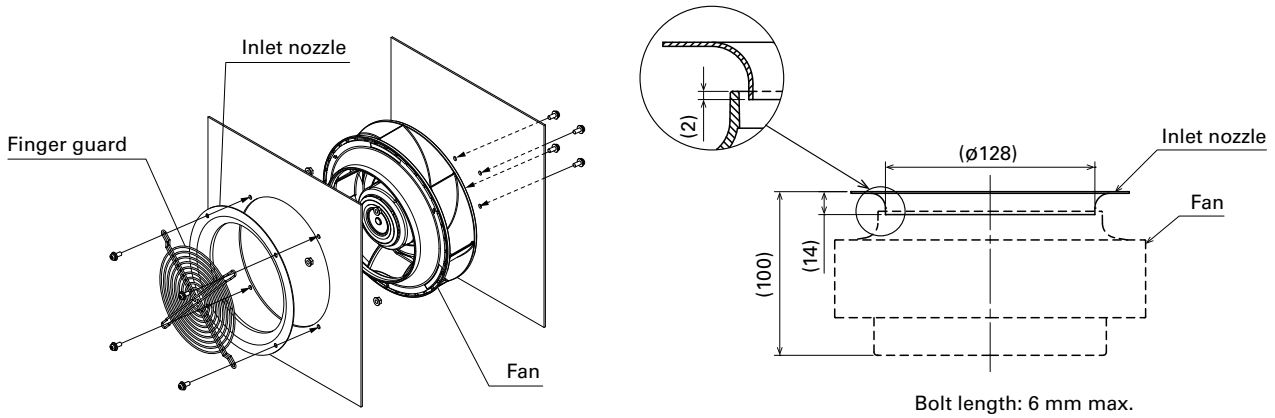


ACDC Fan $\phi 190 \text{ mm}$

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



■ Reference Diagram for Mounting (unit: mm)



■ Options

Finger guards

page: p. 565

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

Inlet nozzle

page: p. 569

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



Ø 225x99 mm

San Ace 225AD 9ADTS 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 For details, please refer to p. 580.
- Dielectric strength 50/60 Hz, 1500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 MΩ min. at 500 VDC (between lead wire conductors and motor case)
- Sound pressure level (SPL) A-weighted sound pressure level (SPL) at 1 m away from the air inlet.
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire

AC power input	L: Orange	N: Gray	Ground	Yellow / Green
+10 VDC output	Red	Black	Sensor	Yellow
			Control	Brown
- Mass 1800 g

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

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

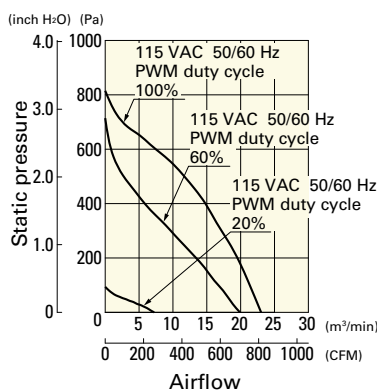
Model no.	Rated voltage [V]	Operating voltage range [V]	Frequency [Hz]	PWM duty cycle [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]			
9ADTS11P0G001	115	90 to 132	50/60	100	2.23	155	3200	23.0 812	815 3.27	74	-20 to +60	40000/60°C (70000/40°C)			
				20	0.3	10	1000	7.1 252	80 0.32	50					
9ADTS11P0F001				100	1.11	70	2450	17.6 621	480 1.93	68					
				20	0.3	10	1000	7.1 252	80 0.32	50					
9ADTS23P0G001				230	180 to 264	50/60	100	1.17	155	3200			23.0 812	815 3.27	74
							20	0.2	10	1000			7.1 252	80 0.32	50
9ADTS23P0F001	100	0.64	70				2450	17.6 621	480 1.93	68					
	20	0.2	10				1000	7.1 252	80 0.32	50					

* PWM frequency is 1 kHz. Models without ratings for 0% PWM duty cycle have zero speed at 0%. When control terminal is open, speed is the same as at 100% duty cycle.

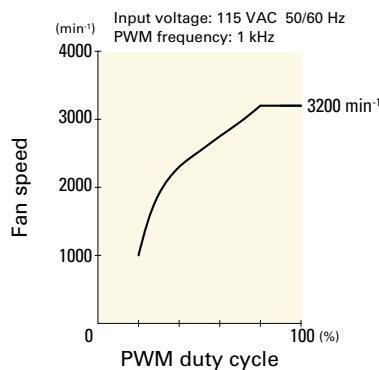
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9ADTS11P0G001 With pulse sensor with PWM control function

PWM duty cycle



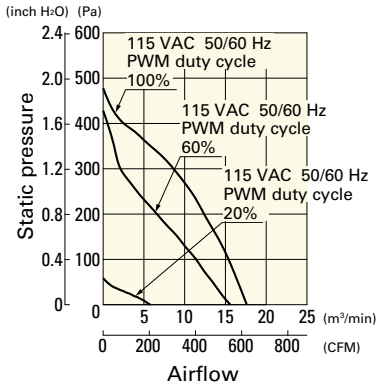
PWM duty - Speed characteristics example



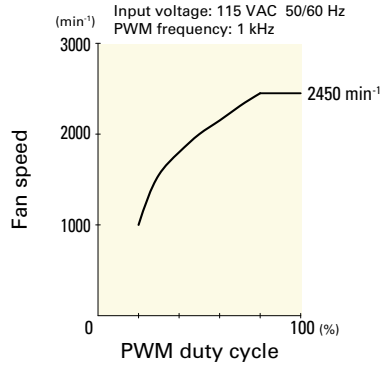
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9ADTS11P0F001 With pulse sensor with PWM control function

PWM duty cycle

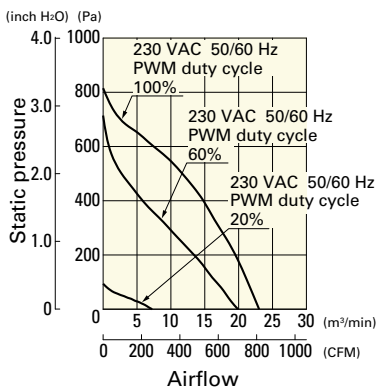


PWM duty - Speed characteristics example

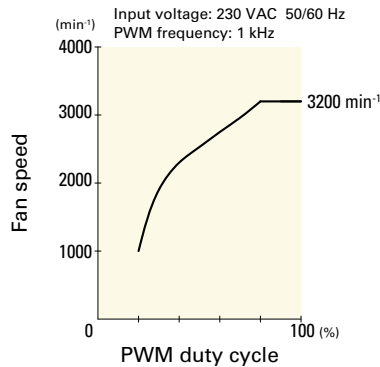


9ADTS23P0G001 With pulse sensor with PWM control function

PWM duty cycle

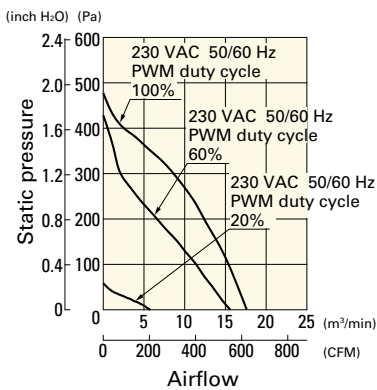


PWM duty - Speed characteristics example

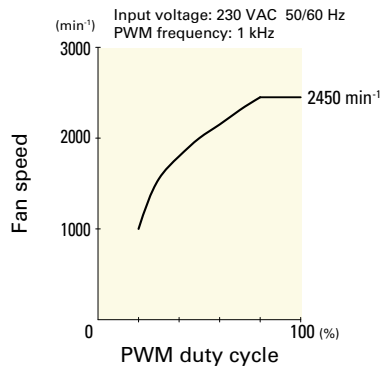


9ADTS23P0F001 With pulse sensor with PWM control function

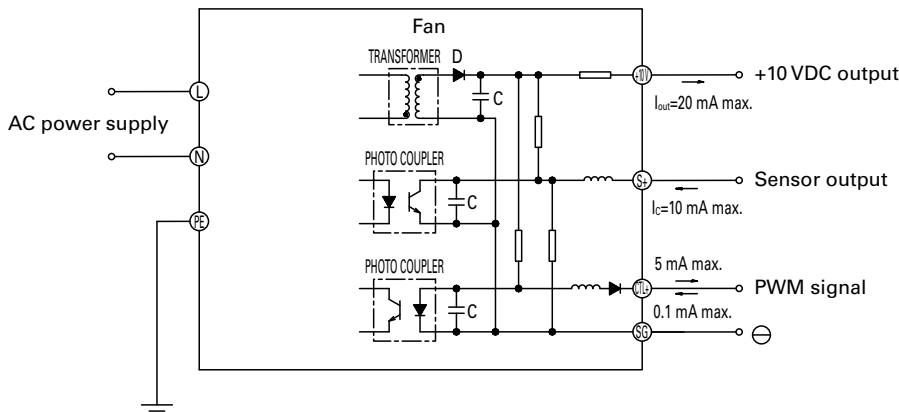
PWM duty cycle



PWM duty - Speed characteristics example

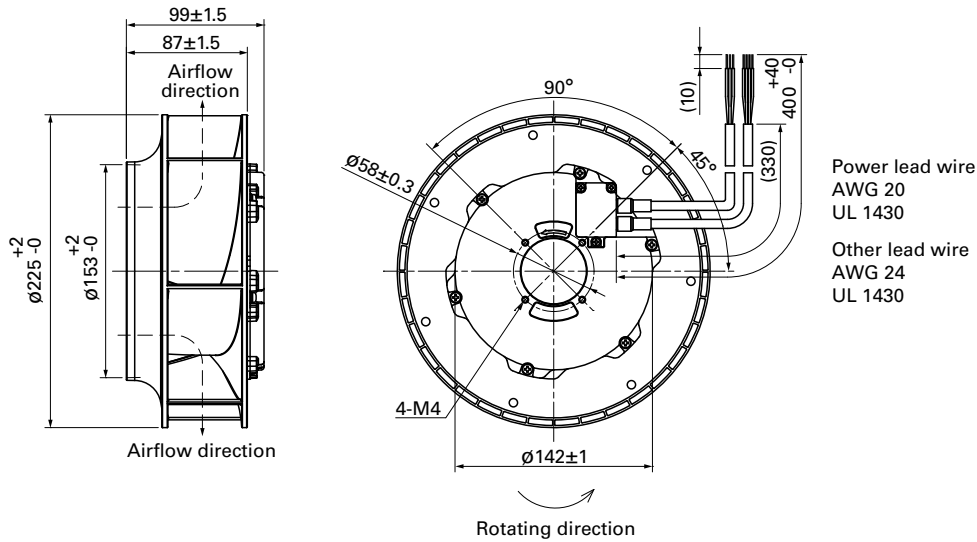


Connection Schematic

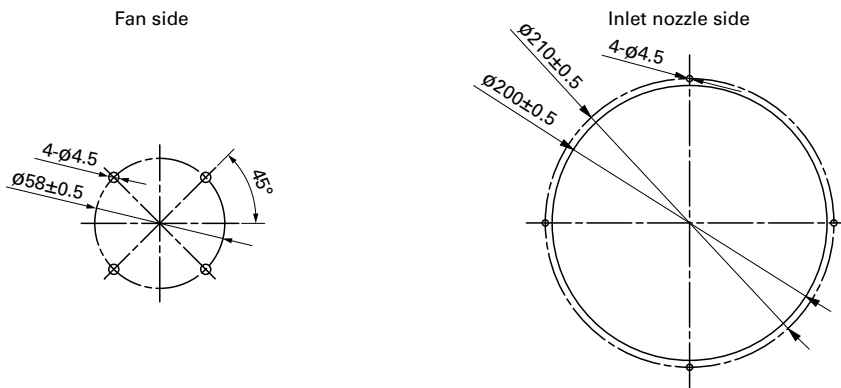


ACDC
ACDC Fan φ225 mm

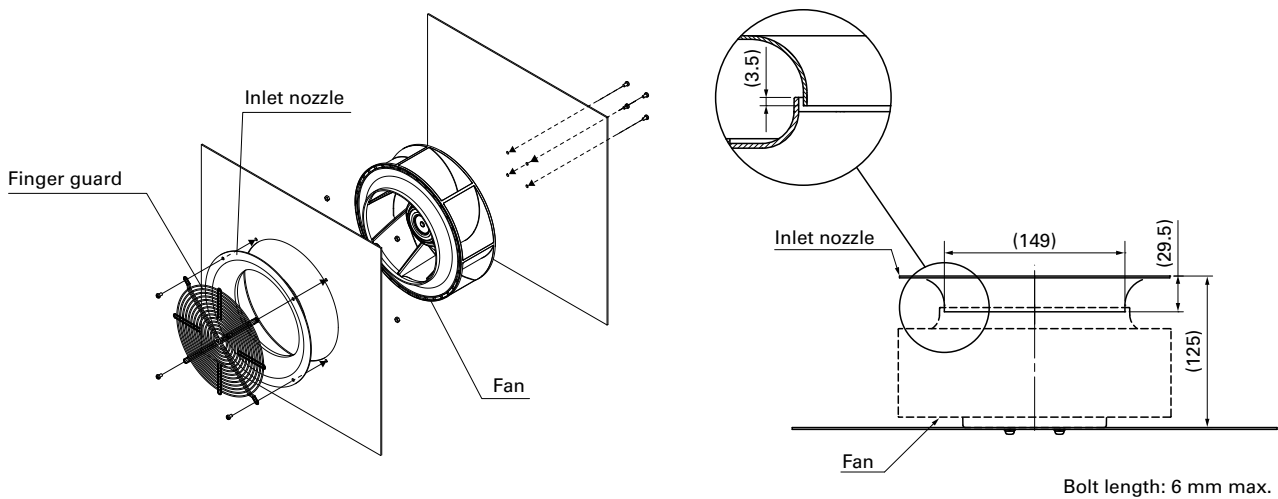
Dimensions (unit: mm)



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



Reference Diagram for Mounting (unit: mm)



Options

Finger guards

page: p. 567

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

Inlet nozzle

page: p. 569

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



Ø **225x99** mm

San Ace 225AD 9ADW1TS 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 indoor free air at 60°C, rated voltage) Expected life at 40°C is for reference only.
- Motor protection function Locked rotor burnout protection For details, please refer to p. 580.
- Dielectric strength 50/60 Hz, 1500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 MΩ min. at 500 VDC (between lead wire conductors and motor case)
- Sound pressure level (SPL) A-weighted sound pressure level (SPL) at 1 m away from the air inlet.
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire

AC power input	L: Orange	N: Gray	Ground	Yellow / Green
+10 VDC output	Red	Black	Sensor	Yellow
			Control	Brown
- Mass 1900 g
- Ingress protection IP56

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

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

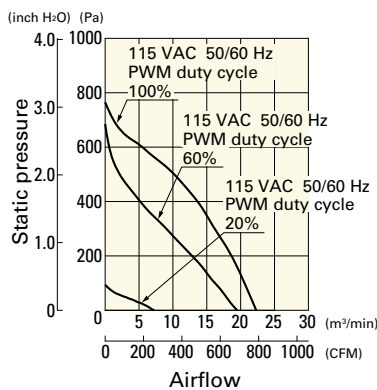
Model no.	Rated voltage [V]	Operating voltage range [V]	Frequency [Hz]	PWM duty cycle [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9ADW1TS11P0H001	115	90 to 132	50/60	100	2.06	140	3100	22.3 787	760 3.05	73	-20 to +60	40000/60°C (70000/40°C)
				20	0.3	11	1000	7.1 252	80 0.32	50		
9ADW1TS11P0M001	100	11		100	1.08	61	2350	16.9 597	440 1.77	67		
				20	0.3	11	1000	7.1 252	80 0.32	50		
9ADW1TS23P0H001	230	180 to 264		100	1.06	140	3100	22.3 787	760 3.05	73		
				20	0.2	11	1000	7.1 252	80 0.32	50		
9ADW1TS23P0M001	100	61	100	0.57	61	2350	16.9 597	440 1.77	67			
			20	0.2	11	1000	7.1 252	80 0.32	50			

* PWM frequency is 1 kHz. Models without ratings for 0% PWM duty cycle have zero speed at 0%. When control terminal is open, speed is the same as at 100% duty cycle.

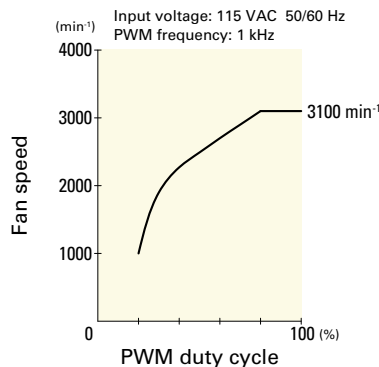
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9ADW1TS11P0H001 With pulse sensor with PWM control function

PWM duty cycle



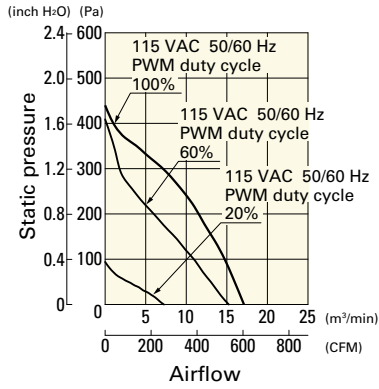
PWM duty - Speed characteristics example



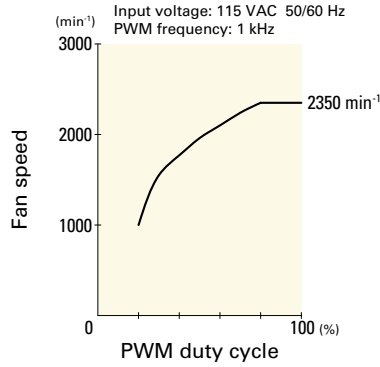
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9ADW1TS11P0M001 With pulse sensor with PWM control function

PWM duty cycle

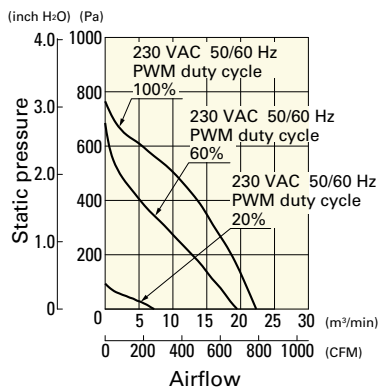


PWM duty - Speed characteristics example

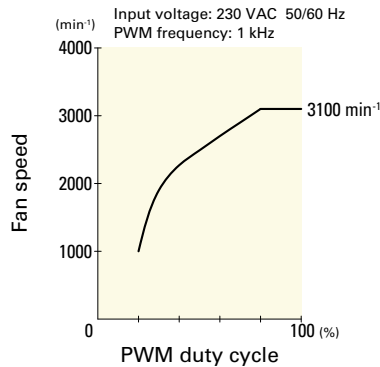


9ADW1TS23P0H001 With pulse sensor with PWM control function

PWM duty cycle

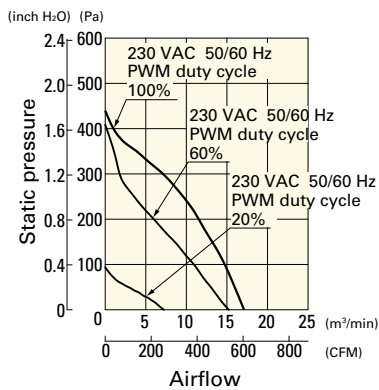


PWM duty - Speed characteristics example

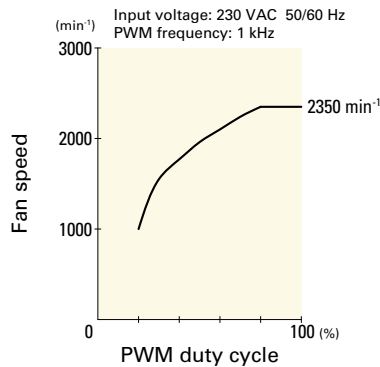


9ADW1TS23P0M001 With pulse sensor with PWM control function

PWM duty cycle

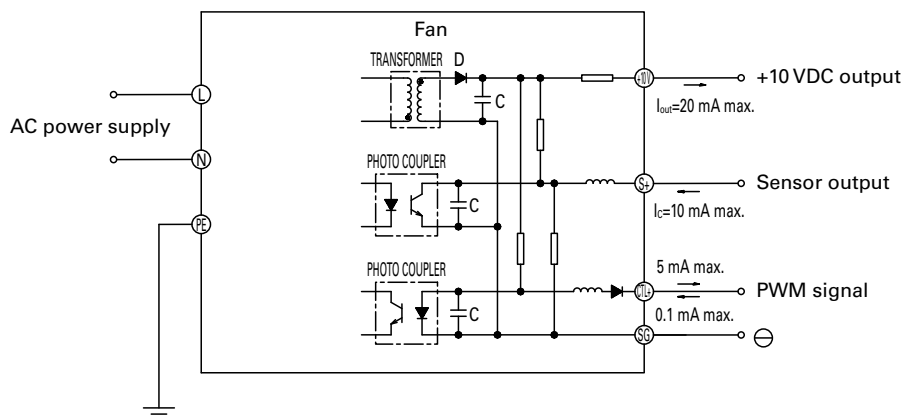


PWM duty - Speed characteristics example

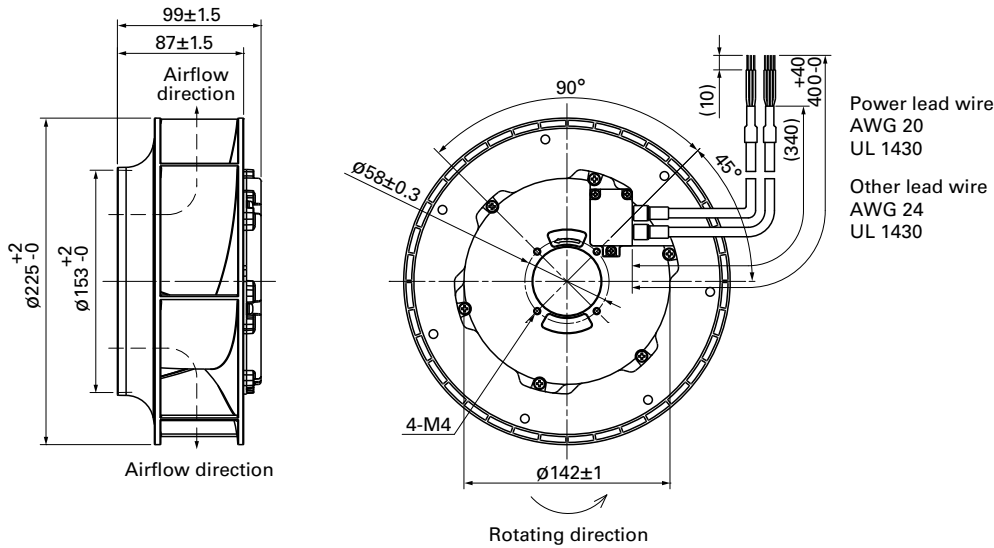


ACDC Fan φ225 mm ACDC

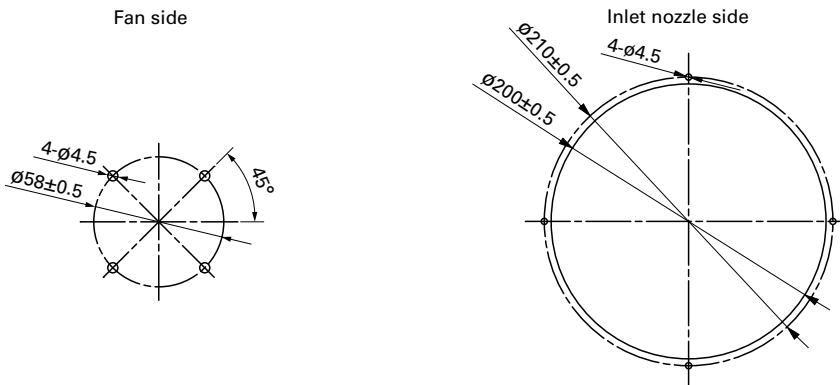
Connection Schematic



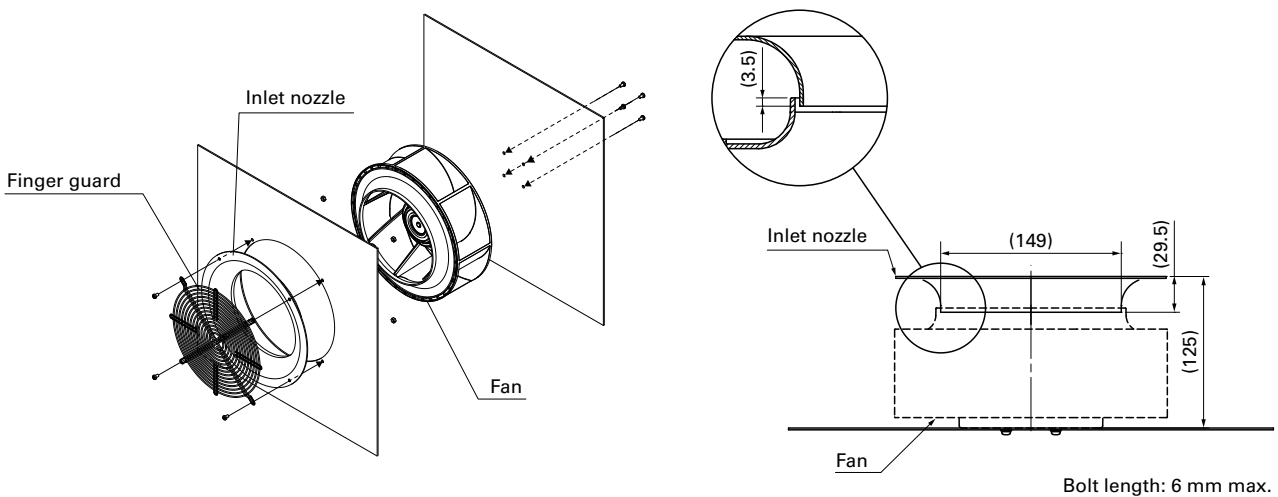
Dimensions (unit: mm)



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



Reference Diagram for Mounting (unit: mm)



Options

Finger guards

page: p. 567

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

Inlet nozzle

page: p. 569

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



∅250×99 mm

San Ace 250AD 9ADTV 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 For details, please refer to p. 580.
- Dielectric strength 50/60 Hz, 1500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 MΩ min. at 500 VDC (between lead wire conductors and motor case)
- Sound pressure level (SPL) A-weighted sound pressure level (SPL) at 1 m away from the air inlet.
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire

AC power input	L: Orange	N: Gray	Ground	Yellow / Green
+10 VDC output	Red	Black	Sensor	Yellow
			Control	Brown
- Mass 1920 g

Specifications When the optional inlet nozzle (109-1151) is mounted.

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

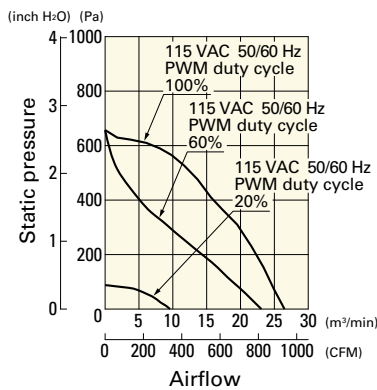
Model no.	Rated voltage [V]	Operating voltage range [V]	Frequency [Hz]	PWM duty cycle [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9ADTV11P0G001	115	90 to 132	50/60	100	2.3	140	2700	26.5 936	650 2.61	71	-25 to +60	40000/60°C (70000/40°C)
				20	0.3	10	1000	9.6 339	88 0.35	57		
9ADTV23P0G001	230	180 to 264		100	1.2	140	2700	26.5 936	650 2.61	71		
				20	0.2	10	1000	9.6 339	88 0.35	57		

* PWM frequency is 1 kHz. Models without ratings for 0% PWM duty cycle have zero speed at 0%. When control terminal is open, speed is the same as at 100% duty cycle.

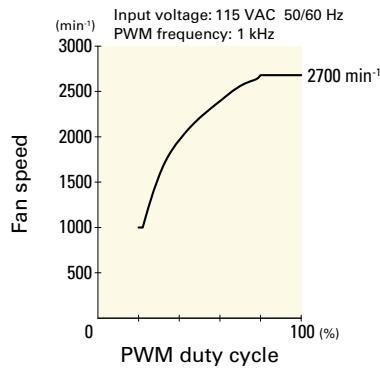
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9ADTV11P0G001 With pulse sensor with PWM control function

PWM duty cycle

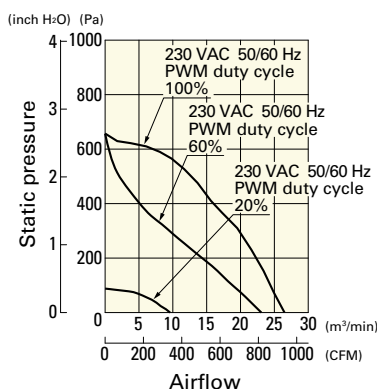


PWM duty - Speed characteristics example

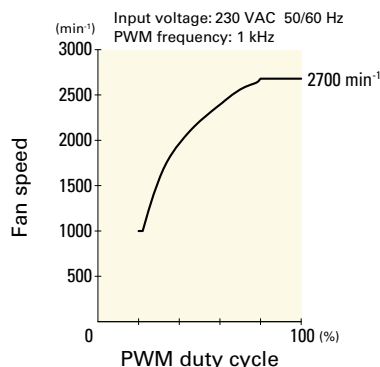


9ADTV23P0G001 With pulse sensor with PWM control function

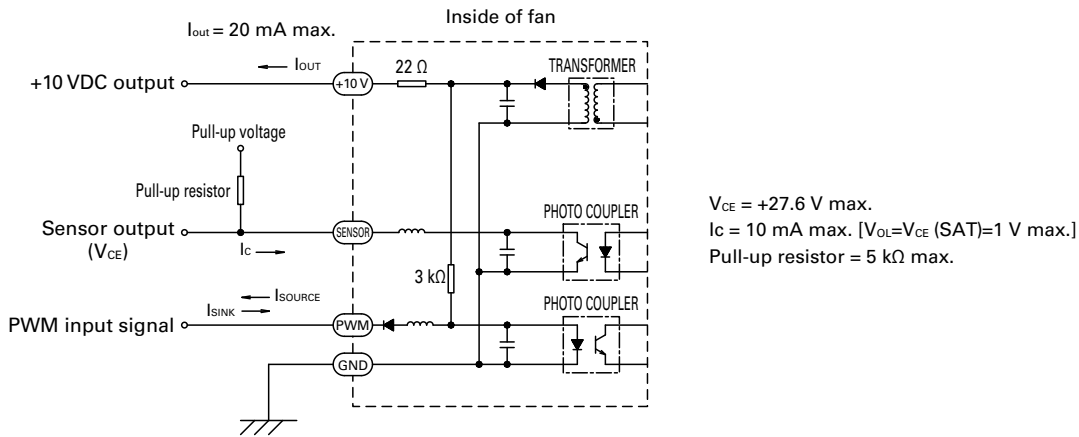
PWM duty cycle



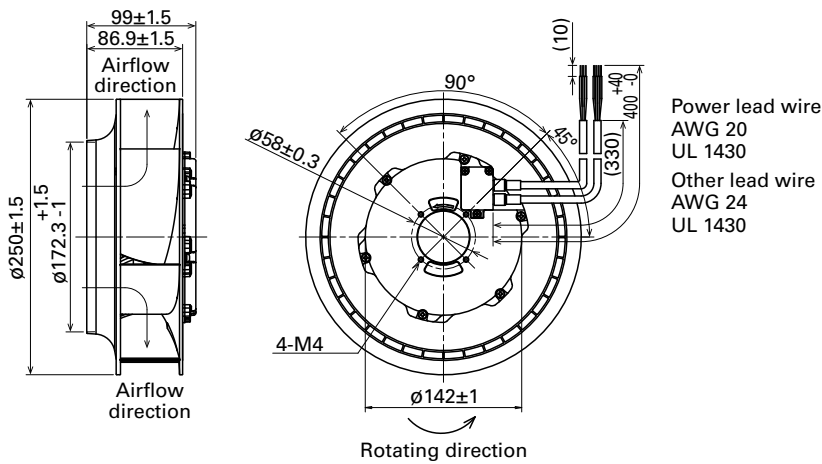
PWM duty - Speed characteristics example



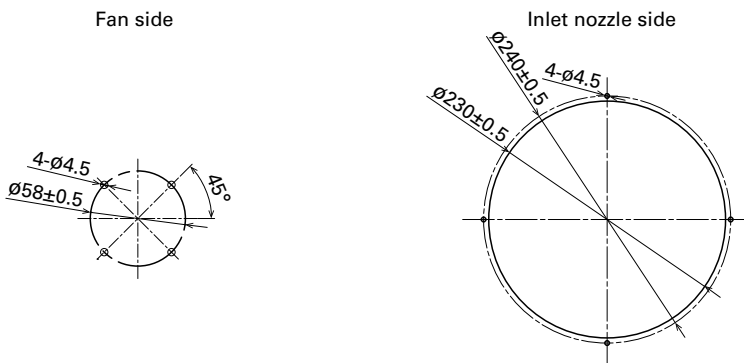
Connection Schematic



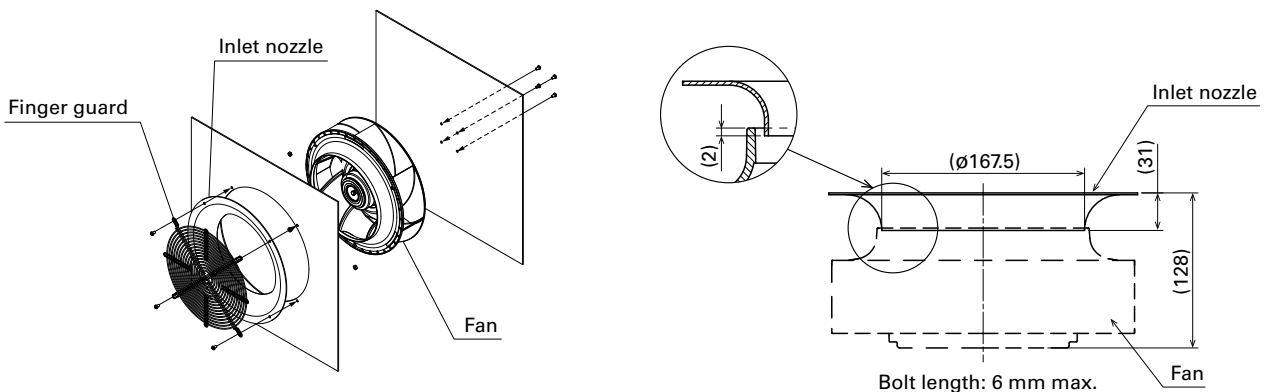
Dimensions (unit: mm)



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



Reference Diagram for Mounting (unit: mm)



Options

Finger guards

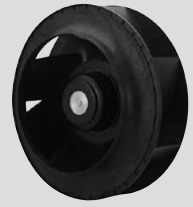
page: p. 568

Model no.: 109-1152,109-1152H

Inlet nozzle

page: p. 569

Model no.: 109-1151,109-1151H



∅250×99 mm

San Ace 250AD 9ADW1TV 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 indoor free air at 60°C, rated voltage) Expected life at 40°C is for reference only.
- Motor protection function Locked rotor burnout protection For details, please refer to p. 580.
- Dielectric strength 50/60 Hz, 1500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance 10 MΩ min. at 500 VDC (between lead wire conductors and motor case)
- Sound pressure level (SPL) A-weighted sound pressure level (SPL) at 1 m away from the air inlet.
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire

AC power input	L: Orange	N: Gray	Ground	Yellow / Green
+10 VDC output	Red	Black	Sensor	Yellow
			Control	Brown
- Mass 2020 g
- Ingress protection IP56

Specifications When the optional inlet nozzle (109-1151H) is mounted.

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

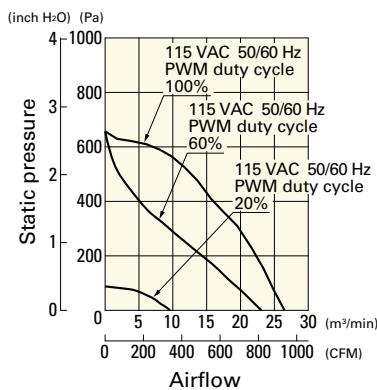
Model no.	Rated voltage [V]	Operating voltage range [V]	Frequency [Hz]	PWM duty cycle [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9ADW1TV11P0G001	115	90 to 132	50/60	100	2.3	140	2700	26.5 936	650 2.61	71	-25 to +60	40000/60°C (70000/40°C)
				20	0.3	10	1000	9.6 339	88 0.35	57		
9ADW1TV23P0G001	230	180 to 264		100	1.2	140	2700	26.5 936	650 2.61	71		
				20	0.2	10	1000	9.6 339	88 0.35	57		

* PWM frequency is 1 kHz. Models without ratings for 0% PWM duty cycle have zero speed at 0%. When control terminal is open, speed is the same as at 100% duty cycle.

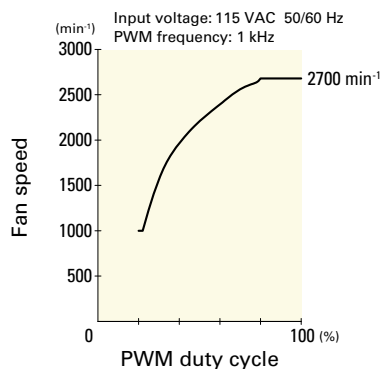
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9ADW1TV11P0G001 With pulse sensor with PWM control function

PWM duty cycle



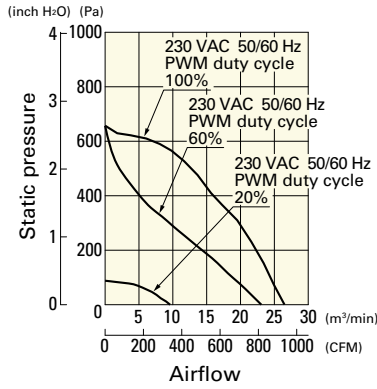
PWM duty - Speed characteristics example



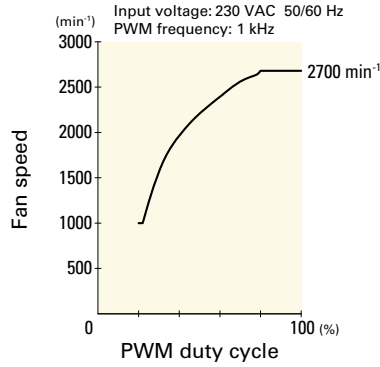
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9ADW1TV23P0G001 With pulse sensor with PWM control function

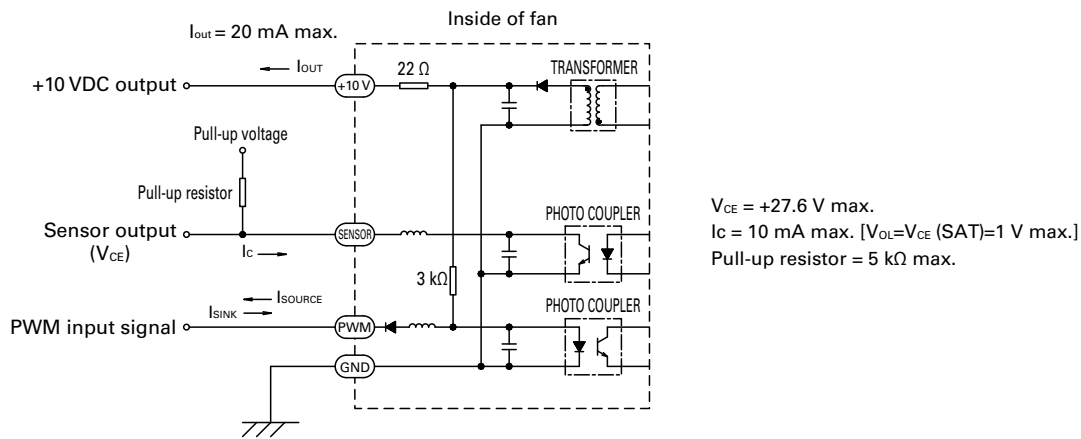
PWM duty cycle



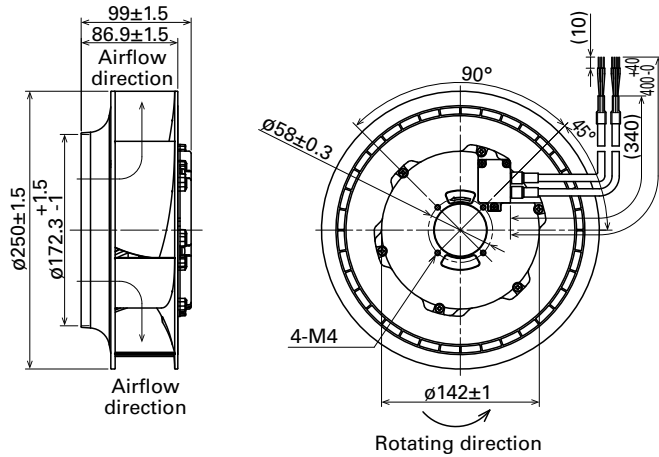
PWM duty - Speed characteristics example



Connection Schematic



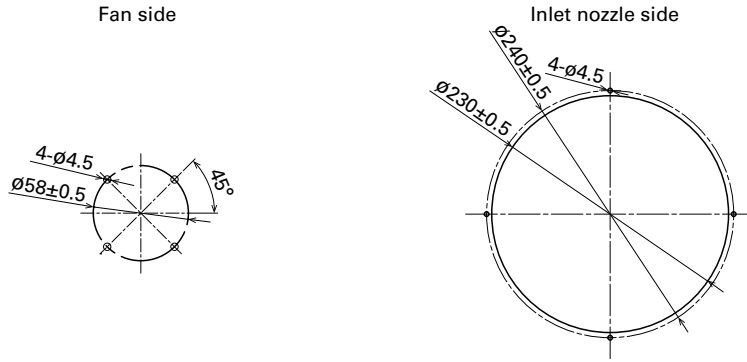
Dimensions (unit: mm)



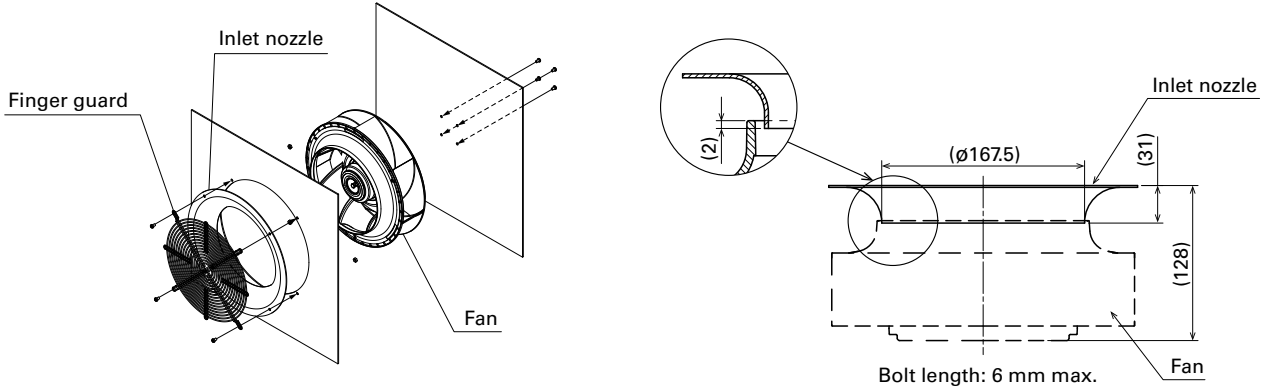
Power lead wire
AWG 20
UL 1430
Other lead wire
AWG 24
UL 1430

ACDC Fan $\phi 250 \text{ mm}$

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



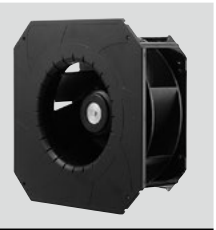
Reference Diagram for Mounting (unit: mm)



Options

Finger guards page: p. 568
 Model no.: 109-1152, 109-1152H

Inlet nozzle page: p. 569
 Model no.: 109-1151, 109-1151H



270x270x119 mm

San Ace 225AD 9ADB1TS type

General Specifications

- Material Motor case: Aluminum (Black coating), Impeller: Plastic (Flammability: UL 94V-0)
Bracket: Aluminum (Black coating), Plastic (Flammability: UL94V-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
For details, please refer to p. 580.
- Dielectric strength 50/60 Hz, 1500 VAC, for 1 minute (between lead wire conductors and bracket)
- Insulation resistance 10 MΩ min. at 500 VDC (between lead wire conductors and bracket)
- Sound pressure level (SPL) A-weighted sound pressure level (SPL) at 1 m away from the air inlet.
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire

AC power input	L: Orange	N: Gray	Ground	Yellow / Green
+10 VDC output	Red	Black	Sensor	Yellow
			Control	Brown
- Mass 2500 g

Specifications

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

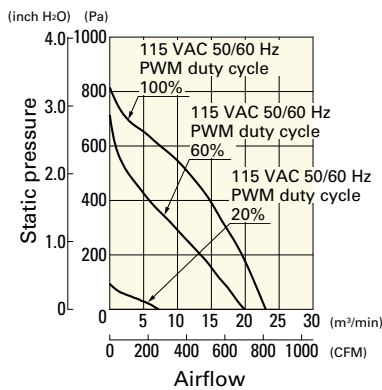
Model no.	Rated voltage [V]	Operating voltage range [V]	Frequency [Hz]	PWM duty cycle [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]			
9ADB1TS11P0G001	115	90 to 132	50/60	100	2.23	155	3200	23.0 812	815 3.27	74	-20 to +60	40000/60°C (70000/40°C)			
				20	0.3	10	1000	7.1 252	80 0.32	50					
9ADB1TS11P0F001				100	1.11	70	2450	17.6 621	480 1.93	68					
				20	0.3	10	1000	7.1 252	80 0.32	50					
9ADB1TS23P0G001				230	180 to 264	50/60	100	1.17	155	3200			23.0 812	815 3.27	74
							20	0.2	10	1000			7.1 252	80 0.32	50
9ADB1TS23P0F001	100	0.64	70				2450	17.6 621	480 1.93	68					
	20	0.2	10				1000	7.1 252	80 0.32	50					

* PWM frequency is 1 kHz. Models without ratings for 0% PWM duty cycle have zero speed at 0%. When control terminal is open, speed is the same as at 100% duty cycle.

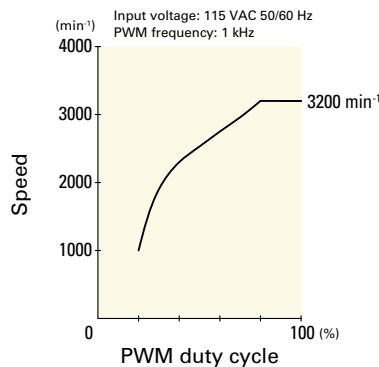
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9ADB1TS11P0G001 With pulse sensor with PWM control function

PWM duty cycle



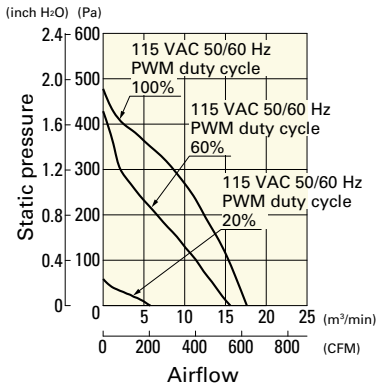
PWM duty - Speed characteristics example



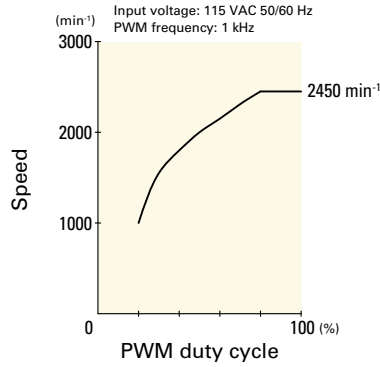
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9ADB1TS11P0F001 With pulse sensor with PWM control function

PWM duty cycle

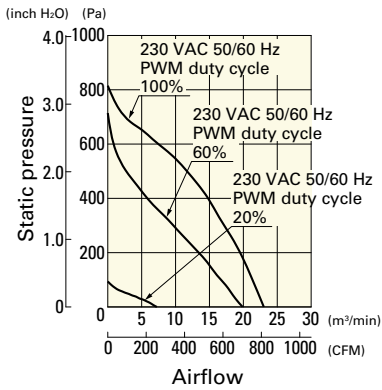


PWM duty - Speed characteristics example

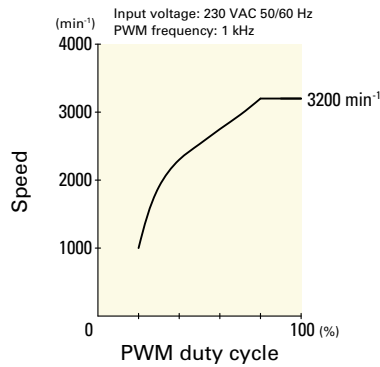


9ADB1TS23P0G001 With pulse sensor with PWM control function

PWM duty cycle

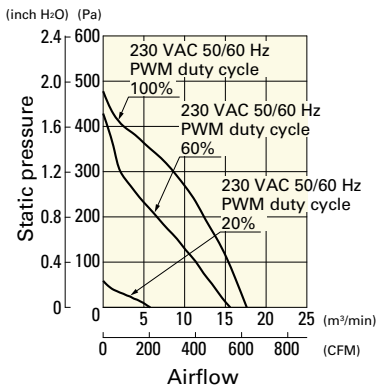


PWM duty - Speed characteristics example

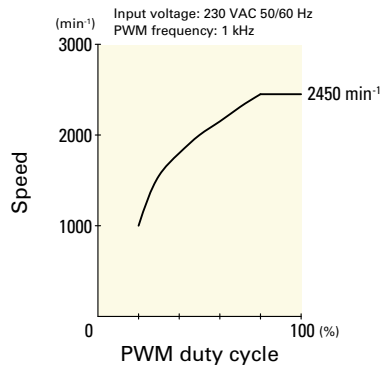


9ADB1TS23P0F001 With pulse sensor with PWM control function

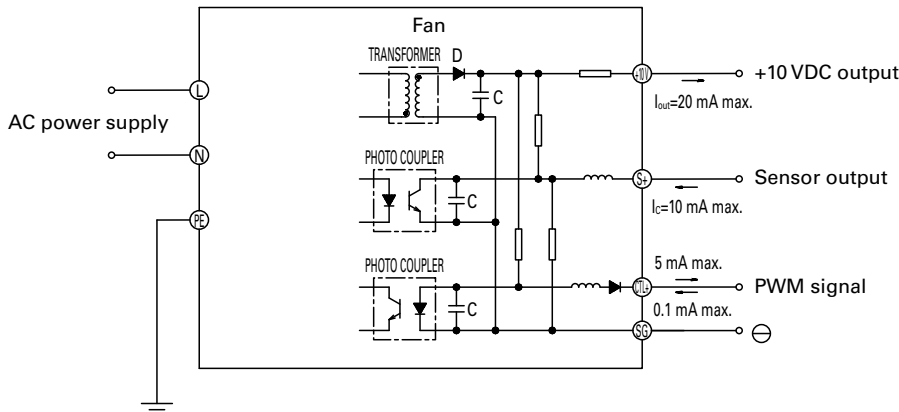
PWM duty cycle



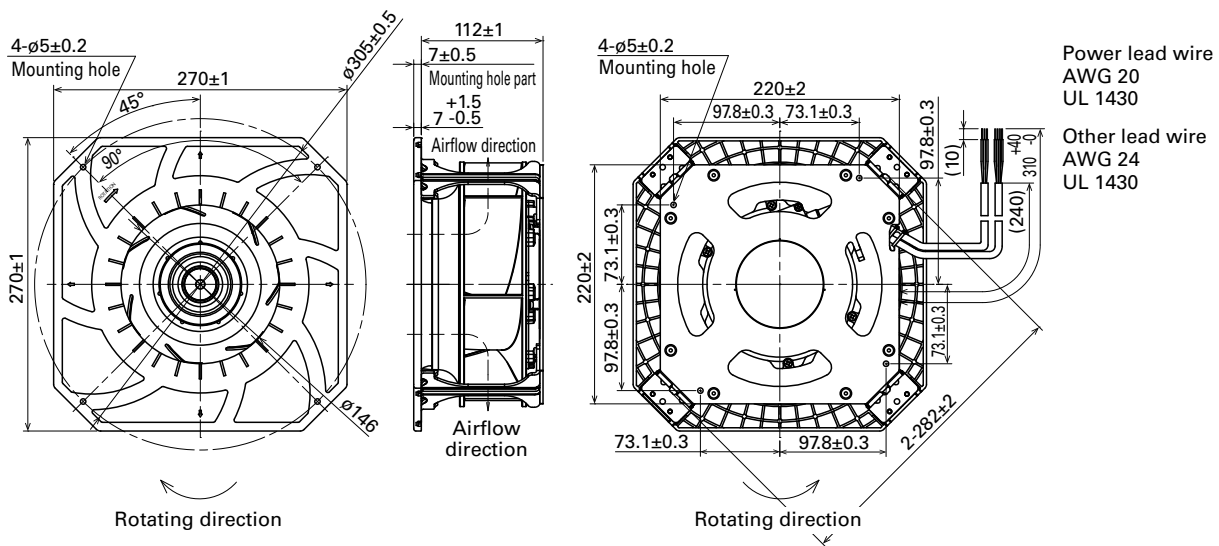
PWM duty - Speed characteristics example



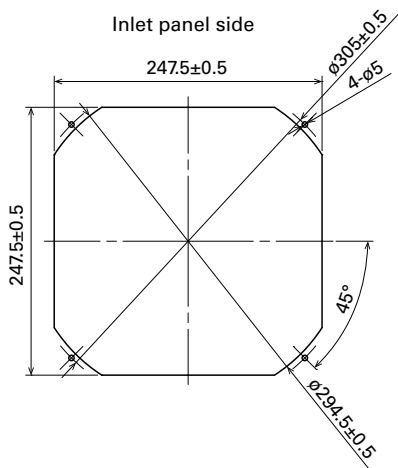
Connection Schematic



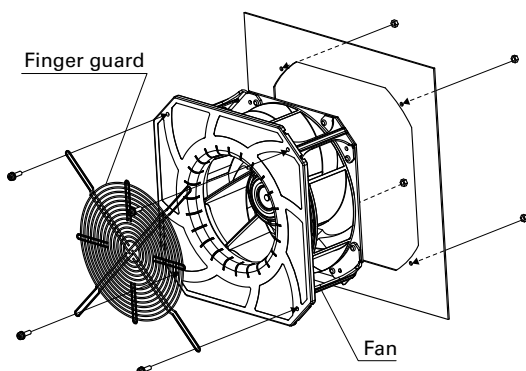
Dimensions (unit: mm)



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



Reference Diagram for Mounting

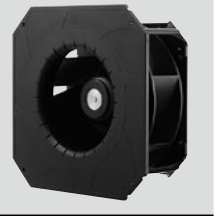


Options

Finger guards

page: p. 568

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



270x270x119 mm

San Ace 225AD 9ADB1W1TS type

General Specifications

- Material Motor case: Aluminum (Black coating), Impeller: Plastic (Flammability: UL 94V-0)
Bracket: Aluminum (Black coating), Plastic (Flammability: UL94V-0)
- Expected life See the table below. (L10 life: 90% survival rate for continuous operation in indoor free air at 60°C, rated voltage)
Expected life at 40°C is for reference only.
- Motor protection function Locked rotor burnout protection
For details, please refer to p. 580.
- Dielectric strength 50/60 Hz, 1500 VAC, for 1 minute (between lead wire conductors and bracket)
- Insulation resistance 10 MΩ min. at 500 VDC (between lead wire conductors and bracket)
- Sound pressure level (SPL) A-weighted sound pressure level (SPL) at 1 m away from the air inlet.
- Storage temperature -30 to +70°C (Non-condensing)
- Lead wire

AC power input	L: Orange	N: Gray	Ground	Yellow / Green
+10 VDC output	Red	Black	Sensor	Yellow
			Control	Brown
- Mass 2600 g
- Ingress protection IP56

Specifications

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

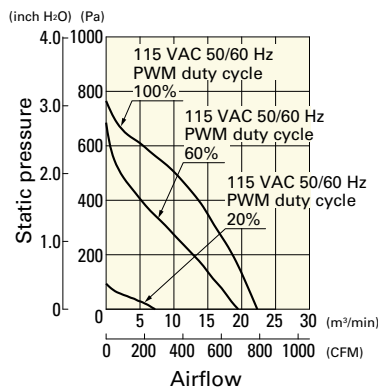
Model no.	Rated voltage [V]	Operating voltage range [V]	Frequency [Hz]	PWM duty cycle* [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9ADB1W1TS11P0H001	115	90 to 132	50/60	100	2.06	140	3100	22.3 787	760 3.05	73	-20 to +60	40000/60°C (70000/40°C)
				20	0.3	11	1000	7.1 252	80 0.32	50		
9ADB1W1TS11P0M001	115	90 to 132	50/60	100	1.08	61	2350	16.9 597	440 1.77	67		
				20	0.3	11	1000	7.1 252	80 0.32	50		
9ADB1W1TS23P0H001	230	180 to 264	50/60	100	1.06	140	3100	22.3 787	760 3.05	73		
				20	0.2	11	1000	7.1 252	80 0.32	50		
9ADB1W1TS23P0M001	230	180 to 264	50/60	100	0.57	61	2350	16.9 597	440 1.77	67		
				20	0.2	11	1000	7.1 252	80 0.32	50		

* PWM frequency is 1 kHz. Models without ratings for 0% PWM duty cycle have zero speed at 0%. When control terminal is open, speed is the same as at 100% duty cycle.

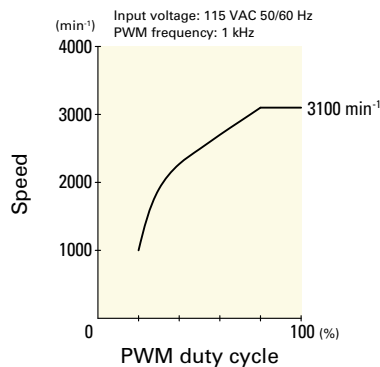
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9ADB1W1TS11P0H001 With pulse sensor with PWM control function

PWM duty cycle



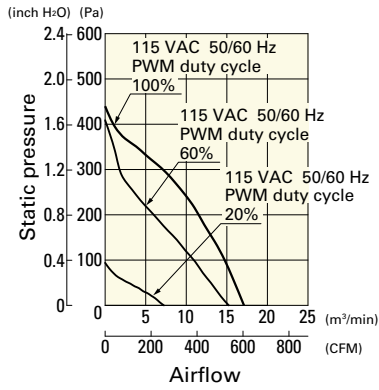
PWM duty - Speed characteristics example



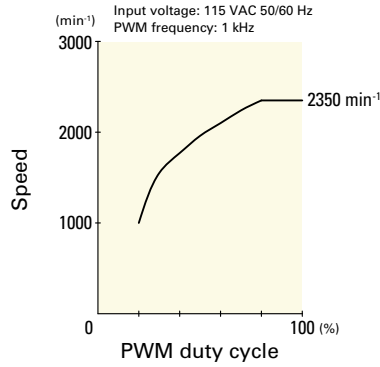
Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9ADB1W1TS11P0M001 With pulse sensor with PWM control function

PWM duty cycle

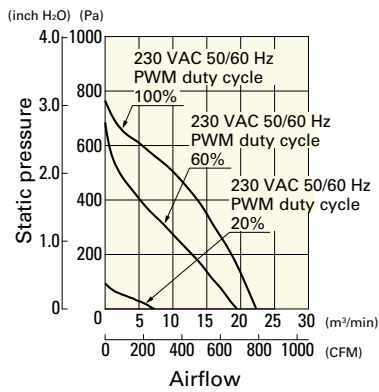


PWM duty - Speed characteristics example

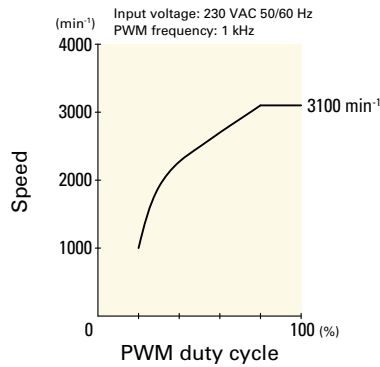


9ADB1W1TS23P0H001 With pulse sensor with PWM control function

PWM duty cycle

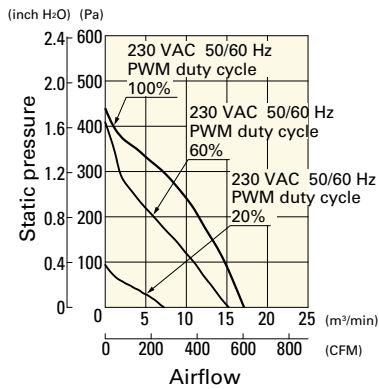


PWM duty - Speed characteristics example

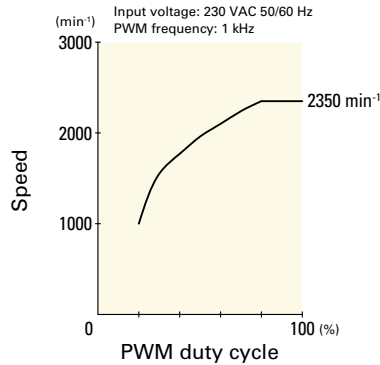


9ADB1W1TS23P0M001 With pulse sensor with PWM control function

PWM duty cycle

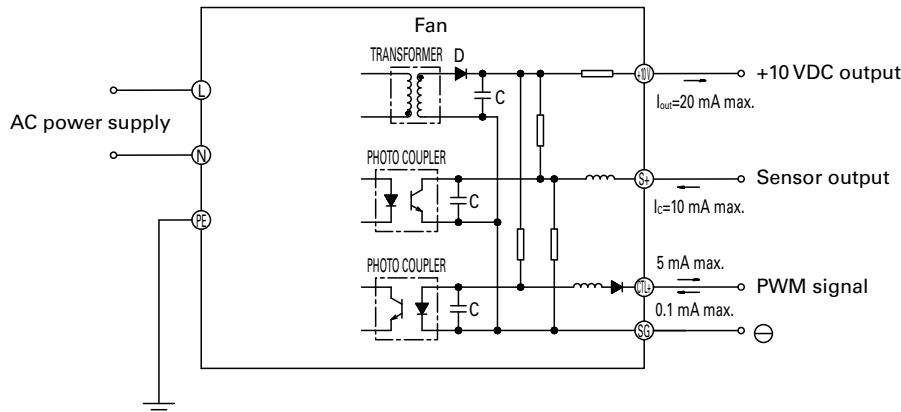


PWM duty - Speed characteristics example

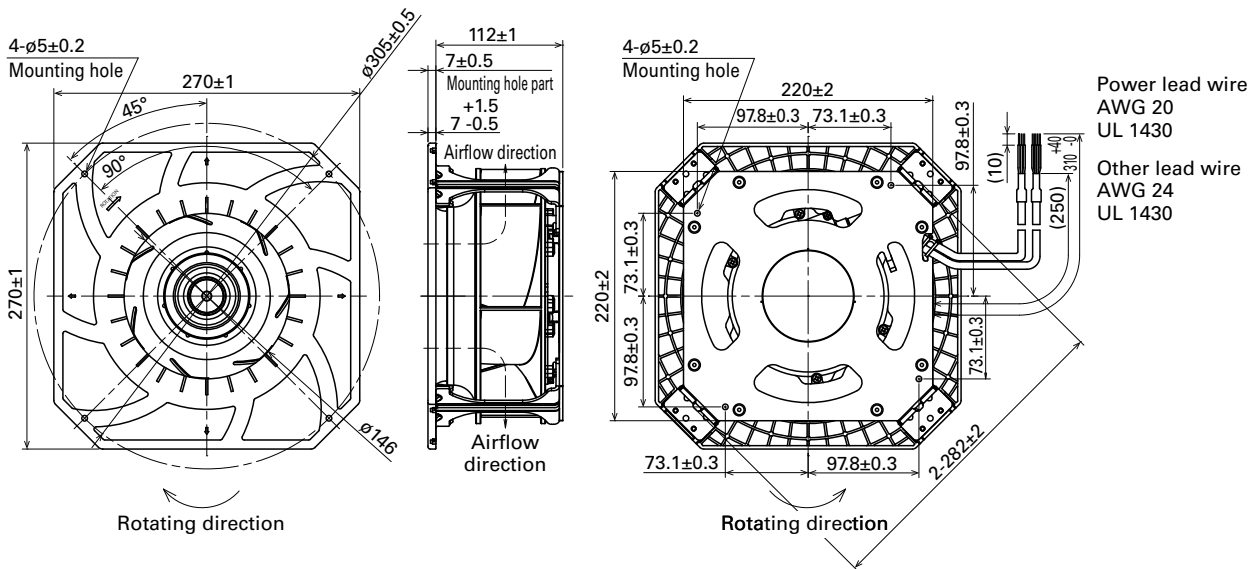


ACDC Fan 270 mm sq.

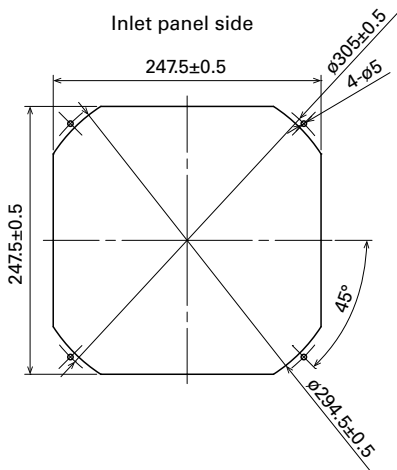
Connection Schematic



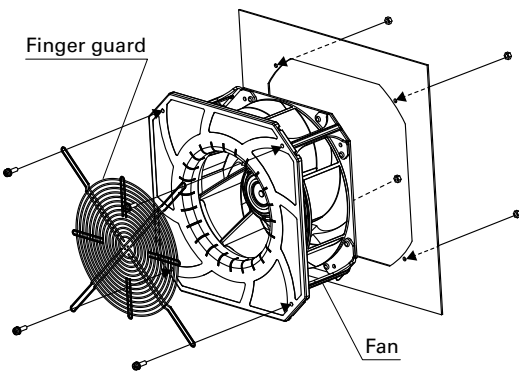
Dimensions (unit: mm)



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



Reference Diagram for Mounting



Options

Finger guards

page: p. 568

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