E0515H series 51 × 53 × 15 mm

DC Centrifugal Blowers

E0515H

51×53×15
(2.0"×2.1"×0.6")
Max. airflow: 0.125 m³/min
Max. static pressure: 210 Pa
Mass: 30 g

Fan model code

- **E0515H12B7AZA01**
- **E0515H12B7APA01**
- **E0515H12B8AZA01**
- **E0515H24B5AZ-00**
- **E0515H24B7AZA01**
- **E0515H24B8AZA01**
- **E0515H24B8ASA01**

Standard specification

Max. Airflow		Max. Static Pressure		Noise	Speed	Input	Voltage Spec. V		Current mA		Model Code	Operating Temp. Range ℃
m³/min	CFM	Pa	inH₂O	dB	min⁻¹	W	Rating	Operating Range	Rating	Starting		
0.125	4.4	210	0.84	42	6100	2.3	12	6-13.8	190	320	E0515H12B8AZA01	-20 ~ +60
						2.4	24	12-27.6	100	160	E0515H24B8AZA01	
0.11	3.9	165	0.66	40	5500	1.7	12	6-13.8	140	225	E0515H12B7AZA01	-20 ~ +80
						1.9	24	12-27.6	80	130	E0515H24B7AZA01	-20 ~ +60
0.1	3.5	135	0.54	37	5000	1.4	24	16.8-27.6	60	110	E0515H24B5AZ-00	

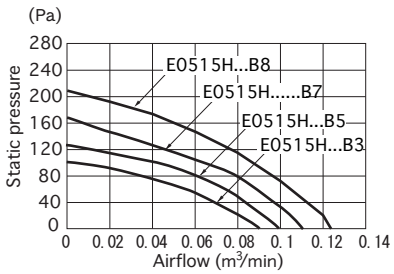
- Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.
- The characteristics are the values at rated voltage (12 V or 24 V), and normal temperature and humidity.
- The life expectancy of E0515H series products at rated voltage and in continuous operation is 30,000 hours at 60℃.(8 speed except)

General specification

Materials Used	Venturi: ABS and PBT synthetic resins Impeller: ABS and PBT synthetic resins Bearing: Both side shielded ball bearing
Motor	Brushless DC motor, Protection type: Current shut off by detecting lock state, automatically reset
Common Elec. Spec.	See pages G-11, G-12, G-13.

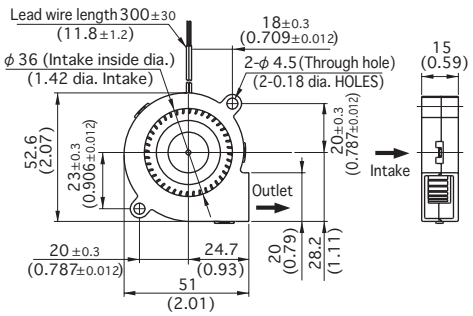
Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]



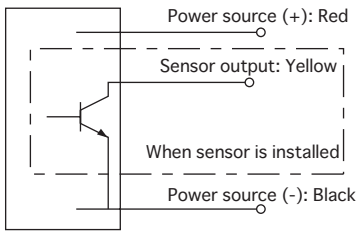
External dimensions in mm (inches)

● Lead wire type



Lead wire spec. UL1061 AWG26 or UL3265 AWG26
Color (+) Red
(-) Black

Wiring connection diagram



DC centrifugal blower with sensor

Rated Vol.	Model Code	
12 V	**E0515H12B7APA01**	
24 V	**E0515H24B7APA01**	**E0515H24B8ASA01**

- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- The listed products are registered in the following overseas standards files, UL: E48889, CSA: LR49399, TUV: R9451586
- 3D data is also available at our web2-CAD site (www.cadenas.co.jp).

Sensor Spec. ▶ G-15

DC axial fans & blowers with sensors

The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose of use. The lead wire for the sensor is yellow. The output type is an open collector output for all three types.

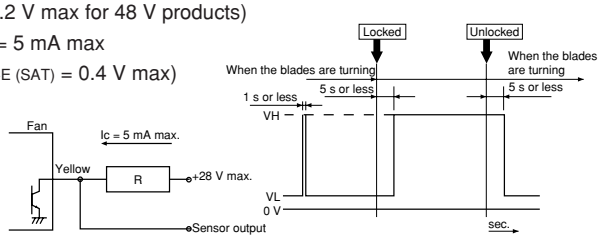
■ Sensor type

1. Lock detection type (Product code: S)

The output signal indicates an [L] state (transistor is ON) while the propeller is rotating, changing to an [H] state (transistor is OFF) less than five seconds after the propeller stops rotating. The propeller automatically restarts operation within five seconds when the lock is unlocked. ([H] → [L] 5 s). If the pull-up voltage is live, the [H] state (transistor is OFF) will engage in less than five seconds, even when the power is turned off.

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform



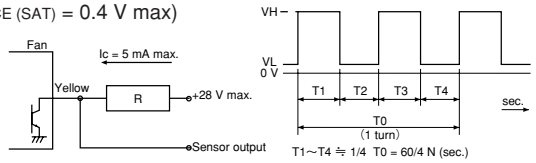
※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

2. Pulse output type (Product code: P)

A rectangular wave of two pulses will be output for each turn of the propeller while the propeller is rotating, outputting two types of signal depending on the propeller position when the propeller is locked. (See the note below ※)

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform

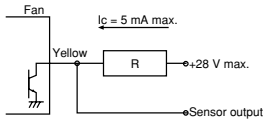


※Output signal waveform when the fan is stopped: The following two types of waveform are output, depending on the blade position when the propeller is stopped:
Pulse outputs of High - constant or restart timing (0.05 Hz to 2 Hz).

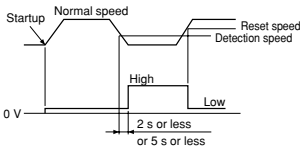
3. Speed detection type (Product code: Q)

The output signal indicates the [H] state when the propeller revolutions are slower than the preset speed, changing to the [L] state when the propeller revolutions exceed the reset speed.
[Products with a reversed output waveform are also available, suitable for a wired OR connection when several fans are installed. Contact NIDEC SERVO for further information. {Former code: SQ, new code (15 - digit code products): R}]

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max at 5 mA)



● Output waveform



Note: The output waveform for type SQ (R) will be reversed.
The speed setting for the alarm output is about half the rated speed.
For more detailed information, please request a product delivery specification from NIDEC SERVO.

E0525H/K series □ 48 × 25 mm

Super Silent Blowers

E0525H/K

□48×25 (□1.9"×1.0")
Max. airflow: 0.22 m³/min
Max. static pressure: 220 Pa
Mass: 50 g

Features

- The smaller 48 mm square blower gives as much airflow output as a larger 70 mm square blower while maintaining the same low noise level.
- Both clockwise and counterclockwise discharge (mirror-image) versions are available.

Fan model code

E0525H12B7AZ-00
E0525H12B7AS-00
E0525K12B7AZ-00
E0525H24B7AZ-00
E0525H24B7AS-00
E0525K24B7AZ-00

Standard specification

Max. Airflow		Max. Static Pressure		Noise	Speed	Voltage Spec. V		Current mA		Model Code	Operating Temp. Range ℃
m³/min	CFM	Pa	inH₂O	dB	min⁻¹	Rating	Operating Range	Rating	Starting		
0. 22	7. 8	220	0.88	42. 5	6700	12	4.5-13.8	230	530	**E0525H12B7AZ-00**	-20 ~ +70
										E0525K12B7AZ-00	
						24	9.6-27.6	110	280	**E0525H24B7AZ-00**	
										E0525K24B7AZ-00	

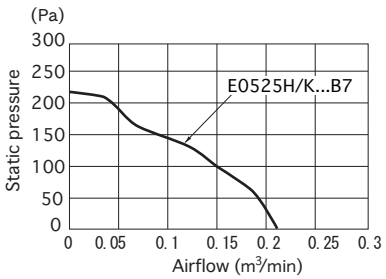
- Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.
- The characteristics are the values at rated voltage (12 V or 24 V), and normal temperature and humidity.

General specification

Materials Used	Venturi: ABS and PBT synthetic resins Impeller: ABS and PBT synthetic resins Bearing: Both side shielded ball bearing
Motor	Brushless DC motor, Protection type: Current shut off by detecting lock state, automatically reset
Common Elec. Spec.	See pages G-11, G-12, G-13.

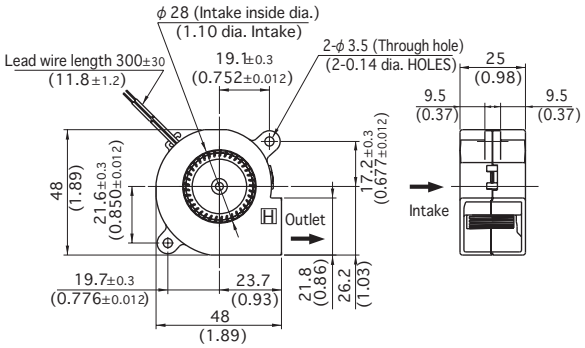
Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]



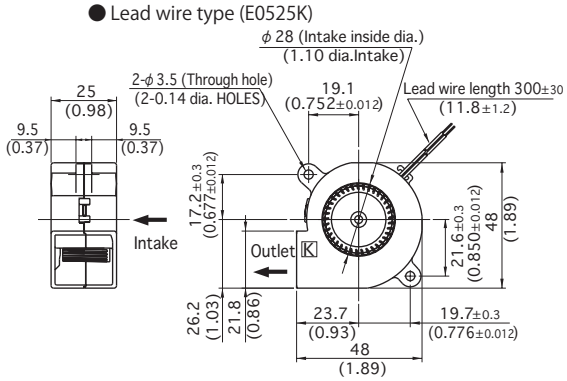
External dimensions in mm (inches)

● Lead wire type (E0525H)



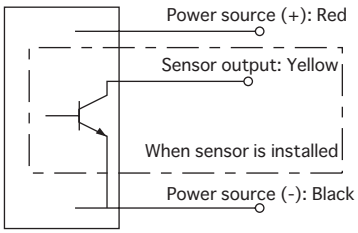
Lead wire spec. AWG26 UL3265
Color (+) Red
(-) Black

● Lead wire type (E0525K)



Lead wire spec. AWG26 UL3265
Color (+) Red
(-) Black

Wiring connection diagram



Super silent blower with sensor

Rated Vol.	Model Code
12 V	**E0525H12B7AS-00**
24 V	**E0525H24B7AS-00**

- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- The listed products are registered in the following overseas standards files, UL:/cUL E48889, TUV: R50004410

DC axial fans & blowers with sensors

The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose of use. The lead wire for the sensor is yellow. The output type is an open collector output for all three types.

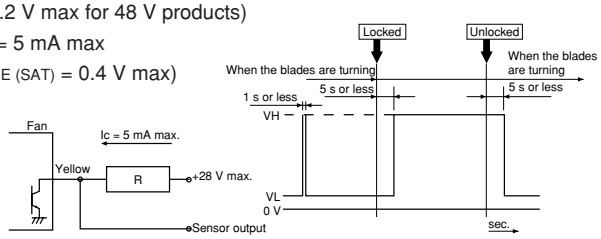
■ Sensor type

1. Lock detection type (Product code: S)

The output signal indicates an [L] state (transistor is ON) while the propeller is rotating, changing to an [H] state (transistor is OFF) less than five seconds after the propeller stops rotating. The propeller automatically restarts operation within five seconds when the lock is unlocked. ([H] → [L] 5 s). If the pull-up voltage is live, the [H] state (transistor is OFF) will engage in less than five seconds, even when the power is turned off.

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform



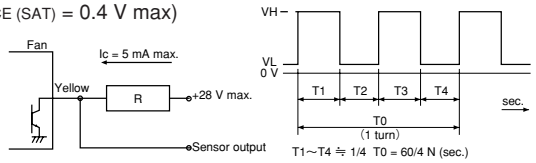
※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

2. Pulse output type (Product code: P)

A rectangular wave of two pulses will be output for each turn of the propeller while the propeller is rotating, outputting two types of signal depending on the propeller position when the propeller is locked. (See the note below ※)

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform

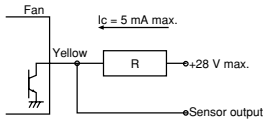


※Output signal waveform when the fan is stopped: The following two types of waveform are output, depending on the blade position when the propeller is stopped:
Pulse outputs of High - constant or restart timing (0.05 Hz to 2 Hz).

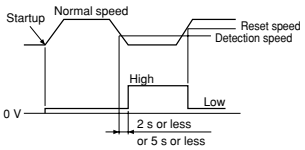
3. Speed detection type (Product code: Q)

The output signal indicates the [H] state when the propeller revolutions are slower than the preset speed, changing to the [L] state when the propeller revolutions exceed the reset speed.
[Products with a reversed output waveform are also available, suitable for a wired OR connection when several fans are installed. Contact NIDEC SERVO for further information. {Former code: SQ, new code (15 - digit code products): R}]

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max at 5 mA)



● Output waveform



Note: The output waveform for type SQ (R) will be reversed.
The speed setting for the alarm output is about half the rated speed.
For more detailed information, please request a product delivery specification from NIDEC SERVO.

E0720H series 70 × 76 × 20 mm

Super Silent Blowers
E0720H

70×76×20
(2.8"×3.0"×0.8")
Max. airflow: 0.29 m³/min
Max. static pressure: 300 Pa
Mass: 50 g

Fan model code

- **E0720H12B5AZ-00**
- **E0720H12B5AP-00**
- **E0720H12B8AZ-00**
- **E0720H12B8AP-00**
- **E0720H24B5AZ-00**
- **E0720H24B5AP-00**
- **E0720H24B7AZ-00**
- **E0720H24B8AZ-00**
- **E0720H24B8AS-00**

Standard specification

Max. Airflow		Max. Static Pressure		Noise	Speed	Voltage Spec. V			Current mA		Model Code	Operating Temp. Range℃
m³/min	CFM	Pa	inH₂O	dB	min⁻¹	Rating	Start up Voltage Range	Operating Range	Rating	Starting		
0.29	10.2	300	1.21	44	4750	12	10.8-13.8	5-13.8	300	580	**E0720H12B8AZ-00**	-20 ～ +70
						24	21.6-27.6	10-27.6	140	270	**E0720H24B8AZ-00**	
0.27	9.5	250	1.01	42	4400	24	21.6-27.6	10-27.6	120	240	**E0720H24B7AZ-00**	
0.25	8.8	210	0.84	40	4050	12	10.8-13.8	5.5-13.8	200	390	**E0720H12B5AZ-00**	
						24	21.6-27.6	10-27.6	100	200	**E0720H24B5AZ-00**	

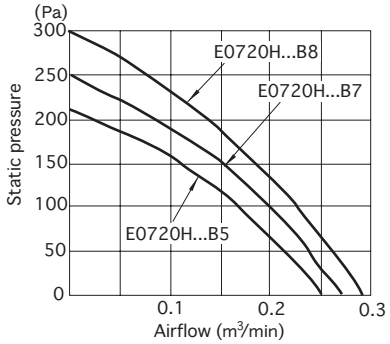
- Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.
- The characteristics are the values at rated voltage (12 V or 24 V), and normal temperature and humidity.
- Life expectancy of the E0720H-8 series in continuous operation at rated voltage is 20,000 hours at an operating temperature of 60℃. (25,000 hours for other products)

General specification

Materials Used	Venturi: ABS and PBT synthetic resins Impeller: ABS and PBT synthetic resins Bearing: Both side shielded ball bearing
Motor	Brushless DC motor, Protection type: Current shut off by detecting lock state, automatically reset
Common Elec. Spec.	See pages G-11, G-12, G-13.
Standard Carton	150 to a carton of (450 x 380 x 295) mm, mass 8 kg

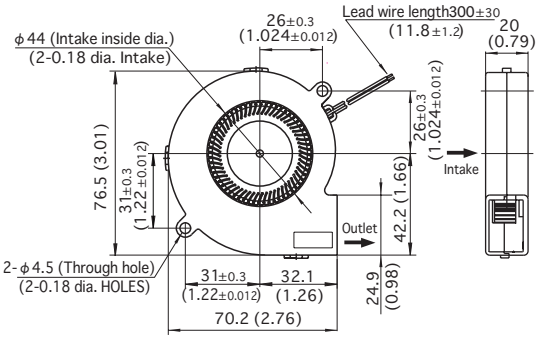
Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]



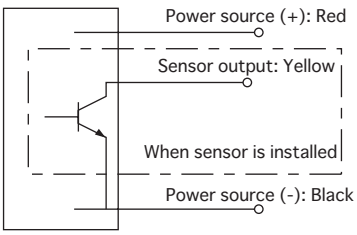
External dimensions in mm (inches)

● Lead wire type



Lead wire spec. AWG26 UL3265
Color (+) Red
(-) Black

Wiring connection diagram



Super silent blower with sensor

Rated Vol.	Model Code	
12 V	**E0720H12B5AP-00**	**E0720H12B8AP-00**
24 V		**E0720H24B8AS-00**

- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above, variable speed specifications, and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- The listed products are registered in the following overseas standards files, UL: E48889, CSA: LR49399, TUV: R50004410

DC axial fans & blowers with sensors

The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose of use. The lead wire for the sensor is yellow. The output type is an open collector output for all three types.

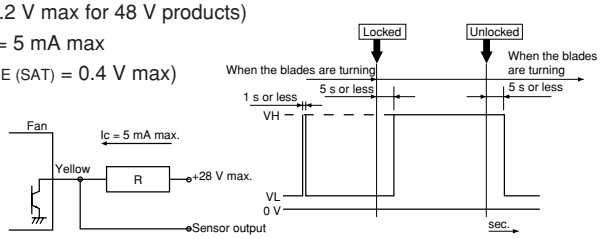
■ Sensor type

1. Lock detection type (Product code: S)

The output signal indicates an [L] state (transistor is ON) while the propeller is rotating, changing to an [H] state (transistor is OFF) less than five seconds after the propeller stops rotating. The propeller automatically restarts operation within five seconds when the lock is unlocked. ([H] → [L] 5 s). If the pull-up voltage is live, the [H] state (transistor is OFF) will engage in less than five seconds, even when the power is turned off.

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform



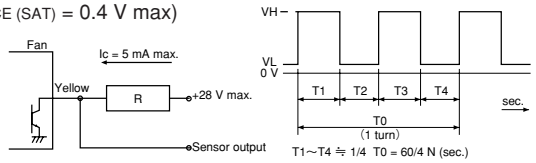
※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

2. Pulse output type (Product code: P)

A rectangular wave of two pulses will be output for each turn of the propeller while the propeller is rotating, outputting two types of signal depending on the propeller position when the propeller is locked. (See the note below ※)

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform

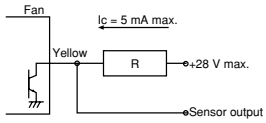


※Output signal waveform when the fan is stopped: The following two types of waveform are output, depending on the blade position when the propeller is stopped:
Pulse outputs of High - constant or restart timing (0.05 Hz to 2 Hz).

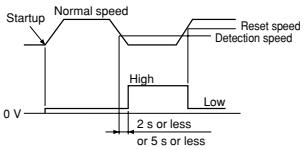
3. Speed detection type (Product code: Q)

The output signal indicates the [H] state when the propeller revolutions are slower than the preset speed, changing to the [L] state when the propeller revolutions exceed the reset speed.
[Products with a reversed output waveform are also available, suitable for a wired OR connection when several fans are installed. Contact NIDEC SERVO for further information. {Former code: SQ, new code (15 - digit code products): R}]

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max at 5 mA)



● Output waveform



Note: The output waveform for type SQ (R) will be reversed.
The speed setting for the alarm output is about half the rated speed.
For more detailed information, please request a product delivery specification from NIDEC SERVO.

E1027H series 97 × 95 × 25 mm

Super Silent Blowers
E1027H

97×95×25
(3.8"×3.7"×1.0")
Max. airflow: 0.78 m³/min
Max. static pressure: 520 Pa
Mass: 120 g (～7), 125 g (～A)

Fan model code
E1027H12B7AZ-00
E1027H12BAAZ-00

Standard specification

Max. Airflow		Max. Static Pressure		Noise	Speed	Voltage Spec. V		Current mA		Model Code	Operating Temp. Range ˚C
m³/min	CFM	Pa	inH₂O	dB	min⁻¹	Rating	Operating Range	Rating	Starting		
0.78	28	520	2.09	55	5000	12	8.4-13.8	1000	2200	E1027H12BAAZ-00	-20 ～ +60
0.57	20	315	1.27	47	3600	12	5-13.2	550	1670	E1027H12B7AZ-00	-20 ～ +70

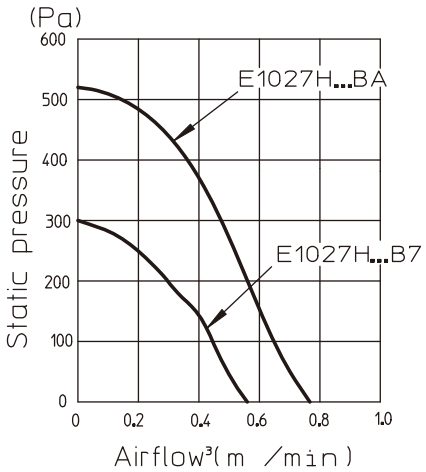
- Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.
- The characteristics are the values at rated voltage (12 V), and normal temperature and humidity.

General specification

Materials Used	Venturi: ABS and PBT synthetic resins Impeller: ABS and PBT synthetic resins Bearing: Both side shielded ball bearing
Motor	Brushless DC motor, Protection type: Current shut off by detecting lock state, automatically reset
Common Elec. Spec.	See pages G-11, G-12, G-13.

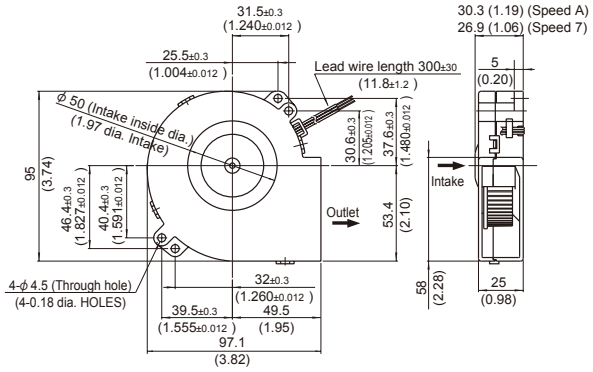
Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]



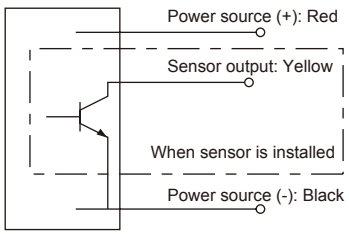
External dimensions in mm (inches)

● Lead wire type



Lead wire spec. AWG24 UL3266
Color (+) Red
(-) Black

Wiring connection diagram



- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above, variable speed specifications, and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- The listed products are registered in the following overseas standards files, UL/cUL: E48889, TUV: R50004410

DC axial fans & blowers with sensors

The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose of use. The lead wire for the sensor is yellow. The output type is an open collector output for all three types.

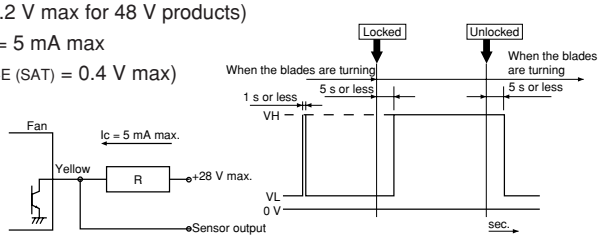
■ Sensor type

1. Lock detection type (Product code: S)

The output signal indicates an [L] state (transistor is ON) while the propeller is rotating, changing to an [H] state (transistor is OFF) less than five seconds after the propeller stops rotating. The propeller automatically restarts operation within five seconds when the lock is unlocked. ([H] → [L] 5 s). If the pull-up voltage is live, the [H] state (transistor is OFF) will engage in less than five seconds, even when the power is turned off.

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform



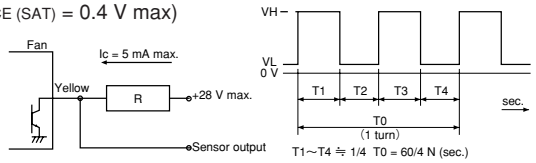
※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

2. Pulse output type (Product code: P)

A rectangular wave of two pulses will be output for each turn of the propeller while the propeller is rotating, outputting two types of signal depending on the propeller position when the propeller is locked. (See the note below ※)

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform

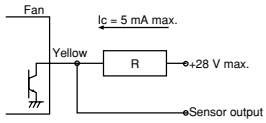


※Output signal waveform when the fan is stopped: The following two types of waveform are output, depending on the blade position when the propeller is stopped:
Pulse outputs of High - constant or restart timing (0.05 Hz to 2 Hz).

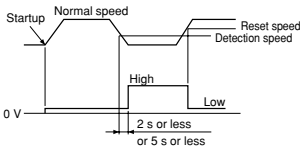
3. Speed detection type (Product code: Q)

The output signal indicates the [H] state when the propeller revolutions are slower than the preset speed, changing to the [L] state when the propeller revolutions exceed the reset speed.
[Products with a reversed output waveform are also available, suitable for a wired OR connection when several fans are installed. Contact NIDEC SERVO for further information. {Former code: SQ, new code (15 - digit code products): R}]

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max at 5 mA)



● Output waveform



Note: The output waveform for type SQ (R) will be reversed.
The speed setting for the alarm output is about half the rated speed.
For more detailed information, please request a product delivery specification from NIDEC SERVO.

E1033H/L series 97×95×33 mm

Super Silent Blowers
E1033H/L

97×95×33
(3.8"×3.7"×1.3")
Max. airflow: 1.55m³/min
Max. static pressure: 1400 Pa
Mass: 140 g (~8),160 g (~A), 170g(~F)

Fan model code

- E1033H12B7AP-00
- E1033H12B7AZ-00
- E1033H12B8AS-00
- E1033H12B8AZ-00
- E1033H12BAAZ-00
- E1033L12BBAZ-00
- E1033L12BCAZ-00
- E1033L12BEZP-00
- E1033L12BFZP-00
- E1033H24B6AZ-00
- E1033H24B7AZ-00
- E1033H24B8AZ-00
- E1033H24BAAP-00
- E1033H24BAAZ-00
- E1033L24BBAZ-00
- E1033L24BCAZ-00

Standard specification

Max. Airflow		Max. Static Pressure		Noise	Speed	Voltage spec.V		CurrentmA		Model Code	Operating Temp. Range ℃
m³/min	CFM	Pa	inH₂O	dB	r/min	Rating	Operating Range	Rating	Starting		
1.55	55	1400	5.63	66	6900	12	10.8 - 12.6	3500	6300	**E1033L12BFZP-00**	-20 ~ +70
1.45	51	1200	4.82	64	6400	12	10.8 - 13.2	2940	6350	**E1033L12BEZP-00**	
1.25	44	840	3.36	62	5800	12	8.4 - 13.2	1950	3100	**E1033L12BCAZ-00**	
						24	12 - 26.4	950	1650	**E1033L24BCAZ-00**	
1.15	41	700	2.81	60	5300	12	8.4 - 13.2	1400	3100	**E1033L12BBAZ-00**	
						24	12 - 26.4	700	1650	**E1033L24BBAZ-00**	
1.14	40	500	2.01	58	4850	12	8.4 - 13.2	1250	2100	**E1033H12BAAZ-00**	-20 ~ +60
						24	12 - 26.4	630	1850	**E1033H24BAAZ-00**	
0.85	30	320	1.29	51	3450	12	4.5 - 13.2	770	1950	**E1033H12B8AZ-00**	-20 ~ +70
						24	10 - 26.4	390	940	**E1033H24B8AZ-00**	
0.76	27	260	1.05	48	3100	12	5 - 13.2	590	1260	**E1033H12B7AZ-00**	
						24	10 - 26.4	300	710	**E1033H24B7AZ-00**	
0.64	23	185	0.74	46	2600	24	10 - 26.4	220	400	**E1033H24B6AZ-00**	

- Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.
- The characteristics are the values at rated voltage (12 V or 24 V), and normal temperature and humidity.

General specification

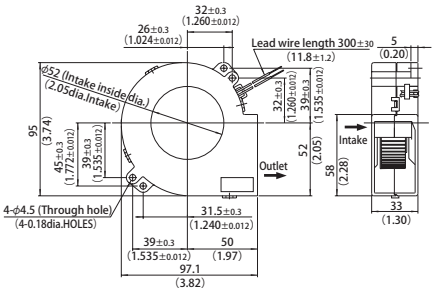
Materials Used	Venturi: ABS and PBT synthetic resins *1 Impeller: ABS and PBT synthetic resins *2 Bearing: Both side shielded ball bearing
Motor	Brushless DC motor, Protection type: Current shut off by detecting lock state, automatically reset
Common Elec. Spec.	See pages G-11, G-12, G-13.
Standard Carton	50 to a carton of (450 x 380 x 220) mm, mass 8 kg *3

*1 E1033L Venturi: PBT synthetic resins
*2 E1033L Impeller: PBT synthetic resins
*3 E1033L 40 to a carton of (450 x 380 x 220) mm, mass 8 kg

External dimensions in mm (inches)

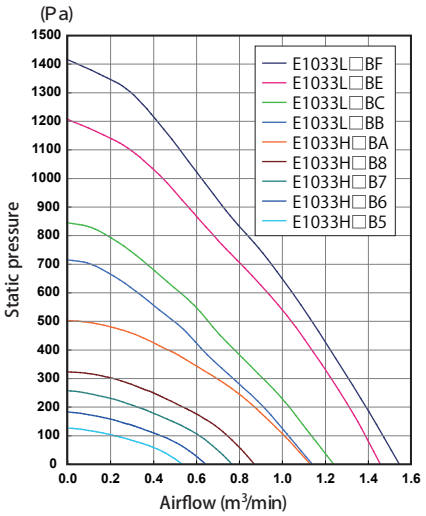
● Lead wire type (E1033H/L)

Lead wire spec. AWG24 UL3266
or AWG22 UL3266
Color (+) Red
(-) Black

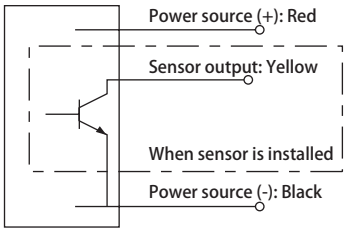


Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]



Wiring connection diagram



Super silent blower with sensor

Rated Vol.	Model Code				
12 V	E1033H12B7AP-00	E1033H12B8AS-00			
24 V			E1033H24BAAP-00		

- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above, variable speed specifications, and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- The listed products are registered in the following overseas standards files, UL/cUL: E48889, TUV: R50004410
- PWM (pulse width modulation) allowing for variable speed control is available in some models.

Sensor Spec. ▶ G-15

Variable-Speed Fans and Blowers

Fan model code

- D0925C12B8ZP-00
- D0925C24B8ZP-00
- D1225C12BBZP-00
- D1225C24BBZP-00
- D1238B48B7ZP-00
- D1751M48B6ZP-00
- D1751M24B5ZP-00
- D1751S24B9ZP300
- D1751S24B6ZP-00
- G0938B48B9ZP-00
- G0938B12B8ZP-00
- G1238B12BBZP-00
- G1238B24BBZP-00
- G1238B48BBZP-00
- G1238B24BAZP-00
- G1751M24B9ZP300
- G1751M48B9ZP-00

Blowers

- E1033L12BFZP-00
- E1033L12BEZP-00
- E1033H24BAZP-00
- E2271Z48B7ZP-00

Lineup of PWM variable-speed semi-standard products

- A PWM signal from the customer equipment is input to the control line (blue) of the fan motor for variable-speed operation of fans and blowers. (Input and noisecan be reduced when the internal temperature of the customer equipment is low, such as during idling.)

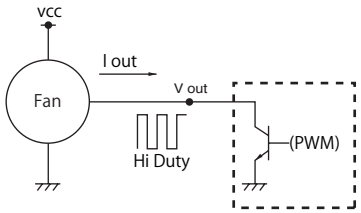
- Sizes
  Axial fans: □92 mm～□172 mm
  Blower: □97 mm～ ϕ220 mm

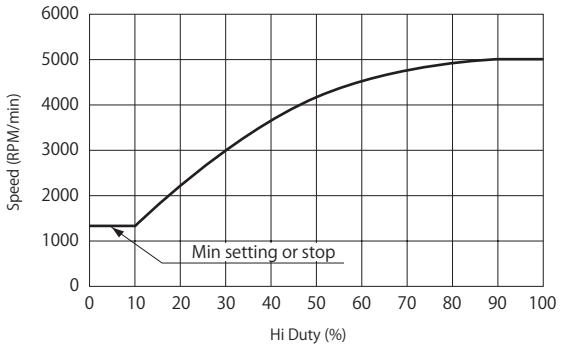
Characteristics for reference

(The characteristics are typical characteristics and their curves will differ, depending on the particular model)

- **Standard values for PWM control signal - speed specification (at rated voltage, open, and normal temperature and humidity)**

I_{out}	1 mA MAX.
V_{out}	5 V MAX.
V_{LOsat}	0.4 MAX.
Freq.	500 Hz~5000 Hz





Semi-standard products (Products in regular production)

Size	Model Code	Max. Airflow		Max. Static Pressure		Noise	Speed min^{-1}		Voltage Spec. V		Operating
		m^3/min	CFM	Pa	inH$_2$O	dB	Max.	Min.	Rating	Operating Range	Temp. Range ℃
□92×25mm	D0925C12B8ZP-00	2	71	67	0.27	40	4450	1000	12	10.2-13.2	-20 ～ 60℃
	D0925C24B8ZP-00						4450	1750	24	21.6-26.4	
□120×25mm	D1225C12BBZP-00	4.25	150.1	150	0.6	50.5	5400	1000	12	10.2-13.8	-20 ～ 60℃
	D1225C24BBZP-00								24	20.4-27.6	
□119×38mm	D1238B48B7ZP-00	4.4	155	170	0.68	54	4000	1250	48	40.8-55.2	-20 ～ 70℃
ϕ172×150×51mm	D1751M48B6ZP-00	10.2	360	315	1.27	64	4800	1000	48	36-60	-20 ～ 70℃
	D1751M24B5ZP-00	9	318	260	1.04	61	4200	1000	24	12-27.6	
ϕ172×51mm	D1751S24B9ZP300	14.2	501	640	2.57	68	6800	3200	24	16-28	-20 ～ 60℃
	D1751S24B6ZP-00	10.2	360	335	1.35	59	4800	1000	24	12-27.6	
□92×38mm	G0938B48B9ZP-00	3.6	127	440	1.77	61	7000	2000	48	36-55.2	-20 ～ 60℃
	G0938B12B8ZP-00	3.2	113	350	1.41	58	6300	1600	12	8.4-13.8	-20 ～ 70℃
□119×38mm	G1238B12BBZP-00	7.4	261	520	2.09	67	6300	1000	12	9.6-13.8	-20 ～ 60℃
	G1238B24BBZP-00								24	16.8-27.6	
	G1238B48BBZP-00								48	36-55.2	
	G1238B24BAZP-00	6.3	223	415	1.67	64	5300	1000	24	16.8-27.6	-20 ～ 70℃
ϕ172×150×51mm	G1751M24B9ZP300	11.2	395	780	3.13	74	6800	3200	24	16-28	-20 ～ 70℃
	G1751M48B9ZP-00								48	36-60	
97×95×33mm	E1033L12BFZP-00	1.55	55	1400	5.63	66	6900	1800	12	10.8-12.6	-20 ～ 70℃
	E1033L12BEZP-00	1.45	51	1200	4.82	64	6400	1600	12	10.8-13.2	
	E1033H24BAZP-00	1.14	40	500	2.01	58	4850	1800	24	16-26.4	-20 ～ 60℃
ϕ220×71mm	E2271Z48B7ZP-00	18.1	639	600	2.41	74	3200	1000	48	36-57	-20 ～ 60℃

- Aside from the above models, please see also the high pressure, variable speed G series fans. Details may be found in specs G-31 to G-36.
- The lineup of variable-speed fans and blowers will be expanded regularly. Visit the NIDEC SERVO Website for information on the latest lineup.
- Direct your inquiry to NIDEC SERVO for connector termination to lead wires, for sensor specifications other than those contained in the catalog and for variable speed specifications. (Products tailored to voltage command control and resistance value command control are also available)
- To ensure correct installation and smooth operation please obtain a drawing for approval or reference drawing from NIDEC SERVO Co.

DC axial fans & blowers with sensors

The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose of use. The lead wire for the sensor is yellow. The output type is an open collector output for all three types.

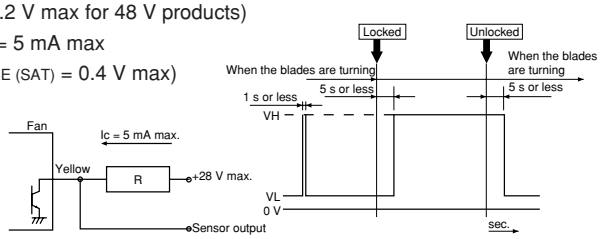
■ Sensor type

1. Lock detection type (Product code: S)

The output signal indicates an [L] state (transistor is ON) while the propeller is rotating, changing to an [H] state (transistor is OFF) less than five seconds after the propeller stops rotating. The propeller automatically restarts operation within five seconds when the lock is unlocked. ([H] → [L] 5 s). If the pull-up voltage is live, the [H] state (transistor is OFF) will engage in less than five seconds, even when the power is turned off.

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform



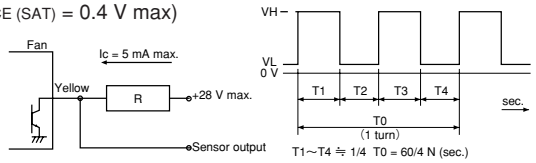
※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

2. Pulse output type (Product code: P)

A rectangular wave of two pulses will be output for each turn of the propeller while the propeller is rotating, outputting two types of signal depending on the propeller position when the propeller is locked. (See the note below ※)

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform

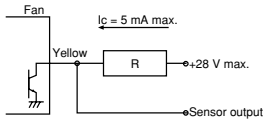


※Output signal waveform when the fan is stopped: The following two types of waveform are output, depending on the blade position when the propeller is stopped:
Pulse outputs of High - constant or restart timing (0.05 Hz to 2 Hz).

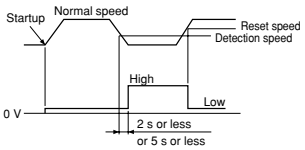
3. Speed detection type (Product code: Q)

The output signal indicates the [H] state when the propeller revolutions are slower than the preset speed, changing to the [L] state when the propeller revolutions exceed the reset speed.
[Products with a reversed output waveform are also available, suitable for a wired OR connection when several fans are installed. Contact NIDEC SERVO for further information. {Former code: SQ, new code (15 - digit code products): R}]

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max at 5 mA)



● Output waveform



Note: The output waveform for type SQ (R) will be reversed.
The speed setting for the alarm output is about half the rated speed.
For more detailed information, please request a product delivery specification from NIDEC SERVO.

E1232L series 119 × 117 × 32 mm

Super Silent Blowers
E1232L

119×117×32
(4.7"×4.6"×1.3")
Max. airflow: 1.13 m³/min
Max. static pressure: 460 Pa
Mass: 220 g

Fan model code

- **E1232L12B7AZ-00**
- **E1232L12B9AZ-00**
- **E1232L24B7AZ-00**
- **E1232L24B9AZ-00**

Standard specification

Max. Airflow		Max. Static Pressure		Noise	Speed	Voltage Spec. V		Current mA		Model Code	Operating Temp. Range ℃
m³/min	CFM	Pa	inH₂O	dB	min⁻¹	Rating	Operating Range	Rating	Starting		
1.13	40	460	1.85	54	3800	12	8.4-13.2	1100	2100	**E1232L12B9AZ-00**	-20 ～ +60
						24	21.6-26.4	560	1900	**E1232L24B9AZ-00**	
0.91	32	320	1.29	49	3100	12	7.2-13.2	820	1800	**E1232L12B7AZ-00**	
						24	12-26.4	430	900	**E1232L24B7AZ-00**	

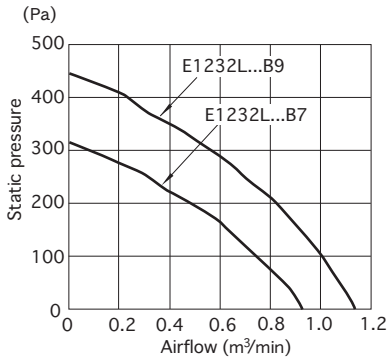
- Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.
- The characteristics are the values at rated voltage (12 V or 24 V), and normal temperature and humidity.
- The life expectancy of E1232L-7, 9 speed products at rated voltage and in continuous operation is 30,000 hours at 60℃. (40,000 hours for other products)

General specification

Materials Used	Venturi: ABS and PBT synthetic resins Impeller: ABS and PBT synthetic resins Bearing: Both side shielded ball bearing
Motor	Brushless DC motor, Protection type: Current shut off by detecting lock state, automatically reset
Common Elec. Spec.	See pages G-11, G-12, G-13.

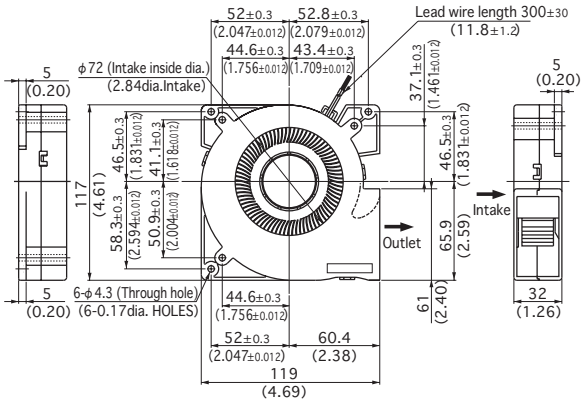
Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]



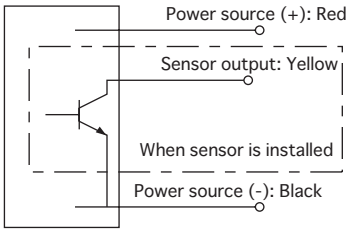
External dimensions in mm (inches)

● Lead wire type



Lead wire spec. AWG24 UL1007 or UL3266
Color (+) Red
(-) Black

Wiring connection diagram



- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above, variable speed specifications, and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- The listed products are registered in the following overseas standards files, UL/cUL: E48889, TUV: R50004410

DC axial fans & blowers with sensors

The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose of use. The lead wire for the sensor is yellow. The output type is an open collector output for all three types.

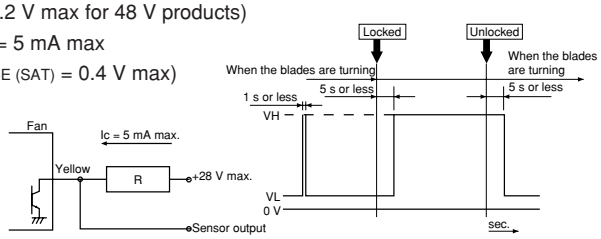
■ Sensor type

1. Lock detection type (Product code: S)

The output signal indicates an [L] state (transistor is ON) while the propeller is rotating, changing to an [H] state (transistor is OFF) less than five seconds after the propeller stops rotating. The propeller automatically restarts operation within five seconds when the lock is unlocked. ([H] → [L] 5 s). If the pull-up voltage is live, the [H] state (transistor is OFF) will engage in less than five seconds, even when the power is turned off.

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform



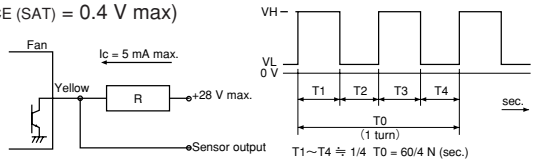
※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

2. Pulse output type (Product code: P)

A rectangular wave of two pulses will be output for each turn of the propeller while the propeller is rotating, outputting two types of signal depending on the propeller position when the propeller is locked. (See the note below ※)

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform

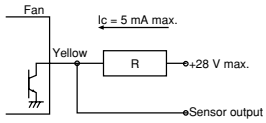


※Output signal waveform when the fan is stopped: The following two types of waveform are output, depending on the blade position when the propeller is stopped:
Pulse outputs of High - constant or restart timing (0.05 Hz to 2 Hz).

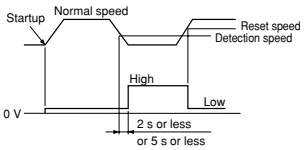
3. Speed detection type (Product code: Q)

The output signal indicates the [H] state when the propeller revolutions are slower than the preset speed, changing to the [L] state when the propeller revolutions exceed the reset speed.
[Products with a reversed output waveform are also available, suitable for a wired OR connection when several fans are installed. Contact NIDEC SERVO for further information. {Former code: SQ, new code (15 - digit code products): R}]

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max at 5 mA)



● Output waveform



Note: The output waveform for type SQ (R) will be reversed.
The speed setting for the alarm output is about half the rated speed.
For more detailed information, please request a product delivery specification from NIDEC SERVO.

E1331K series 126 × 127 × 31 mm

Super Silent Blowers

E1331K

126×127×31
(5.0"×5.0"×1.2")
Max. airflow: 1.08 m ³/min
Max. static pressure: 480 Pa
Mass: 250 g

Fan model code

- **E1331K12B5AZ-00**
- **E1331K12B6AP-00**
- **E1331K12B7AZ-00**
- **E1331K24B7AZ-00**

Standard specification

Max. Airflow		Max. Static Pressure		Noise	Speed	Voltage Spec. V		Current mA		Model Code	Operating Temp. Range℃
m³/min	CFM	Pa	inH₂O	dB	min⁻¹	Rating	Operating Range	Rating	Starting		
0.87	31	310	1.25	49	2700	12	6-13.2	690	1790	**E1331K12B7AZ-00**	-20 ～+70
						24	12-26.4	380	930	**E1331K24B7AZ-00**	
0.79	28	250	1.01	47	2500	24	12-26.4	280	710	**E1331K24B6AZ-00**	
0.72	25	210	0.84	45	2200	12	6-13.2	440	1008	**E1331K12B5AZ-00**	

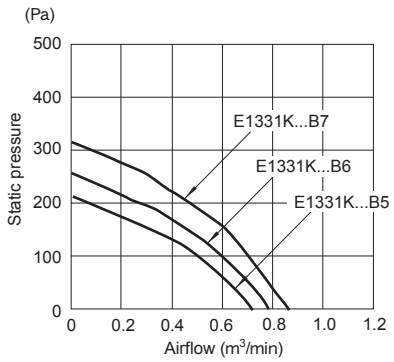
- Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.
- The characteristics are the values at rated voltage (12 V or 24 V), and normal temperature and humidity.

General specification

Materials Used	Venturi: ABS and PBT synthetic resins Impeller: ABS and PBT synthetic resins Bearing: Both side shielded ball bearing
Motor	Brushless DC motor, Protection type: Current shut off by detecting lock state, automatically reset
Common Elec. Spec.	See pages G-11, G-12, G-13.

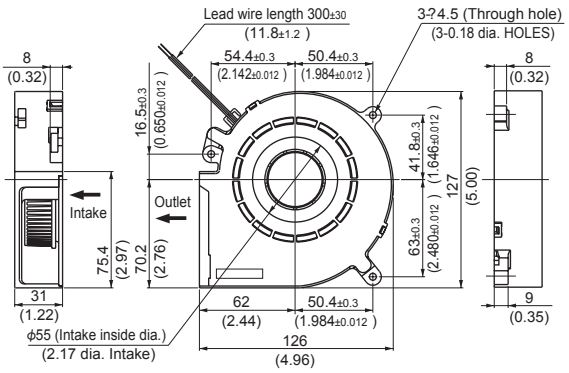
Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]



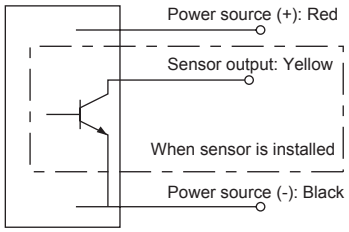
External dimensions in mm (inches)

● Lead wire type



Lead wire spec. AWG24 UL1007 or UL3266
Color (+) Red
(-) Black

Wiring connection diagram



Super silent blower with sensor

Rated Vol.	Model Code
24 V	**E1331K24B6AP-00**

- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above, variable speed specifications, and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- The listed products are registered in the following overseas standards files, UL/cUL: E48889, TUV: R50004410

Sensor Spec. ▶ G-15

DC axial fans & blowers with sensors

The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose of use. The lead wire for the sensor is yellow. The output type is an open collector output for all three types.

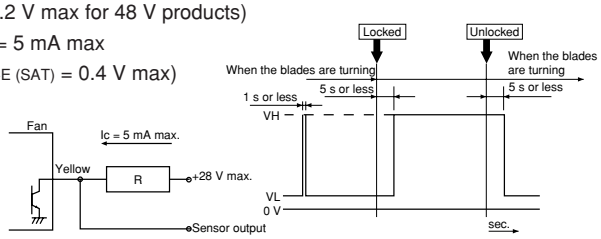
■ Sensor type

1. Lock detection type (Product code: S)

The output signal indicates an [L] state (transistor is ON) while the propeller is rotating, changing to an [H] state (transistor is OFF) less than five seconds after the propeller stops rotating. The propeller automatically restarts operation within five seconds when the lock is unlocked. ([H] → [L] 5 s). If the pull-up voltage is live, the [H] state (transistor is OFF) will engage in less than five seconds, even when the power is turned off.

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform



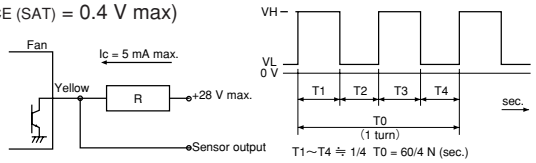
※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

2. Pulse output type (Product code: P)

A rectangular wave of two pulses will be output for each turn of the propeller while the propeller is rotating, outputting two types of signal depending on the propeller position when the propeller is locked. (See the note below ※)

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform



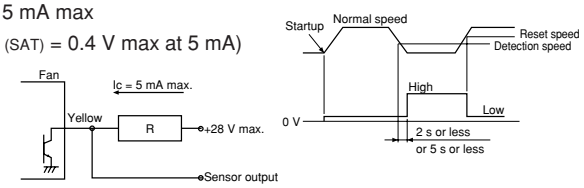
※Output signal waveform when the fan is stopped: The following two types of waveform are output, depending on the blade position when the propeller is stopped:
Pulse outputs of High - constant or restart timing (0.05 Hz to 2 Hz).

3. Speed detection type (Product code: Q)

The output signal indicates the [H] state when the propeller revolutions are slower than the preset speed, changing to the [L] state when the propeller revolutions exceed the reset speed.
[Products with a reversed output waveform are also available, suitable for a wired OR connection when several fans are installed. Contact NIDEC SERVO for further information. {Former code: SQ, new code (15 - digit code products): R}]

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max at 5 mA)

● Output waveform



Note: The output waveform for type SQ (R) will be reversed.
The speed setting for the alarm output is about half the rated speed.
For more detailed information, please request a product delivery specification from NIDEC SERVO.

AC fans with sensors

By equipping the motor with a rotation detection function, the AC fans of NIDEC SERVO have a system to send an alarm signal when the fan motor revolutions slow down and to cut off the system power supply. In 1980, NIDEC SERVO developed a system to output an alarm signal by detecting the lowering of generated voltage by installing a tachometer generator with the cooling fan and this system has since been incorporated in NIDEC SERVO products. The output type of the alarm signal is an open collector output.

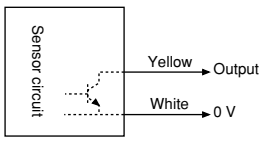
Type	Tachometer generator type			
Sensor output operation	Open collector transistor, permissible sync Current: 50 mA max. Permissible imposed voltage: DC 40 V max. Permissible power consumption: 1.5 W max. (at 25 ℃)			
Sensor output operation	AC power supply	Speed	Output transistor operation	Output state
	OFF		OPEN	HIGH (Abnormal)
	ON	Below detection speed	OPEN	HIGH (Abnormal)
	ON	Above detection speed	CLOSE	LOW (Normal)
Detection speed RD	1500 ~ 2200 rpm			
Detection delay time TD	2 s or less 17 Type			
Type	Standard speed			
Insulation resistance	10 M Ω or higher by a DC 500 V: Between the sensor lead and venturi			
Dielectric strength	Between the sensor lead and venturi	No anomaly allowed after applying AC 500 V 50 Hz for 1 minute		

■ Sensor specification

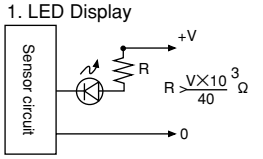
■ Operational and handling precautions

Operate fans and blowers at an ambient temperature of between -10 °C and 60 °C and relative humidity of less than 90 %. Latch output is not used so malfunction by electrical noise can be ruled out. However, note that the semiconductor devices in the internal circuitry may be damaged by electrical noise and high voltage. No delay circuit is provided so a trouble signal is output on startup. As when operating and handling the fan, exercise caution to avoid dropping and exposing the blower to shock and vibration.

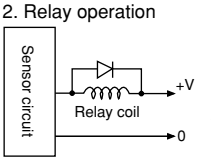
■ Sensor connection



1. LED Display



2. Relay operation



Use in tandem with a flyback diode. Limit the coil current to 50 mA or less.

※ A sensor is available with the AS ad PL series only.

E1540H series 150 × 152 × 40 mm

Super Silent Blowers

E1540H

150×152×40
(5.9"×6.0"×1.6")
Max. airflow: 2.0 m³/min
Max. static pressure: 430 Pa
Mass: 380 g

Fan model code
E1540H12B5AZ-00
E1540H12B7AS-00
E1540H12B7AZ-00
E1540H24B5AZ-00
E1540H24B7AP-00
E1540H24B7AS-00
E1540H24B7AZ-00

Standard specification

Max. Airflow		Max. Static Pressure		Noise	Speed	Input	Voltage Spec. V		Current mA		Model Code	Operating Temp. Range ℃
m³/min	CFM	Pa	inH₂O	dB	min⁻¹	W	Rating	Operating Range	Rating	Starting		
2.0	71	430	1.73	56	2700	19.4	12	8.4-13.8	1600		**E1540H12B7AZ-00**	-20 ～ +70
						17.8	24	16.8-27.6	740		**E1540H24B7AZ-00**	
1.65	58	270	1.09	51	2200	13	12	8.4-13.8	1100		**E1540H12B5AZ-00**	
							24	12-27.6	540		**E1540H24B5AZ-00**	

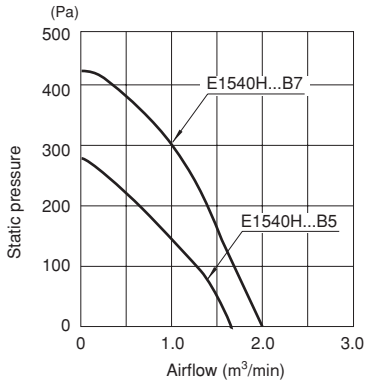
- Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.
- The characteristics are the values at rated voltage (12 V or 24 V), and normal temperature and humidity.
- The life expectancy of E1540H-7 speed products at rated voltage and in continuous operation is 30,000 hours at 60℃. (40,000 hours for other products)

General specification

Materials Used	Venturi: ABS and PBT synthetic resins Impeller: ABS and PBT synthetic resins Bearing: Both side shielded ball bearing
Motor	Brushless DC motor, Protection type: Overcurrent detection and automatic resetting by current limiting
Common Elec. Spec.	See pages G-11, G-12, G-13.
Standard Carton	16 to a carton of (450 x 380 x 220) mm, mass 7 kg

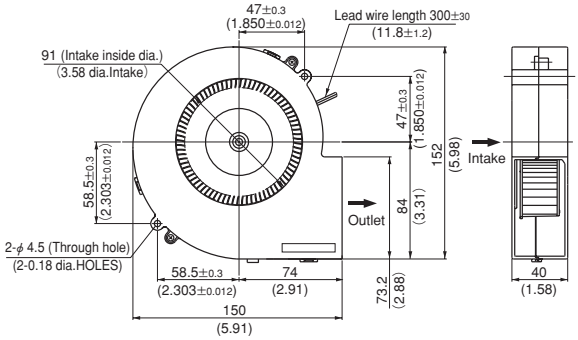
Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]



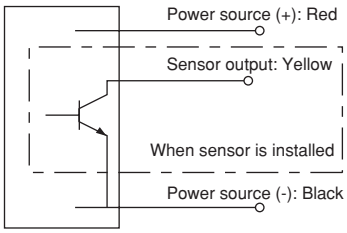
External dimensions in mm (inches)

● **Lead wire type**



Lead wire spec. AWG24 UL3266
Color (+) Red
(-) Black

Wiring connection diagram



Super silent blower with sensor

Rated Vol.	Model Code
12 V	**E1540H12B7AS-00**
24 V	**E1540H24B7AS-00** **E1540H24B7AP-00**

- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above, variable speed specifications, and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- The listed products are registered in the following overseas standards files, UL/cUL: E48889, TUV: R50004410
- 3D data is also available at our web2-CAD site (www.cadenas.co.jp).

DC axial fans & blowers with sensors

The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose of use. The lead wire for the sensor is yellow. The output type is an open collector output for all three types.

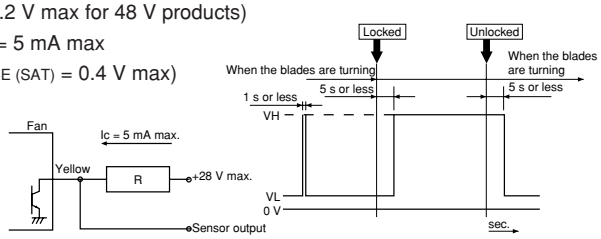
■ Sensor type

1. Lock detection type (Product code: S)

The output signal indicates an [L] state (transistor is ON) while the propeller is rotating, changing to an [H] state (transistor is OFF) less than five seconds after the propeller stops rotating. The propeller automatically restarts operation within five seconds when the lock is unlocked. ([H] → [L] 5 s). If the pull-up voltage is live, the [H] state (transistor is OFF) will engage in less than five seconds, even when the power is turned off.

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform



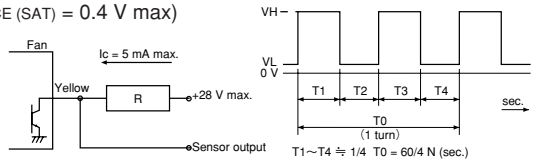
※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

2. Pulse output type (Product code: P)

A rectangular wave of two pulses will be output for each turn of the propeller while the propeller is rotating, outputting two types of signal depending on the propeller position when the propeller is locked. (See the note below ※)

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform

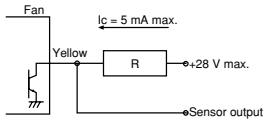


※Output signal waveform when the fan is stopped: The following two types of waveform are output, depending on the blade position when the propeller is stopped:
Pulse outputs of High - constant or restart timing (0.05 Hz to 2 Hz).

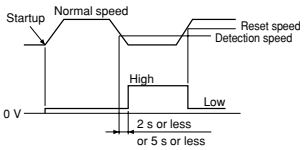
3. Speed detection type (Product code: Q)

The output signal indicates the [H] state when the propeller revolutions are slower than the preset speed, changing to the [L] state when the propeller revolutions exceed the reset speed.
[Products with a reversed output waveform are also available, suitable for a wired OR connection when several fans are installed. Contact NIDEC SERVO for further information. {Former code: SQ, new code (15 - digit code products): R}]

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max at 5 mA)



● Output waveform

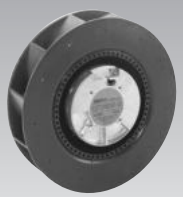


Note: The output waveform for type SQ (R) will be reversed.
The speed setting for the alarm output is about half the rated speed.
For more detailed information, please request a product delivery specification from NIDEC SERVO.

E2271Z series φ220 × 71 mm

Super Silent Blowers

E2271Z



φ220×71 (φ8.7"×2.8")
Max. airflow: 18.1 m³/min
Max. static pressure: 650 Pa
Mass: 1300 g

Features

- **Large airflow, high static pressure backward blowers without housing.**
- **A low noise effect can be achieved by combining an inlet ring.**

Fan model code

E2271Z24B5YP-00
E2271Z48B7AP-00

Standard specification

Max. Airflow		Max. Static Pressure		Noise	Speed	Voltage Spec. V		Current mA		Model Code	Operating Temp. Range ℃
m³/min	CFM	Pa	inH₂O	dB	min⁻¹	Rating	Operating Range	Rating	Starting		
18.1	639	650	2.61	71	3200	48	36-57	2100	4500	**E2271Z48B7AP-00**	-20 ～ +60
14.7	519	470	1.89	69	2650	24	21.0-26.4	2600	3800	**E2271Z24B5YP-00**	-20 ～ +40

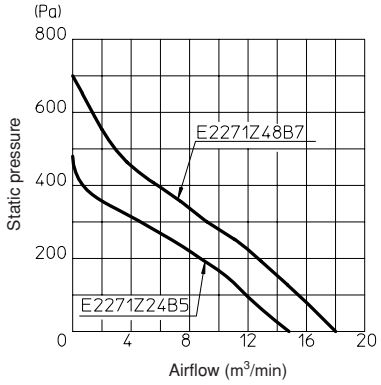
- Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.
- The characteristics are the values at rated voltage (24V, or 48 V), and normal temperature and humidity.
- This product has limitations to ON/OFF functionality. For details, please reference the relevant diagrams in the specification.

General specification

Materials Used	Ventur: Aluminum alloy die castings Impeller: ABS and PBT synthetic resins Bearing: Both side shielded ball bearing
Motor	Brushless DC motor, Protection type: Overcurrent detection and automatic resetting by current limiting
Common Elec. Spec.	See pages G-11, G-12, G-13.

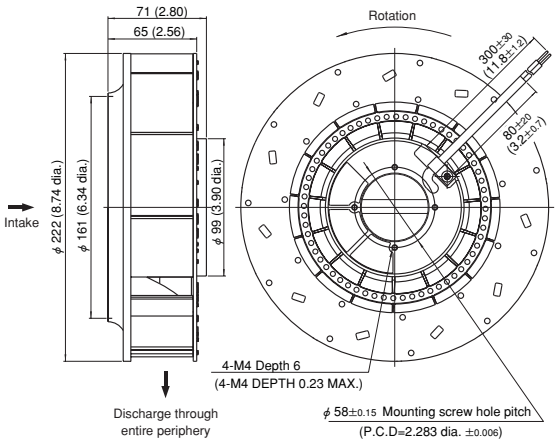
Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]
(Performance when an inlet ring is combined)

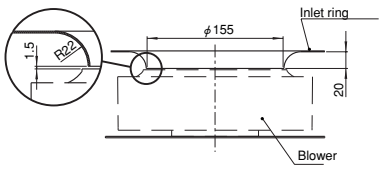


External dimensions in mm (inches)

● **Lead wire type**

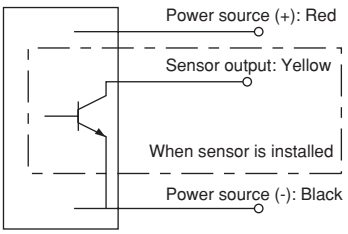


Lead wire spec. AWG24 UL3266
Color (+) Red
(-) Black
(sensor) Yellow



With an inlet ring installed (S = N.T.S.)

Wiring connection diagram



Options (sold separately)
・E2271 inlet ring

Products for variable-speed operation by PWM, voltage or resistance value commands can also be supplied with this model. (See pages G-51 and 52.) Contact NIDEC SERVO for further information.

Super silent blower with sensor

Rated Vol.	Model Code
24 V	**E2271Z24B5YP-00**
48 V	**E2271Z48B7AP-00**

- This product features a large airflow and high static pressure without using a housing. A standard specification is ensured if installed complying with the foregoing bell mouth shape and its position.
- See page G-73 for detailed dimensions of the intake bell mouth.
- A bell mouth fitting accessory (product code E2271 Inlet Ring) is available as an option. (See page G-65.)
- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above, variable speed specifications, and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- The listed products are registered in the following overseas standards files, UL/cUL: E48889, TUV: R50004410 (E2271Z48B7 only models.)

Variable-Speed Fans and Blowers

Fan model code

- D0925C12B8ZP-00
- D0925C24B8ZP-00
- D1225C12BBZP-00
- D1225C24BBZP-00
- D1238B48B7ZP-00
- D1751M48B6ZP-00
- D1751M24B5ZP-00
- D1751S24B9ZP300
- D1751S24B6ZP-00
- G0938B48B9ZP-00
- G0938B12B8ZP-00
- G1238B12BBZP-00
- G1238B24BBZP-00
- G1238B48BBZP-00
- G1238B24BAZP-00
- G1751M24B9ZP300
- G1751M48B9ZP-00

Blowers

- E1033L12BFZP-00
- E1033L12BEZP-00
- E1033H24BAZP-00
- E2271Z48B7ZP-00

Lineup of PWM variable-speed semi-standard products

- A PWM signal from the customer equipment is input to the control line (blue) of the fan motor for variable-speed operation of fans and blowers. (Input and noisecan be reduced when the internal temperature of the customer equipment is low, such as during idling.)

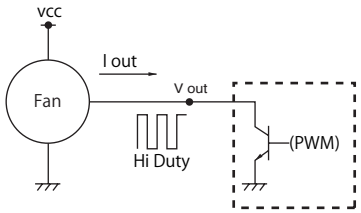
- Sizes
  Axial fans: □92 mm～□172 mm
  Blower: □97 mm～ ϕ220 mm

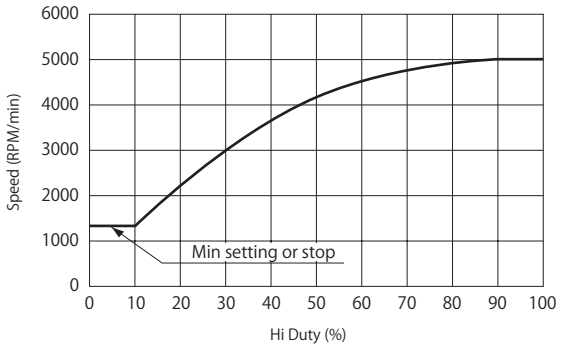
Characteristics for reference

(The characteristics are typical characteristics and their curves will differ, depending on the particular model)

- **Standard values for PWM control signal - speed specification (at rated voltage, open, and normal temperature and humidity)**

I_{out}	1 mA MAX.
V_{out}	5 V MAX.
V_{LOsat}	0.4 MAX.
Freq.	500 Hz~5000 Hz





Semi-standard products (Products in regular production)

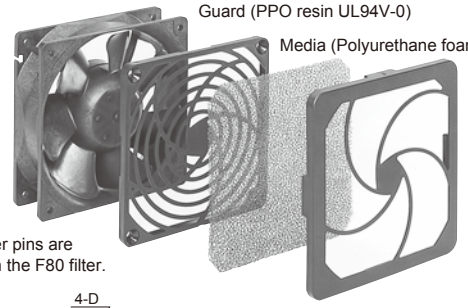
Size	Model Code	Max. Airflow		Max. Static Pressure		Noise	Speed min^{-1}		Voltage Spec. V		Operating
		m^3/min	CFM	Pa	inH$_2$O	dB	Max.	Min.	Rating	Operating Range	Temp. Range ℃
□92×25mm	D0925C12B8ZP-00	2	71	67	0.27	40	4450	1000	12	10.2-13.2	-20 ～ 60℃
	D0925C24B8ZP-00						4450	1750	24	21.6-26.4	
□120×25mm	D1225C12BBZP-00	4.25	150.1	150	0.6	50.5	5400	1000	12	10.2-13.8	-20 ～ 60℃
	D1225C24BBZP-00								24	20.4-27.6	
□119×38mm	D1238B48B7ZP-00	4.4	155	170	0.68	54	4000	1250	48	40.8-55.2	-20 ～ 70℃
ϕ172×150×51mm	D1751M48B6ZP-00	10.2	360	315	1.27	64	4800	1000	48	36-60	-20 ～ 70℃
	D1751M24B5ZP-00	9	318	260	1.04	61	4200	1000	24	12-27.6	
ϕ172×51mm	D1751S24B9ZP300	14.2	501	640	2.57	68	6800	3200	24	16-28	-20 ～ 60℃
	D1751S24B6ZP-00	10.2	360	335	1.35	59	4800	1000	24	12-27.6	
□92×38mm	G0938B48B9ZP-00	3.6	127	440	1.77	61	7000	2000	48	36-55.2	-20 ～ 60℃
	G0938B12B8ZP-00	3.2	113	350	1.41	58	6300	1600	12	8.4-13.8	-20 ～ 70℃
□119×38mm	G1238B12BBZP-00	7.4	261	520	2.09	67	6300	1000	12	9.6-13.8	-20 ～ 60℃
	G1238B24BBZP-00								24	16.8-27.6	
	G1238B48BBZP-00								48	36-55.2	
	G1238B24BAZP-00	6.3	223	415	1.67	64	5300	1000	24	16.8-27.6	-20 ～ 70℃
ϕ172×150×51mm	G1751M24B9ZP300	11.2	395	780	3.13	74	6800	3200	24	16-28	-20 ～ 70℃
	G1751M48B9ZP-00								48	36-60	
97×95×33mm	E1033L12BFZP-00	1.55	55	1400	5.63	66	6900	1800	12	10.8-12.6	-20 ～ 70℃
	E1033L12BEZP-00	1.45	51	1200	4.82	64	6400	1600	12	10.8-13.2	
	E1033H24BAZP-00	1.14	40	500	2.01	58	4850	1800	24	16-26.4	-20 ～ 60℃
ϕ220×71mm	E2271Z48B7ZP-00	18.1	639	600	2.41	74	3200	1000	48	36-57	-20 ～ 60℃

- Aside from the above models, please see also the high pressure, variable speed G series fans. Details may be found in specs G-31 to G-36.
- The lineup of variable-speed fans and blowers will be expanded regularly. Visit the NIDEC SERVO Website for information on the latest lineup.
- Direct your inquiry to NIDEC SERVO for connector termination to lead wires, for sensor specifications other than those contained in the catalog and for variable speed specifications. (Products tailored to voltage command control and resistance value command control are also available)
- To ensure correct installation and smooth operation please obtain a drawing for approval or reference drawing from NIDEC SERVO Co.

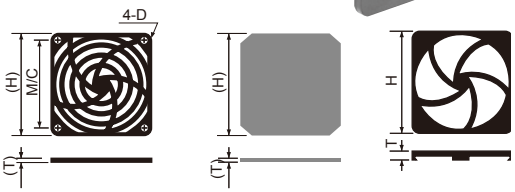
Filters and Other Accessories (Options)

■ Filter

3-piece set



Note: Two retainer pins are provided on the F80 filter.



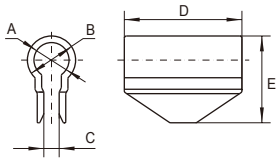
List of mating fan series

	Filter	F80	F92	F120
DC Axial Fans	PUDC	○		
	D0925C		○	
	KLDC		○	
	D1225C			○
	CNDC			○
	D1238B			○
	G0838C	○		
	G0938B		○	
	G1238B			○

	Filter	F80	F92	F120
AC Axial Fans	VE	○		
	WE		○	
	KA		○	
	CU			○
	CN			○

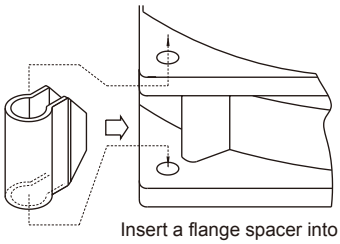
Component (Model Code)	H	T	M／C	D
F80 Filter	83.5	10	71.4	ϕ 4.5
F92 Filter	96.5	11	82.6	ϕ 3.8
F120 Filter	123.7	11	104.8	ϕ 4.4

■ Flange spacer



Component (Model Code)	A mm	B mm	C mm	D mm	E mm	Mating Model Code
Flange Spacer PUDC (※)	5	8	2	17	14.5	KUDC,PUDC
Flange SpacerCNDC	8	11	3.5	28	19.8	CNDC

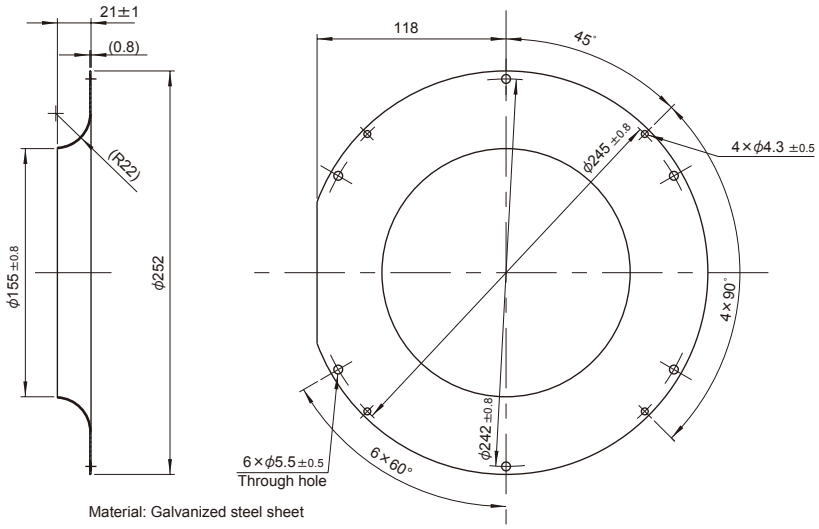
※Ribbed venturis (PUDC-R) are available for PUDC



Insert a flange spacer into the ribs of a venturi.

(Installing a flange spacer)

■ Inlet ring



Material: Galvanized steel sheet

Component (Model Code)	Mating Model Code
E2271 Inlet ring	E2271Z

DC axial fans & blowers with sensors

The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose of use. The lead wire for the sensor is yellow. The output type is an open collector output for all three types.

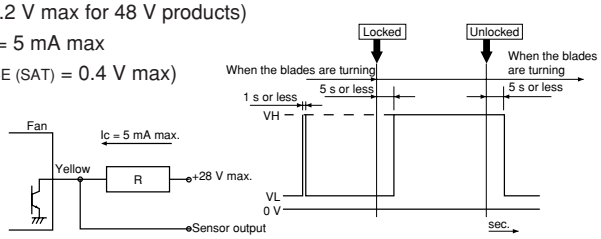
■ Sensor type

1. Lock detection type (Product code: S)

The output signal indicates an [L] state (transistor is ON) while the propeller is rotating, changing to an [H] state (transistor is OFF) less than five seconds after the propeller stops rotating. The propeller automatically restarts operation within five seconds when the lock is unlocked. ([H] → [L] 5 s). If the pull-up voltage is live, the [H] state (transistor is OFF) will engage in less than five seconds, even when the power is turned off.

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform



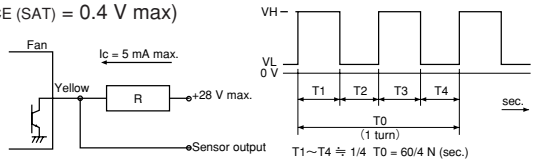
※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

2. Pulse output type (Product code: P)

A rectangular wave of two pulses will be output for each turn of the propeller while the propeller is rotating, outputting two types of signal depending on the propeller position when the propeller is locked. (See the note below ※)

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform

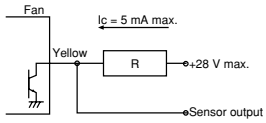


※Output signal waveform when the fan is stopped: The following two types of waveform are output, depending on the blade position when the propeller is stopped:
Pulse outputs of High - constant or restart timing (0.05 Hz to 2 Hz).

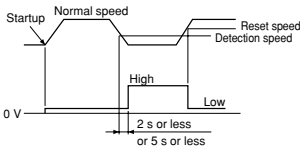
3. Speed detection type (Product code: Q)

The output signal indicates the [H] state when the propeller revolutions are slower than the preset speed, changing to the [L] state when the propeller revolutions exceed the reset speed.
[Products with a reversed output waveform are also available, suitable for a wired OR connection when several fans are installed. Contact NIDEC SERVO for further information. {Former code: SQ, new code (15 - digit code products): R}]

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max at 5 mA)



● Output waveform



Note: The output waveform for type SQ (R) will be reversed.
The speed setting for the alarm output is about half the rated speed.
For more detailed information, please request a product delivery specification from NIDEC SERVO.

MBDC series □ 76 × 30 mm

DC Centrifugal Blowers

MBDC

□76×30 (□3.0"×1.2")
Max. airflow: 0.33 m³/min
Max. static pressure: 172 Pa
Mass: 105 g

Fan model code

- **MBDC12B4**
- **MBDC12H4**
- **MBDC12H4S**
- **MBDC12Z4**
- **MBDC12Z4S**
- **MBDC24B4**
- **MBDC24B4S**
- **MBDC24Z4**

Standard specification

Max. Airflow		Max. Static Pressure		Noise	Speed	Input	Voltage Spec. V		Current mA		Model Code	Operating Temp. Range ℃
m³/min	CFM	Pa	inH₂O	dB	min⁻¹	W	Rating	Operating Range	Rating	Starting		
0.33	11.6	172	0.69	47	4200	4.6	12	7.2-13.8	380	820	**MBDC12H4**	-20 ～ +60
0.29	10.2	117	0.47	41	3400	3.1	12	7.2-13.8	250	600	**MBDC12Z4**	
							24	12-27.6	140	300	**MBDC24Z4**	
0.25	8.8	83	0.33	38	3000	2.5	12	7.2-13.8	200	450	**MBDC12B4**	
							24	12-27.6	110	250	**MBDC24B4**	

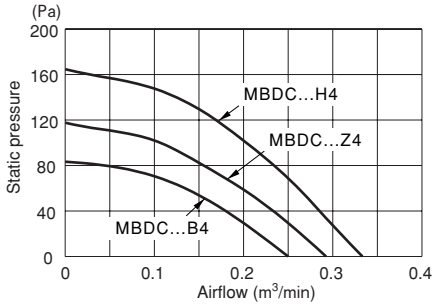
- Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.
- The characteristics are the values at rated voltage (12 V or 24 V), and normal temperature and humidity.

General specification

Materials Used	Venturi: ABS and PBT synthetic resins Impeller: ABS and PBT synthetic resins Bearing: Both side shielded ball bearing
Motor	Brushless DC motor, Protection type: Current shut off by detecting lock state, automatically reset
Common Elec. Spec.	See pages G-11, G-12, G-13.
Standard Carton	120 to a carton of (450 x 380 x 300) mm, mass 13 kg

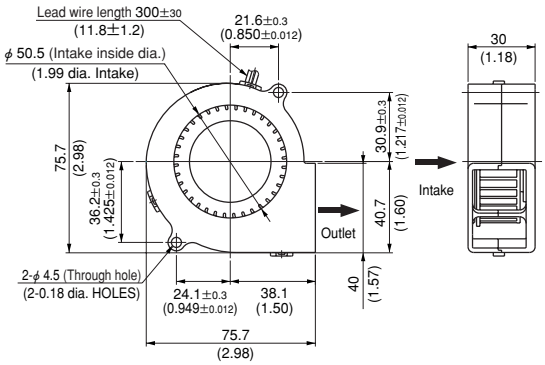
Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]



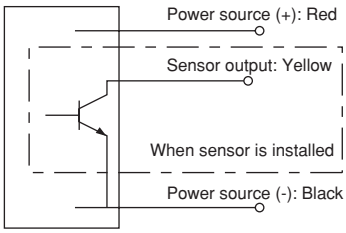
External dimensions in mm (inches)

● **Lead wire type**



Lead wire spec. AWG24 UL1007 or UL3266
Color (+) Red
(-) Black

Wiring connection diagram



DC centrifugal blower with sensor

Rated Vol.	Model Code		
12 V		**MBDC12Z4S**	**MBDC12H4S**
24 V	**MBDC24B4S**		

- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above, variable speed specifications, and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- The listed products are registered in the following overseas standards files, UL: E48889, CSA: LR49399, TUV: R9451586
- Customizing to the sleeve bearing specification also accepted depending on the intended purchase quantity. Contact NIDEC SERVO for further information.
- 3D data is also available at our web2-CAD site (www.cadenas.co.jp).

Sensor Spec. ▶ G-15

DC axial fans & blowers with sensors

The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose of use. The lead wire for the sensor is yellow. The output type is an open collector output for all three types.

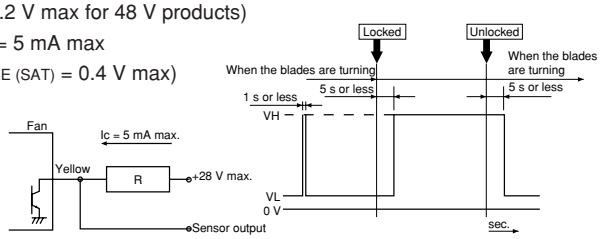
■ Sensor type

1. Lock detection type (Product code: S)

The output signal indicates an [L] state (transistor is ON) while the propeller is rotating, changing to an [H] state (transistor is OFF) less than five seconds after the propeller stops rotating. The propeller automatically restarts operation within five seconds when the lock is unlocked. ([H] → [L] 5 s). If the pull-up voltage is live, the [H] state (transistor is OFF) will engage in less than five seconds, even when the power is turned off.

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform



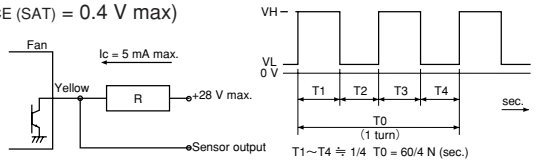
※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

2. Pulse output type (Product code: P)

A rectangular wave of two pulses will be output for each turn of the propeller while the propeller is rotating, outputting two types of signal depending on the propeller position when the propeller is locked. (See the note below ※)

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max)

● Output waveform

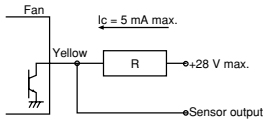


※Output signal waveform when the fan is stopped: The following two types of waveform are output, depending on the blade position when the propeller is stopped:
Pulse outputs of High - constant or restart timing (0.05 Hz to 2 Hz).

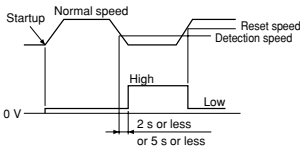
3. Speed detection type (Product code: Q)

The output signal indicates the [H] state when the propeller revolutions are slower than the preset speed, changing to the [L] state when the propeller revolutions exceed the reset speed.
[Products with a reversed output waveform are also available, suitable for a wired OR connection when several fans are installed. Contact NIDEC SERVO for further information. {Former code: SQ, new code (15 - digit code products): R}]

● Specification: V_{CE} = 28 V max
(55.2 V max for 48 V products)
IC = 5 mA max
($V_{CE\ (SAT)}$ = 0.4 V max at 5 mA)



● Output waveform



Note: The output waveform for type SQ (R) will be reversed.
The speed setting for the alarm output is about half the rated speed.
For more detailed information, please request a product delivery specification from NIDEC SERVO.