

DC Axial Fan
D1338B



□ 127 × 38 (□ 5.0" × 1.5")
Max. airflow: 5.8 m³/min
Max. static pressure: 185 Pa
Mass: 410 g

Fan model code

D1338B24B8AZ-00

D1338B24B8AS-00

■ Standard specification

Max. Airflow	Max. Static Pressure	Noise	Speed	Input	Voltage Spec. V		Current mA		Model Code	Operating Temp. Range °C		
					Rating	Operating Range	Rating	Starting				
5.8	205	185	0.74	58	4500	19.7	24	16.8-27.6	820	2500	D1338B24B8AZ-00	-20 ~ +70

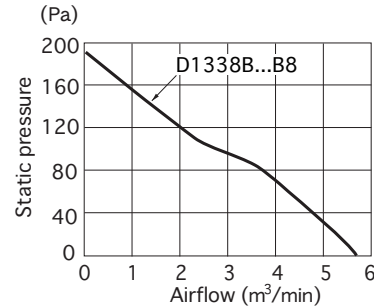
- Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.
- The characteristics are the values at rated voltage (12 V, 24 V or 48 V), and normal temperature and humidity.

■ General specification

Materials Used	Venturi: Aluminum alloy die castings Propeller: 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.

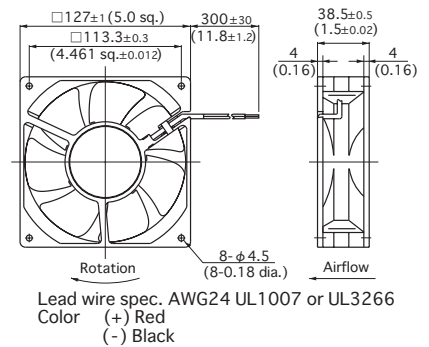
■ Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]

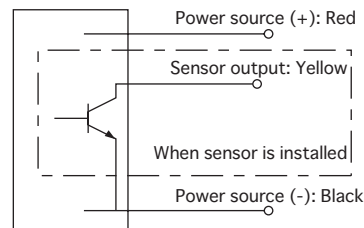


■ External dimensions in mm (inches)

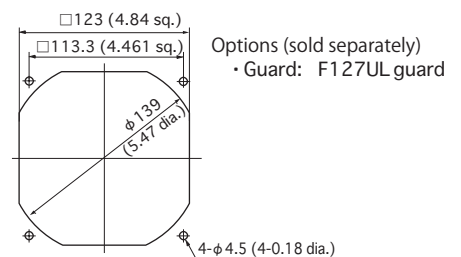
- Lead wire type



■ Wiring connection diagram



■ Mounting hole dimensions [Recommendation] in mm (inches)



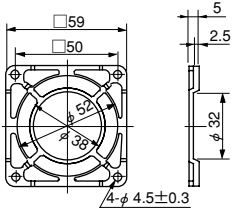
DC axial fan with sensor

Rated Vol.	Model Code
24 V	D1338B24B8AS-00

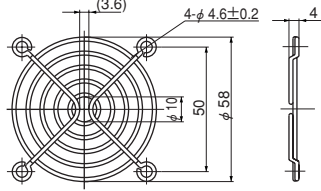
*** For red-lines product,
Please contact us from our website .
HP : <http://www.nidec.com/en/nidec-servo>**

- 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: 50004410
- 3D data is also available at our website.

F60UL Guard (Mass 12 g)

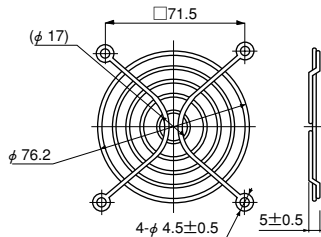


Material: Polycarbonate (black)
UL94V-2



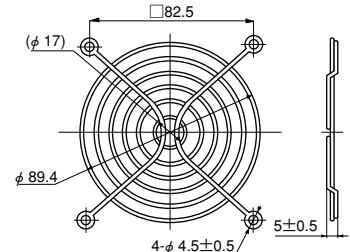
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



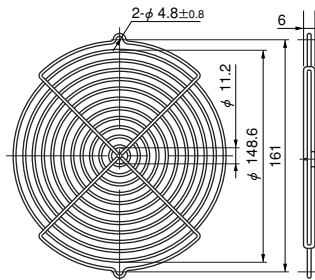
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



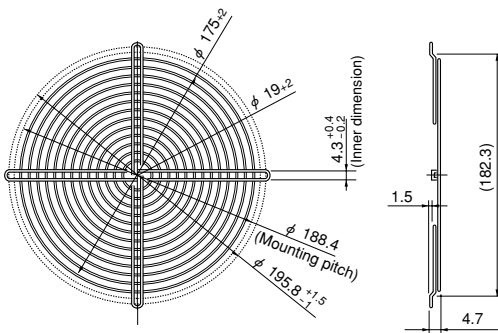
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

F200UL Guard (Mass 82 g)



Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

DC axial fans & blowers with sensors

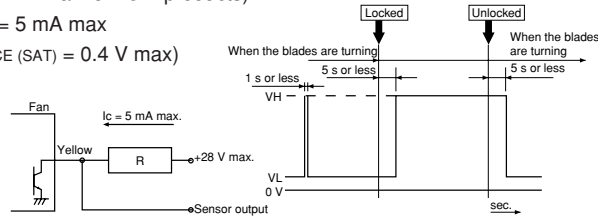
The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose 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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- Output waveform

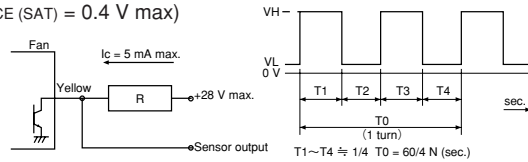


※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- 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).

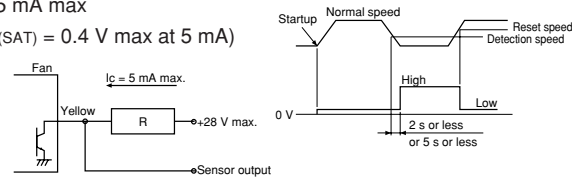
3. Speed detection type (Product code: Q)

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

● 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.

DC Axial Fan
D1751M



$\phi 172 \times 150 \times 51$
($\phi 6.8" \times 6.0" \times 2.0"$)
Max. airflow : 13.8 m³/min
Max. static pressure : 600 Pa
Mass : 780 g

Fan model code

D1751M12B2AZ-00

D1751M12B2AS-00

D1751M24B2AZ-00

Standard specification

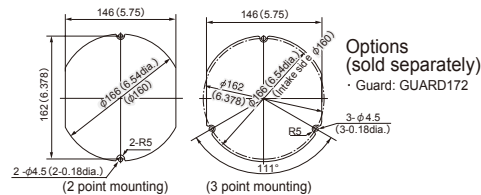
Max. airflow m ³ /min	Max. static pressure CFM	Max. static pressure		Noise dB	Speed min ⁻¹	Voltage spec. V		Current mA		Model code	Operating Temp. Range °C
		Pa	inH ₂ O			Rating	Operating Range	Rating	Starting		
5.8	205	120	0.48	49	2800	12	8.4-13.8	800	2900	D1751M12B2AZ-00	-20 ~ +70
						24	12-27.6	400	1900	D1751M24B2AZ-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, 24 V, 48 V), and normal temperature and humidity.

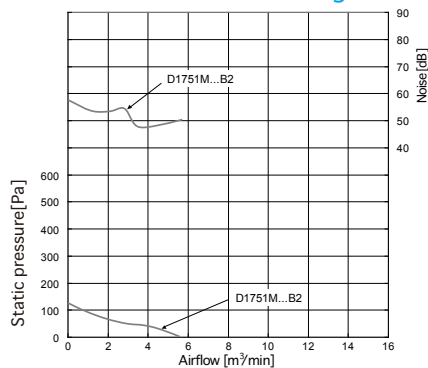
General specification

Materials Used	Venturi: Aluminum alloy die castings Propelle: 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	12 to a carton of (450 x 380 x 220)mm, mass 10kg

Mounting hole dimensions
in mm (inches) [Recommendation]

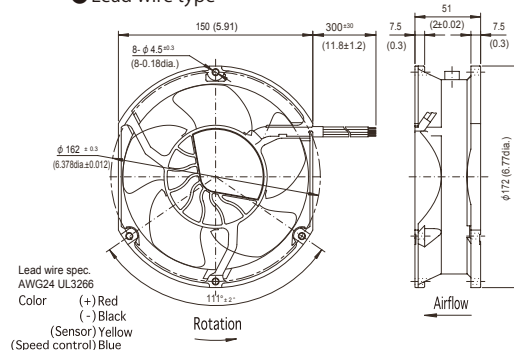


Standard airflow and static pressure characteristics (At rated voltage)



External dimensions in mm (inches)

● Lead wire type

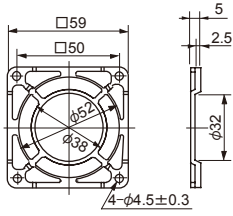


DC axial fan with sensor

Rated Vol.	Model Code
12 V	D1751M12B2AS-00

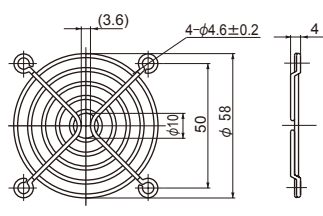
- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above, variable speed specifications, and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- PWM (pulse width modulation) allowing for variable speed control is available in some models (reference the G-51 spec.)
- The listed products are registered in the following overseas standards files, UL/cUL: E48889, TUV: R50004410

F60P Guard (Mass 4 g)



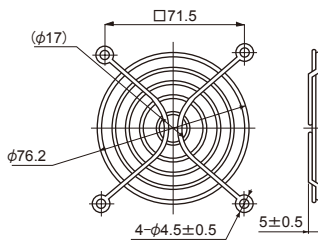
Material: Polycarbonate (black)
UL94V-2

F60UL Guard (Mass 12 g)



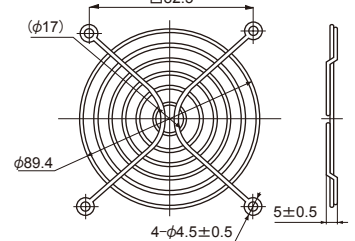
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



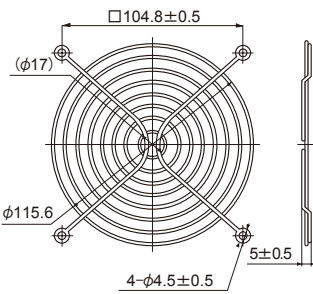
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



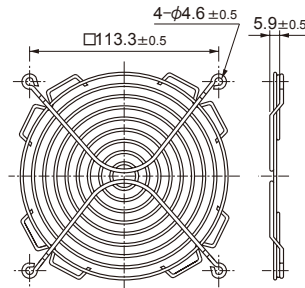
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F120UL Guard (Mass 29 g)



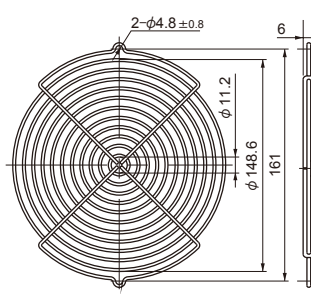
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F127UL Guard



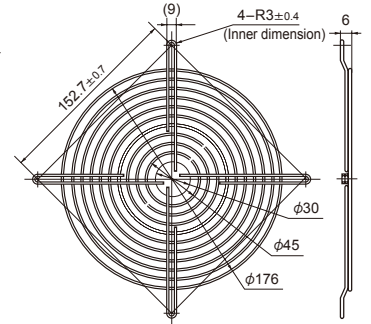
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



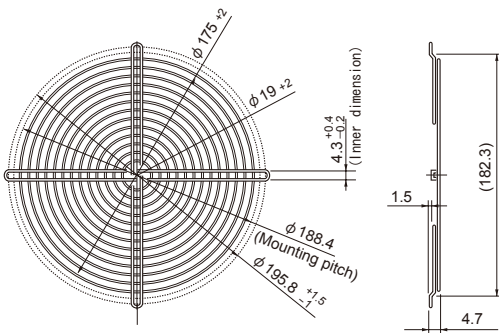
Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

F180UL Guard



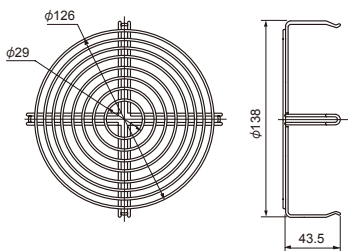
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F200UL Guard (Mass 82 g)



Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

SCN Guard (Mass 55 g)



Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

- Guard special for intake side of SCN (metal venturi) fans.

List of mating fan series

	Guard	F60P	F60UL	F80UL	F92UL	F120UL	F127UL	GUARD 172	F180UL	F200UL	SCN
AC Axial Fans	SCN					○*1					○*2
	VE			○							
	WE				○						
	KA				○						
	CU					○					
	CN					○					
	MA							○			
PA							○				
DC Axial Fans	TUDC	○	○								
	PUDC			○							
	D0925C				○						
	KLDC				○						
	D1225C					○					
	CNDC					○					
	D1238B					○					
	D1338B						○				
	D1751M							○			
	D1751S								○		
	G0638D		○								
	G0838X			○							
G0938B				○							
G1238B					○						
G1751M								○			

*1: Can be installed only on outlet side. *2: Can be installed only on intake side. All guards conform to the UL standard when combined with NIDEC SERVO fans. The installation of a filter, guard and other accessories will constitute a ventilating load, reducing the airflow. Select a suitable guard, taking into consideration the increase in air resistance. (See Figs. 12 and 13 on page G-7.)

DC axial fans & blowers with sensors

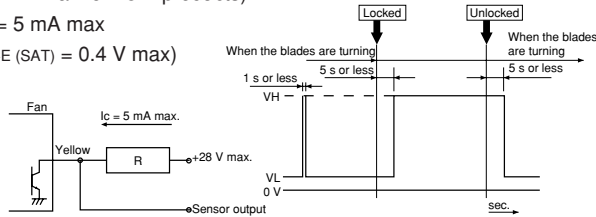
The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose 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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- Output waveform

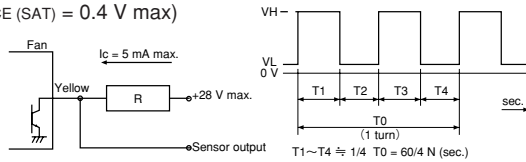


※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- 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).

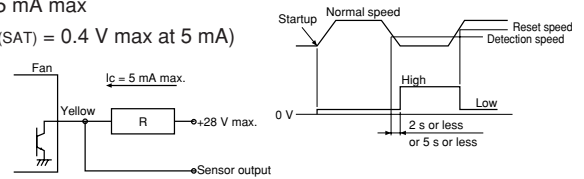
3. Speed detection type (Product code: Q)

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

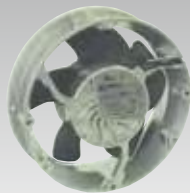
● Output waveform



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.

DC Axial Fan

D1751S



$\phi 172 \times 51$
($\phi 6.8'' \times 2.0''$)
Max. airflow : 14 m³/min
Max. static pressure : 640 Pa
Mass : 830 g

Fan model code

- D1751S24B9ZP300
- D1751S24B6ZP-00
- D1751S24B4AZ-00
- D1751S24B4ZR-13
- D1751S24B3AZ-00
- D1751S12B2AZ-00
- D1751S24B2AZ-00
- D1751S24B2AP-00

Standard specification

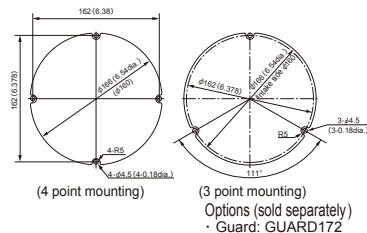
Max. airflow		Max. static pressure		Noise dB	Speed min ⁻¹	Voltage spec. V		Current mA		Model code	Operating Temp. Range °C
m ³ /min	CFM	Pa	inH ₂ O			Rating	Operating Range	Rating	Starting		
14.2	501	640	2.57	68	6800	24	16-28	4600	6900	D1751S24B9ZP300	-20 ~ +60
10.2	360	335	1.35	59	4800	24	12-27.6	1800	3200	D1751S24B6ZP-00	
8	282	220	0.88	53.5	3800	24	12-27.6	900	2200	D1751S24B4AZ-00	
6.8	240	165	0.66	48	3200	24	12-27.6	600	2400	D1751S24B3AZ-00	-20 ~ +70
5.8	205	125	0.50	44	2800	12	8.4-13.8	800	2900	D1751S12B2AZ-00	
						24	12-27.6	400	1900	D1751S24B2AZ-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, 24 V), and normal temperature and humidity.

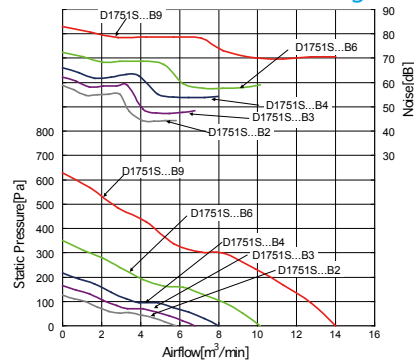
General specification

Materials Used	Venturi: Aluminum alloy die castings Propelle: 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	12 to a carton of (450 x 380 x 220)mm, mass 10.5kg

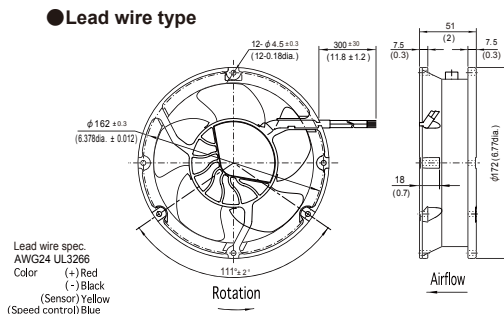
Mouting hole dimensions in mm (inches) [Recommendation]



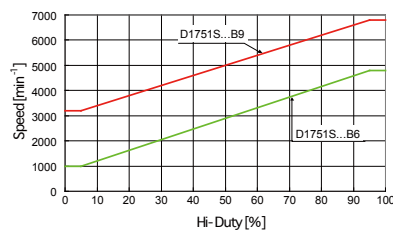
Standard airflow and static pressure characteristics (At rated voltage)



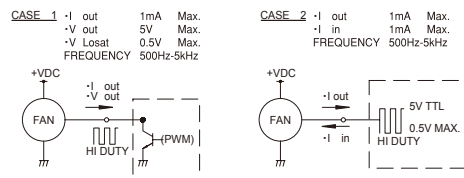
External dimensions in mm (inches)



PWM speed control specification



Speed Performance (At rated vol. Air) Specification (Room temperature)



DC axial fan with sensor

Rated Vol.	Model Code
24 V	D1751S24B9ZP300
	D1751S24B6ZP-00
	D1751S24B2AP-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.
- PWM (pulse width modulation) allowing for variable speed control is available in some models (reference the G-51 spec.)
- The listed products are registered in the following overseas standards files, UL/cUL: E48889, TUV: R50004410

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

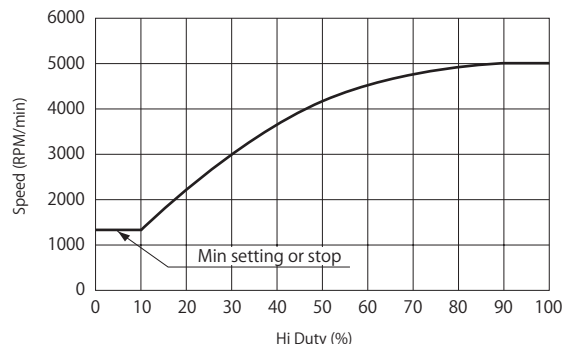
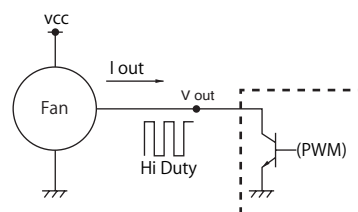
Lineup of PWM variable-speed semi-standard products

- 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 noise can 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

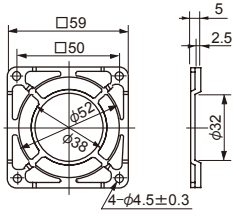


Semi-standard products (Products in regular production)

Size	Model Code	Max. Airflow		Max. Static Pressure		Noise	Speed min ⁻¹		Voltage Spec. V		Operating Temp. Range °C
		m ³ /min	CFM	Pa	inH ₂ O		Max.	Min.	Rating	Operating Range	
□92×25mm	D0925C12B8ZP-00	2	71	67	0.27	40	4450	1000	12	10.2-13.2	-20 ~ 60°C
	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°C
	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°C
φ172×150×51mm	D1751M48B6ZP-00	10.2	360	315	1.27	64	4800	1000	48	36-60	-20 ~ 70°C
	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°C
	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°C
	G0938B12B8ZP-00	3.2	113	350	1.41	58	6300	1600	12	8.4-13.8	
□119×38mm	G1238B12BBZP-00	7.4	261	520	2.09	67	6300	1000	12	9.6-13.8	-20 ~ 60°C
	G1238B24BBZP-00								24	16.8-27.6	
	G1238B48BBZP-00								48	36-55.2	
	G1238B24BAZP-00								24	16.8-27.6	
φ172×150×51mm	G1751M24B9ZP300	11.2	395	780	3.13	74	6800	3200	24	16-28	-20 ~ 70°C
	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°C
	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	
φ220×71mm	E2271Z48B7ZP-00	18.1	639	600	2.41	74	3200	1000	48	36-57	-20 ~ 60°C

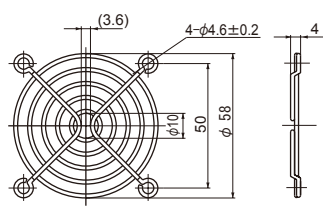
- Aside from the above models, please see also the high pressure, variable speed G series fans. Details may be found in specs G-31 to G-36.
- The lineup of variable-speed fans and blowers will be expanded regularly. Visit the NIDEC SERVO Website for information on the latest lineup.
- Direct your inquiry 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.

F60P Guard (Mass 4 g)



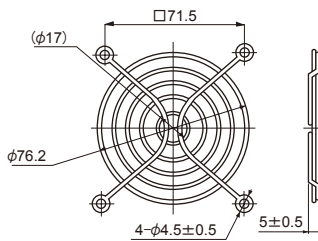
Material: Polycarbonate (black)
UL94V-2

F60UL Guard (Mass 12 g)



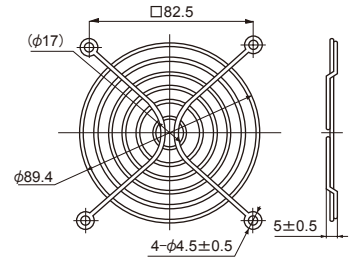
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



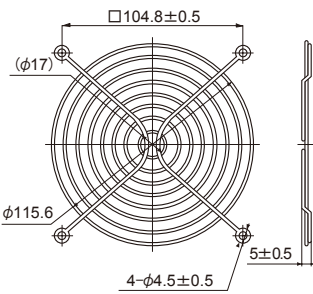
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



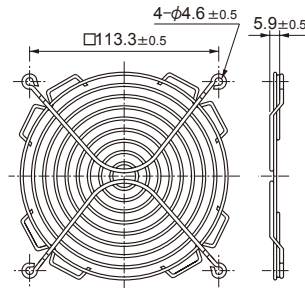
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F120UL Guard (Mass 29 g)



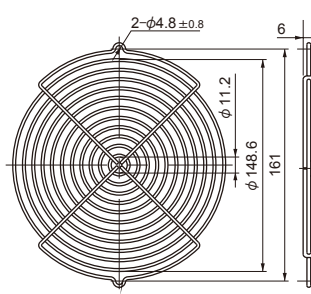
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F127UL Guard



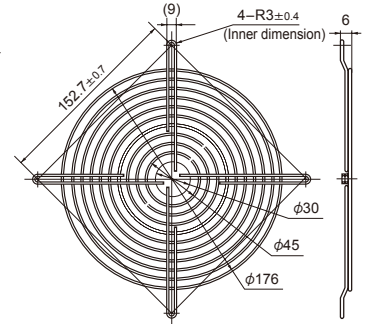
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



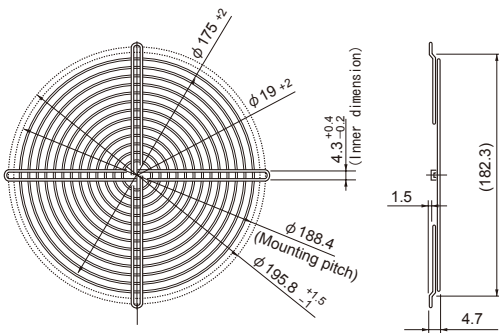
Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

F180UL Guard



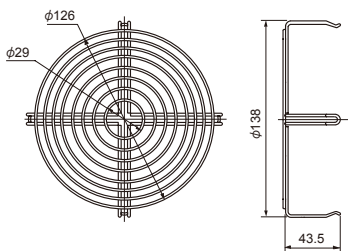
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F200UL Guard (Mass 82 g)



Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

SCN Guard (Mass 55 g)



Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

- Guard special for intake side of SCN (metal venturi) fans.

List of mating fan series

	Guard	F60P	F60UL	F80UL	F92UL	F120UL	F127UL	GUARD 172	F180UL	F200UL	SCN
AC Axial Fans	SCN					○*1					○*2
	VE			○							
	WE				○						
	KA				○						
	CU					○					
	CN						○				
	MA							○			
DC Axial Fans	PA							○			
	TUDC	○	○								
	PUDC			○							
	D0925C				○						
	KLDC				○						
	D1225C					○					
	CNDC					○					
	D1238B					○					
	D1338B						○				
	D1751M							○			
	D1751S								○		
	G0638D		○								
	G0838X			○							
G0938B				○							
G1238B					○						
G1751M								○			

*1: Can be installed only on outlet side. *2: Can be installed only on intake side. All guards conform to the UL standard when combined with NIDEC SERVO fans. The installation of a filter, guard and other accessories will constitute a ventilating load, reducing the airflow. Select a suitable guard, taking into consideration the increase in air resistance. (See Figs. 12 and 13 on page G-7.)

DC axial fans & blowers with sensors

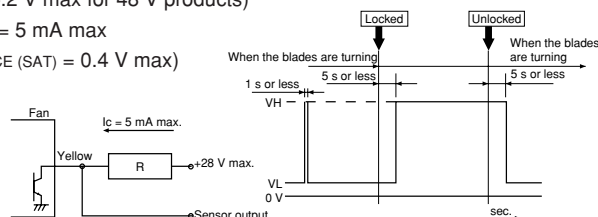
The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose 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: $V_{CE} = 28\text{ V max}$
(55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- Output waveform

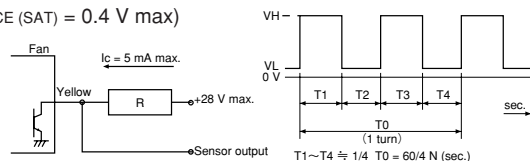


※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

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: $V_{CE} = 28\text{ V max}$
(55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- 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).

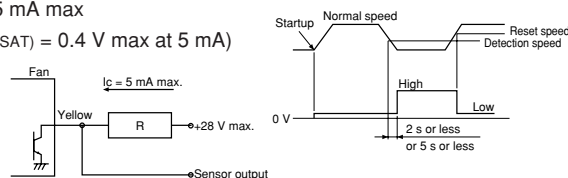
3. Speed detection type (Product code: Q)

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

● 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.

DC Axial Fan
Fixed Blade Type
G0938B



□92×38 (□3.6"×1.5")
Max. airflow : 3.9 m³/min
Max. static pressure : 490 Pa
Mass : 320 g

Fan model code

G0938B12B8ZP-00

G0938B48B9ZP-00

■ Standard specification

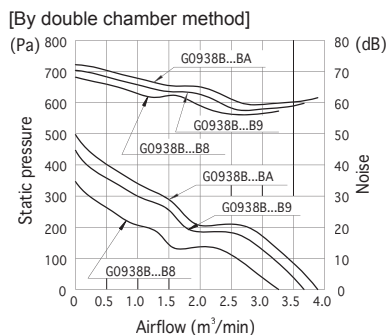
Max. airflow m ³ /min	Max. static pressure CFM	Max. static pressure Pa	Noise inHzO	Noise dB	Speed min ⁻¹		Voltage spec. V		Current mA		Model code	Operating Temp. Range°C
					Max.	Min.	Rating	Operating Range	Rating	Starting		
3.6	127	440	1.77	61	7000	2000	48	36-55.2	520	1100	G0938B48B9ZP-00	-20 ~ +60
3.2	113	350	1.41	58	6300	1600	12	8.4-13.8	1500	3800	G0938B12B8ZP-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 or 48 V), and normal temperature and humidity.
- Max. CFM and max static pressure points coincide at max rotational speed.

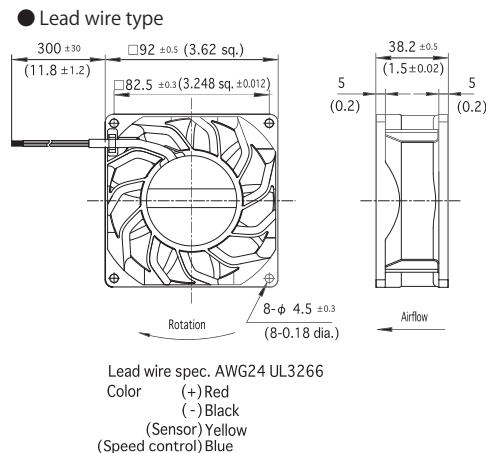
■ General specification

Materials Used	Venturi: Aluminum alloy die castings Propeller: 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.

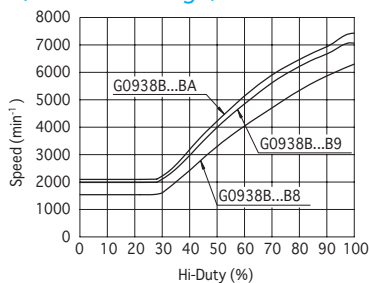
■ Standard airflow and static pressure characteristics (At rated voltage)



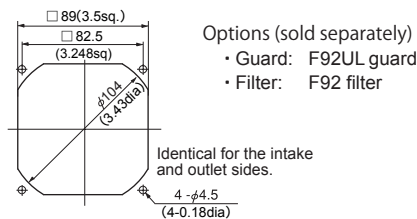
■ External dimensions in mm (inches)



■ PWM speed control specification (At rated voltage)

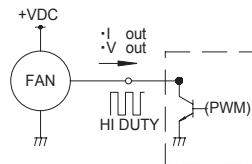


■ Mounting hole dimensions [Recommendation] in mm (inches)

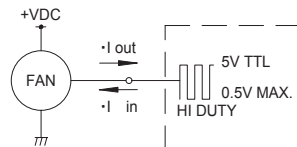


■ Speed performance (At rated vol., Free air condition) Specification (Room temperature)

CASE 1
• I out 1mA Max.
• V out 5V Max.
• V Losat 0.5V Max.
FREQUENCY 500Hz-5kHz



CASE 2
• I out 1mA Max.
• I in 1mA Max.
FREQUENCY 500Hz-5kHz



- 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

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

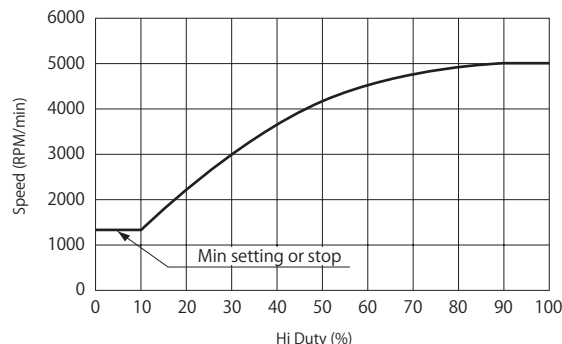
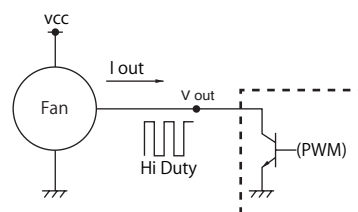
- A PWM signal from the customer equipment is input to the control line (blue) of the fan motor for variable-speed operation of fans and blowers. (Input and noise can be reduced when the internal temperature of the customer equipment is low, such as during idling.)
- Sizes
Axial fans: □92 mm~□172 mm
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

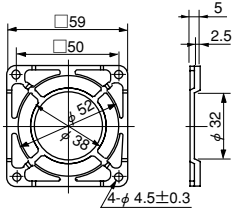


Semi-standard products (Products in regular production)

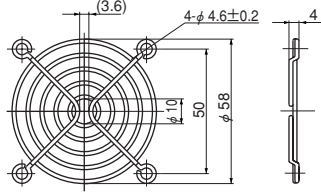
Size	Model Code	Max. Airflow		Max. Static Pressure		Noise	Speed min ⁻¹		Voltage Spec. V		Operating Temp. Range °C
		m ³ /min	CFM	Pa	inH ₂ O		Max.	Min.	Rating	Operating Range	
□92×25mm	D0925C12B8ZP-00	2	71	67	0.27	40	4450	1000	12	10.2-13.2	-20 ~ 60°C
	D0925C24B8ZP-00						4450	1750	24	21.6-26.4	
□120×25mm	D1225C12BBZP-00	4.25	150.1	150	0.6	50.5	5400	1000	12	10.2-13.8	-20 ~ 60°C
	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°C
φ172×150×51mm	D1751M48B6ZP-00	10.2	360	315	1.27	64	4800	1000	48	36-60	-20 ~ 70°C
	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°C
	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°C
	G0938B12B8ZP-00	3.2	113	350	1.41	58	6300	1600	12	8.4-13.8	
□119×38mm	G1238B12BBZP-00	7.4	261	520	2.09	67	6300	1000	12	9.6-13.8	-20 ~ 60°C
	G1238B24BBZP-00								24	16.8-27.6	
	G1238B48BBZP-00								48	36-55.2	
	G1238B24BAZP-00								24	16.8-27.6	
φ172×150×51mm	G1751M24B9ZP300	11.2	395	780	3.13	74	6800	3200	24	16-28	-20 ~ 70°C
	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°C
	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	
φ220×71mm	E2271Z48B7ZP-00	18.1	639	600	2.41	74	3200	1000	48	36-57	-20 ~ 60°C

- 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.

F60UL Guard (Mass 12 g)

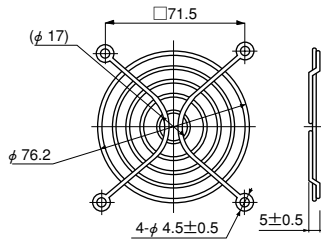


Material: Polycarbonate (black)
UL94V-2



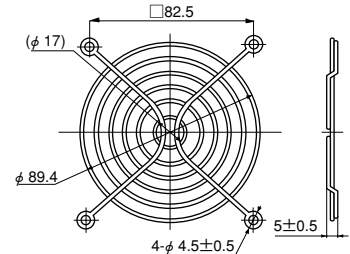
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



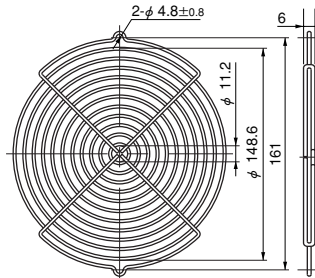
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



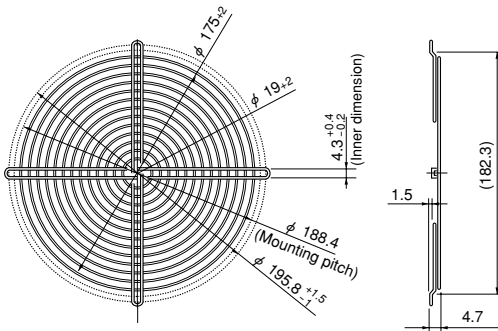
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

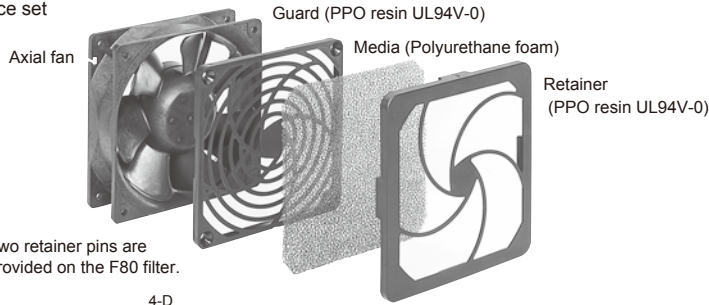
F200UL Guard (Mass 82 g)



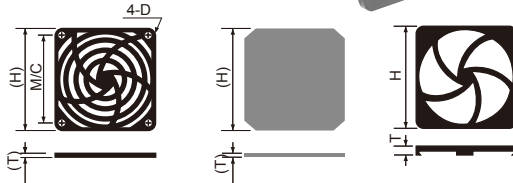
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

Filter

3-piece set



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



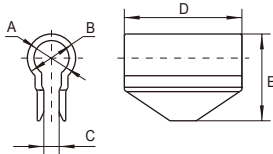
List of mating fan series

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

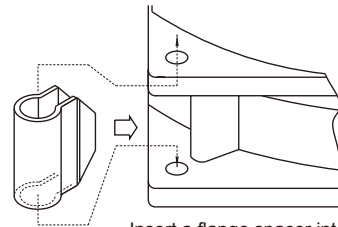
Filter	F80	F92	F120
VE	○		
WE		○	
KA		○	
CU			○
CN			○

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

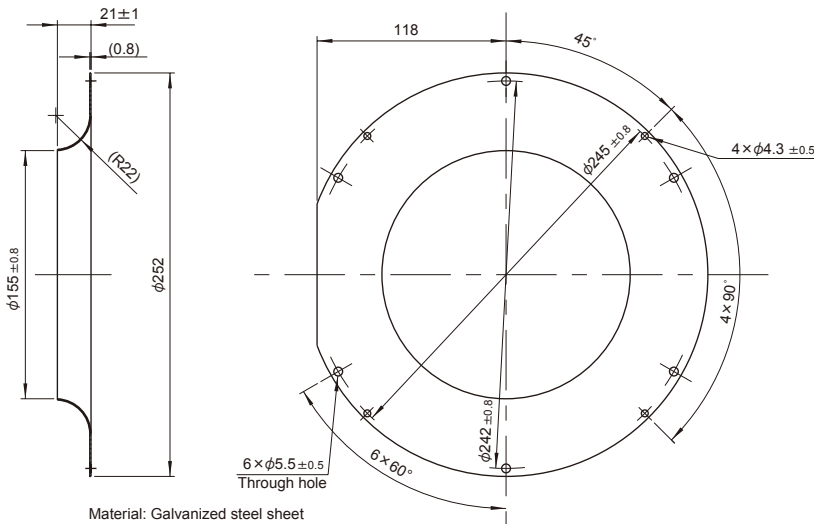


Insert a flange spacer into the ribs of a venturi.

(Installing a flange spacer)

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

Inlet ring



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

DC axial fans & blowers with sensors

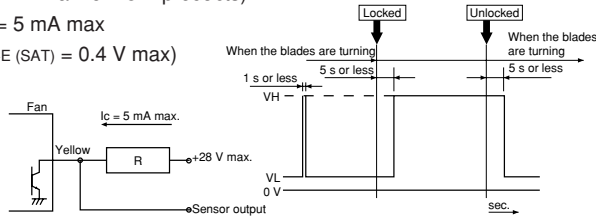
The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose 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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- Output waveform

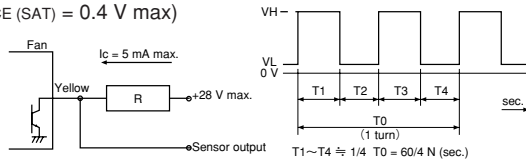


※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- 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).

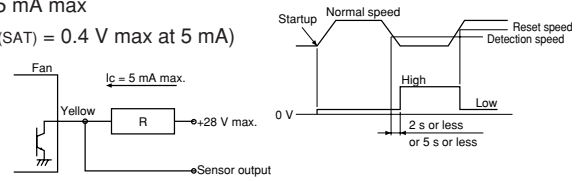
3. Speed detection type (Product code: Q)

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

● 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.

DC Axial Fan
Fixed Blade Type
G1238B



□ 120 × 38 (□ 4.7" × 1.5")
Max. airflow : 7.4 m³/min
Max. static pressure : 520 Pa
Mass : 480 g

Fan model code

G1238B12BBZP-00

G1238B24BAZP-00

G1238B24BBZP-00

G1238B48BBZP-00

■ Standard specification

Max. airflow		Max. static pressure		Noise dB	Speed min ⁻¹		Voltage spec. V		Current mA		Model code	Operating Temp. Range°C
m ³ /min	CFM	Pa	inH ₂ O		Max.	Min.	Rating	Operating Range	Rating	Starting		
7.4	261	520	2.09	67	6300	1000	12	9.6-13.8	4450	6100	G1238B12BBZP-00	-20 ~ +60
							24	16.8-27.6	2200	3100	G1238B24BBZP-00	
							48	36-55.2	1100	1600	G1238B48BBZP-00	
6.3	223	415	1.67	64	5300	1000	24	16.8-27.6	1300	2000	G1238B24BAZP-00	-20 ~ +70

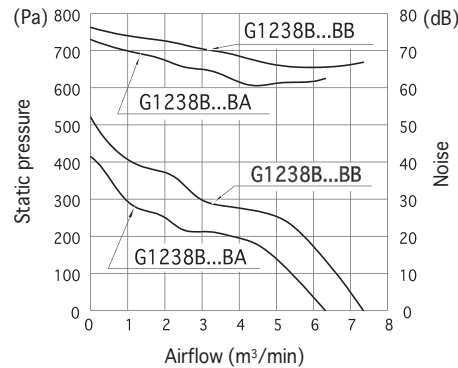
- Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.
- The characteristics are the values at rated voltage (12 V, 24 V, or 48 V), and normal temperature and humidity.
- Max. CFM and max static pressure points coincide at max rotational speed.

■ General specification

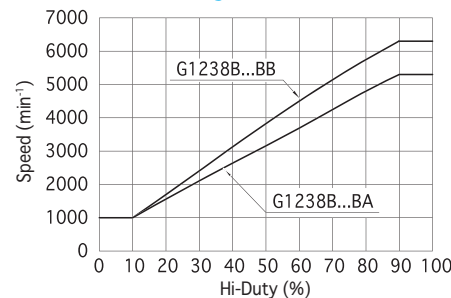
Materials Used	Venturi: Aluminum alloy die castings. Propeller: ABS and PBT synthetic resins Bearing: Both side shielded ball bearing
Motor	Brushless DC motor, Protection type: Current shut off by detecting lock state, automatically reset
Common Elec. Spec.	See pages G-11, G-12, G-13.

■ Standard airflow and static pressure characteristics (At rated voltage)

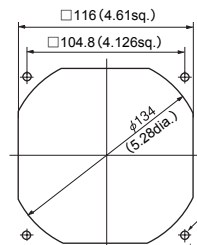
[By double chamber method]



■ PWM speed control specification (At rated voltage)



■ Mounting hole dimensions (Recommendation)



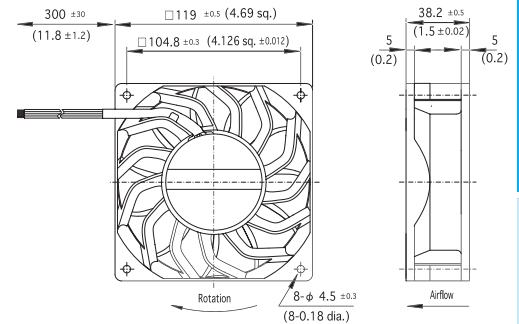
- Options (sold separately)
- Guard: F120UL guard
 - Filter: F120 filter

Indental for the intake and outlet sides.

- 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

■ External dimensions in mm (inches)

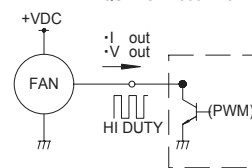
● Lead wire type



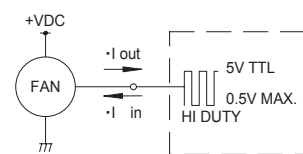
Lead wire spec. AWG22 UL3266
Color (+) Red
(-) Black
(Sensor) Yellow
(Speed control) Blue

■ Speed performance (At rated vol., Free air condition) Specification (Room temperature)

CASE 1 -I out 1mA Max.
-V out 5V Max.
-V Losat 0.5V Max.
FREQUENCY 500Hz-5kHz



CASE 2 -I out 1mA Max.
-I in 1mA Max.
FREQUENCY 500Hz-5kHz



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

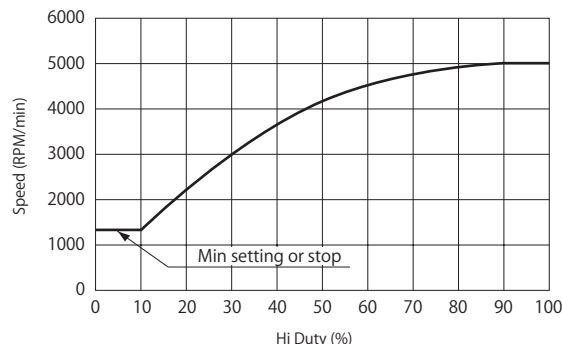
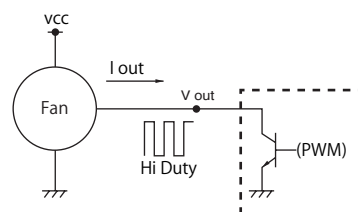
- A PWM signal from the customer equipment is input to the control line (blue) of the fan motor for variable-speed operation of fans and blowers. (Input and noise can be reduced when the internal temperature of the customer equipment is low, such as during idling.)
- Sizes
Axial fans: □92 mm~□172 mm
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

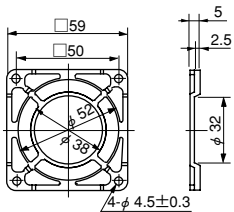


Semi-standard products (Products in regular production)

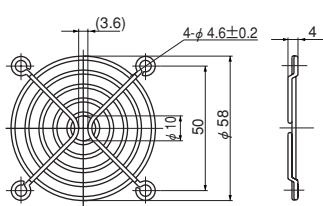
Size	Model Code	Max. Airflow		Max. Static Pressure		Noise	Speed min ⁻¹		Voltage Spec. V		Operating Temp. Range °C
		m ³ /min	CFM	Pa	inH ₂ O		Max.	Min.	Rating	Operating Range	
□92×25mm	D0925C12B8ZP-00	2	71	67	0.27	40	4450	1000	12	10.2-13.2	-20 ~ 60°C
	D0925C24B8ZP-00						4450	1750	24	21.6-26.4	
□120×25mm	D1225C12BBZP-00	4.25	150.1	150	0.6	50.5	5400	1000	12	10.2-13.8	-20 ~ 60°C
	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°C
φ172×150×51mm	D1751M48B6ZP-00	10.2	360	315	1.27	64	4800	1000	48	36-60	-20 ~ 70°C
	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°C
	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°C
	G0938B12B8ZP-00	3.2	113	350	1.41	58	6300	1600	12	8.4-13.8	
□119×38mm	G1238B12BBZP-00	7.4	261	520	2.09	67	6300	1000	12	9.6-13.8	-20 ~ 60°C
	G1238B24BBZP-00								24	16.8-27.6	
	G1238B48BBZP-00								48	36-55.2	
	G1238B24BAZP-00								24	16.8-27.6	
φ172×150×51mm	G1751M24B9ZP300	11.2	395	780	3.13	74	6800	3200	24	16-28	-20 ~ 70°C
	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°C
	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	
φ220×71mm	E2271Z48B7ZP-00	18.1	639	600	2.41	74	3200	1000	48	36-57	-20 ~ 60°C

- 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.

F60UL Guard (Mass 12 g)

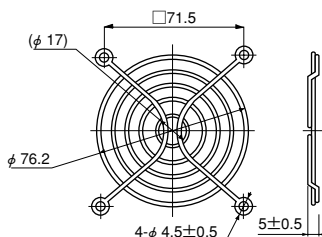


Material: Polycarbonate (black)
UL94V-2



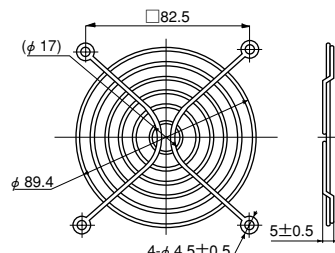
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



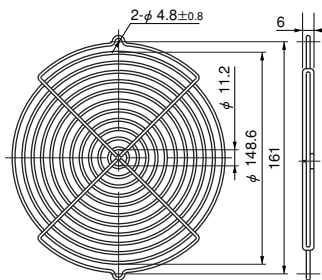
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



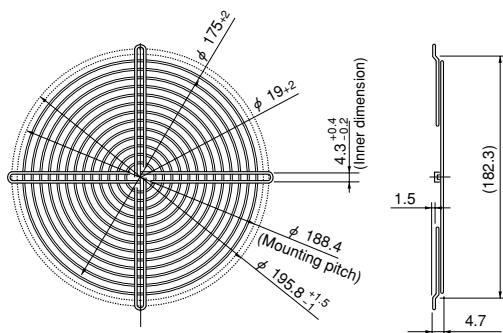
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

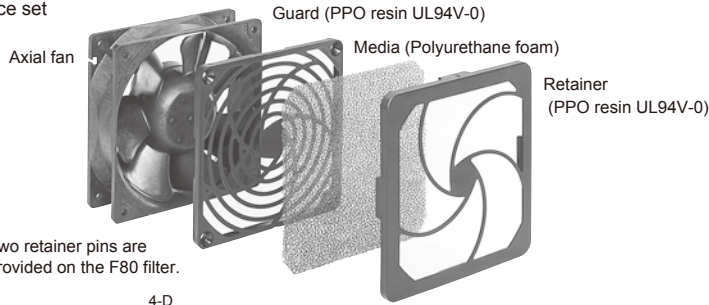
F200UL Guard (Mass 82 g)



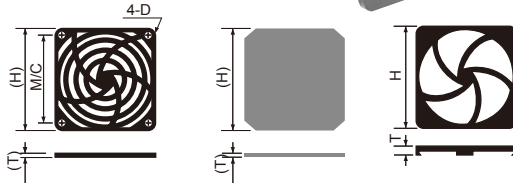
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

Filter

3-piece set



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



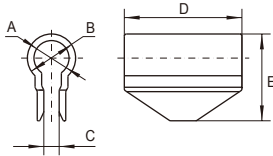
List of mating fan series

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

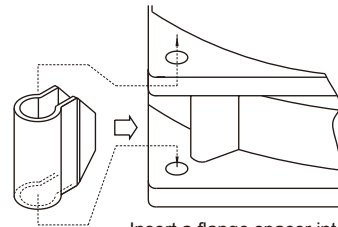
Filter	F80	F92	F120
VE	○		
WE		○	
KA		○	
CU			○
CN			○

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

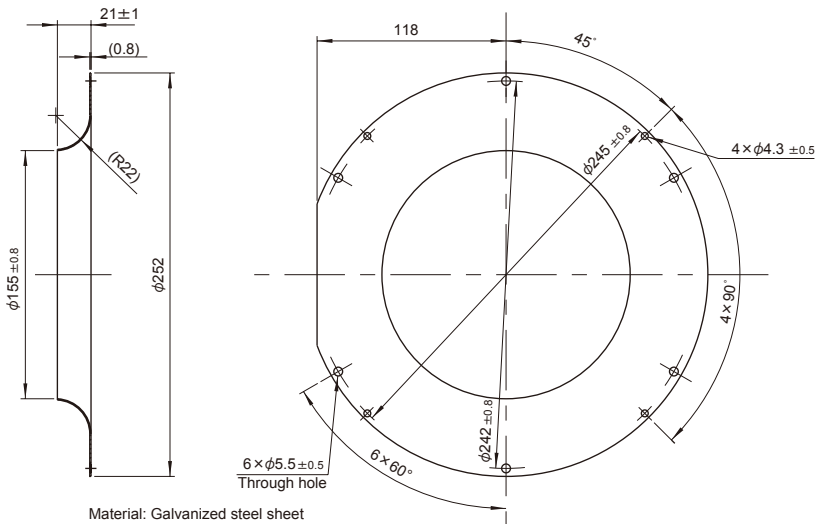


Insert a flange spacer into the ribs of a venturi.

(Installing a flange spacer)

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

Inlet ring



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

DC axial fans & blowers with sensors

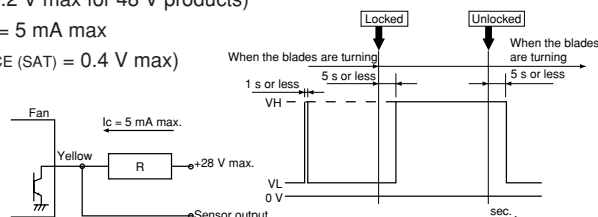
The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose 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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- Output waveform

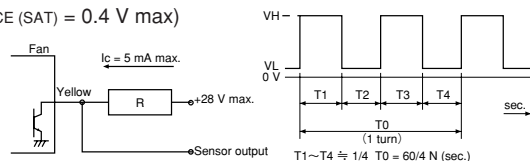


※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- 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).

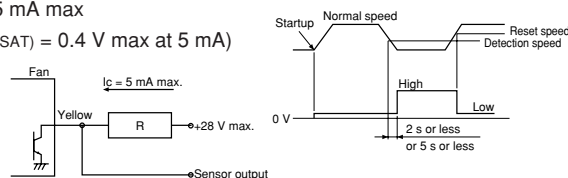
3. Speed detection type (Product code: Q)

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

● 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.

For a High Static Pressure Region
DC Axial Fan
Fixed Blade Type
G1751M



$\phi 172 \times 150 \times 51$
($\phi 6.8" \times 6.0" \times 2.0"$)
Max. airflow: 11.2 m³/min
Max. static pressure: 840 Pa
Mass: 820 g

Fan model code

G1751M24B9ZP300

G1751M48B9ZP-00

G1751M48B8ZP-00

High static pressure fans suitable for cooling densely assembled equipment.

Standard specification

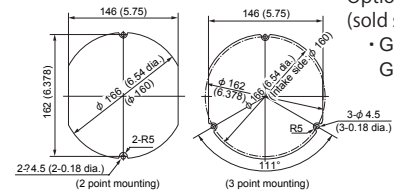
Max. airflow		Max. static pressure		Noise	Speed min ⁻¹		Voltage spec. V		Current mA		Model code	Operating Temp. Range°C
m ³ /min	CFM	Pa	inH ₂ O	dB	Max.	Min.	Rating	Operating Range	Rating	Starting		
11.2	395	780	3.13	74(7.9m ³ /min)	6800	3200	24	16-28	4800	6900	G1751M24B9ZP300	-20 ~ +60
		840	3.37				48	36-60	2500	6000	G1751M48B9ZP-00	
10	353	710	2.85	71(7.9m ³ /min)	6200	2600	48	36-60	1800	3500	G1751M48B8ZP-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 (24 V, or 48 V), and normal temperature and humidity.
- Max. CFM and max static pressure points conclude at max rotational speed.

General specification

Materials Used	Venturi: Aluminum alloy die castings Propeller: 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	12 to a carton of (450 x 380 x 220) mm, mass 11 kg

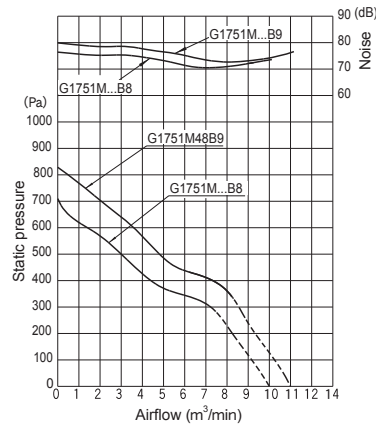
Mounting hole dimensions [Recommendation]



Options (sold separately)
• Guard: GUARD172

Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]

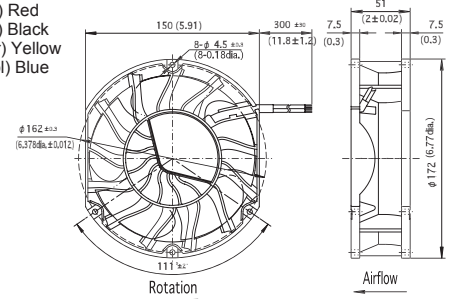


External dimensions

● Lead wire type

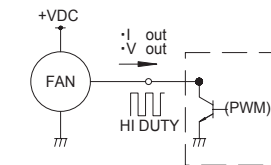
Lead wire spec. AWG24 UL3266

Color (+) Red
(-) Black
(Sensor) Yellow
(Speed control) Blue

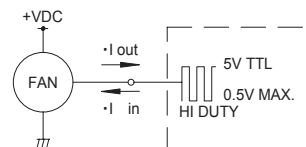


Speed performance (At rated vol., Free air condition) Specification (Room temperature)

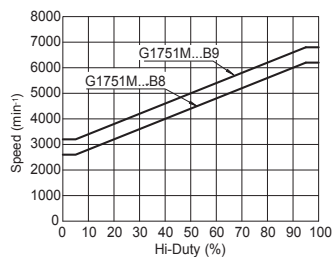
CASE 1
· I out 1mA Max.
· V out 5V Max.
· V Losat 0.5V Max.
FREQUENCY 500Hz-5kHz



CASE 2
· I out 1mA Max.
· I in 1mA Max.
FREQUENCY 500Hz-5kHz



PWM speed control specification (At rated voltage)



- 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

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

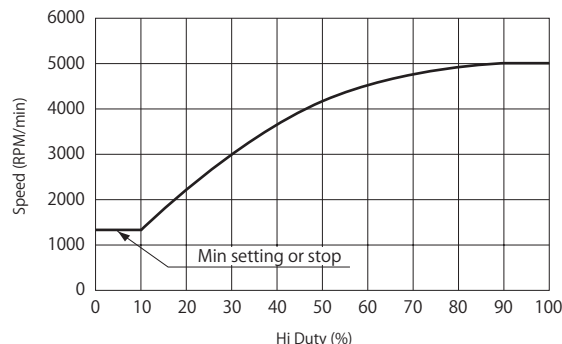
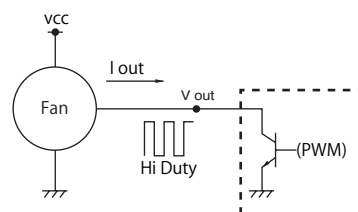
- A PWM signal from the customer equipment is input to the control line (blue) of the fan motor for variable-speed operation of fans and blowers. (Input and noise can be reduced when the internal temperature of the customer equipment is low, such as during idling.)
- Sizes
Axial fans: □92 mm~□172 mm
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

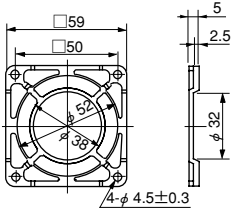


Semi-standard products (Products in regular production)

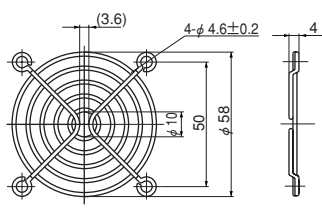
Size	Model Code	Max. Airflow		Max. Static Pressure		Noise	Speed min ⁻¹		Voltage Spec. V		Operating Temp. Range °C
		m ³ /min	CFM	Pa	inH ₂ O		Max.	Min.	Rating	Operating Range	
□92×25mm	D0925C12B8ZP-00	2	71	67	0.27	40	4450	1000	12	10.2-13.2	-20 ~ 60°C
	D0925C24B8ZP-00						4450	1750	24	21.6-26.4	
□120×25mm	D1225C12BBZP-00	4.25	150.1	150	0.6	50.5	5400	1000	12	10.2-13.8	-20 ~ 60°C
	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°C
φ172×150×51mm	D1751M48B6ZP-00	10.2	360	315	1.27	64	4800	1000	48	36-60	-20 ~ 70°C
	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°C
	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°C
	G0938B12B8ZP-00	3.2	113	350	1.41	58	6300	1600	12	8.4-13.8	
□119×38mm	G1238B12BBZP-00	7.4	261	520	2.09	67	6300	1000	12	9.6-13.8	-20 ~ 60°C
	G1238B24BBZP-00								24	16.8-27.6	
	G1238B48BBZP-00								48	36-55.2	
	G1238B24BAZP-00								24	16.8-27.6	
φ172×150×51mm	G1751M24B9ZP300	11.2	395	780	3.13	74	6800	3200	24	16-28	-20 ~ 70°C
	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°C
	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	
φ220×71mm	E2271Z48B7ZP-00	18.1	639	600	2.41	74	3200	1000	48	36-57	-20 ~ 60°C

- 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.

F60UL Guard (Mass 12 g)

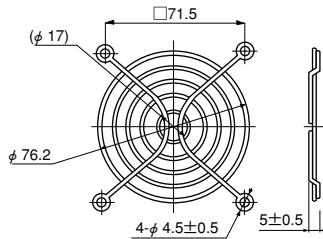


Material: Polycarbonate (black)
UL94V-2



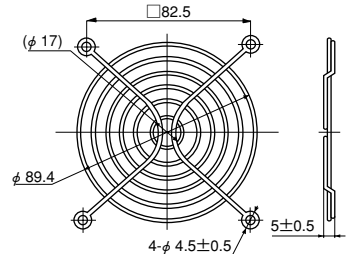
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



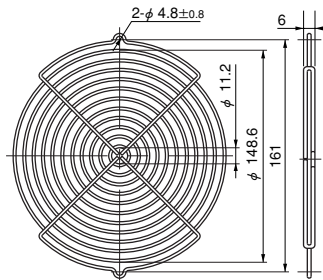
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



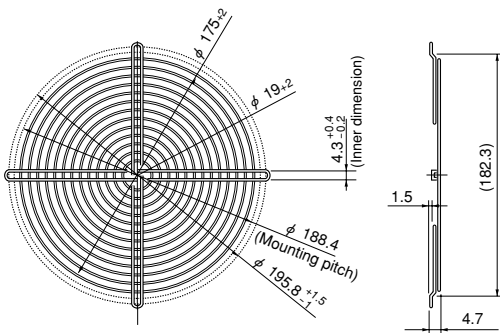
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

F200UL Guard (Mass 82 g)



Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

DC axial fans & blowers with sensors

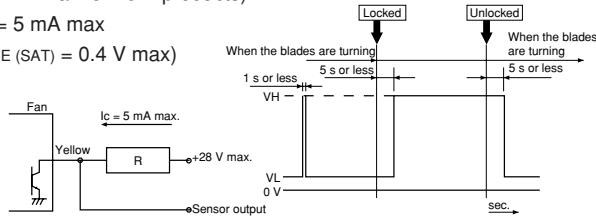
The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose 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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- Output waveform

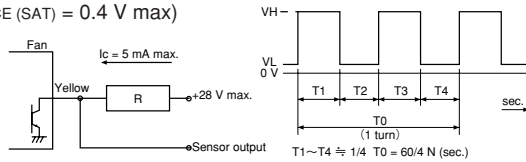


※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- 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).

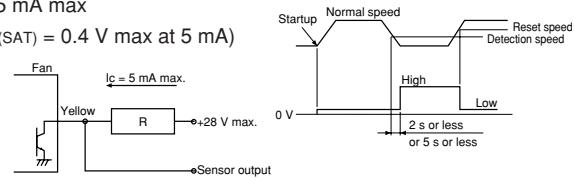
3. Speed detection type (Product code: Q)

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

● 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.

DC Axial Fan
KLDC



□92×32 (□3.6"×1.3")
Max. airflow: 2.1 m³/min
Max. static pressure: 140 Pa
Mass: 145 g

Fan model code

- KLDC12B4
- KLDC12B4S
- KLDC24B4
- KLDC24B4S
- KLDC24Z7
- KLDC24Z7S

■ Standard specification

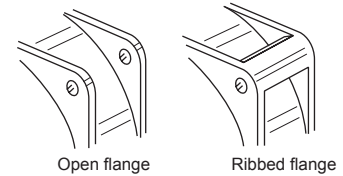
Max. Airflow		Max. Static Pressure		Noise dB	Speed min ⁻¹	Input W	Voltage Spec. V		Current mA		Model Code		Operating Temp. Range °C
m ³ /min	CFM	Pa	inH ₂ O				Rating	Operating Range	Rating	Starting	Open Flange	Ribbed Flange	
1.7	60	86	0.35	43	3800	3.6	24	12-27.6	150	480		KLDC24Z7	-20 ~ +70
1.5	53	65	0.26	39	3200	3.5	12	7.2-13.8	280	570		KLDC12B4	
							24	12-27.6	140			KLDC24B4	

- 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 Propeller: 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	60 to a carton of (450 x 380 x 220) mm, mass 9 kg

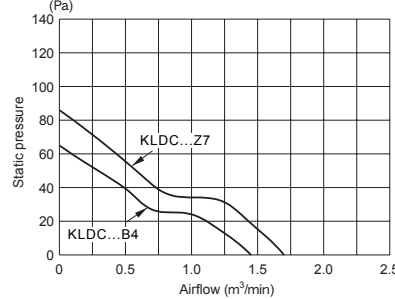
● Venturi shape



Specify no suffix symbol in your ordering information when the venturi is mounted with screws. Suffix 'F' for an open flange venturi.

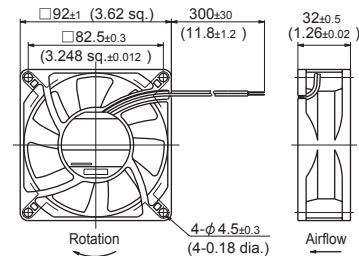
■ Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]

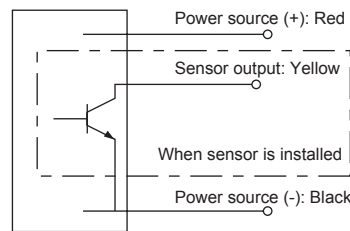


■ External dimensions in mm (inches)

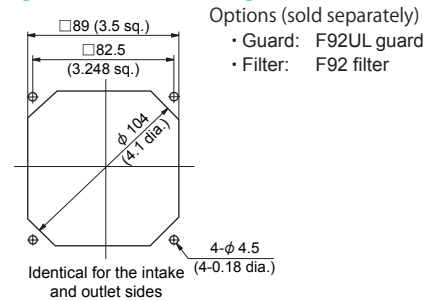
- Lead wire type Lead wire spec. AWG24 UL1007 or UL3266
Color (+) Red
(-) Black



■ Wiring connection diagram



■ Mounting hole dimensions in mm (inches) [Recommendation]

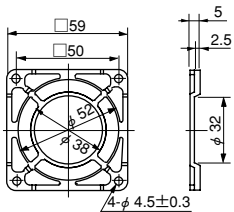


DC axial fan with sensor

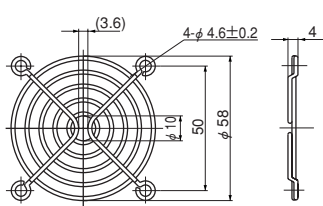
Rated Voltage	Model Code	
12 V	KLDC12B4S	
24 V	KLDC24B4S	KLDC24Z7S

- 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
- 3D data is also available at our website.

F60UL Guard (Mass 12 g)

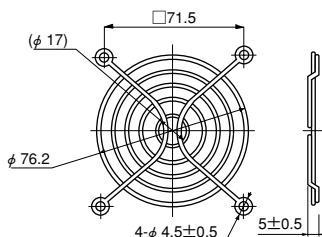


Material: Polycarbonate (black)
UL94V-2



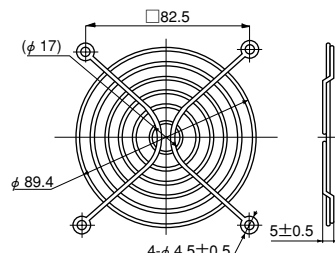
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



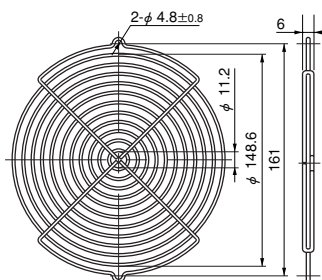
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



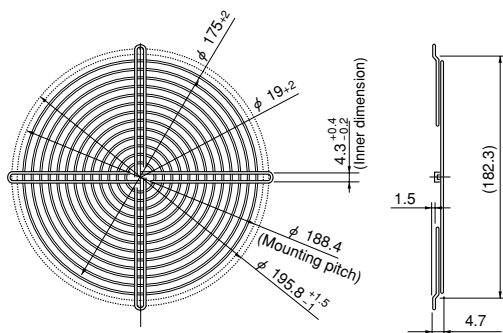
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

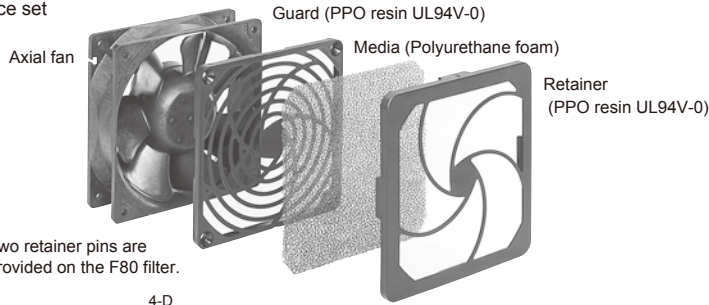
F200UL Guard (Mass 82 g)



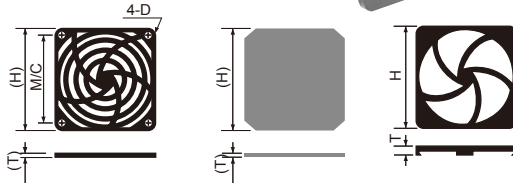
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

Filter

3-piece set



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



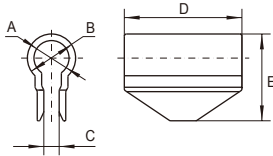
List of mating fan series

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

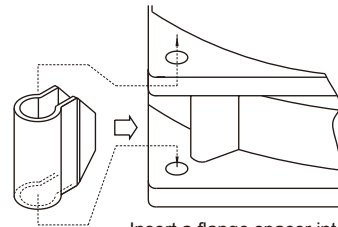
Filter	F80	F92	F120
VE	○		
WE		○	
KA		○	
CU			○
CN			○

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

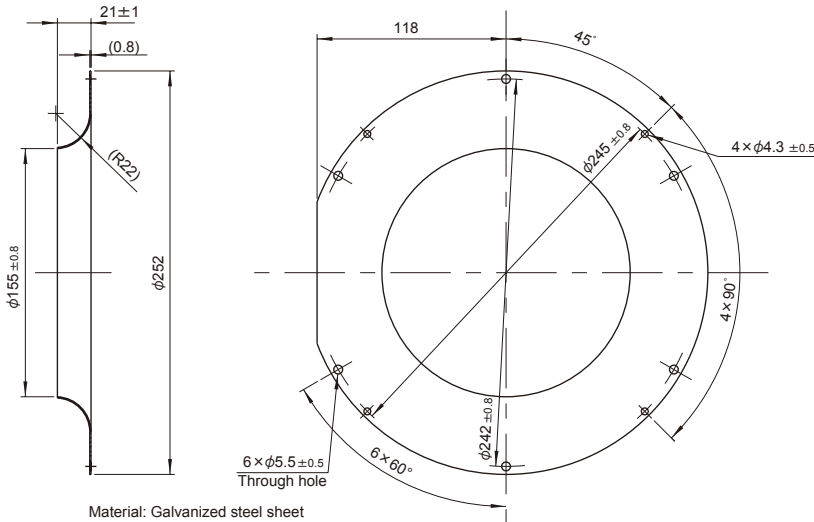


Insert a flange spacer into the ribs of a venturi.

(Installing a flange spacer)

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

Inlet ring



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

DC axial fans & blowers with sensors

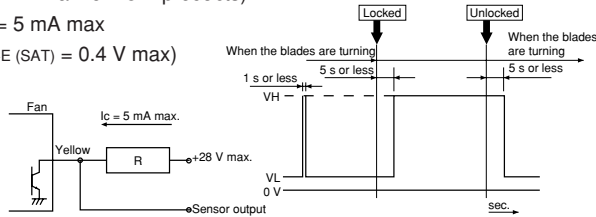
The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose 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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- Output waveform

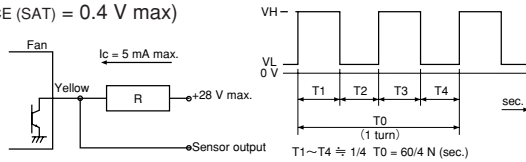


※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- 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).

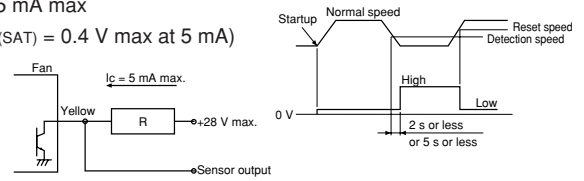
3. Speed detection type (Product code: Q)

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

● 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 Axial Fan

MA



$\phi 172 \times 150 \times 51$

($\phi 6.8'' \times 6.0'' \times 2.0$)

Max. airflow: 5.5 m³/min (50 Hz)
6.5 m³/min (60 Hz)

Max. static pressure:
152 Pa (50 Hz) 186 Pa (60 Hz)
Mass: 950 g

Fan model code

MA2B3

MA47B3

MA48B3

MA55B3

MA60B3

MA77B3

Standard specification

(*1: Rated values appear on name plate)

Max. Airflow		Max. Static Pressure		Noise dB	Speed min ⁻¹	Rated Vol. V (±10%)	Freq. Hz	Input W *1	Current mA*1	Lock Current mA	Model Code							
m ³ /min	CFM	Pa	inH ₂ O								Terminal Type	Standard*2						
5.5/ 6.5	194/ 229	152/ 186	0.61/ 0.75	50/ 55	2850/ 3400	100	50/ 60	32/28	400/310	620/600	MA55B3	UCP						
													115	29/28	270/250	470/460	MA2B3	UCP
													200	32/28	200/150	300/300	MA60B3	UCP
													220-240/ 208-230	33/30	150/130	250/240	MA77B3	UCP
													100-120	33/32	300/270	440/430	MA47B3	UCP
													200-240	33/32	150/140	240/240	MA48B3	UCP

● Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.

● *2: The symbols in the standards column denote that they are registered in the following standards files, U: UL E48889, C: CSA LR49399

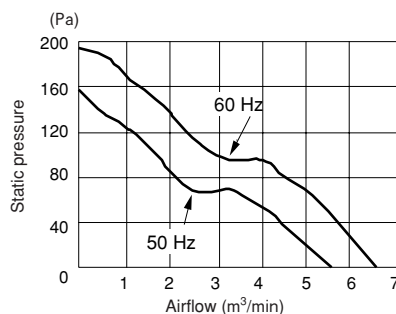
● *2: Products conforming to the specifications of the Electrical Appliance and Material Safety Law (Japan) can be used in case the products are assembled in electric appliances used in Japan. (Products marked with the (PS)E mark)

General specification

Material used	Venturi: Aluminum alloy die casting Propeller: ABS and PBT synthetic resins Capacitor cover: Glass fiber reinforced polycarbonate resin Capacitor: MF capacitor Bearing: Double - sided shielded ball bearing
Motor	Capacitor phase advancing type induction motor Protection type: Thermal protection
Common Elec. Spec.	See page G-12.
Usage Range	Rated voltage ±10 %
Operating Temp. Range	-20 °C ~ +60 °C
Standard Carton	12 to a carton of (380 x 370 x 190) mm, mass 12.0 kg

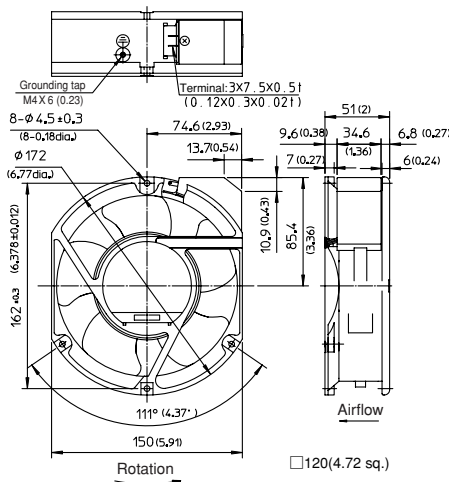
Standard airflow and static pressure characteristics (At rated voltage)

MA□B3

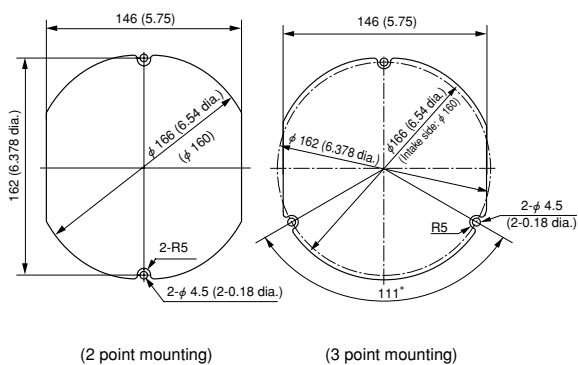


External dimensions in mm (inches)

● Terminal type



Mounting hole dimensions in mm (inches)
[Recommendation]



Options (sold separately)

- Guard: GUARD 172
- Power code: T2P1 code, D2P1 code, UL2P1 code

Fans & Blowers

Axial

DC fans

Centrifugal

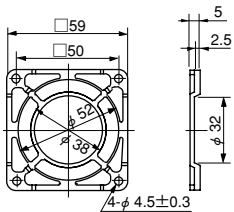
Silent

AC fans

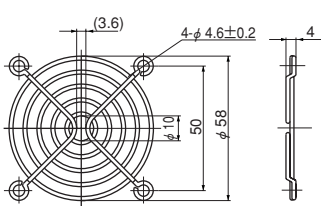
Centrifugal

Option

F60UL Guard (Mass 12 g)

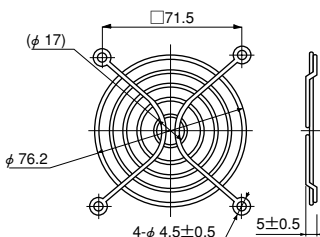


Material: Polycarbonate (black)
UL94V-2



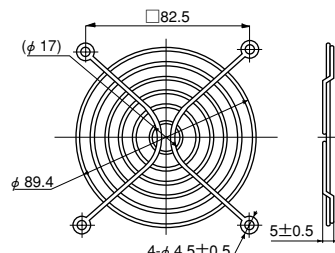
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



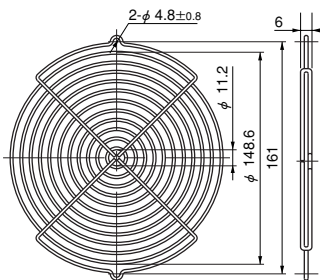
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



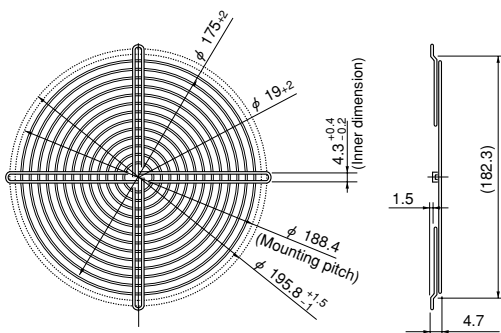
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

F200UL Guard (Mass 82 g)



Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

Axial

DC fans

Centrifugal

Silent

AC fans

Axial

Centrifugal

Option

*** For red-lines product,
Please contact us from our website .
HP : <http://www.nidec.com/en/nidec-servo>**

AC Axial Fan
PA



$\phi 172 \times 51$ ($\phi 6.8" \times 2.0"$)
 Max. airflow: 5.5 m³/min (50 Hz)
 6.5 m³/min (60 Hz)
 Max. static pressure:
 152 Pa (50 Hz) 186 Pa (60 Hz)
 Mass: 950 g

Fan model code

PA2B3

PA47B3

PA48B3

PA55B3

PA55H3

PA60B3

PA77B3

Standard specification

(*1: Rated values appear on name plate)

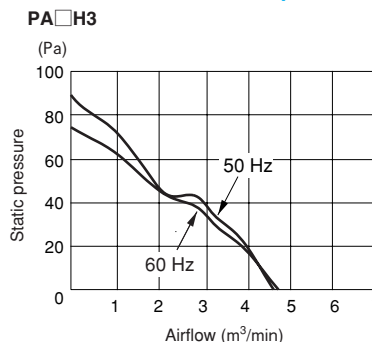
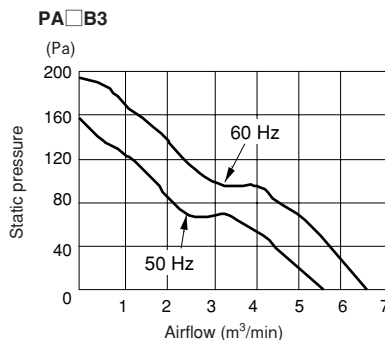
Max. Airflow m ³ /min	Max. Static Pressure CFM Pa inH ₂ O	Noise dB	Speed min ⁻¹	Rated Vol. V (±10%)	Freq. Hz	Input W *1	Current mA*1	Lock Current mA	Model Code	
									Terminal Type	Standard*2
5.5/ 6.5	194/ 229	152/ 186	0.61/ 0.75	46/ 50	2850/ 3400	220-240/ 208-230	50/ 60		100	32/28 400/310 620/600 PA55B3 UCP
									115	29/28 270/250 470/460 PA2B3 UCP
									200	32/28 200/150 300/300 PA60B3 UCP
									33/30	150/130 250/240 PA77B3 UCP
									33/32	300/270 440/430 PA47B3 UCP
									33/32	150/140 240/240 PA48B3 UCP
4.7/4.7	166/166	90/75	0.36/0.30	44/44	2500/2500	100		17/19 180/200 PA55H3 UCP		

- Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.
- *1: The symbols in the standards column denote that they are registered in the following standards files, U: UL E48889, C: CSA LR49399
- *2: Products conforming to the specifications of the Electrical Appliance and Material Safety Law (Japan) can be used in case the products are assembled in electric appliances used in Japan. (Products marked with the (PS)E mark)

General specification

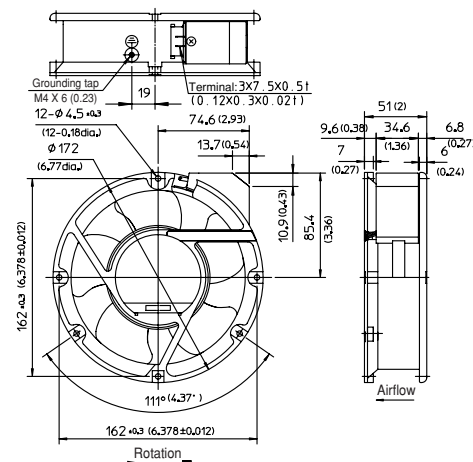
Material Used	Venturi: Aluminum alloy die casting Propeller: ABS and PBT synthetic resins Capacitor cover: Glass fiber reinforced polycarbonate resin Capacitor: MF capacitor Bearing: Double - sided shielded ball bearing
Motor	Capacitor phase advancing type induction motor Protection type: Thermal protection
Common Elec. Spec.	See page G-12.
Usage Range	Rated voltage ±10 %
Operating Temp. Range	-20 °C ~ +60 °C
Standard Carton	12 to a carton of (420 x 410 x 220) mm, mass 12.5 kg

Standard airflow and static pressure characteristics (At rated voltage)



External dimensions in mm (inches)

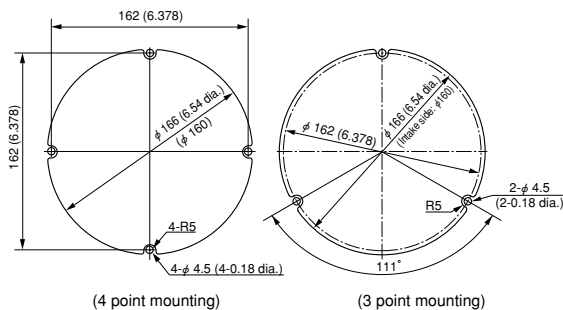
Terminal type



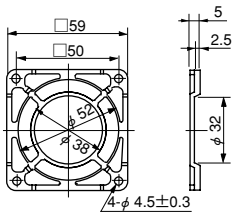
Options (sold separately)

- Guard: GUARD 172
- Power code: T2P1 code, D2P1 code, UL2P1 code

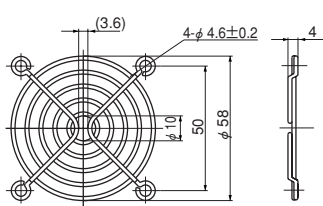
Mounting hole dimensions in mm (inches)
[Recommendation]



F60UL Guard (Mass 12 g)

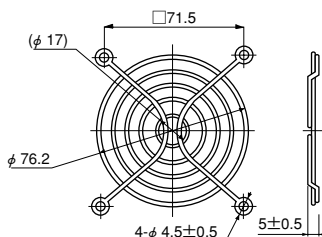


Material: Polycarbonate (black)
UL94V-2



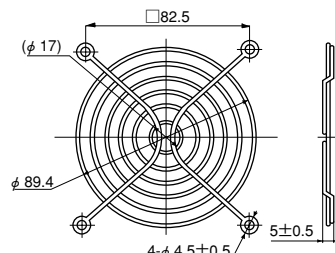
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



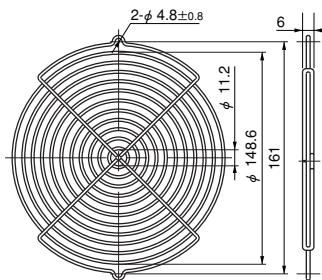
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



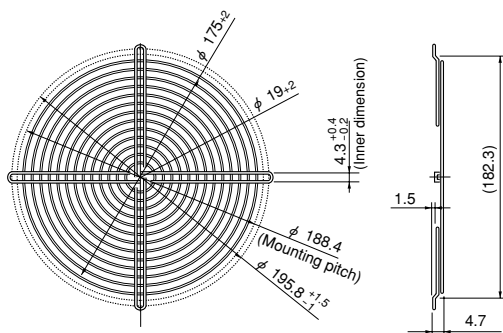
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

F200UL Guard (Mass 82 g)



Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

Axial

DC fans

Centrifugal

Silent

AC fans

Axial

Centrifugal

Option

*** For red-lines product,
Please contact us from our website .
HP : <http://www.nidec.com/en/nidec-servo>**

DC Axial Fan

PUDC



□80×25 (□3.2"×1.0")
Max. airflow: 1.58 m³/min
Max. static pressure: 100 Pa
Mass: 85 g

Fan model code

- PUDC12B4
- PUDC12B4P
- PUDC12B4R
- PUDC12B4RS
- PUDC12B4S
- PUDC12D4
- PUDC12D4R
- PUDC12H4
- PUDC12U7
- PUDC12U7P
- PUDC12U7R
- PUDC12U7RP
- PUDC12Z4
- PUDC12Z4P
- PUDC12Z4Q
- PUDC12Z4R
- PUDC12Z4RP
- PUDC12Z4RS
- PUDC12Z4S
- PUDC24B4
- PUDC24B4R
- PUDC24B4RS
- PUDC24B4S
- PUDC24D4
- PUDC24D4RS
- PUDC24D4S
- PUDC24H4
- PUDC24H4R
- PUDC24H4RS
- PUDC24U7
- PUDC24U7R
- PUDC24U7RS
- PUDC24Z4
- PUDC24Z4P
- PUDC24Z4R
- PUDC24Z4RS
- PUDC24Z4S

Standard specification

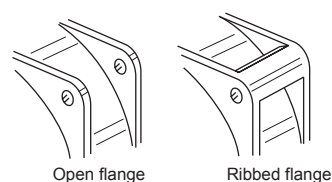
Max. Airflow		Max. Static Pressure		Noise	Speed	Input	Voltage Spec. V		Current mA		Model Code		Operating Temp. Range °C
m ³ /min	CFM	Pa	inH ₂ O	dB	min ⁻¹	W	Rating	Operating Range	Rating	Starting	Open Flange	Ribbed Flange	
1.58	56	100	0.40	47	4560	4	12	7.2-13.8	340	1080	PUDC12U7	PUDC12U7R	-20~+60
							4.3	24	12-27.6	180	510	PUDC24U7	
1.32	47	74	0.30	40	3900	3.8	12	7.2-13.8	320	730	PUDC12H4		
							24	12-27.6	160	340	PUDC24H4	PUDC24H4R	
1.2	42	59	0.24	35	3500	2.4	12	7.2-13.8	160	520	PUDC12Z4	PUDC12Z4R	-20~+70
							24	12-27.6	100	200	PUDC24Z4	PUDC24Z4R	
0.94	33	38	0.15	30	2800	1.5	12	7.2-13.8	140	320	PUDC12B4	PUDC12B4R	
							24	12-27.6	70	180	PUDC24B4	PUDC24B4R	
0.73	26	25	0.10	23	2150	1	12	8.4-13.8	80	180	PUDC12D4	PUDC12D4R	
							24	14.4-27.6	40		PUDC24D4		

- 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, 24 V or 48 V), and normal temperature and humidity.

General specification

Materials Used	Venturi: ABS and PBT synthetic resins Propeller: 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 10 kg

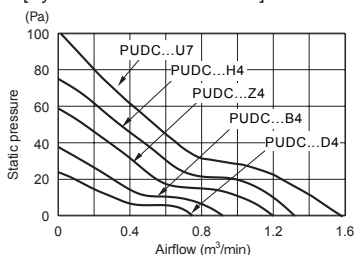
● Venturi shape



Use ribbed venturi with a reinforced corner when the venturi is mounted with screws. (The spacer is indicated in the model code by the letter 'R'.)

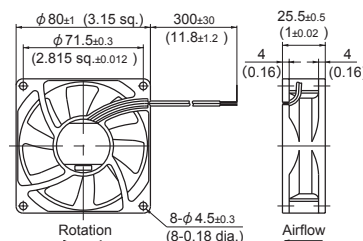
Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]

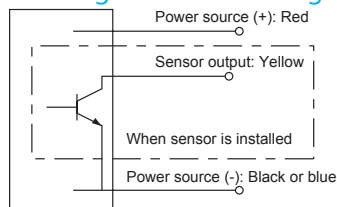


External dimensions in mm (inches)

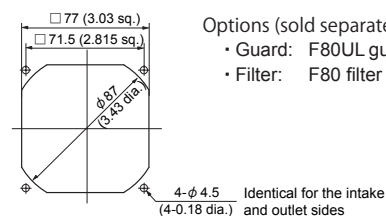
- Lead wire type Lead wire spec. AWG24 UL1007 or UL3266
- Color (+) Red (-) Black (PUDC□D4: Blue)



Wiring connection diagram



Mounting hole dimensions [Recommendation] in mm (inches)



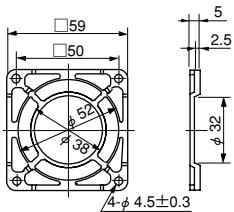
- Options (sold separately)
- Guard: F80UL guard
- Filter: F80 filter

DC axial fan with sensor

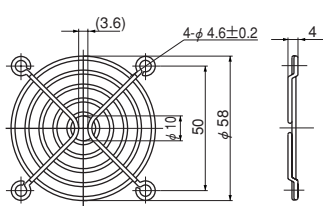
Rated Vol.	Model Code				
12 V		PUDC12B4S PUDC12B4RS PUDC12B4P	PUDC12Z4S PUDC12Z4RS PUDC12Z4P PUDC12Z4RP PUDC12Z4Q		PUDC12U7P PUDC12U7RP
24 V	PUDC24D4S PUDC24D4RS	PUDC24B4S PUDC24B4RS	PUDC24Z4Q PUDC24Z4S PUDC24Z4RS PUDC24Z4P	PUDC24H4RS	PUDC24U7RS

- 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
- Customized fans with sleeve bearings are also available depending on the intended purchase quantity. Contact NIDEC SERVO for further information.
- 3D data is also available at our website

F60UL Guard (Mass 12 g)

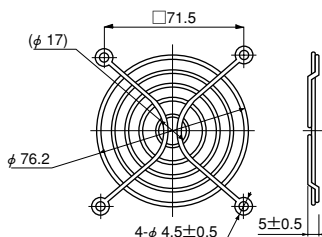


Material: Polycarbonate (black)
UL94V-2



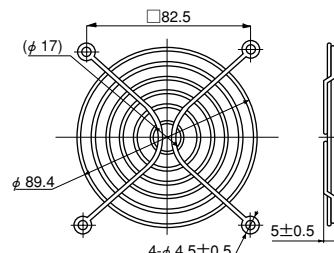
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



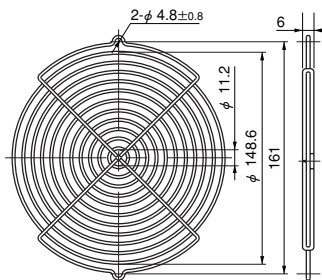
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



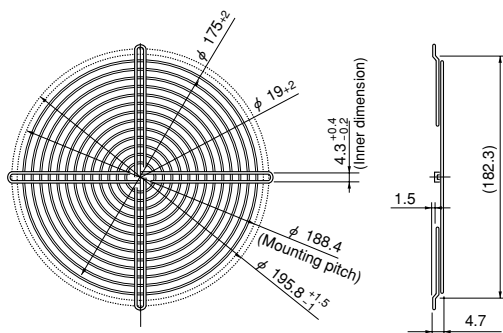
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

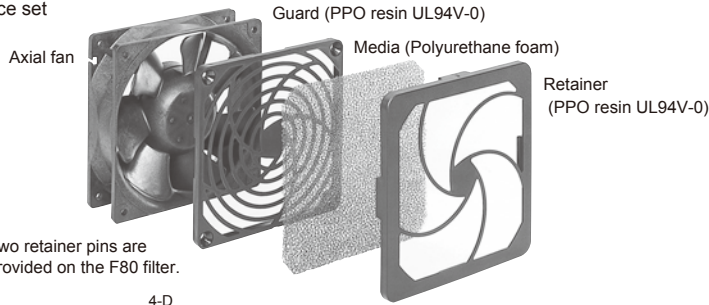
F200UL Guard (Mass 82 g)



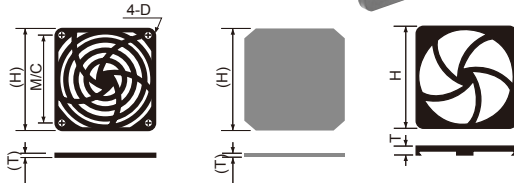
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

Filter

3-piece set



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



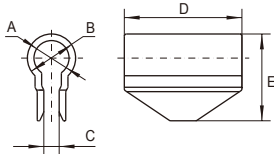
List of mating fan series

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

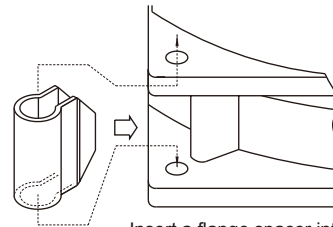
Filter	F80	F92	F120
VE	○		
WE		○	
KA		○	
CU			○
CN			○

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

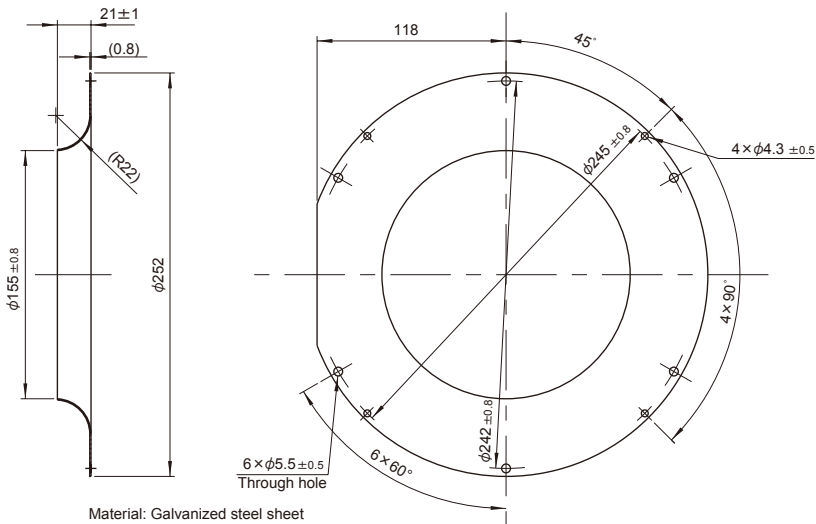


Insert a flange spacer into the ribs of a venturi.

(Installing a flange spacer)

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

Inlet ring



Material: Galvanized steel sheet

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

DC axial fans & blowers with sensors

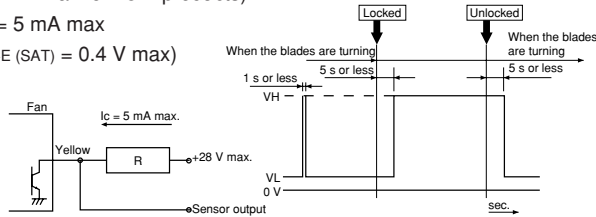
The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose 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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- Output waveform

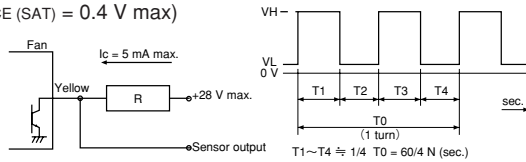


※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- 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).

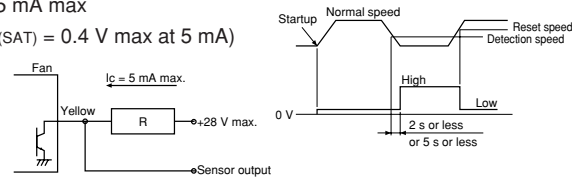
3. Speed detection type (Product code: Q)

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

● 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.

DC Axial Fan
TUDC



□60×25 (□2.4"×1.0")
Max. airflow: 0.87 m³/min
Max. static pressure: 130 Pa
Mass: 75 g

Fan model code

- TUDC12B4
- TUDC12B4F
- TUDC12B4S
- TUDC12D4
- TUDC12D4S
- TUDC12H4
- TUDC12H4S
- TUDC12N7
- TUDC12Z4
- TUDC12Z4F
- TUDC12Z4FS
- TUDC12Z4P
- TUDC12Z4Q
- TUDC12Z4S
- TUDC24B4
- TUDC24B4S
- TUDC24D4
- TUDC24D4S
- TUDC24H4
- TUDC24H4S
- TUDC24S7
- TUDC24S7F
- TUDC24Z4
- TUDC24Z4P
- TUDC24Z4S
- TUDC24Z4SQ
- TUDC48H4

Standard specification

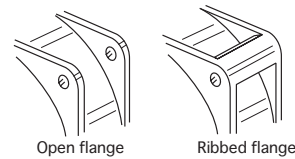
Max. Airflow m³/min	Max. Static Pressure CFM	Max. Static Pressure		Noise dB	Speed min ⁻¹	Input W	Voltage Spec. V		Current mA		Model Code		Operating Temp. Range °C
		Pa	inH ₂ O				Rating	Operating Range	Rating	Starting	Open Flange	Ribbed Flange	
0.9	32	150	0.60	44	6900	4.8	24	12-27.6	200	750	TUDC24S7F	TUDC24S7	-20 ~ +60
0.87	31	130	0.52	46	6800	4.2	12	7.2-13.8	350	1430		TUDC12N7	
0.65	23	75	0.30	37	5000	2.6	12	7.2-13.8	220	710		TUDC12H4	-20 ~ +60
							24	12-27.6	110	360		TUDC24H4	
							2.5	48	24-55.2	50		TUDC48H4	
0.55	19	59	0.24	32	4300	1.8	12	7.2-13.8	140	550	TUDC12Z4F	TUDC12Z4	-20 ~ +70
							24	12-27.6	80	270		TUDC24Z4	
0.47	17	39	0.16	27	3650	1.4	12	7.2-13.8	130	380	TUDC12B4F	TUDC12B4	
							24	12-27.6	70	190		TUDC24B4	
0.35	12	24	0.10	20	2750	0.9	12	8.4-13.8	80	210		TUDC12D4	
							24	14.4-27.6	40	110		TUDC24D4	

- 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, 24 V or 48 V), and normal temperature and humidity.

General specification

Materials Used	Venturi: ABS and PBT synthetic resins Propeller: 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	100 to a carton of (450 x 380 x 160) mm, mass 9 kg

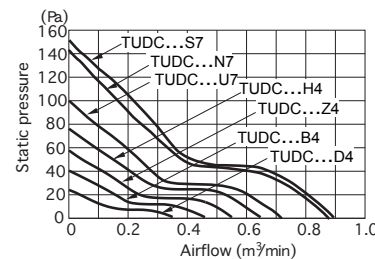
● Venturi shape



Specify no suffix symbol in your ordering information when the venturi is mounted with screws. Suffix 'F' for an open flange venturi.

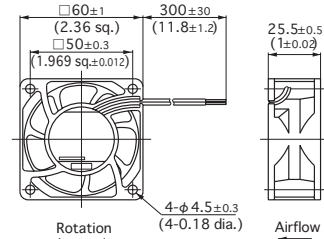
Standard airflow and static pressure characteristics (At rated voltage)

[By double chamber method]

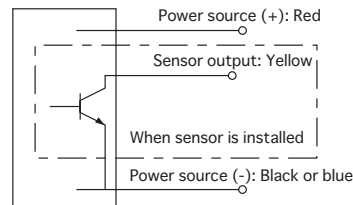


External dimensions in mm (inches)

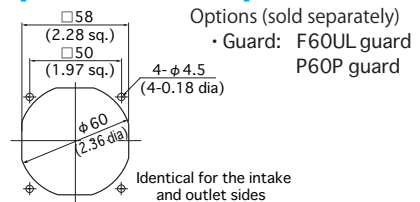
- Lead wire type Lead wire spec. AWG24 UL1007 or UL3266
Color (+) Red (-) Black (TUDC□D4: Blue)



Wiring connection diagram



Mounting hole dimensions [Recommendation]

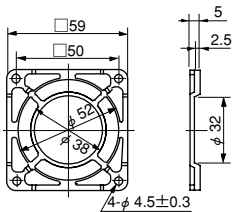


DC axial fan with sensor

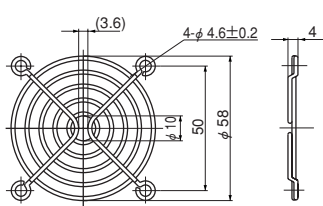
Rated Vol.	Model Code			
12 V	TUDC12D4S	TUDC12B4S	TUDC12Z4S TUDC12Z4FS TUDC12Z4P TUDC12Z4Q	TUDC12H4S
24 V	TUDC24D4S	TUDC24B4S	TUDC24Z4S TUDC24Z4SQ TUDC24Z4Q	TUDC24H4S
48 V			TUDC48Z4P	

- 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 site.

F60UL Guard (Mass 12 g)

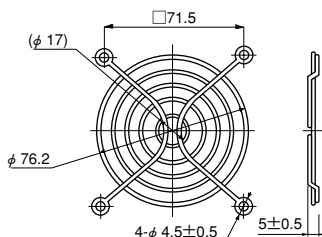


Material: Polycarbonate (black)
UL94V-2



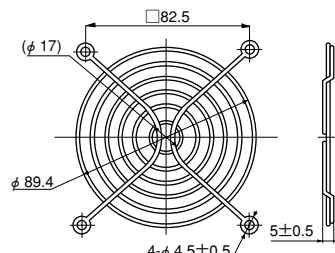
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



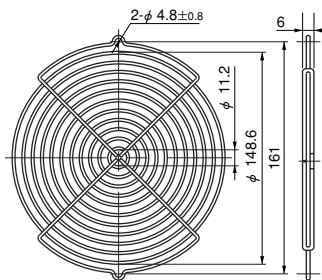
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



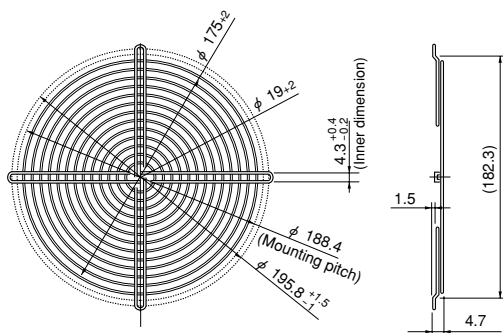
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

F200UL Guard (Mass 82 g)



Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

DC axial fans & blowers with sensors

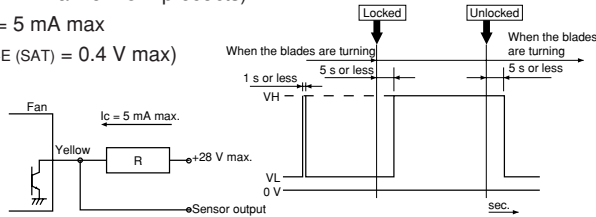
The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose 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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- Output waveform

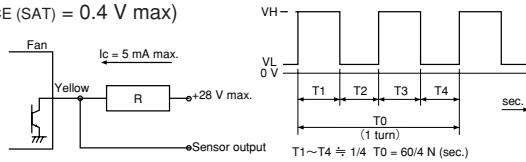


※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- 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).

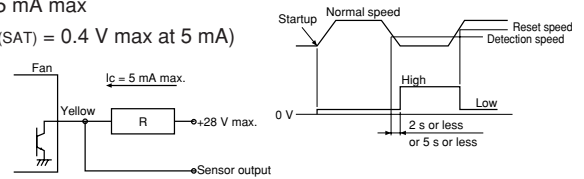
3. Speed detection type (Product code: Q)

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

● 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.

DC Axial Fan
CNDC



□ 120 × 38 (□ 4.7" × 1.5")
Max. airflow: 4.4 m³/min
Max. static pressure: 160 Pa
Mass: 250 g

Fan model code

- CNDC12B7
- CNDC12B7P
- CNDC12B7S
- CNDC12D7
- CNDC12H7
- CNDC12U7
- CNDC12Z7
- CNDC12Z7P
- CNDC24B7
- CNDC24B7P
- CNDC24B7Q
- CNDC24B7S
- CNDC24B7SQ
- CNDC24B7V
- CNDC24B7VS
- CNDC24D7
- CNDC24U7
- CNDC24Z7
- CNDC24Z7P
- CNDC24Z7Q
- CNDC24Z7S
- CNDC24Z7V
- CNDC48B7
- CNDC48B7P
- CNDC48Z7
- CNDC48Z7S
- CNDC48Z7V

Standard specification

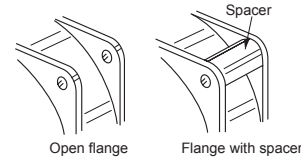
Max. Airflow m ³ /min	Max. Static Pressure CFM	Max. Static Pressure Pa	Noise inH ₂ O	Noise dB	Speed min ⁻¹	Input W	Voltage Spec. V		Current mA		Model Code		Operating Temp. Range °C
							Rating	Operating Range	Rating	Starting	Open Flange	With Spacer	
4.4	155	160	0.64	52	3800	11.2	12	8.4-13.8	930	2100	CNDC12U7		-20 ~ +70
						10.8	24	19.2-27.6	450	2000	CNDC24U7		
4.0	141	140	0.56	51	3550	9.1	12	8.4-13.8	760	2080	CNDC12H7		
						8.6	12	7.2-13.8	710	2350	CNDC12Z7		
3.5	124	105	0.42	49	3200	9.0	24	12-27.6	370	1200	CNDC24Z7	CNDC24Z7V	
						10.0	48	24-55.2	210	530	CNDC48Z7	CNDC48Z7V	
						4.6	12	7.2-13.8	380	1330	CNDC12B7		
2.8	99	70	0.28	40	2650	4.8	24	12-27.6	200	640	CNDC24B7	CNDC24B7V	
						6	48	24-55.2	120	340	CNDC48B7		
2.1	74	44	0.18	32	1950	2.4	12	8.4-13.8	200		CNDC12D7		
						2.6	24	14.4-27.6	110		CNDC24D7		

- 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, 24 V or 48 V), and normal temperature and humidity.
- The life expectancy of CNDC-Z speed products at rated voltage and in continuous operation is 30,000 hours at 60°C. (40,000 hours for other products)

General specification

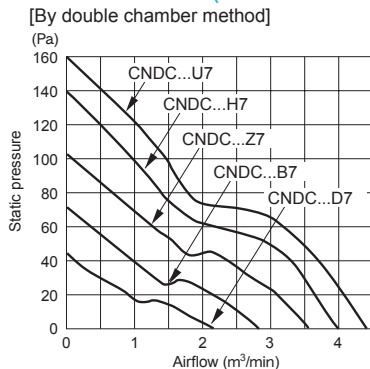
With Spacer	Venturi: ABS and PBT synthetic resins Propeller: ABS and PBT synthetic resins Bearing: Both side shielded ball bearing
Motor	Brushless DC motor, Protection type: Current shut off by detecting lock state, automatically reset
Common Elec. Spec.	See pages G-11, G-12, G-13.
Standard Carton	40 to a carton of (450 x 380 x 300) mm, mass 12 kg

● Venturi shape

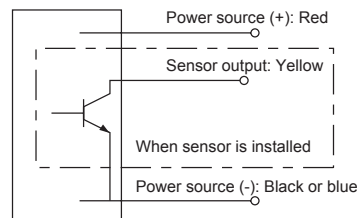


Use the reinforced product with spacer when the venturi is mounted with screws. (The spacer is indicated in the model code by the letter 'V'.)

Standard airflow and static pressure characteristics (At rated voltage)



Wiring connection diagram



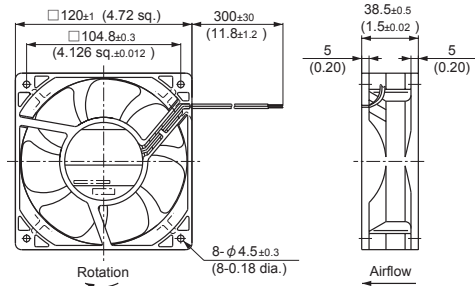
DC axial fan with sensor

Rated Vol.	Model Code	
12 V	CNDC12B7S CNDC12B7P	
	CNDC24B7S CNDC24B7VS CNDC24B7P CNDC24B7Q CNDC24B7SQ	CNDC24Z7S CNDC24Z7P CNDC24Z7Q
24 V	CNDC48B7P	CNDC48Z7S

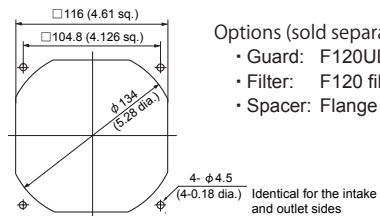
- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above, variable speed specifications, and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- The listed products are registered in the following overseas standards files, UL/cUL: E48889 (Except H, U speed models), CSA: LR49399 (H, U speed model only), TUV: R9451586
- 3D data is also available at our website.

External dimensions in mm (inches)

- Lead wire type Lead wire spec. AWG24 UL1007 or UL3266
Color (+) Red (-) Black (CNDC□D7: Blue)

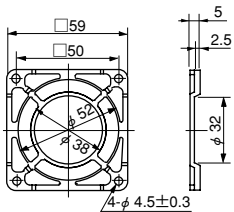


Mounting hole dimensions [Recommendation]

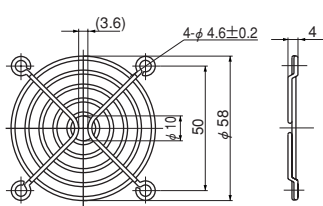


- Options (sold separately)
- Guard: F120UL guard
 - Filter: F120 filter
 - Spacer: Flange spacer CNDC

F60UL Guard (Mass 12 g)

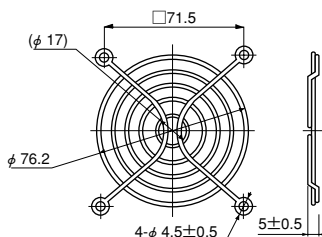


Material: Polycarbonate (black)
UL94V-2



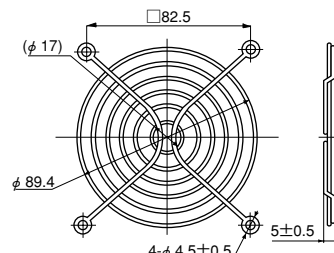
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



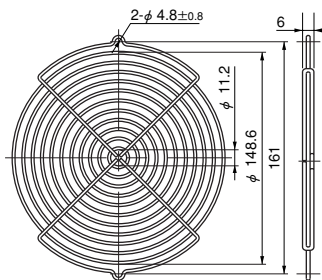
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



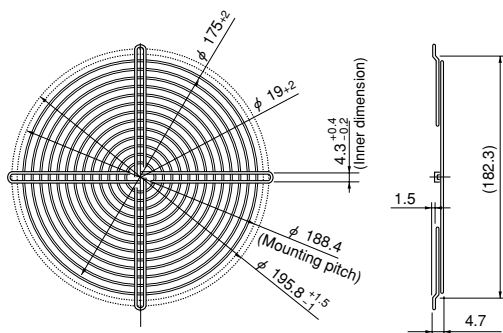
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

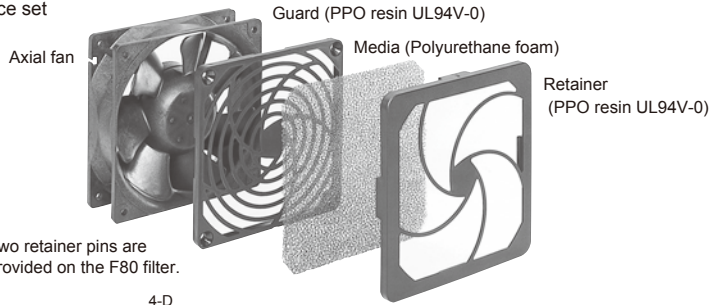
F200UL Guard (Mass 82 g)



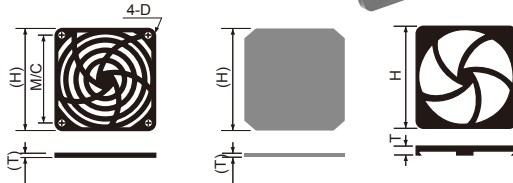
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

Filter

3-piece set



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



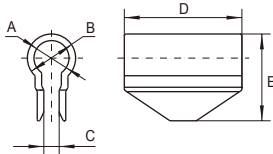
List of mating fan series

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

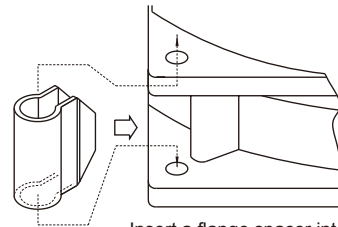
Filter	F80	F92	F120
VE	○		
WE		○	
KA		○	
CU			○
CN			○

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

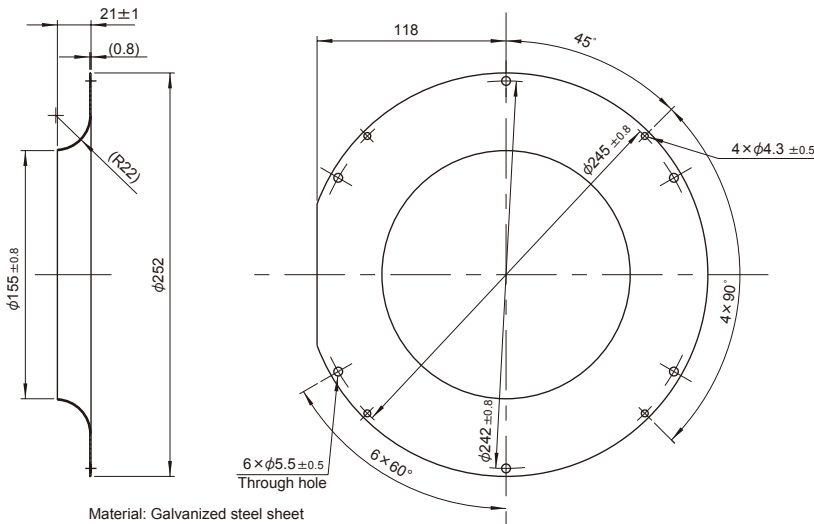


Insert a flange spacer into the ribs of a venturi.

(Installing a flange spacer)

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

Inlet ring



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

DC axial fans & blowers with sensors

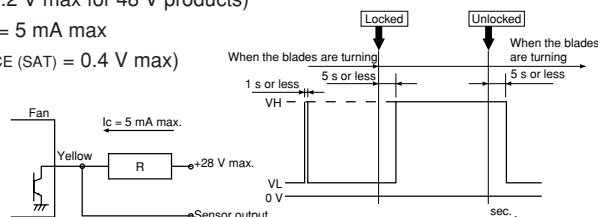
The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose 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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- Output waveform

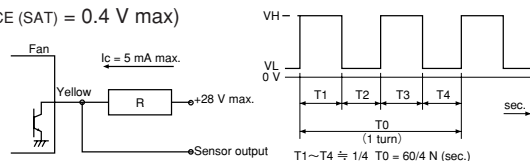


※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- 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).

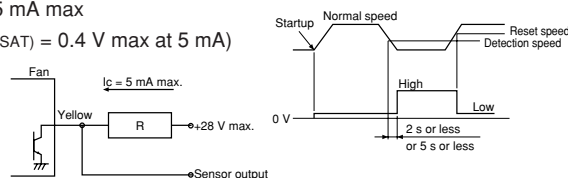
3. Speed detection type (Product code: Q)

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

● 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.

GentleTyphoon™
D0925C



□ 92 × 25 (□ 3.6" × 1.0")

Max. airflow: 2.0 m³/min
Max. static pressure: 67 Pa
Mass: 100 g

Fan model code

- D0925C12B4AS-00
- D0925C12B4AZ-00
- D0925C12B6AS-00
- D0925C12B6AZ-00
- D0925C12B8AS-00
- D0925C12B8AZ-00
- D0925C12B8ZP-00
- D0925C24B4AS-00
- D0925C24B4AZ-00
- D0925C24B6AS-00
- D0925C24B6AZ-00
- D0925C24B7AS-00
- D0925C24B7AZ-00
- D0925C24B8ZP-00

Features

- Wider low-noise operating range (50% increase)
- Significant vibration reduction using two methods.
- Energy efficiency (30% less input power than previous models)
- New design improves quality of sound.
- Sensor (lock, pulse) can be installed
- Variable speed (PWM, voltage, resistance) available

Standard specification

Max. Airflow		Max. Static Pressure		Noise	Speed	Voltage Spec. V		Current mA		Model Code	Operating Temp. Range °C
m ³ /min	CFM	Pa	inH ₂ O			dB	r/min	Rating	Operating Range		
2.0	71	67	0.27	40 *	4450	12	10.2-13.2	330	850	D0925C12B8AZ-00	-20 ~ +60
						24	21.6-26.4	170	460	D0925C24B8ZP-00	
1.84	65	55	0.22	38 *	4000	24	12.0-26.4	140	430	D0925C24B7AZ-00	-20 ~ +65
1.66	59	48	0.19	35 *	3750	12	10.2-13.2	200	650	D0925C12B6AZ-00	-20 ~ +70
				36 *		24	12.0-26.4	110	360	D0925C24B6AZ-00	
1.5	53	40	0.16	32 *	3400	12	10.2-13.2	150	530	D0925C12B4AZ-00	
				34 *		24	12.0-26.4	90	280	D0925C24B4AZ-00	

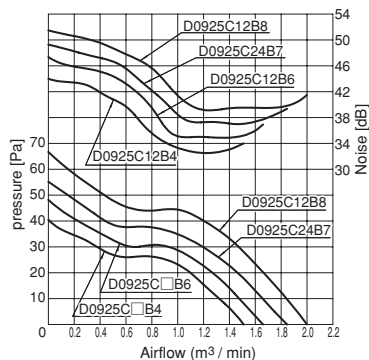
*(as shown in the noise graph below).

- 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 only venturi shape available for these products is ribbed flange.
- This fan is specially designed for long life. At rated voltage and in continuous operation the expected life is 60,000 hours at 60°C, (100,000 hours at 40°C). (7.8 speed model: 50,000 hours at 60°C, 90,000 hours at 40°C)

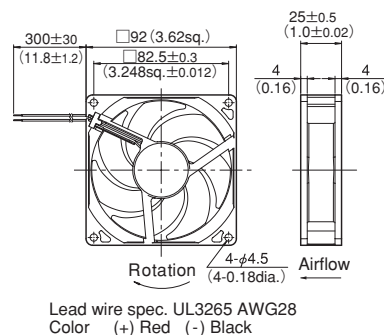
General specification

Materials Used	Venturi: SPS synthetic resins Propeller: SPS 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	70 to a carton of (450 x 380 x 300) mm, mass 7 kg

Standard airflow and static pressure characteristics [At rated voltage]

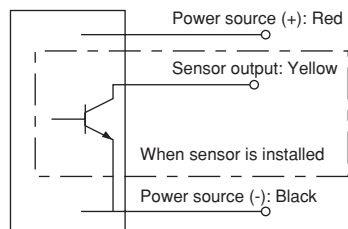


External dimensions in mm

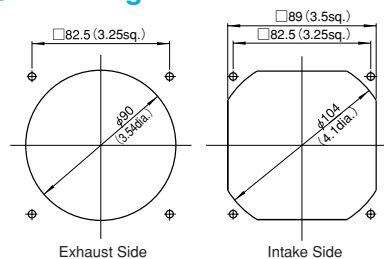


Lead wire spec. UL3265 AWG28
Color (+) Red (-) Black

Wiring connection diagram



Mounting Hole Dimensions



Options (sold separately)

- Guard: F92UL guard
- Filter: F92 filter

DC axial fan with sensor

Rated Voltage	Model Code			
12 V	D0925C12B4AS-00	D0925C12B6AS-00		D0925C12B8AS-00 D0925C12B8ZP-00
24 V	D0925C24B4AS-00	D0925C24B6AS-00	D0925C24B7AS-00	D0925C24B8ZP-00

- PWM (pulse width modulation) allowing for variable speed control is available in some models (reference the G-51 spec).
- 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:48889, TUV:R50004410:

Fans & Blowers

Axial

DC fans

Centrifugal

Silent

AC fans

Centrifugal

Option

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

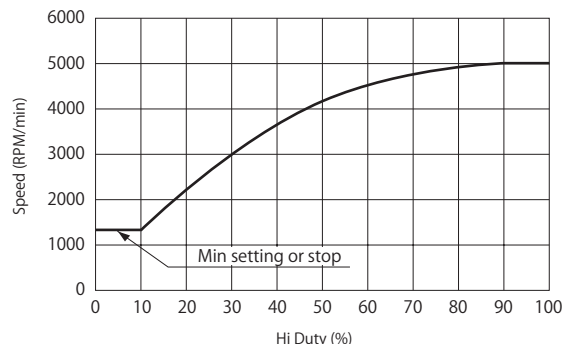
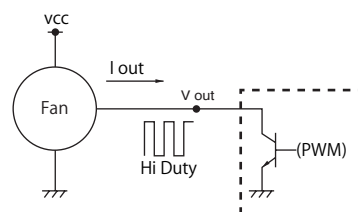
- A PWM signal from the customer equipment is input to the control line (blue) of the fan motor for variable-speed operation of fans and blowers. (Input and noise can be reduced when the internal temperature of the customer equipment is low, such as during idling.)
- Sizes
Axial fans: □92 mm~□172 mm
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

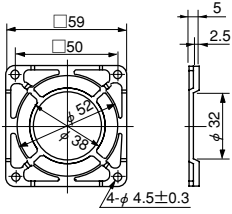


Semi-standard products (Products in regular production)

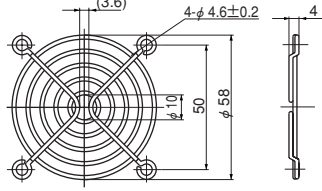
Size	Model Code	Max. Airflow		Max. Static Pressure		Noise	Speed min ⁻¹		Voltage Spec. V		Operating Temp. Range °C
		m ³ /min	CFM	Pa	inH ₂ O		Max.	Min.	Rating	Operating Range	
□92×25mm	D0925C12B8ZP-00	2	71	67	0.27	40	4450	1000	12	10.2-13.2	-20 ~ 60°C
	D0925C24B8ZP-00						4450	1750	24	21.6-26.4	
□120×25mm	D1225C12BBZP-00	4.25	150.1	150	0.6	50.5	5400	1000	12	10.2-13.8	-20 ~ 60°C
	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°C
φ172×150×51mm	D1751M48B6ZP-00	10.2	360	315	1.27	64	4800	1000	48	36-60	-20 ~ 70°C
	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°C
	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°C
	G0938B12B8ZP-00	3.2	113	350	1.41	58	6300	1600	12	8.4-13.8	
□119×38mm	G1238B12BBZP-00	7.4	261	520	2.09	67	6300	1000	12	9.6-13.8	-20 ~ 60°C
	G1238B24BBZP-00								24	16.8-27.6	
	G1238B48BBZP-00								48	36-55.2	
	G1238B24BAZP-00								24	16.8-27.6	
φ172×150×51mm	G1751M24B9ZP300	11.2	395	780	3.13	74	6800	3200	24	16-28	-20 ~ 70°C
	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°C
	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	
φ220×71mm	E2271Z48B7ZP-00	18.1	639	600	2.41	74	3200	1000	48	36-57	-20 ~ 60°C

- 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.

F60UL Guard (Mass 12 g)

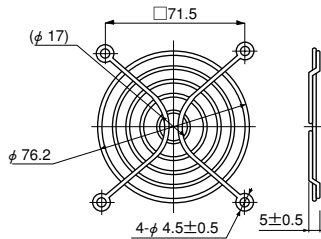


Material: Polycarbonate (black)
UL94V-2



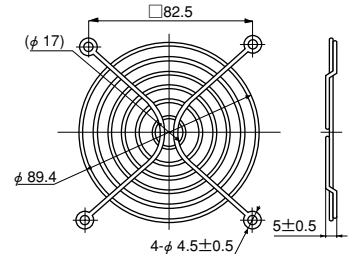
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



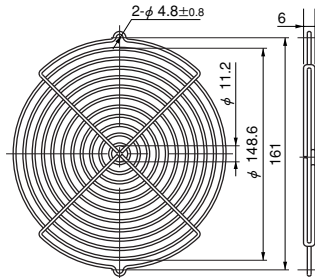
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



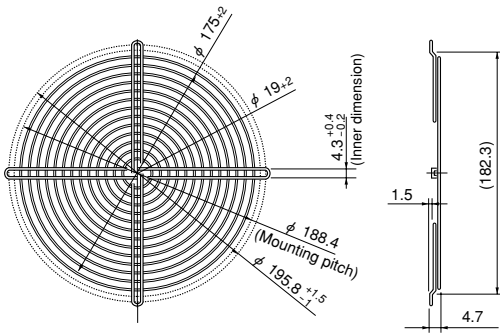
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

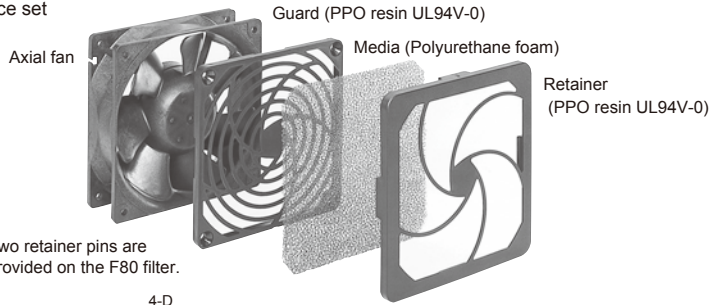
F200UL Guard (Mass 82 g)



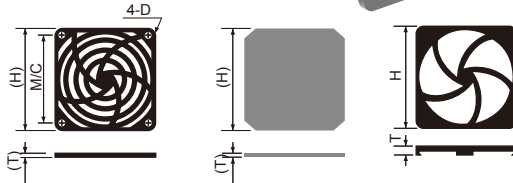
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

Filter

3-piece set



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



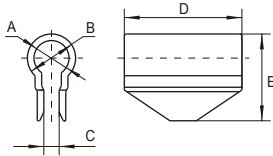
List of mating fan series

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

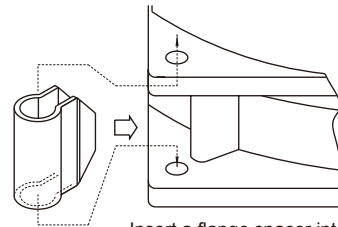
Filter	F80	F92	F120
VE	○		
WE		○	
KA		○	
CU			○
CN			○

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

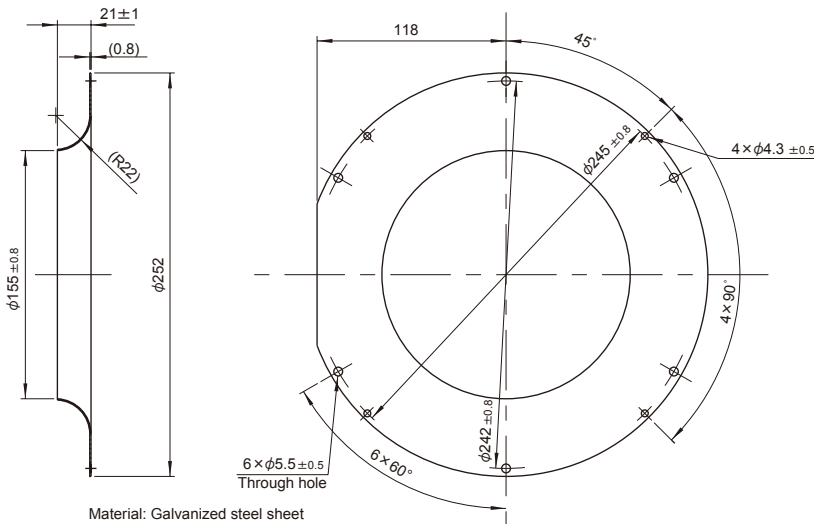


Insert a flange spacer into the ribs of a venturi.

(Installing a flange spacer)

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

Inlet ring



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

DC axial fans & blowers with sensors

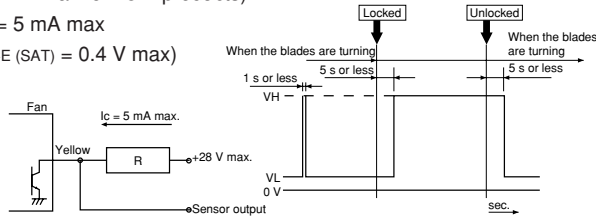
The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose 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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- Output waveform

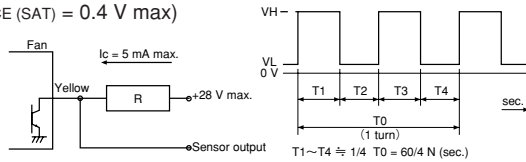


※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- 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).

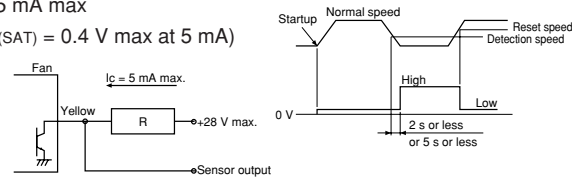
3. Speed detection type (Product code: Q)

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

● 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.

GentleTyphoon™
D1225C



□ 120 × 25 (□ 4.7" × 1.0")

Max. airflow: 1.65 m³/min
Max. static pressure: 20 Pa
Mass: 200g

Fan model code

D1225C12B4AZ-00

D1225C12B5AZ-00

D1225C12B6AZ-00

D1225C24B4AZ-00

D1225C24B5AZ-00

D1225C24B6AZ-00

Features

- Wide low-noise range (noise reduced in high density devices)
- 2-way vibration reduction (lowers resonant noise of entire device)
- Energy Efficient (wide reduction compared to previous model)
- Design to improve sound (for low speed applications)
- Sensors Available (lock, pulse)
- Variable speed available (PWM, voltage resistance)

Standard specification

Max. Airflow		Max. Static Pressure		Noise	Speed	Voltage Spec. V		Current mA		Model Code	Operating Temp. Range °C
m ³ /min	CFM	Pa	inH ₂ O	dB	r/min	Rating	Operating Range	Rating	Starting		
1.95	69	28	0.113	30*	2150	12	5.0-13.2	123	530	D1225C12B6AZ-00	-10 ~ +60
						24	12.0-26.4	100	230	D1225C24B6AZ-00	
1.65	58	20	0.081	26*	1850	12	5.0-13.2	83	360	D1225C12B5AZ-00	
						24	12.0-26.4	45	190	D1225C24B5AZ-00	
1.30	46	13	0.051	19*	1450	12	7.0-13.2	49	210	D1225C12B4AZ-00	
						24	12.0-26.4	29	100	D1225C24B4AZ-00	

* Noise values shown (at 1m) were converted as follows subtract 12dB from actual noise measurements taken at 25 cm (as shown in the noise graph below).

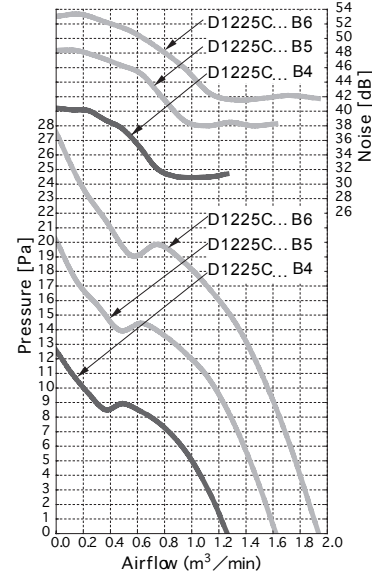
- Figures in the table are average measured values. Please request the product delivery specification when preparing a purchase specification.
- The characteristics are the values at rated voltage (12 V or 24 V), and normal temperature and humidity.
- the only venturi shape available for these products is ribbed flange.
- Depending on quantities, Nidec Servo can meet many of your requirements for customization, such as special connectors, sensors, variable speed specifications and other modifications. Please contact Nidec Servo for more information.
- This fan is specially designed for long life. At rated voltage and in continuous operation the expected life is 4 speed model :60,000 hours at 60°C, 5,6 speed model :55,000 hours at 60°C, 6 speed 24V model :45,000 hours at 60°C.

General specification

Materials Used	Venturi: PBT-ABS synthetic resins Propeller: PBT-ABS 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	60 to a carton of (450 x 380 x 300) mm, mass 13 kg

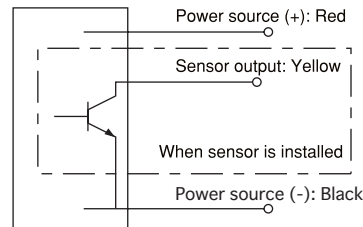
- Each of the eight flanged ribs has "nut insert" receptacles for the M4 nuts (not included) which allow for easy attachment.

Standard airflow and static pressure characteristics (At rated voltage)



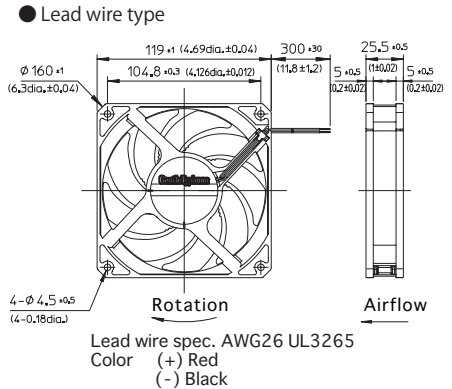
Noise values shown (at 1m) were converted as follows subtract 12dB from actual noise measurements taken at 25cm (as shown in the noise graphs below).

Wiring connection diagram

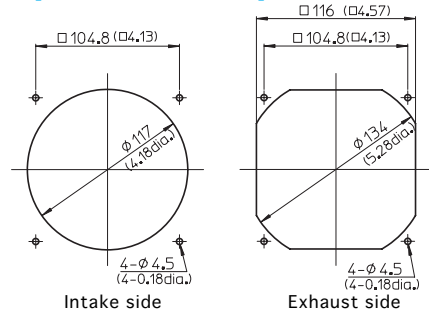


- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above, variable speed specifications, and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- The listed products are registered in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

External dimensions in mm (inches)



Mounting hole dimensions [Recommendation] in mm (inches)



- Options (sold separately)
- Guard: F120UL guard
 - Filter: F120 filter

DC Axial Fan
D1238B



□ 120 × 38 (□ 4.7" × 1.5")
Max. airflow: 6.2 m³/min
Max. static pressure: 300 Pa
Mass: 430 g

Fan model code

D1238B12B7AZ-00

D1238B12B9AZ-00

D1238B24B7AP-00

D1238B24B7AZ-00

D1238B24B8AS-00

D1238B24B8AZ-00

D1238B24B9AP-00

D1238B24B9AS-00

D1238B24B9AZ-00

D1238B48B8AZ-00

D1238B48B9AZ-00

D1238B48BAAS-00

Axial

DC fans

Centrifugal

Silent

AC fans

Centrifugal

Option

■ Standard specification

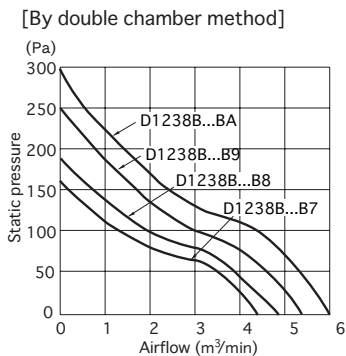
Max. Airflow m ³ /min	Max. Static Pressure CFM	Pa	inH ₂ O	Noise dB	Speed min ⁻¹	Input W	Voltage Spec. V		Current mA		Model Code	Operating Temp. Range °C
							Rating	Operating Range	Rating	Starting		
5.25	185	250	1.01	59	4900	19.8	12	8.4-13.8	1650	5200	D1238B12B9AZ-00	-20 ~ +70
						19.7	24	16.8-27.6	820	2600	D1238B24B9AZ-00	
						19.2	48	36-55.2	400	950	D1238B48B9AZ-00	
4.8	169	185	0.74	56	4400	13.9	24	16.8-27.6	580	1850	D1238B24B8AZ-00	
						15.4	48	36-55.2	320		D1238B48B8AZ-00	
4.4	155	160	0.64	54	4000	14.4	12	8.4-13.8	1200		D1238B12B7AZ-00	
						14.4	24	16.8-27.6	600	1600	D1238B24B7AZ-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, 24 V or 48 V), and normal temperature and humidity.

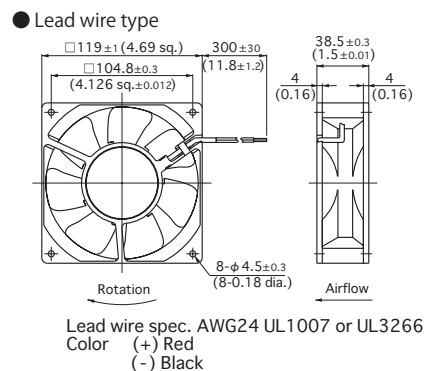
■ General specification

Materials Used	Venturi: Aluminum alloy die castings Propeller: 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.

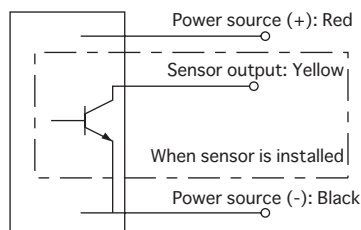
■ Standard airflow and static pressure characteristics (At rated voltage)



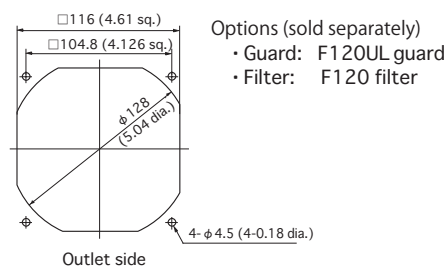
■ External dimensions in mm (inches)



■ Wiring connection diagram



■ Mounting hole dimensions [Recommendation] in mm (inches)



Customized fans with a higher airflow are also available.
Please contact NIDEC SERVO for more information.

DC axial fan with sensor

Rated Vol.	Model Code		
24 V	D1238B24B7AP-00	D1238B24B8AS-00	D1238B24B9AS-00 D1238B24B9AP-00
48 V			D1238B48BAAS-00

- PWM (pulse width modulation) allowing for variable speed control is available in some models (reference the G-51 spec).
- 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: E129458, CSA: LR49399, TUV: R50004410
- 3D data is also available at our website.

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

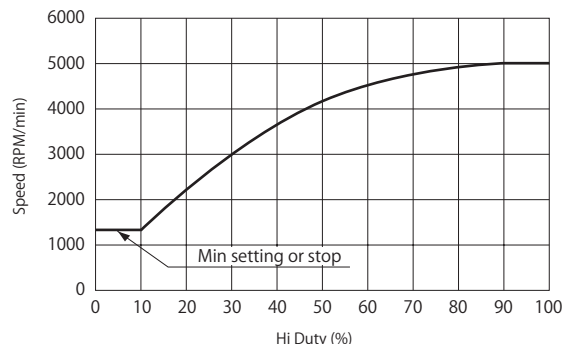
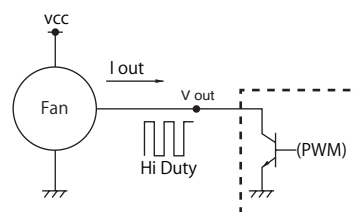
Lineup of PWM variable-speed semi-standard products

- 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 noise can 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

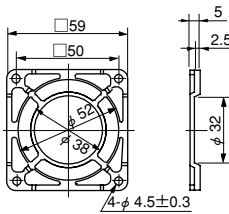


Semi-standard products (Products in regular production)

Size	Model Code	Max. Airflow		Max. Static Pressure		Noise	Speed min ⁻¹		Voltage Spec. V		Operating Temp. Range °C
		m ³ /min	CFM	Pa	inH ₂ O		Max.	Min.	Rating	Operating Range	
□92×25mm	D0925C12B8ZP-00	2	71	67	0.27	40	4450	1000	12	10.2-13.2	-20 ~ 60°C
	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°C
	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°C
φ172×150×51mm	D1751M48B6ZP-00	10.2	360	315	1.27	64	4800	1000	48	36-60	-20 ~ 70°C
	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°C
	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°C
	G0938B12B8ZP-00	3.2	113	350	1.41	58	6300	1600	12	8.4-13.8	
□119×38mm	G1238B12BBZP-00	7.4	261	520	2.09	67	6300	1000	12	9.6-13.8	-20 ~ 60°C
	G1238B24BBZP-00								24	16.8-27.6	
	G1238B48BBZP-00								48	36-55.2	
	G1238B24BAZP-00								6.3	223	
φ172×150×51mm	G1751M24B9ZP300	11.2	395	780	3.13	74	6800	3200	24	16-28	-20 ~ 70°C
	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°C
	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	
φ220×71mm	E2271Z48B7ZP-00	18.1	639	600	2.41	74	3200	1000	48	36-57	-20 ~ 60°C

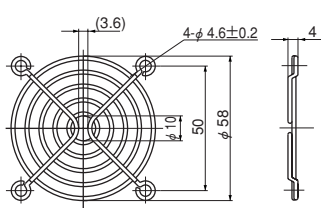
- Aside from the above models, please see also the high pressure, variable speed G series fans. Details may be found in specs G-31 to G-36.
- The lineup of variable-speed fans and blowers will be expanded regularly. Visit the NIDEC SERVO Website for information on the latest lineup.
- Direct your inquiry 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.

F60P Guard (Mass 4 g)



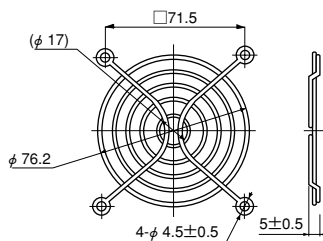
Material: Polycarbonate (black)
UL94V-2

F60UL Guard (Mass 12 g)



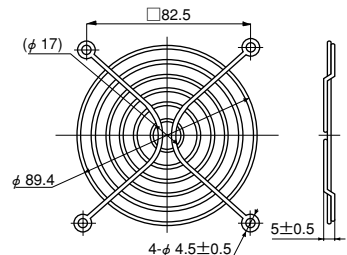
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



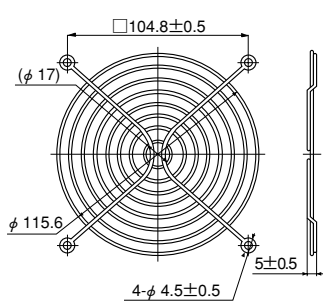
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



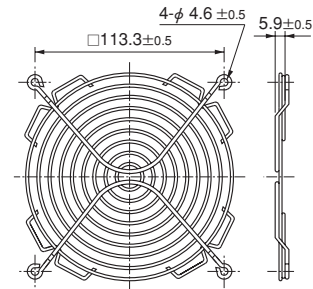
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F120UL Guard (Mass 29 g)



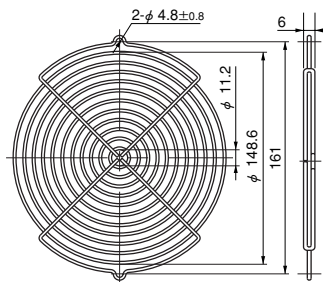
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F127UL Guard



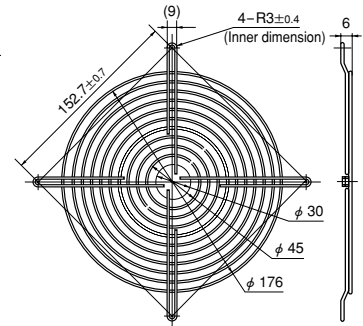
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



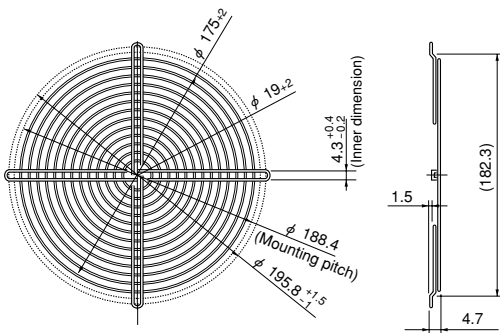
Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

F180UL Guard



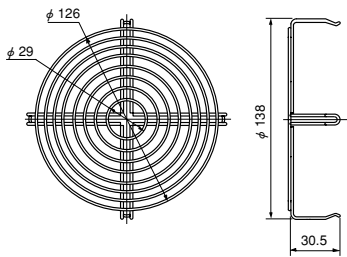
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F200UL Guard (Mass 82 g)



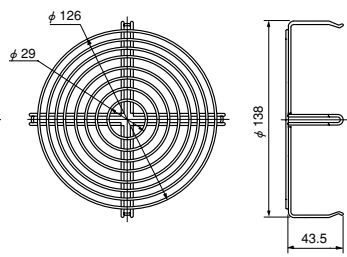
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

SCU Guard (Mass 50 g)



Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

SCN Guard (Mass 55 g)



Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

• Guard special for intake side of SCU (metal venturi) fans.

• Guard special for intake side of SCN (metal venturi) fans.

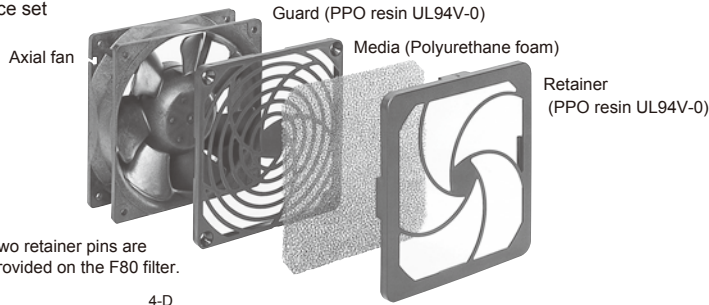
List of mating fan series

Guard	F60P	F60UL	F80UL	F92UL	F120UL	F127UL	GUARD 172	F180UL	F200UL	SCN	SCU
AC Axial Fans											
SCU					○*1						○*2
SCN					○*1					○*2	
VE			○								
WE				○							
KA				○							
CU					○						
CN					○						
MA							○				
PA							○				
PL								○			
TUDC	○	○									
PUDC			○								
KUDC				○							
DO925C				○							
KLDC				○							
CUDC					○						
D1225C					○						
DC Axial Fans											
CNDC					○						
D1238T					○						
D1238B					○						
D1338B					○						
D1338S					○						
D1751M							○				
D1751S							○				
G0638D		○									
G0838C			○								
G0938B				○							
G1238B					○						
G1751M							○				

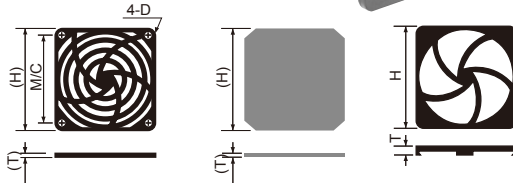
*1: Can be installed only on outlet side. *2: Can be installed only on intake side.
All guards conform to the UL standard when combined with NIDEC SERVO fans.
The installation of a filter, guard and other accessories will constitute a ventilating load, reducing the airflow. Select a suitable guard, taking into consideration the increase in air resistance. (See Figs. 12 and 13 on page G-7.)

Filter

3-piece set



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



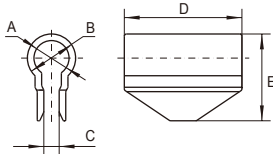
List of mating fan series

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

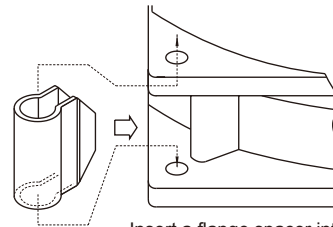
Filter	F80	F92	F120
VE	○		
WE		○	
KA		○	
CU			○
CN			○

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

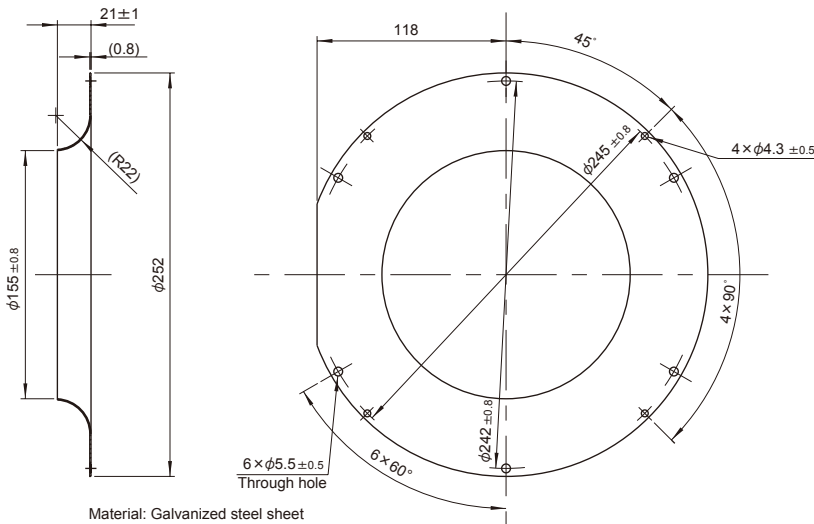


Insert a flange spacer into the ribs of a venturi.

(Installing a flange spacer)

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

Inlet ring



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

DC axial fans & blowers with sensors

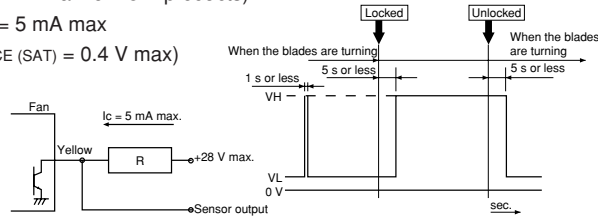
The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose 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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- Output waveform

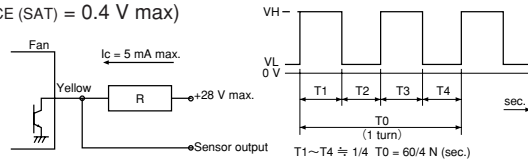


※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

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: $V_{CE} = 28\text{ V max}$ (55.2 V max for 48 V products)
 $I_C = 5\text{ mA max}$
($V_{CE(SAT)} = 0.4\text{ V max}$)
- 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).

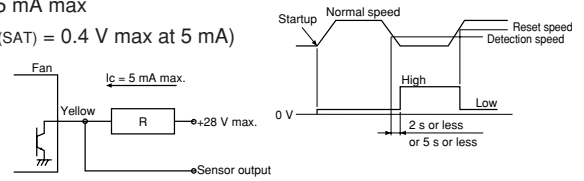
3. Speed detection type (Product code: Q)

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

● 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.