

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

D1751S12B1AP-00

D1751S12B1AS-00

D1751S12B1AZ-00

D1751S12B2AP-00

D1751S12B2AS-00

D1751S12B2AZ-00

D1751S12B3AP-00

D1751S12B3AS-00

D1751S12B3AZ-00

D1751S12B4AP-00

D1751S12B4AS-00

D1751S12B4AZ-00

D1751S24B1AP-00

D1751S24B1AS-00

D1751S24B1AZ-00

D1751S24B2AP-00

D1751S24B2AS-00

D1751S24B2AZ-00

D1751S24B3AP-00

D1751S24B3AS-00

D1751S24B3AZ-00

D1751S24B4ZP-00

D1751S24B5ZP-00

D1751S24B6AP-00

D1751S24B6ZP-00

D1751S24B7AP-00

D1751S24B7AZ-00

D1751S24B7ZP-00

D1751S24B8ZPB01

D1751S24B9ZPB01

D1751S48B2AP-00

D1751S48B2AS-00

D1751S48B2AZ-00

D1751S48B3AP-00

D1751S48B3AS-00

D1751S48B3AZ-00

D1751S48B4ZP-00

D1751S48B5ZP-00

D1751S48B6ZP-00

D1751S48B7ZP-00

D1751S48B8AZ-00

D1751S48B8ZPA01

D1751S48B9ZPA01

Standard specification

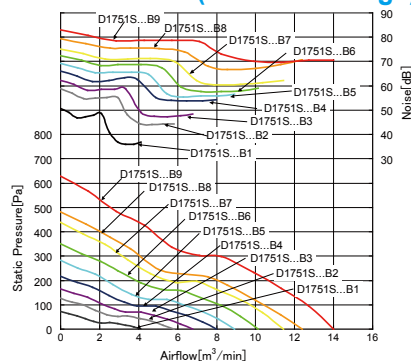
Max. airflow m ³ /min	Max. static pressure CFM	Pa	inH ₂ O	Noise dB	Speed min ⁻¹	Voltage spec. V		Current mA		Model code	Operating Temp. Range °C					
						Rating	Operating Range	Rating	Starting							
14	494	640	2.57	76	6800	24	16-28	4600	7200	D1751S24B9ZPB01	-20 ~ +70					
						48	36-60	2400	6600	D1751S48B9ZPA01						
12.4	437.7	490	1.97	71	6100	24	16-28	3400	4800	D1751S24B8ZPB01		-20 ~ +70				
						48	36-60	1650	3500	D1751S48B8ZPA01						
11.4	402	435	1.75	62	5400	24	12-27.6	2450	5600	D1751S24B7AZ-00			-20 ~ +70			
						48	36-60	1200	2350	D1751S48B7ZP-00						
10.2	360	335	1.35	59	4800	24	12-27.6	1800	3200	D1751S24B6AZ-00				-20 ~ +70		
						48	36-60	820	1800	D1751S48B6ZP-00						
9	318	270	1.08	56	4200	24	12-27.6	1200	2200	D1751S24B5ZP-00					-20 ~ +70	
						48	36-60	600	1150	D1751S48B5ZP-00						
8	282	220	0.88	53.5	3800	12	8.4-13.8	1840	3800	D1751S12B4AZ-00						-20 ~ +70
						24	12-27.6	900	2200	D1751S24B4ZP-00						
6.8	240	165	0.66	48	3200	12	8.4-13.8	450	860	D1751S48B4ZP-00	-20 ~ +70					
						24	12-27.6	600	2400	D1751S24B3AZ-00						
5.8	205	125	0.50	44	2800	12	8.4-13.8	310	900	D1751S48B3AZ-00		-20 ~ +70				
						24	12-27.6	800	2900	D1751S12B2AZ-00						
4.2	148	70	0.28	36	2000	24	12-27.6	400	1900	D1751S24B2AZ-00			-20 ~ +70			
						48	28.8-55.2	210	700	D1751S48B2AZ-00						
						12	8.4-13.8	390	2200	D1751S12B1AZ-00				-20 ~ +70		
						24	12-27.6	200	1150	D1751S24B1AZ-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.

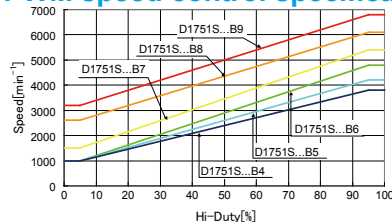
General specification

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 10.5kg

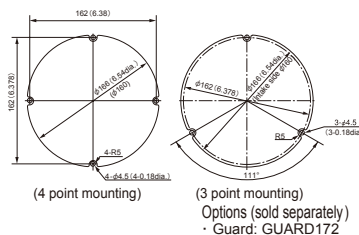
Standard airflow and static pressure characteristics (At rated voltage)



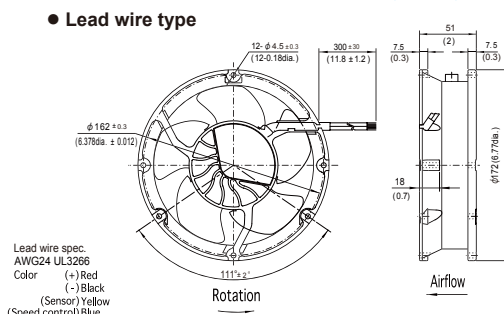
PWM speed control specification



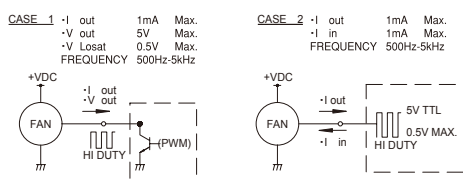
Mouting hole dimensions in mm (inches) [Recommendation]



External dimensions in mm (inches)



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

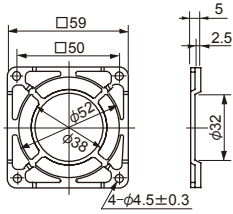


DC axial fan with sensor

Rated Vol.	Model Code									
12 V	D1751S12B1AP-00	D1751S12B2AP-00	D1751S12B3AP-00	D1751S12B4AP-00						
	D1751S12B1AS-00	D1751S12B2AS-00	D1751S12B3AS-00	D1751S12B4AS-00						
24V	D1751S24B1AP-00	D1751S24B2AP-00	D1751S24B3AP-00	D1751S24B4ZP-00	D1751S24B5ZP-00	D1751S24B6AP-00	D1751S24B7AP-00	D1751S24B8ZPB01	D1751S24B9ZPB01	
	D1751S24B1AS-00	D1751S24B2AS-00	D1751S24B3AS-00	D1751S24B4ZR-13		D1751S24B6ZP-00	D1751S24B7ZP-00			
48V		D1751S48B2AP-00	D1751S48B3AP-00	D1751S48B4ZP-00	D1751S48B5ZP-00	D1751S48B6ZP-00	D1751S48B7ZP-00	D1751S48B8ZPA01	D1751S48B9ZPA01	
		D1751S48B2AS-00	D1751S48B3AS-00							

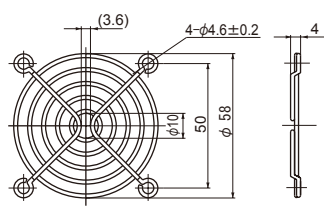
- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above, variable speed specifications, and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- PWM (pulse width modulation) allowing 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)



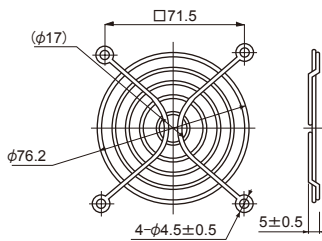
Material: Polycarbonate (black)
UL94V-2

F60UL Guard (Mass 12 g)



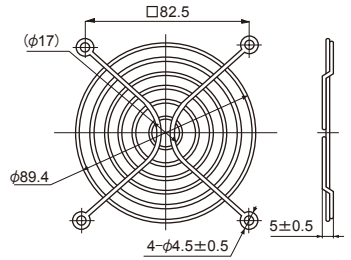
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



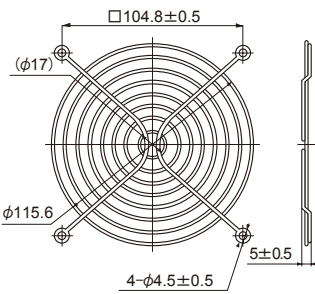
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



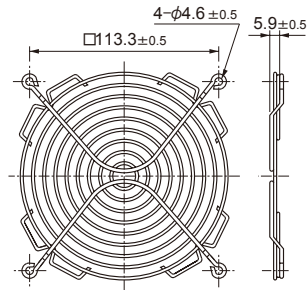
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F120UL Guard (Mass 29 g)



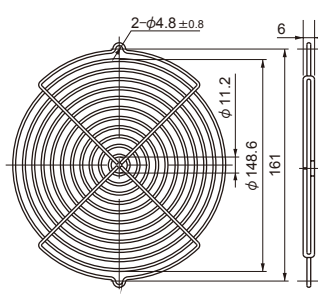
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F127UL Guard



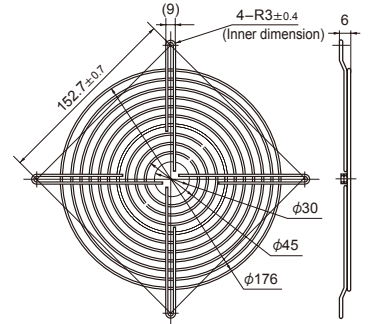
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



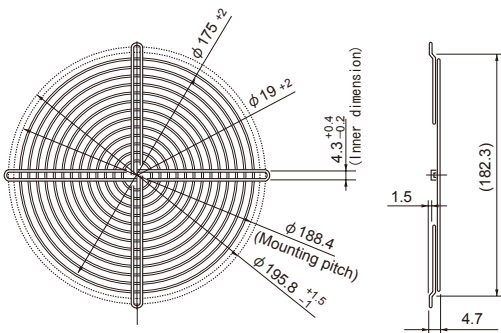
Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

F180UL Guard



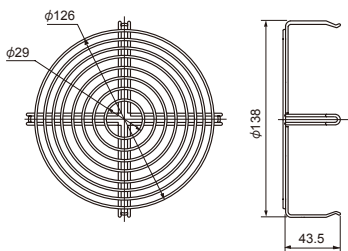
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

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

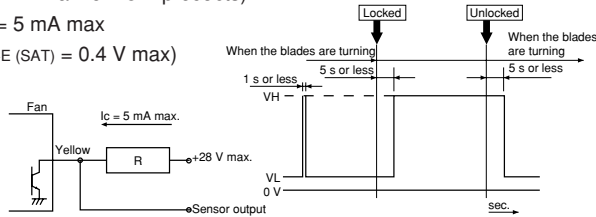
The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose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

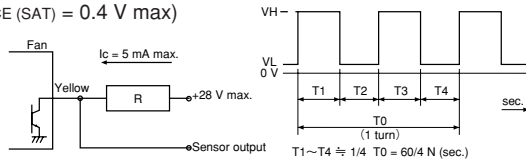


※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

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).

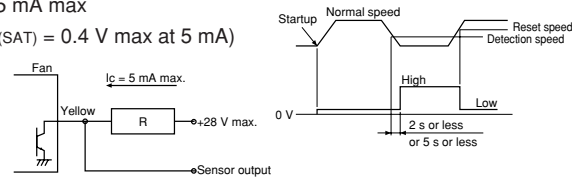
3. Speed detection type (Product code: Q)

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.