

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

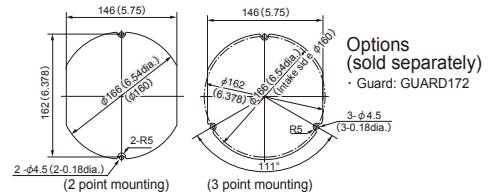
| Max. airflow m ³ /min | Max. static pressure CFM | Max. static pressure | | Noise dB | Speed min ⁻¹ | Voltage spec. V | | Current mA | | Model code | Operating Temp. Range °C |
|-------------------------------------|-----------------------------|----------------------|--------------------|-------------|----------------------------|-----------------|-----------------|------------|----------|------------------------|-----------------------------|
| | | 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.

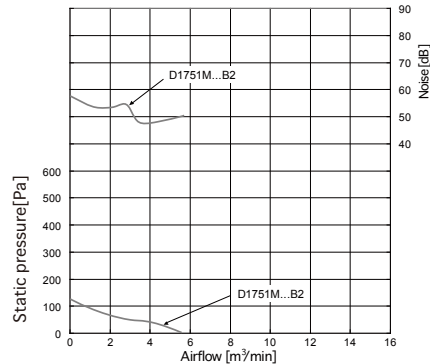
■ General specification

| | |
|--------------------|--|
| 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]

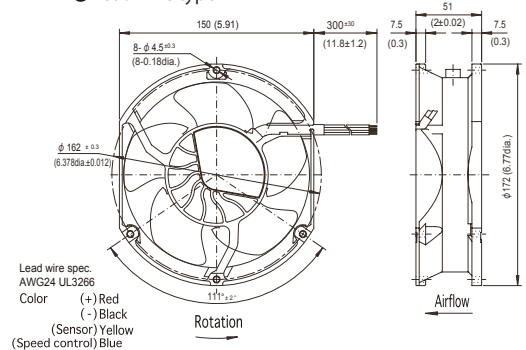


■ Standard airflow and static pressure characteristics (At rated voltage)



■ External dimensions in mm (inches)

● Lead wire type

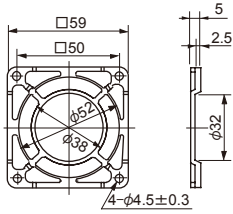


DC axial fan with sensor

| Rated Vol. | Model Code |
|------------|------------------------|
| 12 V | D1751M12B2AS-00 |

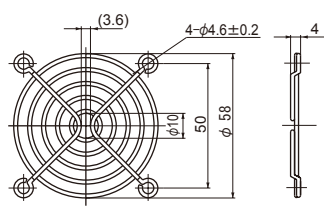
- NIDEC SERVO can meet many of your requirements for customization, such as special connectors, other sensors not listed above, variable speed specifications, and other modifications. Please contact NIDEC SERVO during your product planning and development stage.
- PWM (pulse width modulation) allowing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



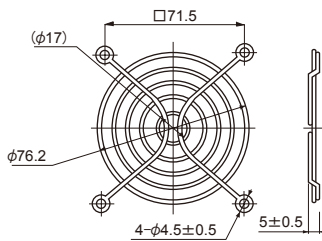
Material: Polycarbonate (black)
UL94V-2

F60UL Guard (Mass 12 g)



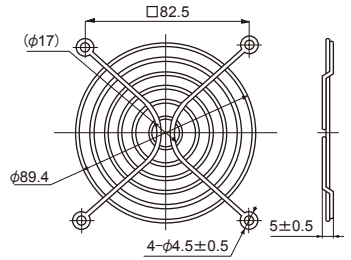
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F80UL Guard (Mass 14 g)



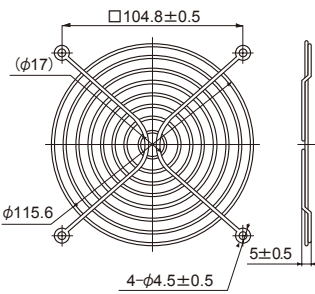
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F92UL Guard (Mass 16 g)



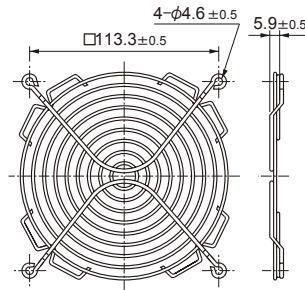
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F120UL Guard (Mass 29 g)



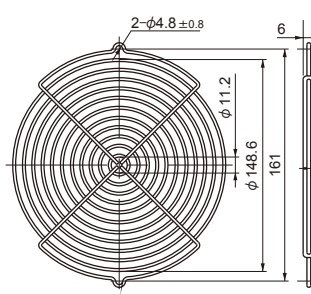
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

F127UL Guard



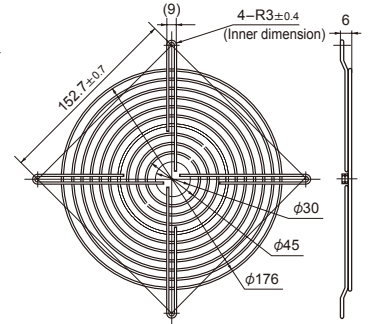
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

GUARD 172



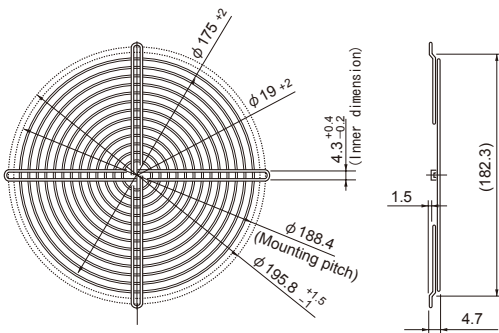
Material: Mild steel wire 2 dia.
Surface treatment:
Nickel chromium plating

F180UL Guard



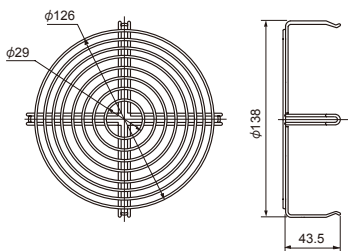
Material: Mild steel wire 1.6 dia.
Surface treatment:
Nickel chromium plating

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

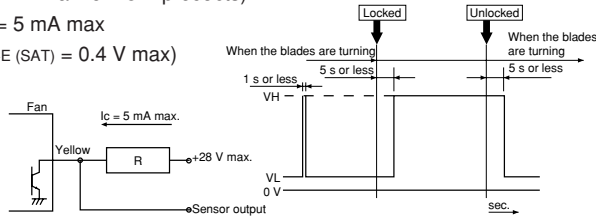
The DC fans and blowers of NIDEC SERVO have a function to send an alarm signal when the fan motor revolutions slow down. Several systems are used to cut off the system power supply by this alarm signal, with three types of sensors available. Select the right type of sensor in accordance with the purpose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

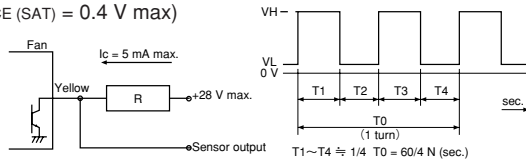


※When the power is turned on, the state sometimes becomes high [H] for several hundred ms.

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).

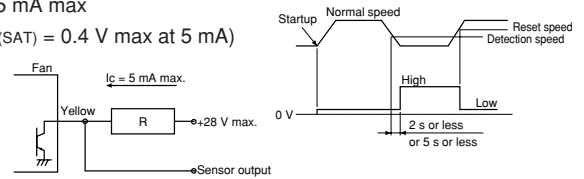
3. Speed detection type (Product code: Q)

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.