San Ace 172GP 9GP type
G Proof Fan

Features

Highly Resistant to G-Forces
This fan can withstand g-forces of 75 g for 1000 hours.*

Low Noise and High Energy Efficiency
The PWM control function enables the external control of fan speed, contributing to lower noise and higher energy efficiency of devices.

* Measured with our g-force testing machine. g = Acceleration of gravity = 9.8 m/s^2

ø172×150×51 mm

Specifications

The following nos. **have PWM controls, pulse sensors.**

Model no.	Rated voltage [V]	Operating voltage range [V]	PWM duty cycle* [%]	Rated current [A]	Rated input [W]	Rated speed [min^{-1}]	Max. airflow [m^3/min]	Max. airflow [CFM]	Max. static pressure [Pa]	Max. static pressure [inchH$_2$O]	SPL [dB(A)]	Operating temperature [°C]	Expected life [h]
9GP5724P5H001	24	16 to 30	100	5.00	120	8000	12.3	434	1000	4.02	77	-20 to +70	40000/60°C (70000/40°C)
			20	0.50	12.0	3000	4.6	162	175	0.70	51		
9GP5748P5G001	48	36 to 72	100	5.00	240	10500	16.1	568	1600	6.43	83		
			20	0.41	19.7	3700	5.6	198	250	1.01	57		

* PWM frequency: 25 kHz. Fan does not rotate when PWM duty cycle is 0%.

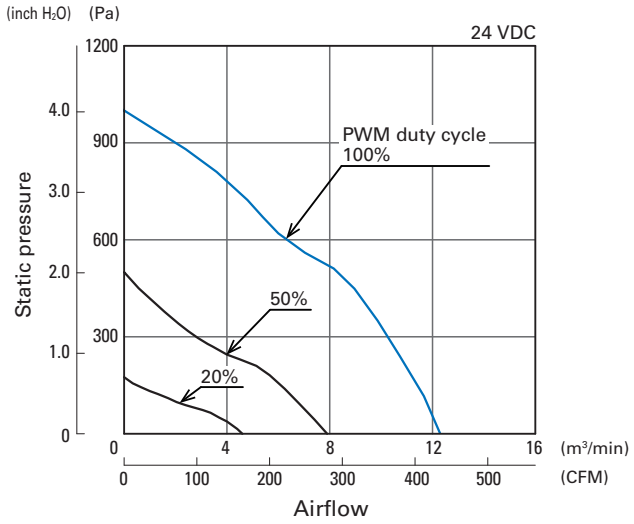
Models with the following sensor specifications are also available as options: Without sensor Lock sensor

Common Specifications

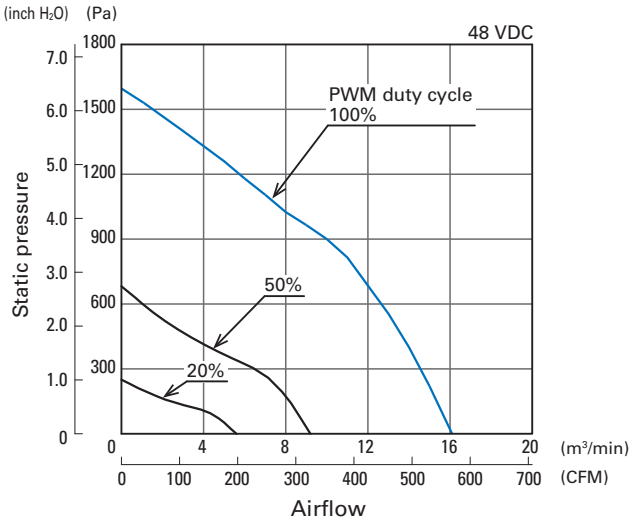
- ☐Material ····· Frame: Aluminum (Black coating), Impeller: Plastics (Flammability: UL 94V-1)
- ☐Expected life ····· Refer to specifications
  (L10: Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
  Expected life at 40°C ambient is just reference value.
- ☐Motor protection system ····· Current blocking function and reverse polarity protection
- ☐Dielectric strength ····· 50/60 Hz, 500 VAC, 1 minute (between lead conductor and frame)
- ☐Sound pressure level (SPL) ····· Expressed as the value at 1 m from air inlet side
- ☐Operating temperature ····· Refer to specifications (Non-condensing)
- ☐Storage temperature ····· -30 to +70°C (Non-condensing)
- ☐Lead wire ····· ⊕Red ⊖Black Sensor: Yellow Control: Brown
- ☐Mass ····· Approx. 880 g
- ☐G-force tolerance ····· 75 g for 1000 hours (Measured with our g-force testing machine)

Airflow - Static Pressure Characteristics

・ PWM duty cycle

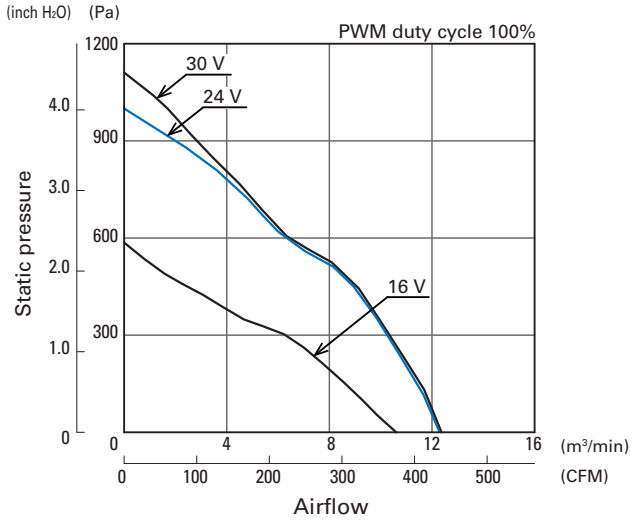


9GP5724P5H001

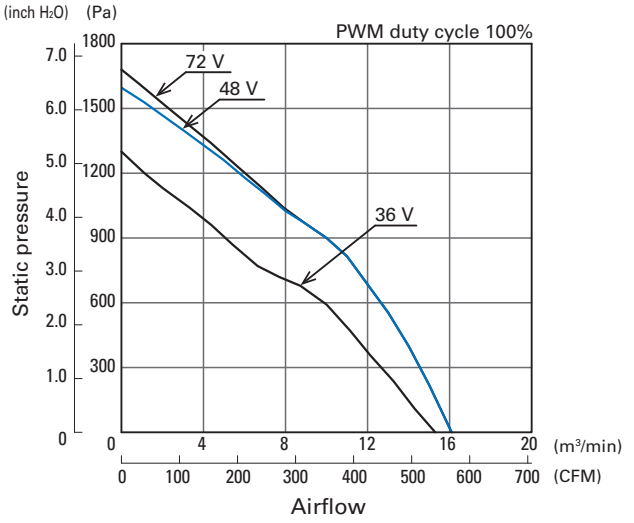


9GP5748P5G001

・ Operating voltage range

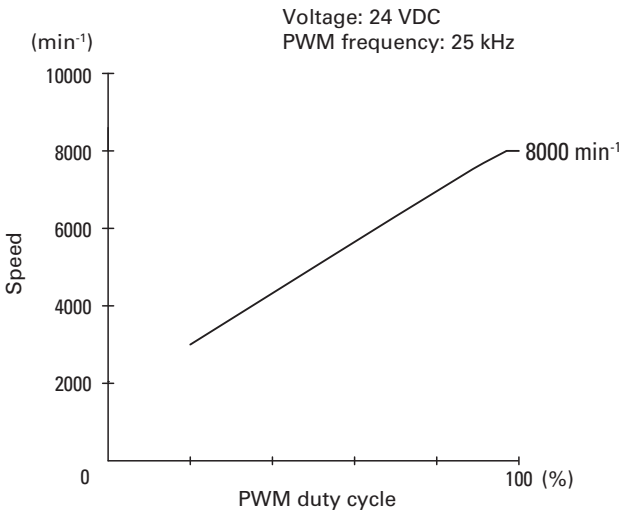


9GP5724P5H001

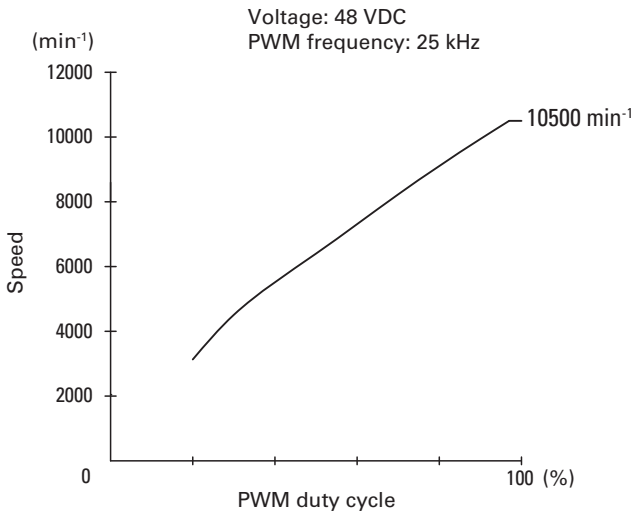


9GP5748P5G001

PWM Duty - Speed Characteristics Example



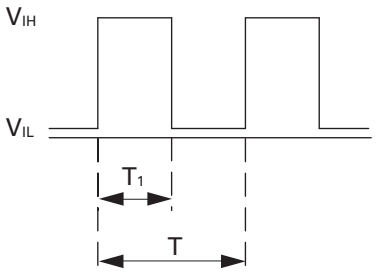
9GP5724P5H001



9GP5748P5G001

PWM Input Signal Example

Input signal waveform



V_{IH} = 4.75 to 5.25 V V_{IL} = 0 to 0.4 V

PWM duty cycle (%) = $\frac{T1}{T} \times 100$ PWM frequency 25 (kHz) = $\frac{1}{T}$

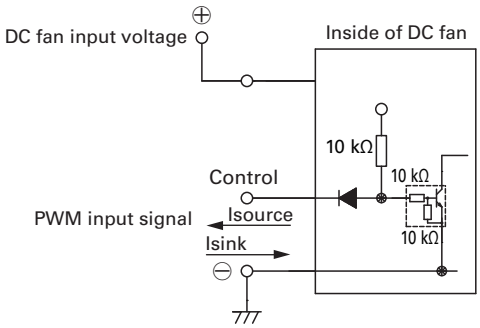
Current source (Isource) = 1 mA max. (when control voltage is 0 V)

Current sink (Isink) = 1 mA max. (when control voltage is 5.25 V)

Control terminal voltage = 5.25 V max. (when control terminal is open)

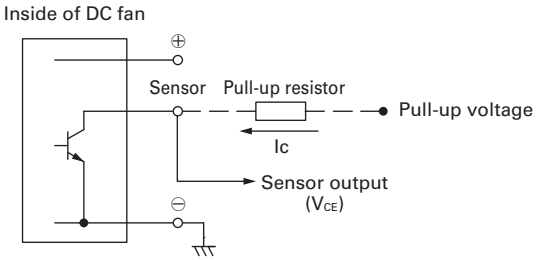
When the control terminal is open,
fan speed is the same as when PWM duty cycle is 100%.
Either TTL input, open collector or open drain can be used for
PWM control input signal.

Example of Connection Schematic



Specifications for Pulse Sensors

Output circuit: Open collector



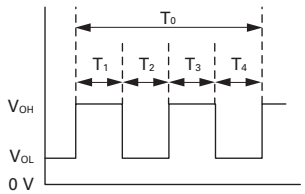
Rated voltage 24 V fan
V_{CE}=+36 V max.
Ic=10 mA max. [V_{OL}=V_{CE} (SAT)=1 V max.]

Rated voltage 48 V fan
V_{CE}=+72 V max.
Ic=10 mA max. [V_{OL}=V_{CE} (SAT)=1 V max.]

Output waveform (Need pull-up resistor)

In case of steady running

(One revolution)

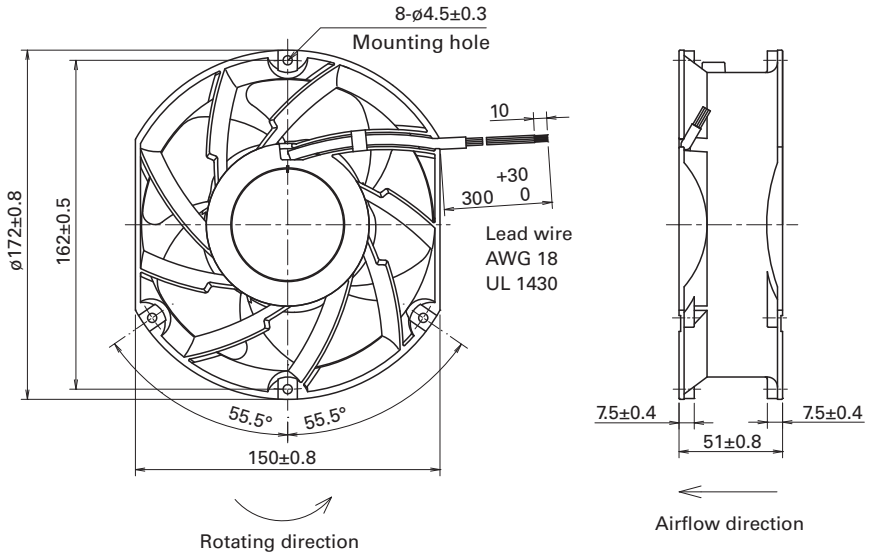


$T_{1\ to\ 4} \fallingdotseq (1/4)\ T_0$

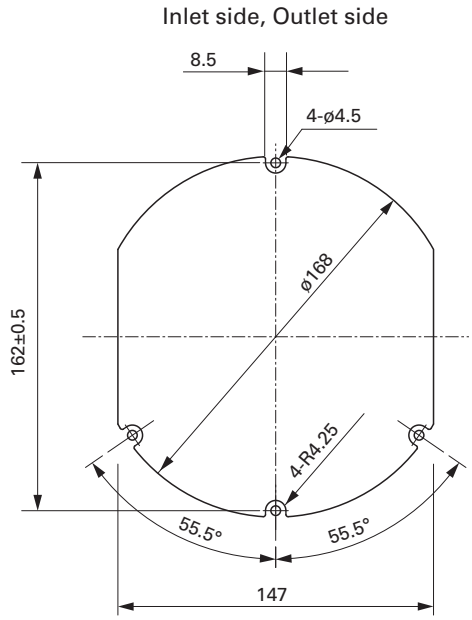
$T_{1\ to\ 4} \fallingdotseq (1/4)\ T_0 = 60/4N$ (s)

N=Fan speed (min^{-1})

Dimensions (unit: mm)



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



Notice

- Please read the "Safety Precautions" on our website before using the product.
- The products shown in this catalog are subject to Japanese Export Control Law. Diversion contrary to the law of exporting country is prohibited.
- For protecting fan bearings against electrolytic corrosion near strong electromagnetic noise sources, we provide effective countermeasures such as Electrolytic Corrosion Proof Fans and EMC guards. Contact us for details.

SANYO DENKI CO., LTD. 3-33-1, Minami-Otsuka, Toshima-ku, Tokyo 170-8451, Japan TEL: +81 3 5927 1020 https://www.sanyodenki.com

CATALOG No. C1074B001 '17.8