San Ace 92 9HV type
High Static Pressure Fan

Features

High Static Pressure
Maximum static pressure is increased by approximately 2.5 times compared with our conventional product.*

Low Power Consumption
Provides the same cooling performance as three of our conventional products connected in series, while consuming approximately 46% less power.*

* Specification of Model No. 9HV0912P1G001.
Our conventional product is 92 x 92 x 38 mm “San Ace 92”, Model No. 9GV0912P1G03.

92×92×38mm

Specifications

The following nos. have **PWM controls, pulse sensors, and ribs.** For ribless, append "1" to the model no.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM Duty Cycle Note1) [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min⁻¹]	Max. Air Flow [m³/min]	Max. Air Flow [CFM]	MAX. Static Pressure [Pa]	MAX. Static Pressure [inchH2O]	SPL [dB(A)]	Operating Temperature [℃]	Expected Life Note2) [h]
9HV0912P1G001	12	8 to 12.6	100	5.2	62.4	14,900	5.1	180	1,100	4.42	72	−20 to +70	40,000 / 60℃ (70,000 / 40℃)
			0	0.8	9.6	4,500	1.54	54.4	160	0.64	44		
9HV0948P1G001	48	36 to 60	100	1.2	57.6	14,900	5.1	180	1,100	4.42	72		
			0	0.15	7.2	4,500	1.54	54.4	160	0.64	44		

Note1: PWM Frequency: 25 kHz
Note2: Expected life at 40 degreeC ambient is just reference value.

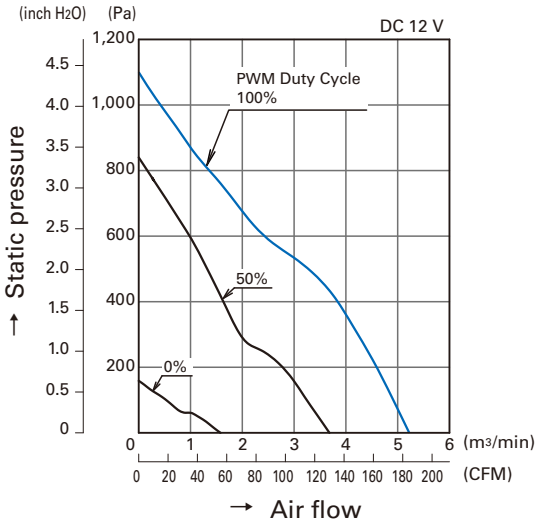
Available options: Without Sensor, Pulse Sensor
Please inquire as the availability of these functions depend on the model: Lock Sensor, Low Speed Sensor

Common Specifications

- ☐ Material ····· Frame: Plastics (Flammability: UL94V-0), Impeller: Plastics (Flammability: UL94V-1)
- ☐ Expected Life ····· Refer to specifications
  (L10: Survival rate : 90% at 60 ℃, rated voltage, and continuously run in a free air state)
- ☐ 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 ℃ (Non-condensing)
- ☐ Lead Wire ····· ⊕Red ⊖Black Sensor: Yellow Control: Brown
- ☐ Mass ····· Approx. 250 g

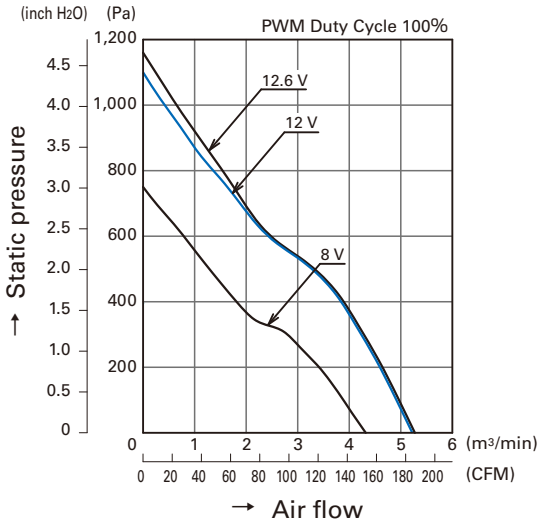
Air Flow - Static Pressure Characteristics

• PWM Duty Cycle

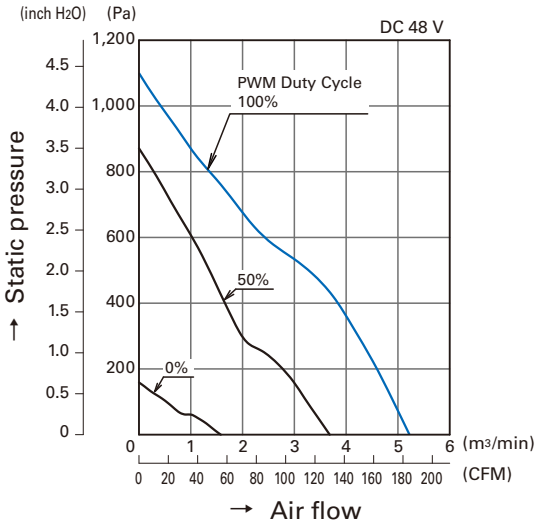


9HV0912P1G001

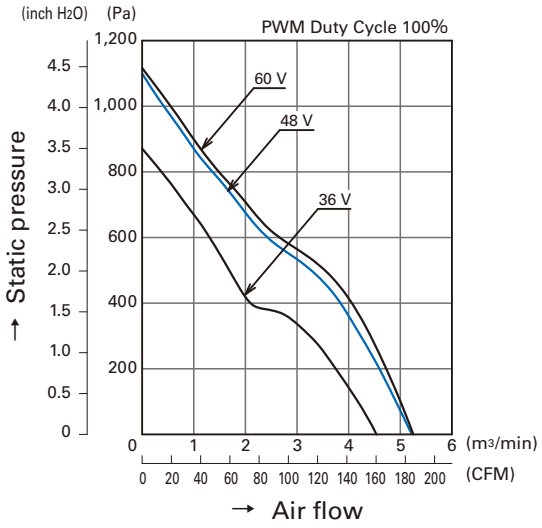
• Operating Voltage Range



9HV0912P1G001

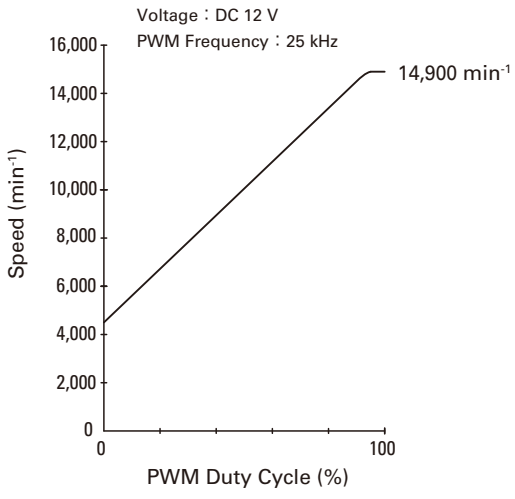


9HV0948P1G001

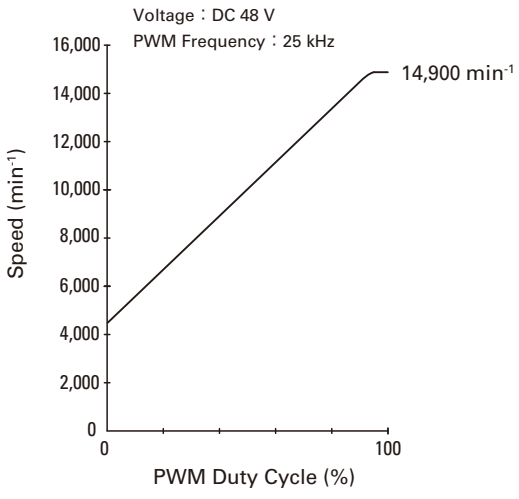


9HV0948P1G001

PWM Duty - Speed Characteristics Example



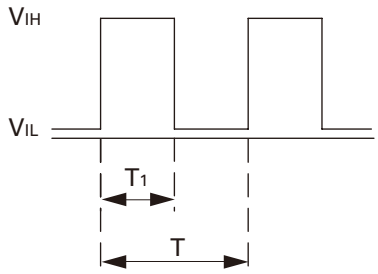
9HV0912P1G001



9HV0948P1G001

PWM Input Signal Example

Input Signal Waveform



V_{IH}=4.75 V to 5.25 V

V_{IL}=0 V to 0.4 V

PWM Duty Cycle (%) = $\frac{T1}{T} \times 100$

PWM Frequency 25 (kHz) = $\frac{1}{T}$

Source Current (Isource) : 1 mA Max. at control voltage 0 V

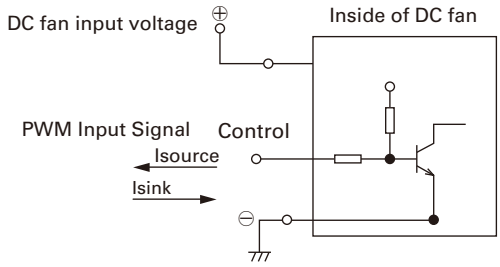
Sink Current (Isink) : 1 mA Max. at control voltage 5.25 V

Control Terminal Voltage : 5.25 V Max. (Open Circuit)

When the control lead wire is open,
speed is same as one at 100% PWM duty cycle.

This fan speed should be controlled by PWM input signal of either TTL input or open collector, drain input.

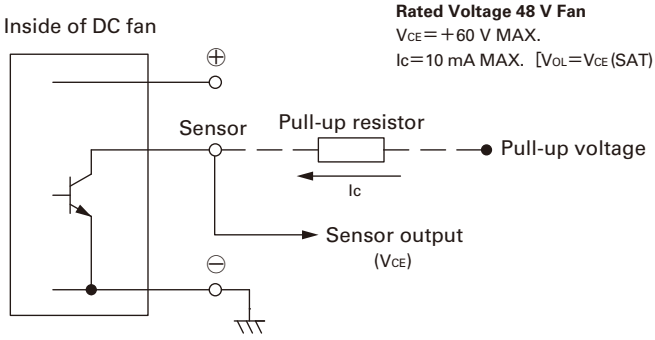
Example of Connection Schematic



Specifications for Pulse Sensors

Output circuit : Open collector

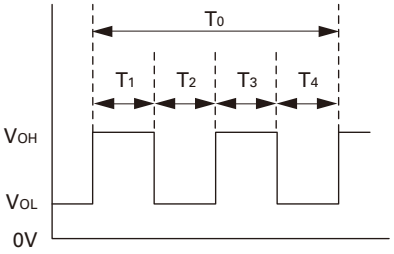
Rated Voltage 12 V Fan
V_{CE}=+15 V MAX.
Ic=10 mA MAX. [V_{OL}=V_{CE}(SAT) =0.6 V MAX.]
Rated Voltage 48 V Fan
V_{CE}=+60 V MAX.
Ic=10 mA MAX. [V_{OL}=V_{CE}(SAT) =0.6 V MAX.]



Output Waveform (Need pull-up resistor)

In case of steady running

(One revolution)

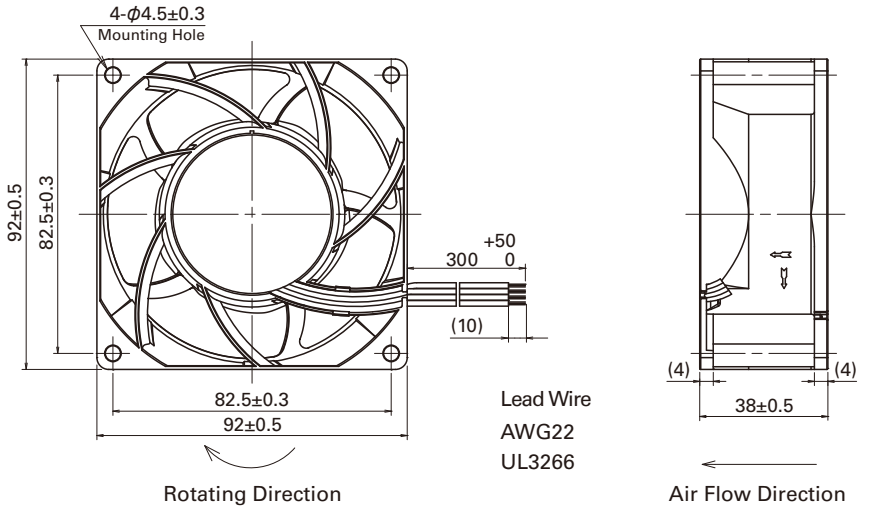


$T_{1\sim4} \fallingdotseq$ (1/4) T_0

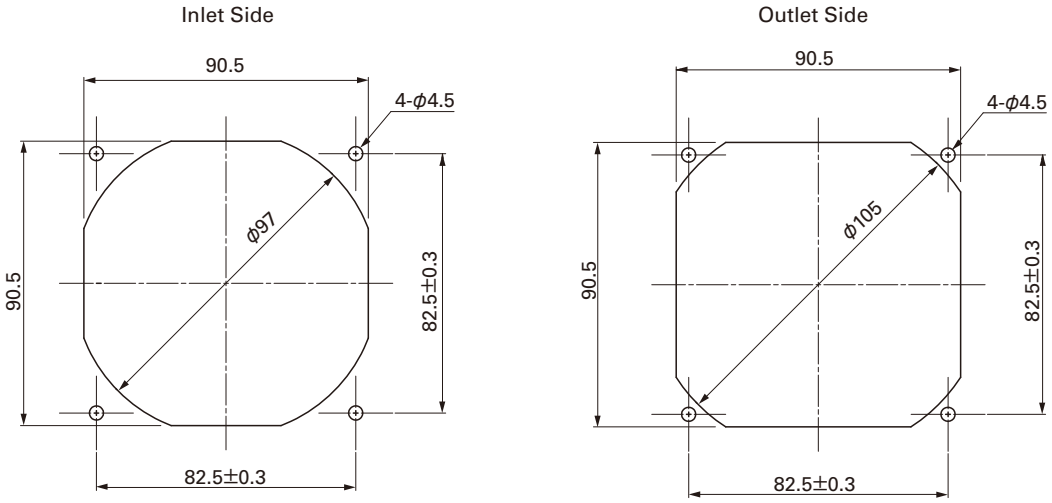
$T_{1\sim4} \fallingdotseq$ (1/4) T_0=60/4N (sec)

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

Dimensions (unit : mm) (With ribs)



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



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

CATALOG No. C1031B001 '13.12