

# San Ace 80

## DC fan

DC fan 80mm

### Features

#### High Static Pressure

Maximum static pressure is increased by approx. 2times compared with our conventional product\*.

#### Low Noise

Achieved low noise: 69 dB(A).

\* Our conventional product is 80 x 80 x 38 mm thick. San Ace 80 GVtype, Model No. 9GV0812P1G03.



ECO PRODUCTS

## 80 × 80 × 38mm HV type

### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM Duty Cycle [%] <sup>Note1</sup>	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min] [CFM]	Max. Static Pressure [Pa] [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life <sup>Note2</sup> [h]
9HV0812P1G001(0011)	12	10.8 to 13.2	100	3.4	40.8	14,900	3.7 130.7	1,000 4.0	69	-10 to +70	40,000/60°C (70,000/40°C)
			0	0.64	7.68	4,400	1.06 37.5	87.2 0.35	40		
9HV0848P1G001(0011)	48	36 to 57	100	0.85	40.8	14,900	3.7 130.7	1,000 4.0	69		
			0	0.13	6.24	4,400	1.06 37.5	87.2 0.35	40		

The numbers in ( ) represent ribless models.

Note1 : PWM Frequency : 25kHz

Note2 : Expected life at 40 degreeC ambient is just reference value.

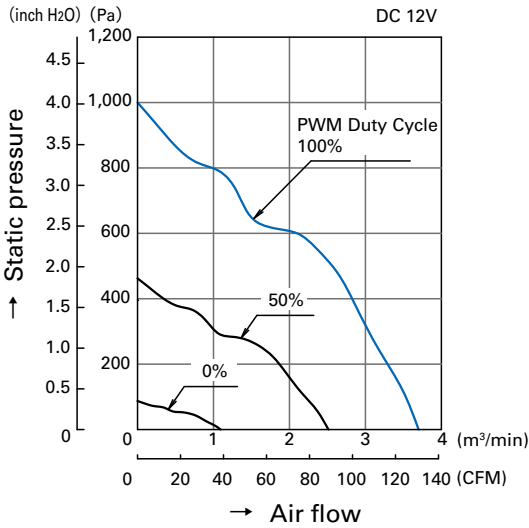
### Common Specifications

- Material ..... Frame, Impeller: Plastics (Flammability: UL94V-0)
- Expected Life ..... Varies for each model  
(L10: Survival rate: 90% at 60°C, 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, 500VAC, 1 minute (between lead conductor and frame)
- Sound Pressure Level (SPL) ..... Expressed as the value at 1m from air inlet side
- Operating Temperature ..... Varies for each model (Non-condensing)
- Storage Temperature ..... -30°C to +70°C (Non-Condensing)
- Lead Wire ..... ⊕red ⊖black Sensor: yellow Control : brown
- Mass ..... Approx. 230g

80mm

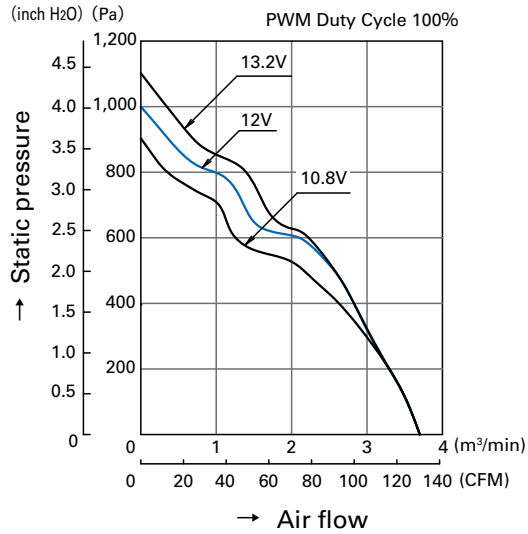
## Air Flow - Static Pressure Characteristics

### • PWM Duty Cycle

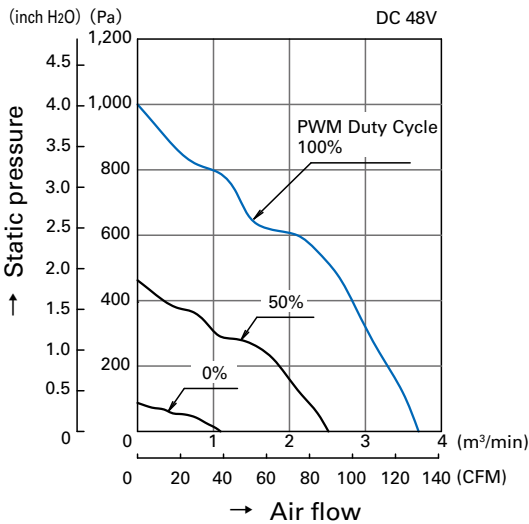


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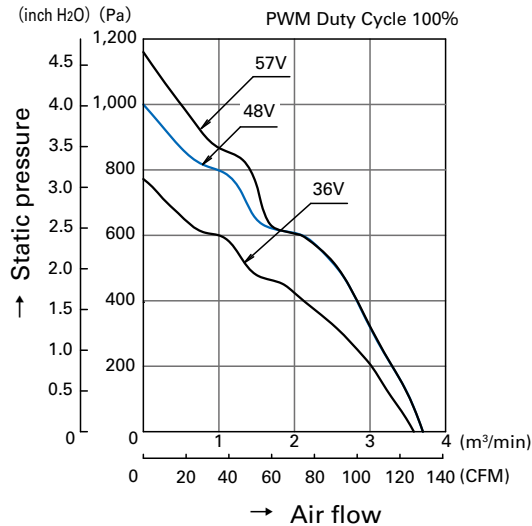
### • Operating Voltage Range



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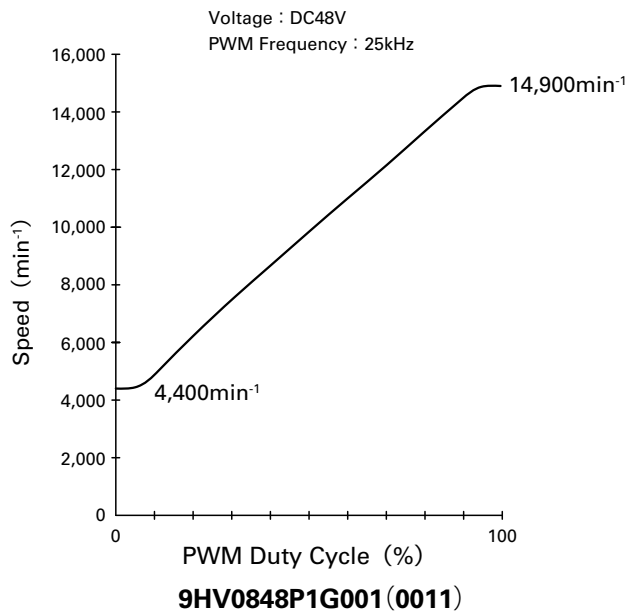
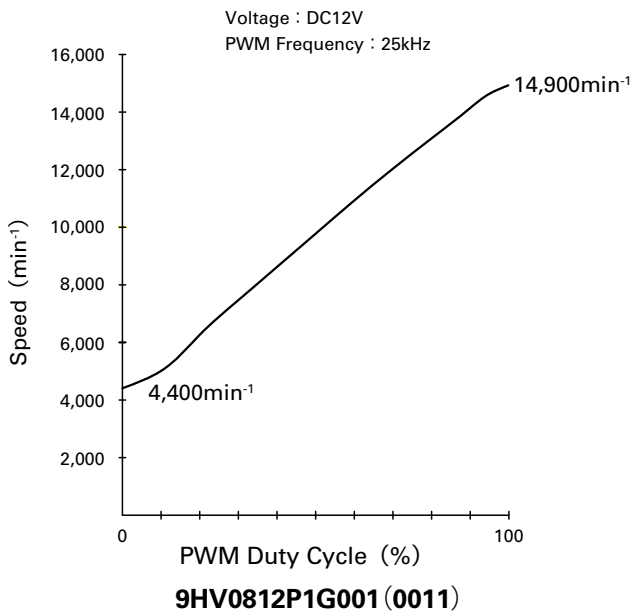


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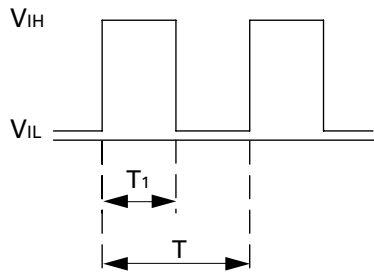
9HV0848P1G001 (0011)

## PWM Duty - Speed Characteristics Example



### PWM Input Signal Example

Input Signal Wave Form



$V_{IH} = 4.75V$  to  $5.25V$

$V_{IL} = 0V$  to  $0.4V$

$$\text{PWM Duty Cycle (\%)} = \frac{T_1}{T} \times 100$$

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

Source Current ( $I_{source}$ ) : 1mA Max. at control voltage 0V

Sink Current ( $I_{sink}$ ) : 1mA Max. at control voltage 5.25V

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

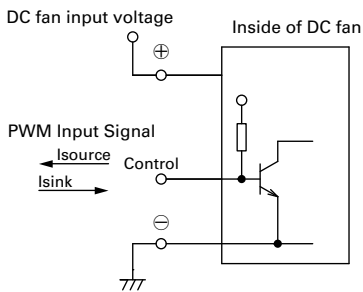
When the control lead wire is open,

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.

### Connection Schematic



### Specifications for Pulse Sensors

Output circuit : Open collector

**Rated Voltage 12V fan**

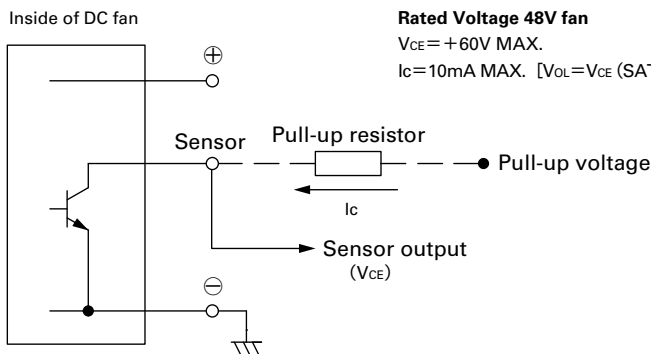
$V_{CE} = +15V$  MAX.

$I_C = 10mA$  MAX. [ $V_{OL} = V_{CE} (SAT) = 0.6V$  MAX.]

**Rated Voltage 48V fan**

$V_{CE} = +60V$  MAX.

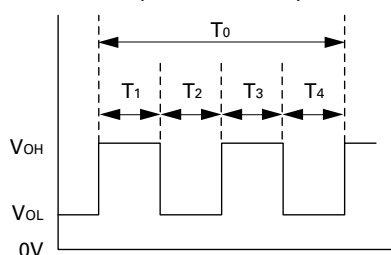
$I_C = 10mA$  MAX. [ $V_{OL} = V_{CE} (SAT) = 0.6V$  MAX.]



Output waveform (Need pull-up resistor)

In case of steady running

(One revolution)

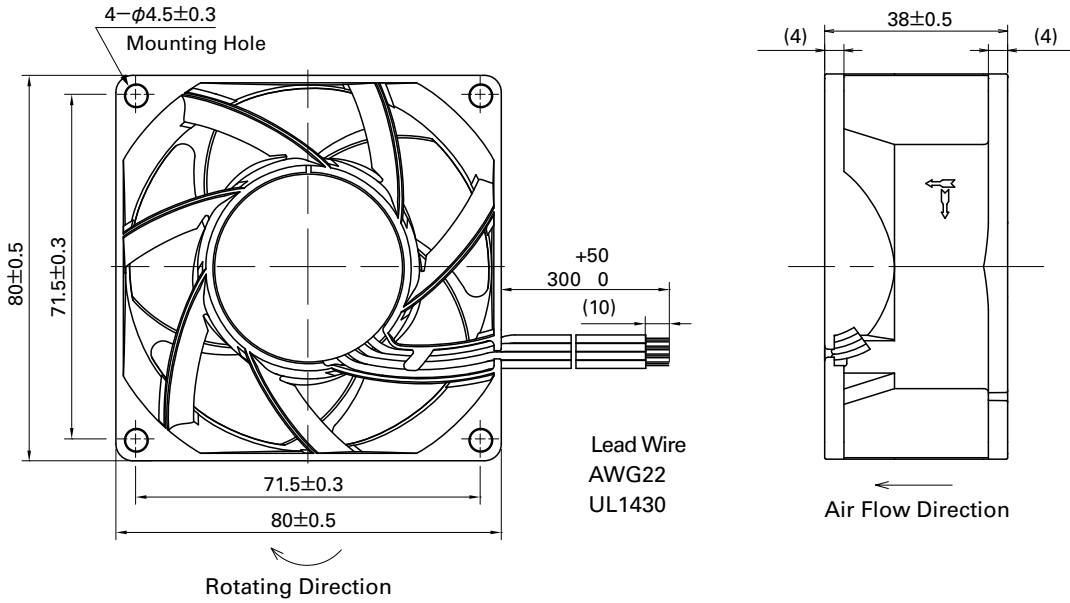


$$T_{1\sim 4} \doteq (1/4) T_0$$

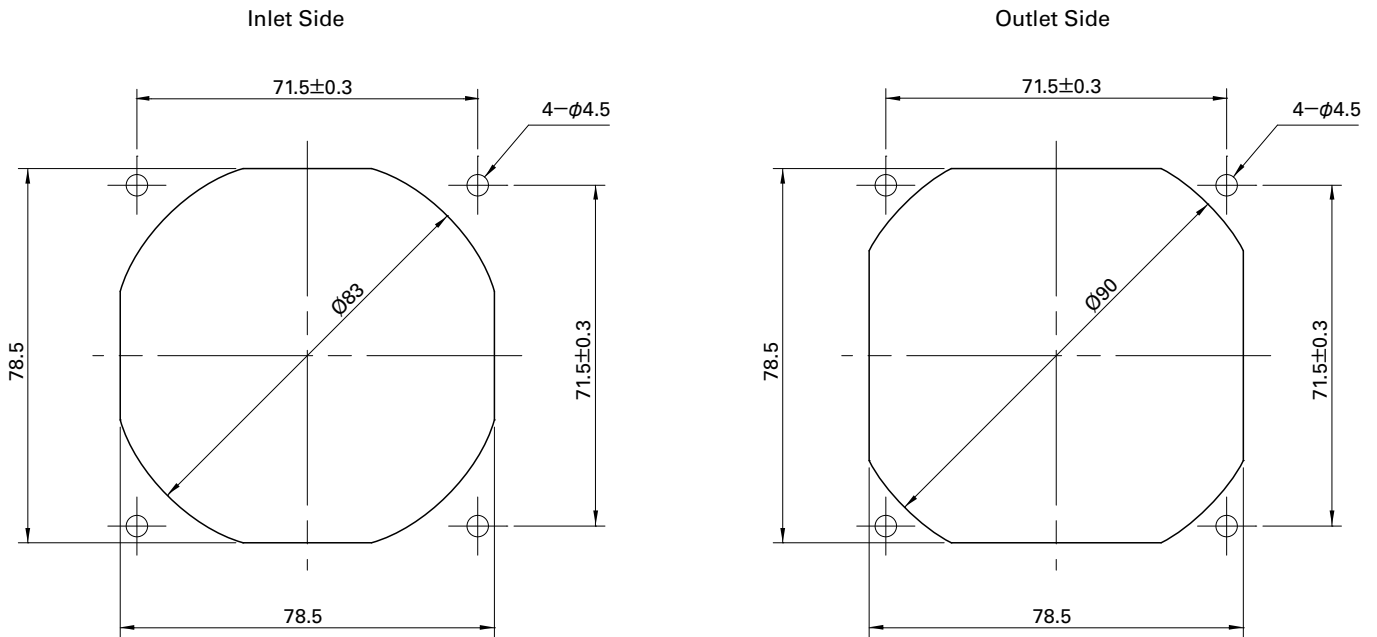
$$T_{1\sim 4} \doteq (1/4) T_0 = 60/4N \text{ (sec)}$$

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

**Dimensions (unit : mm) (with ribs)**



**Reference dimension of mounting holes and vent opening (unit : mm)**



**Notice**

- The products shown in the catalog are subject to Japanese Export Control Law. Diversion contrary to the law of exporting country is prohibited.
- To protect against electrolytic corrosion that may occur in locations with strong electromagnetic noise, we provide fans that are unaffected by electrolytic corrosion.

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