



# 120×120×38 mm

San Ace 120 9HV type

## General Specifications

- Material ..... Frame: Aluminum, Impeller: Plastic (Flammability: UL 94V-1)
- Expected life ..... See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage)
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection  
For details, please refer to p. 529.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- Sound pressure level (SPL) ..... At 1 m away from the air inlet
- Storage temperature ..... -30 to +70°C (Non-condensing)
- Lead wire ..... ⊕Red ⊖Black (Sensor) Yellow (Control) Brown
- Mass ..... 460 g

## Specifications

The models listed below **have pulse sensors with PWM control function.**

Model no.	Rated voltage [V]	Operating voltage range [V]	PWM duty cycle* [%]	Rated current [A]	Rated input [W]	Rated speed [min <sup>-1</sup> ]	Max. airflow [m <sup>3</sup> /min] [CFM]	Max. static pressure [Pa] [inchH <sub>2</sub> O]	SPL [dB (A)]	Operating temperature [°C]	Expected life [h]
9HV1224P1A001	24	21.6 to 26.4	100	2.4	57.6	9600	7.0 247	950 3.82	71	-20 to +70	40000/60°C (70000/40°C)
			0	0.37	8.88	3800	2.7 95	161 0.65	46		
9HV1248P1G001	48	36 to 60	100	2.0	96	11500	8.3 293	1300 5.22	75		
			0	0.23	11	3800	2.7 95	161 0.65	46		
9HV1248P1H001	48	36 to 60	100	1.4	67	10000	7.2 254	1050 4.22	72		
			0	0.23	11	3800	2.7 95	161 0.65	46		

\* PWM frequency: 25 kHz

Other sensor specifications are available as options. Refer to the index (p. 556).

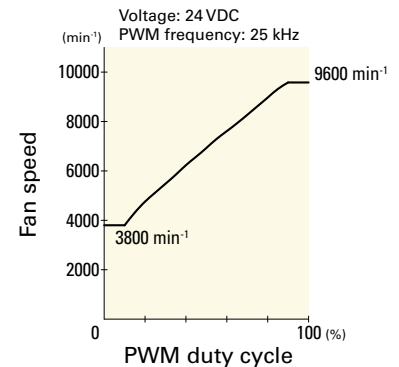
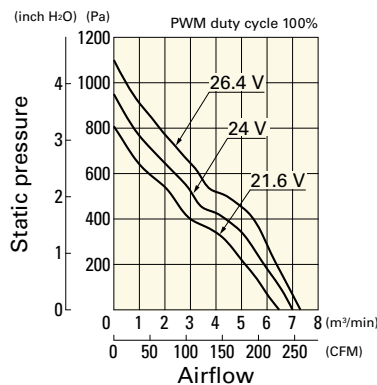
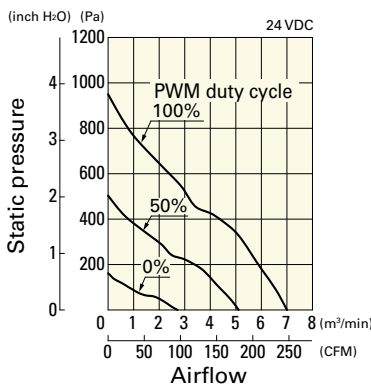
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

**9HV1224P1A001** With pulse sensor with PWM control function

PWM duty cycle

Operating voltage range

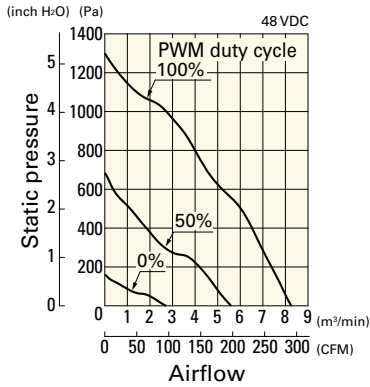
PWM duty - Speed characteristics example



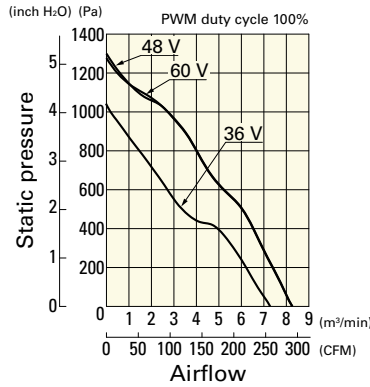
**Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example**

**9HV1248P1G001** With pulse sensor with PWM control function

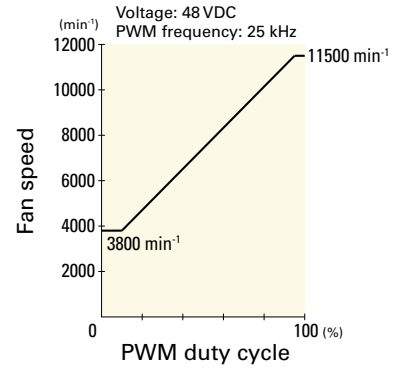
PWM duty cycle



Operating voltage range

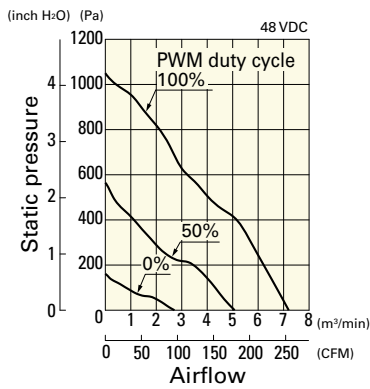


PWM duty - Speed characteristics example

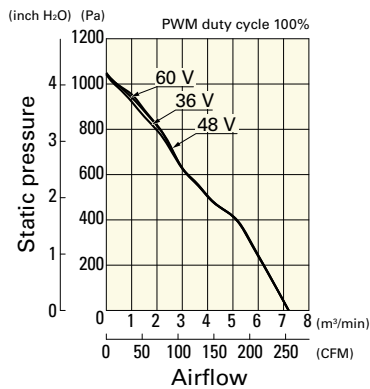


**9HV1248P1H001** With pulse sensor with PWM control function

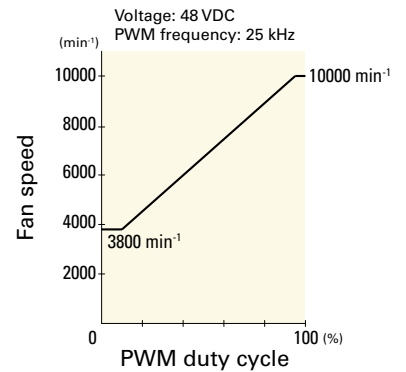
PWM duty cycle



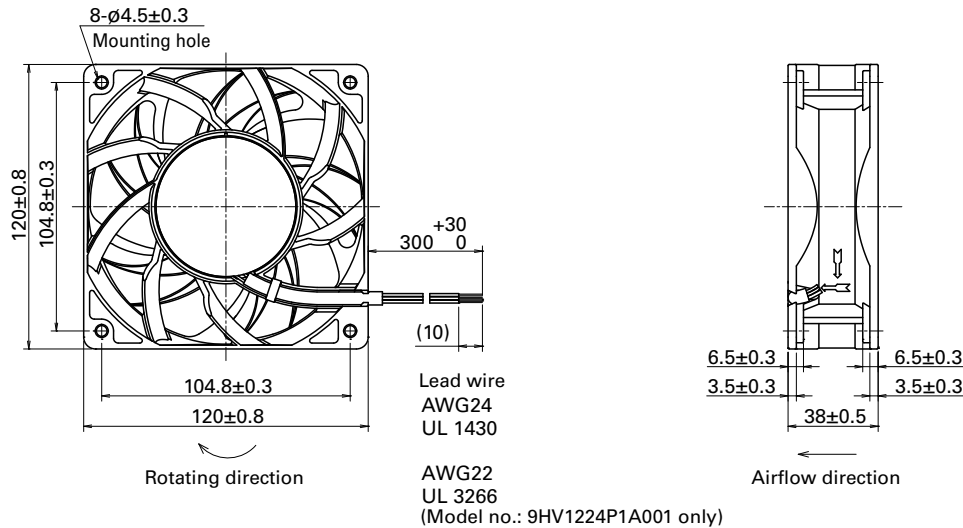
Operating voltage range



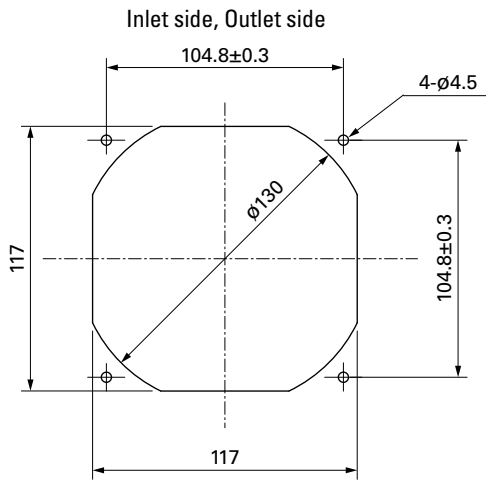
PWM duty - Speed characteristics example



**Dimensions (unit: mm)**



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



## Options

### Finger guards

page: p. 514

Model no.: 109-019C, 109-019H, 109-019E, 109-019K

### Resin finger guards

page: p. 520

Model no.: 109-1000G

### Resin filter kits

page: p. 521

Model no.: 109-1000F13 (13PPI), 109-1000F20 (20PPI),  
109-1000F30 (30PPI), 109-1000F40 (40PPI)

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[9HV1248H1002](#)