

# San Ace C100

## Centrifugal Fan

Centrifugal Fan 100mm

### ■ Features

#### Energy-saving

- Power consumption: 10.56 W

#### Low noise

- Sound Pressure Level: 60 dB(A)

#### Large air flow and high static pressure

- Maximum air flow : 1.77 m<sup>3</sup>/min
- Maximum static pressure : 560 Pa



φ 100mm × 25mm

### ■ Specifications Note 2)

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM Duty Cycle [%] <small>Note 1)</small>		Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Air Flow [m <sup>3</sup> /min] [CFM]		Static Pressure [Pa] [inchH <sub>2</sub> O]		SPL [dB(A)]	Operating Temperature [°C]	Life Expectancy [h]
			100	0				560	2.25	60	-10 to +70			
9TM48P4H01	48	36 to 60	100	0.22	10.56	6,400	1.77	62.5	560	2.25	60	-10 to +70	40,000	
			0	0.04	1.92	2,000	0.51	18.0	48	0.19	34			

Note 1 : PWM Frequency : 25kHz

Note 3 : When our inlet nozzle [Option (Model NO. :109-1080)] is mounted.

### ■ Common Specifications

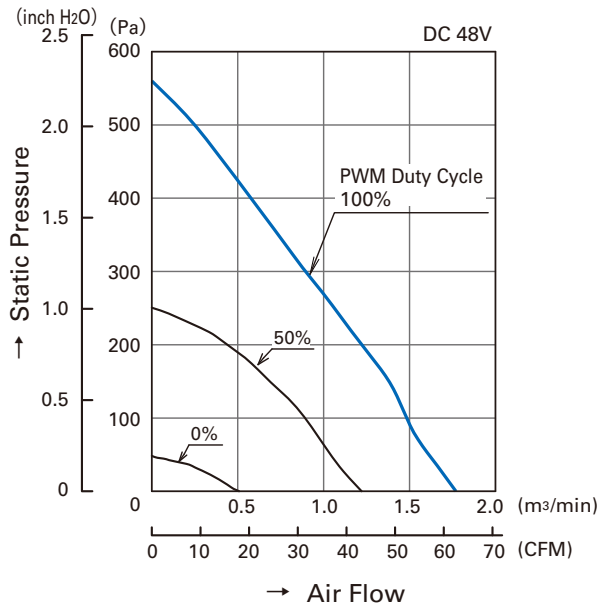
- Material ..... Frame: Aluminum, Impeller : Plastics (Flammability: UL94V-0)
- Life Expectancy ..... Varies for each model  
(L10: Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
- Motor Protection System ..... Current blocking function and Reverse polarity protection
- 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 Range ..... Varies for each model (Non-condensing)
- Lead Wire ..... ⊕red ⊖black Sensor : yellow Control : brown
- Mass ..... Approx. 150g

100mm

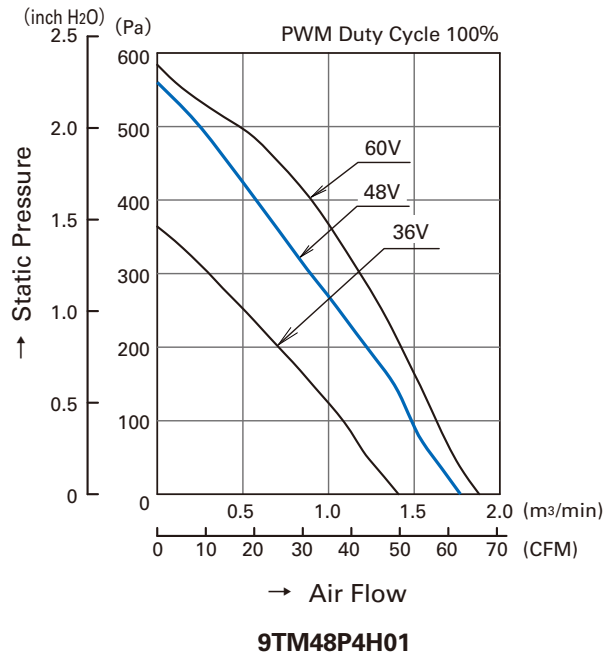
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## Air Flow and Static Pressure Characteristics

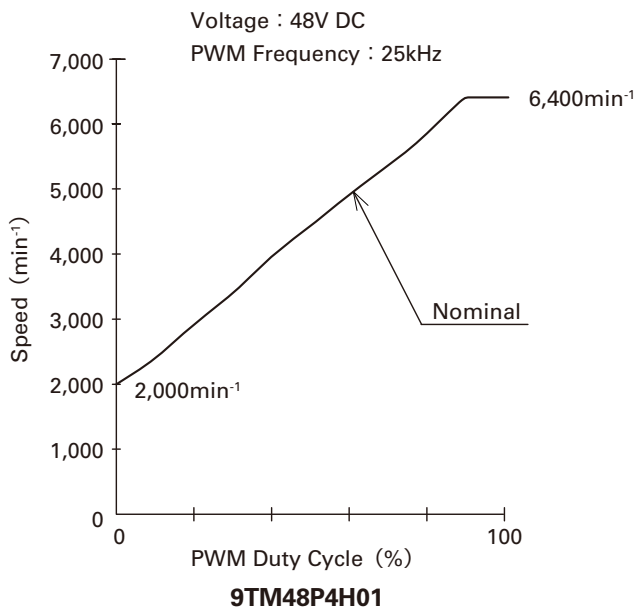
- PWM Duty Cycle



- Operating Voltage Range

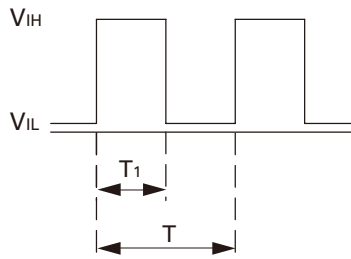


## PWM Duty - Speed Characteristics Example



**PWM Input Signal Example**

Input Signal Wave Form



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

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

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

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

Source Current : 2mA Max. at control voltage 0V

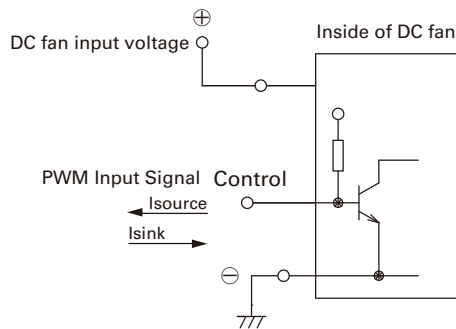
Sink Current : 1mA Max. at control voltage 5.25V

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

When the control lead wire is no connecting, the speed is the same speed as at 100% of PWM cycle.

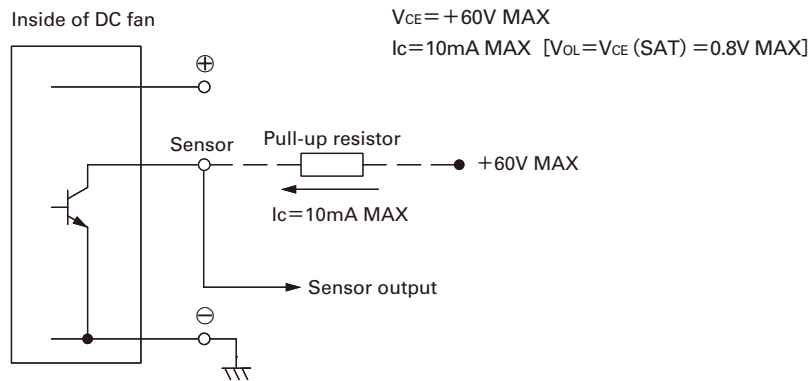
This fan speed should be controlled by PWM input signal of either TTL input or open collector, drain input.

**Connection Schematic**



**Specifications for Pulse Sensors**

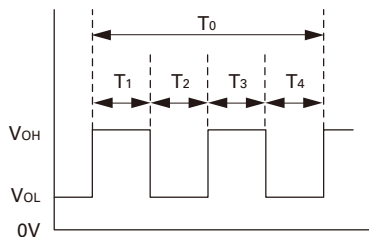
Output circuit : Open collector



Output waveform (Need pull-up resistor)

In case of steady running

(One revolution)



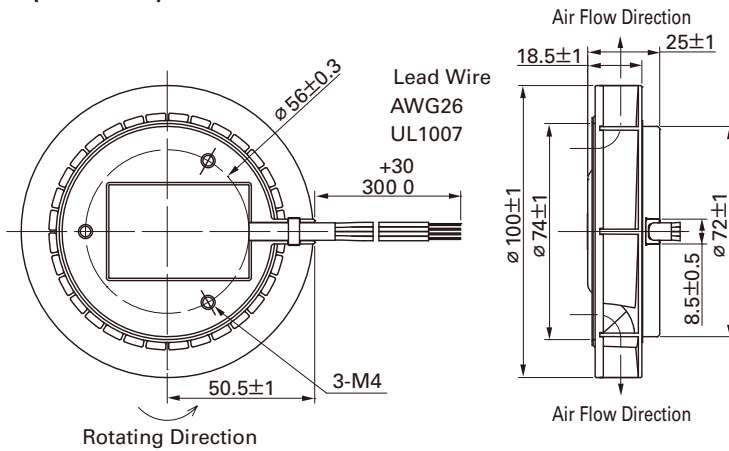
$T_{1-4} \doteq (1/4) T_0$

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

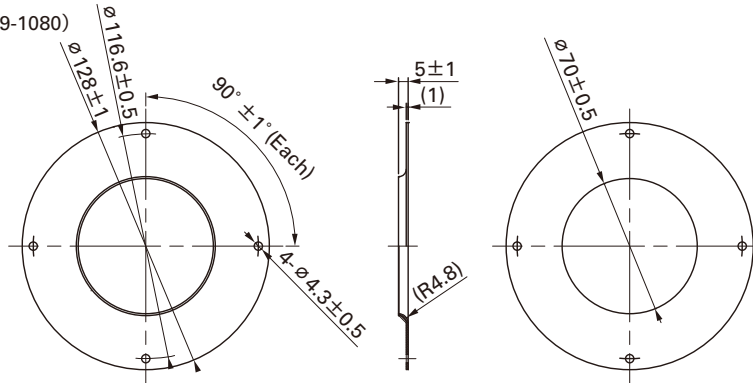
$N = \text{Fan speed (min}^{-1}\text{)}$

■ Dimensions (unit : mm)

Fan

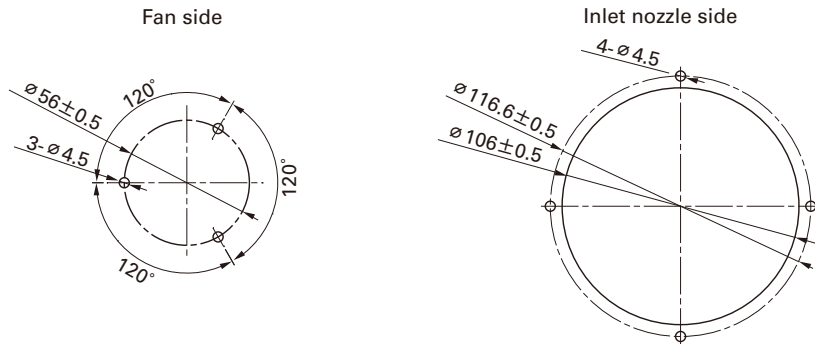


Inlet nozzle  
(Model No. : 109-1080)

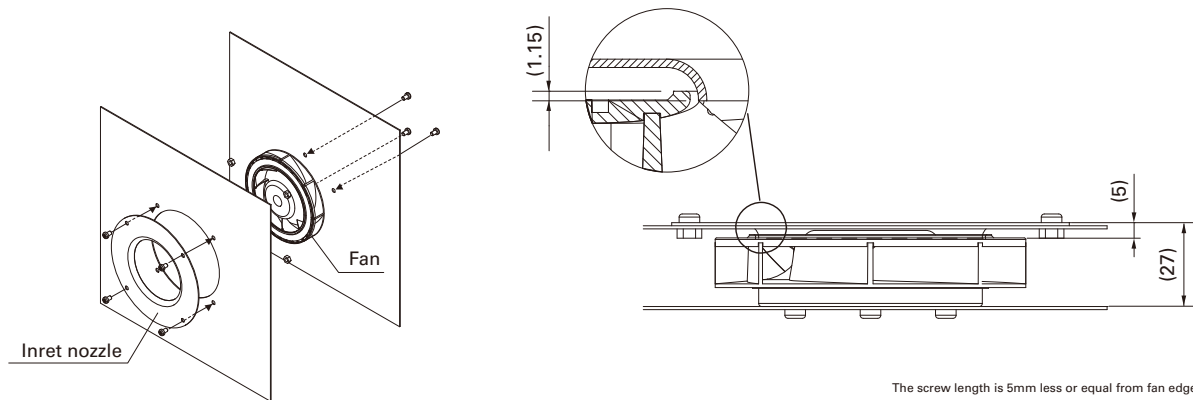


Inlet nozzle : Nozzle mounted in fan inlet side to adjust the flow of introduced air

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



■ Reference diagram for mounting



The screw length is 5mm less or equal from fan edge side.

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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