

# San Ace C150

## Centrifugal Fan

### ■ Features

#### Large air flow and high static pressure

- Maximum air flow : 3.83 m<sup>3</sup>/min (135 CFM)
- Maximum static pressure : 410 Pa (1.65 inchH<sub>2</sub>O)

#### Energy-saving design

- Power consumption: 14.9 W

#### Low noise

- Sound Pressure Level: 59 dB(A)



Centrifugal Fan 150mm

**φ 150mm × 35mm**

### ■ Specifications Note 3)

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM Duty Cycle [%] <small>Note 1,2)</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]
9TN24P1H01	24	20.4 to 27.6	100	0.62	14.9	3,800	3.83 135	410 1.65	59	-10 to +70	40,000
9TN48P1H01	48	36.0 to 55.2	100	0.32	15.4	3,800	3.83 135	390 1.57	59		

Note 1 : PWM Frequency : 25kHz

Note 2 : Fan does not rotate when PWM duty cycle is 0%.

Note 3 : When our inletnozzle [Option (Model : 109-1081)] is mounted.

Note 4 : Max input is 9TN24P1H01 : 21.4W, 9TN48P1H01 : 22W.

### ■ Common Specifications

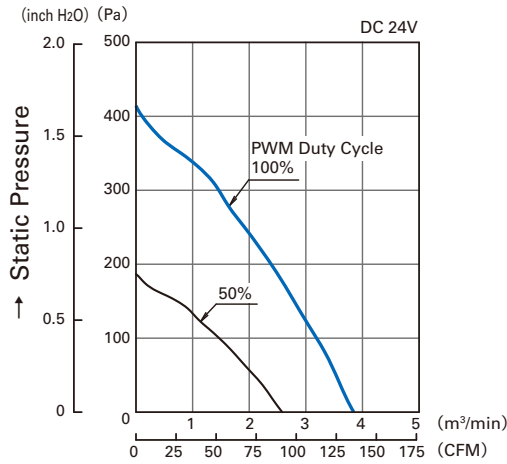
- Material ..... Frame: Aluminum, Impeller: Plastics (Flammability: UL94V-0)
- Life Expectancy ..... Varies for each model  
(L10: Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
- Motor Protection System ..... Current blocking function and Reverse polarity protection
- 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)
- Storage Temperature ..... -30°C to +70°C (Non-Condensing)
- Lead Wire ..... ⊕red ⊖black Sensor: yellow Control: brown
- Mass ..... Approx.330g

150mm

# San Ace C150

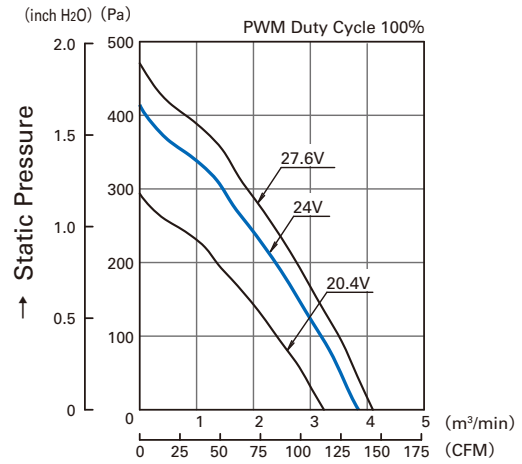
## Air Flow and Static Pressure Characteristics

### • PWM Duty Cycle

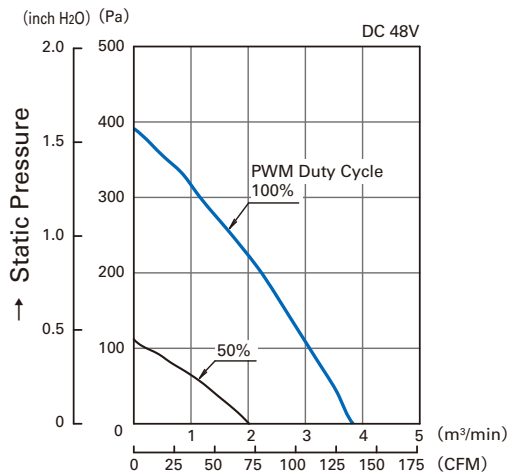


→ Air Flow  
**9TN24P1H01**

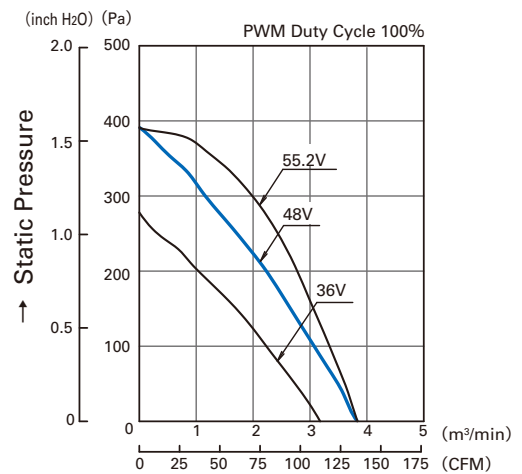
### • Operating Voltage Range



→ Air Flow  
**9TN24P1H01**

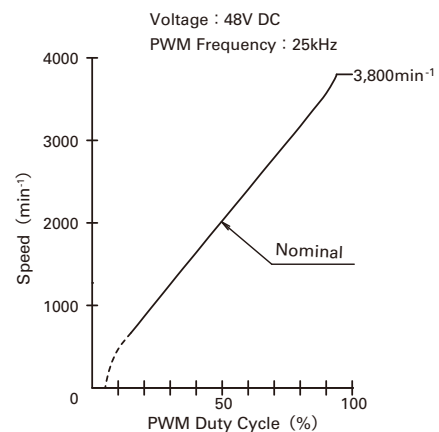
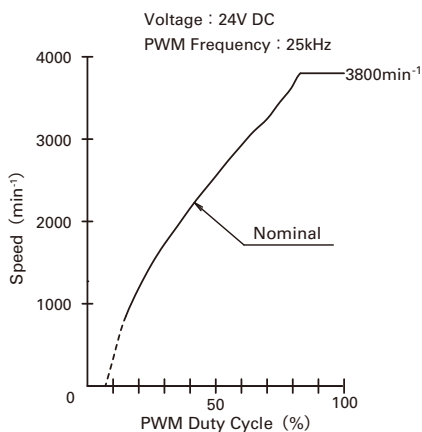


→ Air Flow  
**9TN48P1H01**



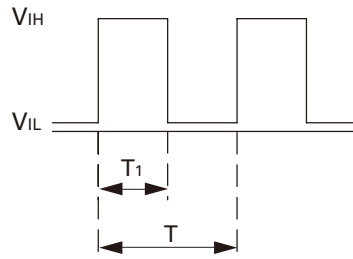
→ Air Flow  
**9TN48P1H01**

## 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 ( $I_{source}$ ) : 2mA Max. at control voltage 0V

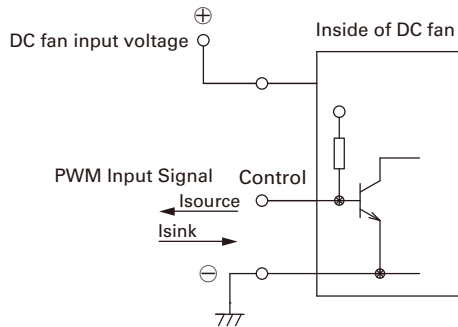
Sink Current ( $I_{sink}$ ) : 1mA Max. at control voltage 5.25V

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

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

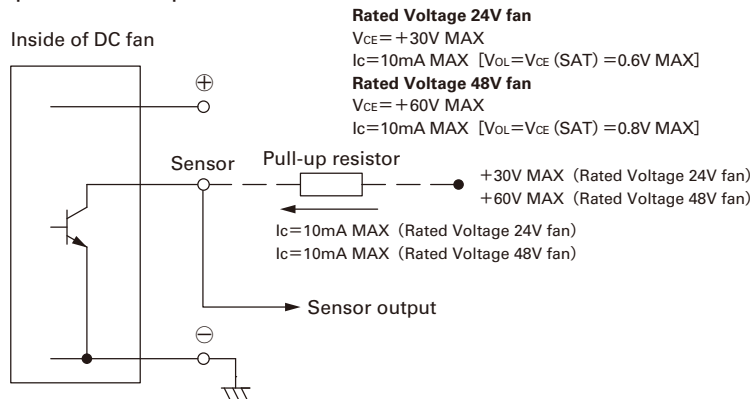
This fan speed should be controlled by PWM input signal of either TTL input or open collector, drain input.

**Connection Schematic**



**Specifications for Pulse Sensors**

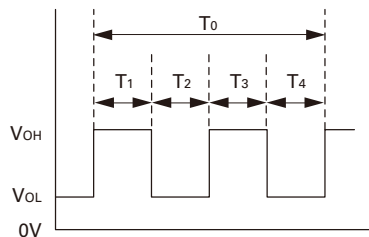
Output circuit : Open collector



Output waveform (Need pull-up resistor)

In case of steady running

(One revolution)

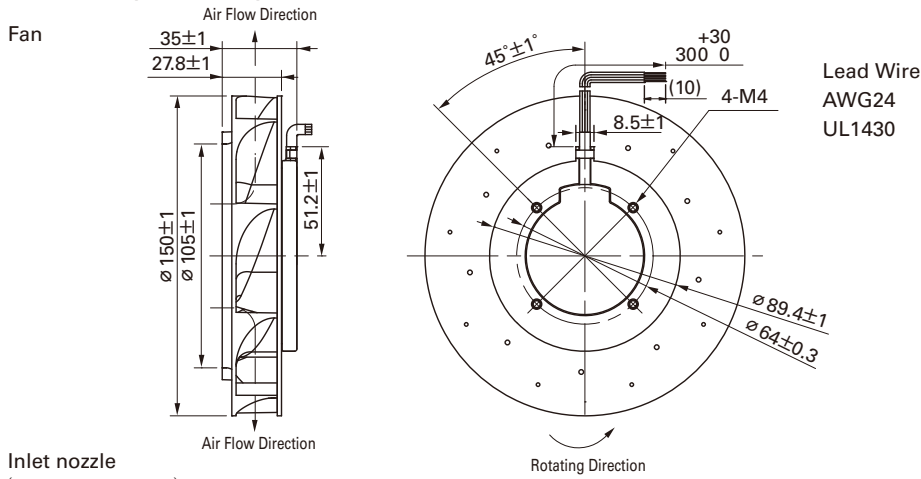


$T_{1-4} \doteq (1/4) T_0$

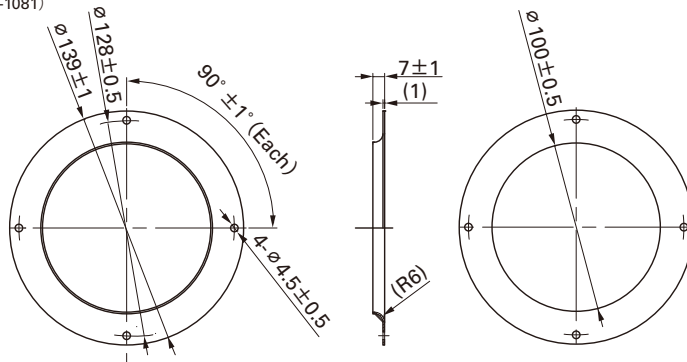
$T_{1-4} \doteq (1/4) T_0 = 60/4N$  (sec)

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

**Dimensions (unit : mm)**

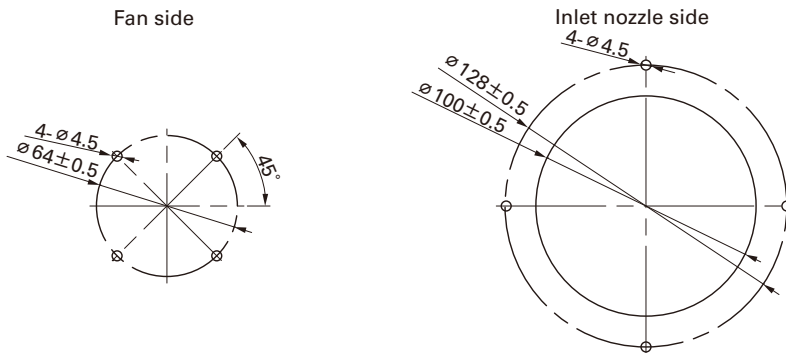


**Inlet nozzle**  
(Model No. : 109-1081)

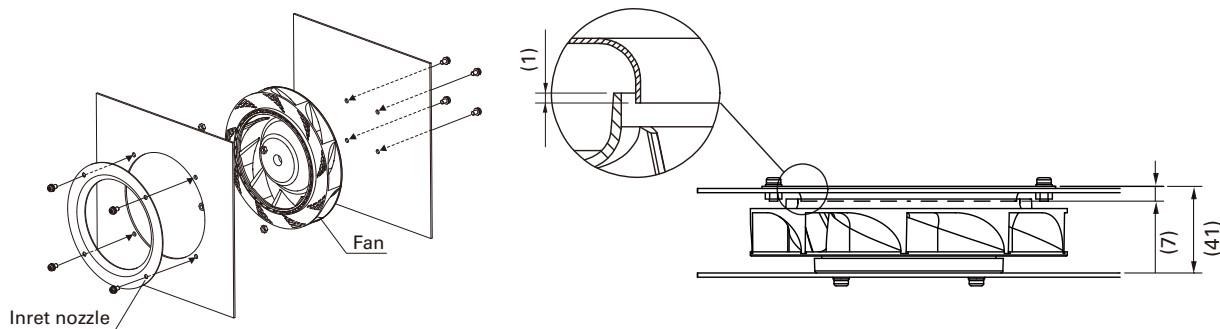


Inlet nozzle: Nozzle mounted in fan inlet side to adjust the flow of introduced air

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



**Reference diagram for mounting**



Screw length should be 4 mm or more but not exceeding 6 mm from fan edge face.

**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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CATALOG No. 889-1 '09.9