

San Ace C225^{9TS type}

Centrifugal Fan

Features

High Airflow and Static Pressure

- Maximum airflow: 28.1 m³/min^{*1}
- Maximum static pressure: 861 Pa^{*1}
- High cooling performance even in equipment with high system impedance

Low Noise and Energy Efficiency

- Sound pressure level: 70.5 dB(A)^{*2}
- Power consumption: 99.8 W^{*2}
- Maintains high airflow and static pressure while limiting noise and power consumption.

*1: Specification of Model No. 9TS48P0G001

*2: Specification of Model No. 9TS48P0H001



φ225 mm × 99 mm

Specifications

The following nos. have **PWM controls, pulse sensors.**

Model No.	Rated voltage [V]	Operating voltage range [V]	PWM duty cycle (Note1, 2) [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. Airflow [m³/min] [CFM]	Max. Static pressure [Pa] [inchH2O]	SPL [dB(A)]	Operating temperature [°C]	Expected life [h]	
9TS48P0G001	48	36 to 72	100	3.65	175.2	3,550	28.1 992	861 3.46	74.5	-20 to +60	40,000	
			15	0.24	11.5	1,000	7.85 277	68.5 0.28	52.0			
9TS48P0H001				100	2.08	99.8	2,900	22.7 801	590 2.37	70.5		-20 to +70
				15	0.24	11.5	1,000	7.85 277	68.5 0.28	52.0		

Note 1: PWM frequency: 25 kHz

Note 2: Fans do not rotate when PWM duty cycle is 0%.

Note 3: When inlet nozzle [Option (Model: 109-1134)] is mounted.

Note 4: Max input is 380 W at rated voltage.

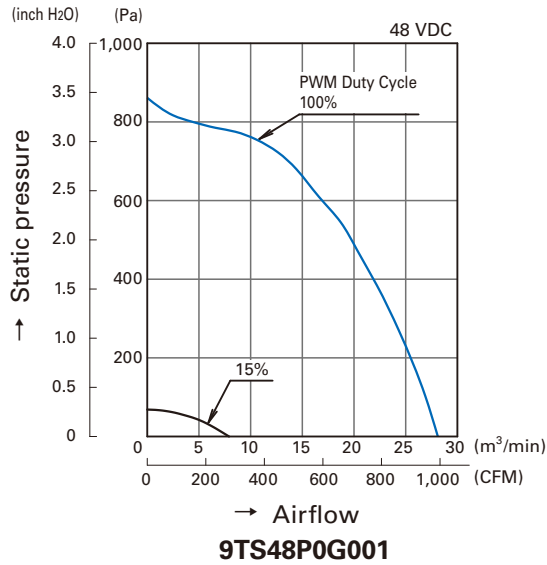
Available options: **Without Sensor**

Common Specifications

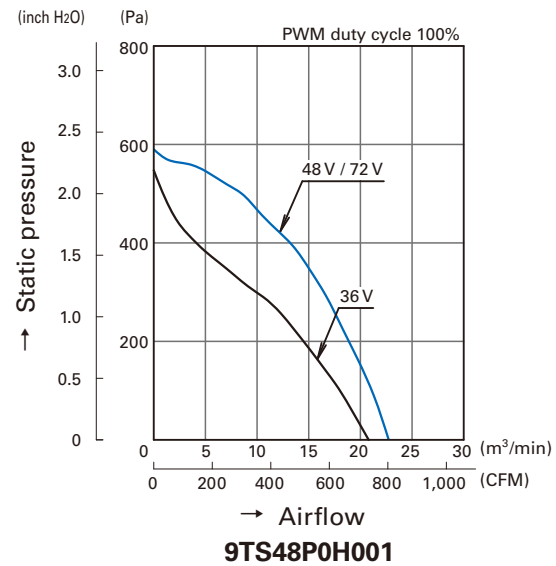
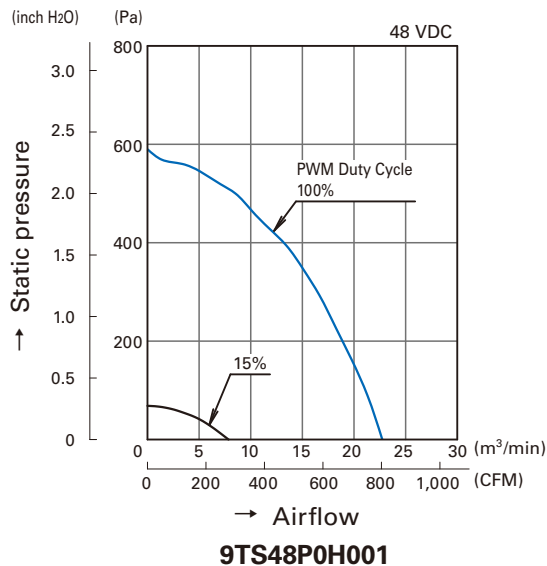
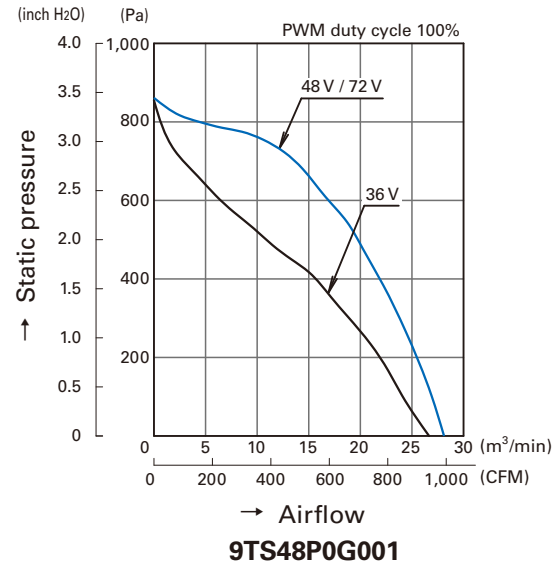
- ☐ Material Motor case: Aluminum, Impeller: Plastics (Flammability: UL94V-0)
- ☐ Expected life Refer to specifications
(L10: Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- ☐ Motor protection system Current blocking function and reverse polarity protection
- ☐ Dielectric strength 50 / 60 Hz, 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 °C to +70 °C (Non-condensing)
- ☐ Lead wire ⊕Red ⊖Black Sensor: Yellow Control: Brown
- ☐ Mass Approx. 1,220 g

Airflow - Static Pressure Characteristics

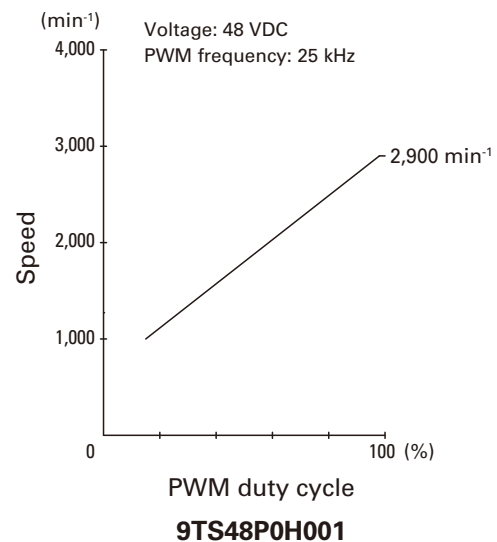
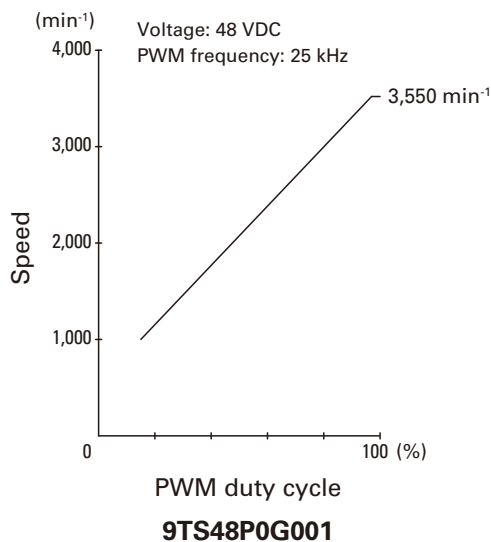
- PWM duty cycle



- Operating voltage range

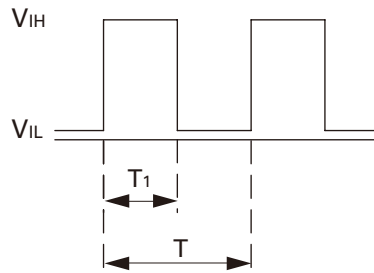


PWM Duty - Speed Characteristics Example



PWM Input Signal Example

Input signal waveform



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

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

PWM duty cycle (%) = $\frac{T_1}{T} \times 100$

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

Source current (I_{source}) : 1 mA max. at control voltage 0 V

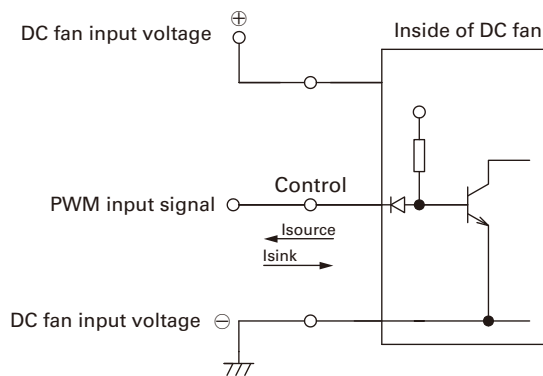
Sink current (I_{sink}) : 1 mA max. at control voltage 5.25 V

Control terminal voltage: 5.25 V max. (Open circuit)

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

Either TTL input, open collector or open drain can be used for PWM control input signal.

Example of Connection Schematic

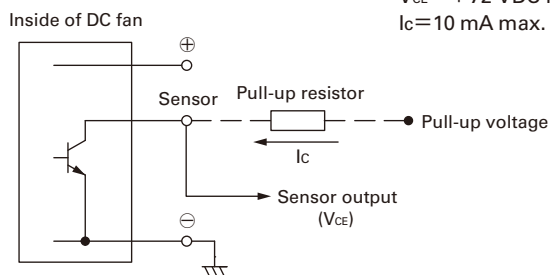


Specifications for Pulse Sensors

Output circuit: Open collector

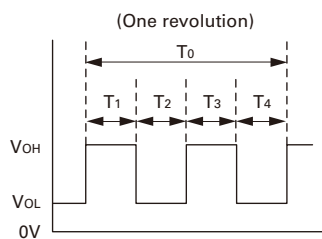
$V_{CE}=+72\text{ VDC max.}$

$I_c=10\text{ mA max. [}V_{CE}(\text{SAT})=1\text{ V max.]}$



Output waveform (Need pull-up resistor)

In case of steady running



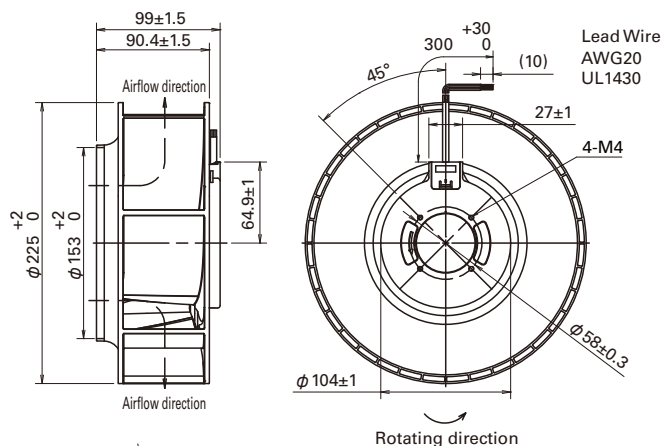
$T_1 \sim 4 \div (1/4) T_0$

$T_1 \sim 4 \div (1/4) T_0 = 60/4N \text{ (sec)}$

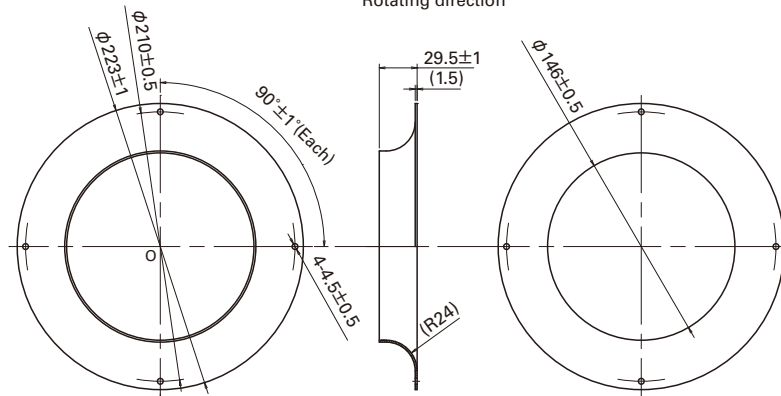
$N = \text{Fan speed (min}^{-1}\text{)}$

■ Dimensions (unit: mm)

Fan

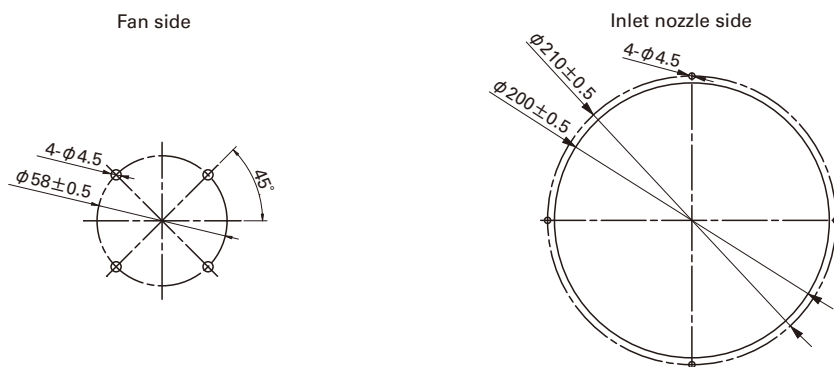


Inlet nozzle
(Model: 109-1134)
Material: Steel sheet
Surface treatment:
Electro nickel plating (silver)
Mass: 360 g

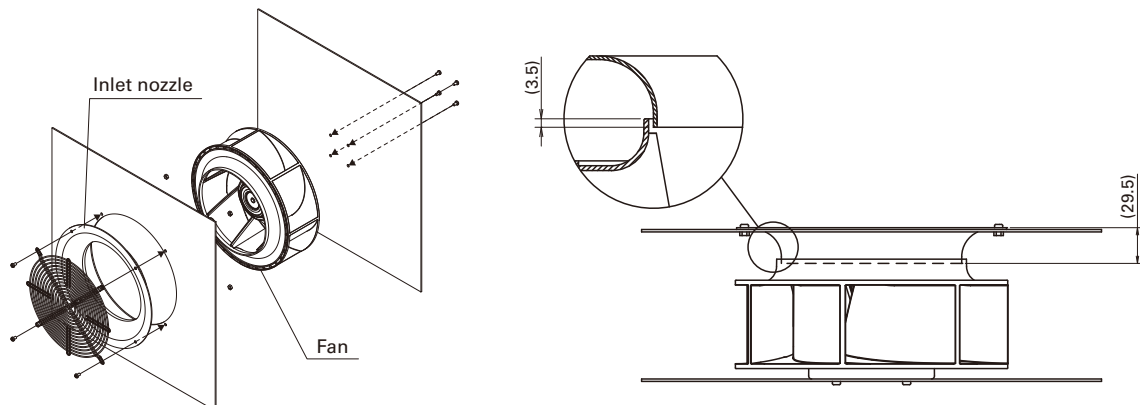


Inlet nozzle: Nozzle mounted in fan inlet side to adjust the flow of introduced air

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



■ Reference Diagram for Mounting



Notice

- Please read the "Safety Instructions" on our website once you have decided on a product for use.
- The products shown in this 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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