San Ace 40W
Splash Proof Fan

Features

Splash Proof and Dust Resistant
IP68 protection rating water and dust resistance.

Longest-Lasting Lifespan
This fan has an expected lifespan of 150,000 hours (approximately 17 years), about 1.5 times that of our conventional long life fan,*1 making them ideal for equipment that must operate without maintenance for extended periods.

High Airflow and High Static Pressure
Maximum airflow increased by approximately 2.8 times and maximum static pressure increased by approximately 6 times compared with our conventional splash proof fan.*2

*1: Specification of Model No. 9WL0412P3J001. Our conventional long life fan is 40 x 40 x 28 mm “San Ace 40L”, Model No. 9L0412J301.
*2: Specification of Model No. 9WL0412P3J001. Our conventional splash proof fan is 40 x 40 x 20 mm “San Ace 40W”, Model No. 9WP0412H6001.

40×40×28mm

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]	Max. Airflow [CFM]	Max. Static pressure [Pa]	Max. Static pressure [inchH₂O]	SPL [dB(A)]	Operating temperature [℃]	Expected life [h]
9WL0412P3J001	12	10.8 to 13.2	100	0.52	6.24	17,500	0.63	22.2	400	1.61	51	−20 to +70	150,000 / 60 ℃
			20	0.06	0.72	3,600	0.13	4.6	16.9	0.07	20		
9WL0412P3G001			100	0.40	4.80	15,500	0.56	19.7	310	1.24	47		
			20	0.06	0.72	3,300	0.12	4.2	14.0	0.06	18		
9WL0424P3J001	24	21.6 to 26.4	100	0.26	6.24	17,500	0.63	22.2	400	1.61	51		
			20	0.04	0.96	4,000	0.14	5.1	20.9	0.08	22		
9WL0424P3G001			100	0.20	4.80	15,500	0.56	19.7	310	1.24	47		
			20	0.04	0.96	3,000	0.11	3.8	11.6	0.05	16		

Note1: PWM frequency: 25 kHz
Note2: Fans do not rotate when PWM duty cycle is 0%.

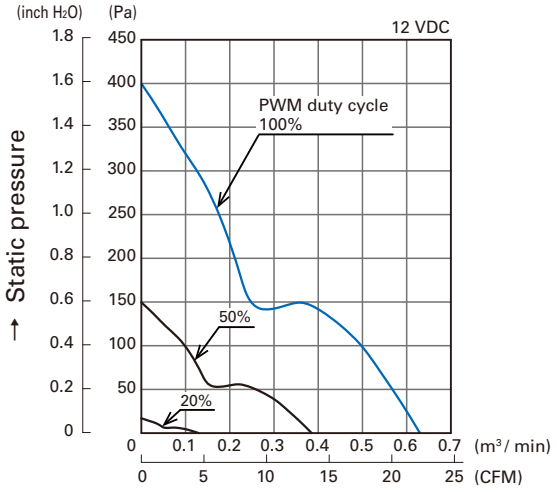
Available options: Without Sensor | Pulse Sensor

Common Specifications

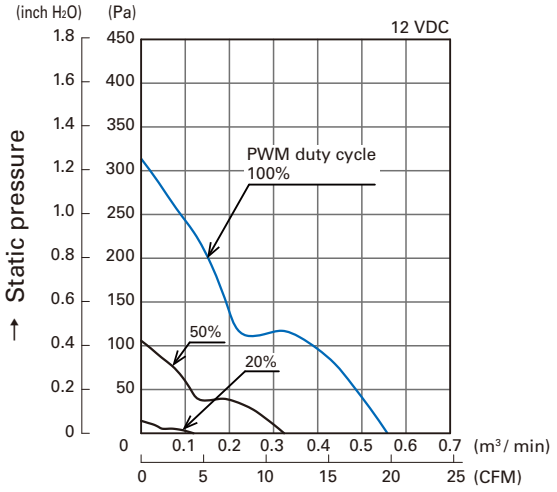
- ☐ Material ····· Frame: Aluminum (Black coating), Impeller: Plastics (Flammability: UL94V-0)
- ☐ Expected life ····· Refer to specifications
  (L10: Survival rate: 90% at 60 ℃, rated voltage, and continuously run in a free air state)
- ☐ Motor protection system ····· Current blocking function and reverse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

Airflow - Static Pressure Characteristics

- PWM duty cycle



9WL0412P3J001



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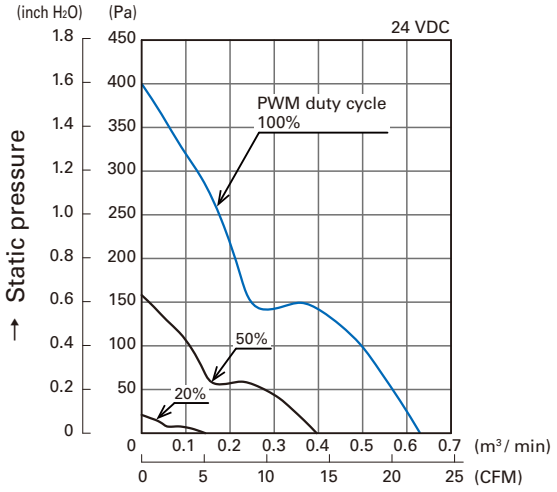

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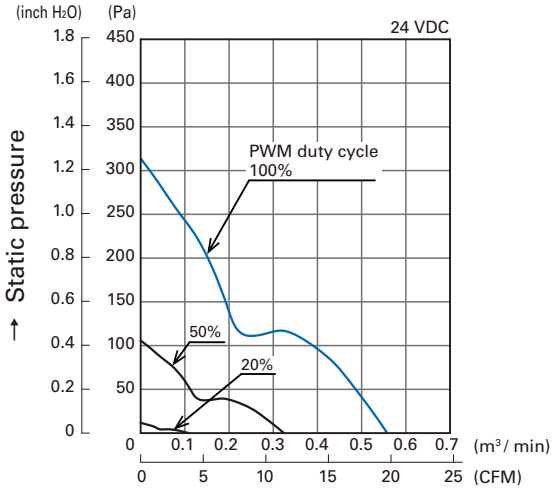

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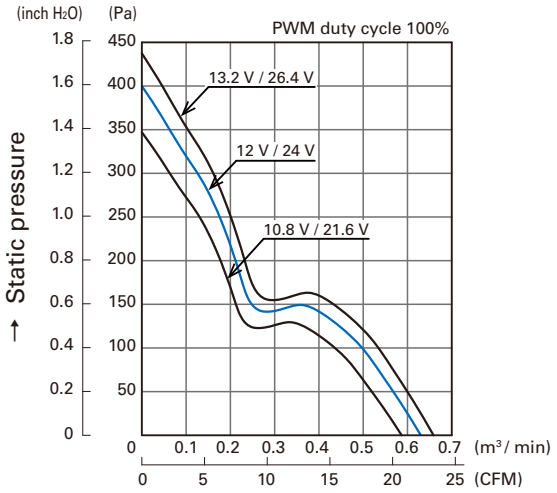
- Operating voltage range



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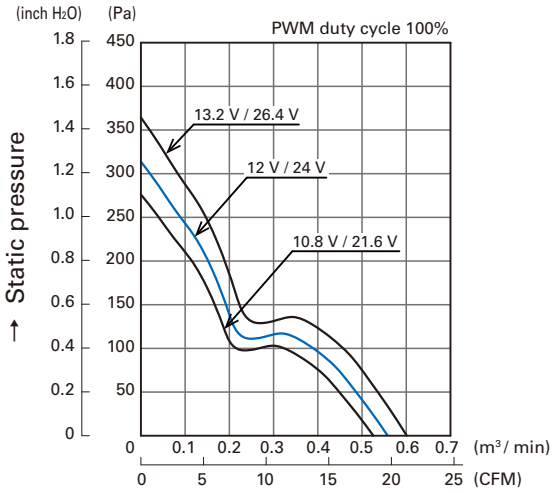

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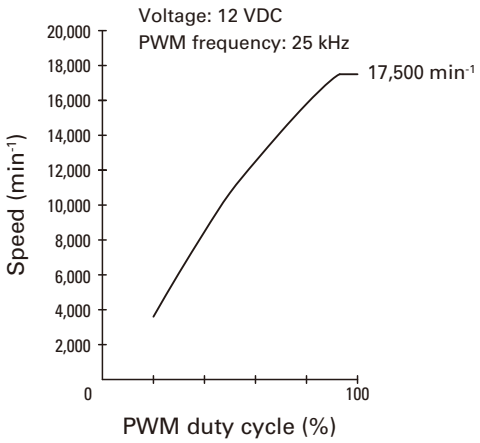
PWM Duty - Speed Characteristics Example



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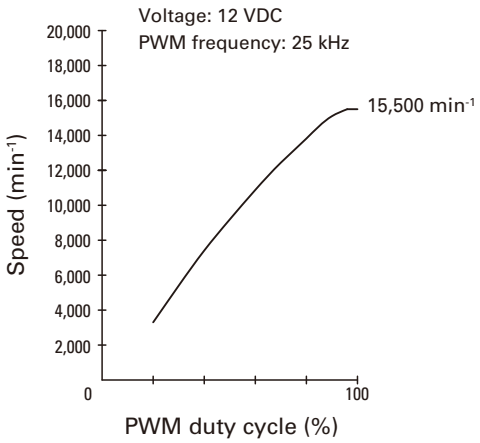

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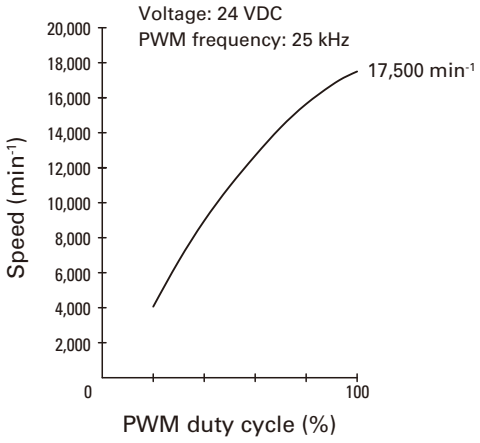

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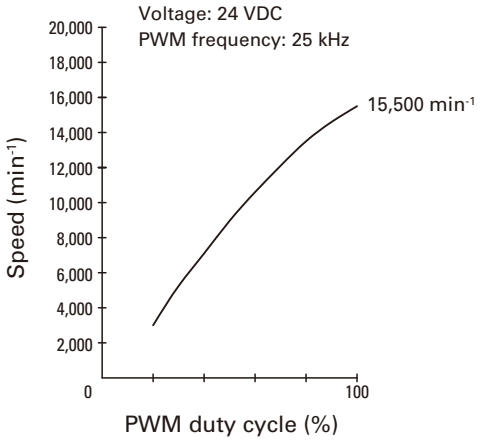

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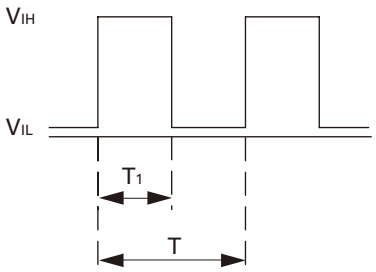
PWM Input Signal Example

Input signal waveform



Rated voltage 12 V fan

V_{IH}=2.8 V to 3.8 V V_{IL}=0 V to 0.4 V

PWM duty cycle (%) = $\frac{T1}{T} \times 100$ PWM frequency 25 (kHz) = $\frac{1}{T}$

Source current (Isource) : 3 mA max. at control voltage 0 V
Sink current (Isink) : 1 mA max. at control voltage 3.8 V
Control terminal voltage: 3.95 V max. (Open circuit)

Rated voltage 24 V fan

V_{IH}=4.75 V to 5.25 V V_{IL}=0 V to 0.4 V

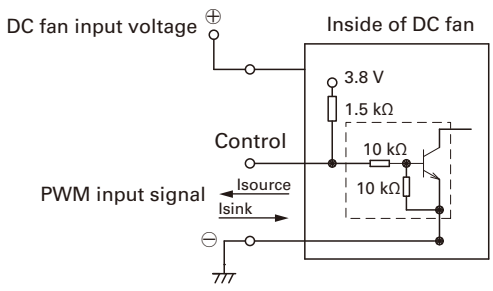
PWM duty cycle (%) = $\frac{T1}{T} \times 100$ PWM frequency 25 (kHz) = $\frac{1}{T}$

Source current (Isource) : 1 mA max. at control voltage 0 V
Sink current (Isink) : 1 mA max. at control voltage 5.25 V
Control terminal voltage: 5.3 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



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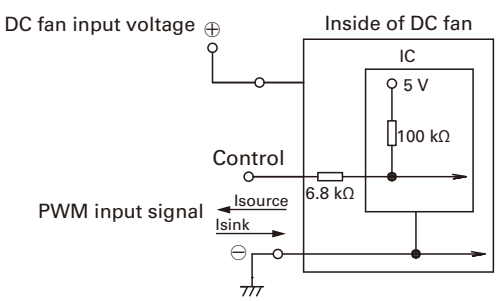

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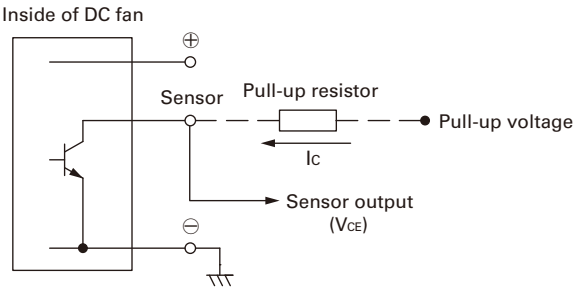
Specifications for Pulse Sensors

Output circuit: Open collector

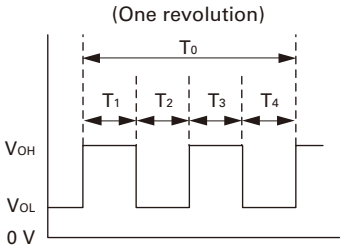


Rated voltage 12 V fan
V_{CE} = +13.8 V max.
Ic = 5 mA max. [V_{CE} (SAT) = 0.6 V max.]

Rated voltage 24 V fan
V_{CE} = +27.6 V max.
Ic = 5 mA max. [V_{CE} (SAT) = 0.8 V max.]

Output waveform (Need pull-up resistor)

In case of steady running

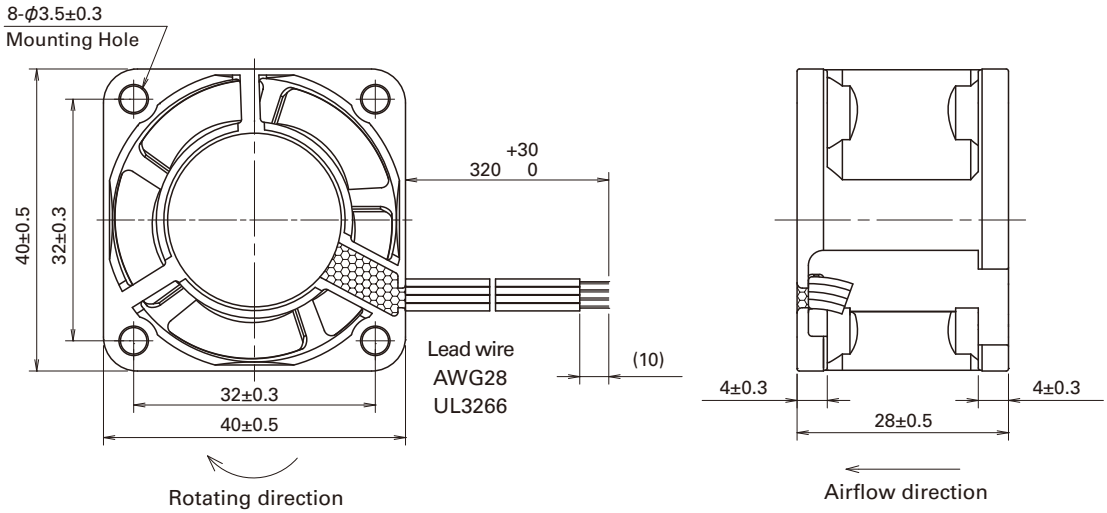


$T_{1\sim4} \fallingdotseq$ (1/4) T_0

$T_{1\sim4} \fallingdotseq$ (1/4) T_0 = 60/4N (sec)

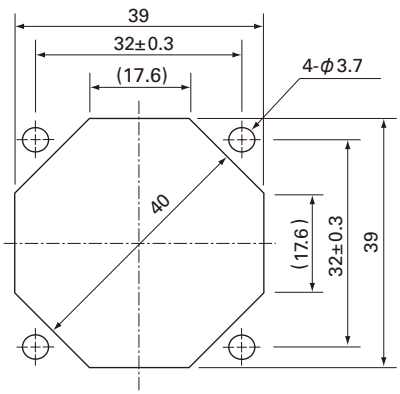
N = Fan speed (min^{-1})

Dimensions (unit: mm)



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

Inlet side, Outlet side



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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