

San Ace 80 ^{9CRB} type

High Airflow Counter Rotating Fan

Features

High Airflow and High Static Pressure

The maximum airflow increased by approximately 22% compared with our conventional counter rotating fan, while maintaining equivalent maximum static pressure.*

It's a perfect cooling solution especially for densely-packed equipment.

Suitable for 2U Devices

Measuring 80 mm square, this new fan is ideal for 2U sized equipment.

*: Our conventional counter rotating fan is 80 x 80 x 80 mm "San Ace 80" 9CRA type, Model No. 9CRA0812P8G001.



80×80×80 mm

Specifications

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

Model no.	Rated voltage [V]	Operating voltage range [V]	PWM duty cycle (Note 1,2) [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]		Max. airflow [m ³ /min] [CFM]		Max. static pressure [Pa] [inchHzO]		SPL [dB(A)]	Operating temperature [°C]	Expected life (Note 3) [h]
						Inlet	Outlet							
9CRB0812P8G001	12	10.8 to 13.2	100	9.2	110.4	14,600	12,200	5.5	194	1,150	4.6	80	-20 to +70	40,000 / 60 °C (70,000 / 40 °C)
			20	0.17	2.04	2,000	1,670	0.7	24.7	21.6	0.09			

Note 1: PWM frequency: 25 kHz Note 2: Fan does not rotate when PWM duty cycle is 0%. Note 3: Expected life at 40 °C ambient is just reference value.

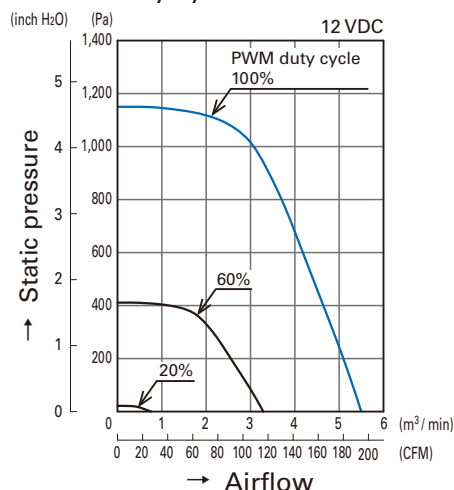
Models with the following sensor specifications are also available as options: **Pulse sensor**

Common Specifications

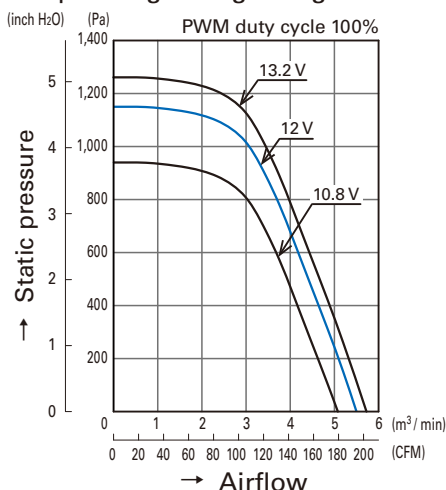
- Material Frame, Impeller: Plastics (Flammability: UL94V-0)
- Expected life Refer to specifications
(L10: Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- Motor protection system Current blocking function and reverse polarity protection
- Dielectric strength 50 / 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 Inlet: ⊕ Red ⊖ Black Sensor: Yellow Control: Brown
Outlet: ⊕ Orange ⊖ Gray Sensor: Purple Control: White
- Mass 430 g

Airflow - Static Pressure Characteristics

• PWM duty cycle

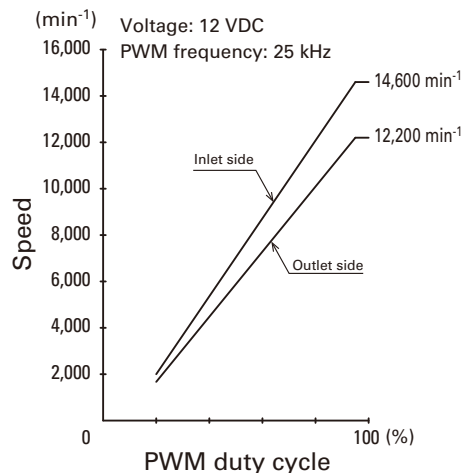


• Operating voltage range



PWM Duty

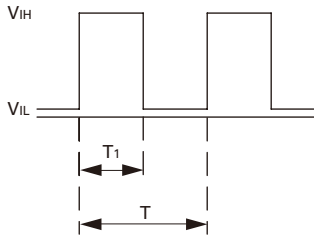
- Speed Characteristics Example



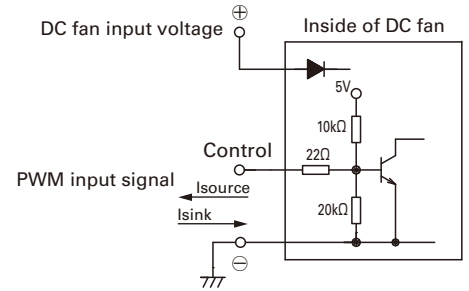
PWM Input Signal Example

Example of Connection Schematic

Input signal waveform



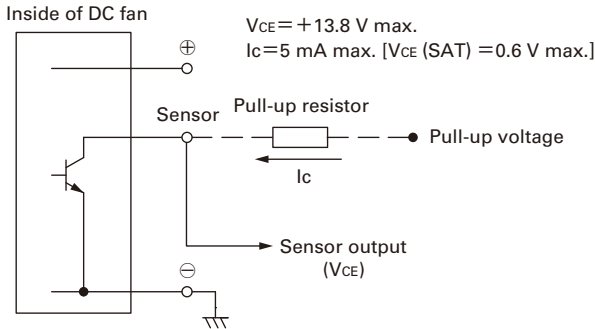
$V_{IH}=4.75\text{ V to }5.25\text{ V}$
 $V_{IL}=0\text{ V to }0.4\text{ V}$
 $\text{PWM duty cycle (\%)} = \frac{T_1}{T} \times 100$
 $\text{PWM frequency } 25\text{ (kHz)} = \frac{1}{T}$
 Source current (I_{source}): 2 mA max. at control voltage 0 V
 Sink current (I_{sink}): 2 mA max. at control voltage 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.



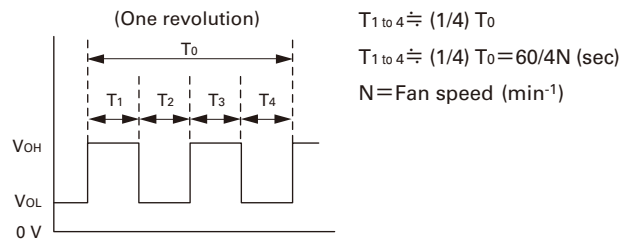
Specifications for Pulse Sensors

Output circuit: Open collector

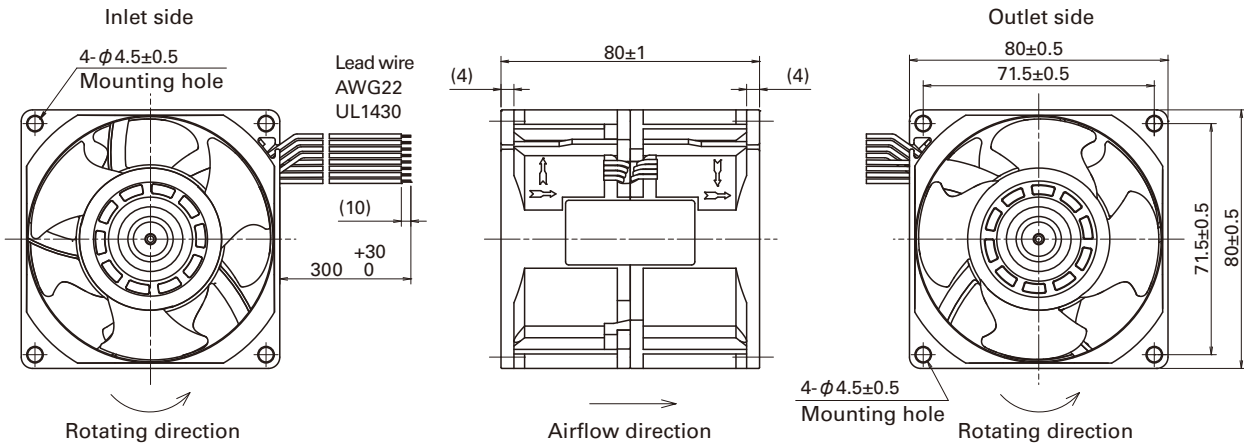
Output waveform (Need pull-up resistor)



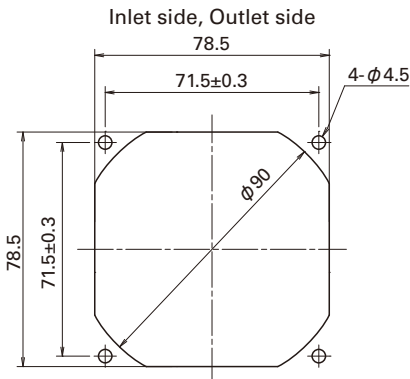
In case of steady running



Dimensions (unit: mm)



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



Notice

- Please read the "Safety Precautions" on our website before using the product.
- The products shown in this catalog are subject to Japanese Export Control Law. Diversion contrary to the law of exporting country is prohibited.
- For protecting fan bearings against electrolytic corrosion near strong electromagnetic noise sources, we provide effective countermeasures such as Electrolytic Corrosion Proof Fans and EMC guards. Contact us for details.

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Specifications are subject to change without notice.

CATALOG No. C1055B002 '16.6