

# San Ace 40 9RA type

## DC Fan

### Features

#### Low Noise

Compared to our current model <sup>(1)</sup> noise level has been reduced by 4 dB(A).

#### Low Power Consumption

Power consumption has been reduced by about 49% <sup>(3)</sup> compared to the current model. <sup>(2)</sup>

#### Contribution to SDGs

Made with lead-free brass, this fan complies with the RoHS Directive. <sup>(4)</sup> It is also certified as an Eco Product <sup>(5)</sup> for its use of environmentally friendly resources and technologies.

(1) Current model: 40 x 40 x 28 mm San Ace 40 9P type DC Fan

(2) Current model: 40 x 40 x 28 mm San Ace 40 9P type DC Fan (model: 109P0412H301)

(3) For a model 9RA0412H3001

(4) The RoHS (Restriction of Hazardous Substances) Directive restricts the use of certain hazardous substances in electrical and electronic equipment distributed within the European Union.

(5) Eco Products are eco-friendly products designed to reduce the environmental impact of the product and its packaging materials compared to our existing products or equivalent marketed products if not offered by us. Our products are assessed over the product's life cycle against our own eco-design requirements including product size, weight, power consumption, and CO<sub>2</sub> emissions, and those meeting our standards and higher standards qualify as Eco Products and Eco Products Plus, respectively.



## 40 x 40 x 28 mm

### Specifications

The models listed below **have ribs and pulse sensors.**

Model no.	Rated voltage [V]	Operating voltage range [V]	Rated current [A]	Rated input [W]	Rated speed [min <sup>-1</sup> ]	Max. airflow [m <sup>3</sup> /min] [CFM]	Max. static pressure [Pa] [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating temperature [°C]	Expected life [h]
9RA0405H3001	5	4.5 to 5.5	0.22	1.10	9600	0.31 10.9	115 0.460	33	-20 to +70	60000/60°C (90000/40°C)
9RA0405F3001			0.14	0.70	7400	0.23 8.1	68.3 0.270	26		
9RA0412H3001	12	7 to 13.8	0.10	1.20	9600	0.31 10.9	115 0.460	33		
9RA0412F3001			0.06	0.72	7400	0.23 8.1	68.3 0.270	26		
9RA0412M3001			0.035	0.42	4600	0.14 4.9	26.4 0.100	16		
9RA0424H3001			24	12 to 27.6	0.05	1.20	9600	0.31 10.9		
9RA0424F3001	0.03	0.72			7400	0.23 8.1	68.3 0.270	26		

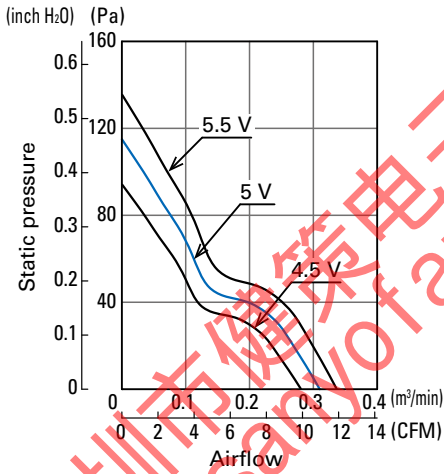
Models with the following sensor specifications are also available as options: **Without sensor** **Lock sensor**

### Common Specifications

- Material ..... Frame: Plastic (Flammability: UL 94V-0), Impeller: Plastic (Flammability: UL 94V-0)
- Expected life ..... Refer to specifications  
(L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage)  
Expected life at 40°C is for reference only.
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ min. at 500 VDC (between lead wire conductors and frame)
- Sound pressure level (SPL) ..... A-weighted sound pressure level (SPL) at 1 m away from the air inlet.
- Operating temperature ..... Refer to specifications (Non-condensing)
- Storage temperature ..... -30 to +70°C (Non-condensing)
- Lead wire ..... ⊕ Red ⊖ Black (Sensor) Yellow
- Mass ..... 40 g

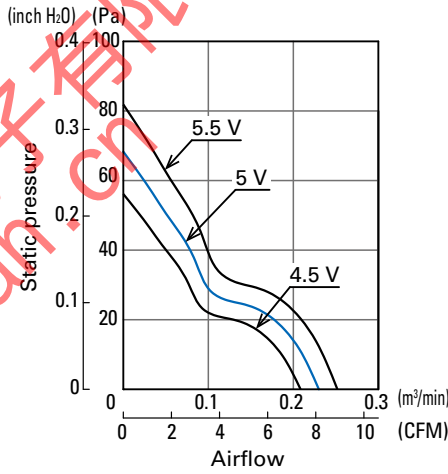
## Airflow - Static Pressure Characteristics

Operating voltage range



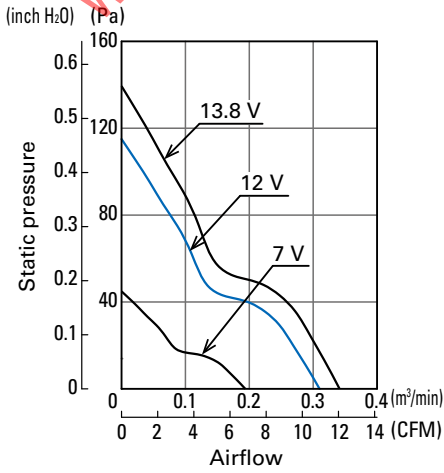
**9RA0405H3001**

Operating voltage range



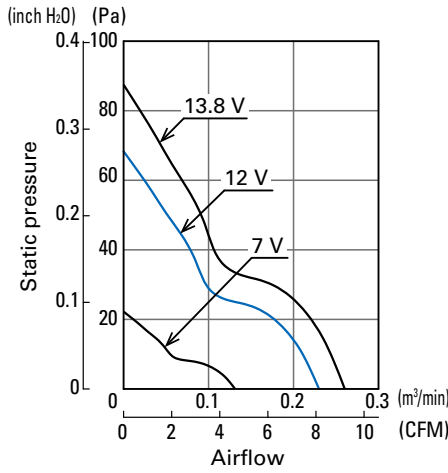
**9RA0405F3001**

Operating voltage range



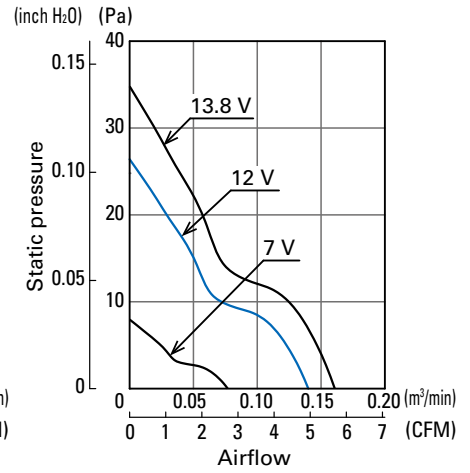
**9RA0412H3001**

Operating voltage range



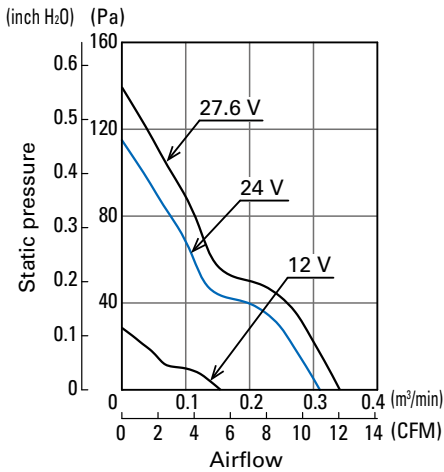
**9RA0412F3001**

Operating voltage range



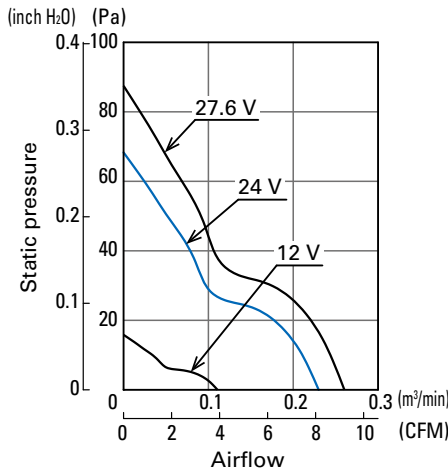
**9RA0412M3001**

Operating voltage range



**9RA0424H3001**

Operating voltage range

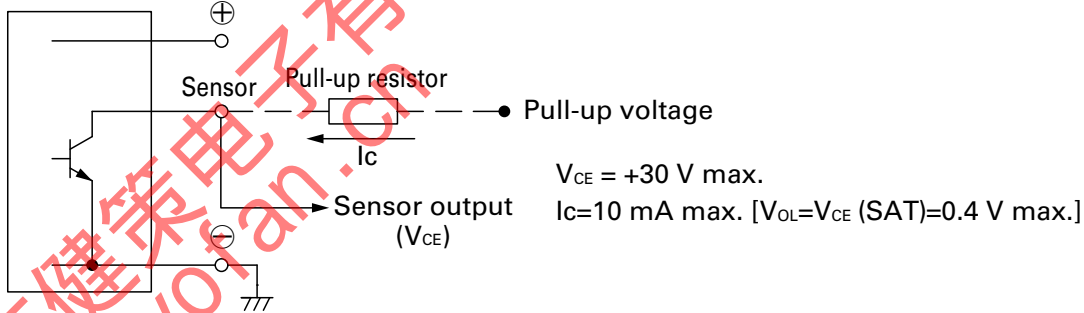


**9RA0424F3001**

■ Specifications for Pulse Sensors

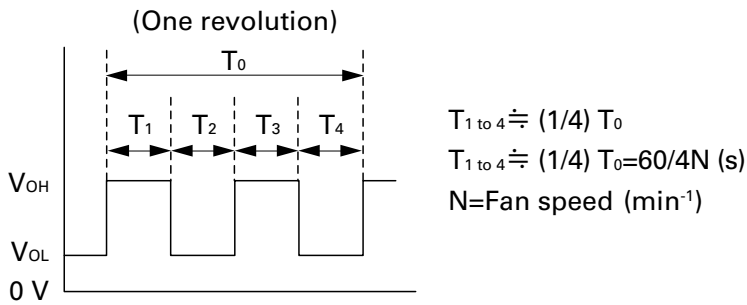
Output circuit: Open collector

Inside of DC fan

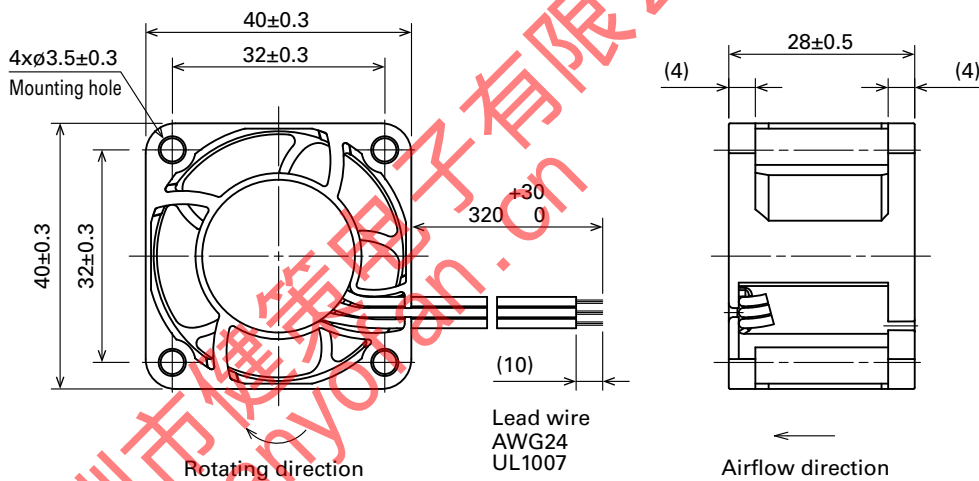


Output waveform (Need pull-up resistor)

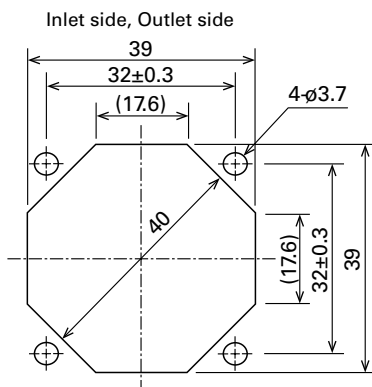
In case of steady running



## Dimensions (unit: mm)



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



## Options

Finger guards

Model no.: 109-059, 109-059H