

# San Ace 80L LG type

## High Air Flow Long Life Fan

### Features

#### Long Life

The San Ace 80L LG type has an expected life of 180,000 hours (approximately 20 years), 1.8 times that of our conventional long life fan,<sup>\*1</sup> making this fan ideal for equipment that must operate without maintenance for extended periods.

#### High Air Flow and High Static Pressure

The maximum air flow of the San Ace 80L LG type is approximately 1.7 times and its maximum static pressure is approximately 3.5 times that of our conventional long life fan.<sup>\*1</sup>

#### Low Power Consumption

The power consumption of this new fan is approximately 33% lower than that of our conventional long life fan.<sup>\*2</sup>



\*1 Specification of Model No. 9LG0812P4J001. Our conventional long life fan is 80 x 80 x 25 mm "San Ace 80L", Model No. 109L0812S401.

\*2 Specification of Model No. 9LG0812P4H001. When air flow and static pressure performance is almost identical. Our conventional long life fan is 80 x 80 x 25 mm "San Ace 80L", Model No. 109L0812H401.

**80×80×25mm**

### Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM Duty Cycle [%] <sup>Note1</sup>	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min] [CFM]	Max. Static Pressure [Pa] [inch H <sub>2</sub> O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9LG0812P4J001	12	10.8 to 13.2	100	0.6	7.2	7,400	2.07 73.0	177 0.71	49	-10 to +70	180,000
			20 <sup>Note2</sup>	0.06	0.72	1,800	0.50 17.6	10.4 0.04	16		
9LG0812P4G001			100	0.30	3.60	5,500	1.54 54.3	98 0.39	43		
			25 <sup>Note2</sup>	0.05	0.60	1,400	0.39 13.7	6.3 0.02	14		
9LG0812P4H001			100	0.12	1.44	3,700	1.03 36.3	44 0.17	31		
			25 <sup>Note2</sup>	0.04	0.48	1,100	0.30 10.5	3.9 0.01	13		
9LG0824P4J001	24	21.6 to 26.4	100	0.28	6.72	7,400	2.07 73.0	177 0.71	49		
			20 <sup>Note2</sup>	0.05	1.20	2,400	0.67 23.6	18.6 0.07	22		
9LG0824P4G001			100	0.14	3.36	5,500	1.54 54.3	98 0.39	43		
			20 <sup>Note2</sup>	0.02	0.48	1,200	0.33 11.6	4.6 0.01	13		
9LG0824P4H001			100	0.05	1.2	3,700	1.03 36.3	44 0.17	31		
			30 <sup>Note2</sup>	0.02	0.48	1,100	0.30 10.5	3.9 0.01	13		

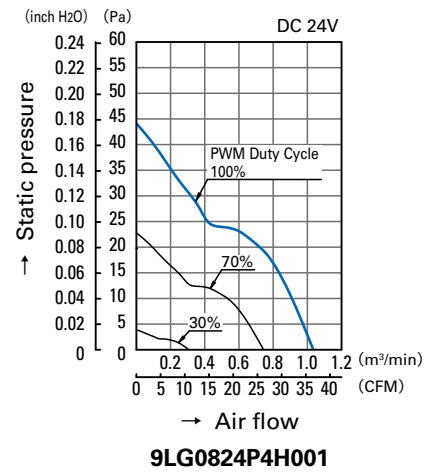
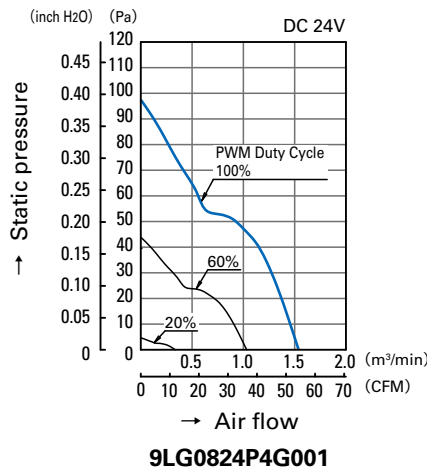
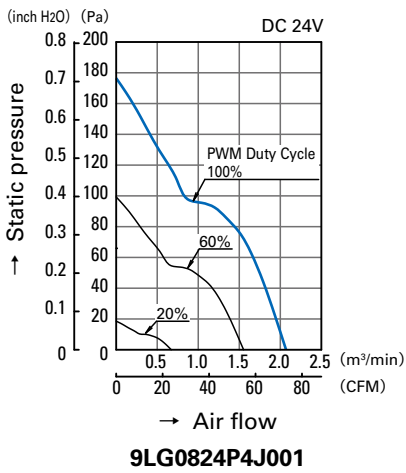
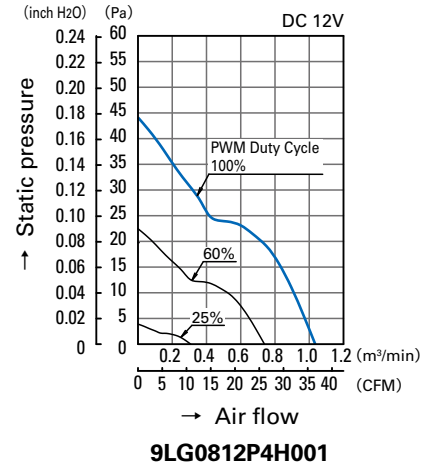
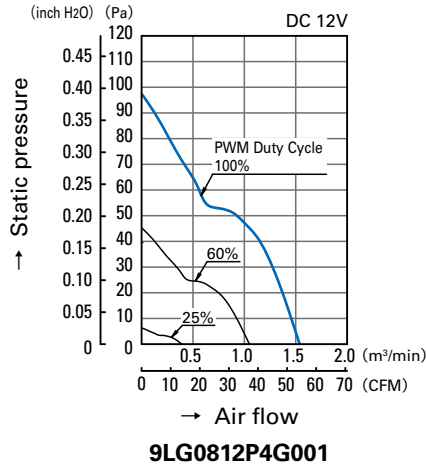
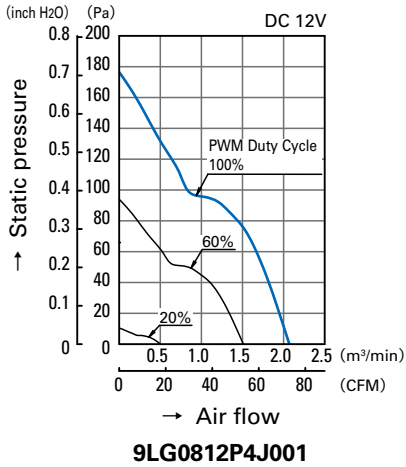
Note1 : PWM Frequency : 25kHz Fans do not rotate when PWM duty cycle is 0%.  
 Note2 : Minimum startup duty cycle

### Common Specifications

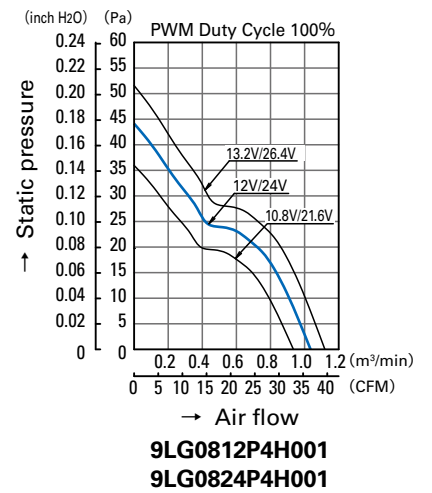
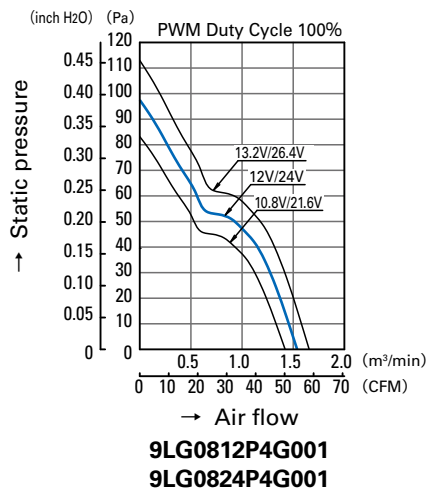
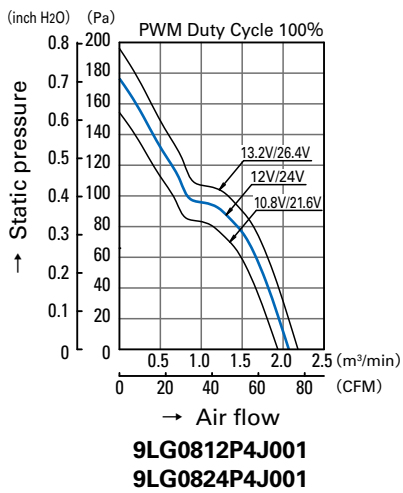
- Material ..... Frame : Aluminum, Impeller : Plastics (Flammability: UL94V-1)
- Expected Life ..... Varies for each model  
(L10: Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
- Motor Protection System ..... Current blocking function and Reverse polarity protection
- 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 ..... 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. 130g

## Air Flow - Static Pressure Characteristics

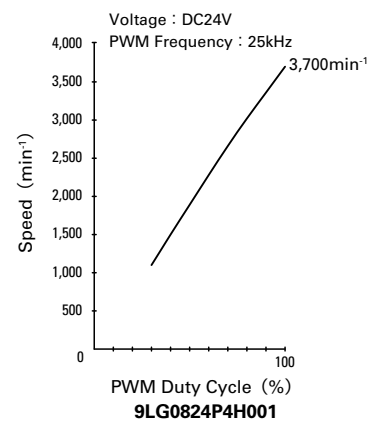
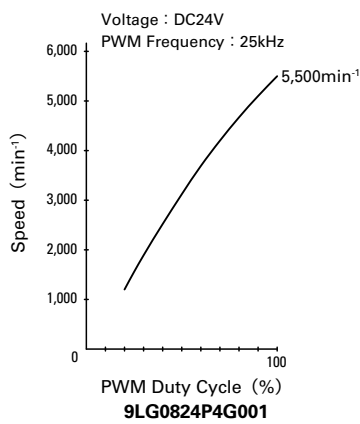
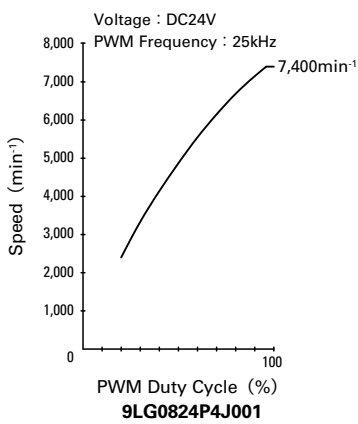
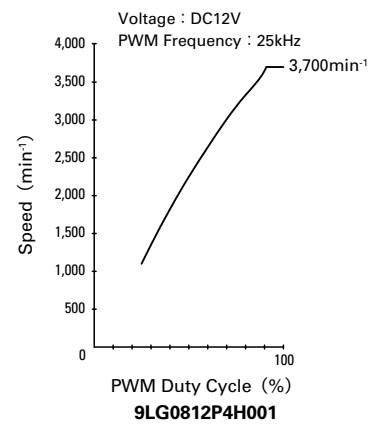
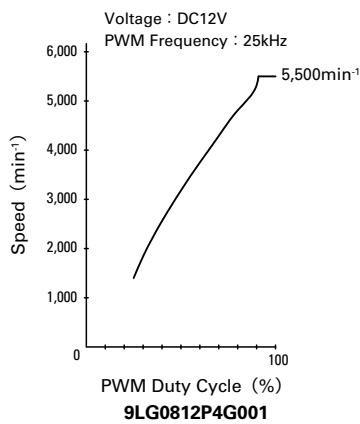
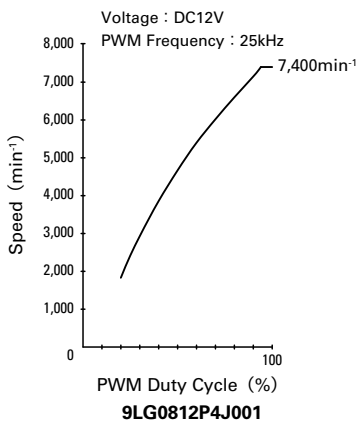
### PWM Duty Cycle



### Operating Voltage Range

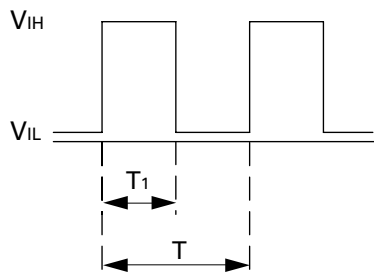


### PWM Duty - Speed Characteristics Example



### PWM Input Signal Example

#### Input Signal Waveform



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

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

$$\text{PWM Duty Cycle (\%)} = \frac{T_1}{T} \times 100$$

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

Source Current : 1mA Max. at control voltage 0V

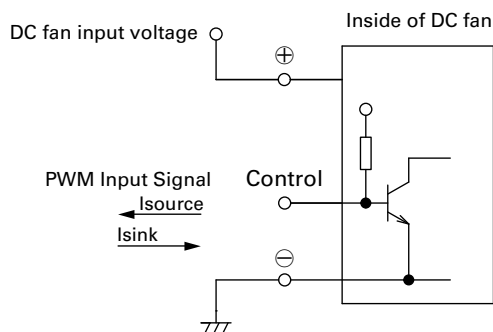
Sink Current : 1mA Max. at control voltage 5.25V

Control Terminal Voltage : 5.25V 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.  
Fans do not rotate when PWM duty cycle is 0%.

### Example of Connection Schematic



## Specifications for Pulse Sensors

Output circuit : Open collector

### Rated Voltage 12V Fan

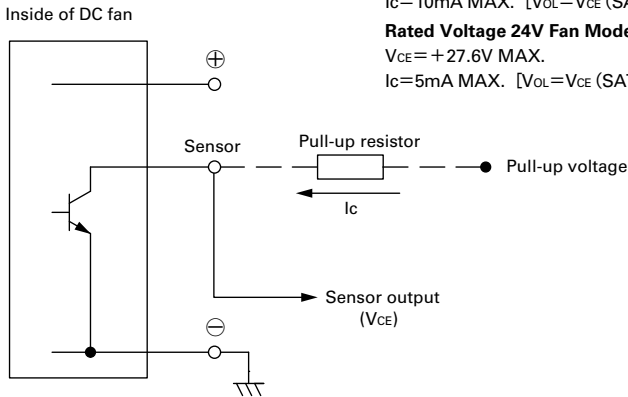
$V_{CE} = +13.8V$  MAX.  
 $I_c = 5mA$  MAX. [ $V_{OL} = V_{CE} (SAT) = 0.6V$  MAX.]

### Rated Voltage 24V Fan Model No.: 9LG0824P4J001

$V_{CE} = +30V$  MAX.  
 $I_c = 10mA$  MAX. [ $V_{OL} = V_{CE} (SAT) = 0.6V$  MAX.]

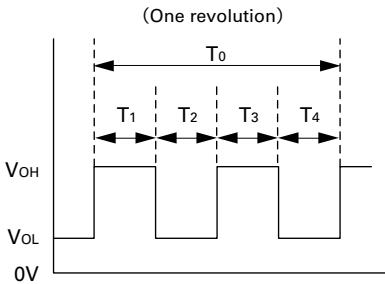
### Rated Voltage 24V Fan Model No.: 9LG0824P4G001, 9LG0824P4H001

$V_{CE} = +27.6V$  MAX.  
 $I_c = 5mA$  MAX. [ $V_{OL} = V_{CE} (SAT) = 0.8V$  MAX.]



Output Waveform (Need pull-up resistor)

In case of steady running

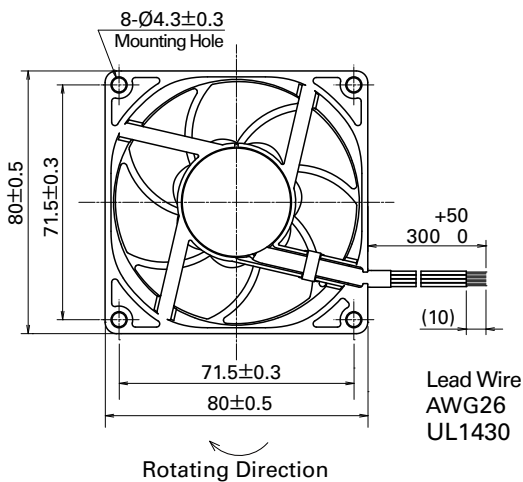


$$T_{1\sim4} \doteq (1/4) T_0$$

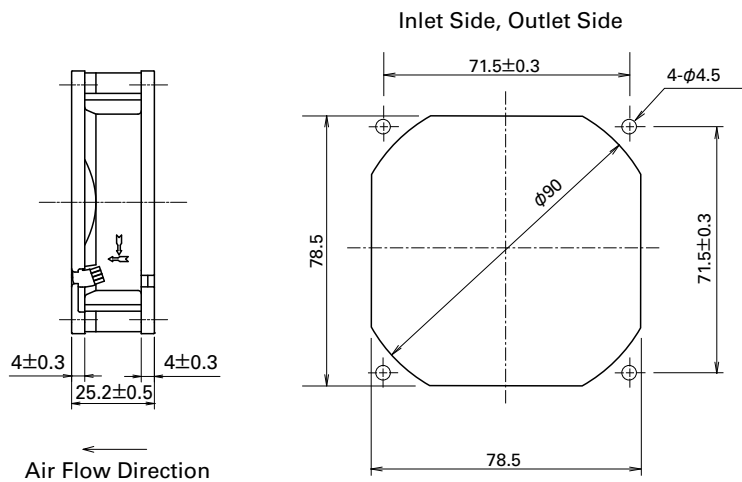
$$T_{1\sim4} \doteq (1/4) T_0 = 60/4N \text{ (sec)}$$

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

## Dimensions (unit : mm)



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



## 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.

**SANYO DENKI CO.,LTD.** 1-15-1, Kita-otsuka, Toshima-ku, Tokyo 170-8451, Japan. PHONE :+ 81 3 3917 5151

<http://www.sanyodenki.com>

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