

San Ace 80 GA type

Low power consumption fan

Features

Energy-saving

Power consumption is reduced by approx. 20 % compared with our conventional fan*.

Low noise

Sound pressure level is reduced by approx. 2dB(A) compared with our conventional fan*.

* Our conventional product is the DC cooling fan
80 × 80 × 38 mm fan "San Ace 80" (Model No: 9GV0812P1F03)
When air flow and static pressure is almost identical.



Low power consumption fan 80mm

80×80×38mm

Specifications

The numbers in () represent ribless models.

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM Duty Cycle* [%]	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Air Flow [m³/min] [CFM]		Static Pressure [Pa] [inchH2O]		SPL [dB(A)]	Operating Temperature [°C]	Life Expectancy [h]	
9GA0812P1S61(611)	12	10.8 to 13.2	100	0.94	11.28	9,550	2.6	91.8	480	1.93	59	-10 to +70	40,000	
0			0.1	1.2	2,900	0.74	26.1	60	0.24	27				
9GA0812P1H61(611)			100	0.6	7.2	8,250	2.25	79.4	380	1.53	55			
			0	0.08	0.96	2,500	0.64	22.6	45	0.18	24			

*PWM Frequency : 25kHz

Common Specifications

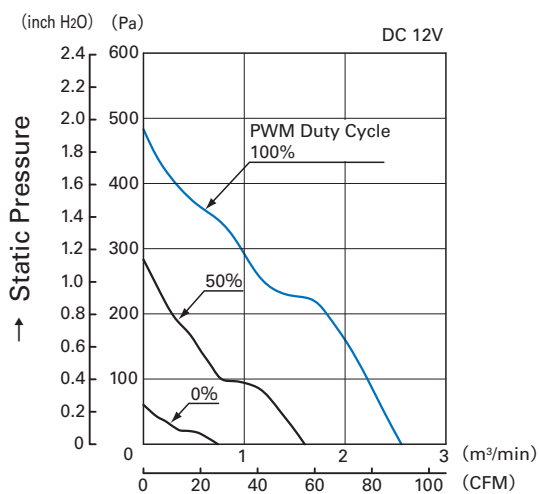
- ☐ Material Frame, Impeller: Plastics (Flammability: UL94V-0)
- ☐ Life Expectancy Varies for each model
(L10: Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
- ☐ Motor Protection System Current blocking function and Reverse polarity protection
- ☐ Dielectric Strength 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 Range 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.160g

80mm

San Ace 80GA_{type}

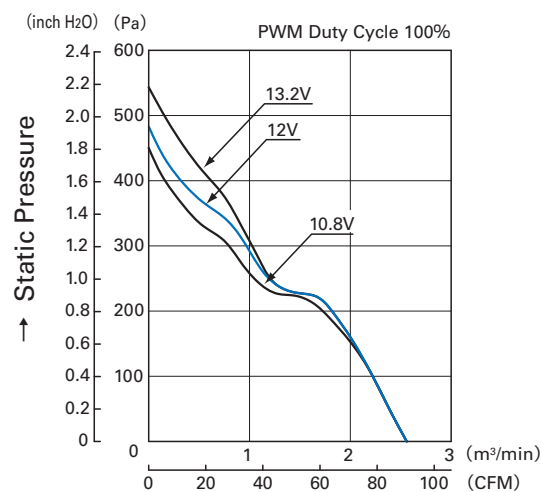
Air Flow - Static Pressure Characteristics

• PWM Duty Cycle

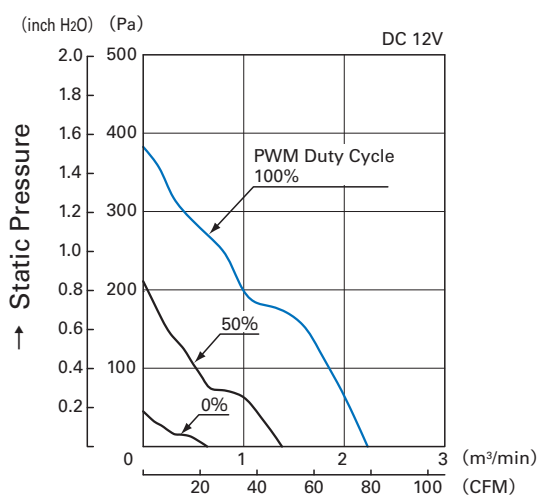


→ Air Flow
9GA0812P1S61(611)

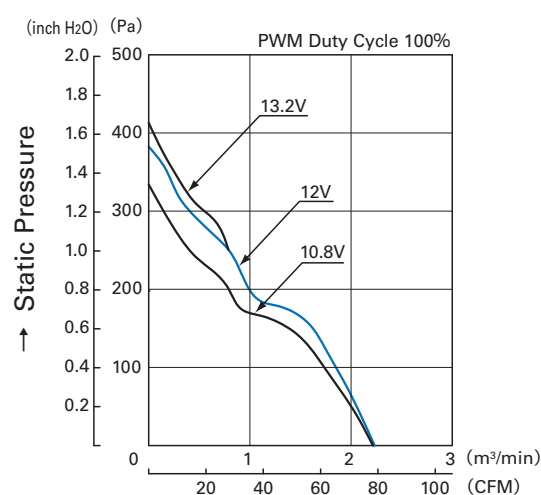
• Operating Voltage Range



→ Air Flow
9GA0812P1S61(611)

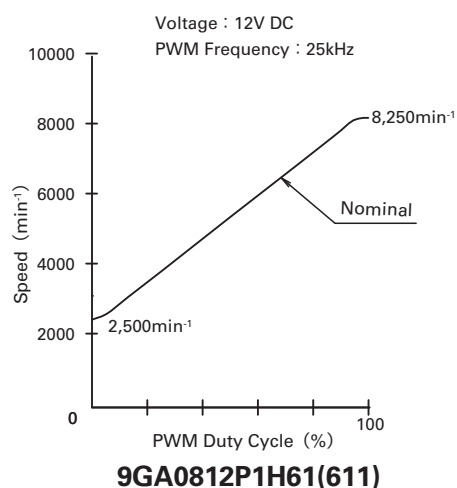
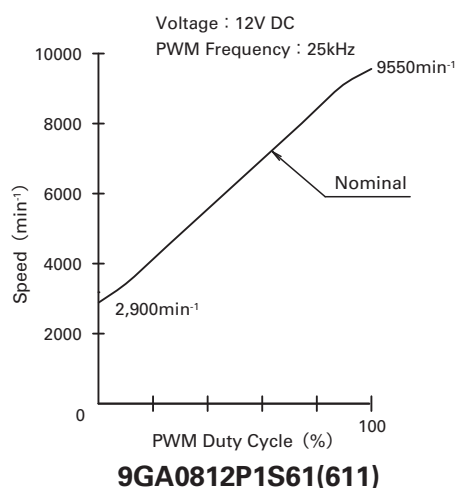


→ Air Flow
9GA0812P1H61(611)



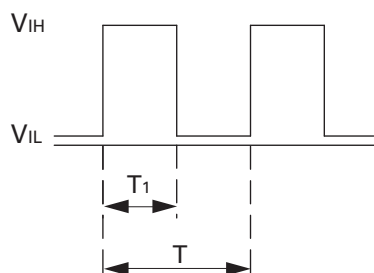
→ Air Flow
9GA0812P1H61(611)

PWM Duty - Speed Characteristics Example



PWM Input Signal Example

Input Signal Wave Form



$V_{IH}=4.75V$ 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 (I_{source}) : 1mA Max. at control voltage 0V

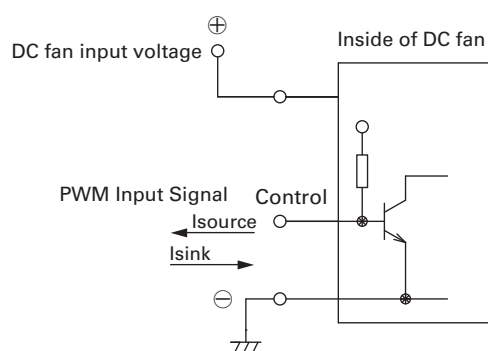
Sink Current (I_{sink}) : 1mA Max. at control voltage 5.25V

Control Terminal Voltage : 5.25V Max. (Open Circuit)

When the control lead wire is no connecting,
the speed is the same speed as at 100% of PWM cycle.

This fan speed should be controlled by PWM input signal
of either TTL input or open collector, drain input.

Connection Schematic

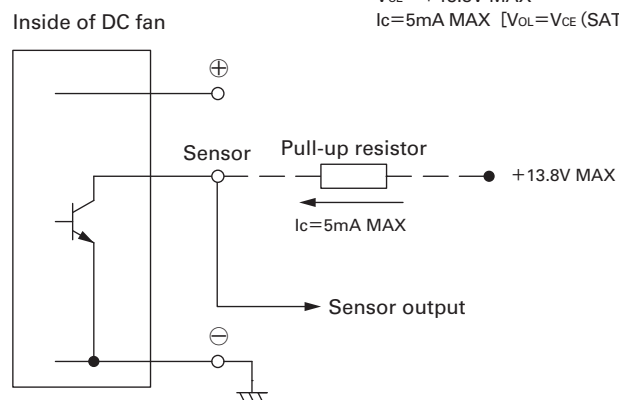


Specifications for Pulse Sensors

Output circuit : Open collector

$V_{CE} = +13.8V$ MAX

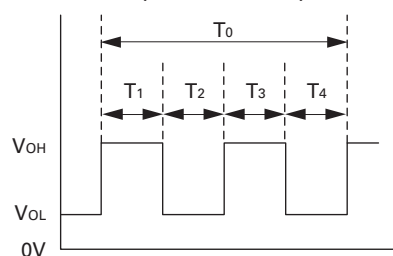
$I_C = 5mA$ MAX [$V_{OL} = V_{CE} (SAT) = 0.6V$ MAX]



Output waveform (Need pull-up resistor)

In case of steady running

(One revolution)

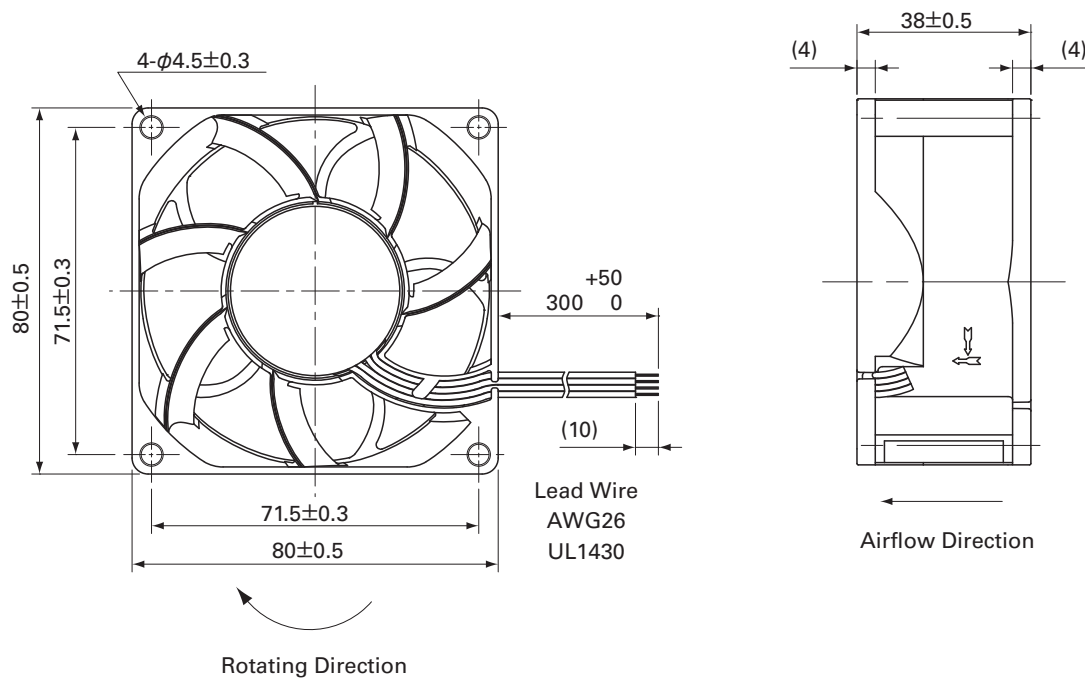


$$T_1 \sim 4 \div (1/4) T_0$$

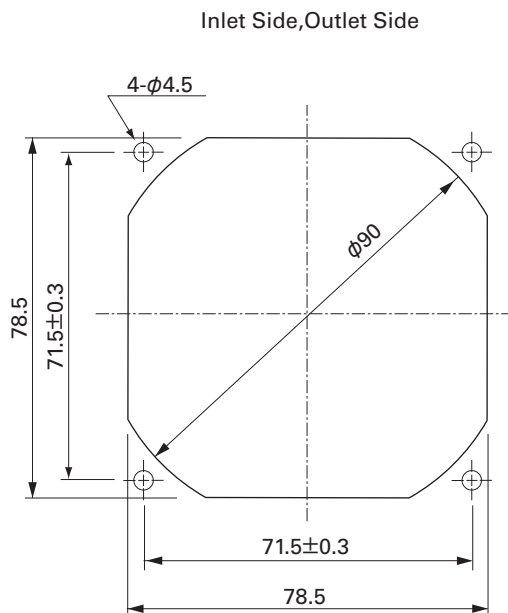
$$T_1 \sim 4 \div (1/4) T_0 = 60/4N \text{ (sec)}$$

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

■ Dimensions (unit : mm) (With ribs)



■ 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 Home Page: <http://www.sanyodenki.co.jp>