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.

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 [℃]	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℃, 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℃ to +70℃ （Non-Condensing）
☐ Lead Wire ························· ⊕red　⊖black　Sensor: yellow　Control: brown
☐ Mass ···························· Approx.160g
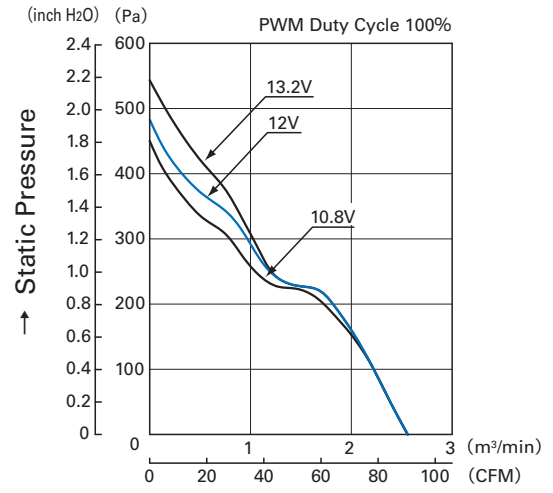
San Ace 80 GA type

■ Air Flow - Static Pressure Characteristics
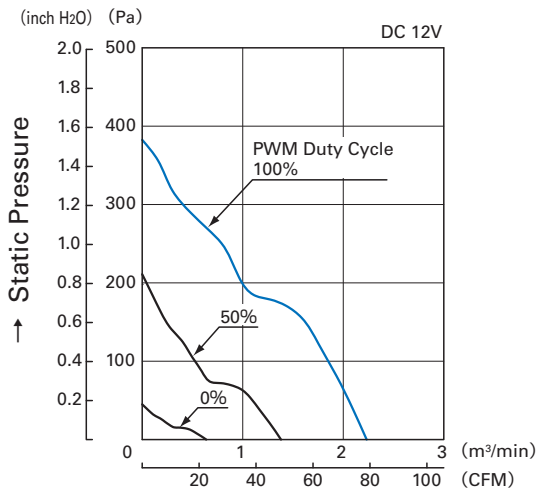
・ PWM Duty Cycle
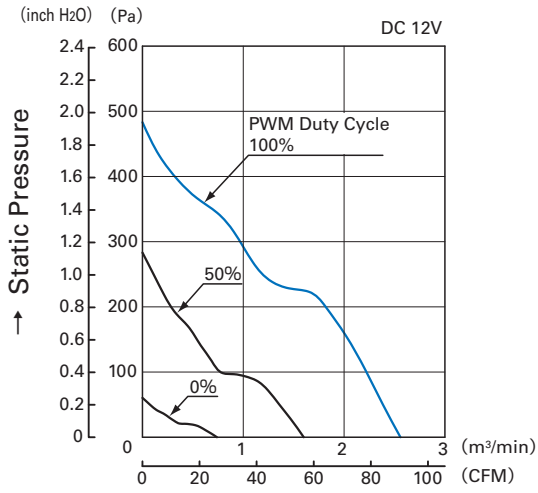
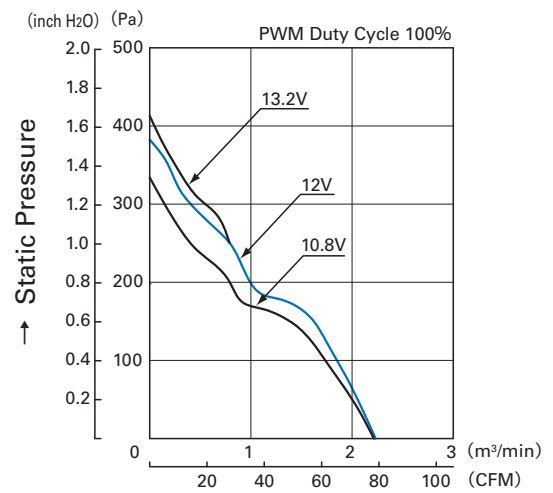**9GA0812P1S61(611)**

・ Operating Voltage Range

9GA0812P1S61(611)

9GA0812P1H61(611)

9GA0812P1H61(611)

■ PWM Duty - Speed Characteristics Example

Voltage：12V DC
PWM Frequency：25kHz

9550min⁻¹

Nominal

2,900min⁻¹

9GA0812P1S61(611)

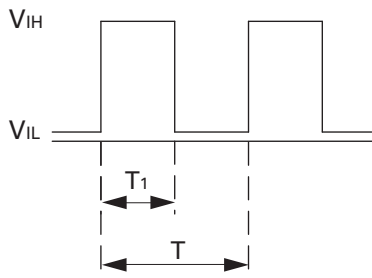Voltage：12V DC
PWM Frequency：25kHz

8,250min⁻¹

Nominal

2,500min⁻¹
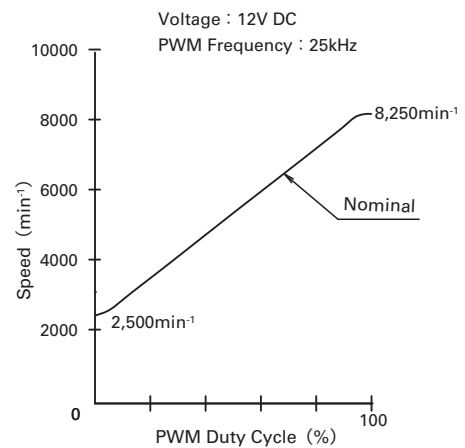
9GA0812P1H61(611)

PWM Input Signal Example

Input Signal Wave Form

V_{IH}=4.75V to 5.25V

V_{IL}=0V to 0.4V

PWM Duty Cycle （%）= $\dfrac{T1}{T} \times 100$

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

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

Sink Current（Isink）: 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
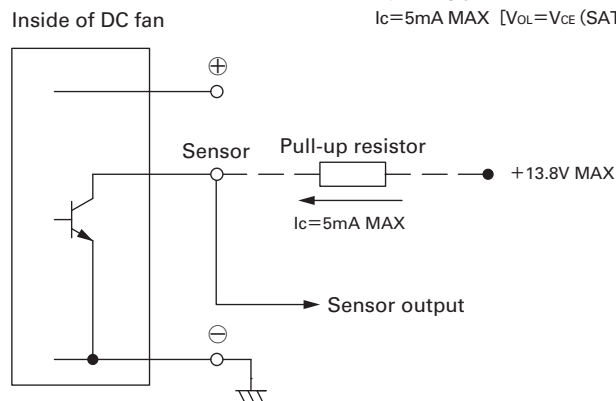of either TTL input or open collector, drain input.

Connection Schematic

DC fan input voltage

Inside of DC fan

PWM Input Signal　Control

Isource

Isink
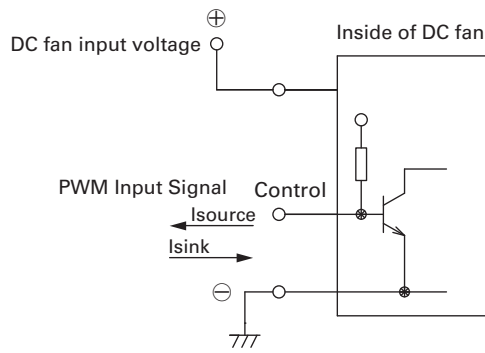
Specifications for Pulse Sensors

Output circuit : Open collector

V_{CE}＝＋13.8V MAX

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

Inside of DC fan

Sensor　Pull-up resistor

＋13.8V MAX

Ic＝5mA MAX

Sensor output

Output waveform （Need pull-up resistor）

In case of steady running

（One revolution）
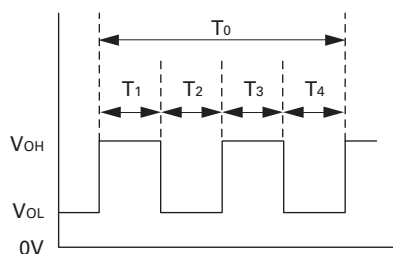
$T_{1\sim4}$≒（1/4）T_0

$T_{1\sim4}$≒（1/4）T_0＝60/4N（sec）

N＝Fan speed（min^{-1}）

T_0

T_1　T_2　T_3　T_4

V_{OH}

V_{OL}

0V

■ Dimensions (unit : mm) (With ribs)

4-φ4.5±0.3

80±0.5
71.5±0.3

71.5±0.3
80±0.5

Rotating Direction

+50
300 0

(10)

Lead Wire
AWG26
UL1430

38±0.5
(4)   (4)

Airflow Direction
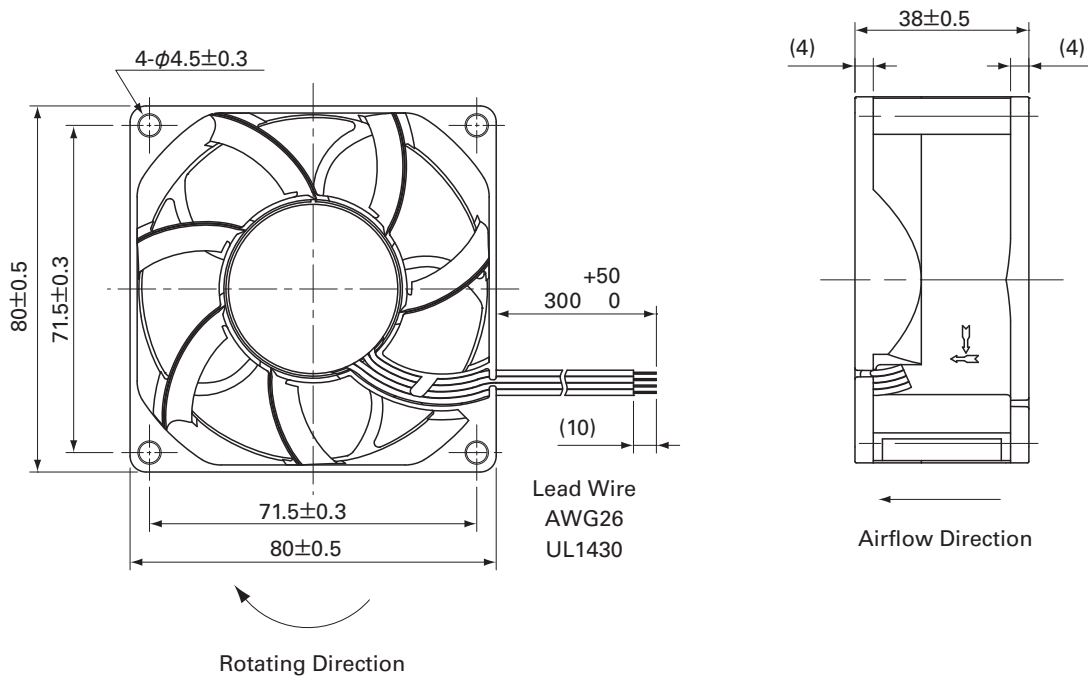
■ Reference dimension of mounting holes and vent opening (unit : mm)

Inlet Side,Outlet Side

4-φ4.5

φ90

78.5
71.5±0.3

71.5±0.3
78.5
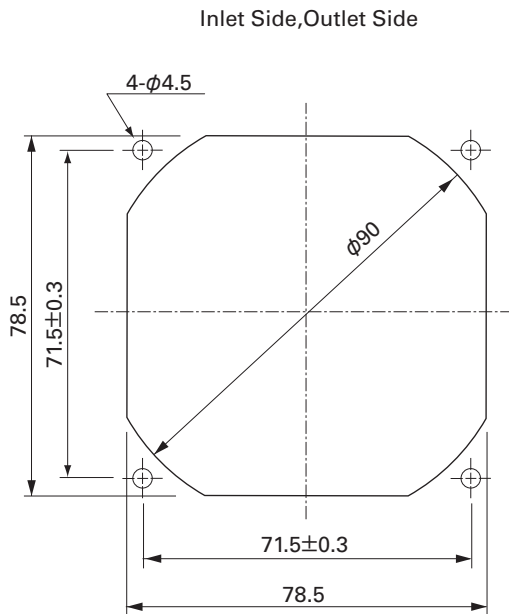
Notice

● 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.