

New Product Introduction
June 12th, 2023

San Ace 160AD

ACDC Fan
(9AD type)
Splash Proof ACDC Fan
(9ADW type)

φ160×51mm

SANYO DENKI

SANYO DENKI AMERICA, INC.
Cooling Systems Division
www.Sanyodenki.com/america



Products Highlights

- High Airflow and High Static Pressure
- Low Noise and Low Power Consumption
- Wide Operating Voltage Range
- Water and Dust Protection (IP56)
- Target applications: Control Panels, Industrial Equipment, Air Conditioners

The new addition of 160 x 51mm size strengthens the ACDC fan lineup, with IP56 option.

In addition, we can cultivate new markets that could not be entered by AC Fan of the same size, by reducing power consumption and noise, IP protection and wide input voltage range.

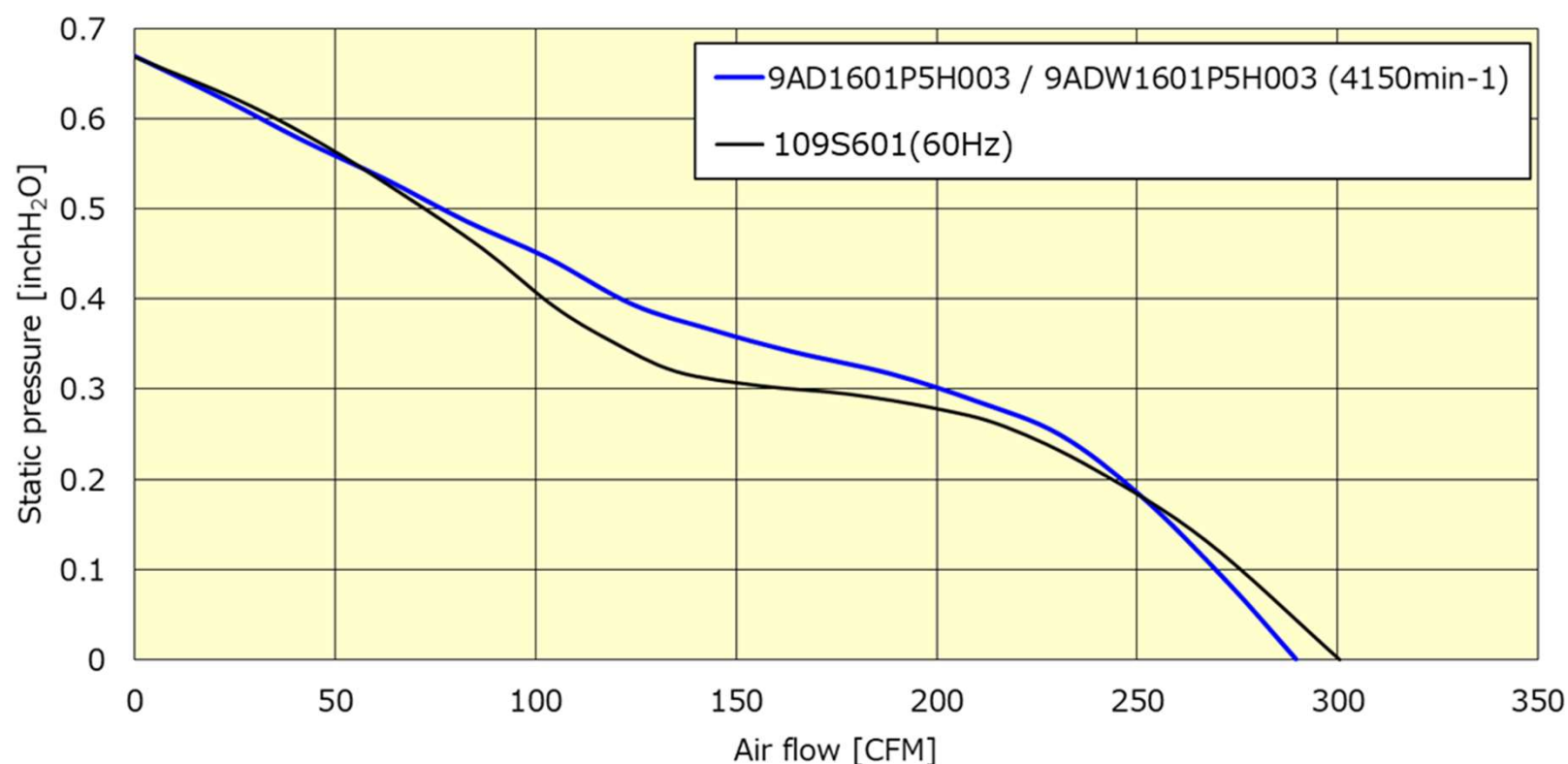
High Airflow and High Static Pressure (SanAce 160AD / 9AD type)

□ Characteristic Comparison

*Rated speed, SPL, Rated input are values at rated voltage in free air.

*SPL is A-weighted sound pressure level that measured at 1 meter away from air intake side of fan.

Model no.	Rated voltage [VAC]	Frequency [Hz]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [CFM]	Max. static pressure [inchH ₂ O]	SPL [dB(A)]	Expected life @60°C [h]	Ingress protection
New Model 9AD1601P5H003 9ADW1601P5H003	100~240	50/60	22	4,150	290	0.66	58	40,000	IP56 (9ADW)
Current Model 109S601 (60Hz)	100	50/60	33	3,350	300.4	0.669	60	25,000	-



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Specifications (San Ace 160AD / 9AD type)

□ Specifications

*Rated speed, SPL, Rated input are values at rated voltage in free air.

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Lead wire model

The models listed below **have pulse sensors with PWM control function.**

Model no.	Rated voltage [V]	Operating voltage range [V]	Frequency [Hz]	PWM duty cycle* [%]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating temperature [°C]	Expected life [h]
9AD1601P5H003	100 to 240	90 to 264	50/60	100	0.46	22	4150	8.2 290	167 0.66	58	-20 to +70	40000/60°C (70000/40°C)
				0	0.10	4.0	1500	3.07 108	44 0.17	31		

* PWM frequency is 25 kHz. Models without ratings for 0% PWM duty cycle have zero speed at 0%. When control terminal is open, speed is the same as at 0% duty cycle.

The models listed below **no sensors.**

Model no.	Rated voltage [V]	Operating voltage range [V]	Frequency [Hz]	Rated current [A]	Rated input [W]	Rated speed [min ⁻¹]	Max. airflow [m ³ /min] [CFM]	Max. static pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating temperature [°C]	Expected life [h]
9AD1601H5002	100 to 240	90 to 264	50/60	0.46	22	4150	8.2 290	167 0.66	58	-20 to +70	40000/60°C (70000/40°C)

Terminal model

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Specifications (San Ace 160AD / 9AD type)

□ Sensor

Sensor specifications are Pulse sensor with PWM control function, no sensor.
Low speed sensor are available as options.

□ PWM control function

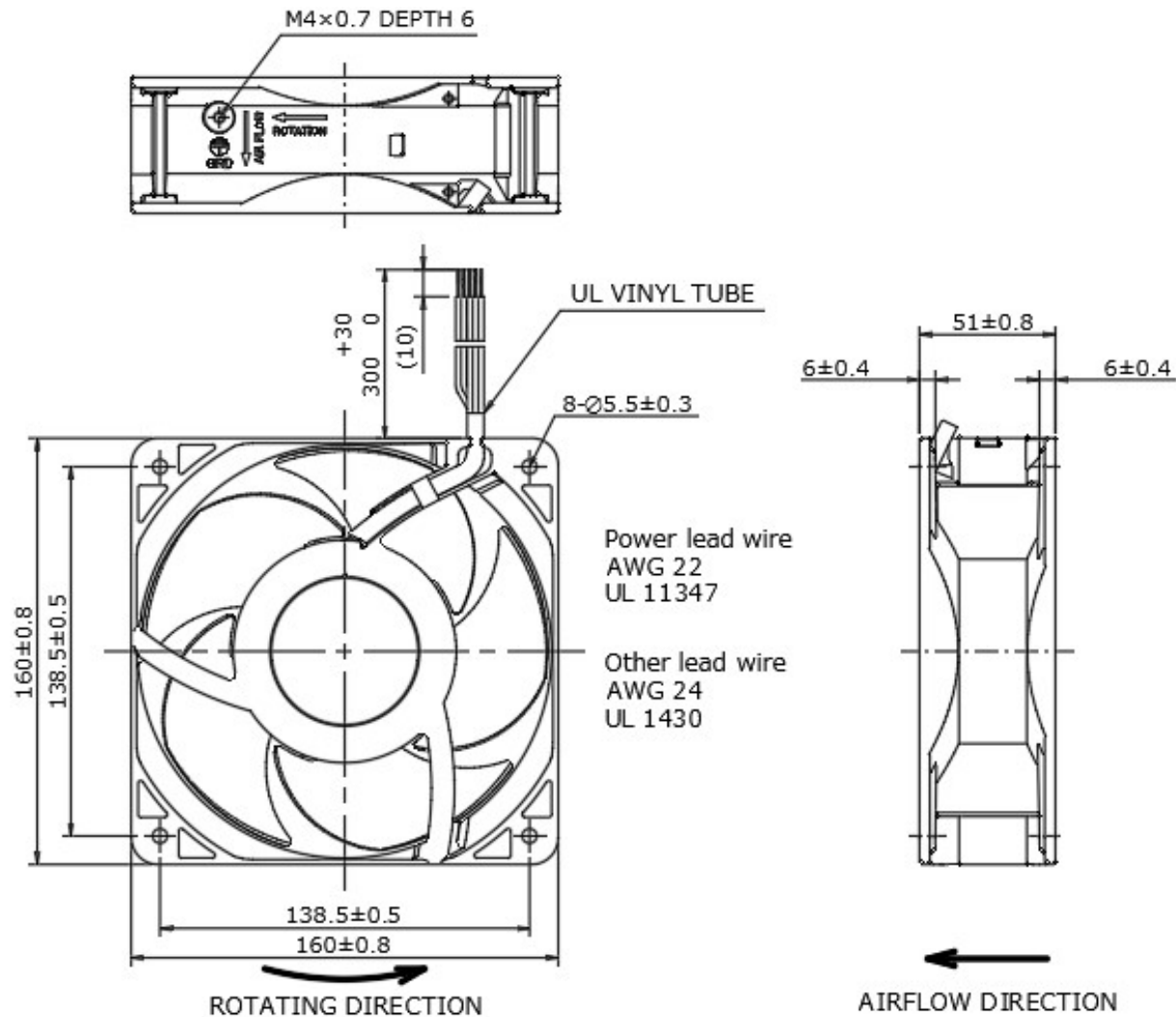
PWM control function enables to control fan speed depending on the situation and to reduce the power consumption and noise.

*When the PWM control terminal is open, the fan speed is the same as the speed at 0% PWM duty cycle. A TTL input can be used for the PWM input signal.

Specifications (San Ace 160AD / 9AD type)

▣ Dimensions

Lead wire model

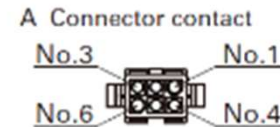
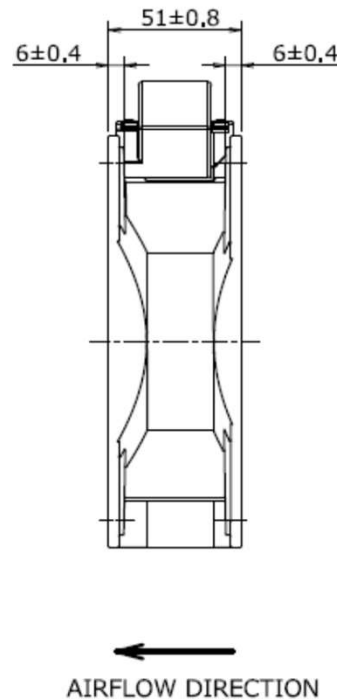
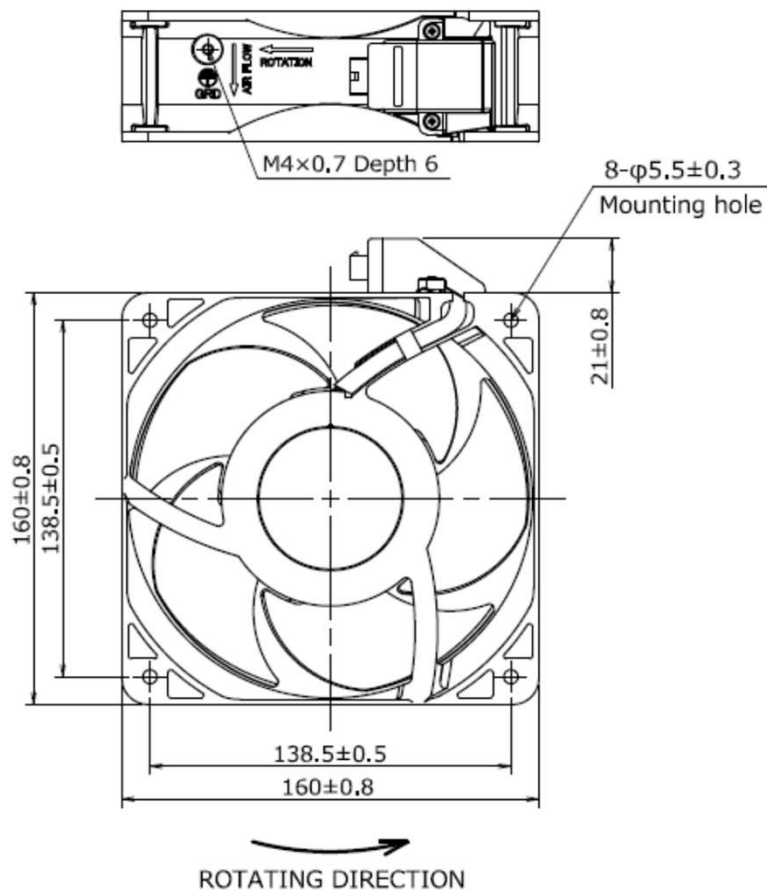


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Specifications (San Ace 160AD / 9AD type)

□ Dimensions

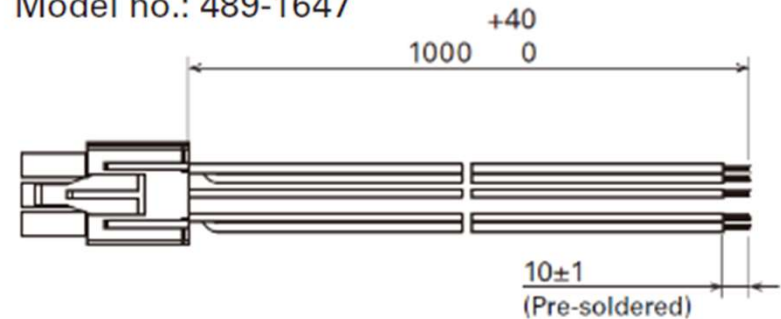
Terminal model



Pin arrangement
Connector (Model no.: TE:1-172160-9)

Pin No.	Function	Input
1	L	AC
2	No connection	-
3	N	AC
4	PWM	DC
5	GND	DC
6	Sensor	DC

Wiring harness Model no.: 489-1647



Connector Model no.: TE:1-172168-9

Power lead wire
AWG22 UL11347

Other lead wire
AWG24 UL3385

Specifications (San Ace 160AD / 9ADW type / IP56)

□ Specifications

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□ MTBF = 1.5 million hours

□ FIT rate = 660

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Specifications (San Ace 160AD / 9ADW type / IP56)

□ Sensor

Sensor specifications are Pulse sensor with PWM control function, no sensor. Lock sensor, Low-speed sensor are available as options.

□ PWM control function

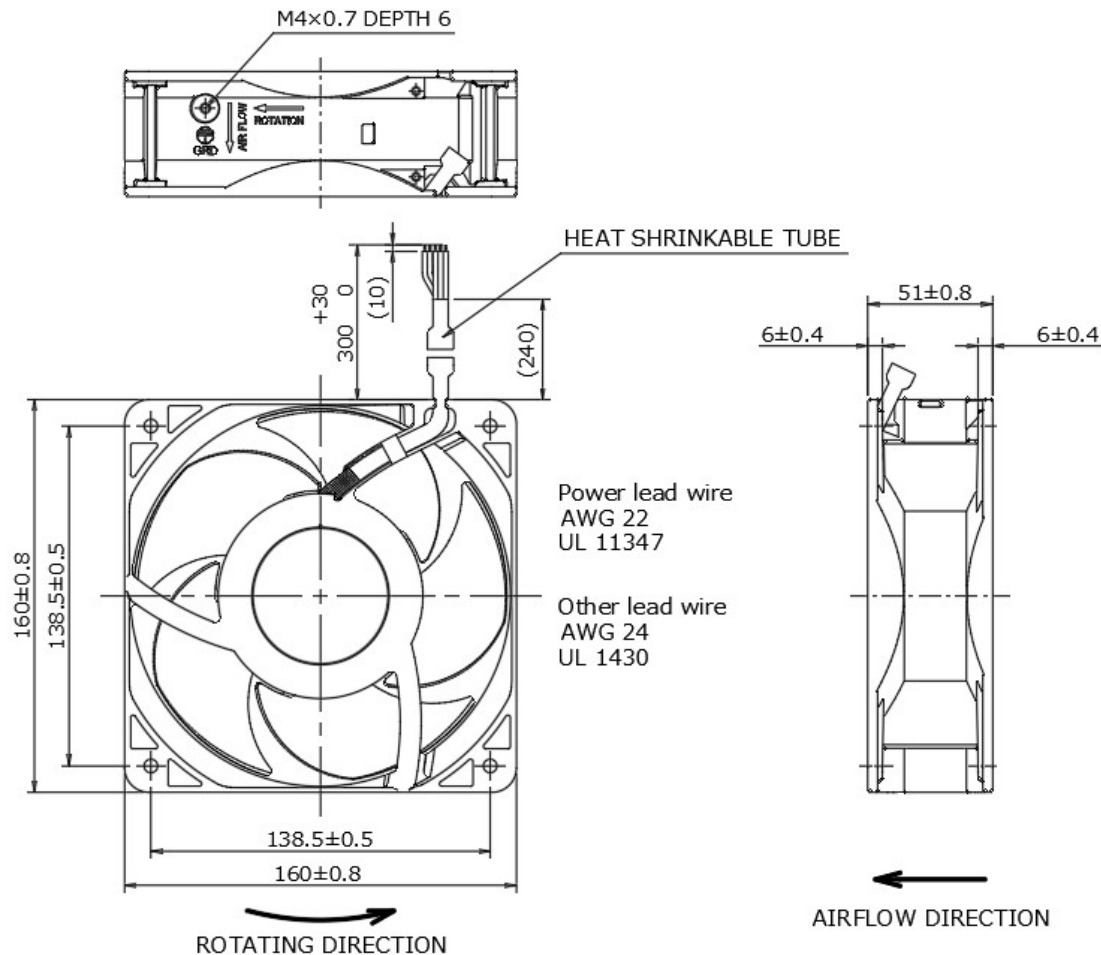
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Specifications (San Ace 160AD / 9ADW type / IP56)

□ Dimensions (unit : mm)

Lead wire model

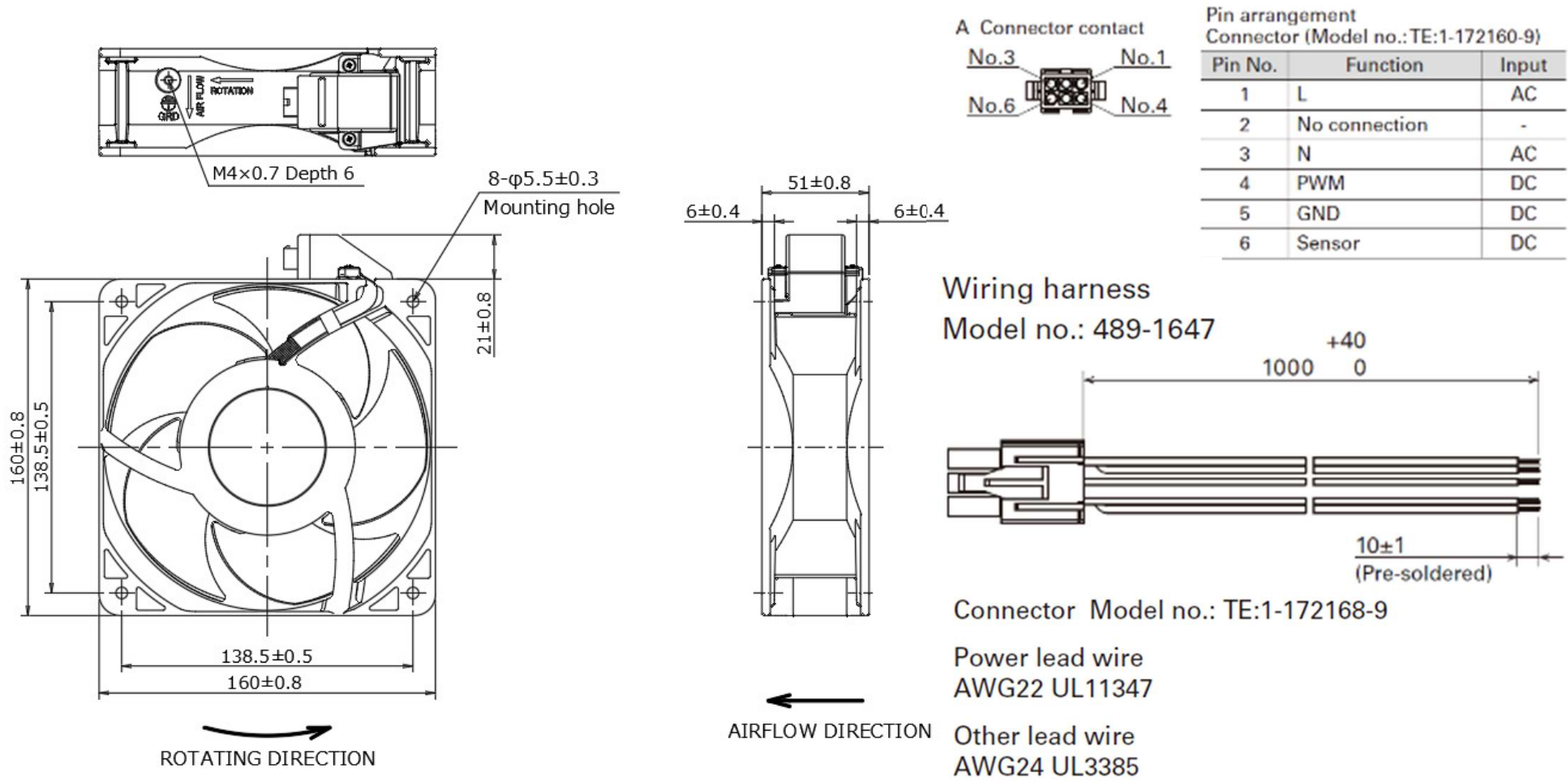


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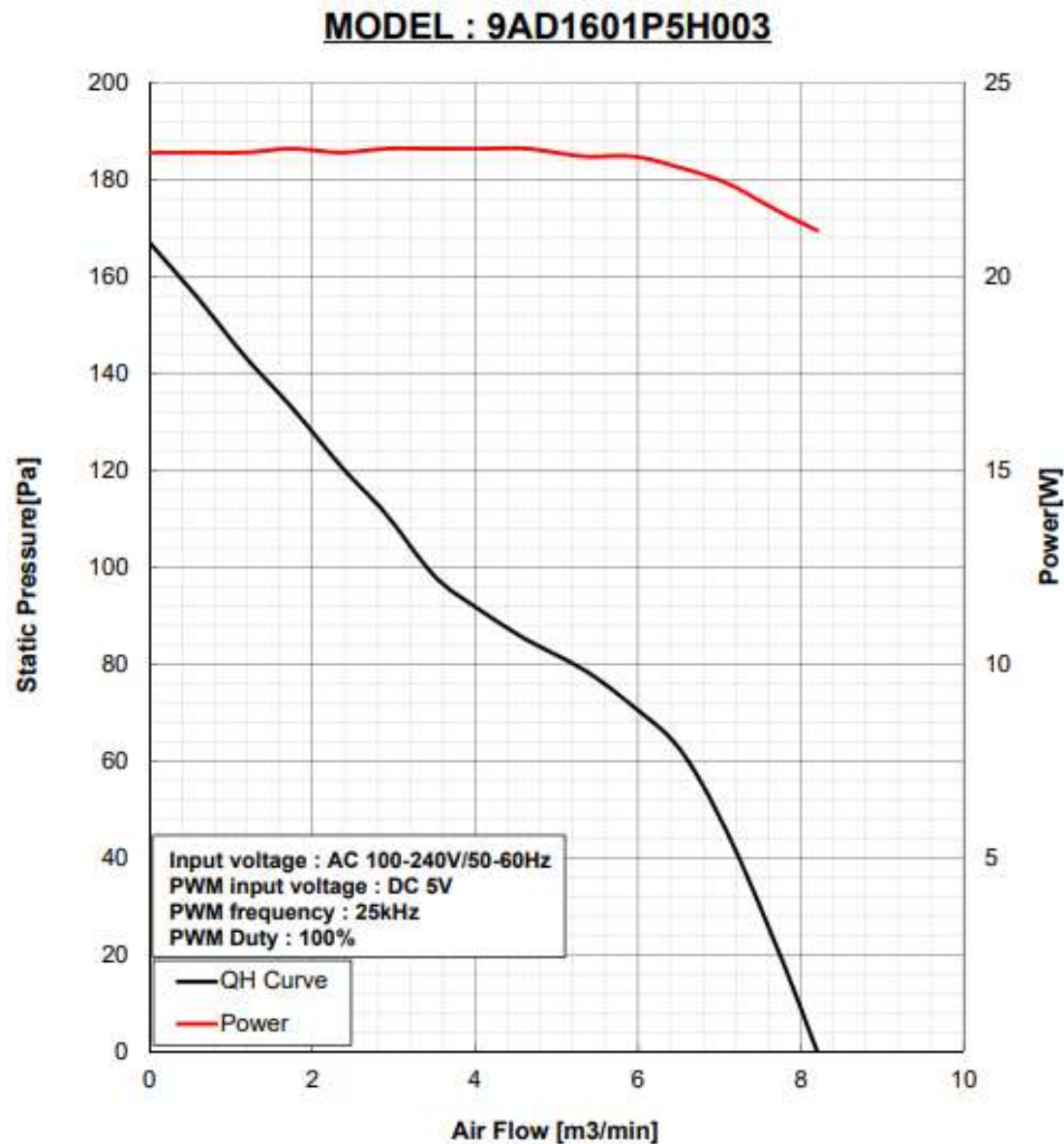
Specifications (San Ace 160AD / 9ADW type / IP56)

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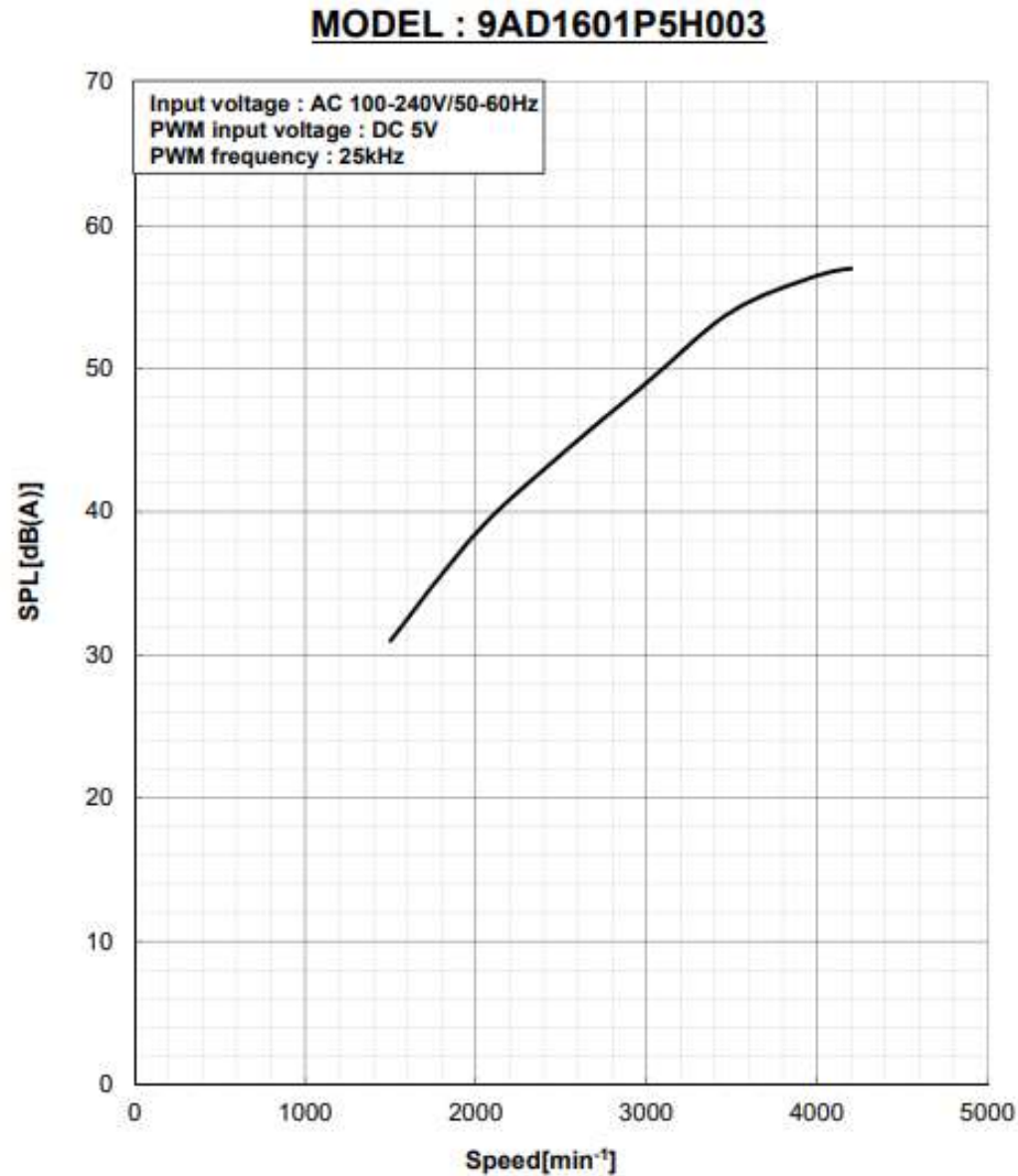
Terminal model



Performance vs Power SanAce 160AD (9AD and 9ADW type)

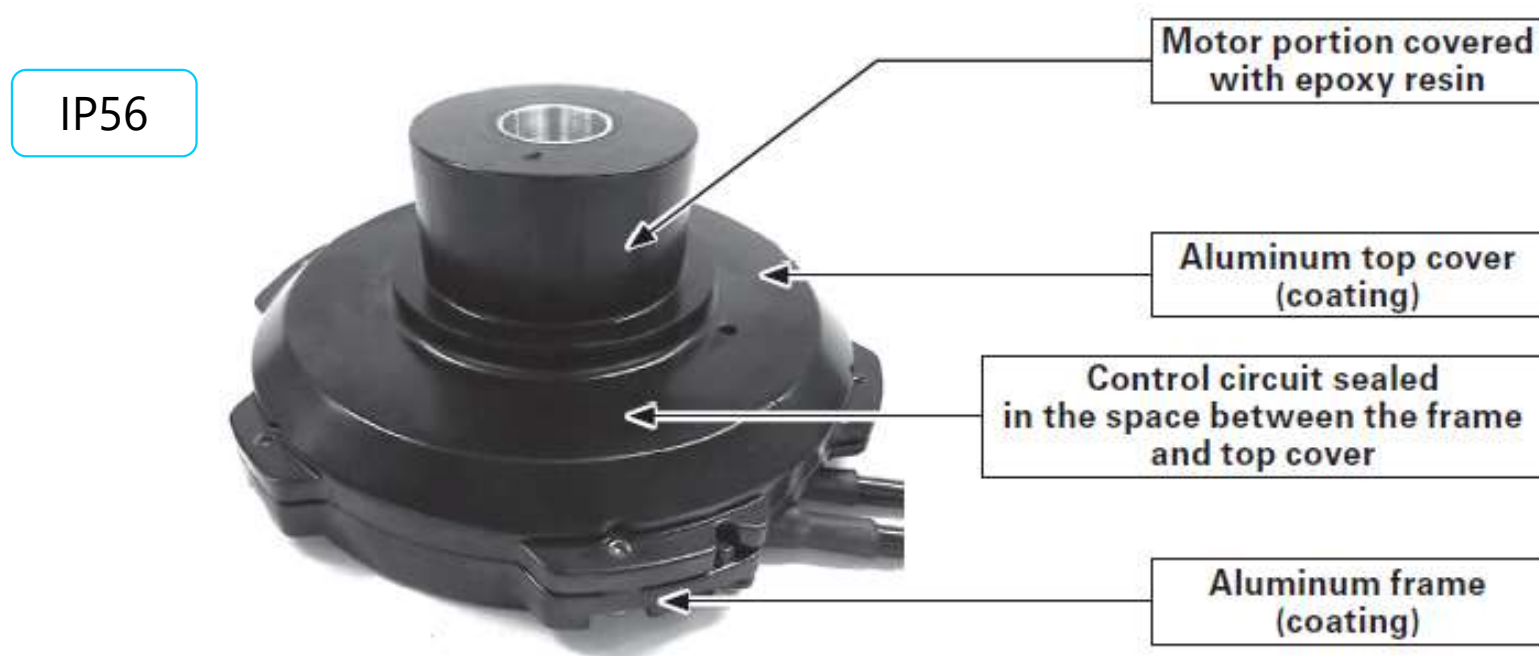


SPEED vs Sound Pressure Level (dB(A)) San Ace 160AD (9AD and 9ADW type)



IP56 Water and Dust Resistance

With its IP56 rating, the San Ace 160 AD Splash Proof Fan is protected from water and dust. This ensures stable fan operation even in harsh environments. Sanyo Denki's IP56 products have the following structure.



The degree of protection (IP code) is defined by IEC 60529 (International Electrotechnical Commission).
IP56:- Protection against a level of dust that could hinder operation or impair safety
- Protection against powerful water jets

Target Applications

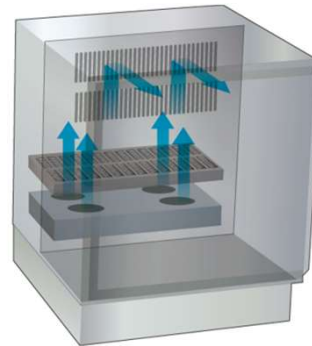
- Control Panels
- Industrial Equipment
- Air Conditioners
- Air Purifier
- Large refrigerator
- Industrial grain storage



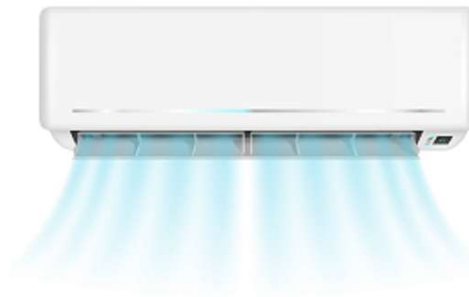
Industrial
grain storage



Control Panel



Large Refrigerator



Air conditioner



Air Purifier with
UV germicidal lamp

Miscellaneous

- Customizations available

- Harness assembly: Sanyo Denki can recommend connectors and terminals.
- Additional conformal coating available
- Others

- PWM Control available

- PWM control function enables to control fan speed depending on the situation and reduces power consumption and noise.

- No DC Power Supply Required

- Capable of +10 VDC output from the fan itself.

- 100 and 240VDC available

- cUL and TUV approved