



SANYO DENKI San Ace

140 mm x 140 mm x 51 mm

Long Life Fan 9LG type

Long Life Splash Proof Fan 9WL type

June 7th, 2018

Cooling Systems Division
Sanyo Denki America, Inc.

Products Highlights

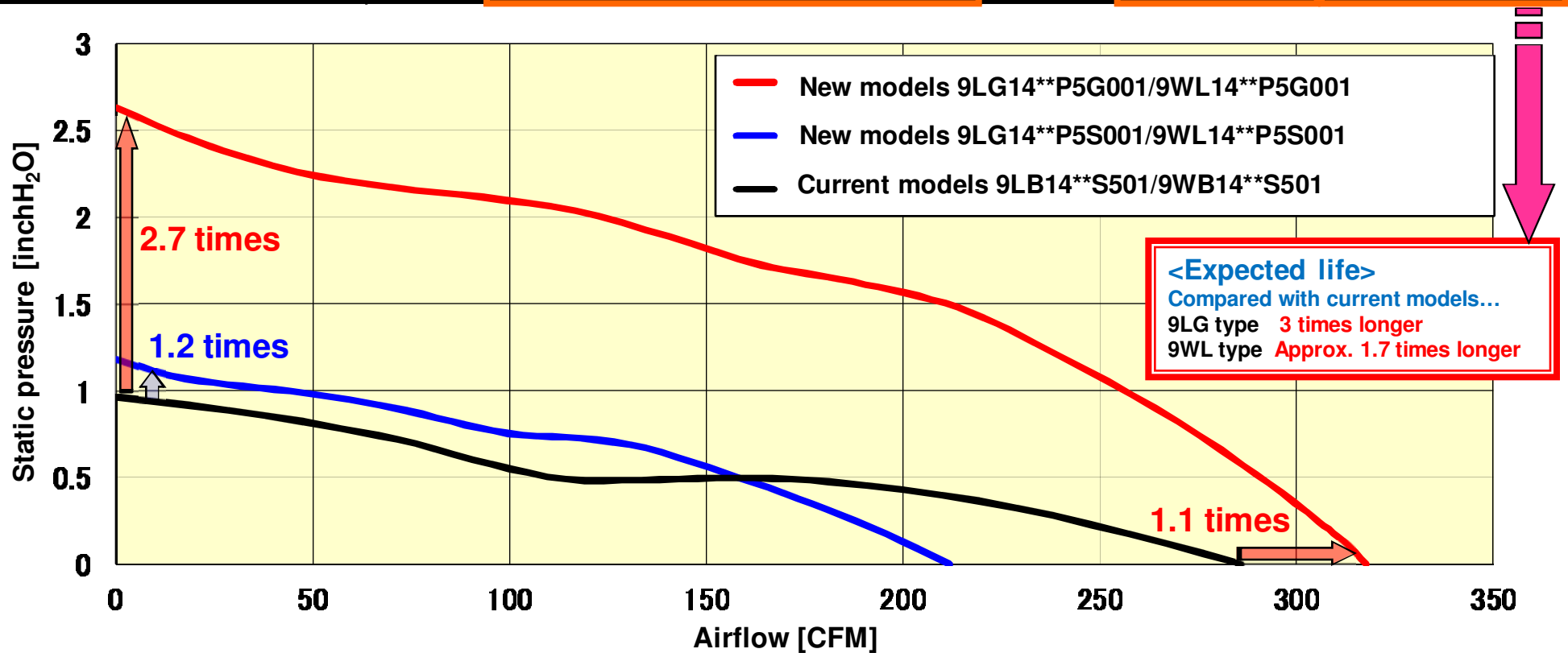
- Long life
- High airflow and high static pressure
- IP68 water and dust resistance (9WL type)
- High energy efficiency and low noise
- Target applications: Communications equipment, industrial inverters, solar inverters, fuel cells, rapid EV charging stations & digital signage

Long Life, high airflow, high static pressure, high energy efficiency, & low noise

Comparison with Current Models

* Rated speed and sound pressure level are values at rated voltage in free air.
* Sound pressure level is measured at one meter from the inlet.

	Rated Speed [min ⁻¹]	Max. Airflow [CFM]	Max. Static Pressure [inchH ₂ O]	SPL [dB(A)]	Power Consumption [W]	Expected Life (60°C) [h] Long Life / Splash Proof
New models 9LG14**P5G001 / 9WL14**P5G001	7,500	318 (1.1 times)	2.63 (2.7 times)	69	62	180,000 / 100,000
New models 9LG14**P5S001 / 9WL14**P5S001	5,000	212	1.18 (1.2 times)	57	22 (-35%)	180,000 / 100,000
Current models 9LB14**S501 / 9WB14**S501	4,200	286	0.96	57	34 (Max.)	60,000 / 60,000

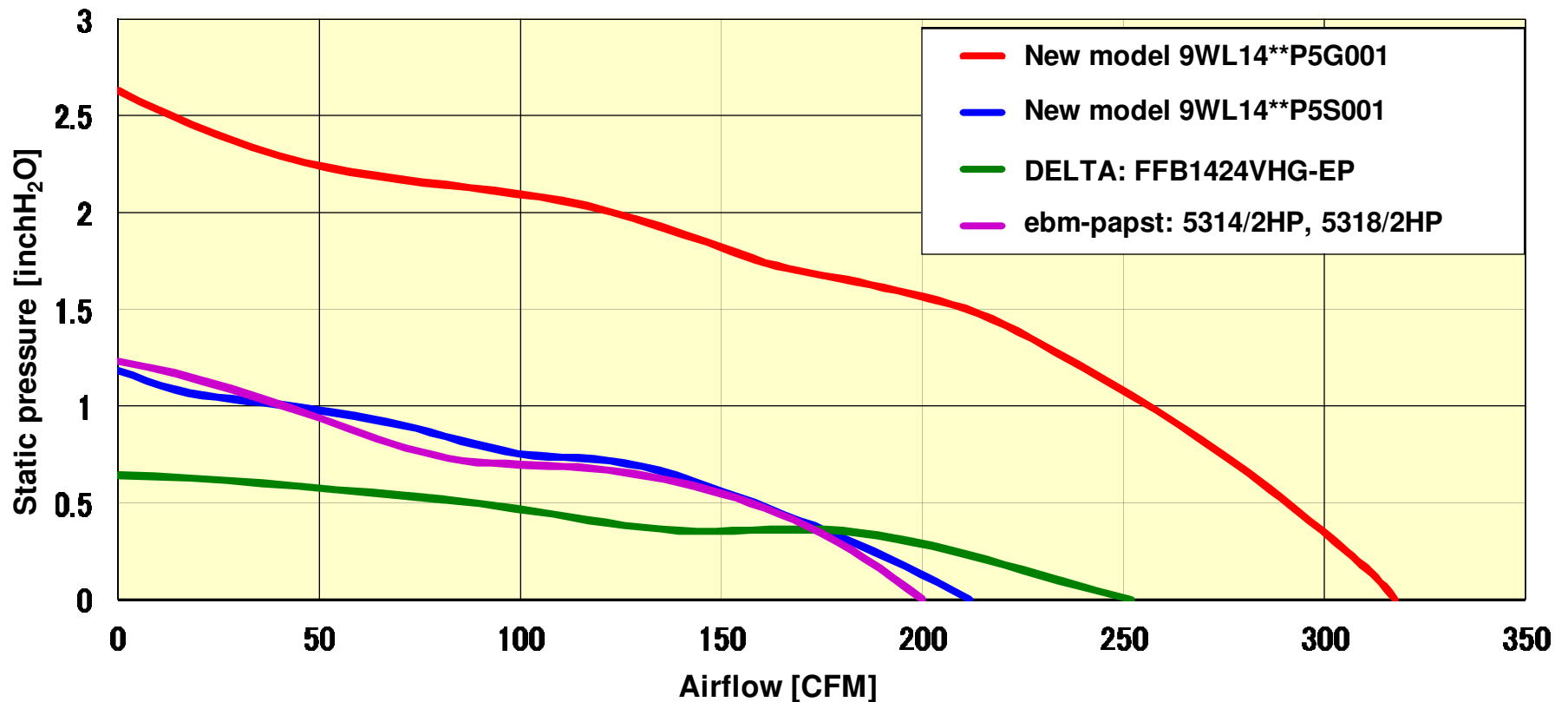


Long Life, high airflow, high static pressure, high energy efficiency, & low noise

Comparison with Competitors' Products (Splash Proof Fans)

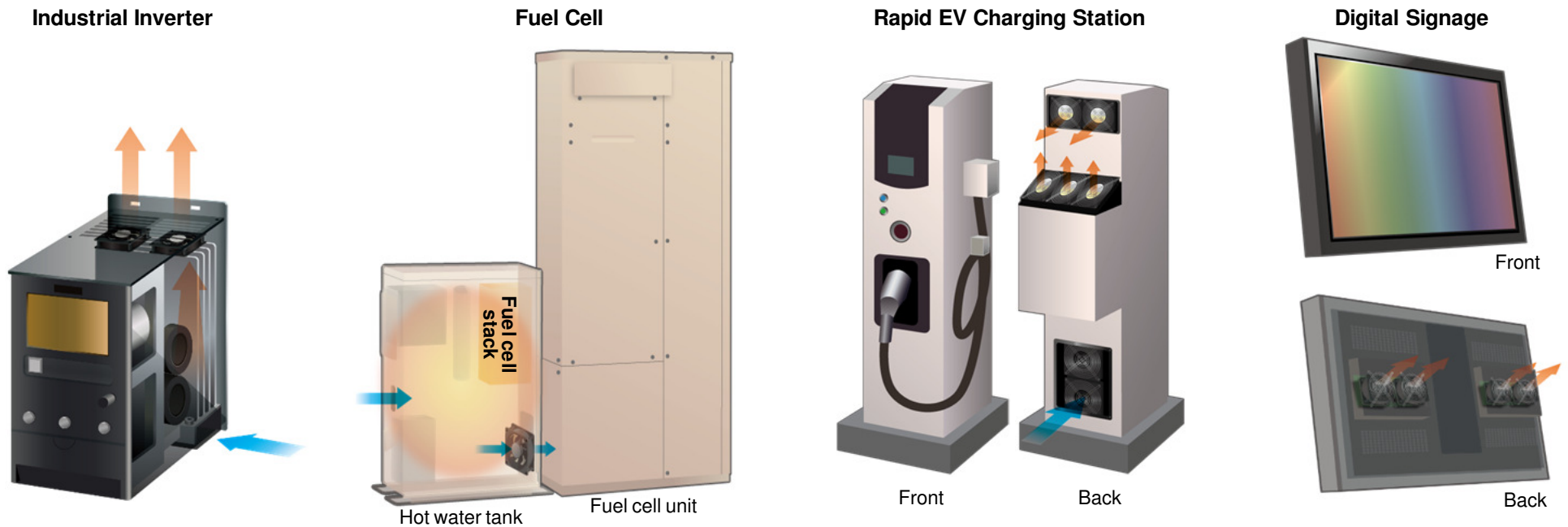
*Rated speed and sound pressure level are values at rated voltage in free air.
 *Sound pressure level is measured at one meter from the inlet.

	IP Code	Rated Speed [min ⁻¹]	Max. Airflow [CFM]	Max. Static Pressure [inchH ₂ O]	SPL [dB(A)]	Power Consumption [W]	Expected Life [h]
New model 9WL14**P5G001	IP68	7,500	318	2.63	69	62	100,000/60°C
New model 9WL14**P5S001	IP68	5,000	212	1.18	57	22	100,000/60°C
DELTA : FFB1424VHG-EP	IP56	3,200	252	0.64	58.5	24	70,000/40°C
ebm-papst : 5314 /2HP, 5318 /2HP	IP54	5,000	201	1.23	64	27	40,000/65°C



Target Applications

- Communications equipment
- Industrial inverters
- Fuel cells
- Solar inverters
- Rapid EV charging stations
- Digital signage



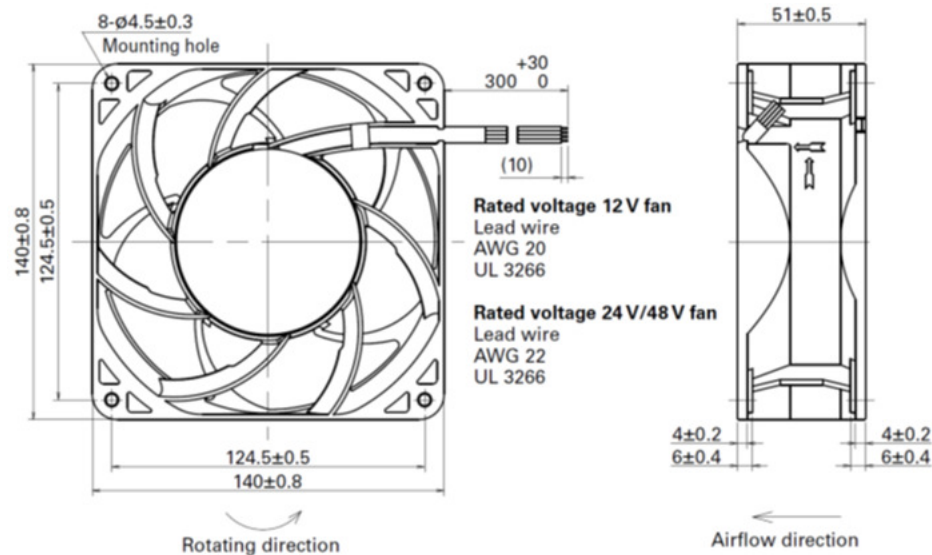
Specifications (9LG type)

□ Specification

* PWM frequency: 25 kHz. Fan does not rotate when PWM duty cycle is 0%

Model no.	Rated voltage [V]	Operating voltage range [V]	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]
9LG1412P5G001	12	10.2 to 13.8	100	5.16	62	7500	9.0 318	655 2.63	69	-20 ~ +70	180000/60°C
			20	0.31	3.72	2300	2.75 97	80 0.32	38		
9LG1412P5S001			100	1.83	22	5000	6.0 212	295 1.18	57		
			20	0.31	3.72	2300	2.75 97	80 0.32	38		
9LG1424P5G001	24	20.4 to 27.6	100	2.58	62	7500	9.0 318	655 2.63	69		
			20	0.16	3.84	2300	2.75 97	80 0.32	38		
9LG1424P5S001			100	0.91	22	5000	6.0 212	295 1.18	57		
			20	0.16	3.84	2300	2.75 97	80 0.32	38		
9LG1448P5G001	48	40.8 to 55.2	100	1.29	62	7500	9.0 318	655 2.63	69		
			20	0.12	5.76	2300	2.75 97	80 0.32	38		
9LG1448P5S001			100	0.45	22	5000	6.0 212	295 1.18	57		
			20	0.12	5.76	2300	2.75 97	80 0.32	38		

□ Dimensions



□ MTBF = 2 million hours

□ FIT rate = 500

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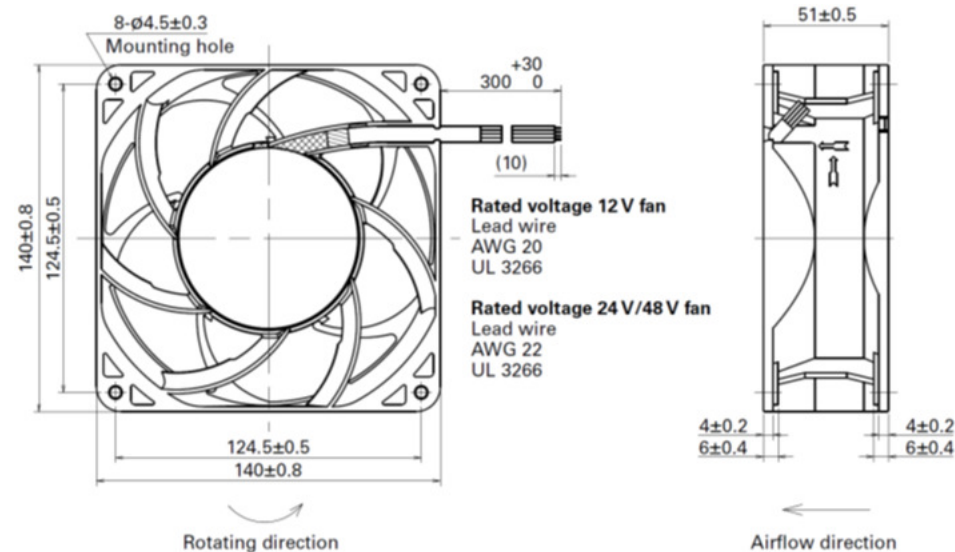
Specifications (9WL type)

□ Specification

* PWM frequency: 25 kHz. Fan does not rotate when PWM duty cycle is 0%

Model no.	Rated voltage [V]	Operating voltage range [V]	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]
9WL1412P5G001	12	10.2 to 13.8	100	5.16	62	7500	9.0 318	655 2.63	69	-20 to +70	100000/60°C
			20	0.31	3.72	2300	2.75 97	80 0.32	38		
9WL1412P5S001			100	1.83	22	5000	6.0 212	295 1.18	57		
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9WL1448P5G001	48	40.8 to 55.2	100	1.29	62	7500	9.0 318	655 2.63	69		
			20	0.12	5.76	2300	2.75 97	80 0.32	38		
9WL1448P5S001			100	0.45	22	5000	6.0 212	295 1.18	57		
			20	0.12	5.76	2300	2.75 97	80 0.32	38		

□ Dimensions



□ MTBF = 2 million hours

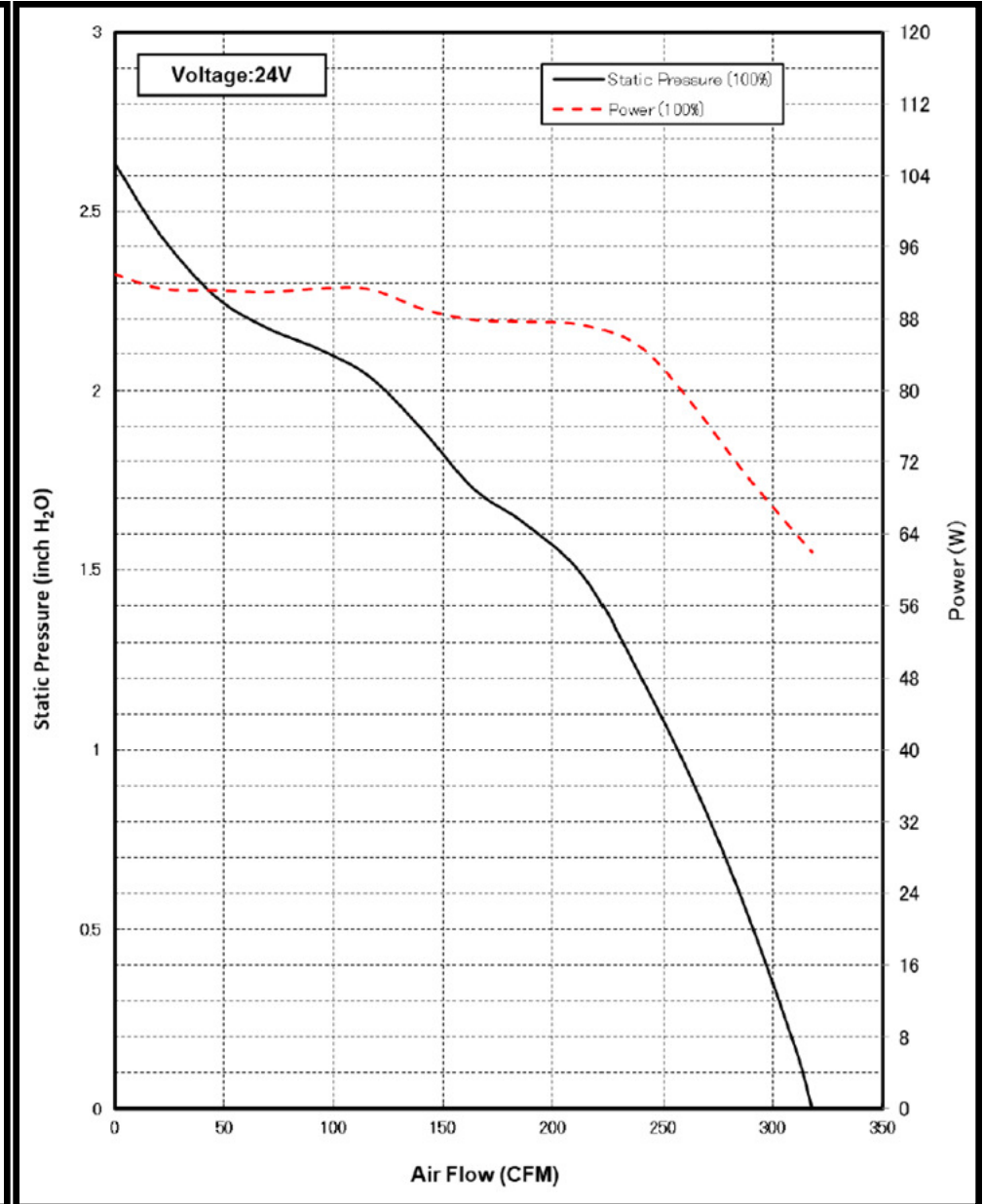
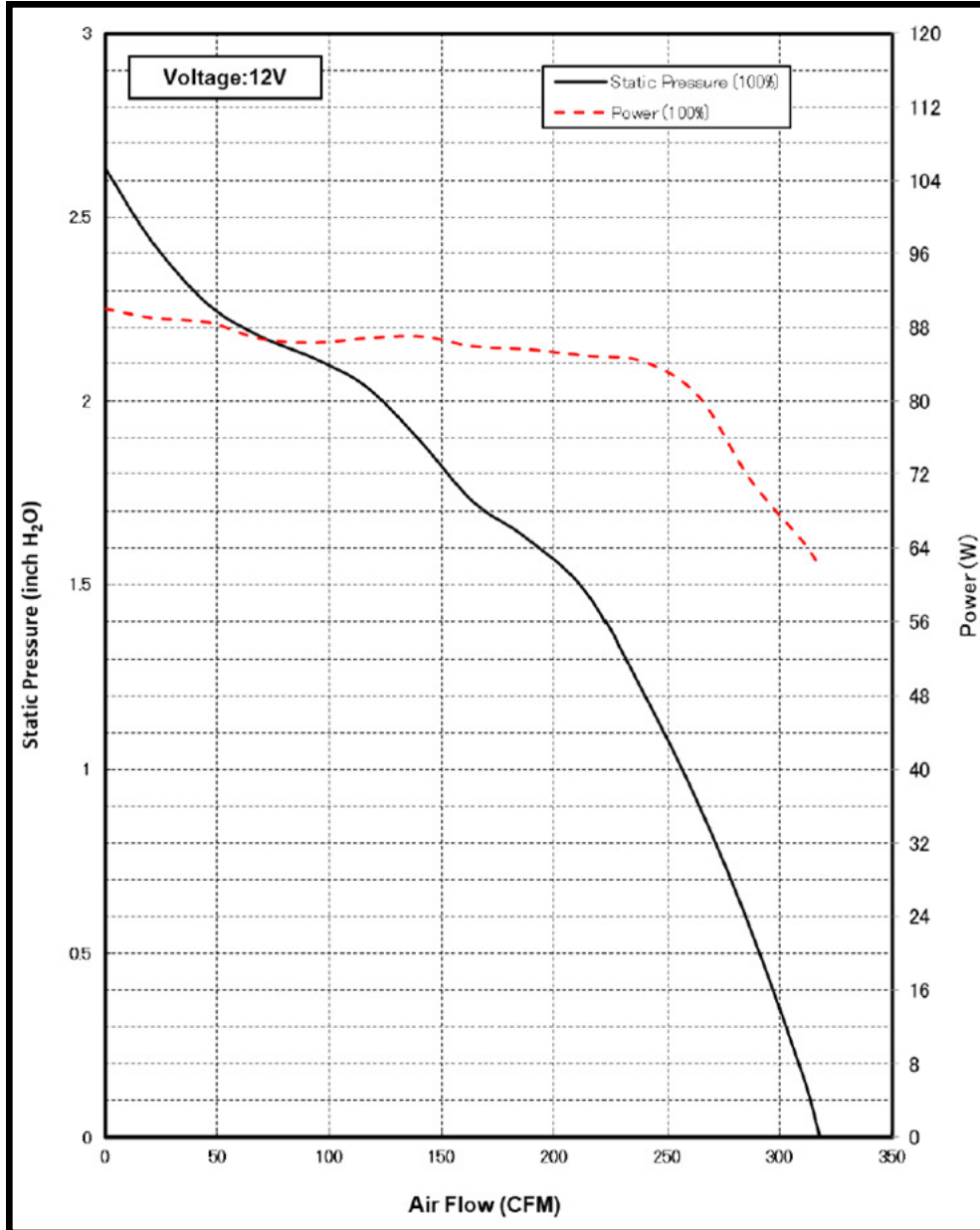
□ FIT rate = 500

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Performance vs Power (12V & 24V)

Model: 9LG1412P5G001 & 9WL1412P5G001

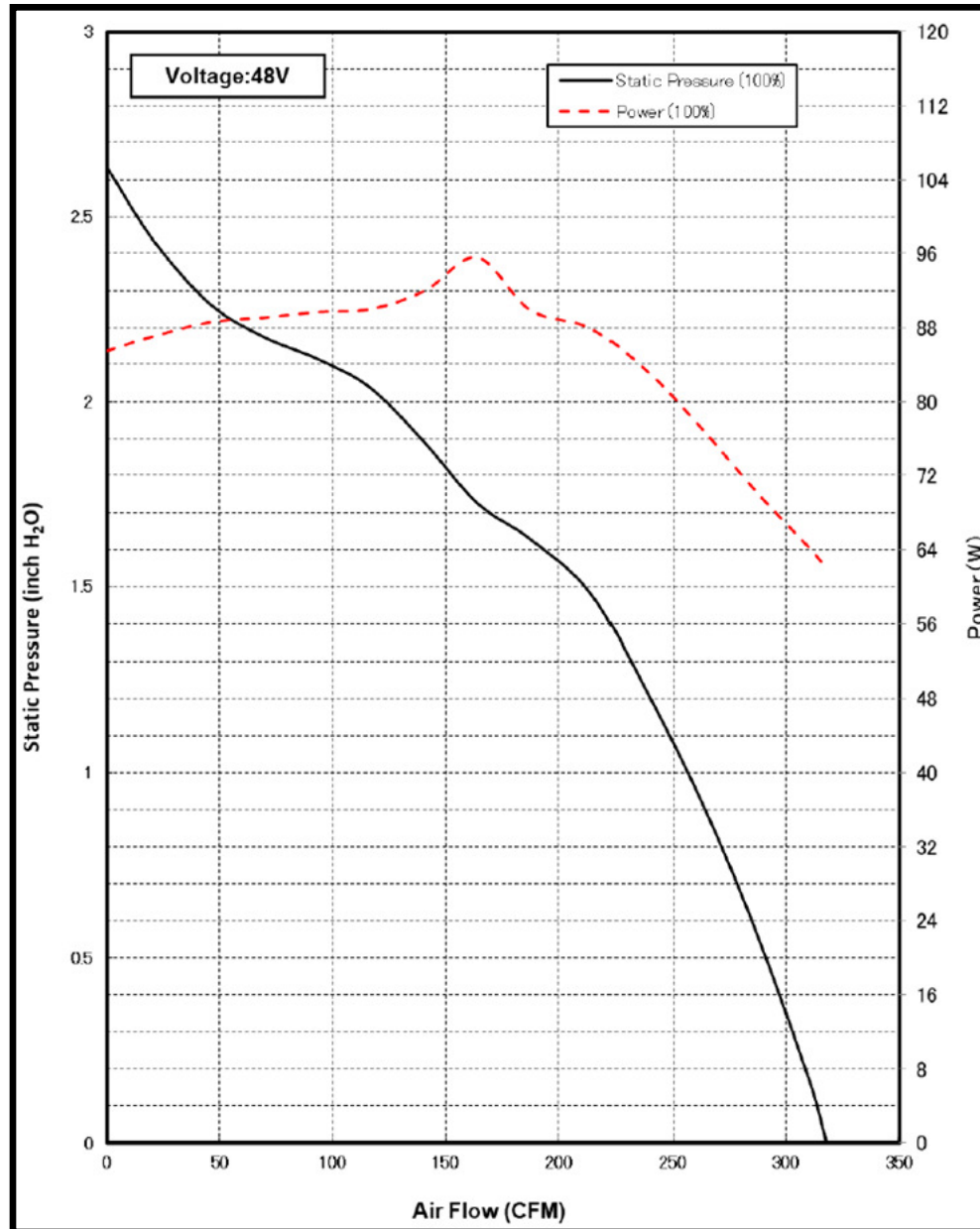
Model: 9LG1424P5G001 & 9WL1424P5G001



(Measurement by SANYO DENKI AMERICA Double Chamber System)

Performance vs Power (48V)

Model: 9LG1448P5G001 & 9WL1448P5G001

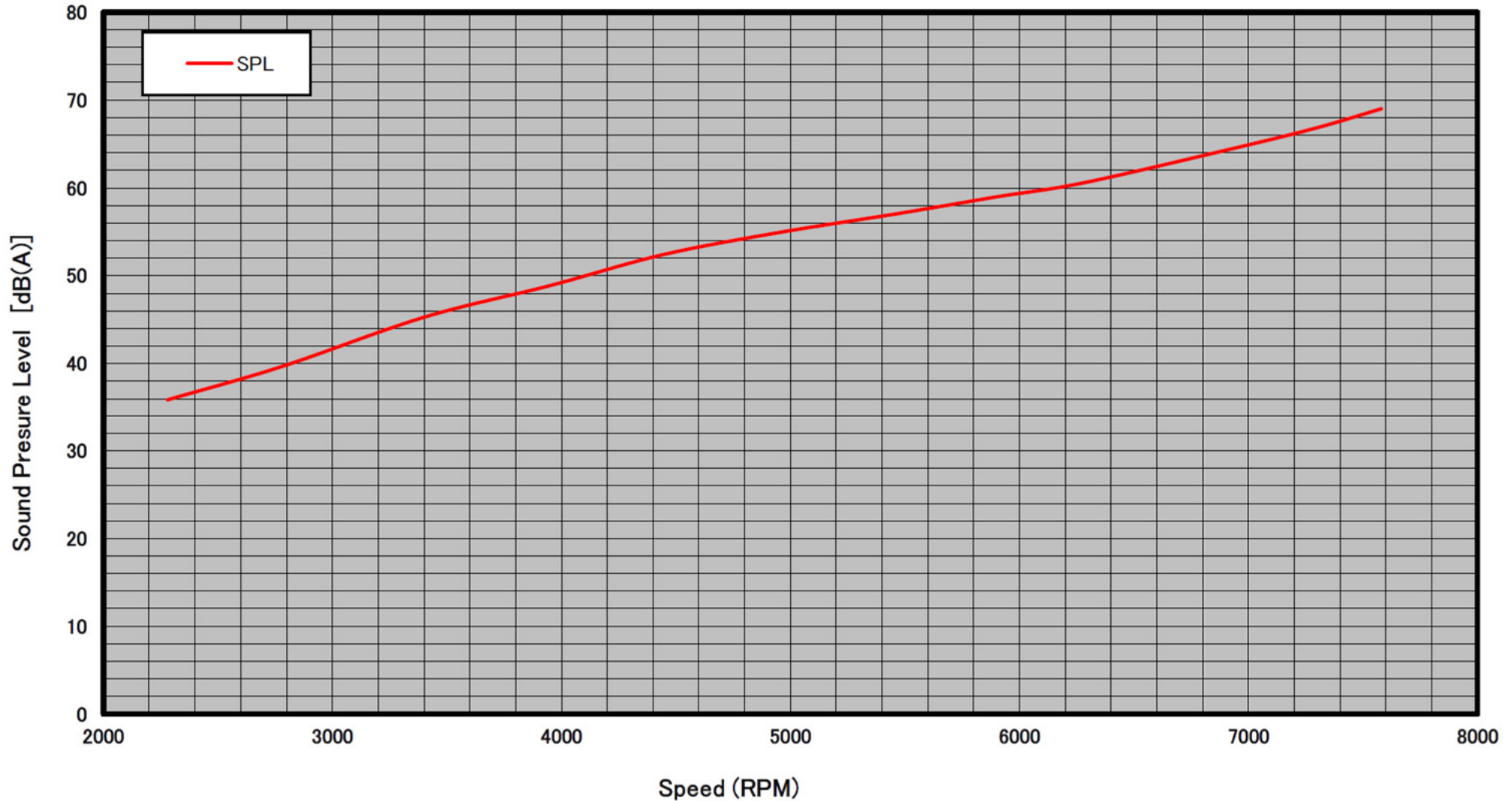


(Measurement by SANYO DENKI AMERICA Double Chamber System)

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Sound Pressure Level vs RPM

Model: 9LG1412P5G001, 9LG1424P5G001, 9LG1448P5G001, 9WL1412P5G001, 9WL1424P5G001, 9WL1448P5G001



Measured at 1m from the air inlet (Measurement Value)

Competitors

- Delta FFB1424VHG-EP
 - 252.11 CFM
 - 0.644 inchH2O
 - IP56
 - 70,000 Hours @ 40C
- ebm-papst 5314 /2HP & 5318 /2HP
 - 200 CFM
 - 1.23 inchH2O
 - IP54
 - 40,000 Hours @ 65C



Miscellaneous

- Customizations available;
 - Harness assembly

Sanyo Denki can recommend connectors and terminals.
 - Others
- Standard 3 phase motor
- Standard conformal coating for humidity protection (9LG type)
- cUL and TUV approved in April & May 2018