

DC FAN MOTOR

# San Ace

LONG LIFE SERIES

Long Life DC Fan Motor



SANYO DENKI



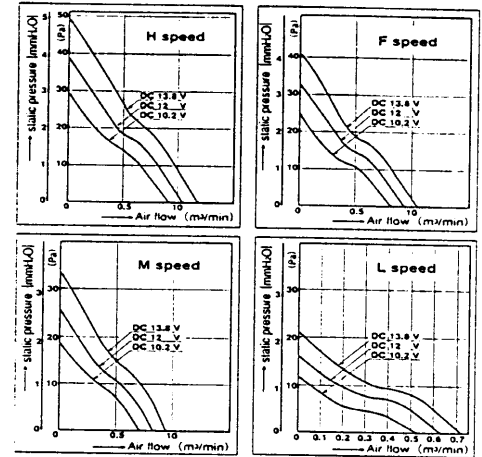
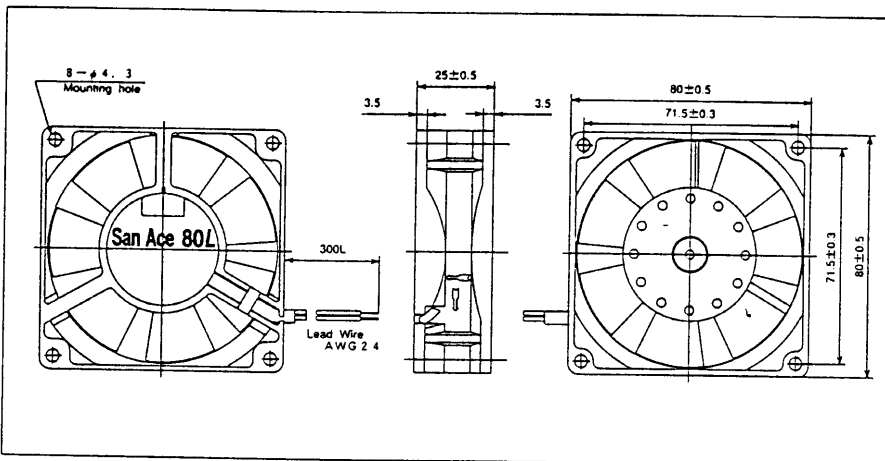
# Extensive Lineup -- San Ace 80L and San Ace 92L, in addition to San Ace 120L and San Ace 140L



## New Product

### Standard Specifications for San Ace 80L

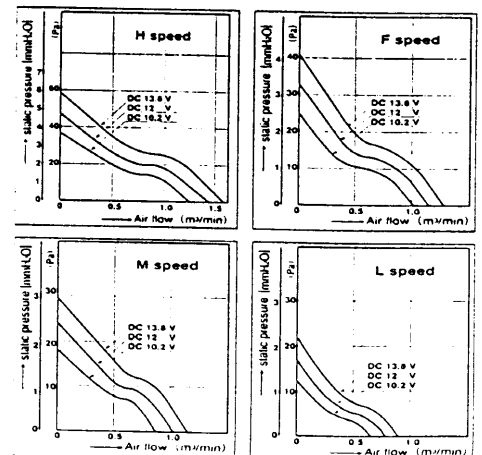
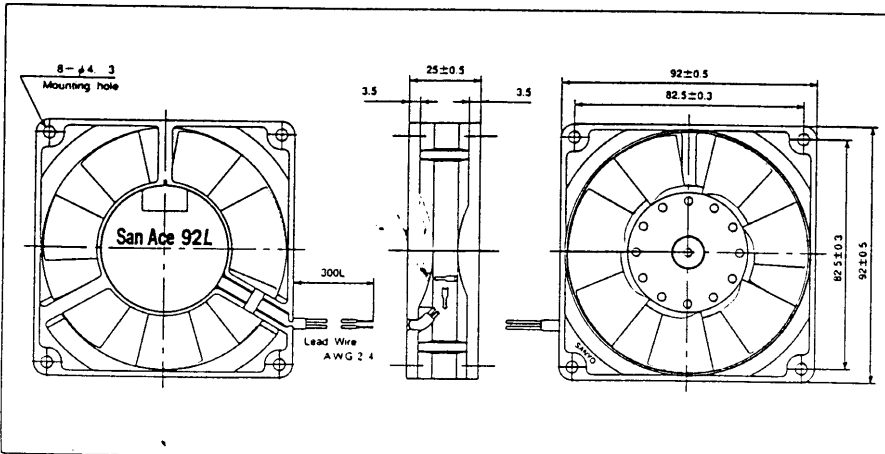
Model	109L0812H402	109L0812F402	109L0812M402	109L0812L402	109L0824H402	109L0824F402	109L0824M402	109L0824L402
Rated Voltage (V)	12	12	12	12	24	24	24	24
Operating Voltage Range (V)	10.2~13.8	10.2~13.8	10.2~13.8	10.2~13.8	20.4~27.6	20.4~27.6	20.4~27.6	20.4~27.6
Rated Current (A)	0.18	0.14	0.1	0.08	0.09	0.08	0.07	0.05
Rated Input (W)	2.16	1.68	1.2	0.96	2.16	1.92	1.68	1.2
Rated Speed (min <sup>-1</sup> )	3000	2700	2400	1900	3000	2700	2400	1900
Max. Air Flow (m <sup>3</sup> /min)	1.06	0.93	0.83	0.63	1.06	0.93	0.83	0.63
Max. Static Pressure Pa (mmH <sub>2</sub> O)	39.2 (4.0)	32.3(3.3)	26.5(2.7)	16.7(1.7)	39.2 (4.0)	32.3(3.3)	26.5(2.7)	16.7(1.7)
Noise dB (A)	32	29	26	22	32	29	26	22
Weight (g)	150	150	150	150	150	150	150	150



## New Product

### Standard Specifications for San Ace 92L

Model	109L0912H402	109L0912F402	109L0912M402	109L0912L402	109L0924H402	109L0924F402	109L0924M402	109L0924L402
Rated Voltage (V)	12	12	12	12	24	24	24	24
Operating Voltage Range (V)	10.2~13.8	10.2~13.8	10.2~13.8	10.2~13.8	20.4~27.6	20.4~27.6	20.4~27.6	20.4~27.6
Rated Current (A)	0.21	0.14	0.11	0.08	0.12	0.08	0.06	0.05
Rated Input (W)	2.52	1.68	1.32	0.96	2.88	1.92	1.44	1.2
Rated Speed (min <sup>-1</sup> )	2850	2450	2100	1700	2850	2450	2100	1700
Max. Air Flow (m <sup>3</sup> /min)	1.38	1.18	1.01	0.80	1.38	1.18	1.01	0.80
Max. Static Pressure Pa (mmH <sub>2</sub> O)	45.1 (4.6)	32.3(3.3)	23.5(2.4)	16.7(1.7)	45.1 (4.6)	32.3(3.3)	23.5(2.4)	16.7(1.7)
Noise dB (A)	33	30	27	23	33	30	27	23
Weight (g)	170	170	170	170	170	170	170	170



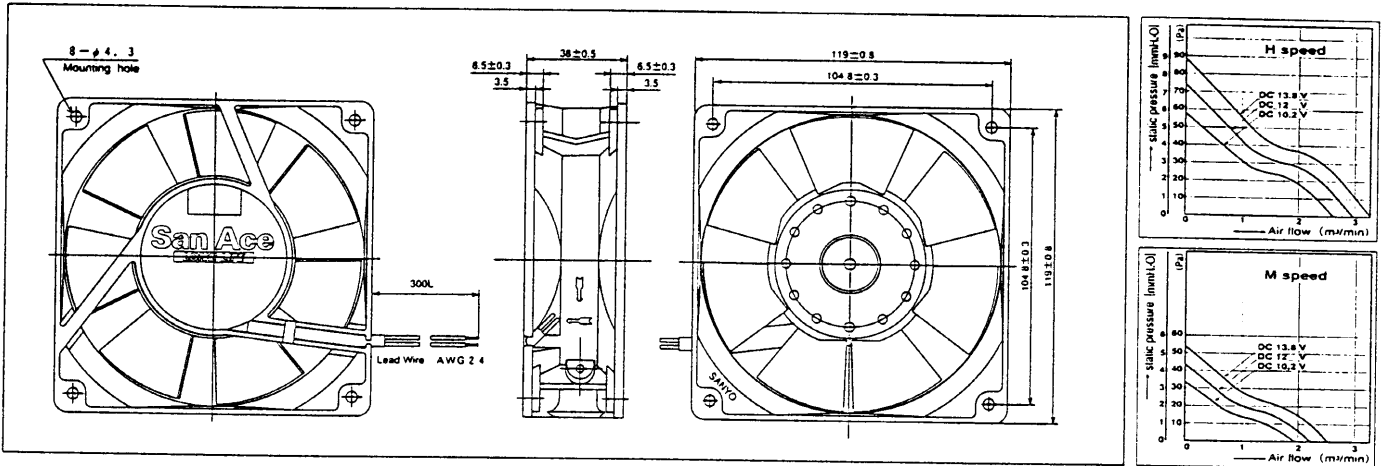
\*San Ace 80L and San Ace 92L are also available with a rated voltage of 48V.

**Powerful Cooling in a Compact Unit**  
**Maintenance-Free Operation for Continuous**  
**20 Years (with San Ace 120L)**  
**10 years (with San Ace 80L, San Ace 92L or San Ace 140L)**

- Expected Life : 100,000 hours (8CL, 32L, 140L), 200,000 hours (120L)
- (Survival Rate: 90% at 50°C amb. and rated voltage)
- Insulation Resistance : 1CM or more with DC500V megger
- Operating Temp. Range : -10°C ~ +70°C (80L, 92L)
- 10°C ~ +60°C (120L, 140L)
- Motor Protection : Reverse connection protection, prevention of seizure when rotor operation is inhibited
- Noise : Value 1m from fan surface (JITSB8330)
- Sensors : Pulse sensor, lock sensor, option compatibility
- Air flow/Static Pressure : Measured by SANYO DENKI double chamber unit

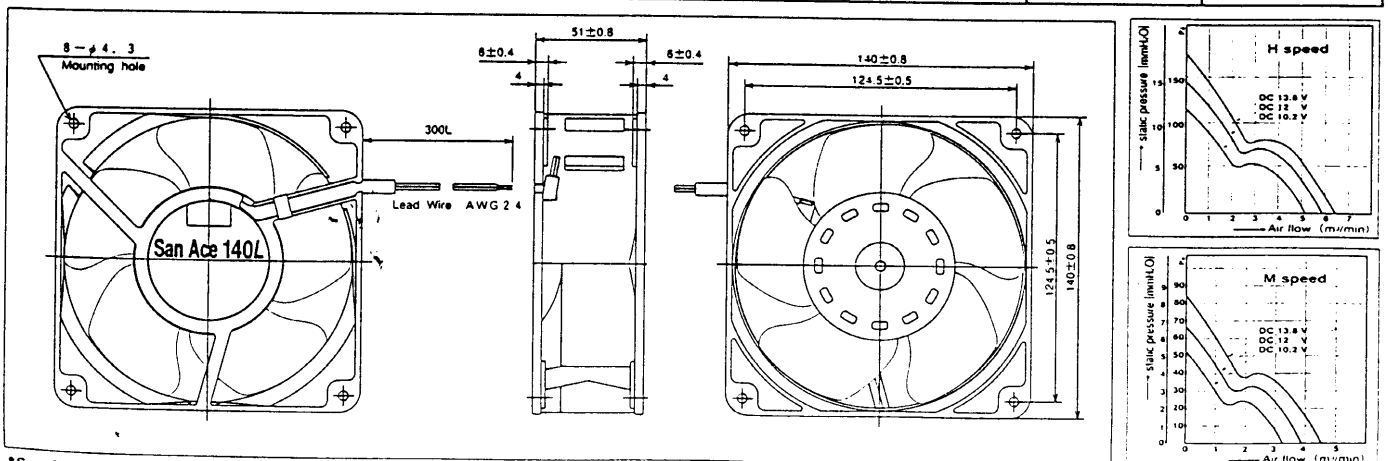
**Standard Specifications for San Ace 120L**

Model	109L1212H102	109L1212M102	109L1221H102	109L1224H102	109L1224M102	109L1248H102	109L1248M102
Rated Voltage (V)	12	12	21	24	24	48	48
Operating Voltage Range (V)	10.2~13.8	10.2~13.8	17.8~24.2	20.4~27.6	20.4~27.6	40.8~55.2	40.8~55.2
Rated Current (A)	0.4	0.22	0.24	0.21	0.1	0.12	0.06
Rated Input (W)	4.8	2.64	5.04	5.04	2.4	5.76	2.88
Rated Speed (min <sup>-1</sup> )	2850	2150	2850	2850	2150	2850	2150
Max. Air Flow (m <sup>3</sup> /min)	3.0	2.25	3.0	3.0	2.25	3.0	2.25
Max. Static Pressure Pa (mmHzO)	70.5(7.2)	41.1(4.2)	70.5(7.2)	70.5(7.2)	41.1(4.2)	70.5(7.2)	41.1(4.2)
Noise dB (A)	41	34	41	41	34	41	34
Weight (g)	320	320	320	320	320	320	320



**Standard Specifications for San Ace 140L**

Model	109L1412H502	109L1412M502	109L1424H502	109L1424M502	109L1448H502	109L1448M502
Rated Voltage (V)	12	12	24	24	48	48
Operating Voltage Range (V)	10.2~13.8	10.2~13.8	20.4~27.6	20.4~27.6	40.8~55.2	40.8~55.2
Rated Current (A)	1.4	0.46	0.6	0.21	0.29	0.12
Rated Input (W)	16.8	5.52	14.4	5.04	13.9	5.76
Rated Speed (min <sup>-1</sup> )	3200	2100	3200	2100	3200	2100
Max. Air Flow (m <sup>3</sup> /min)	5.9	3.9	5.9	3.9	5.9	3.9
Max. Static Pressure Pa (mmHzO)	142.1(14.5)	68.6(7)	142.1(14.5)	68.6(7)	142.1(14.5)	68.6(7)
Noise dB (A)	52	41	52	41	52	41
Weight (g)	760	760	760	760	760	760



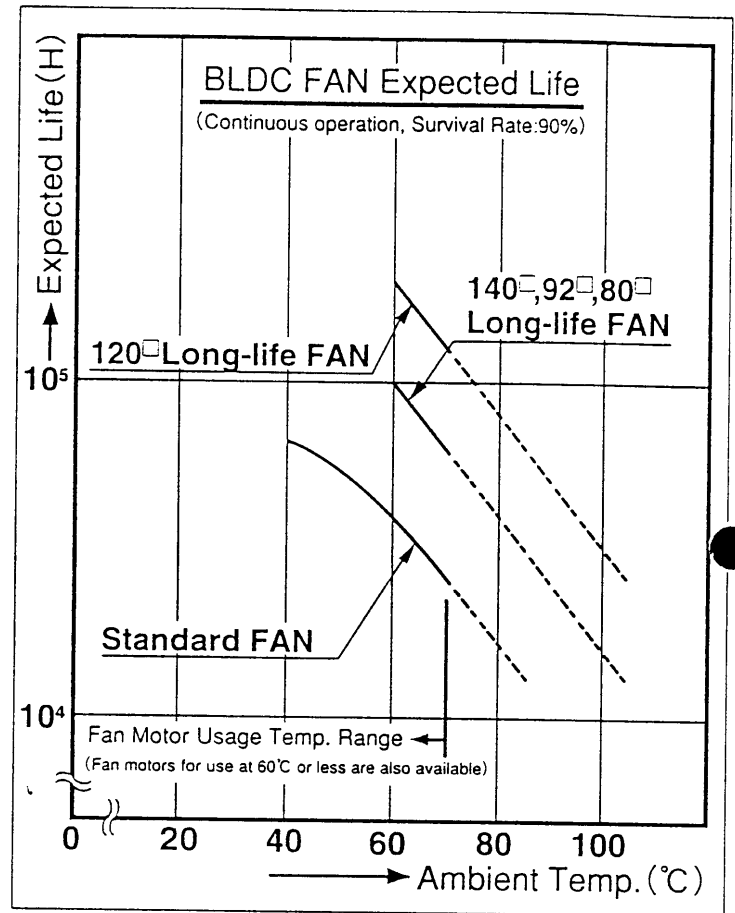
\*San Ace 120L and San Ace 140L can also be used with relay alarm.

## Life Curve (expected values)

### Reliability and Life

Due to the low power consumption of the BLDC FAN and its self-cooling characteristics, there is minimal temperature rise of the motor itself. In addition, since bearing grease also features low temperature rise, long motor life is achieved. A substantial increase in motor life has been made possible in the San Ace LONG LIFE series through improvements to boost motor efficiency.

\*The chart to the right indicates the relationship of ambient temperature to life for the standard and long-life type BLDC FAN. This data has been compiled from information obtained in life and other tests conducted by SANYODENKI.



### Notes on Use



If the following precautions are not taken, a light-to-medium degree of injury or material damage may occur. Such injury or damage can result in serious consequences in some situations. To avoid this, be sure to strictly observe these regulations.

### CAUTION

- This system cannot be used in medical equipment on which human life depends.
- This system cannot be used in any equipment which might greatly affect social and public utilities.
- This system cannot be used in circumstances where vibration occurs, such as in vehicles or onboard vessels.
- Do not disassemble or remodel the FAN. If so, normal operation cannot be guaranteed, and serious accidents may result.
- To avoid injury, do not touch the system while the FAN is rotating.
- Do not put anything into the FAN, otherwise trouble will occur.
- When using this system, be sure to observe the conditions and circumstances of use (working voltage and temperature ranges and the power unit connecting position) mentioned in this catalog.
- If the FAN fails during equipment operation, the warranty is considered to be that for the equipment.
- The FAN is only to be used internally in any equipment.
- Since static electricity can cause problems for the FAN and other equipment, be sure to take appropriate electrostatic protective means during installation.
- Use this FAN with the finger guard installed.

For any questions or consultations, contact the Business Department of our company.

### SANYO DENKI CO.,LTD.

1-15-1. KITA OHTSUKA,  
TOSHIMA-KU, TOKYO, JAPAN.  
TELEPHONE INTERNATIONAL +81 3 3917 2223  
FACSIMILE INTERNATIONAL +81 3 3917 4521

### SANYO DENKI AMERICA, INC.

2310 205TH ST., SUITE 101 TORRANCE,  
CA 90501 U.S.A.  
PHONE : (310) 212-7724 FAX : (310) 212-6545

### SANYO DENKI EUROPE SA.

BP 50286, 95958 ROISSY CHARLES-DE-GAULLE  
CEDEX, FRANCE  
PHONE : (1) 48632661 FAX : (1) 48632416

URL <http://www.sanyodenki.co.jp>