

Standards and Specifications
of
Model: FD8025S12W9-61-2RSC1
(Auto Restart Protection)

A. General Specification

Item		Specification / Standard / Condition	
01	Outline Dimension	80 x 80 x 25	mm
02	Bearing	Sleeve Bearing	
03	Rated Voltage	DC 12	V
04	Operating Voltage	DC 6.0 V ~ DC 13.8	V
05	Starting Voltage	DC 6.0	V
06	Rated Current (Max.)	0.40	A
07	Actual Current	0.39	A
08	Power Consumption (Max.)	4.80	W
09	Rated Speed	4,000	R.P.M. $\pm$ 10%
10	Maximum Airflow	56.80	CFM
11	Maximum Static Pressure	6.30	mm-H ₂ O
12	Noise Level	42.40	dB (A)
13	Life Expectancy	70,000	hrs at 40°C
14	Net Weight	76	Gram
15	Number of Blade	7	Blades
16	Number of Pole	4	Poles
17	Rotating Direction	Counter-Clockwise	Looking at Rotor Side
18	Plastic Material: Blade, Housing, Bobbin	Housing: Plastic UL 94V-0 P.B.T. Blade: Plastic UL 94V-0 P.B.T.	
19	Lead Wire	UL Type #24 AWG	Red: (+) Black: (-)
20	Connector	with Alex# 2512-02 equivalent Connector	

B. Electrical Specification

Item		Specification / Condition	
01	Locked Rotor Protection	✓	Safety Condition
		✓	a. Auto power off after locked at rated voltage for 1 sec. b. After auto power off, circuit attempt to restart in 2-6 sec.
02	Polarity Protection	✓	Circuit is protected when VCC & GND are exchanged, the circuit won't be burned within 10 seconds.
03	Insulation Resistance	✓	10 m.Ohm / between unshielded wire and frame at 500 VDC/min.
04	Dielectric Strength	✓	5 mA Maximum. / Measured between lead wire (+) and frame at 500 VAC/min.

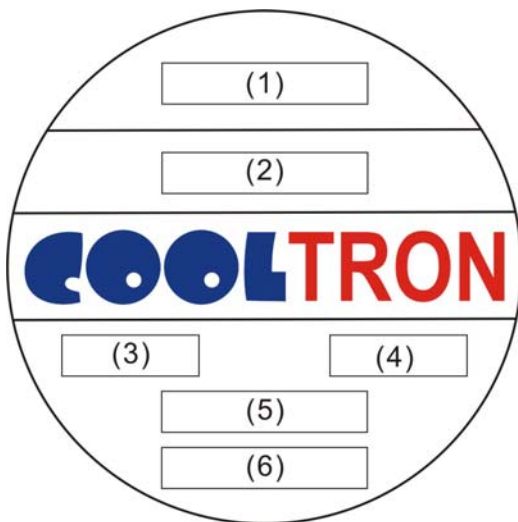
C. Environmental Specification

Item		Specification / Condition
01	Operating Condition	Temperature: -10°C ~ + 70°C Humidity: 35% ~ 85% RH
02	Storage Temperature	Temperature: -40°C ~ + 70°C Humidity: 35% ~ 85% RH
03	Test of high & low Temperature	Test Circulation at -10°C & 70°C two times per 4 hours
04	Packing Vibration Test	Packing condition: X, Y, Z 3 directions, 1.1G load vibration test for 30 min.
05	Packing Shock Proof Test	1 corner, 3 edges, 6 faces natural drop from 60cm high, packed

D. Safety Approvals

Safety Approval	File No.
UL	E194726
CUL	E194726
TUV	R50048194

E. Label Marking



(1)	Safety Approval
(2)	Model Number & Appendix Code
(3)	Rated Voltage
(4)	Power Consumption
(5)	Bearing Type
(6)	Location

FD8025-61 Series Performance Curves

This graph shows the performance of the FD8025-61 Series, plotting Static Pressure (mm-H₂O) on the Y-axis against Air Flow (CFM) on the X-axis. The Y-axis ranges from 0 to 10.0 in increments of 2.0. The X-axis ranges from 0 to 60.0 in increments of 12.0. Four curves are shown, representing different RPM values: 2000RPM (dashed line), 2500RPM (dash-dot line), 3000RPM (long-dashed line), and 4000RPM (solid line). The 4000RPM curve starts at approximately 6.4 mm-H₂O at 0 CFM and decreases to 0 mm-H₂O at approximately 58 CFM. The 3000RPM curve starts at approximately 3.4 mm-H₂O at 0 CFM and decreases to 0 mm-H₂O at approximately 42 CFM. The 2500RPM curve starts at approximately 2.2 mm-H₂O at 0 CFM and decreases to 0 mm-H₂O at approximately 32 CFM. The 2000RPM curve starts at approximately 1.6 mm-H₂O at 0 CFM and decreases to 0 mm-H₂O at approximately 25 CFM.

Air Flow (CFM)	Static Pressure (mm-H ₂ O) at 2000RPM	Static Pressure (mm-H ₂ O) at 2500RPM	Static Pressure (mm-H ₂ O) at 3000RPM	Static Pressure (mm-H ₂ O) at 4000RPM
0	1.6	2.2	3.4	6.4
12	0.8	1.4	2.4	4.8
24	0.4	0.8	1.6	3.2
36	0.0	0.4	1.0	1.6
48	0.0	0.0	0.4	0.8
60	0.0	0.0	0.0	0.0

Technical drawing of the Alex#2512-02 fan, showing top and side views with dimensions.

Top View Dimensions:

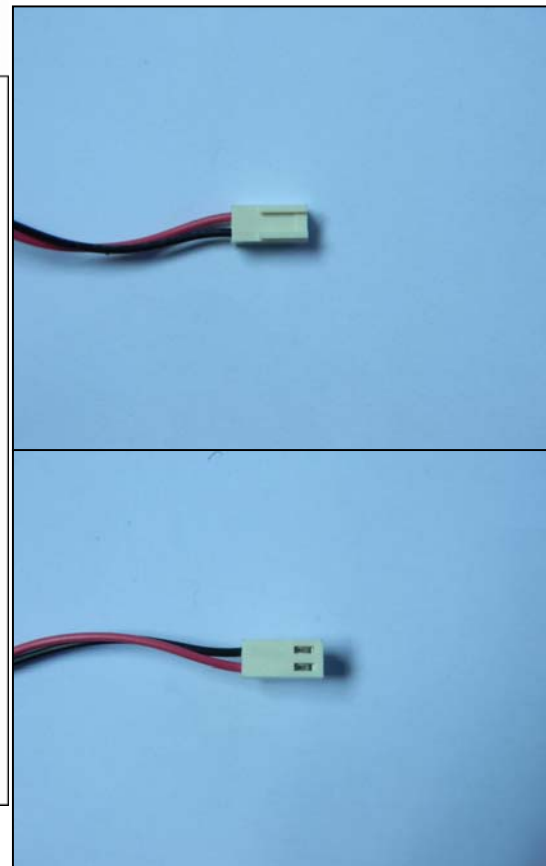
- Overall width: 80.0 ± 0.5 mm
- Overall height: 71.5 ± 0.3 mm
- Mounting hole diameter: $\varnothing 4.4 \pm 0.3$ mm
- Rotation direction: Indicated by a curved arrow labeled "Rotation".
- Airflow direction: Indicated by a straight arrow labeled "Airflow".
- Pin 1 (+) and Pin 2 (-) are labeled on the connector.
- Connector pitch: 100" (2.54 mm).
- Connector length: 305 ± 10 mm.

Side View Dimensions:

- Mounting hole diameter: $\varnothing 4.4 \pm 0.3$ mm.
- Mounting hole spacing: 25.0 ± 0.5 mm.
- Mounting hole diameter: 4.0 mm.

WITH Alex#2512-02 equivalent 2PIN CONNECTOR(.100" PITCH)

unit: mm



H. Fan Photos



FD8025-61