

Product data sheet

Specifications

Product Name: Shield Pole Motor for Axial Flow Fans

Product Model: F2E-120S/B-115

Motor Code: M2S06301-AB

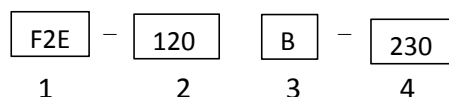
Order Number:2018.008/010



Naming rules

1.1 Product code description

Example:



1-Company code or fan wiring method

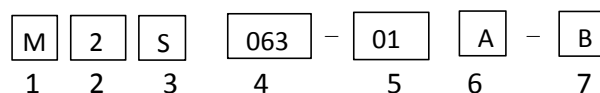
2-External dimensions

3-Bearing type (S: sleeve bearing B: ball bearing)

4-Input voltage (1:115V, 2:230V, 3:380V)

1.2 Motor code description

Example:



1-Motor

2-Pole number (2:2 poles, 4:4 poles, 6:6 poles, 8:8 poles);

3-Input voltage (S: 115V, E: 230V, D: 380V);

4-Motor outer diameter;

5-Motor design serial number;

6-AC power;

7-Insulation level (B: Grade B, F: Grade F)

Production standard and safety regulations

1	The product satisfy requirements	☒ GB12350 《Safety requirements of small power motors》
		☐ GB/T13275 《General technical requirements for general centrifugal fan》
		☒ EN60335-1 《Household and similar electrical appliances-safety》
		☐ EN62368-1 《Household and similar electrical appliances-safety》
		☒ UL507 electric fan standard
2	Management system certification	☒ Quality Management System ISO9001:2015 ☒ Environmental Management System ISO14001:2015 ☐ Occupational Health and Safety Management System ISO 45001:2008

3	Certificate	☒ CCC Self-declaration Self-declaration No:2024000401000296 According to the standard: GB/T12350-2022
		☐ CE
		☒ UL/CUL/Certificate No: E324860-20240522
		☐ TUV /Certificate No:
4	Vibration of the fan	☒ Fan effective value of vibration velocity according JB/T8689 standard

General Specification

ITEMS		Specification/Condition		
1	Outline. Dimension	See enclosed drawing		
2	Type of motor	Axial flow fan with shaded pole motor		
3	No. of poles	2poles		
4	Starting voltage	90V		
5	Voltage range	90V-245V		
6	Rated .voltage/Frequency	115V AC	50HZ	60HZ
7	Rated current	Testing under the rated voltage	0.34A±10%	0.28A±10%
8	Power consumption		25W±10%	21W±10%
9	Rated speed		2500RPM±10%	2700RPM±10%
10	Max airflow		145±5% m^3h	160±5% m^3h
11	Max static pressure		/	/
12	No.of fan blades	7P		
13	Rotating direction	Observe counterclockwise from the fan blade		
14	Air outlet direction	Straight in and straight out		
15	Operating temperature	Standard temperature rise $\leq 60\text{K}$, tested under 1.1 times the rated voltage (50Hz) experiment. Room environment temperature 25°C for testing temperature rise		
16	Max noise	50/52dBa±5%		
17	Life time	Endurance test for fans: The fan operates continuously for 30,000 hours without failure (under rated voltage, ambient temperature of 25°C , humidity less than 70% RH, and the fan running at full speed).		
18	Failure warning (selectable)	Alarm: ☐ Closed ☐ Opened Passive touch spot Touch spot loading: 8A/AC125V 6A/AC250V 8A/DC12V 6A/DC24V		
19	Signal feedback (selectable) FG signal	☐ FG signal		
20	Description of other functions	/		
21	Weight	0.46KG		

22	Place of production	Shanghai, China
23	Air capacity and air pressure curve	

The graph plots Static pressure Δp_f (Pa) on the Y-axis (0 to 80) against Flowing rate $\dot{V}$ (M³/H and CFM) on the X-axis (0 to 160). It shows performance curves for 50Hz (solid lines) and 60Hz (dashed lines) at 230V (①) and 115V (②). The curves are labeled with inch-H₂O values: 0.28, 0.20, 0.12, and 0.04. Two specific operating points are marked: ① at approximately (85, 15) and ② at approximately (65, 60).

Flowing rate $\dot{V}$ (M ³ /H)	Flowing rate $\dot{V}$ (CFM)	Static pressure Δp_f (Pa) - 50Hz 230V (①)	Static pressure Δp_f (Pa) - 50Hz 115V (②)	Static pressure Δp_f (Pa) - 60Hz 230V (①)	Static pressure Δp_f (Pa) - 60Hz 115V (②)
0	0	62	72	68	78
25	10	52	62	58	68
50	20	30	30	40	40
65	28	15 (①)	60 (②)	35	35
85	38	15 (①)	-	30	30
100	45	30	-	25	25
120	54	20	-	15	15
140	63	10	-	5	5

Main Materials/parts Specification

Materials/Parts		Specification
1	Housing	Aluminum ADC12
2	Blade	PBT+GF
3	Bearing type	Ball Bearing Bearing specifications: NMB 608
4	Enameled wire	QA-2/155
5	Lead way	Terminal block
	Length of lead	110±20mm (Test line, not included by default)
	Wire specification	UL3266 18AWG 125℃
6	Flame retardant rating	V-0: The fire burn out within 30seconds after two times of 10 seconds burning testing for samples. Not Allow the objects drop after burning.
7	Lead wire pipe	Heat-shrink tube
8	Connector	3-position screw terminals
9	Terminal shell	PA66+GF-FR
10	Capacitance	/
11	(Centrifugal fan project) Inlet cones	☐ Yes ☐ No

Electrical Specifically

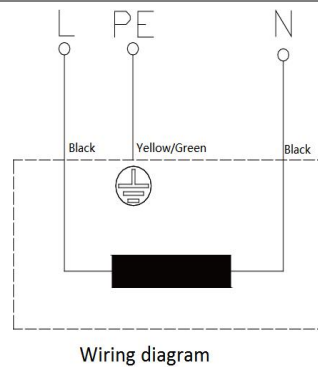
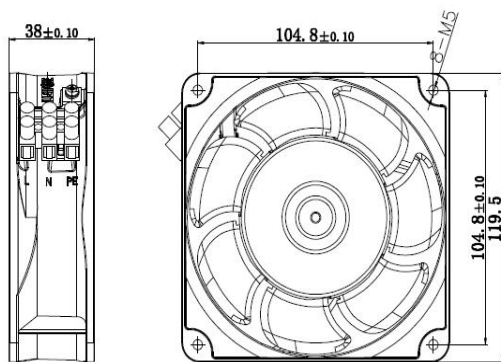
1	Insulation resistance	100MΩ/measured between bare wire and outer frame, 500VDC/1min
2	Dielectric strength	Between wire and frame 1800VAc 5mA 1S
3	Ingress protection	IP34

4	Motor protection type	Impedance protection
5	Thermal protection reset type	/
6	Operating temperature of protector	/

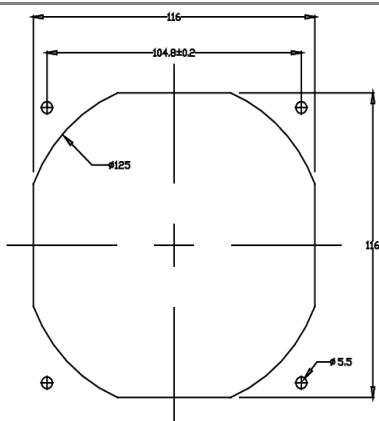
Environmental Specification

1	Working temperature range	Temperature: -30℃~+60℃
2	Working humidity range	Humidity: 0-70%RH
3	Keeping temperature range	Temperature: -40℃~+70℃
4	Keeping humidity range	Humidity: 0-85%RH
5	Insulation shock	IEC61858: B
6	Packing vibration test	After packaging, conduct a 1.1G load vibration test in XYZ directions for 30 minutes. No serious damage
7	Packing shock proof test	After bundling, the height is 60 cm. A drop test is performed from a height of 1 corner and 3 edges onto 6 sides, resulting in no significant damage.

Shape and installation drawings



Cut-out size drawing



Notes

1. Our products should be used within the specification appointed condition, so we will not guarantee this product quality if your application exceeds the limitations outlined in this specification.

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2. Unless we are notified in advance of the required parameters, the shipped products shall be consistent with this specification sheet, and the parameters not specified in this specification sheet shall be the same as the samples finally recognized by your company.
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3. Improper mounting may cause harsh resonance, vibration and noise. Please mount this fan motor properly without applying excessive or uneven force at the mounting points to avoid vibration and noise. Dampers at the mounting points can reduce noise and vibrations greatly.
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4. Please use fan guards to avoid personal accidental injuries.
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5. Unless this fan motor is specified for use in abnormal environments designated by IP rating level, this fan is designed to operate under normal environmental conditions.
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6. Please avoid operating M-FAN's products in poisonous material (organic, cyanogens, formalin, phenol, etc.) or corrosive gas environment (H_2S , SO_2 , NO_2 , etc.)
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7. Please use filters to clean the air-intake in very dusty air environments for extended fan life.
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8. Under the condition of ensuring that the product performance and life remain unchanged or even improved. Unless otherwise agreed in advance, we reserve the right to use parts from multiple sources with the same specifications, and changes in raw materials and structure will not be notified in advance.
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9. Please make sure that the fan is stored in the specified temperature and humidity environment. If the fan is stored for more than 6 months, we recommend that customers test the fan function before using it.
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10. Make sure to turn off the power before connection or disconnecting the connectors. This may cause short of electronic parts.
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