# Product data sheet

LEIPOLE ELECTRICAL SOLUTION

Specifications

Product Name: Shield Pole Motor for Axial Flow Fans

Product Model: F2E-120S/B-230

Motor Code: M2E06301-AB

Order Number:2018.007/009

## Naming rules

1.1 Product code description

Example: F2E – 120 B – 230

1 2 3 4

1-Company code or fan outlet 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: M 2 E 063 – 01 A – B

1 2 3 4 5 6 7

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

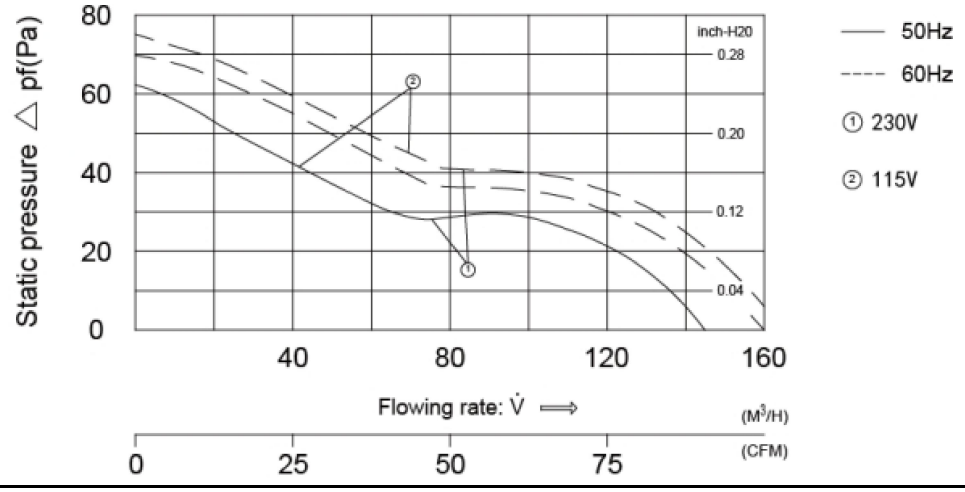
| | | |
|---|---|---|
| 1 | The product satisfy requirements | ☑GB12350 《Safety requirements of small power motors》 |
| | | ☐GB/T13275《General technical requirements for general centrifugal fan》 |
| | | ☑EN60335-1《Household and similar electrical appliances-safety》 |
| | | ☐EN62368-1《Household and similar electrical appliances-safety》 |
| | | ☑UL507 electric fan standard |
| 2 | Management system certification | ☑Quality Management System IS09001:2015<br>☑Environmental Management System IS014001:2015<br>☐Occupational Health and Safety Management System ISO 45001:2008 |

| | | |
|---|---|---|
| 3 | Certificate | ☑CCC Self-declaration<br>Self-declaration No:2024000401000296<br>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 | AC AXIAL-FLOW FAN | | |
| 3 | No. of Poles | 2poles | | |
| 4 | Starting voltage | 90V | | |
| 5 | Voltage range | 90V-245V | | |
| 6 | Rated .voltage/Frequency | 230V AC | 50HZ | 60HZ |
| 7 | Rated current | Testing under the rated voltage | 0.18A±10% | 0.17A±10% |
| 8 | Power consumption | | 19W±10% | 17W±10% |
| 9 | Rated speed | | 2500RPM±10% | 2700RPM±10% |
| 10 | Max airflow | | 145±5%m³h | 160±5% m³h |
| 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 | The standard temperature rise is less than or equal to 60K. Test the temperature rise at 25 ° C in the laboratory with 1.1 times the rated voltage (50Hz) | | |
| 16 | Max noise | 50/52dBa±5% | | |
| 17 | Life time | Fans endurance test: can continuous work within 30000hours (under nominal voltage, environmental temperature is 25℃、humidity＜70%RH 、fans full-speed operation。 | | |
| 18 | Failure warning（selectable） | Alarm：☐Closed ☐ Opened<br>Passive touch spot<br>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 | 0.47KG | | |

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




# Main Materials/parts Specification

| Materials/Parts | | Specification |
|---|---|---|
| 1 | Housing | Aluminum ADC12 |
| 2 | Blade | PBT+GF |
| 3 | Bearing type | Ball Bearing<br>Bearing spec： 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 10seconds 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

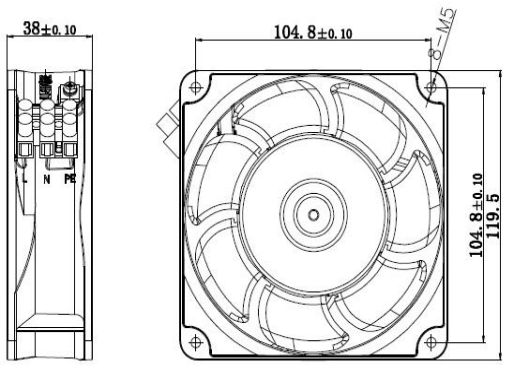
| | | |
|---|---|---|
| 1 | Insulation resistance | 100MΩ/between unshackled wire and frame at 500VDC/1min |
| 2 | Dielectric strength | Between wire and frame 1800VAc 5mA 1S |
| 3 | Ingress protection | IP34 |

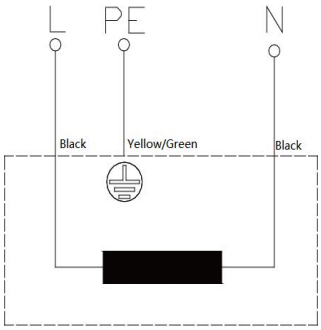
| | | |
|---|---|---|
| 4 | Motor protection type | Impedance protection |
| 5 | Thermal protection reset type | / |
| 6 | Operating temperature of protector | / |

# 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. |

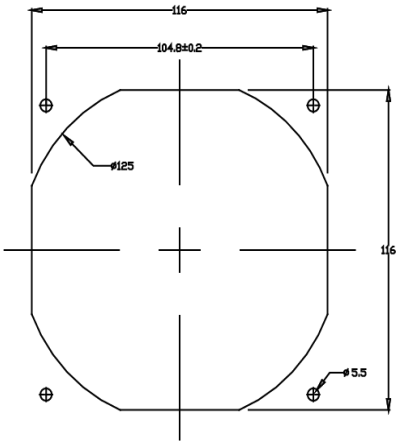
# Shape and installation drawings




Wiring diagram

# 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.

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

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.

4. Please use fan guards to avoid personal accidental injuries.

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 environ mental conditions.

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.)

7. Please use filters to clean the air-intake in very dusty air environments for extended fan life.

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.

9. Always ensure that fans are stored according to the storage temperatures specified. Do not store in a high humidity environment. If the fans are stored for more than 6 months, we recommend functional testing before using.

10. Make sure to turn off the power before connection or disconnecting the connectors. This may cause short of electronic parts.