

# Product data sheet

## Specifications

Product Name: Capacitor start asynchronous motor

Product Model: F2E-20772B.230-M

Motor Code: M2E09202D-AF

Order Number: 2018.069



## Naming rules

### 1.1 Product code description

Example: 

F2E	-	20772	-	B	-	230	-	M
1		2		3		4		5

1-Company code or fan series level 2

2-External dimensions

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

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

5-Blade material (A: Cold-rolled steel SPCC M: Magnesium/Aluminum alloy)

### 1.2 Motor code description

Example: 

M	2	E	-	092	-	02D	-	A	-	F
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	<input checked="" type="checkbox"/> GB12350 《Safety requirements of small power motors》
		<input type="checkbox"/> GB/T13275 《General technical requirements for general centrifugal fan》
		<input checked="" type="checkbox"/> EN60335-1 《Household and similar electrical appliances-safety》
		<input type="checkbox"/> EN62368-1 《Household and similar electrical appliances-safety》
		<input checked="" type="checkbox"/> UL507 electric fan standard
2	Management system certification	<input checked="" type="checkbox"/> Quality Management System ISO9001:2015
		<input checked="" type="checkbox"/> Environmental Management System ISO14001:2015
		<input type="checkbox"/> Occupational Health and Safety Management System ISO 45001:2008

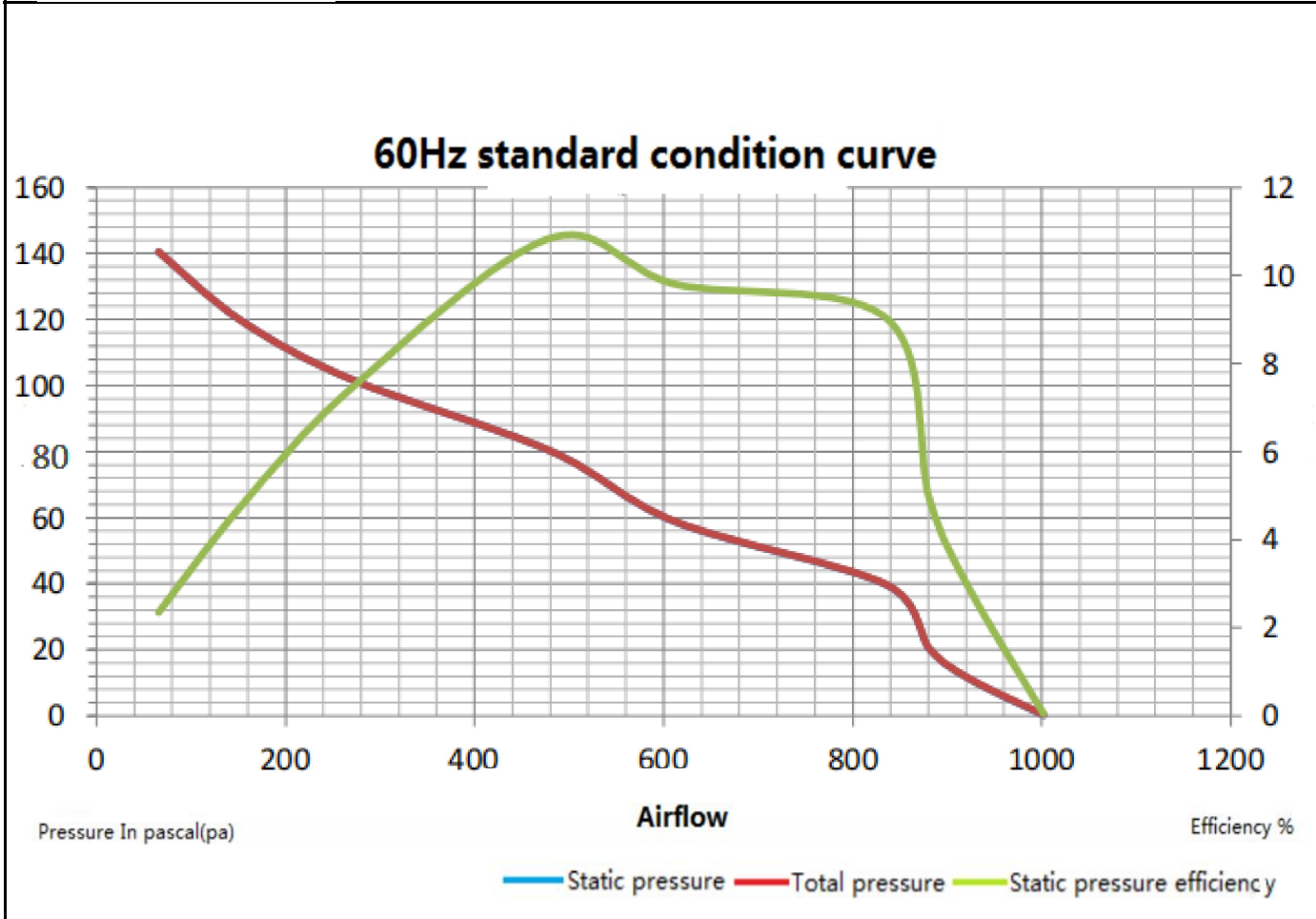
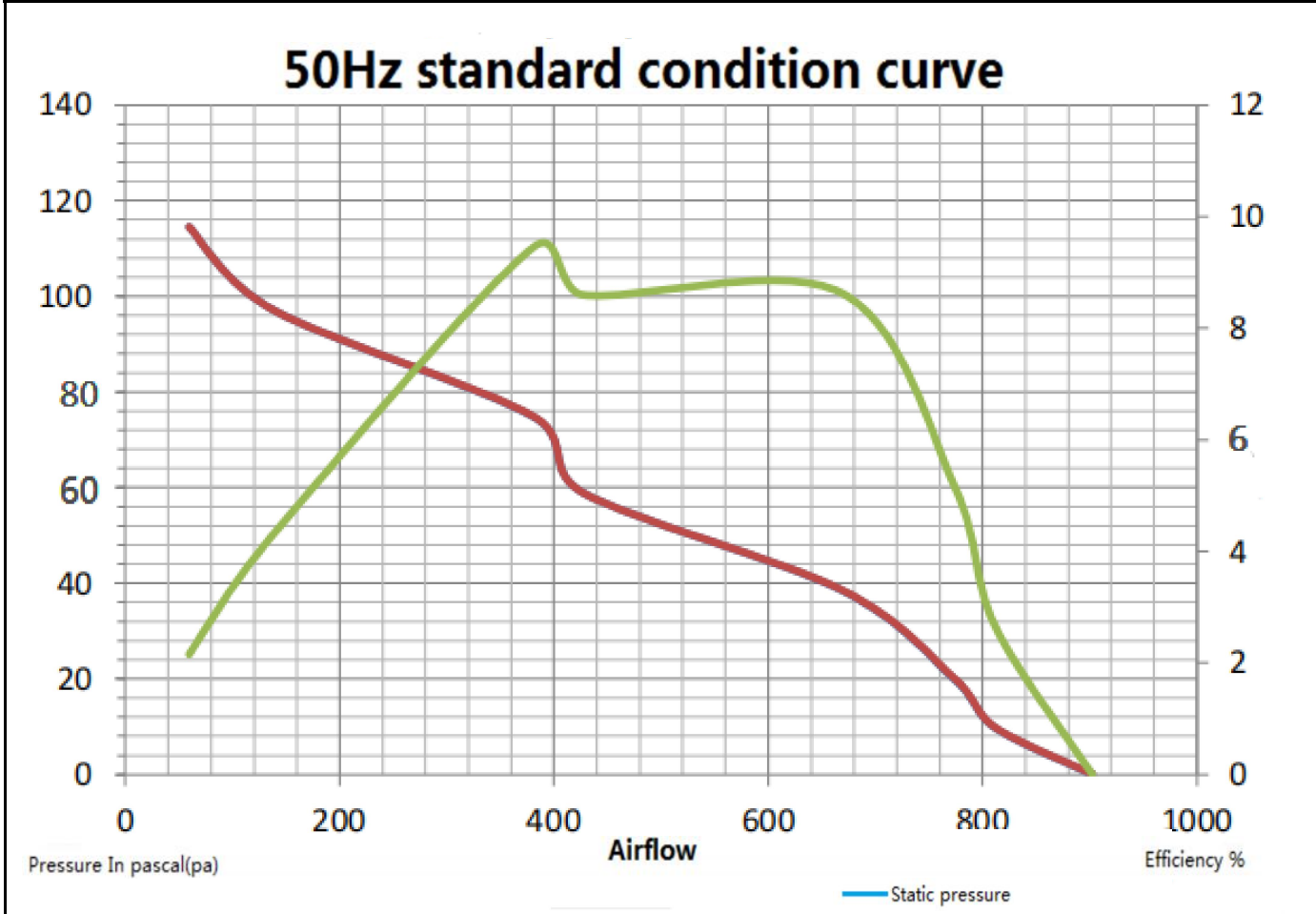
3	Certificate	<input checked="" type="checkbox"/> CQC Voluntary Certification <input type="checkbox"/> Certificate No. :2024000401000296
		<input checked="" type="checkbox"/> CE
		<input checked="" type="checkbox"/> UL/CUL/Certificate No:E324860-20240522
		<input type="checkbox"/> TUV /Certificate No:
4	Vibration of the fan	<input checked="" type="checkbox"/> 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	Capacitor start external rotor asynchronous motor		
3	No. of Poles	2poles		
4	Starting voltage	90V		
5	Voltage range	110V-235V		
6	Rated .voltage/Frequency	AC 230V	50HZ	60HZ
7	Rated current	Testing under the rated voltage	0.32A±10%	0.41A±10%
8	Power consumption		72W±10%	98W±10%
9	Rated speed		2650RPM±10%	2950RPM±10%
10	Max airflow		850±5% <sup>m<sup>3</sup></sup> h	970±5% <sup>m<sup>3</sup></sup> h
11	Max static pressure		120Pa±5%	140Pa±5%
12	No.of fan blades	7P		
13	Rotating direction	Observed counterclockwise from the fan blade side		
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	62/64dBa±5%		
17	Life time	Fan durability test: The fan operates continuously for 50,000 hours without failure (at rated voltage, ambient temperature of 25 °C, humidity less than 70% RH, and the fan running at full speed).		
18	Failure warning (selectable)	Alarm: <input type="checkbox"/> Closed <input type="checkbox"/> Opened Passive touch spot Touch spot loading: 8A/AC125V 6A/AC250V 8A/DC12V 6A/DC24V		
19	Signal feedback (selectable) FG signal	<input type="checkbox"/> FG signal		
20	Description of other functions	/		
21	Weight	2.55KG		

22	Place of production	Shanghai, China
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23	Air capacity and air pressure curve	
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# Main Materials/parts Specification

Materials/Parts		Specification
1	Housing	Aluminum alloy electrophoresis ADC12
2	Blade	Magnesium alloy
3	Bearing type	Ball Bearing Bearing spec: NMB 608
4	Enameled wire	QZY-2 180°C
5	Lead way	Terminal block
	Length of lead	180±20mm ( Test line, not included by default )
	Wire specification	UL3266 18AWG 125°C
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	4-position screw terminals
9	Terminal shell	PA66-FR
10	Capacitance	CBB61 2μF/420-450VAc
11	( Centrifugal fan project ) Inlet cones	<input type="checkbox"/> Yes <input type="checkbox"/> No

## Electrical Specifically

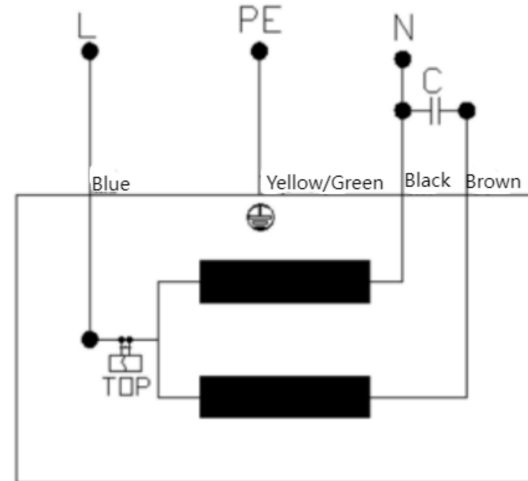
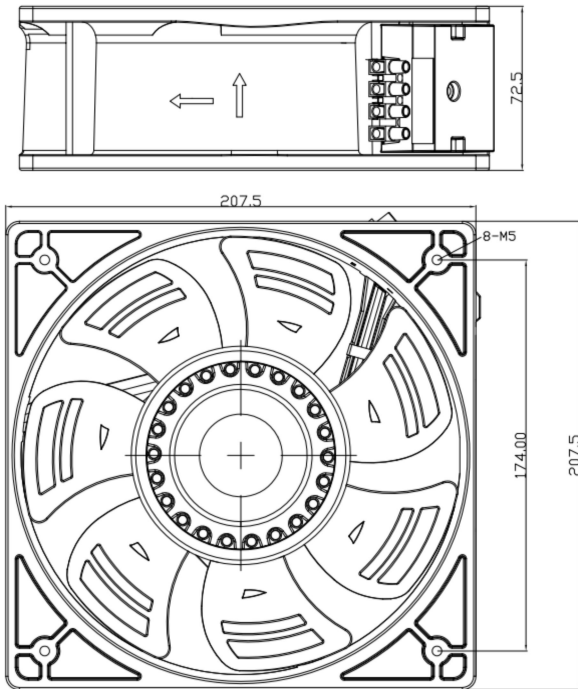
1	Insulation resistance	100MΩ/measurement between bare wire and outer frame, 500VDC/1min
2	Dielectric strength	Between wire and frame 1800VAc 5mA 1S
3	Ingress protection	IP20
4	Motor protection type	Overheat protection
5	Thermal protection reset type	Mechanical type
6	Operating temperature of protector	130°C

## Environmental Specification

1	Working temperature range	Temperature: -35°C~+80°C
2	Working humidity range	Humidity: 0-70%RH
3	Keeping temperature range	Temperature: -40°C~+85°C
4	Keeping humidity range	Humidity: 0-85%RH
5	Insulation shock	IEC61858 Class F

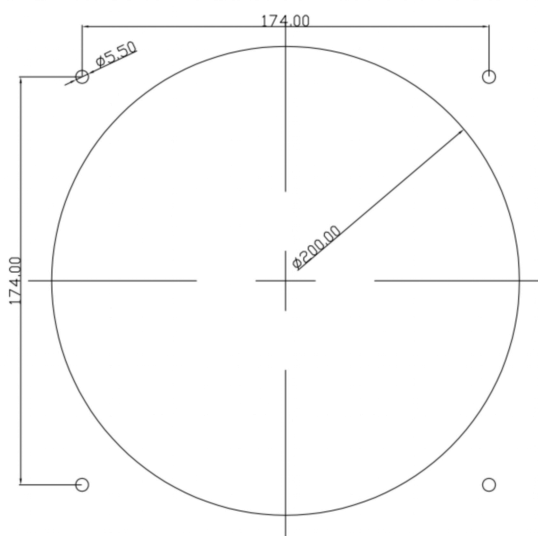
6	Packing vibration test	After packaging, conduct a 1.1G load vibration test in XYZ directions for 30 minutes. No serious damage
7	Packing shock proof test	After bundling, the height is 60 cm. A drop test is performed from a height of 1 corner and 3 edges onto 6 sides, resulting in no significant damage.

## Shape and installation drawings



Wiring Diagram

## Cut-out size drawing



F2E-27072B Cutout Size

# Notes

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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<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, 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. 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.

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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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