Product data sheet

Specifications

EC Axial Fan , Two Ball Bearing , 230VAC , 56W , IP22 , CE

Product name： EC Axial Fan
Model number： F2E-200B23VR
Order number： 2029.014

General Specification

Item	Description	Condition
1-1. Dimension	202*202*60 mm	
1-2. Bearing Type	Two Ball Bearing	
1-3. Rated Voltage	230 VAC	
1-4. Operating Voltage	150-240 VAC	
1-5. Start-up Voltage	150 VAC	25℃ Power ON/OFF
1-6. Operating Frequency	50~400 Hz	A. At Rated Voltage B. 25℃ C. 65%RH D. Measured after 5 minutes
1-7. Rated Power	50.0 W MAX: 56.0 (+15%) W	
1-8. Rated Speed	3300 Rpm/min±10%	
1-9. Max. Air Flow	601.82 CFM	A. PQ Measurement Apparatus B. Standard: AMCA C. Rated Voltage D. Rated Current
	17.03 m^3/min	
1-10. Max. Static Pressure	25.10 mmH2O	
	0.99 inchH2O	
1-11. Noise Level	61.7 dBA Max: 66 dBA	A. Rated Voltage B. Mute Room C. Distance: 1M D. Background Noise: <18dB
1-12. Life Expectancy	70000 hrs at 25℃	Failure Criteria: A： Speed <15% of original B： Current >15% of original C： Fan not running
1-13. Weight	/ grams	
1-14. Packing	1 pcs/Carton	
1-15. Pole	6 Poles	
1-16. Rotation Direction	Anticlockwise (viewed from fan blade)	
1-17. Other Features	Tachometer Output	☐ FG
	Lock Rotor Alarm	☑ RD
	Low Speed Alarm	☐ LD
	Auto Start	☑ AS
	Soft Start	☑ SS

1-17. Other Features	Speed Control Modes	☐ PWM ☐ VC ☐ TC
	Waterproof Level	☑ IP22

Electrical Specification

Item	Condition
2-1. Locked Rotor Protection	☐ Safety Condition
	☑ Auto power off after locking at rated voltage for 1-3 seconds; Automatic restart attempt every 2-6 seconds; No damage after 72-hour locking
2-2. Polarity Protection	☐ Open circuit when Vcc & GND are reversed
	☐ Circuit undamaged within 5 seconds of reverse connection
2-3. Insulation Resistance	☑ At least 10MΩ at 500 VDC between housing and both lead wires
2-4. Dielectric Strength	☑ Withstand 500 VAC for 1 minute (1mA) between housing and lead wires

Specification of Main Materials

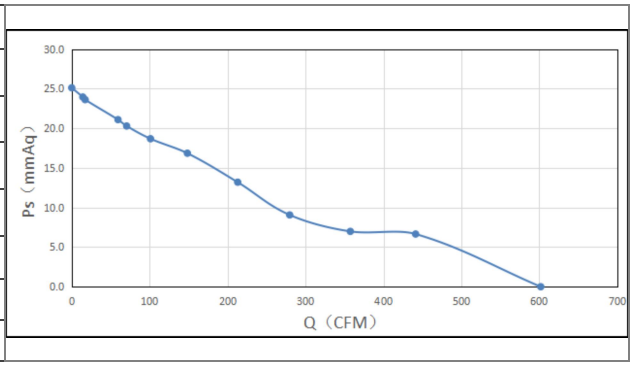
Item	Specification
3-1. Frame	Aluminum alloy
3-2. Propeller	PBT UL94V-0
3-3. Bobbin	PBT UL94V-0
3-4. Lead Wires (Out of Frame)	UL 1007 20AWG, black-black UL 1007 24AWG, yellow-blue
3-5. Connector	5P terminal block
3-6. Label Marking	Model : F2E-200B23VR Rated Voltage : AC 230V Rated Current : 56.0W

Environmental Specification

Item	Condition
4-1. Operating Temperature/Humidity	Temperature : -10~+70℃
	Humidity : 15%~90% RH
4-2. Storage Temperature/Humidity	Temperature : -40~+85℃
	Humidity : 15%~90% RH

P-Q Characteristic Curve Test

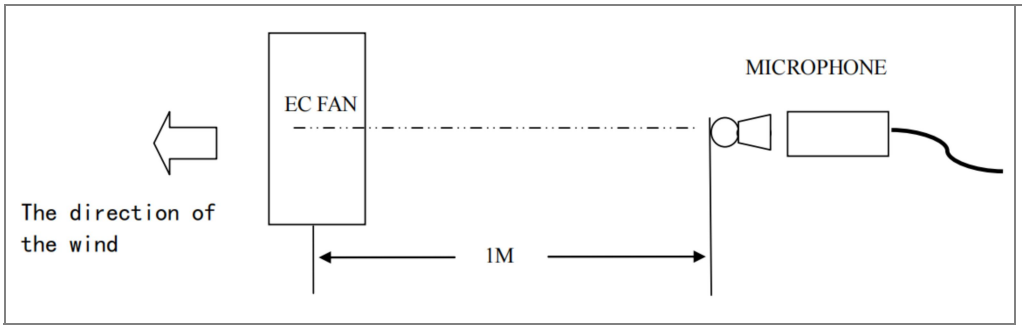
Test Conditions and Methods	
Constant Voltage:	Rated Voltage
Barometric Pressure:	752.4 mmHg
Relative Humidity:	66.825 % RH
Temperature:	25 °C
Test Data:	
Max Flow Rate:	601.82 CFM
Max Ps:	25.1 mmAq



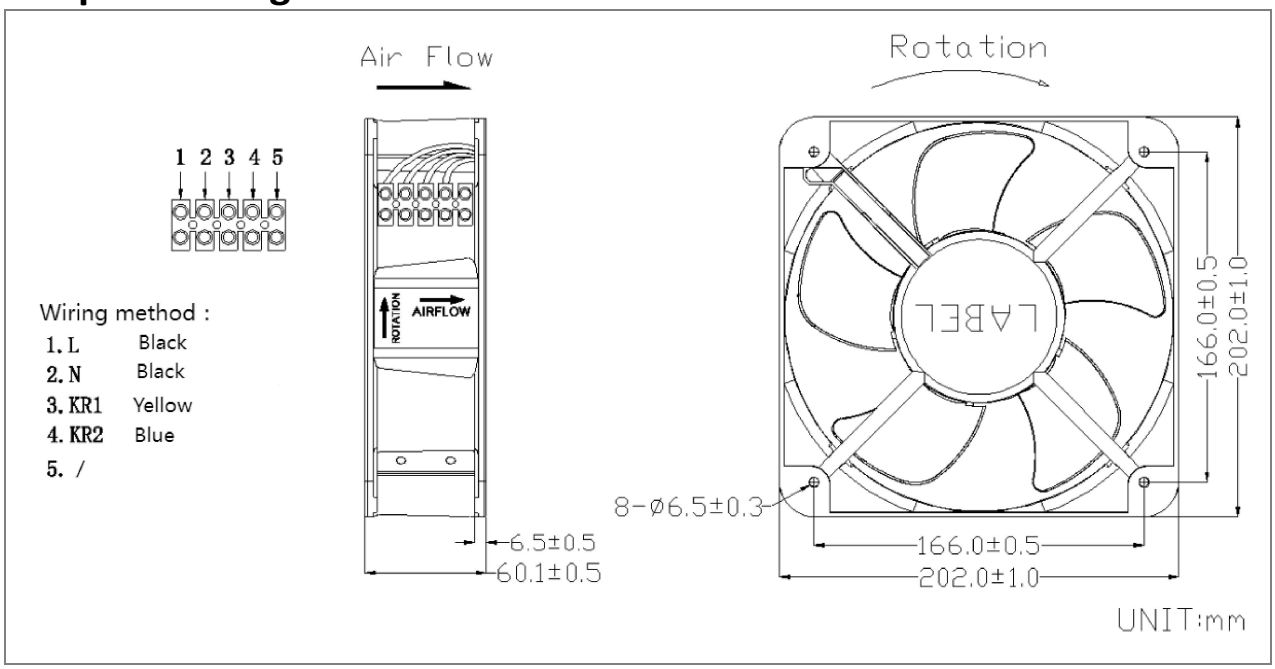
Noise test

Test Condition	Test Method
1. Temperature: 26 ℃	1.Test Position: 180º
2. Humidity: 62 %RH	2.Test Distance: 1.0M from fan intake
3. At Rated Voltage	3.Background Noise: 14.8dB(A)
4. At Rated Speed	4.This test executes to ISO3745 standard
Test Equipment: AWA6290M double channels Acoustic Analyzer	
Test Result: Leq: 61.7 dB(A)	

Noise test method diagram



Shape Drawing



Note: The fan has a constant speed function. When the voltage exceeds 220V, the rotational speed remains constant at 2600 RPM.

Wire color corresponds to function description

Black	L	Voltage input AC220—240VAC
Black	N	Voltage input AC220—240VAC
Yellow	KR1	Relay dry contact
Blue	KR2	Relay dry contact

Wiring Instructions:

During normal operation, the yellow and blue wires are connected; when the machine is abnormally locked, the yellow and blue wires are disconnected.

Label Marking

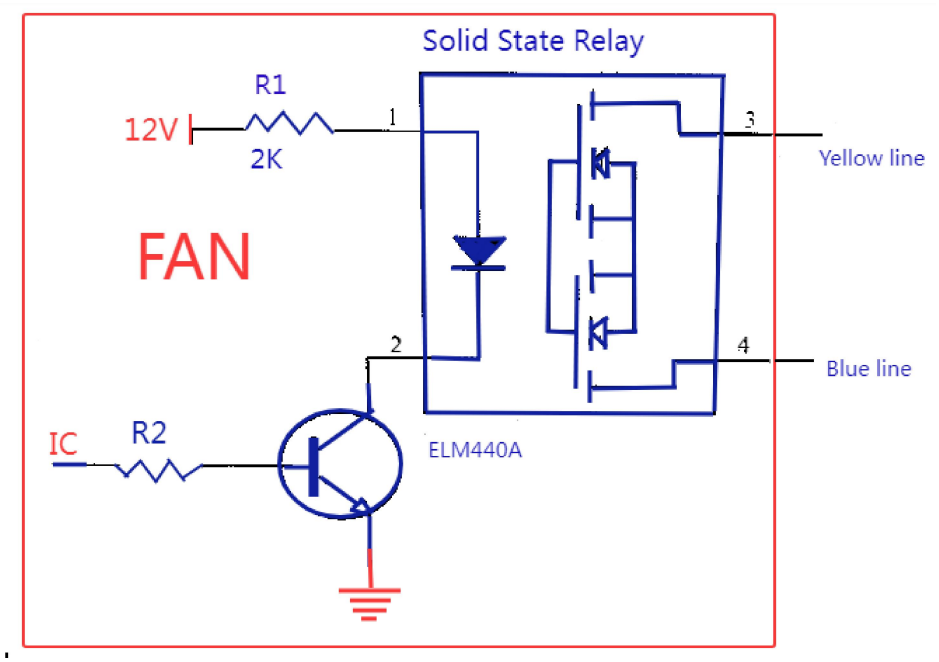
Model No.	F2E-200B23VR
Rated Voltage	230VAC
Max Power	56.0W
Label Size	ϕ65mm
Label Color	Silvery
Safety Approvals	CE

Electric Relay Function KR

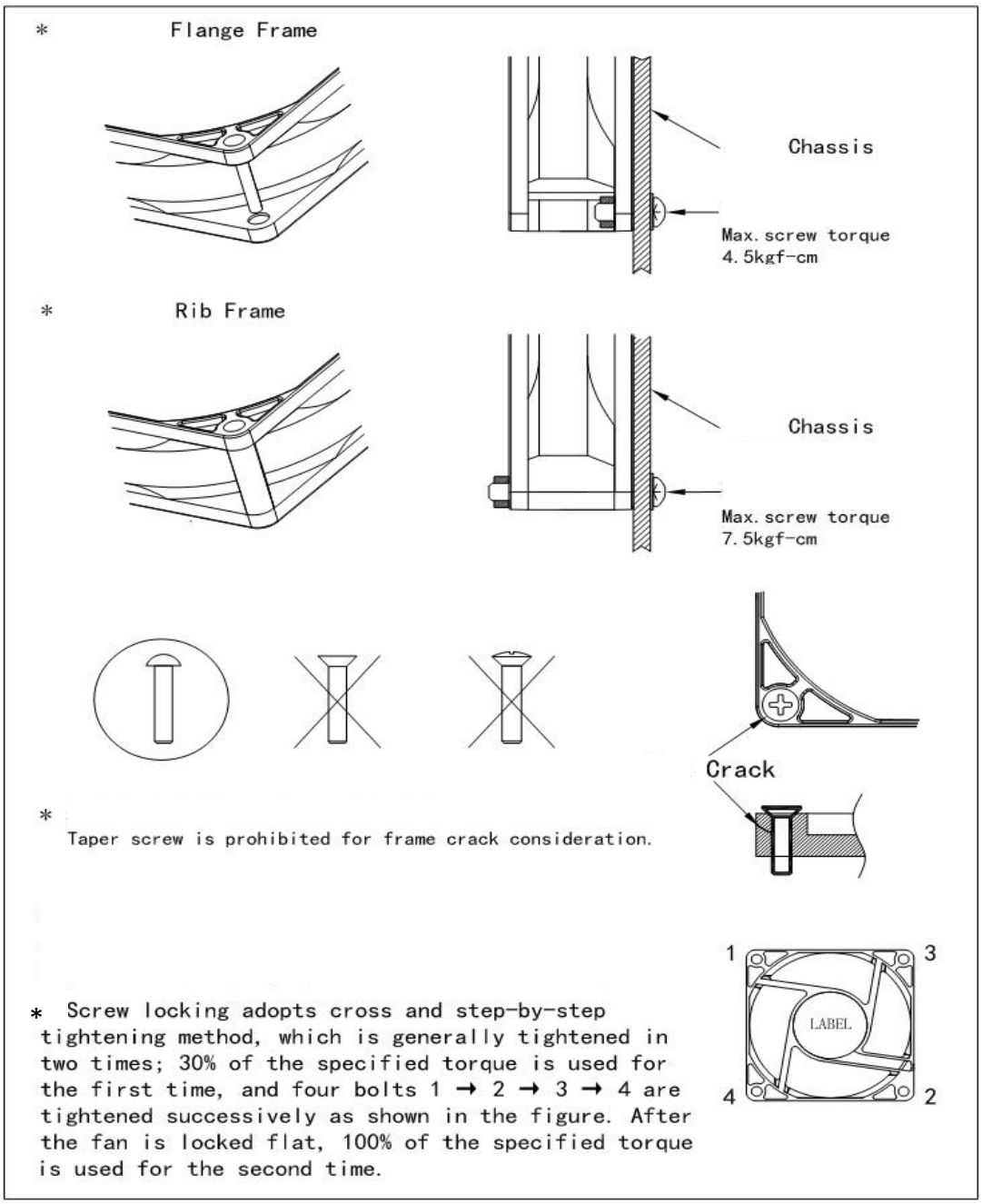
1. Relay Mode: During operation, the relay is in normally closed (NC) state, meaning the yellow wire and blue wire are connected; when the fan is not powered or malfunctions, the relay is in normally open (NO) state, meaning the yellow and blue wires are disconnected.

2.The relay uses a solid-state relay, with a contact impedance of approximately 20 ohms when the dry contact is closed.
Model: ELM440A
Contact current rating: AC 350V / DC 24V 100mA
Different models of solid-state relays should be selected according to different load requirements.

3.Relay Schematic Diagram：



Fan installation method and screw torque recommendations



Notes

1.Do not exceed the limits specified in this specification during use; otherwise, we do not guarantee this product.

2.If any specification in this document needs to be changed, please be sure to put forward the request in advance.

3.Do not press the blades, wrap the power cord around the fan, or pull the power cord forcefully, as this will damage the shaft and power cord.

4.This product does not guarantee against shortened lifespan or defective products caused by the ingress of dust, water droplets, or small insects.

5.If there is any data or document inconsistent with this data, this data shall be the main reference.

6.Do not use in flammable gas or any harmful environment.

7.When assembling the fan, pay special attention to noise generated by resonance or vibration.

8.When the fan is being transported or operated, avoid dropping it: dropping from a height of 50cm or more will cause variation in the balance of the fan blades, and the ball bearings are prone to internal damage and abnormal noise.

9.Do not touch the blades when the fan is running, as this is very dangerous and may easily injure your fingers.
