



Specifications

Name: EC Backward Curved Centrifugal Fan

Model: EB225ST-92-01

Version: A0

This specification mainly describes the mechanical properties, electrical properties, fan performance and product standards of EC backward centrifugal air.

Executive standards:

GB/T21418-2008 "Permanent magnet brushless motor system general technical conditions",

JB/T10563-2006 "General purpose centrifugal fan technical conditions"

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风机型号： EB225ST-92-01

1. Technical data

1—1	Rated voltage	230VAC
1—2	Operating voltage	200~277 VAC
1—3	Starting voltage	≤199VAC
1—4	Rated speed	3030±150 RPM
1—5	Rated current	≤1.5A
1—6	Input power	150 ±10%W
1—7	Airflow volume	1440±10% M ³ /H
1—8	Static pressure	610 ±10% Pa
1—9	noise	≤76 dB(A)
1—10	life	25,000 hours (L10), At 40°C, the temperature of 15%~65%RH environment
1—11	Impeller steering	Viewed from the rotor end, it is regarded as clockwise rotation
1—12	Insulation class	Class F
1—13	Withstand voltage	Test voltage 1800VAC, maximum leakage current 10mA, lasting 1 second. Test location: test between live line or neutral line and motor housing.
1—14	Protection function	Locked-rotor protection Soft start protection Over current protection Over voltage protection High voltage constant power control
1—15	Speed control function	Input 0~10VDC/PWM(input duty cycle and amplitude)
1—16	Minimum governing voltage	≤1.3 VDC
1—17	Motor protection class	IP44
1—18	Insulation resistance	Test power frequency voltage 500 V, 1S, resistance value ≥50MΩ. Test site: Test between all power leads and motor housing.
1—19	Feedback signal	FG signal, output open circuit FG, there is no built-in pull-up resistor in the motor, the client needs an external pull-up resistor, and the rotor outputs 4 pulses per turn.
1—20	Vibration requirement	≤4.6mm/S
1—21	Voltage output	+10VDC (Can be used as speed regulation voltage power supply and FG signal pull-up power supply)

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2.Mechanical performance:

2—1	Overall dimension	Φ225mm X 125mm(see the drawing below)
2—2	Impeller material	PA66+GF
2—3	Leaf number	7
2—4	Impeller chassis	/
2—5	Impeller color	black.
2—6	Rotor surface treatment	electrophoresis
2—7	Shaft bearing	NSK bearing
2—8	Power lead	AWG#18 AWG#22 UL 1007
2—9	Net weight	2.2KG
2—10	Packing method	Sample: carton + shock-proof material. Order: Carton + shock-proof material + wooden pallet.

3. Electrical performance:

3—1	Locked-rotor protection	When the motor is operating at normal voltage, the rotor is subjected to external resistance, stops running, the motor will automatically power off, about 2 to 4 seconds later, restart. If the resistance continues to exist, after restarting for 3 times, the motor completely stops starting, and the resistance must be lifted and re-powered, so that the motor can return to normal state.
3—2	High voltage constant power control	Under a certain speed regulation voltage (0~10VDC), when the input voltage is greater than 240VAC, the fan speed will not increase with the increase of the input voltage, but maintain constant speed operation, which can prevent the instantaneous impact of the fan caused by power grid fluctuations, the protection function can extend the service life of the fan and maintain the stable operation of the fan.
3—3	Soft starting	Under the working voltage, the motor starts to the constant speed, the duration is about 12 seconds, to protect the motor from excessive starting current and damage.
3—4	Over current protection	Under the working voltage, the input current of the motor exceeds the maximum limit value, and the protection will be automatically cut off.
3—5	Over voltage protection	When the power supply voltage exceeds the maximum limit voltage, the motor will automatically power off protection.

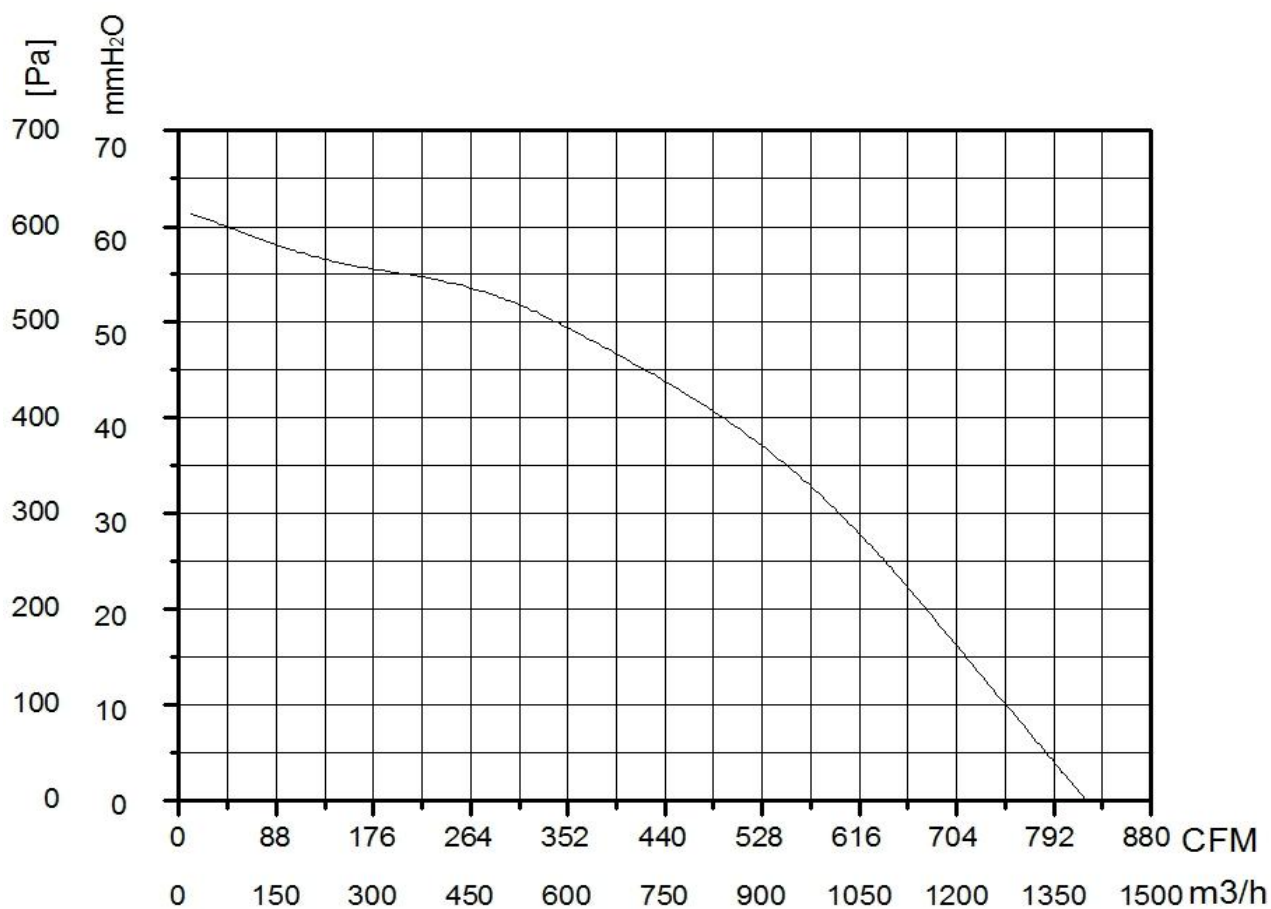
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4. Environment and test:

4—1	Operating temperature	ambient	-25°C to 60°C
4—2	Storage temperature	ambient	-30°C to 65°C
4—3	Ambient humidity		5% to 90% RH
4—4	Storage ambient humidity		5% to 95% RH
4—5	Drop test		In the single packaging state, the three faces of the packing box fall from 30cm high to 10mm thick wood, and the fan is not damaged.
4—6	Vibration test		Sinusoidal waveform: Displacement amplitude: 0.75mm(10G). Frequency: 10Hz to 55Hz / 30 seconds. 55Hz to 10Hz / 30 seconds. Cycle 120 times Duration: 2 hours Test direction: X,Y,Z.
4—7	Impact test		At peak acceleration of 50 g, continuous 11ms (half sine wave).
4—8	Dust proof test		Temperature range :15 ° C to 35 ° C. No metal body with a diameter of 1mm should pass between the rotor and the stator. Comply with IEC 60592 IP4X Note: This test is only applicable to the motor test, not suitable for the fan, the fan rotor after rotation, do not touch the rotor, there is a risk of personal injury.
4—9	Waterproofing test		Splashing water in all directions of the housing has no harmful effect. Complies with IEC 60529 IPX4
4—10	RoHS		All raw materials comply with RoHS requirements.

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5, Curve



测试条件:

输入电压----额定电压(230VAC)

温 度----室温

温 度----65%RH

Test conditions:

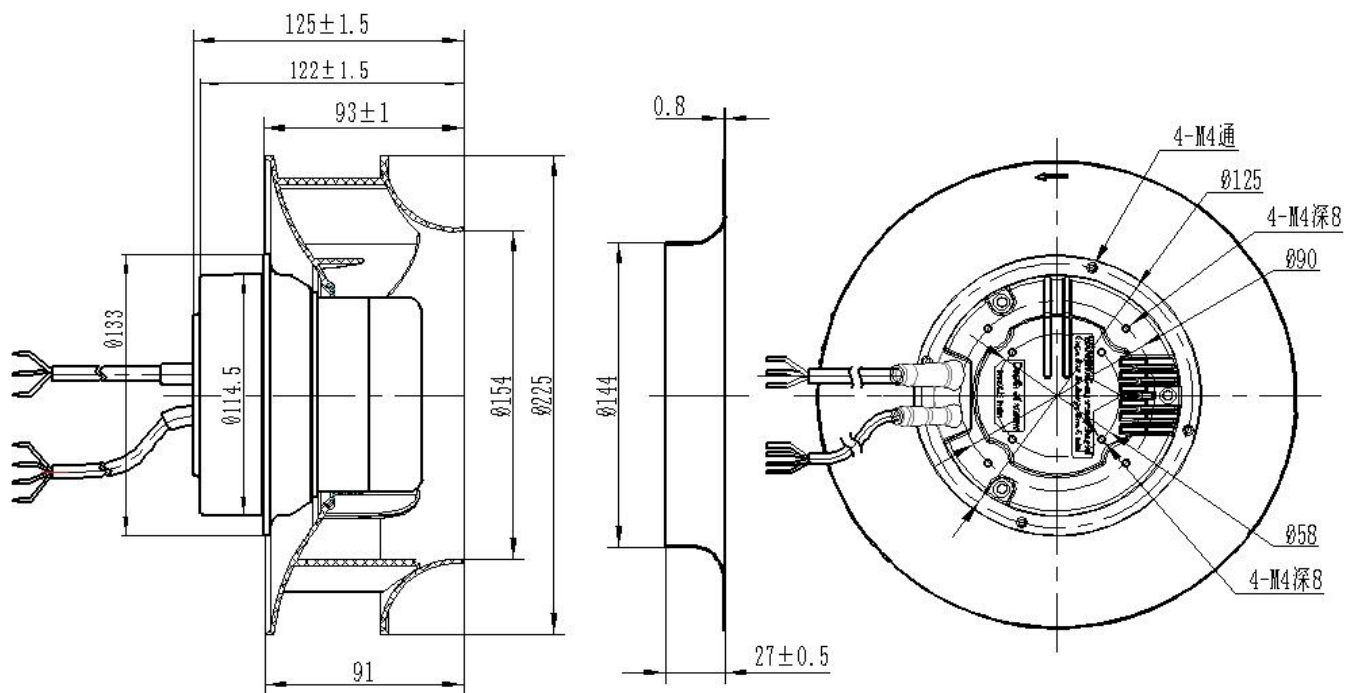
Input voltage ---- Rated voltage (230VAC)

Temperature ---- room temperature

Temperature ----65%RH

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6, Drawing:



注:

1, 电源引线: 4X AWG22、3X AWG18;

红色线输出为+10VDC,黄色线为 0-10VDC/PWM(输入占空比和幅值), 白色线为 FG, 蓝色线为 GND;

棕色线为 L, 蓝色线为 N, 黄绿双色线为接地线;

2, 4XM4 螺钉;

3, 配件:引风圈根据客户需求.

Note:

1, power leads: 4X AWG22, 3X AWG18;

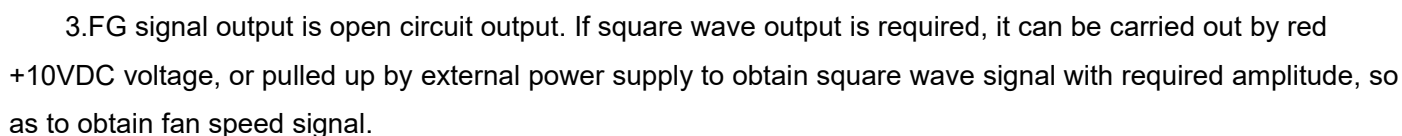
The red line output is +10VDC, the yellow line is 0-10VDC/PWM(input duty cycle and amplitude), the white line is FG, and the blue line is GND.

The brown line is L, the blue line is N, and the yellow-green two-color line is the ground line.

2, 4XM4 screws;

3, accessories: Inlet cone depending on customer demand.

7, Wiring diagram:



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注意事项:

1. 风机黄绿双色线必须有效接地才能通电运行，高压危险，防止未接地而导致触电或影响运行。
2. 风机的红色、黄色、蓝色和白色线不允许接入高压交流电源，防止烧坏风机。
3. 白色信号线禁止直接连接红色+10VDC 电压输出线或外部直流电源，需要获取方波转速信号输出时需要外接上来电阻，详细说明见接线示意图。
4. 风机通电后如果风机不运转，可能调速电压未连接好，禁止在通入交流主电源下接触风轮去调试调速电源，防止风机突然启动而伤手或造成其他人身伤害。
5. 风机通电后可能需要等待几秒才能启动运行，禁止通电后立即触摸风轮或在低速下触摸风轮，防止人身伤害。
6. 使用产品前请仔细阅读本《技术规格书》。

Note:

1. The fan's yellow and green two-color line must be effectively grounded before it can be powered on. High voltage is dangerous, and thus non-grounding connection is strictly prohibited in case of electric shock or affecting operation.
2. The red, yellow, blue, and white cables of the fan are not allowed to connect to the high-voltage AC power supply to prevent the fan from burning out.
3. Do not directly connect the white signal cable to the red +10VDC voltage output line or external DC power supply. When you need to obtain the square wave speed signal output, you need to connect the external resistor.
4. If the fan does not run after the fan is powered on, the speed regulating voltage may not be properly connected. Do not contact the fan to debug the speed regulating power when the AC power supply is connected to the fan.
5. After the fan is powered on, it may take several seconds for the fan to start running. Do not touch the wheel immediately after the power is powered on or at a low speed to prevent personal injury.
6. Please read the Technical Specification carefully before using the product.