



SPECIFICATION

MODEL
K-EC160-G230-25

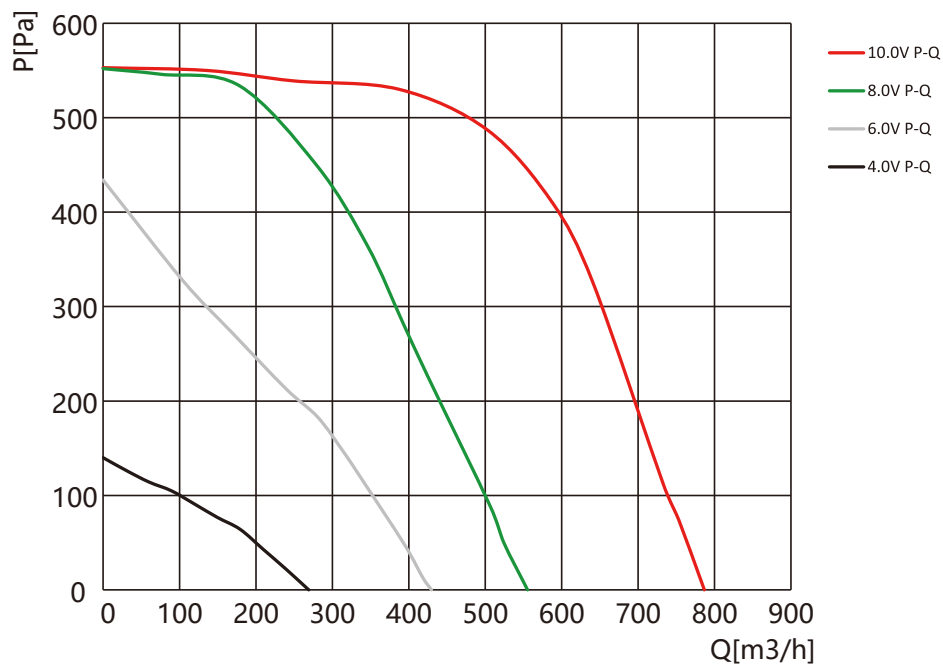
1.Rated Data

Phase	1~
Rated Voltage	230VAC
Rated Voltage Range	184~276VAC
Frequency	50/60Hz
Rated Speed	2500RPM±5%
Max.Input Power	230W
Max.Input Current	1.5A
Noise	73dB(A)
Operating Temperature	-25°C~+60°C

2.Technical Parameter

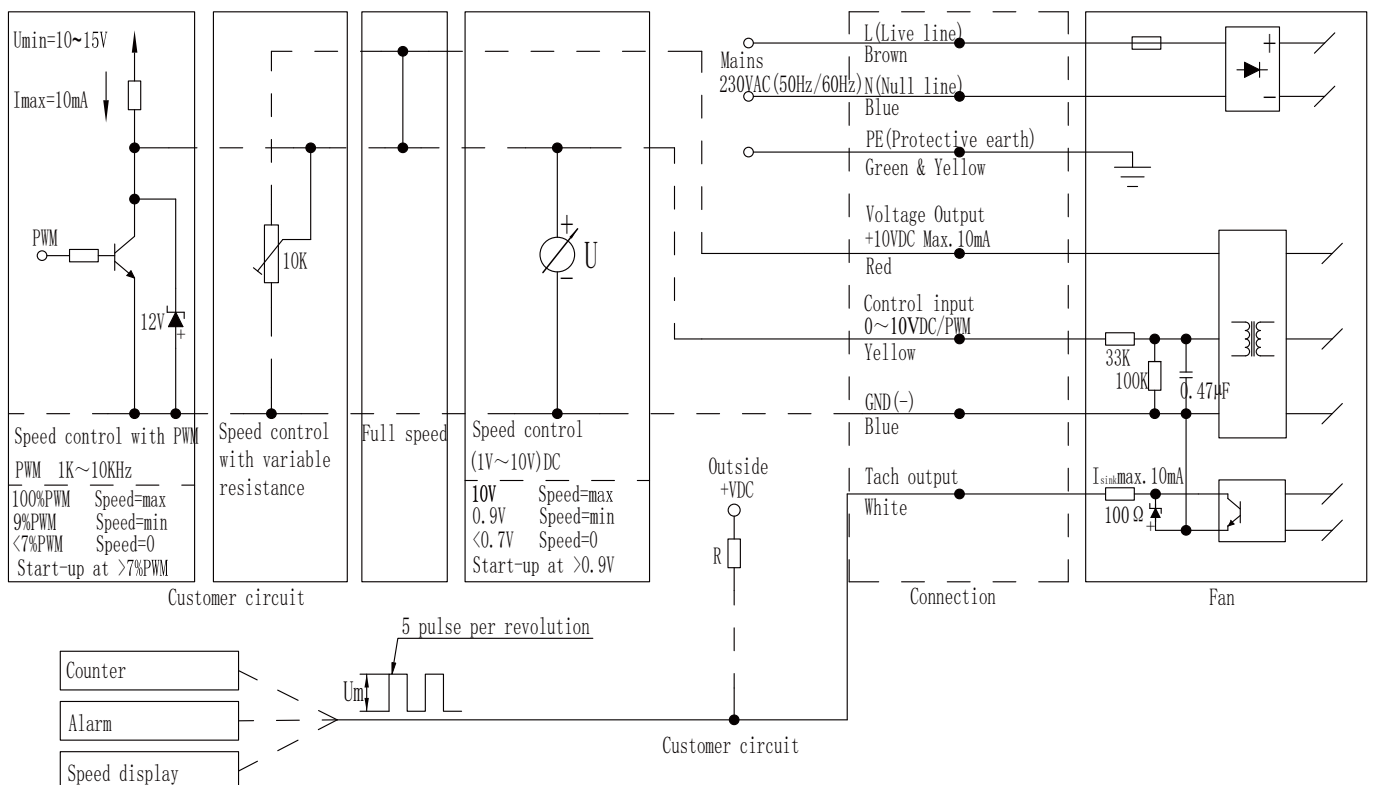
Structure Size	246.9x220.5x130mm
Motor Size	92mm
Impeller Material	PA6+GF
Number of Blades	38
Airflow Direction	Horizontal air outlet along the air outlet
Rotation Direction	Clockwise (viewed from the rotor end)
Surface Treatment Method for Rotor	Electrophoresis (black)
Rotor Casing	Stretch
Protection Level	IP55
Insulation Level	Class B
Storage/Transportation Temperature	-40°C~+80°C
Working Humidity	5%~90%RH
Storage Humidity	5%~95%RH
Installation position	Arbitrary
Cooling Holes/Openings	Rotor side
Operation Mode	S1
Motor Bearing Structure	Ball bearing
Technical Features	<ul style="list-style-type: none"> ◆ 10VDC output, maximum current 10mA. ◆ 0-10VDC/PWM control input, PWM amplitude is recommended to be 10VDC. ◆ Blockage protection ◆ Overheating protection ◆ Overvoltage protection ◆ Undervoltage protection ◆ Overcurrent protection ◆ Soft start
Screw Strength Grade	8.8
Cable Length	Standard 500±20mm (can be stacked every 500mm)
Security Level	Class I (When the user connects the grounding hole)
Electrical Strength	AC1800V, 50Hz for 1 second, leakage current ≤10mA, no breakdown or flashover phenomenon.
Determine the Leakage Current of the Motor at Operating Temperature According to IEC 60990	≤3.5mA

3. Performance Curve



The air performance is measured according to AMCA210 and GB/T 1236. For detailed information on measurement settings, please contact us; The given values are valid under the specified measurement conditions and may vary due to installation conditions. For deviations from the standard configuration, the parameters must be checked on the installed equipment.

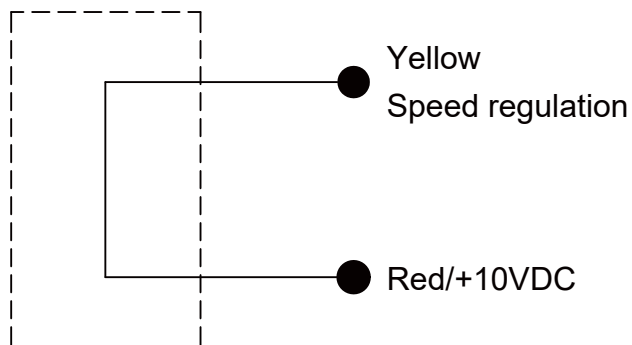
4. Wiring Diagram



Lead Wire	Connect	Name	Color	Function/Distribution
Power Line		PE	Yellow/Green	Ground wire
	U1	L	Brown	Grid connection, supply voltage, phase (live wire)
	U2	N	Blue	Grid connection, supply voltage, phase (zero line)
Control Line	U4	+10V	Red	Fixed output voltage of 10VDC \pm 5%, I _{max} 10mA, The supply voltage is used for external devices (such as potentiometers);SELV.
	U5	Speed regulation	Yellow	0-10V/PWM (PWM recommended amplitude 10V) control input terminal, SELV.
	U6	Signal feedback	White	Speed monitoring output terminal, 5 pulses per revolution (pulse number can be customized or changed to RD signal); SELV.
	U7	GND	Blue	The reference ground potential used for the controller interface, SELV.

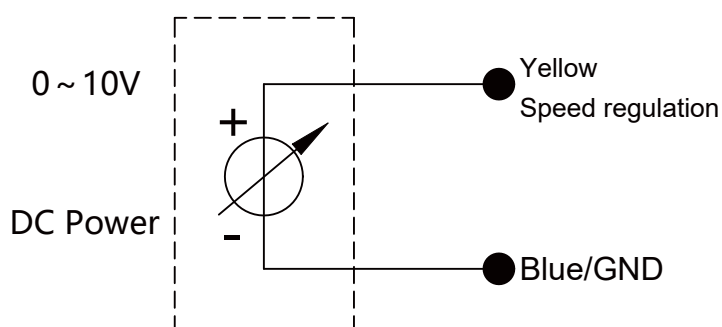
5.Wind Turbine Speed Regulation Instructions

5-1.Run at full speed



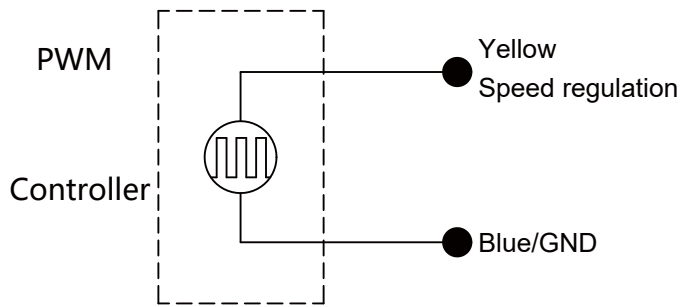
Red yellow short circuit
The wind turbine will run at full speed

5-2.Voltage regulation input 0-10VDC(\pm 0.2V)



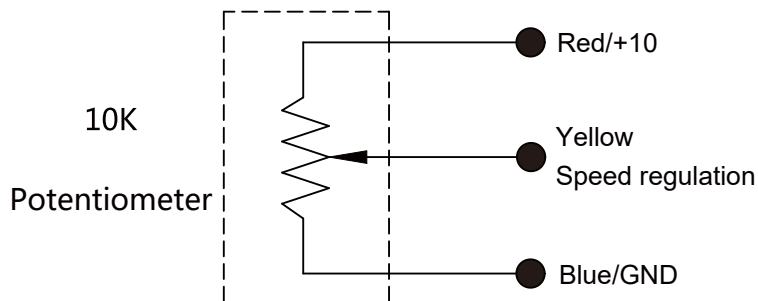
To use a DC power supply, it is necessary to support voltage regulation from 0~10VDC
When the voltage is higher than 1.0VDC, the fan starts
The fan stops when the voltage drops below 0.5VDC
The starting voltage of the fan needs to be greater than 1.0VDC

5-3.PWM speed regulation, PWM frequency 1K~10K, recommended amplitude 10V, duty cycle 0% -100% ($\pm 2\%$).



PWM duty cycle control
 PWM recommended amplitude 10VDC ($\pm 5\%$)
 PWM frequency 1KHz~10KHz
 When the PWM duty cycle is higher than 10%, the fan starts
 When the PWM duty cycle is below 5%, the fan stops
 The PWM duty cycle for starting the fan needs to be greater than 10% PWM

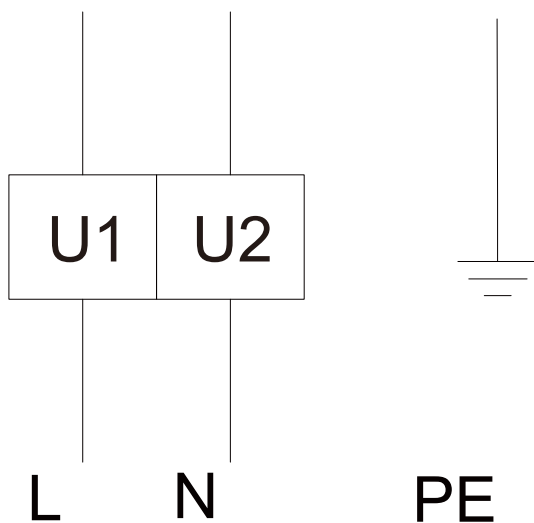
5-4.Potentiometer speed regulation



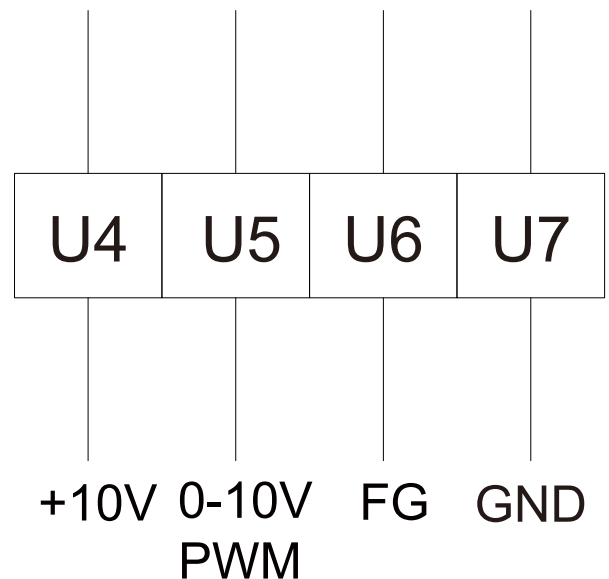
Suggest using a 10K potentiometer for speed regulation
 When the voltage is higher than 1.0VDC, the fan starts
 The fan stops when the voltage drops below 0.5VDC
 The starting voltage of the fan needs to be greater than 1.0V DC

5.Wind Turbine Speed Regulation Instructions

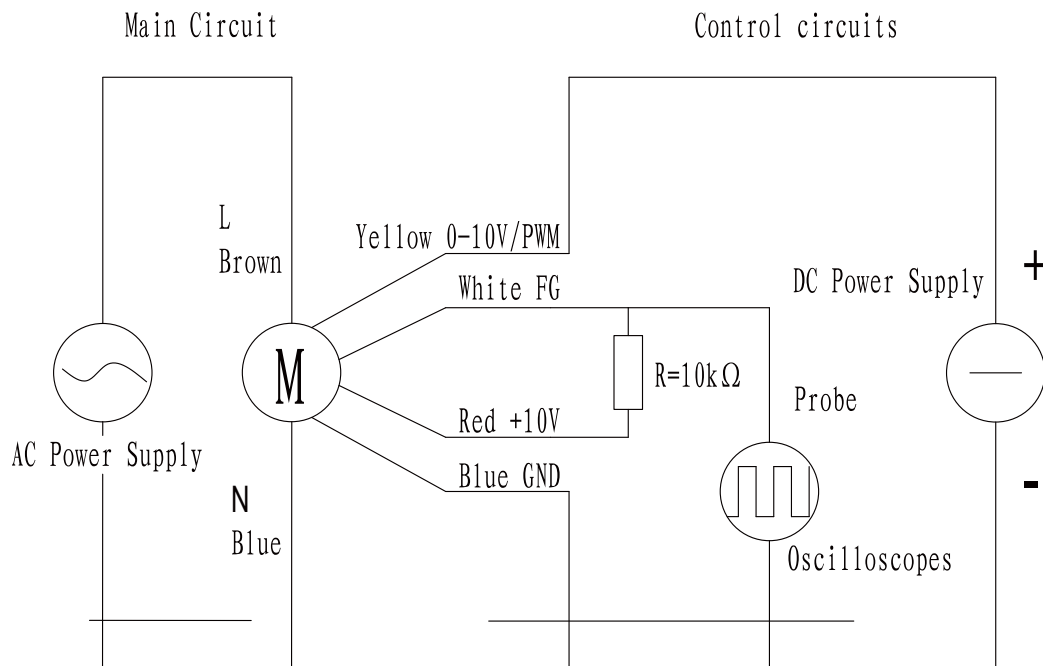
Power Line



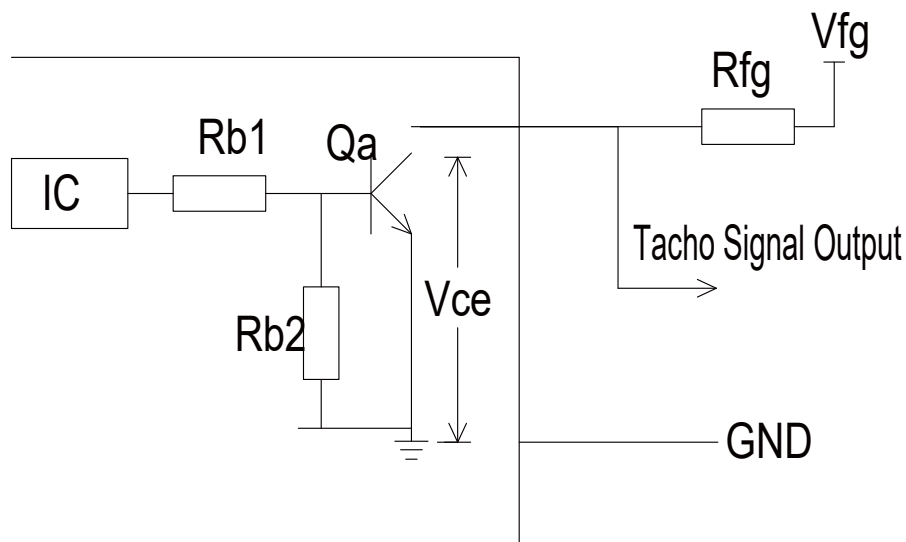
Control Line



6.Signal Feedback Wiring Diagram



7-1.The fan has a speed output signal, and the waveform of the output signal is shown in the following figure. Vfg and pull-up resistor are external parts of the customer, Vfg=(3.3-30) VDC, $R \geq 1000 \times (V_{fg}) \Omega$.



7-2.Speed calculation

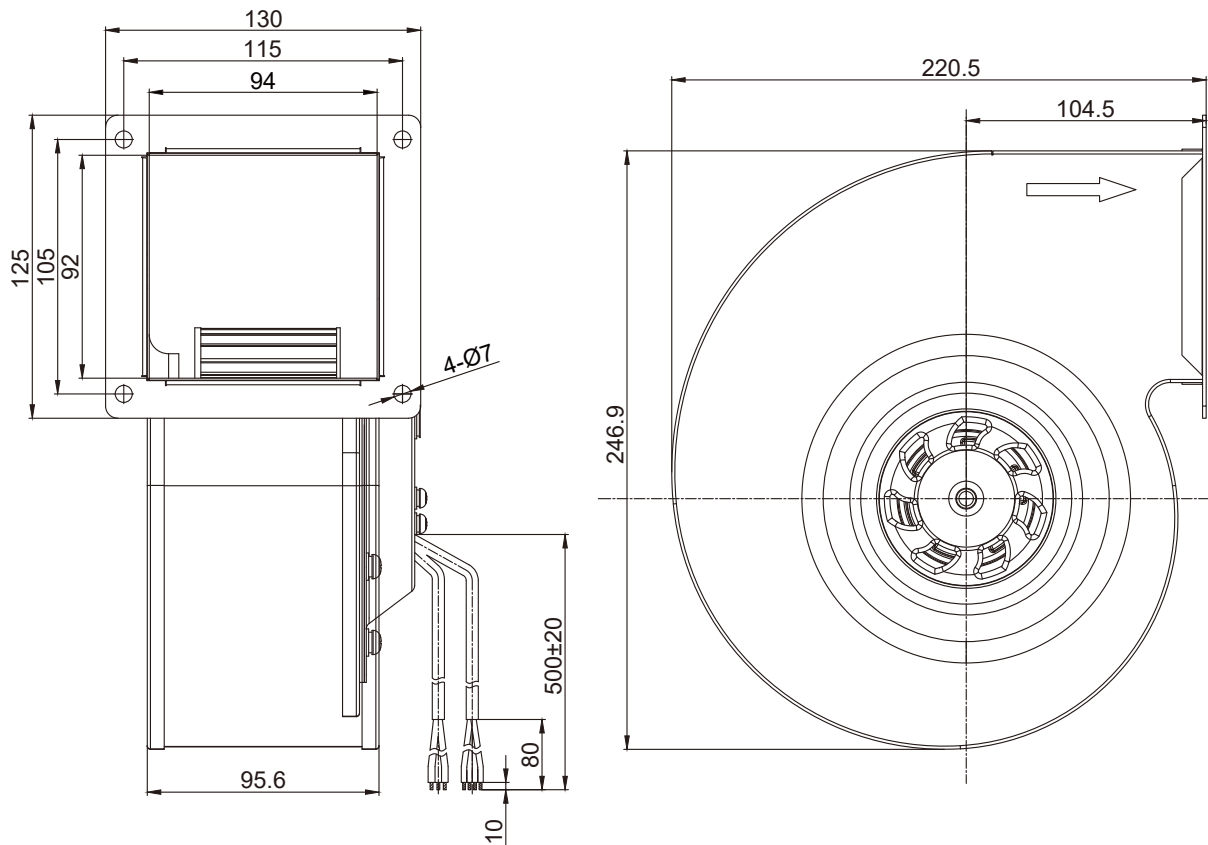
$$n=60f/a;$$

n=Fan speed

a=Number of pulses (several pulses per revolution)

f=Frequency of signal output waveform

8.Outline Drawing



8-1.AC连接电缆 PVC 3×AWG20/AC connection cable PVC 3×AWG20.

8-2.DC连接电缆 PVC 4×AWG24/DC connection cable PVC 4×AWG24.