雄才科技
XIONG CAI TECH

电机控制专家
Motor Control Expert

专注•专业•创新
Concentration • Professional • Innovation

XC503

Controller for Axial fans & Centrifugal Blower of Automobile

-V1.0(20210419)

Technical parameter

Rated voltage: DC24V

Range of input voltage: DC16V~32V

Rated current: 10A

Range of working temperature: -40℃-125℃

Protection Type: Over-temperature protection, over-current protection, over-voltage protection, under-voltage protection, motor phase-to-phase short circuit protection, motor winding phase loss protection, power reverse connection protection, stalling protection

PWM speed regulation logic diagram

PWM signal frequency range 100HZ-1000HZ, duty cycle speed regulation. The speed regulation curve is as follows.
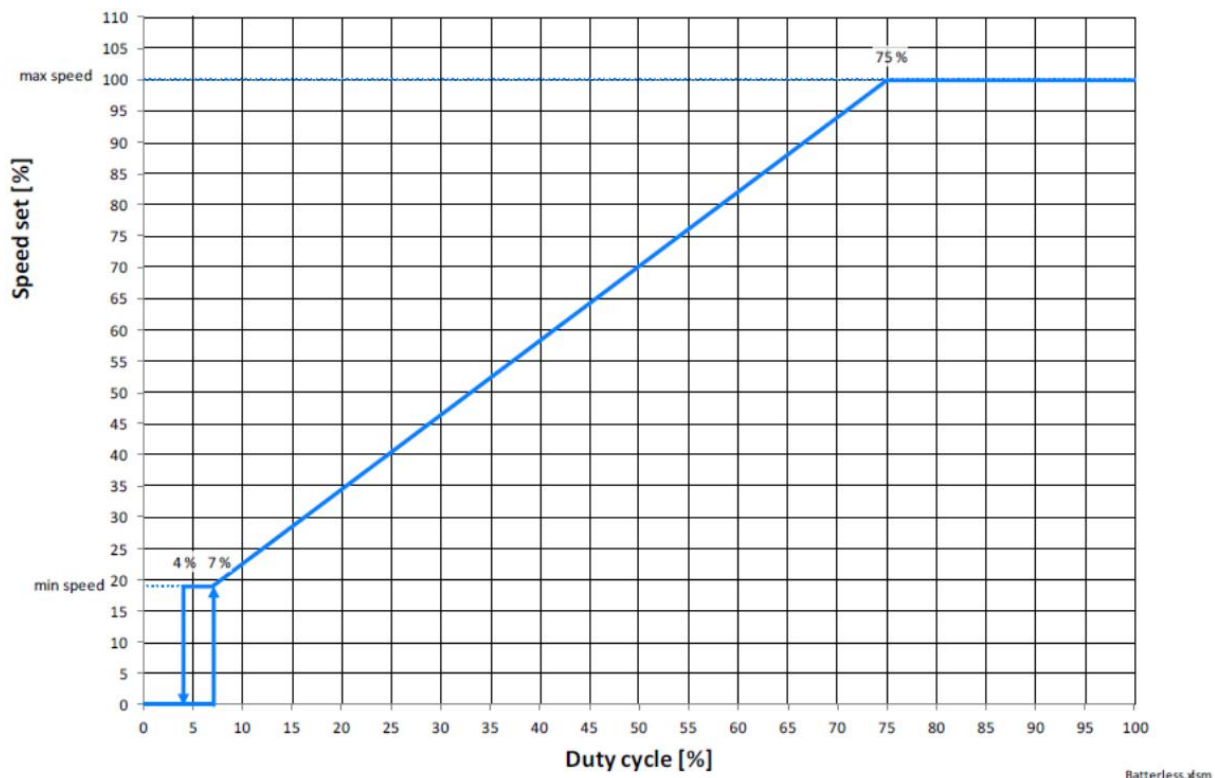
Wiring diagram
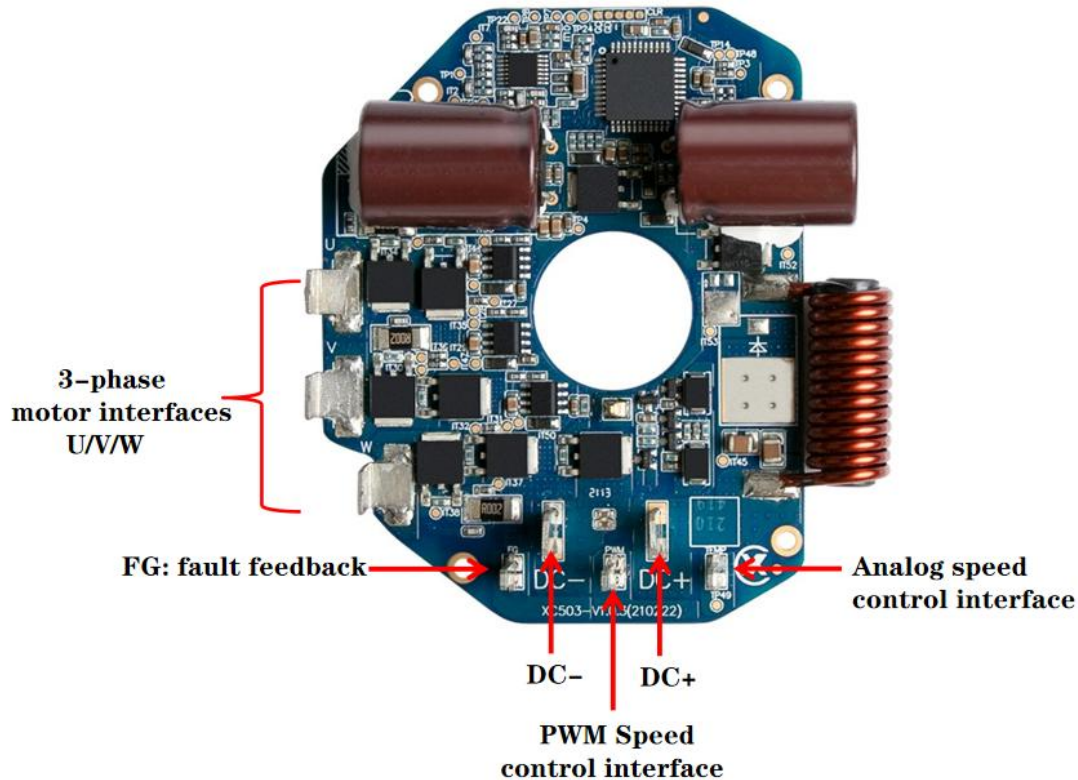
Rotation direction

- If it's found that the motor is running in the opposite direction, please just swap any two motor phase wires.

Error output

- FG default output is high. When the controller fails (excluding over voltage protection and low voltage protection) FG output is low.

Protection function

Low voltage protection:

- When the controller detects that the input voltage is lower than 16V, the low-voltage protection is triggered and the controller stops working.

High voltage protection:

- When the controller detects that the input voltage is higher than 32V, the high voltage protection is triggered and the controller stops working.

Stall protection:

- When the controller detects that the motor is stalled, the stall protection is triggered and the controller stops working. It needs to wait for a certain time before the controller can automatically restart the work.

Overcurrent protection:

- When the controller detects that the current is higher than 40A, the overcurrent protection is triggered, and the controller stops working. After a certain period of time, the controller can restart to work.

Signal loss protection:

- When the controller detects that the PWM signal is lost, the signal loss protection is triggered, and the controller stops working.

Over temperature protection:

- When the controller detects that its temperature is higher than 125 degrees Celsius, the overheat protection is triggered, and the controller stops working. When the temperature of the controller returns to below 105 degrees, the controller restarts automatically.

Motor phase loss protection:

- When the controller detects the phase loss of the motor, and the current of a certain phase is higher than 5A at this time, the phase loss protection is triggered, and the controller stops working.

Note: After the controller fails for the first time, it waits for 3 seconds to restart, and every subsequent failure occurs, the waiting time increases by 3 seconds.