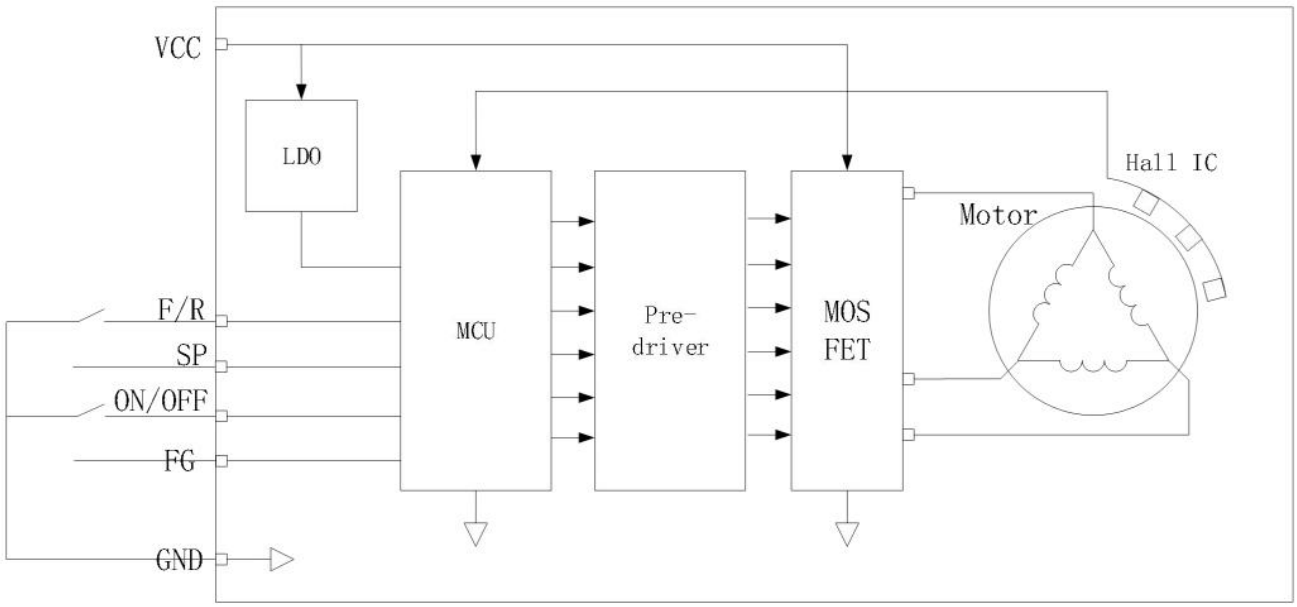
Brushless motor function manual

This brushless motor has 4 wires: blue speed control SP, yellow speed feedback wire FG, red VCC power positive, black power negative.

1 Functional diagrams



2 Power supply

NO.	Description	Interface Type	Meaning
1	VCC(Red)	Input	Power positive (8~24VDC)
2	GND(Black)	Input	Power supply ground

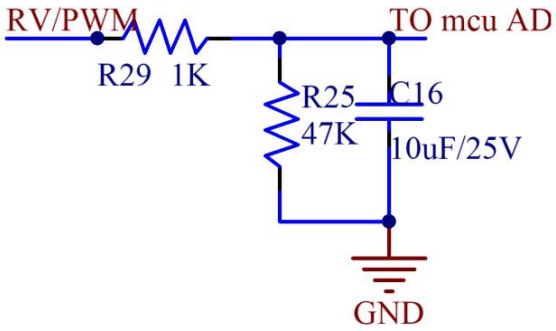
3 Functional Description

1). Speed control SP (blue speed control line, blue line and red VCC shorted - motor running at full speed)

The rotational speed of the motor can be controlled in two ways: analogue voltage and PWM input mode.

● Analogue voltage mode: Through other control units such as PLC, microcontroller, etc., analogue voltage is input to the blue speed control line. The voltage range of the speed control line is from DC0.5V to 4.5V, and the corresponding motor speed is from 0 to rated speed.

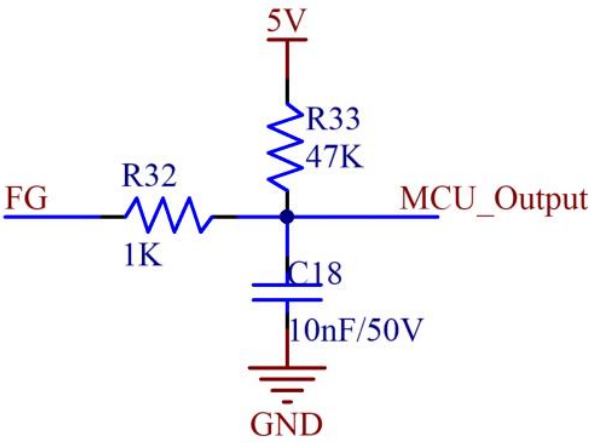
● PWM mode: link PWM to the speed control line, the frequency range of PWM that can be accepted by the speed control port is 15KHz~25KHz, amplitude is 5V, the duty cycle range is 0-100%, and the corresponding rotational speed is 0~rated rotational speed.



Parameters	Description
RV	Potentiometer or voltage signal (DC 0.5 ~ 4.5V)
PWM	5V PWM, duty cycle range 0%~100% (Recommended PWM frequency range 15KHz~25KHz)

2) Speed Feedback Function FG , yellow wire

Outputs speed feedback signal, **one pulse is output for each revolution of motor.**



Parameter	Description
FG	5V TTL pulse signal

3) Switching control (currently there is no output for this function)

The motor can be started or stopped by grounding or disconnecting the ON/OFF wire. When this wire is grounded, the motor starts, and when it is disconnected, the motor stops. The start/stop characteristics of the motor vary depending on the load.