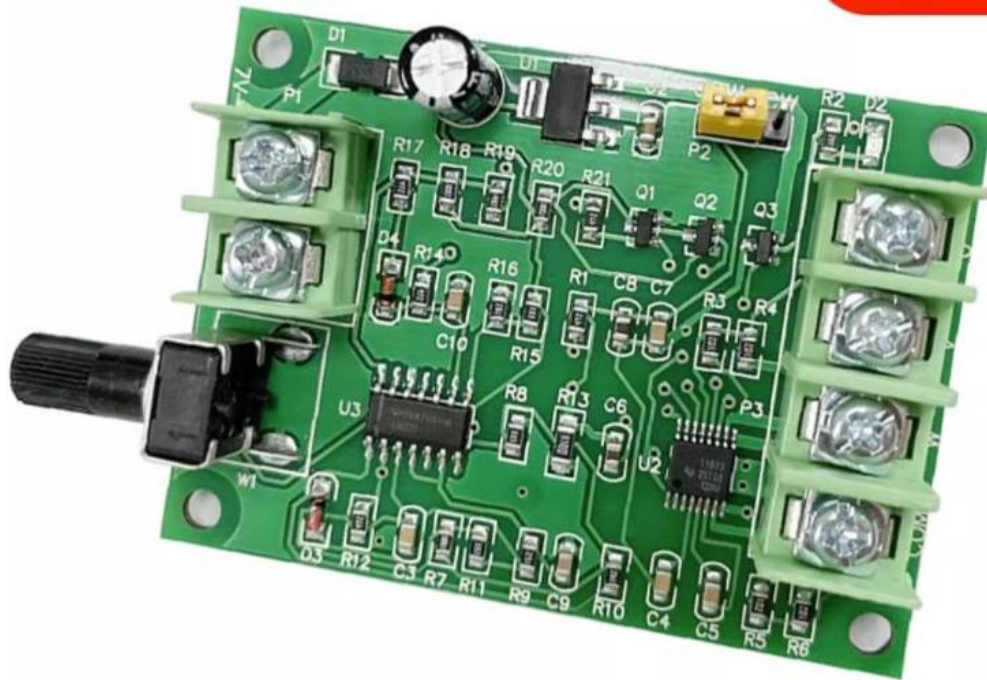


## BLDC Motor Drive Module

### Speed Controller for CD/DVD Hard Drive Motors, 7V-12V Input



Current Rating: Max current limit 3A, recommended continuous operating current 2A.

Startup Guidance: To prevent overcurrent protection during full-speed startup, either increase the input voltage slightly at startup or reduce the speed limit setting.

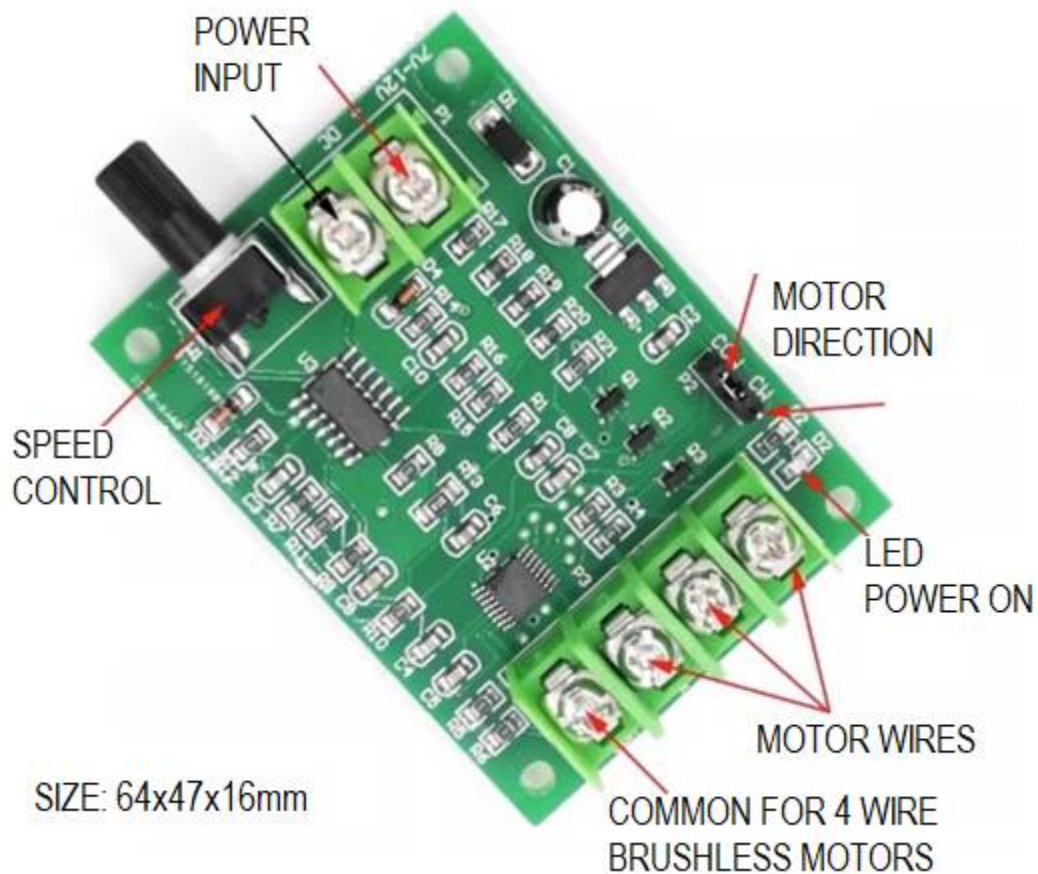
This is a miniature DC brushless motor drive board, compatible with 3-wire and 4-wire sensor-less (Hall-free) brushless motors, including hard drive and optical drive motors.

Key Advantages:

- Built-in reverse polarity, overcurrent, and short-circuit protection
- Simple wiring, plug-and-play operation
- Wide 7-12V input voltage range for hard drive motors, with speed proportional to voltage, max speed ~10,000 RPM

4-Wire Motor Common Terminal Identification:

Use a multimeter set to the  $\Omega \times 1$  range to measure all four terminals. The terminal with the smallest, equal resistance when measured against the other three is the COM (common) terminal. The drive board auto-detects 3/4-wire motors, and the COM wire can be omitted for 4-wire motors.



#### Product Specifications

- Drive Voltage: DC 7-12V
- Operating Current:  $\leq 1.2A$
- Speed Control Range: 0% to 100%
- Phase Commutation Control: Yes
- Protection Features: Reverse Polarity, Overcurrent (OCP), Short-Circuit (SCP)

⚠ Critical Safety Note

When the brushless drive board activates short-circuit or overcurrent protection, the power LED will shut off.

Immediately disconnect power to the drive board, troubleshoot and resolve the overcurrent issue, then restore power. The drive board will resume normal operation once the power LED illuminates again.

