

**Featuring built-in USB configurability, the VoltWerks VW-MOT-1 controls the speed and position of brushed and brushless DC motors**

VW-MOT-1 motor control spins DC and BLDC motors in a range of operating configurations. Suitable for closed-loop control of speed and position, the VW-MOT-1 supports a range of control interfaces as well as a convenient USB port for configuration.

**Key Features**

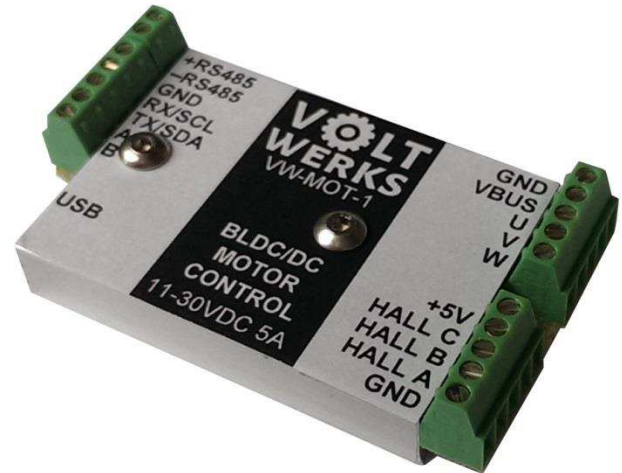
- Brushless DC (BLDC) motor control
- Brushed DC motor control
- 11-30V operating range at up to 6A
- Position, Speed, and open-loop modes
- I2C, UART, and RS485 serial interfaces
- USB port for configuration (Windows, Mac, Linux)
- Hall-sensor connections for BLDC motor
- Quadrature encoder connections for DC motor
- Multi-drop RS485 for up to 31 devices on bus
- Two I/O signals for Limit, Fault, Stop, or Sync function
- Status LED
- Screw terminals or PC-board (0.1") connections
- Supports add-on heat sink for extended temperature
- 2.25" x 1.25" x 0.50" (57mm x 32mm x 13mm)

**Applications**

- Rover-style robots
- Material handling robots
- Industrial automation
- Animatronics
- Home automation

**Ordering**

**VW-MOT-1** motor control rated at 30V 6A. Includes screw terminal blocks (installation required).



**Specifications**

**BLDC Motor**

- 3-phase Brushless DC motors up to 30000 RPM
- 12 and 24V motors (11-30V operation)
- Forward/Reverse using trapezoidal 18kHz switching
- Hall sensor connections
- Position and speed control modes

**Brushed DC Motor**

- 12 and 24V motors (11-30V operation)
- Position, speed, and open-loop control modes
- Quadrature encoder connections

**Other**

- -20°C to 85°C operating range
- Absolute maximum supply voltage : 32Vdc
- Micro USB connector (bus/self-powered)
- Idle current : 10mA
- Sleep current: 0.5mA

**Connections**

Signal	Description
VBUS	Connect to 11-30Vdc power source
GND	Ground
U,V,W	Motor connections for BLDC motor
U,W	Motor connections for DC motor
+5V	5V output hall sensor (25mA max)
RS485 +/-	Inverting/non-inverting RS485 data pair
RX/SCL	UART receive data or I2C Clock (3.3/5V)
TX/SDA	UART transmit data or I2C Data (3.3/5V)
A/B	Configurable I/O signals