

MDC150-050301 - Brushless DC Driver

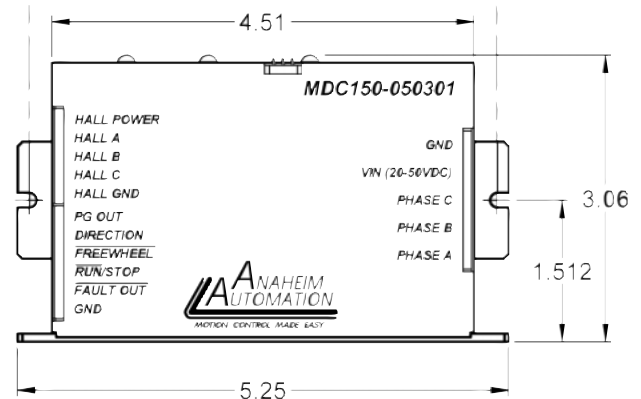
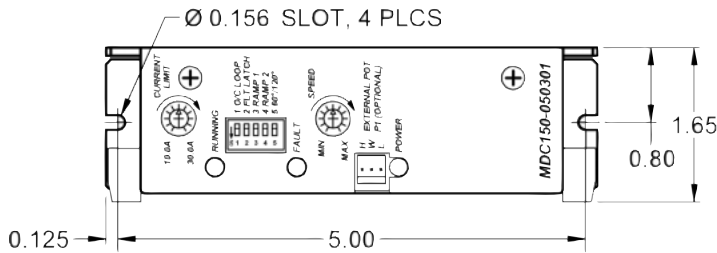


FEATURES

- **Maximum Current Limit Setting 10.0-30.0A**
- **Hall Sensor Feedback**
- **Constant Velocity Mode**
- **Shortcircuit Protection**
- **Brake, Disable and Direction Inputs**
- **Selectable Ramp Up/Down**
- **TTL-CMOS Compatible Inputs**
- **Compact Size (5.25" x 3.06" x 1.65")**
- **Dual Mounting Option**



DIMENSIONS



DESCRIPTION

The MDC150-050301 driver is designed to drive DC brushless motors at currents of up to 30A (peak) and 50V. The current limit can be set with an adjustable potentiometer right on the top of the driver. It also features hall sensor feedback and a constant velocity mode so you can overcome occasional torque spikes without slowing down.

The MDC150-050301 is also easy to use. It has screw down style detachable terminal blocks which make it easy to wire. It features LED's that indicate power and faults which makes problems easy to diagnose. It also features a "running" LED so you can see if the motor is running without actually seeing the shaft. This can be useful in identifying mechanical problems in a machine without removing the motor.

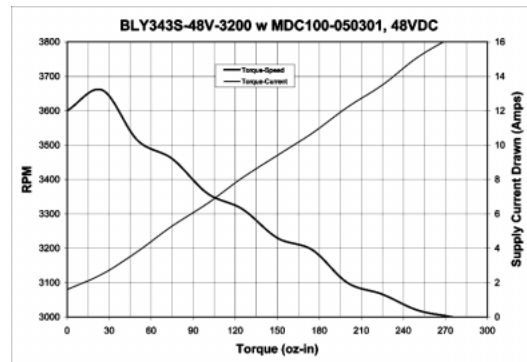
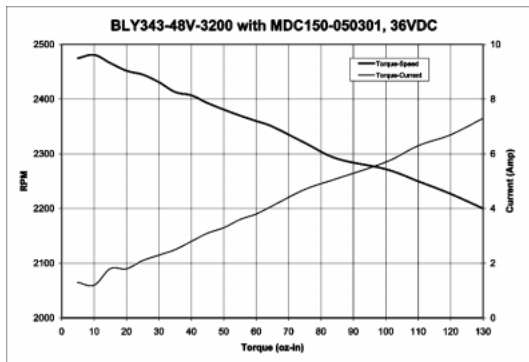
The driver is protected against over current (cycle-by-cycle or latched), hall sensor error and under voltage. When an error occurs, a fault light is turned on to notify the user. Included on the driver is an internal potentiometer to control the maximum phase current allowed into the motor and an internal potentiometer to control the speed of the motor. An optional external potentiometer (10K) or external voltage (1-4VDC) can be used to control the speed as well.

The direction of the motor can be preset by the direction control input. Other inputs to the drive include a run/stop and a motor freewheel input. When using the run/stop input, there are three ramp up/down profiles from standstill to select from. The run/stop input overrides all other inputs into the driver.

Ideal Applications:

Automated machinery or processes that involve food, cosmetic, or medical packaging, labeling, or tamper-evident requirements, cut-to-length applications, electronic assembly, robotics, factory automation, special filming and projection effects, medical diagnostics, inspection and security devices, conveyor and material handling systems, metal fabrication (CNC machinery), pump flow control, XY and rotary tables, equipment upgrades or wherever precise positioning or speed control is required.

Torque Speed Curves



Specifications

Power Requirements: 20 - 50 VDC

Output Current Range: 10.0 - 30.0 Amps (Peak),
1.0 - 5.0 Amps (continuous)

Hall Sensor Power Outputs: 6.25V @ 30mA (Max.)

Control Inputs: (TB3, Pins 2-4) TTL-CMOS Compatible
Logic "0" = 0.0 - 0.8VDC
Logic "1" = Open

Freewheel: (TB3, Pin 3)
Logic "1" (open) - Motor is Enabled
Logic "0" = Motor is de-energized and will coast

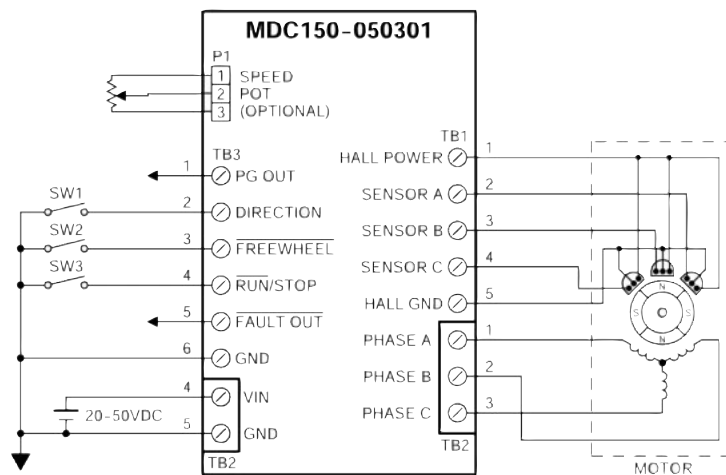
Fault Output: (TB3, Pin 5)
Logic "1" (5V out) - normal operation
Logic "0" - 1 of 3 fault conditions in 'Fault Protection' section

Run/Stop: Logic "1" (open) - Motor will not run and will decelerate if running
Logic "0" - Motor will run and accelerate according to ramp dip switch setting

Operating Temperature: 0° C to + 70° C

Driver Type: Bipolar, Compatible with 4, 6, and 8 Lead Motors. Series or Parallel connection.

Hookup:



Additional Ordering Information

Model #	Description
PSA24V2.7A	DC Power Supply 24VDC at 2.7 Amps
PSA40V4A	DC Power Supply 40VDC at 4.0 Amps
PSA40V8A	DC Power Supply 40VDC at 8 Amps