

# MDCSL100-050301 Sensorless Brushless Speed Controller



## FEATURES

- **Maximum Current Limit Setting from 10.0- 30.0Amps (Peak)**
- **Sensorless motor control**
- **Internal or External Potentiometer Speed Control**
- **Short Circuit Protection**
- **Brake, Disable and Direction Inputs**
- **Selectable Ramp Up/Down**
- **Require 20-50 VDC**
- **TTL-CMOS Compatible Inputs**
- **Dual Mounting Option**
- **CE Certified and RoHS Compliant**



## DESCRIPTION

The MDCSL100-050301 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. This is a sensorless driver, so no hall sensors are needed. The MDCSL100-050301 is also easy to use. It has screw down style detachable terminal blocks which makes wiring simple. Featuring LED's that indicate power and faults which make 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.

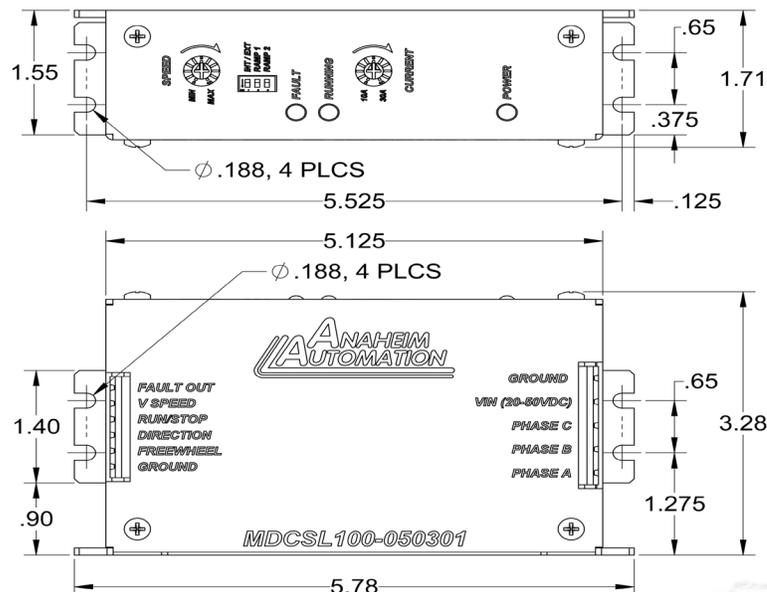
The driver is protected against over current (cycle-by-cycle or latched) and under voltage. When an error occurs, a fault light notifies the user. The fault output will go low to notify the user. Included on the driver is an internal potentiometer to control the maximum phase current allowed into the motor and an internal potentiometer to control the speed of the motor. An optional external potentiometer (10K) or external voltage (1-5VDC) can be used to control speed.

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

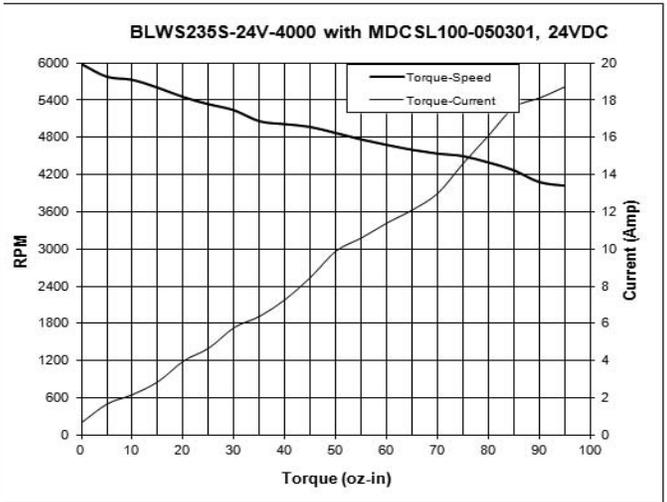
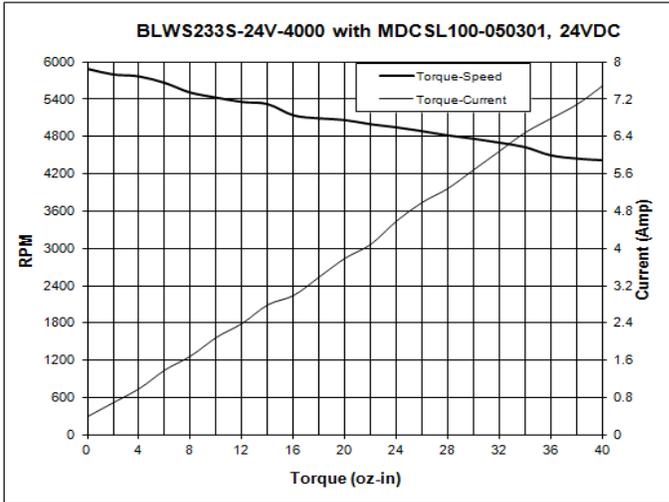
Automated machinery or processes that involve food, cosmetic, or medical packaging, labeling, or tamper-evident requirements, cut-to-length applications, electronic assembly, robotics, factory automation, special filming and projection effects, medical diagnostics, inspection and security devices, conveyor 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.

## DIMENSIONS

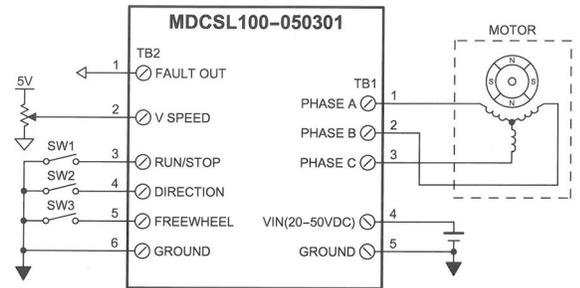


Dimensions are in inches

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Power Requirements: (TB1, Pin 4,5)	20 - 50 VDC
Output Current Range:	10.0 - 30.0 Amps (Peak) 1.0 - 5.0 Amps (Continuous)
Fault Output: (TB2, Pin 1)	Pull-up required. "1" no fault has occurred "0" fault condition
V Speed: (TB2, Pin 2)	To control the speed of the motor with and external DC voltage, INT/EXT SPD switch (SW1-POS1) must be switched to the ON position. 0VDC (min) - 5VDC (max)
RUN/STOP: (TB2, Pin 3)	Logic "1" (open) - Motor will not run and if running will decelerate according to ramp dip switch setting Logic "0" - Motor will run and will accelerate to ramp dip switch
Direction: (TB2, Pin 4)	Logic "1" (open) - Clockwise Logic "0" - Counterclockwise
Freewheel: (TB2, Pin 5)	Logic "1" (open) - Motor is Enabled Logic "0" - Motor is de-energized and coast



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

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