FEATURES

- **Maximum Current Limit Setting from 1.0-10.0 Amps**
- **Internal or External Potentiometer Speed Control**
- **0V to 5V External Voltage Speed Control**
- **2-Quadrant Operation**
- **Hall Sensor Feedback**
- **Constant Velocity Mode**
- **Short Circuit Protection**
- **Requires 20-50VDC**
- **Brake, Disable and Direction Inputs**
- **TTL-CMOS Compatible Inputs**
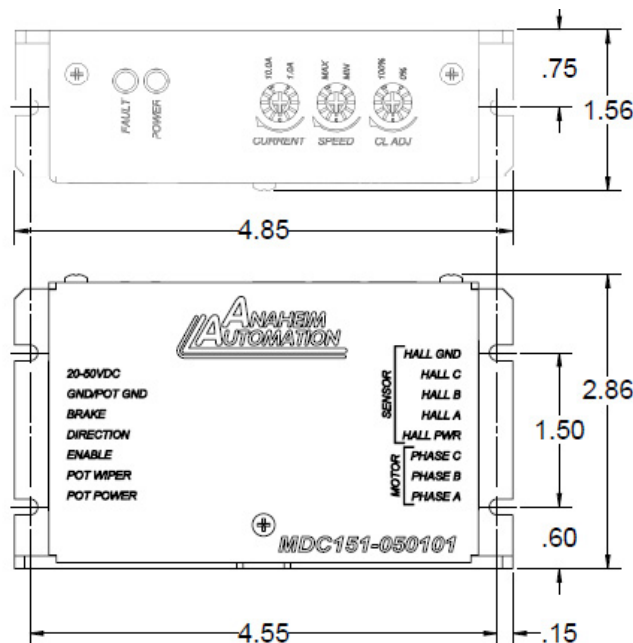- **Dual Mounting Option**

DESCERIPTION

The MDC151-05010 driver is designed to drive DC Brushless Motors at currents of up to 10A (peak) and 50V. Using hall sensor feedback, a constant velocity mode can be selected. The driver is protected against over current (cycle-by-cycle), 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 poentiometer to control the maximum phase current allowed into the motor and an internal potentiometer to control the speed of the motor. An external potentiometer (10K) 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 dynamic brake and a motor disable input. When using the brake input, it overrieds all the other inputs into the driver.
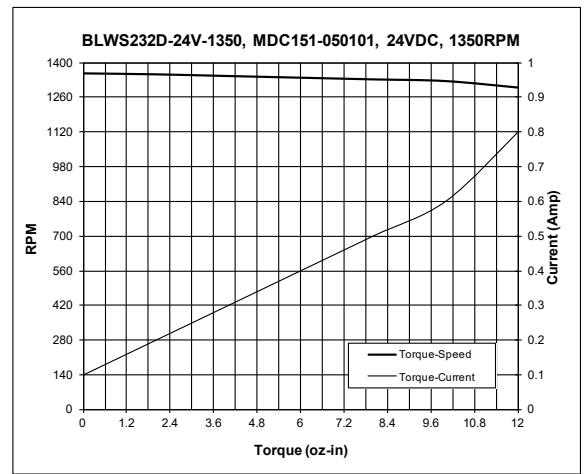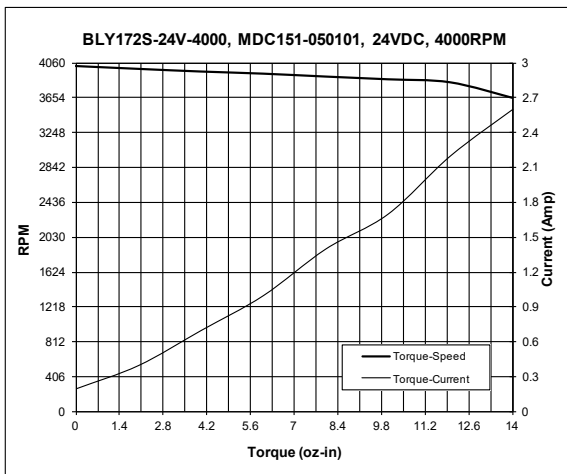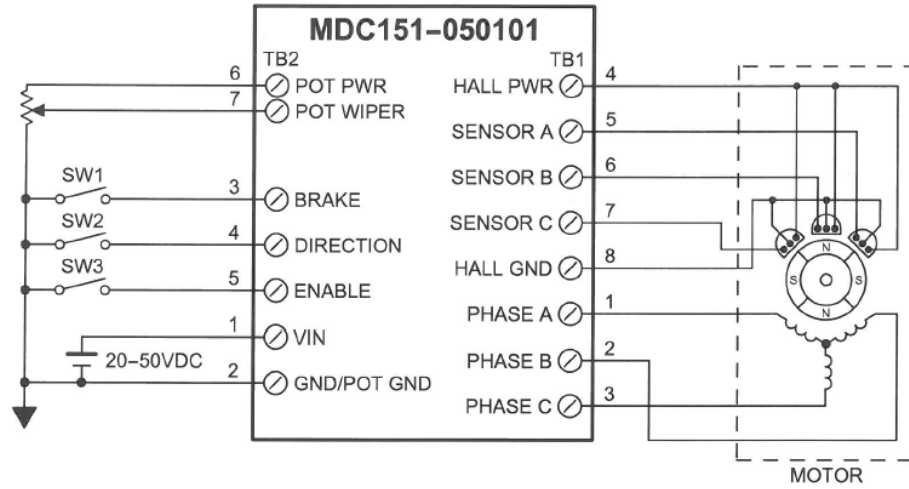
Ideal Applications:

Automated machinery or processes that involves food, cosmetic, or medical packaging, labeling, or tamper-evident requirements, electronic assembly, robotics, factory automation, special filming and projection effects, medical diagnostics, inspection and security devices, conveyor and material handling systems, pump flow control, XY and rotary tables, equipment upgrades or whenever speed control is required.

DIMENSIONS

L011173

MDC151–050101

TB2
- 6 — POT PWR
- 7 — POT WIPER
- 3 — BRAKE (SW1)
- 4 — DIRECTION (SW2)
- 5 — ENABLE (SW3)
- 1 — VIN (20–50VDC)
- 2 — GND/POT GND

TB1
- 4 — HALL PWR
- 5 — SENSOR A
- 6 — SENSOR B
- 7 — SENSOR C
- 8 — HALL GND
- 1 — PHASE A
- 2 — PHASE B
- 3 — PHASE C

MOTOR

BLY172S-24V-4000, MDC151-050101, 24VDC, 4000RPM

Torque-Speed
Torque-Current

BLWS232D-24V-1350, MDC151-050101, 24VDC, 1350RPM

Torque-Speed
Torque-Current

Power Requirements:	20-50 VDC
Output Current Range:	1.0-10 Amps (Peak) 0.5 - 5.0 Amps (Continuous)
Hall Sensor Power Outputs:	6.25V @ 30mA (Max)
Control Inputs:	(TB2, Pins 3-5) TTL-CMOS Compatible Logic "0" = 0.0 - 0.8VDC Logic "1" = Open
Brake:	(TB2, Pin 3) Logic "1" (open) - Motor will not run and if running will decelerate rapidly Logic "0" = Motor will run
Enable:	Logic "1" (open) - Motor is Enabled Logic "0" - Motor is de-energized and will coast
Direction Control:	(TB2, Pin 4) Logic "1" (open) - Clockwise Logic "0" - Counterclockwise
Operating Temperature:	0°C to +70°C
Maximum Closed Loop Motor Speed	2 pole: 30,000 RPM 4 pole: 15,000 RPM 6 pole: 11,250 RPM 8 pole: 7,500 RPM
Maximum Open Loop Motor Speed	50,000 RPM
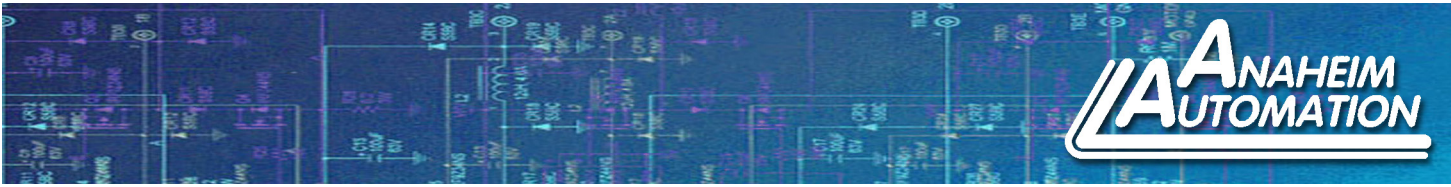
Model #	Description
PSAM24V2.7A	DC Power Supply 24VDC at 2.7 Amps
PSA40V4A	DC Power Supply 40VDC at 4.0 Amps
PSA40V8A	DC Power Supply 40VDC at 8.0 Amps