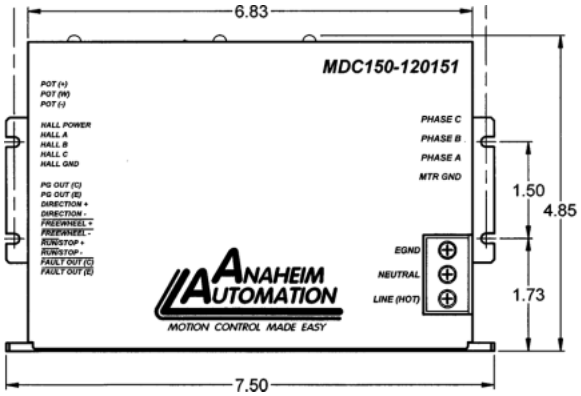
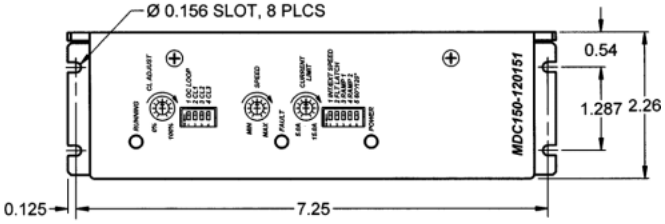
MDC150-120151 - Brushless DC Driver

FEATURES

- ***Maximum Current Limit Setting 5.0-15.0A***
- ***Internal or External Potentiometer Speed Control***
- ***2-Quadrant Operation***
- ***Hall Sensor Feedback***
- ***Constant Velocity Mode***
- ***Short Circuit Protection***
- ***Requires 85 - 135 VAC***
- ***Isolated Speed Out***
- ***Isolated Fault Out***

DIMENSIONS





DESCRIPTION

The MDC150-120151 driver is designed to drive DC brushless motors at currents of up to 15A (peak) and 170V. Using hall sensor feedback, a constant velocity mode can be selected. The driver is protected against over current (cycle-by-cycle or latched), hall sensor error and under voltage. 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) 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.

Over current protection can be provided by means of a over current latch function by setting the 'FLT LATCH' dip switch. If a motor current level exceeding the current limit set by the internal current limit potentiometer is produced, an over current latch is activated, shutting off the output. This driver is equipped with a FAULT LED to alert the user of the following conditions: 1) Invalid Sensor Input code, 2) Over Current. (The driver is equipped with cycle-by-cycle current limiting or over current latch), and 3) Undervoltage Lockout activation at 9.1VDC for the input voltage and 4.5VDC for Hall Sensor voltage.

Ideal Applications:

Automated machinery or processes that involve 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, metal fabrication (CNC machinery), pump flow control, XY and rotary tables, equipment upgrades or wherever precise speed control is required.

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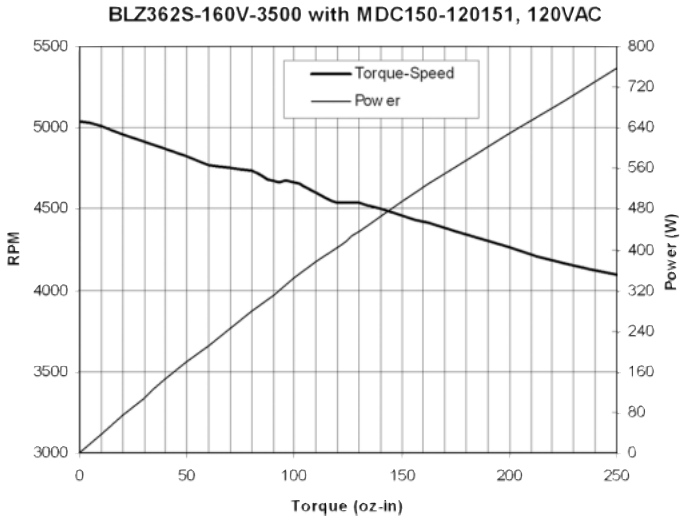
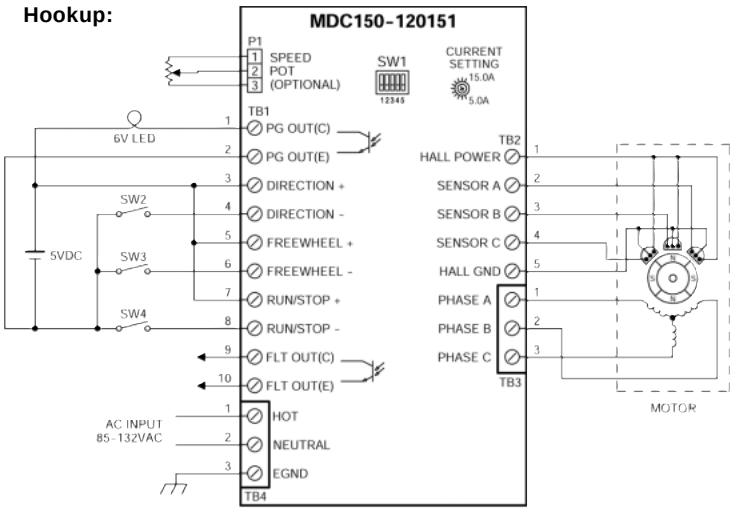
Torque Speed Curve

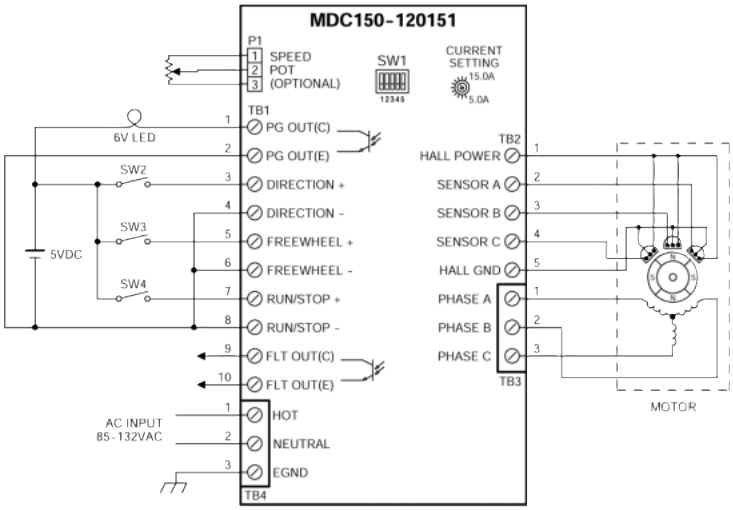


Specifications

Power Requirements:	85VAC (min) 135VAC (max)
Output Current Range:	5.0 - 15.0 Amps (Peak) 2.5 - 7.5 Amps (Continuous)
Hall Sensor Power Outputs:	6.25V @ 30mA (Max.)
Speed Output: (TB1, Pin 1 and 2):	A signal pulse out is available at a rate of 4 pulses for 1 revolution of an 8-pole motor, 3 pulses for 1 revolution of a 6-pole motor, and 2 pulses for 1 revolution of a 4 pole motor. 3-pole motor RPM = 15 * PG OUT (in Hz) 3-pole motor RPM = 20 * PG OUT (in Hz) 4-pole motor RPM = 30 * PG OUT (in Hz)
Operating Temperature:	Heat Sink: 0º - 70º C
Hall Sensor Power Output:	6.25V @ 30mA maximum

Hookup:





ADDITIONAL INFORMATION