

MBD45021-75 Enhanced Step Motor Driver

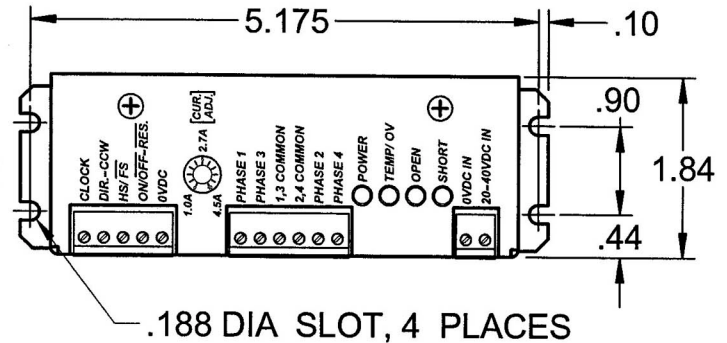
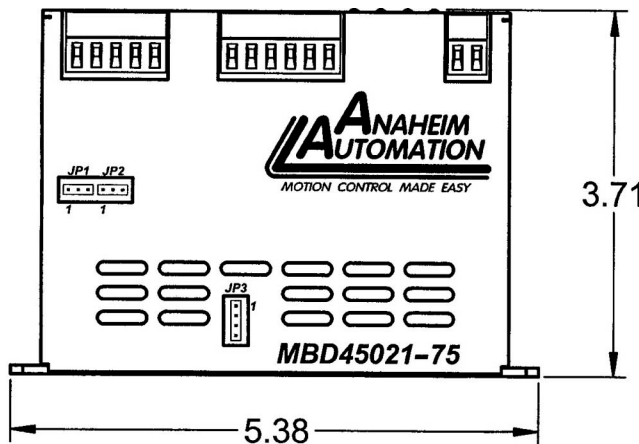


FEATURES

- 1.0-4.5 Amps/Phase Operating Current
- Enhanced Torque/Speed Output over 24VDC drives
- Improved Start-Stop Speeds
- Short Circuit Protection
- Open Motor Wire Detection
- No RFI or EMI Problems
- Requires 24-40VDC
- TTL-CMOS Compatible Inputs
- Receives Positive or Negative Going Clocks
- Full Step or Half Step Operation
- Motor Turn Off Provisions
- Enclosed Modular Package



DIMENSIONS



DESCRIPTION

The MBD45021-75 is a bilevel step motor driver specifically designed to dynamically enhance driver performance. The driver requires 24 to 40 volts DC to operate with this drive. The drive will out perform all standard 24VDC drivers in the industry. If your system is designed for a 24VDC specification, this driver will allow your motor to increase its operating output performance thanks to this outstanding new driver design.

Users have a choice of full-step or half-step operation. Full-step operation occurs by energizing two phases at a time, rotating a typical motor 1.8 degrees per step. Half-step operation occurs by alternately energizing one, and then two, phases at a time, rotating the motor 0.9 degrees per step.

The Motor On/Off feature allows the de-energizing of a motor without disturbing the positioning logic. After re-energizing the motor, a routine can continue. This reduces motor heating and conserves power, especially in applications where motors are stopped for long periods.

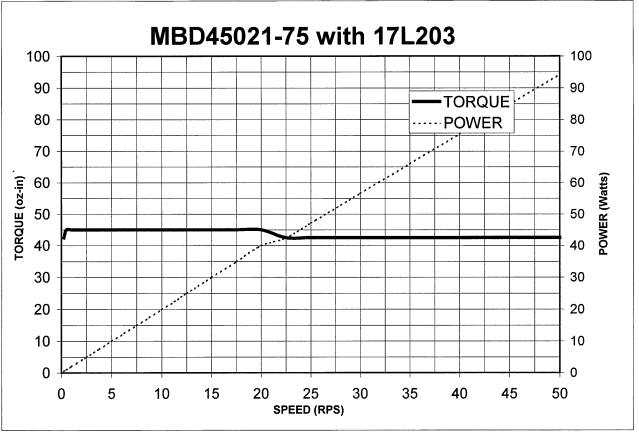
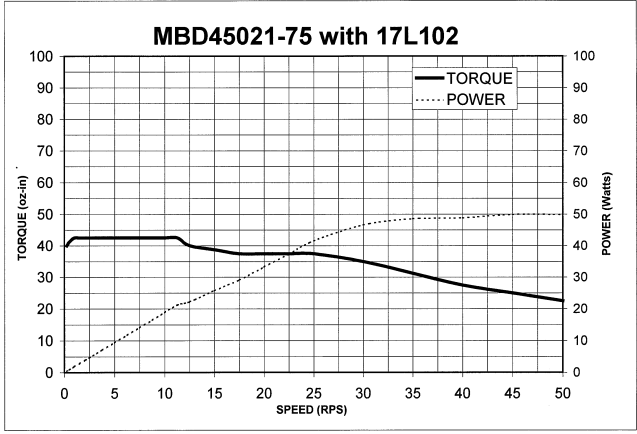
There are 3 types of fault detection. When a fault is detected, the driver turns off the motor current and a LED indicates which type of fault occurred. The Power LED is green and the 3 fault LEDs are off during normal operation. If the driver goes into a fault condition, the fault may be reset by turning the power off for at least 20 seconds or by pulling the reset input (TB1 pin 4) to a logic "0" for at least 10 msec.

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.

L010443

Torque Speed Curves



Specifications

Control Inputs: TTL-CMOS Compatible
 Logic "0"=0 to 0.8 VDC
 Logic "1"=3.5 to 5.0 VDC

Clock, CCW: (Terminals 1 and 2 of TB1)
 15 microseconds minimum pulse width,
 positive or negative going.

Direction Control: Logic "1" (open)-clockwise
 Logic "0" -counterclockwise

Motor On/Off: Logic "1" (open)-motor energized
 Logic "0" -motor de-energized

Output Current Rating: 5.0 Amperes per phase maximum
 operating current; 2.5 Amperes per phase
 maximum standstill current, over the
 operating voltage and temperature
 range. Motor phase ratings of 0.8
 Amperes minimum are required to meet
 the minimum kick level.

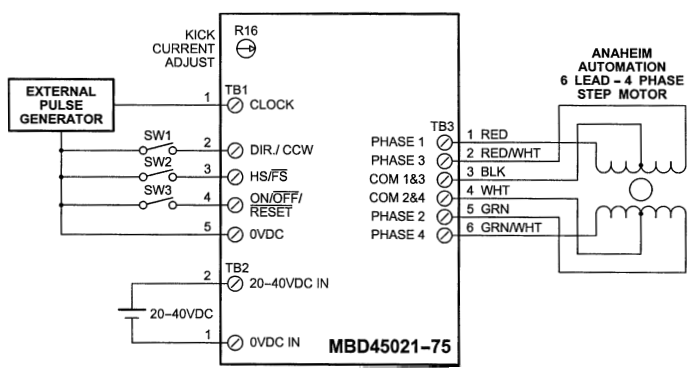
Power Requirements: 20VDC (min) - 40VDC (max)

Power Draw: The power consumption of this driver
 from the DC power supply is determined
 by the DC voltage in. The power draw is
 also motor dependent. Motors exceeding
 160 watts are not intended for the
 MBD45021-75 driver. The following
 formula can be used to determine the
 maximum power delivered by the driver.
 Output Power = (VDC IN) x 4.

Operating Temperature: Heatsink - 0° to 60°C

Fuse: 8 Amp Fast Blow, 5 x 20mm

Hookup:



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

ADDITIONAL INFORMATION