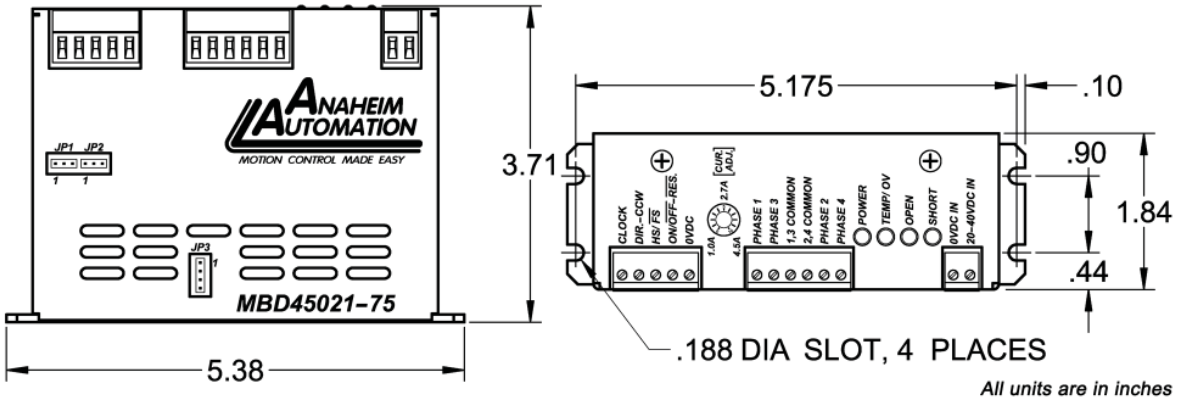
MBD45021-75 Enhanced Step Motor Driver

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



All units are in inches

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° per step. Half-step operation occurs by alternate 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-energized 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 involved 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.

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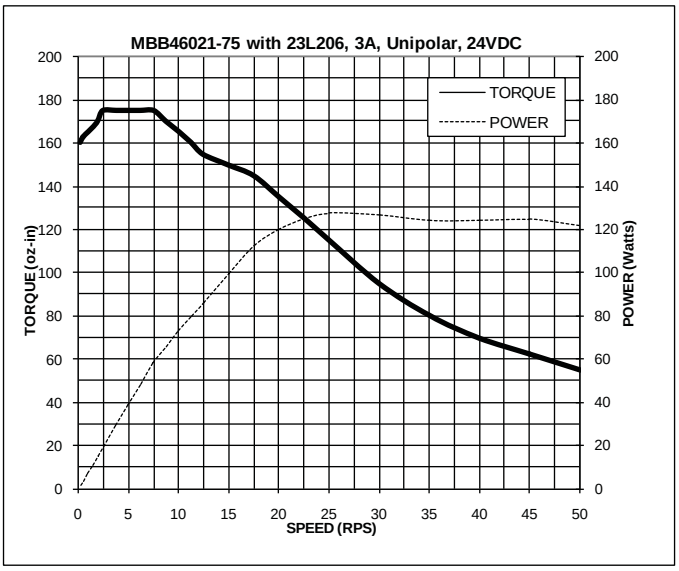
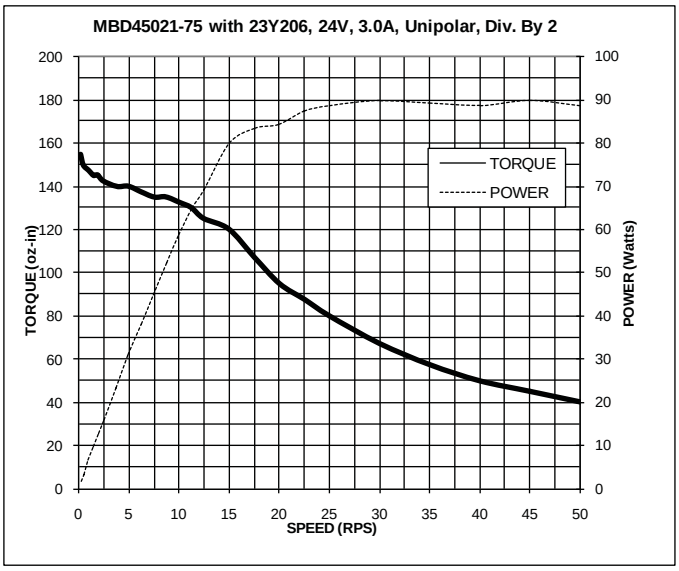
910 East Orangefair Ln. Anaheim, CA 92801 **Tel. (714) 992-6990** Fax. (714) 992-0471 **www.anaheimautomation.com**

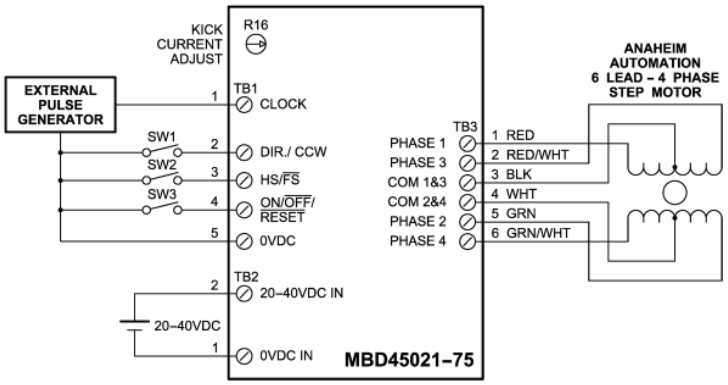
TORQUE CURVES





SPECIFICATIONS/WIRING DIAGRAM

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 drier 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



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