

# MBC12101 - Microstep Driver

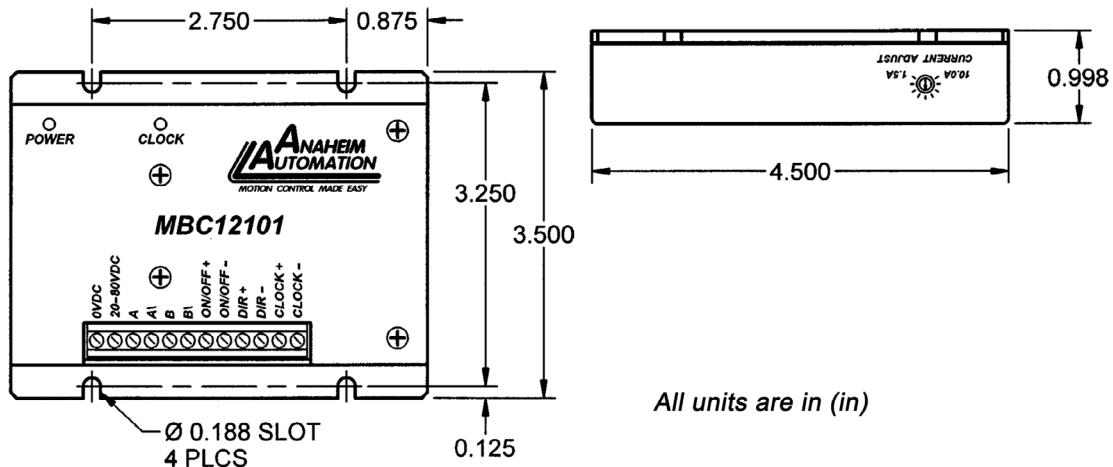


## FEATURES

- Compact Stepper Motor Driver
- 1.5 - 10.0 Amp Current Range
- 2000 Steps per Revolution
- Optically Isolated Inputs
- Short Circuit Protection
- 20 - 80VDC Bus Voltage
- Automatic Current Reduction
- Sinking and Sourcing Inputs
- Power and Clock LEDs
- CE Certified and RoHS Compliant



## DIMENSIONS



All units are in (in)

## DESCRIPTION

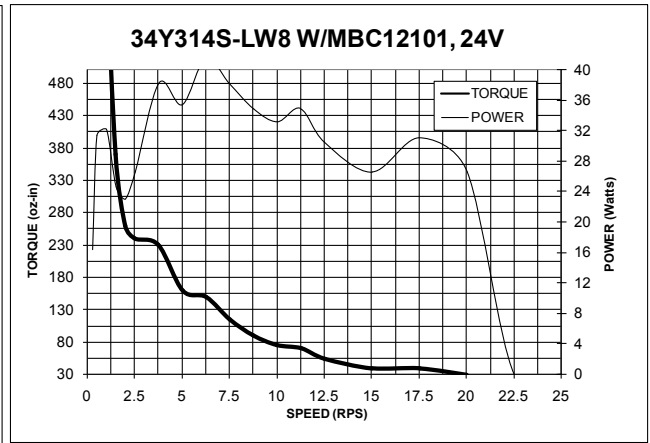
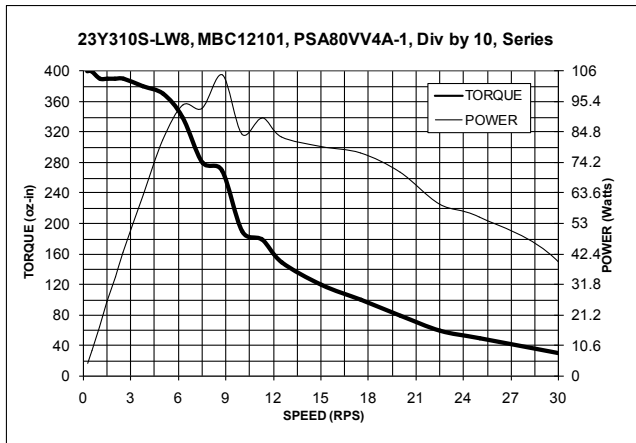
If you're looking for big time stepper performance from a small driver, the MBC12101 is your answer. This powerful microstepping driver provides excellent torque in a compact and lowprofile enclosure. The MBC12101 is also very easy to use. It features rugged terminal blocks, a rotary pot for current settings, and a visible silkscreen for easy installation. Versatile as well as powerful, the MBC12101 has a wide amperage range. It is designed to handle small stepper motors rated as low as 1.5 Amps/phase, mid-sized steppers such as NEMA 23's and 34's as well as larger motors with current ratings up to 10.0 Amps. It operates from a DC voltage of 20-80 Volts, making it a great fit for almost any stepper application. The MBC12101 features optically isolated inputs that are 3.5 - 8.6VDC compatible. The clock input can be set to receive either sinking or sourcing clock signals at frequencies up to 100KHz. The driver also features direction control, motor on/ off capabilities, and a built in short circuit and miswire shutdown protection. The MBC12101 is a bipolar type driver designed for use with 4, 6, or 8 lead stepper motors, making it compatible for series and parallel installations. The driver has 2000 steps per revolution or 0.18° per step resolution, with respect to a 1.8° stepper motor. It also has a motor current reduction feature that will help keep stepper motors cool at standstill, and LED's that indicate power and pulse being received.

### 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 project 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.

CAT0107

## Torque Speed Curves



## Specifications

Power Requirements: 20 - 80 VDC

Output Current Range: 1.5 - 10.0 Amps (Peak)

Microstepping Resolution: 2000 Steps/Revolution (Div-by-10)

Input Signal Voltage: 3.5 - 8.6 VDC

Input Clock Frequency: 0 - 100 kHz

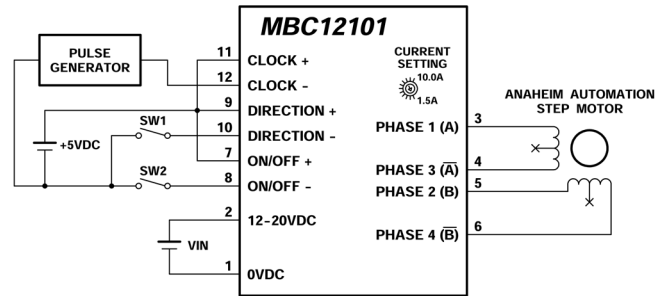
Minimum Input Current: 1.0 mA  
(Isolated Inputs)

Storage Temperature: 0° - 50° C

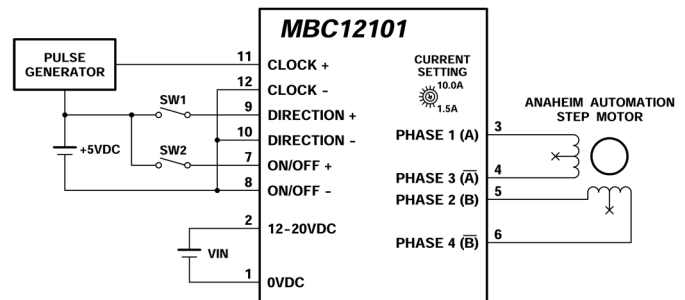
Absolute Maximum Driver Temperature: 70° C

Driver Type: Bipolar, Compatible with 4, 6, and 8 Lead Motors. Series or Parallel Connection

## Sinking Inputs



## Sourcing Inputs:



## Sourcing Inputs:

## Additional Ordering Information

Model #	Description	Input Voltage	Power (Watt)
PSA80V4A-1	80 VDC Power Supply, Up to 4.0 Amp Capability	110 or 220 VAC	320
PSA40V4A	40 VDC Power Supply, Up to 4.0 Amp Capability	110 or 220 VAC	160
PCL601	Single Axis Simple Programmable Controller, RS232/485 Compatible	24 VDC	-
PCL601USB	Single Axis Simple Programmable Controller, USB Compatible	24 VDC	-
MBC10101-75	Enhanced Performance 10A Microstep Driver	8 - 55 VDC	-
MBC10SI1	MBC10101 with a simple indexer, USB compatible	20 - 80 VDC	-
MBC10P31	MBC10101 with a pulse generator, USB compatible	20 - 80 VDC	-