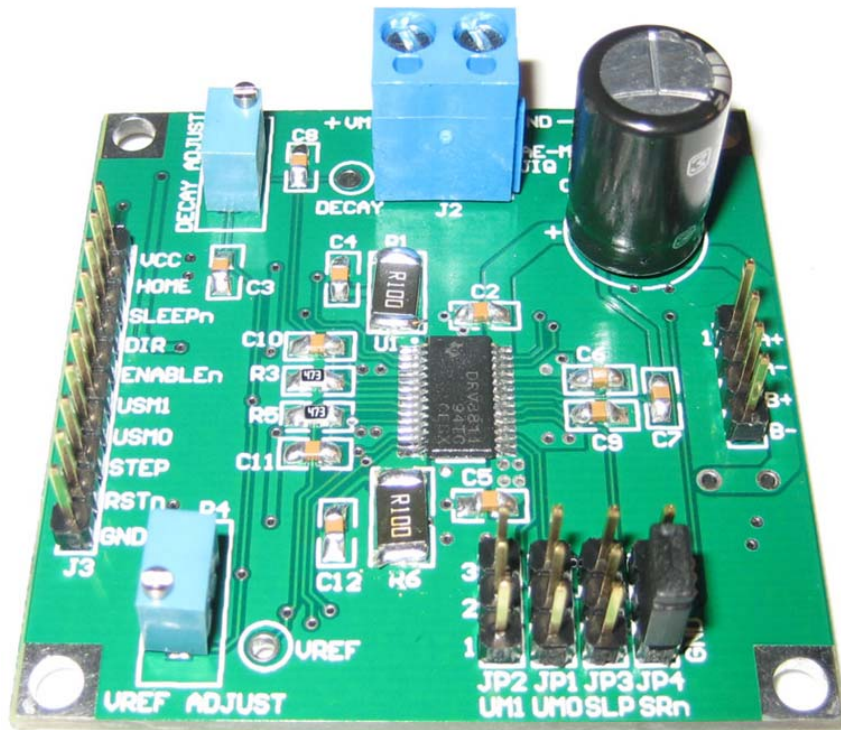
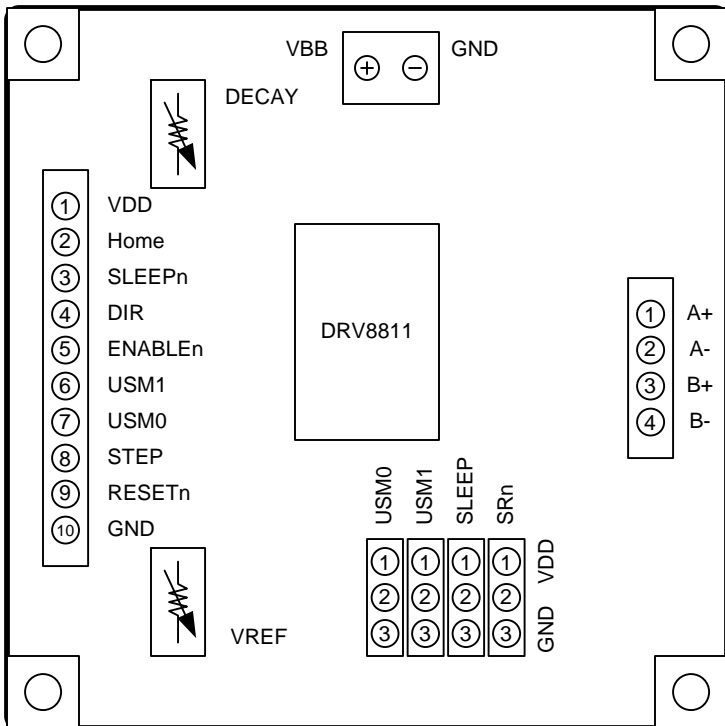


MDL-STPR1 Manual



Microstepping Bipolar Stepper Motor Controller



Internal Indexer Microstepper (MDL-STPR1):

- Controls 1 Bipolar Stepper Motor with up to 2.5A of current
- STEP pin for stepping rate control
- DIR pin for direction of rotation control
- SLEEPn pin for reduced current sink during non operation intervals
- USMx pins to select Microstepping Rate
- Sense Resistors for current regulation
- Configurable VREF for programmable current limit selection.
- Configurable Fast Decay (PFD Pot)

Ease of Use Features:

- Input Power Wires screwed into terminal block
- Motor wires can be connected to four pin header connector
- Only measures 2" by 2"
- 10 pin .100" header connector with all control signals available
- Four jumpers allow easy configuration of non dynamic control signals (SRn, USMx and SLEEPn)

The MDL-STPR1 is a small 2" by 2" Bipolar Stepper motor controller developed around Texas Instruments DRV8811 microstepping indexed driver. It will run motors with up to 2.5A.

SLEEPn: Disables both H Bridges and places the device under the lowest of power consumption rates. When SLEEP is LO, the device is completely disabled and can not be operated. Sleep can be controlled via microcontroller interfacing (through J3) or fixed via the SLEEP Jumper (designed for CNC equipment using the PC parallel port and only having STEP/DIR signals available)

USMx: Selects the Microstepping rate from Single Step (0,0), Half Step (0,1), Quad Step (1,0) or Eight Step (1,1). USMx bits can be set via microcontroller interfacing (through J3) or fixed via the USMx jumpers.

RESETn: Brings the stepper indexer into position zero (starting)

STEP: A transition from LO to HI, signals the device to move one step (or one microstep depending on USMx)

DIR: Controls direction of step generation. This pin controls CW and CCW motor rotation (depending on motor wiring).