

# R101

## CONTROLLER/DRIVER

### MAIN FEATURES:

- Voltage: +15 to 30VDC
- Current: 0.2 to 2.5 Amps Peak, software set
- Hold current: 0.2 to 2.5 Amps, software set
- Step resolution: Full Step, 2x, 4x, 8x, software set
- Speed: (max step frequency: 15kHz). At 8x microstepping, 1.8 motor, max RPS = 15000/1600 = 9 RPS
- Inputs: Step, Direction, Disable Pin if used as driver only, otherwise, 4 inputs.
- Output: 1 output (fault output)



### DETAILED FEATURES:

- Operating temperature: 0 to 45°C
- Homes to the zero set input pin
- Storage of parameters available
- Internal +5VDC output

(Driver Version): The R101 driver contains its own +5VDC output to supply the opto isolated inputs. Many drives require an additional +5VDC power supply (to the main power source). The separate power supplies are for customers who want to keep the inputs isolated from the main power source. Keeping them opto isolated will reduce electrical noise. But customers who need the convenience of using one power supply, they should connect pin 1 and 4 together to use the board's internal +5VDC output.

### CONNECTION SPECIFICATIONS:

JP1 Configuration	
Pin #	Function
1	Common +ve External
2	Step (in)
3	Direction (in)
4	+5VDC Internal
5	Disable (in)
6	Motor A+ (out)
7	Motor A- (out)
8	Motor B+ (out)
9	Motor B- (out)
10	Zero Set (in)
11	Power Ground
12	Power Positive

JP3 Configuration	
Pin #	Function
1	A Input (-ve)
2	Ground
3	B Input (+ve)

A separate three pin connector JP3 is provided for the RS485 bus interface.

### ACCESSORIES:

- USB485 Converter Card will be needed if they cannot communicate with RS485 (\$49)



- USB cable (we do not provide but it can be bought anywhere)



### PROGRAMMING:

- Programming uses a simple syntax that contains 2 ASCII characters followed by a value:

The command syntax is as follows:

```
#<Board Address><Command><Value><cr><lf>
```

The reply syntax is:

```
*<Board Address><Command><Value><cr><lf>
```

NOTE: All commands will return a value.

Example:

Setting the Run Current (RI) to 1500mA (1.5A)

```
#ARI1500 //Sent Command
```

```
*ARI1500 //Received Reply
```

