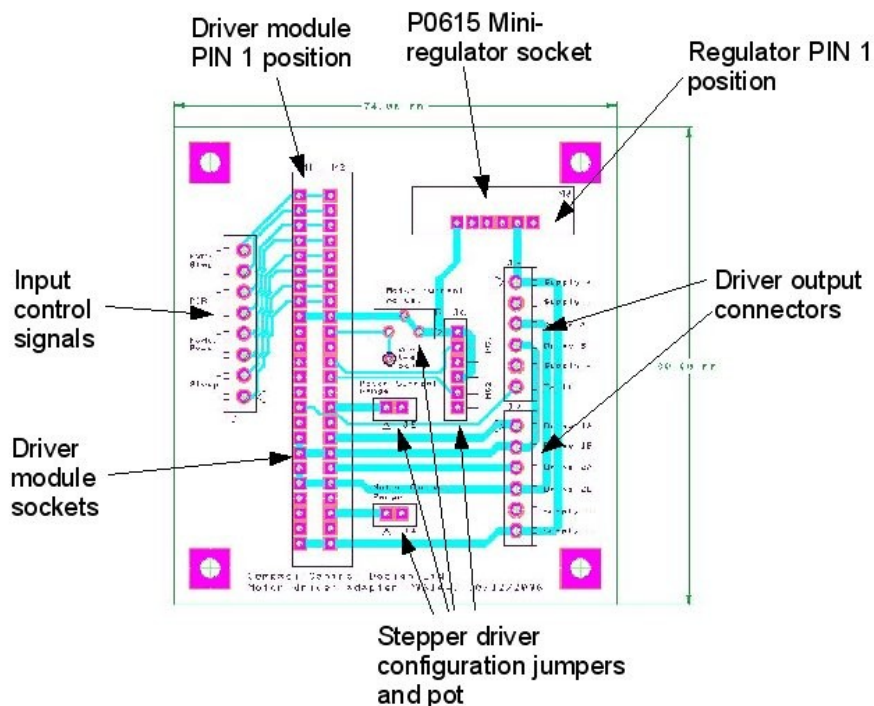


## P0614 Driver adapter board.

This board has been developed to enable either the P0612 Stepper or the P0613 DC Motor driver board to be used or evaluated quickly and easily. The adapter board includes the following-

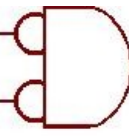
- Jumpers etc. to enable the various configuration options for the driver boards to be set.
- Screw terminals for the control inputs, power and driver outputs.
- The P0615 mini-regulator is included on-board to provide the logic supply required by both driver boards, so only a single power supply is required.
- A P0612 Stepper or P0613 DC Motor driver board is supplied with the adapter board.

## Overview



The P0614 adapter is suitable for either the P0612 Stepper or the P0613 DC Motor driver module, however the P0614 is shipped configured for only one driver module type. The version for the P0612 stepper driver module is shipped with the configuration jumpers and reference voltage pot fitted, the version for the P0613 DC Motor driver does not have these fitted. If the incorrect driver is installed into an adapter damage could result to the driver, adapter and power supply.

The connector for input control signals is simply an extension of the driver module's input control signals. See the P0612 or P0613 driver module documentation for descriptions and specifications for these signals.

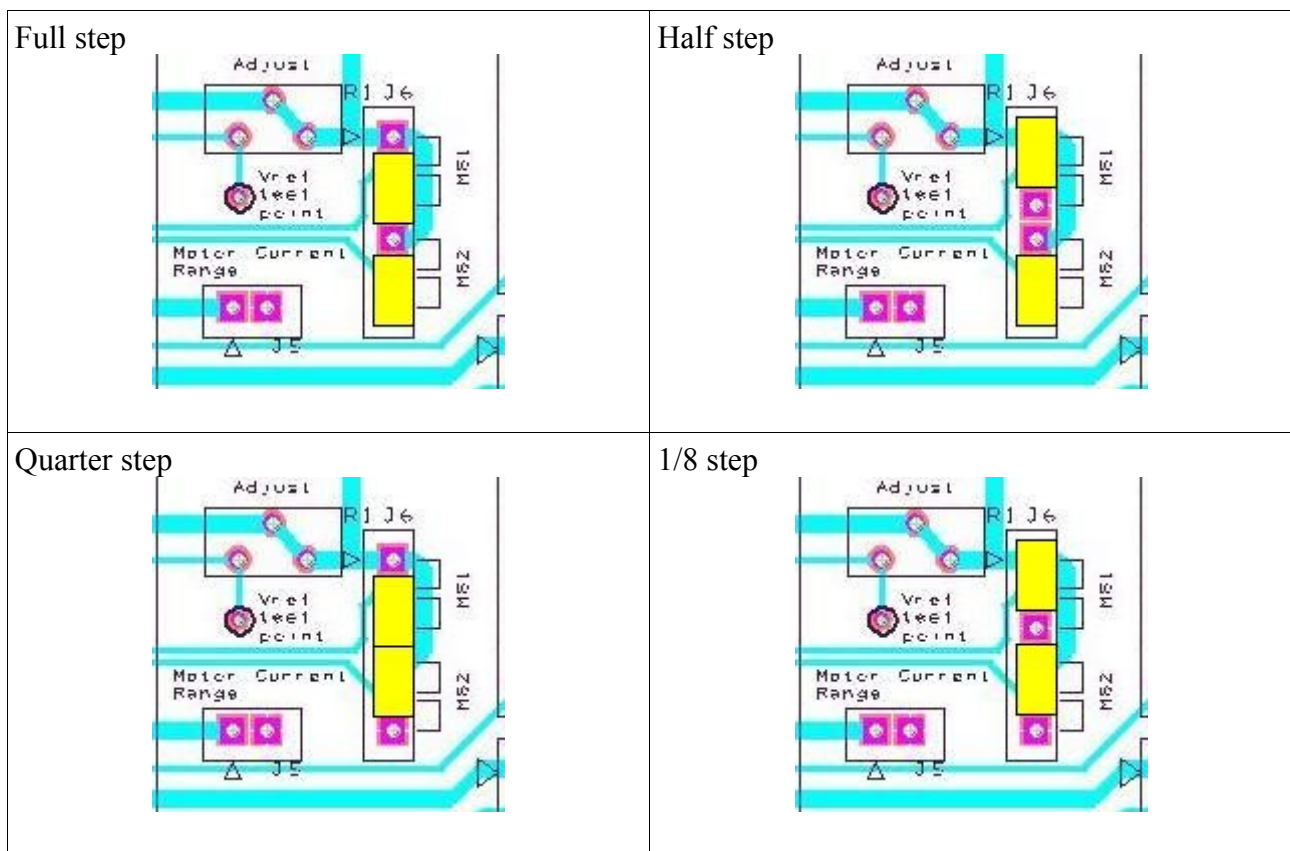


## P0612 Stepper version.

This version includes jumpers and a pot for configuring the options of the P0612 and for controlling the motor drive current.

### Microstepping modes

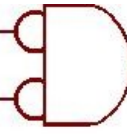
Jumper block J6 enables the microstepping mode to be selected. The following options are available-



### Controlling motor drive current

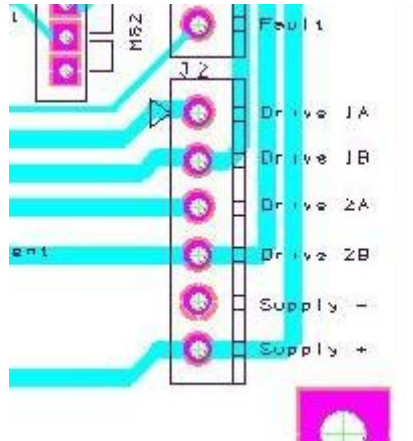
The two jumpers J4 and J5 labeled 'Motor current range' select the high and low current ranges. If both jumpers are installed then the high current range is selected, if both jumpers are removed then the low current range is selected. See the P0612 data sheet for details of the current ranges. NOTE: Both jumpers must be either installed or removed. Do not install only one.

The pot R1 labeled 'Motor current adjust' is used to adjust the motor drive current within the selected range. The pot connects to the driver module's Ref input and the reference voltage can be measured on the test point 'Vref test point', it is referenced to *Supply -*. See the P0612 data sheet for the relationship between Vref and motor drive current.



## Driver outputs

The motor driver outputs appear on the connector J2.



The two phases of the stepper motor are connected to Drive1 and Drive2. The adapter board signal names relate to the P0612 output signals as below-

P0612 driver signal names	Adapter board signal names
Out1A	Drive1A
Out1B	Drive1B
Out2A	Drive2A
Out2B	Drive2B

Refer to the P0612 data sheet for connections to various stepper motor types.

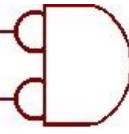
## Power

The P0612 driver module requires motor power and +5 Volt logic power. The adapter board includes a P0615 Mini-regulator to provide the +5 Volt logic power, so only a single power supply is required. See the P0612 data sheet for motor power supply specifications. The power for the adapter board is supplied via the terminal block J2 using the *Supply -* and *Supply +* connections.

**Note:** The four mounting holes are also connected to the *Supply -* connection.

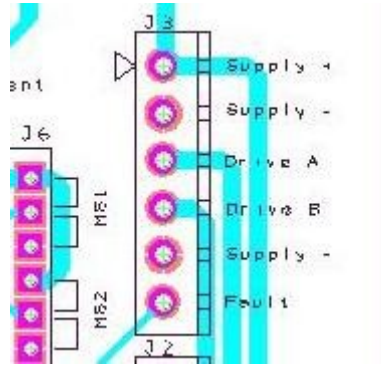
## P0613 DC Motor version

There is no configuration for the DC Motor version of the adapter, just the control signal inputs and the motor drive outputs.



## Driver outputs

The driver outputs are located on terminal block J3, the driver outputs are labeled *Drive A* and *Drive B*.



In addition to the driver outputs, there is also a *Fault* output, this is connected to the P0613 module's FAULT output pin, refer to the P0613 data sheet for details of this output. An LED and resistor could be connected between *Supply+* and *Fault* to provide a visual indication of a fault condition.

## Power

The P0613 driver module requires motor power and +5 Volt logic power. The adapter board includes a P0615 Mini-regulator to provide the +5 Volt logic power, so only a single power supply is required. See the P0613 data sheet for motor power supply specifications. The power for the adapter board is supplied via the terminal block J3 using the *Supply -* and *Supply +* connections.

**Note:** The four mounting holes are also connected to the *Supply -* connection.



## LVD, CE marking and WEEE

The P0614 Adapter board is designed and specified to work at a voltage below the voltage level where the LVD is applicable.

Under CE marking and WEEE directives the P0614 Adapter board is considered to be a component (in WEEE it is a circuit board or sub-assembly) and therefore does not require CE marking and does not fall within the scope of the WEEE directive.

## Version

Version	Date	Description
1.0	5 June 2007	Original document.

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