

Encoder Splitter/Buffer Board

Hardware Reference Guide

Issue 1.2

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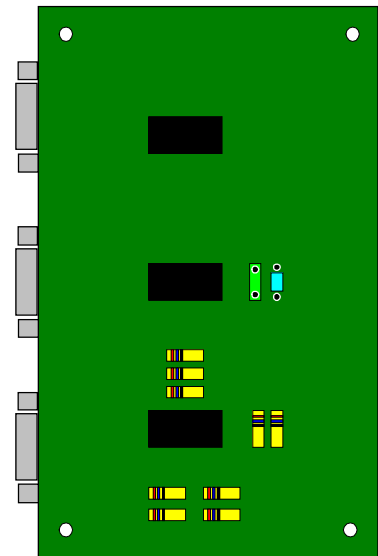
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The Encoder Splitter Board takes the outputs from an incremental encoder as its inputs and buffers them for two output connectors. The encoder can have either single ended or differential outputs, as the input circuit has a differential line receiver and is capable of correctly receiving either type of signal. The three encoder channel signals (A, B, Index) are then taken to differential output drivers which provide separate buffering for the two outputs. The board has two uses:-

1. A means of converting the outputs from a single ended encoder to differential form. This is useful when transmitting the signals some distance, especially in a noisy environment.
2. A means of supplying the signals from one encoder to two items of equipment, e.g. a drive module and a multi-axis controller.

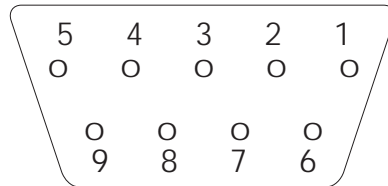


2.

Encoder Pin-out

The encoder input and the two outputs use standard female 9-way D-type sockets. The connections on these are as follows.

CHA SCRNI !CHB INDEX +5V



!CHA CHB GND !INDEX

encoder/mc

Pin	Encoder Input	Output 1	Output 2
1	+5V	+5V	
2	Index Pulse	Index Pulse	Index Pulse
3	! Channel B	! Channel B	! Channel B
4	Screen	Screen	Screen
5	Channel A	Channel A	Channel A
6	! Index Pulse	! Index Pulse	! Index Pulse
7	0V	0V	0V
8	Channel B	Channel B	Channel B
9	! Channel A	! Channel A	! Channel A

Note: Output 2 does not have a 5V connection and therefore the encoder must be powered via Output 1.

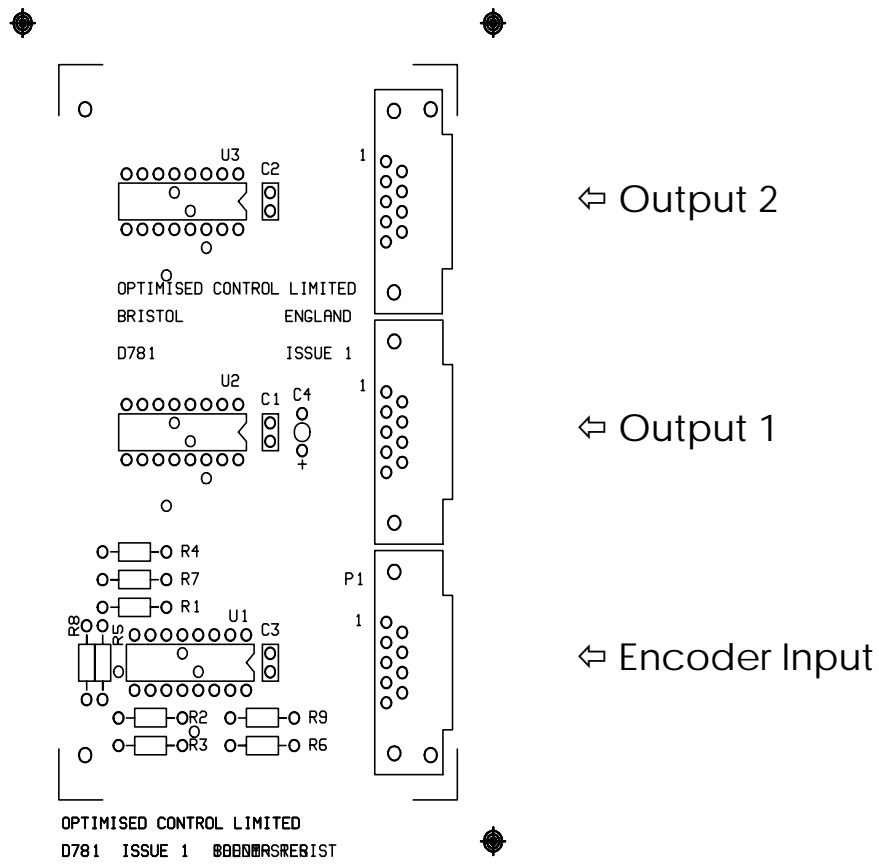


Figure 1: Top view of the PCB.

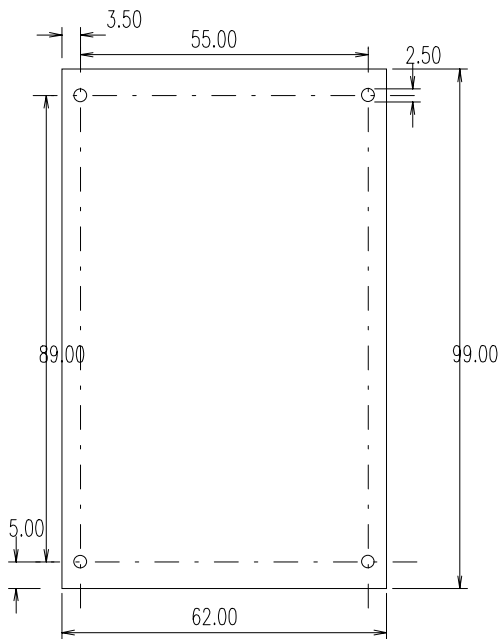


Figure 2: Dimensions