Installation Guide

MDA900

Parallel 24 Pulse Interbridge Lockout Circuit

Part Number: 0410-0014
Issue Number: 1

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General Information

The manufacturer accepts no liability for any consequences resulting from inappropriate, negligent or incorrect installation or adjustment of the optional operating parameters of the equipment or from mismatching the variable speed drive (drive) with the motor.

The contents of this guide are believed to be correct at the time of printing. In the interests of a commitment to a policy of continuous development and improvement, the manufacturer reserves the right to change the specification of the product or its performance, or the contents of the guide, without notice.

Issue Code: 1

Contents

1 Introduction

It is possible to extend the 12 pulse function of the Mentor drives to provide a 24 pulse system by supplying two parallel 12 pulse systems from a transformer with four phase shifted windings as shown in Figure 1.1 below.

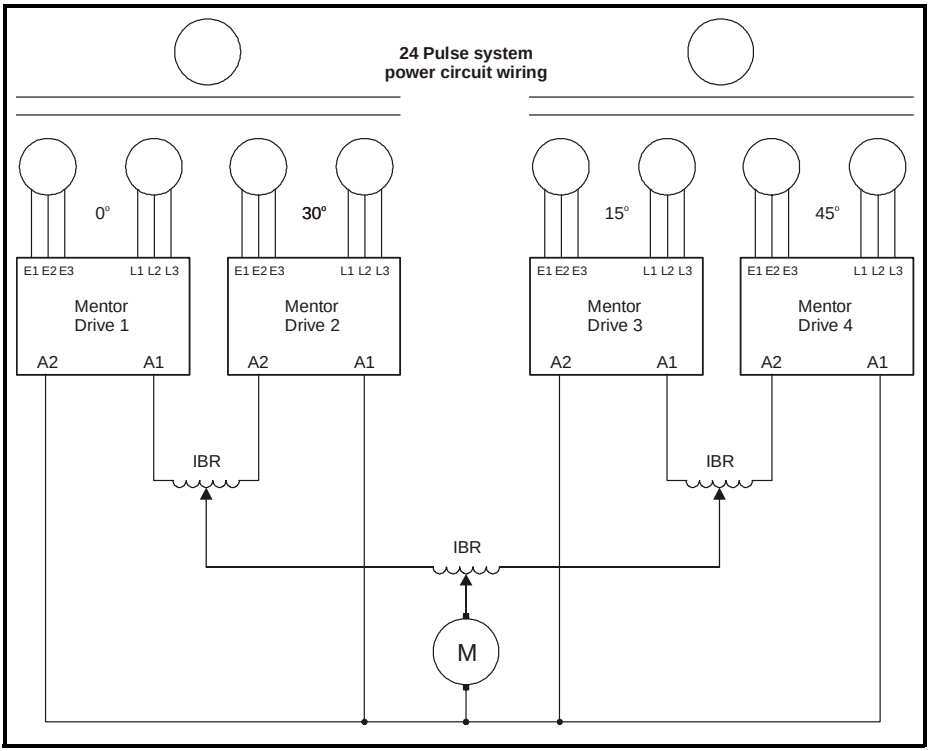

Figure 1.1 System Overview

IBR = inter-bridge reactor

If any further information is required on 12 pulse systems, refer to the document *Mentor 12 Pulse and 24 Pulse Systems* which is available from the supplier of the drive.

1.1 Circuit Function

The drives should be programmed and connected for parallel 12 pulse operation, there are no additional parameters to be set for 24 pulse operation.

If the drives are four quadrant then some extra logic is needed to control the bridge interlocking.

The function of the circuit is to monitor which bridge is operating on each drive using digital outputs on each drive. If any one drive tries to change bridge this circuit will prevent the bridge changeover taking place until all of the drives are in a state which allows a bridge changeover safely.

2 Electrical Installation

2.1 Terminal Description

Connector	Terminal number	Description
PL1 (Slave 3)	1	24V supply
	2	0V
	3	ST5 input
	4	F10 output
PL2 (Master)	1	24V supply
	2	0V
	3	ST5 input
	4	F10 output
PL3 (Slave 1)	1	24V supply
	2	0V
	3	ST5 input
	4	F10 output
PL4 (Slave 2)	1	24V supply
	2	0V
	3	ST5 input
	4	F10 output

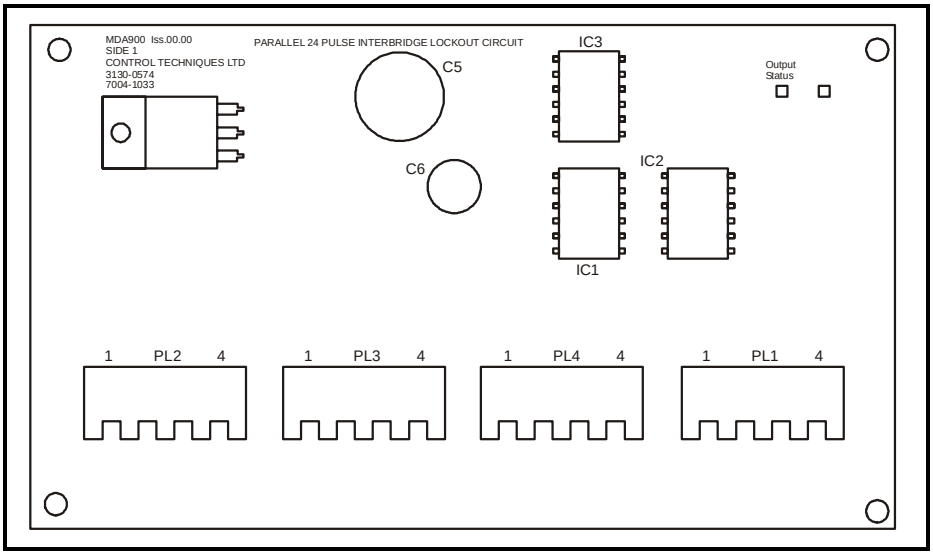

Figure 2.1 MDA900 Board Layout

The bridge interlocking board is connected to the Mentor drives as shown in Figure 2.2.

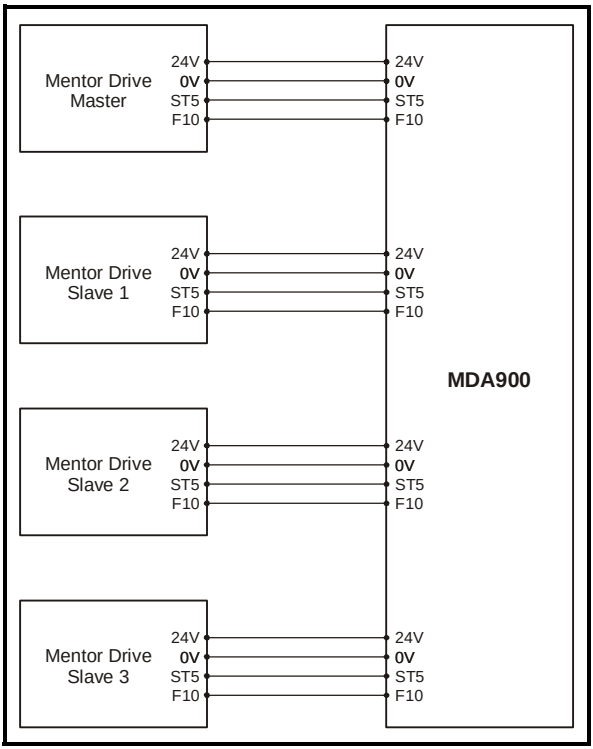

Figure 2.2 Drive Interconnections With MDA900

3 Mechanical Installation

The PCB is supplied with a DIN rail enclosure which is assembled as shown in Figure 3.1.

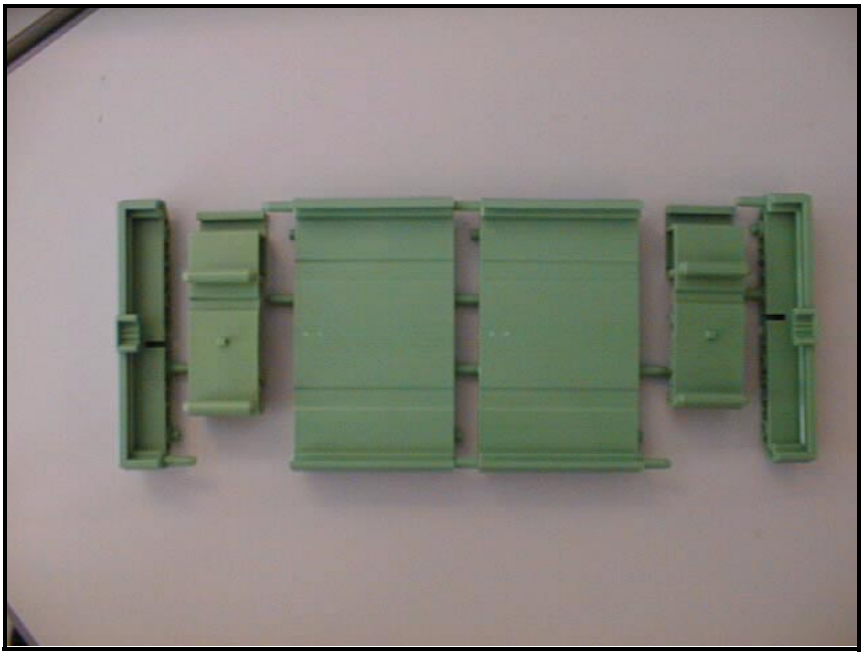

Figure 3.1 DIN rail pcb housing.

Addendum

The following drawing replaces Figure 1.1 in the *MDA900 Installation Guide* (Issue 1).