PRE-AMPS

Deva023 Single Axis Reader Head Pre-Amp

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1 Overview

1.1 About this Manual

This manual covers the Deva023 Single Axis Reader Head Pre-Amp and discusses features and potential applications.

1.2 Deva023 Features

The Deva023 Single Axis Reader Head Pre-Amp has been designed to amplify and condition signals from passive reader heads for use with the Deva 018 interpolator on a PC based system.

This manual describes the installation/configuration of Deva023 and the facilities it offers. For information regarding its use in conjunction with other Deva products, please refer to the relevant User's Manual/Programming Guide.

Note: Software support is an ongoing activity; if support for a particular application or operating system is not detailed in our documentation as provided, please contact support@deva.co.uk to determine current, or future, availability.

1.2.1 Facilities

- +12V supply
- Output pin-to-pin compatible with Deva018
- BS1 variant operates with Brown and Sharpe reader heads

2 Installation and Usage

2.1 Introduction

The Deva023 single axis reader head pre-amp is designed to amplify and condition signals from passive reader heads for use with the Deva 018 interpolator. The Deva023 is available in a range of variants suitable for specific reader heads.

The Deva023 operates from a +12V supply, which is typically passed through the Deva018 interpolator. The output connector of the Deva023 is directly pin compatible with the input connector of the Deva018 interpolator and the two units may be screwed together to form a single inline unit.

Important: The Deva018 must be configured for voltage mode and A,B termination must be disabled.

2.2 Deva023-BS1

The BS1 variant is designed to operate with Brown and Sharpe reader heads, typically found on machines such as Xcel, MicroXcel, Microval, Gauge 2000, and Tesa MicroXcel.

2.2.1 BS1 – Trim Pots

The BS1 has four trim pots that adjust the signal level of each phase as shown in Figure 2.1. These are used to balance the lissajous which may be viewed by connecting an oscilloscope to the Deva018 test signal header.

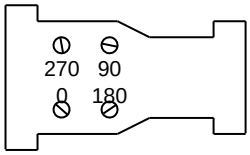

Figure 2.1 BS1 Trim Pots

Alternatively, the trim pots may be linked out if they are already present in the original wiring. The Deva023 contains four pairs of solder pads, each of which must be shorted together to link out the internal trim pots.

2.2.2 BS1 - Connections

The following table lists the input and output connection for the Deva023-BS1. The input connector is a low density 15-way 'D'-type which is pin compatible with the standard reader head cable.

Reader Head Input		Sine Wave Output	
15-way D Socket	Signal	15-way HD Plug	Signal
Pin 1	90 - phase	Pin 1	Aout
Pin 2	270 - phase	Pin 2	Bout
Pin 3	0 - phase	Pin 3	no connection
Pin 4	180 - phase	Pin 4	0V
Pin 5	no connection	Pin 5	no connection
Pin 6	no connection	Pin 6	nAout
Pin 7	+10V	Pin 7	nBout
Pin 8	+10V	Pin 8	no connection
Pin 9	90 – LED	Pin 9	0V

Reader Head Input		Sine Wave Output	
Pin 10	270 – LED	Pin 10	no connection
Pin 11	0 – LED	Pin 11	+12V
Pin 12	180 – LED	Pin 12	no connection
Pin 13	no connection	Pin 13	0V
Pin 14	0V	Pin 14	no connection
Pin 15	no connection	Pin 15	no connection

2.3 Further assistance

For further information and assistance please email support@deva.co.uk or visit our website at www.deva.co.uk

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