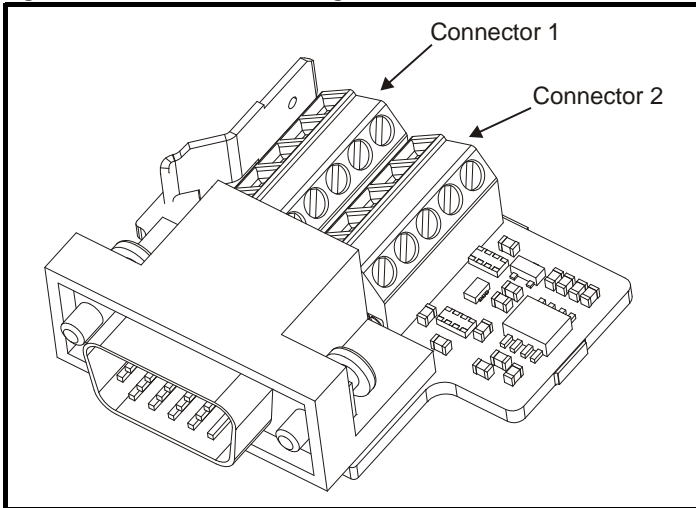# 1   Introduction

The Reference Marker Signal Interface board is intended for use on Unidrive SP. It is not compatible with the SM-Universal Encoder Plus Solutions Module or the Digitax ST drive.

The Reference Marker Signal Interface board is a device that converts the 1Vpp reference marker signal found on some Sincos encoders (such as the Heidenhain ERN480) into a differential EIA485 compatible marker pulse signal for use by the drive. The sine and cosine signals from the encoder are passed to the drive unchanged.

The interface board takes its power from the encoder 5Vdc supply on the drive. The interface board connects directly to the 15-way D-type encoder port on the drive, while two 5-way connector blocks are provided for the signals from the encoder and 5Vdc output.

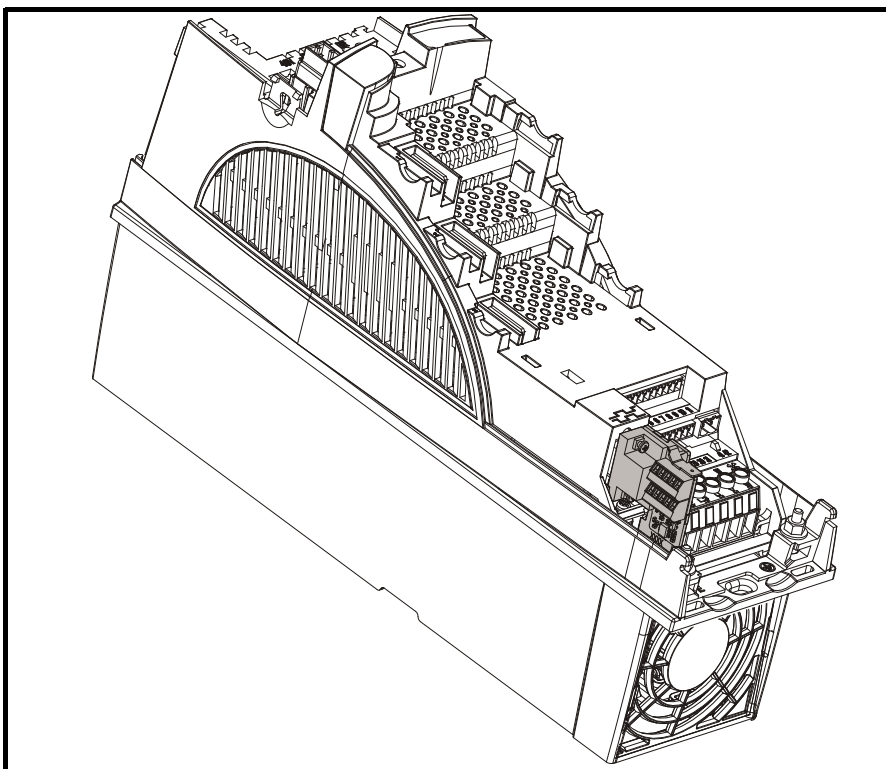The Reference Marker Signal Interface can only be used with Unidrive SP software version V01.16.00 and later.

Figure 1-1   Reference Marker Signal Interface

1.1   Installation

The Reference Marker Signal Interface board should be installed on the drive's 15 way D-type encoder port, as shown below. Two screws are supplied with the interface board which should be used to ensure the board is securely fitted to the encoder port on the drive.

Figure 1-2   Installation of the Reference Marker Signal Interface

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1.2 Terminal connections

Table 1-1 Terminal connections

Connector	Terminal	Description
1	1	A+ or Cos input
	2	A- or Cosref input
	3	B+ or Sin input
	4	B- or Sinref input
	5	0V
2	1	R+
	2	R-
	3	+5V, 300mA output
	4	0V
	5	

NOTE

The 6.3mm male spade connector is provided as a convenient 0V connection for encoder cable shielding.
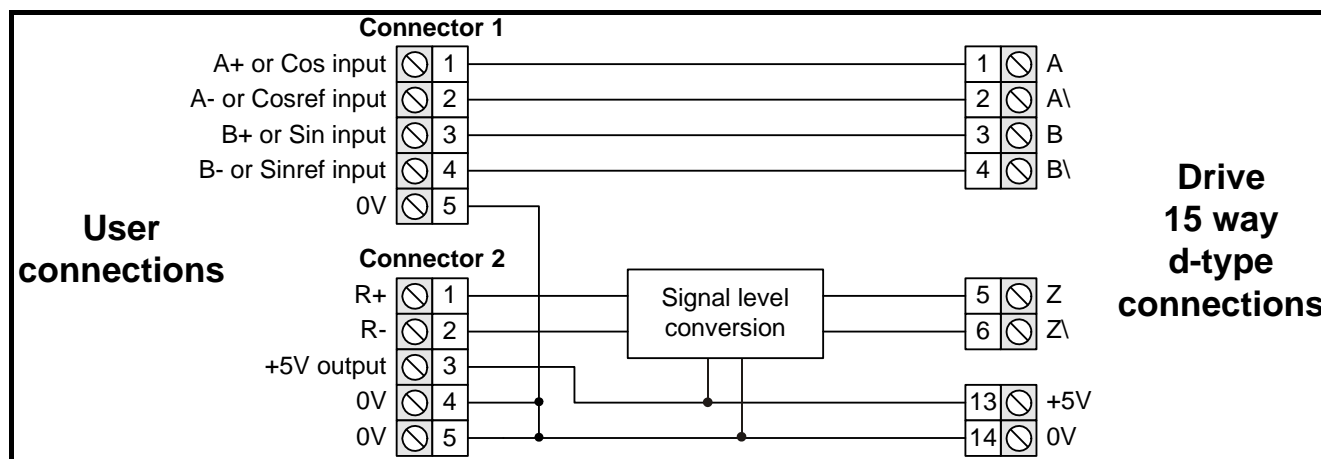
1.3 Parameter settings

Table 1-2 Parameter settings

Parameter	Value	Description
Pr **3.38**	SC (6)	Set encoder type to sincos only
Pr **3.36**	5V (0)	Set encoder power supply to +5V
Pr **3.39**	1	Termination resistors enable for sine and cosine signals and disabled for the marker pulse input

The Reference Marker Signal Interface is intended for use with encoders requiring a 5V power supply.

1.4 Further information

Figure 1-3 Reference marker signal interface block diagram

CONTROL TECHNIQUES

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