DANCER REACTOR INTERFACE OPTION ASSEMBLY
46S02371-0180   SCHEMATIC 45S02371-0180

DESCRIPTION

This option is one of a series available for Louis Allis Saber DC drive. This option consists of the components necessary to generate excitation for, and demodulate signals from, a linear or rotary position reactor.

The purpose of the Dancer Reactor Interface Option is to provide a brushless cam follower with a reasonably linear and fast responding electrical output. The option is designed to be used with Louis Allis 5P210-0005 and Reliance type VSS rotary and linear reactors. The output of this option is signal compatible with the Dancer Position Winder Options, 46S02371-0160/ -1160, so that the dancer reactor and the Dancer Reactor Interface Option can be used to directly replace the electrical signals normally supplied by a dancer potentiometer. The option contains its own 115 VAC activated power supply to supply excitation to the reactor and to provide power for the demodulator circuits.

INSTALLATION

WARNING

REMOVE ALL INPUT POWER TO THE DRIVE BEFORE INSTALLING OPTION COMPONENTS.

See Figure 1. Install the option in the following manner:

1. Install PVC mounting track (L.A. part no. 43T1501-0000) to panel where option is to be mounted.

2. Install option assembly by pressing firmly into mounting track.

3. Using 40 conductor ribbon, fabricate and install a double-ended ribbon cable of sufficient length to fit from 13CONN on the right side of the option
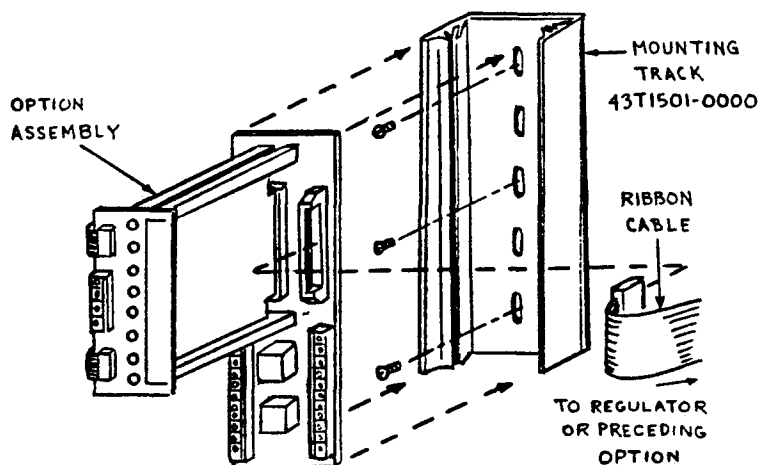

Figure 1.

CHANGE RECORD				DWG. NO. 02Y00025-0073
L	STD-2666 2-3-87 REA.			SHEET 1 OF 3
1	Typo Chg 11-30-85			EFF. 8/19/82 (M)

to 12CONN on the Main PCB in the regulator power cube, or to 12CONN on the left side of a previously installed option.

Cable 12CONN provides the power and signal interface between this option and the controller 40 pin data bus.

INTERCONNECTION

Wire 115 VAC power, signal interconnections, and the dancer reactor according to Figure 2.

ADJUSTMENTS

Adjustments should be made with the Dancer Reactor Interface Option disconnected from the drive and the dancer reactor shaft disconnected from the machinery.

1. Adjust 1RH (FREQUENCY) for a 4.00 ±.04 msec period at 9TP (CLOCK).

2. With a differential input oscilloscope, monitor 10TP (BRIDGE (+)) with respect to 11TP (BRIDGE (-)) while moving the dancer reactor shaft over its linear range. Adjust 2RH (BALANCE) so that the peak-to-peak amplitude of the observed waveform at one extreme of travel is within 1% of the amplitude at the other extreme of travel.

3. Adjust 3RH (GAIN) so that a 10.0 ±.1V Change occurs at 12TP (SIGNAL OUTPUT) when the dancer reactor shaft is moved over its entire linear range.

4. Adjust 4RH (OFFSET) so that the output signal at 12TP (SIGNAL OUTPUT) ranges from 0.0 ±.1V to 10.0V as the dancer reactor shaft is moved over its entire linear range.

5. If the direction of the dancer reactor shaft is wrong, interchange leads H1 and H2 at 1TB(4) and 1TB(6), and repeat Steps 2 through 4.

TROUBLESHOOTING

Troubleshooting consists of checking the input and output voltages of the assembly while the dancer reactor shaft is moved through its range of travel.

1. Verify that all power, signal, and dancer reactor connections are properly wired and that input signals are getting to the assembly.

2. Verify that the dancer reactor is being properly excited and that a signal proportional to shaft position is being generated. If there is no output and the excitation circuits work, replace the reactor.

3. Refer to the schematic diagram of the Dancer Reactor Interface Option. If analog signals do not vary with changes in the dancer reactor shaft position, replace the Dancer Reactor Interface assembly.

MODIFICATION RECORDS

After completing installation of this option, insert this instruction sheet immediately behind the front cover of the Controller instruction manual.

OPTION
I/O
PCB

1TB
1
2
3
4
5
6
7
8

2TB
1
2
3
4
5
6
7
8

(H1)

(HØ)

DANCER
REACTOR

(H2)

115VAC
±10%

TO DANCER
POSITION
WINDER
OPTION

2TB(2)

2TB(4)
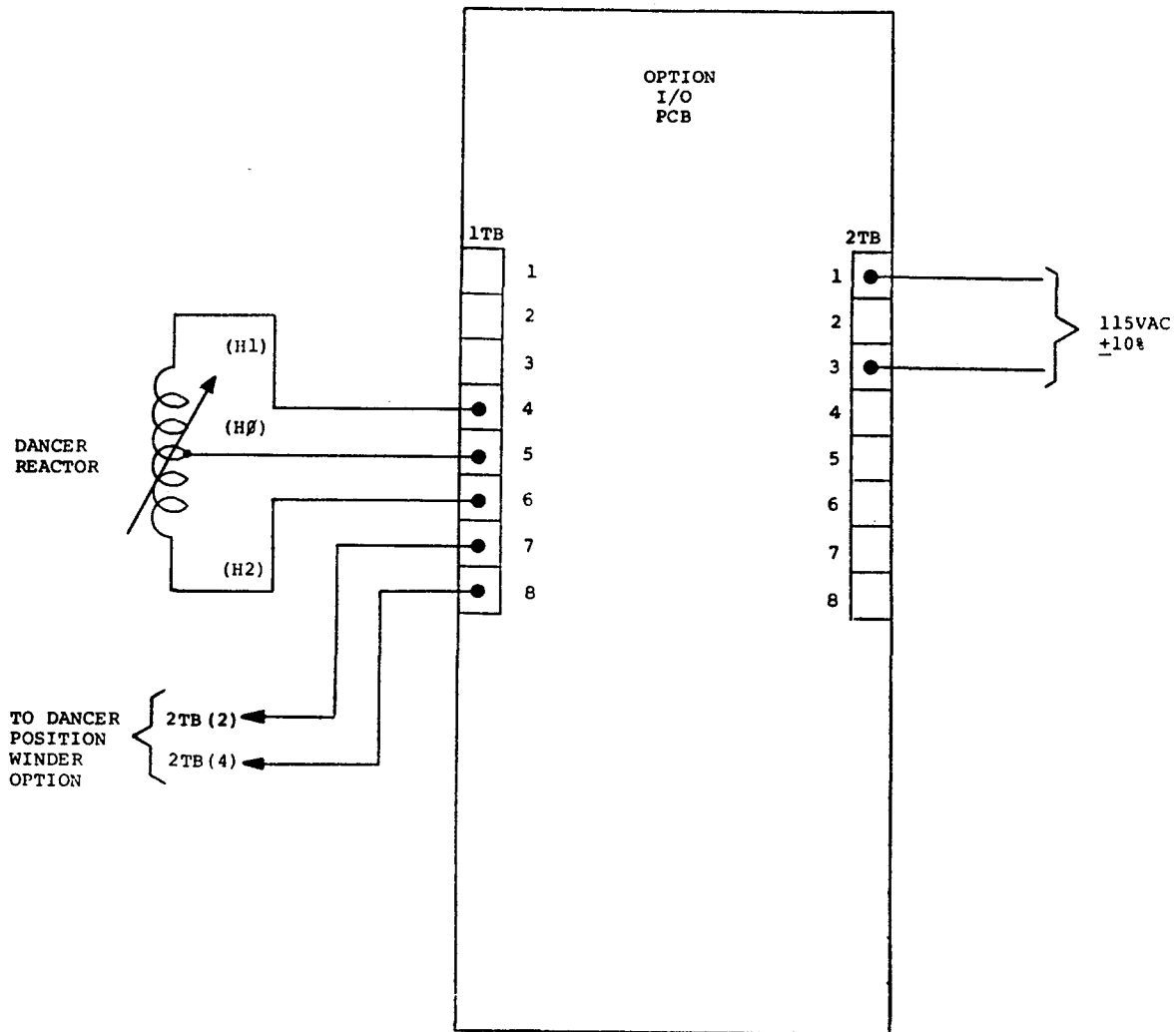
Figure 2.   Interconnection Diagram