

ISOLATED TRANSMITTER OPTION ASSEMBLY 46S02371-0091 SCHEMATIC 45S02371-0091

NOTE

This option assembly is also used in custom designed Lancer I Variable Frequency drives. For those applications, disregard the INSTALLATION section of this instruction sheet.

DESCRIPTION

This option is one of a series available for Louis Allis drives. It consists of components necessary for providing an isolated output signal which is proportional to a voltage input signal. Output is either a differential 0 to 10 VDC, 5mA maximum or 4-20mA, 10 VDC maximum jumper-selectable signal.

Offset and span adjustments are provided by means of two potentiometers (12RH & 11RH) on the Adjust PCB. The power supply for the circuits and the 4-20mA current transducer are mounted on the I/O PCB, which has a protective cover

for safety purposes, because high voltage may exist on the components for some applications.

Selectable jumpers are provided to program the option to receive one of the following input signals:

1. Tach feedback.
2. Voltage feedback.
3. Current feedback.
4. Differential custom input.

Selectable voltage jumpers enable the circuit to provide rated output for the following differential input ranges:

1. 0 - 10 VDC
2. 0 - 100 VDC
3. 0 - 200 VDC

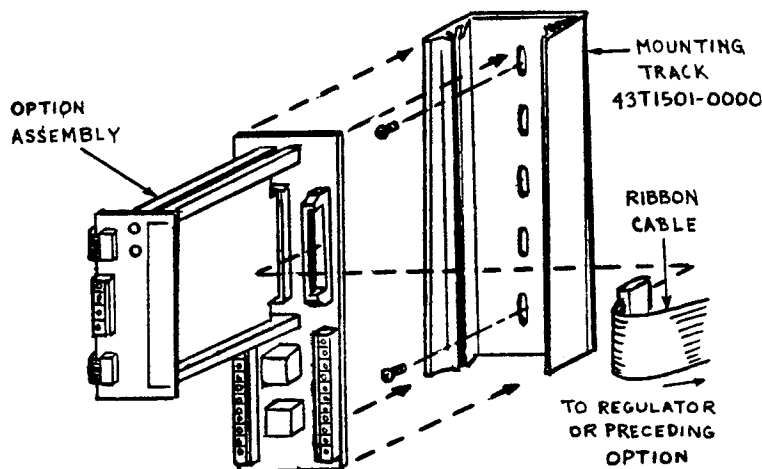


Figure 1.

CHANGE RECORD

1	STD-2718	3-17-87 vca			

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CAUTION

MAXIMUM COMMON MODE VOLTAGE FOR THE DIFFERENTIAL INPUTS WITH RESPECT TO CONTROLLER COMMON (1TP) IS 20V PEAK.

INSTALLATION (DC Drives)

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, using appropriate hardware.
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 12CONN on the right side of the option 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 (tach feedback, voltage feedback, etc.) interface between this option and the Controller 40 pin data bus.

INTERCONNECTION

Jumper faston tabs on the Function PCB to faston tabs on the I/O PCB as follows:

- A to A'
- B to B'
- C to C'
- D to D'

Jumper faston tabs as shown in table below to select the desired input signal.

INPUT SIGNAL	JUMPERS INSTALLED	
	FROM	TO
DIFFERENTIAL CUSTOM INPUT	I	E
TACH FEEDBACK		F
VOLTAGE FEEDBACK		H
CURRENT FEEDBACK		G

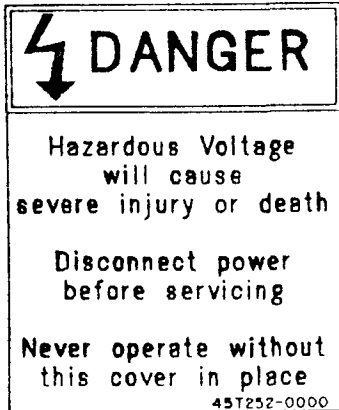
The following table indicates the jumpers required to select the desired differential input voltage range.

DIFFERENTIAL INPUT VOLTAGE AT 1TB (8) (+) AND 1TB (1)(-)	JUMPERS REQUIRED
0 to 10 VDC	1TB (2) to 1TB (4) 1TB (5) to 1TB (7)
0 to 100 VDC	1TB (4) to 1TB (3) 1TB (5) to 1TB (6)
0 to 200 VDC	None Required

The differential 0-10 VDC, 5mA output appears at 2TB (13) (+) and 2TB (14) (-). To select the 4-20mA, 10 VDC max output, between 2TB (15) (+) and 2TB (16) (-), a jumper must be installed from 2TB (12) to 2TB (13).

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ADJUSTMENTS



A PROTECTIVE COVER, WITH THE ABOVE WARNING, IS PART OF THIS ASSEMBLY. MAKE CERTAIN THIS COVER IS IN PLACE BEFORE APPLYING POWER.

After installing the option, apply 115 VAC between 2TB (9) and 2TB (10) and remove jumper from tab I. Follow the steps below for offset and span calibration.

A. For 0-10 VDC, 5mA Max Output:

1. With no input, adjust the OFFSET pot (12RH) for 0.00 VDC at the output, 2TB (13) (+) and 2TB (16) (-).

2. Adjust SPAN pot (11RH) for 10.00 VDC output with full scale input.

B. For 4-20mA, 10 VDC Max Output:

1. Connect a digital milliammeter to 2TB (15) (+) and 2TB (16) (-).

2. With no input, adjust the OFFSET pot (12RH) for 4.00mA on the meter.

3. Adjust SPAN pot (11RH) for 20mA on the meter with full scale input.

If the results in A or B above cannot be obtained, perform the option troubleshooting procedure.

After completing adjustments, reconnect jumper to tab I.

TROUBLESHOOTING

If other options or modifications have been installed, troubleshoot them thoroughly before discarding this option as faulty.

1. Check that all interconnections were made correctly.

2. Insure that 115 VAC is present at 2TB (9) and 2TB (10).

3. Refer to the schematic diagram of this option and check for proper jumpers, according to input voltage, 1TB (8) (+) and 1TB (1) (-).

4. On the Option I/O PCB, measure the following voltages with respect to 2TB.

+15 VDC \pm 5% at 27TP

-15 VDC \pm 5% at 29TP

OPTION RECORDS

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

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