**ISOLATED TRANSMITTER OPTION ASSEMBLY**

**46S02371-0090  SCHEMATIC 45S02371-0090**

**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 (2RH & 1RH) 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.
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

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**Figure 1.**

**HANGE RECORD**

<table>
<thead>
<tr>
<th></th>
<th>STD - 1384</th>
<th>1/13/82</th>
<th>STD - 1631</th>
<th>10/27/82</th>
<th>STD - 1771</th>
<th>5/3/83</th>
</tr>
</thead>
</table>

**DWG. NO. 02Y00025-0065**

**SHEET 1 OF 3**

**EFF. 2/24/82**

(L)
CAUTION

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

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, 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.

<table>
<thead>
<tr>
<th>INPUT SIGNAL</th>
<th>JUMPERS INSTALLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIFFERENTIAL CUSTOM INPUT</td>
<td>E</td>
</tr>
<tr>
<td>TACH FEEDBACK</td>
<td>I, F</td>
</tr>
<tr>
<td>VOLTAGE FEEDBACK</td>
<td>H</td>
</tr>
<tr>
<td>CURRENT FEEDBACK</td>
<td>G</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>DIFFERENTIAL INPUT VOLTAGE AT 1TB (8) (+) AND 1TB (1) (-)</th>
<th>JUMPERS REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 10 VDC</td>
<td>1TB (2) to 1TB (4)</td>
</tr>
<tr>
<td></td>
<td>1TB (5) to 1TB (7)</td>
</tr>
<tr>
<td>0 to 100 VDC</td>
<td>1TB (4) to 1TB (3)</td>
</tr>
<tr>
<td></td>
<td>1TB (5) to 1TB (6)</td>
</tr>
<tr>
<td>0 to 200 VDC</td>
<td>None Required</td>
</tr>
</tbody>
</table>

The differential 0-10 VDC, 5mA output appears at 2TB (5) (+) and 2TB (6) (-). To select the 4-20mA, 10 VDC max output, between 2TB (7) (+) and 2TB (8) (-), a jumper must be installed from 2TB (4) to 2TB (5).
ADJUSTMENTS

DANGER

Hazardous Voltage
will cause
severe injury or death

Disconnect power
before servicing

Never operate without
this cover in place

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 1 and 2TB 2 and
remove jumper from tab I. Follow the
steps below for offset and span calibra-
tion.

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

1. With no input, adjust the
OFFSET pot (2RH) for 0.00 VDC at the
output, 2TB (5) (+) and 2TB (6) (-).

2. Adjust SPAN pot (1RH) for
10.00 VDC output with full scale input.

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

1. Connect a digital milliammeter
to 2TB (7) (+) and 2TB (8) (-).

2. With no input, adjust the OFF-
SET pot (2RH) for 4.00mA on the meter.

3. Adjust SPAN pot (1RH) for 20mA
on the meter with full scale input.

If the results in A or B above cannot be
obtained, perform the option trouble-
shooting 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 (1) and 2TB (2).

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 ±5% at 1TP

   -15 VDC ±5% at 3TP

OPTION RECORDS

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