

MASTER REFERENCE OPTION ASSEMBLY

46S02371-0040 SCHEMATIC 45S02371-0040

DESCRIPTION

This option is one of a series available for Louis Allis Saber DC drives. It consists of components necessary for modifying the basic controller for the master reference function.

This option provides six pairs of output terminals which voltage follow, at one of four amplifier gains, one of eight switch-selectable reference signals. Seven of these are DC voltage signals from the Controller 40-pin data bus:

1. Accel/Decel Input
2. Accel/Decel S-Curve Output
3. Scaled Tach Volts
4. Scaled Bridge Volts
5. Current Feedback

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6. Voltage/Current Follower Output
7. Spare (See Note below)

The eighth signal is an external DC voltage, applied to terminals of the option.

This option can provide simultaneous voltage output to up to six devices, including other controllers. The output voltage range is 0 to ± 10 VDC, with a total load capacity of 20mA.

NOTE

The spare signal line (pin 30 of 12CONN data bus) is provided for special applications. In such cases, its use will be specified by Louis Allis.

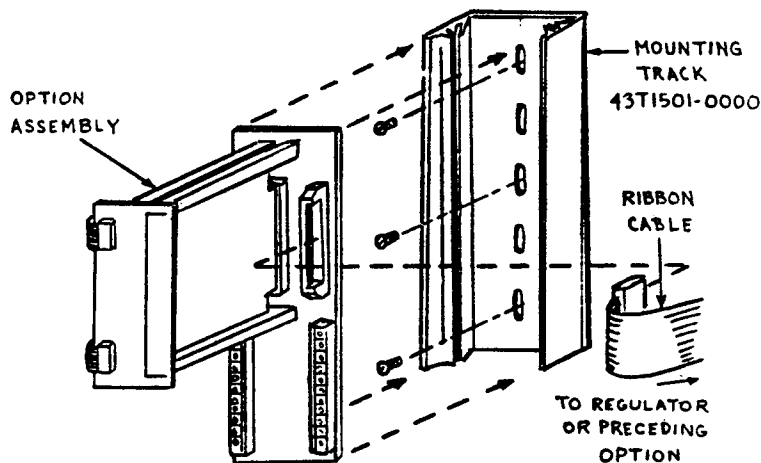


Figure 1.

CHANGE RECORD

1	STD-2666	2-3-81	RAL
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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 interface between this option and the Controller 40 pin data bus.

INTERCONNECTION

By setting only one of the DIP switches 1SS-8SS on the Option Function PCB to the ON position, according to the following chart, select the input signal to be voltage followed.

SWITCH SET TO ON	INPUT SELECTED AS REFERENCE
1SS	Accel/Decel Input
2SS	Accel/Decel S-Curve Output
3SS	Scaled Tach Volts
4SS	Scaled Bridge Volts
5SS	Current Feedback
6SS	Voltage/Current Follower Output
7SS	Spare (See note under description)
8SS	DC Input at I/O PCB 1TB (1) (+) to 1TB (2) (-)

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Set switches 9SS and 10SS, as follows, to select the desired gain multiplier.

GAIN MULTIPLIER	9SS	10SS
1	OPEN	OPEN
2	CLOSED	OPEN
5	OPEN	CLOSED
6	CLOSED	CLOSED

CAUTION

THIS OPTION CONNECTS THE CIRCUIT COMMON OF THE MASTER DRIVE TO THE CIRCUIT COMMON OF EACH SLAVE DRIVE. TO PREVENT EQUIPMENT DAMAGE, THE DRIVES MUST HAVE GROUNDABLE ELECTRONICS, OR EACH DRIVE MUST BE ISOLATED FROM THE AC POWER LINE BY AN INPUT TRANSFORMER.

Each controlled (slave) device should be connected to the reference output at one of the following pairs of terminals on the Option I/O PCB.

1TB (3) (+) and (4) (-)

(5) (+) and (6) (-)

(7) (+) and (8) (-)

2TB (1) (+) and (2) (-)

(3) (+) and (4) (-)

(5) (+) and (6) (-)

ADJUSTMENTS

No adjustments are necessary for this option.

TROUBLESHOOTING

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

Troubleshooting consists of checking the input and output voltage of the option while the drive is running.

1. Start the drive and rotate the speed control pot fully CW.

2. Measure the input voltage between 1TP and 3TP, and the output voltage between 2TP and 3TP of the Option Adjust PCB. Multiply the input voltage by the selected gain multiplier. If the calculated voltage and the measured output voltage do not agree within ± 0.5 volts, replace the Option Function PCB.

OPTION RECORDS

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

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