MagneTek Drives & Systems

For use with Lancer I Variable Frequency Drives.

CONTROLLED STOP PCB OPTION

46S02515-0010

Before installing this kit, a TECHNICALLY QUALIFIED INDIVIDUAL, who is familiar with this type of equipment and hazards involved, should READ this ENTIRE INSTRUCTIONS SHEET.

IMPORTANT

This kit may have been installed by the factory. However, certain steps can only be completed at the installation site. Therefore, review and then perform those steps which complete the installation process.

DESCRIPTION

This option provides controlled deceleration to low speed upon initiation of the normal STOP function, and is particularly useful for stopping high inertia loads that may rotate for long periods of time if only normal friction and windage provide retarding torque. It also may be applied to other loads to provide powered-down stopping if desired.

Upon initiation of normal stop, while using the Controlled Stop option, the Lancer I will decrease motor frequency at the rate established by its DECEL pot setting. In the event this rate exceeds the control's 50% regenerative rating, automatic rate limiting will override and reduce the Decel rate. Drive will continue to brake at 50% regenerative current and the deceleration rate will become load dependent. When the speed reaches a preset low value established by ZERO SPEED adjustment, the drive will stop.

For safety, if this option is selected, it is recommended that an Emergency Stop function be added near the machine being controlled to bypass this option. This is to avoid continuing to power the motor in the event of accident or circuit malfunction.

Without the Controlled Stop option, when the STOP push button is pressed, the drive shuts down and the motor coasts to a stop. To keep the motor running in the regenerative mode during deceleration after the STOP push button has been pressed, the Controlled Stop option maintains the RUN line at a logical 1 until the speed drops to a value determined by the ZERO SPEED pot. When the speed set by the ZERO SPEED pot is reached, the Controlled Stop option switches the RUN line to 0, which then stops the drive.

INSTALLATION AND INTERCONNECTION

The Controlled Stop PCB mounts to two standoffs located on the bottom of the Rectifier Main PCB (refer to Figure 7-4 in the Instruction Manual). Connection of the Controlled Stop PCB is made only to the Rectifier Main PCB thru 108CONN. No connections are made to the Inverter Main PCB.

To install the Controlled Stop PCB, first install the standoffs onto the Rectifier Main PCB. Locate the Controlled Stop PCB to the standoffs and press in place. Then connect ribbon cable 108CONN between the Controlled Stop PCB and the Rectifier Main PCB, and install hold-down clips.

CHANGE RECORD					DWG. NO. 02Y00025-0125
					SHEET 1 OF 2
2 STD2522 4/28/86					EFF. 12/18/85
1 STD2426 1/13/86 RRR					

If the Controlled Stop PCB is being added after the drive has been installed, refer to Section 1.2 in the Instruction Manual for instructions on how to update the 53SL number. For drives with Rectifier Main PCB 46S02510-0011, switch 6SS positions 1 and 2 must both be OPENED for Controlled Stop operation.

ADJUSTMENTS

The ZERO SPEED pot must be adjusted per application for the speed at which it is desired to stop the drive. To adjust the ZERO SPEED pot, perform the following steps:

1. Adjust ZERO SPEED pot to 100%.

2. Start drive and accelerate to at least 50% speed.

3. Press STOP push button and note the speed at which the RUN LED extinguishes.

4. If this speed is too high, decrease the ZERO SPEED pot setting.

5. Repeat steps 2 thru 4 as required.

This completes installation of this PCB option. Place this instruction sheet immediately behind the front cover of the Controller instruction manual.