PL/X Digital Drive Control Board Replacement Procedure

This procedure provides the user with a step-by-step procedure for replacing the control board (p/n LA102556) in the PL/X Series digital DC drive. If at all possible, it is recommended the user upload all of the parameters in the drive using a computer as described in *Chapter 10 – Serial Links* of the *PL/X Series Digital DC Drive Product Manual*.

If a computer is not available or the control board is not functional, the EEPROM (IC17) that contains all of the drive's setup parameters can usually be used to transfer all the settings to the new control board.

Static Sensitive

This equipment contains electrostatic discharge (ESD) sensitive parts. Observe static control precautions when handling, installing, and servicing this product.


Removing the old control board

1. Isolate the drive from all power sources. Ensure both high voltage (EL1, EL2, EL3, L1, L2, and L3 terminals) and low voltage sources (Terminals 51, 52, and 53) have no voltage present.

2. Remove both the upper and lower terminal covers to gain access to the PL/X display and cover.

   Unplug the three connectors (Terminals 1 - 36).

3. For the remainder of this procedure, ground yourself with an ESD ground kit (at a minimum, touch chassis ground to discharge any static electricity prior to touching any portion of the control board).
   Remove the four screws holding the gray PL/X cover in place allowing access to the control board. Take care to support the control board after removing the screws.

4. Unplug both the Display Ribbon Connector and the Key Ribbon Connector from the existing control board and then place the PL/X cover in a safe location.
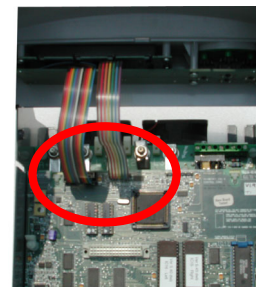
5. With the cover removed, take out the two nylon screws in the lower left and lower right corners of the control board.
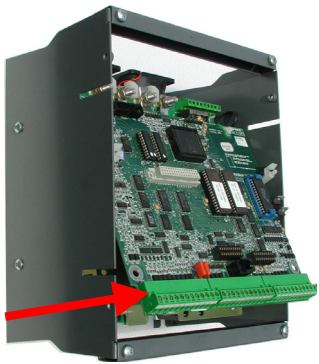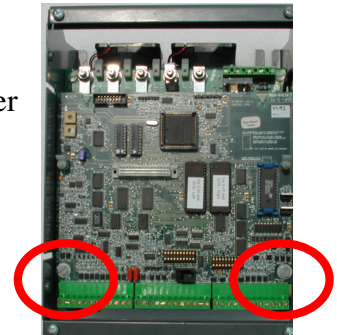
Then, slowly rotate the lower edge of the control board out until the board can be safely slid out of the two upper clips retaining the top of the board.

6. If the drive's settings are to be restored by swapping EEPROM's, perform the exchange of IC17 PRIOR to installing the new control board to prevent any stressing of the board during insertion.

Use the tabs on the blue EEPROM socket to eject IC17 from the original control board and replace IC17 on the new control board. Take care to orient the IC as silk screened on the board (i.e., with the top of the IC pointing towards the control terminals).

Installing the new control board

7. Insert the top edge of the new control board into the two upper clips and rotate towards the power chassis while ensuring all of the pins from the power board align properly with the two sockets.

8. Replace the two nylon screws in the lower left and right of the control board to permanently secure the new board to the power chassis. Hand tighten the nylon screws.

9. With the PL/X cover assembly in-hand, re-insert the Display Ribbon Connector and the Key Ribbon Connector into the new control board. Then, reseat the cover and replace all four of the mounting screws. Take care with the screws, do not over tighten!

10. Replace the three control board connectors (Terminals 1 through 36).

11. Replace both the upper and lower terminal covers.

12. Re-apply power and test for proper functionality.