

3.13 Control System Installation and Setup

3.13.1 LCM4 Furnace Controller Installation

Connect the various cables between the modules, the controller, the computer and the I/O racks.

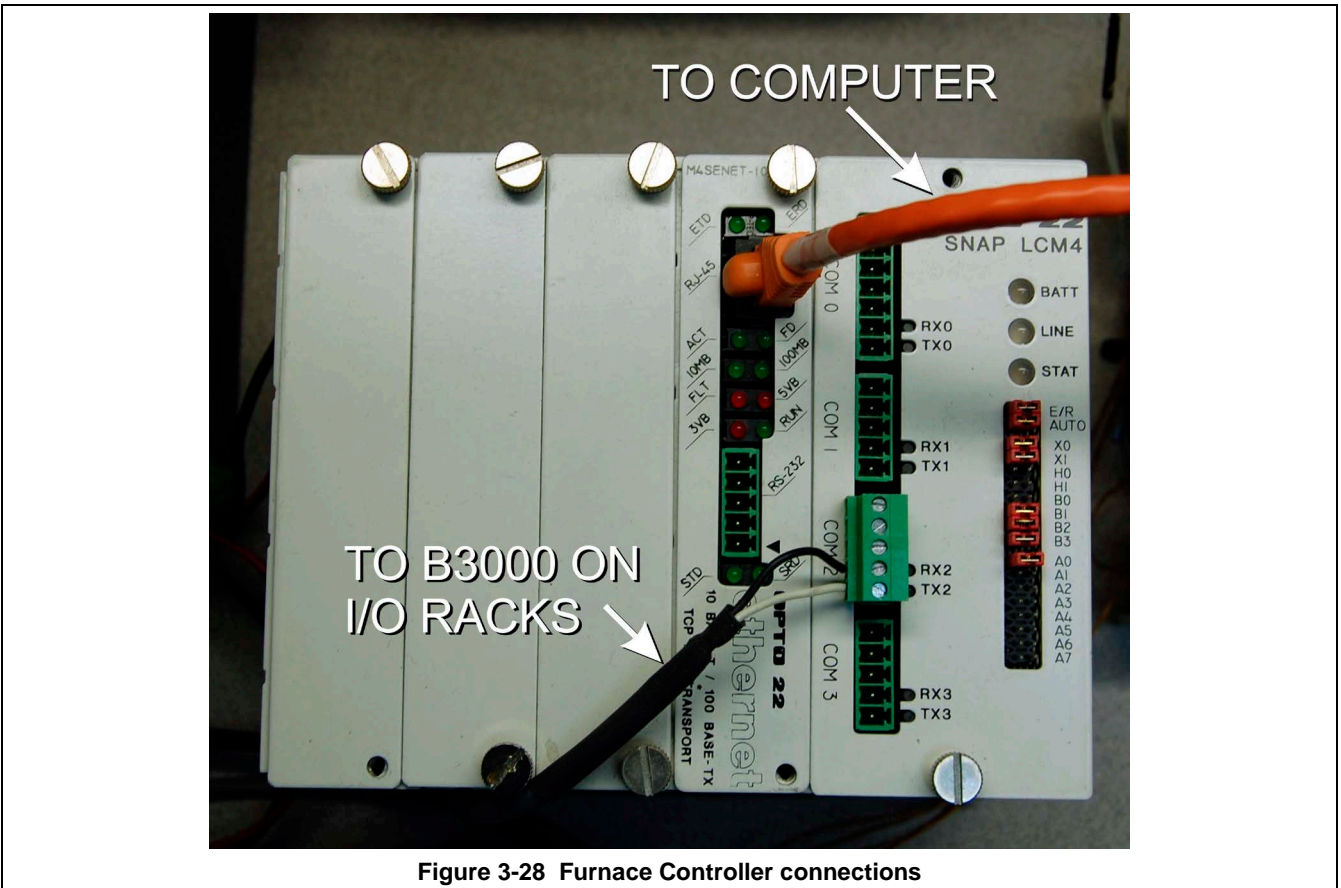


Figure 3-28 Furnace Controller connections

INITIALIZE: Open computer access door and turn ON the computer. When the WINDOWS® logo comes up, hold down the shift key to prevent the MMI from starting, since the controller is not ready yet. If it started, exit using ALT +F4.

The first time the controller is turned on, its memory is empty, and the software has to be downloaded. Double click on the download icon in the furnace group in Windows or the furnace icon on the desktop.

FURNACE SOFTWARE. The furnace icon or menu item will download the kernel (the Operation System for the controller) and the ProControl™ furnace software, and start running it.

You can now start the MMI software by double clicking on the Furnace icon. From now on, startup will be automatic.

You should see the correct date and day in the bottom left corner. If not, go to the Ethernet Installation and troubleshooting section.

LOG-IN. Check the log-in dialog box for one of the 3 proposed users: operator, tech and Factory (FPD). Enter appropriate password for the level selected.

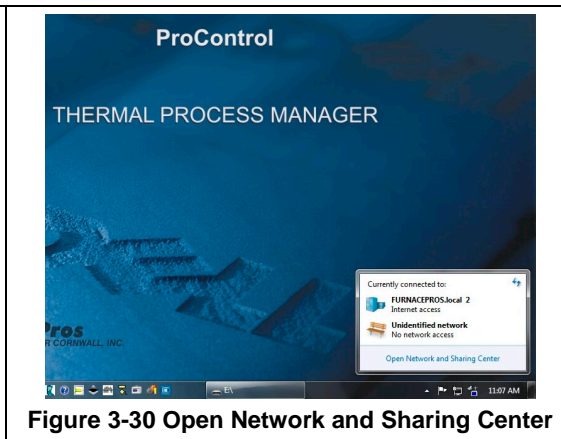
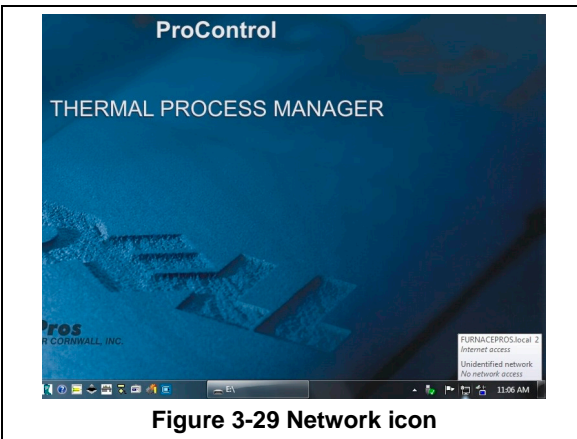
3.13.2 Verify configuration of the external jumpers of the LCM4 Controller

Refer to Section 6, PLC CONFIGURATION drawing for board jumper settings or Figure 3-28.

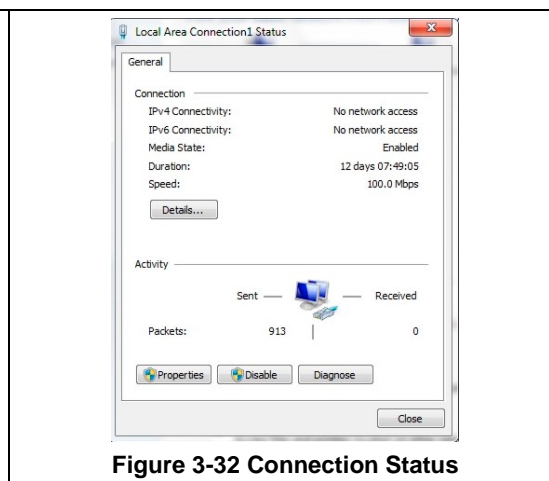
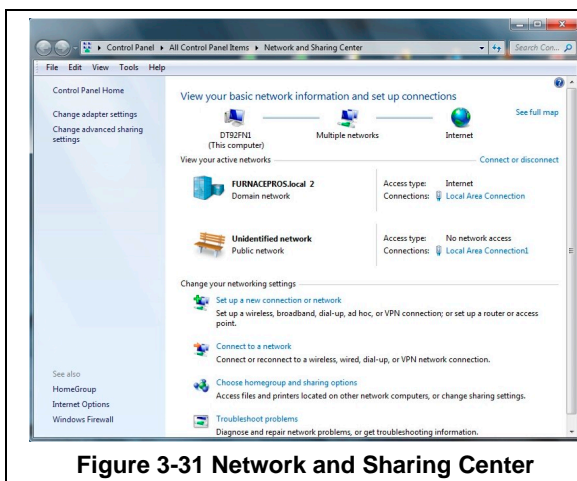
Section 3

3.13.3 Windows7® Setup of Furnace Computer Ethernet Connection

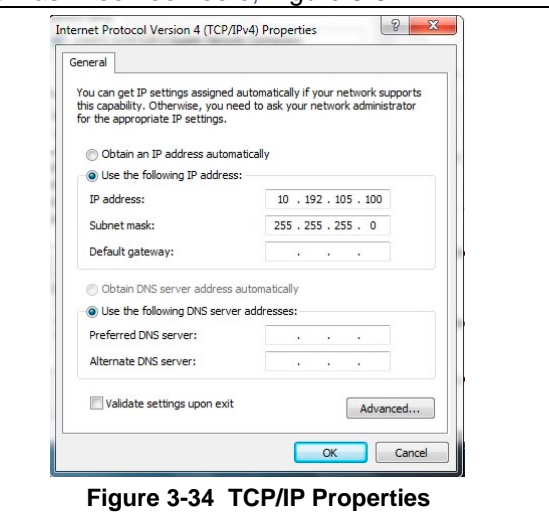
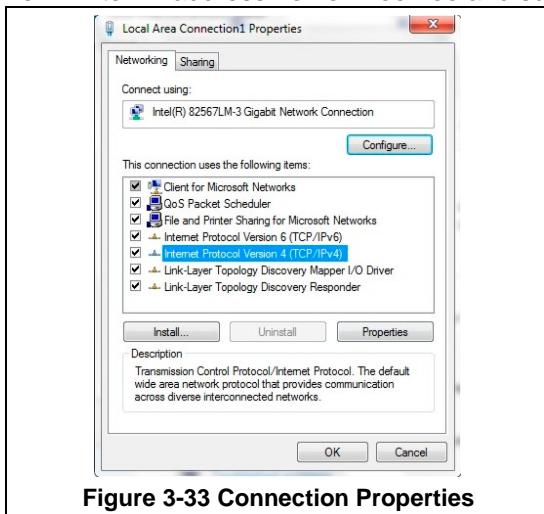
- From the desktop, click on the network icon on the lower right hand side of the screen, Figure 3-29. Click **Open Network and Sharing Center**, Figure 3-30.



- From Network and Sharing Center click on the connection that corresponds to the furnace network (will say “No network access”), Figure 3-31
- Select **Properties** button from the Local Area Connection Status window, Figure 3-32



- Select **Internet Protocol Version 4 (TCP/IPv4)** from the Properties screen, Figure 3-33
- Enter IP address **10.192.105.100** and subnet mask **255.255.255.0**, Figure 3-34



3.13.4 Reset & Assign an IP Address to the Controller's Ethernet Adapter Card.

- a. Remove power from the controller chassis box.
- b. Remove the controller's Ethernet adapter card from the controller chassis.

Note: Follow standard anti-static dissipative procedures when removing and handling the card.

- c. Remove Ethernet and RS-232 connectors
- d. Release (4) front panel set screws and (2) covers

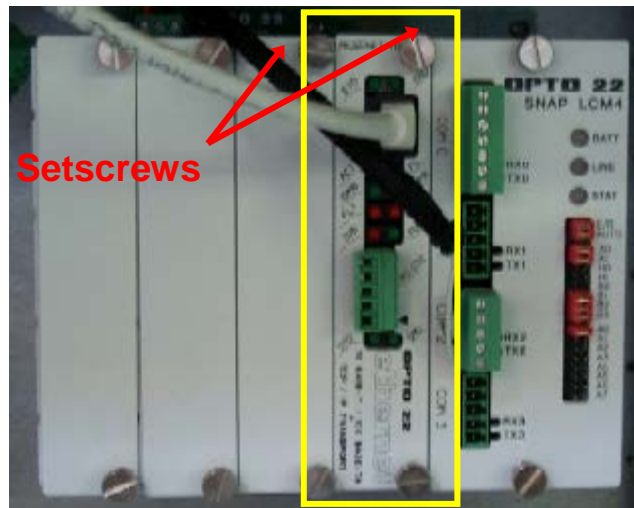


Figure 3-35 Remove Card from chassis. (See figure below)

- e. Remove the Ethernet adapter card

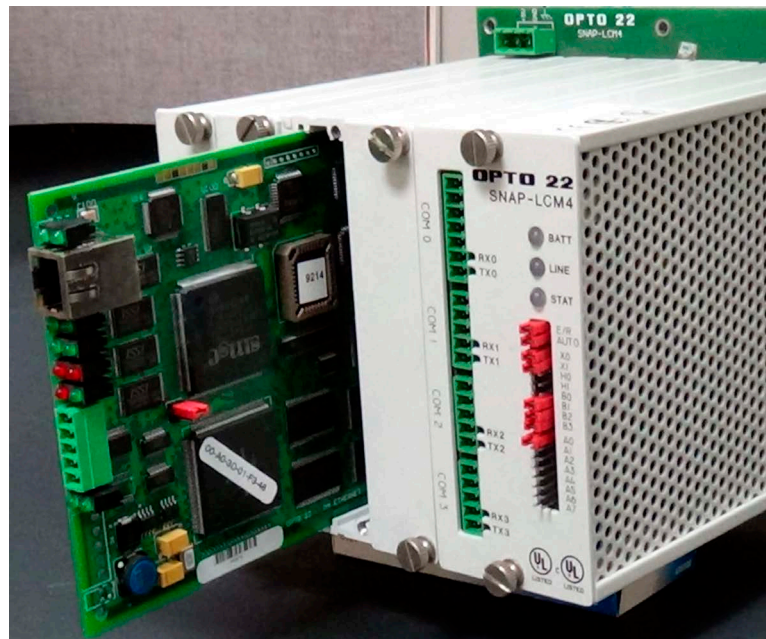


Figure 3-36 Removal of Ethernet Card

Section 3

- f. Move the J7 Jumper to the Module Reset Position as shown in the following pictures.

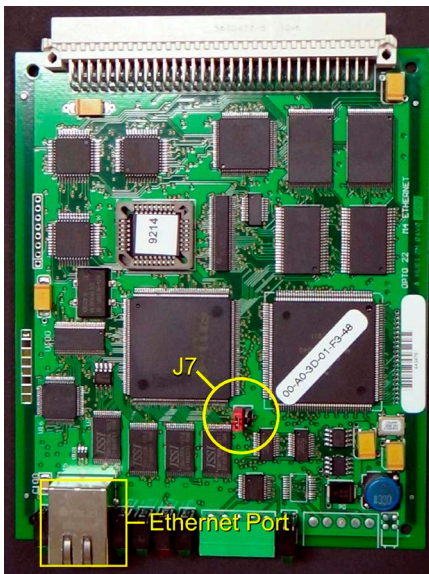


Figure 3-37 Location of J7 Jumper
J7 in Normal RUN Position

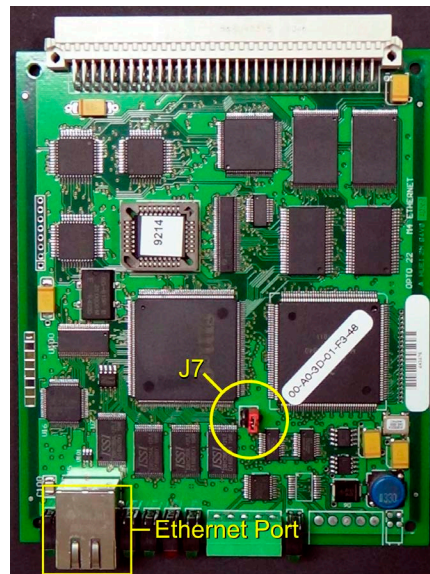


Figure 3-38 J7 Jumper at Module RESET

- g. Reinstall the Ethernet adapter card into the Opto22 controller chassis box.
h. Wait for the STD LED on the Ethernet adapter card to stop blinking, and then turn off, or remove power from the system.

Note: The power switch on the PC may need to be initialized.

- i. Apply power to the controller system.

Note: This procedure resets the Ethernet Adapter Card to its factory default settings.

- j. After removing power from the controller system, again remove the Ethernet Adapter card and restore the J7 Jumper to its original position as shown at right

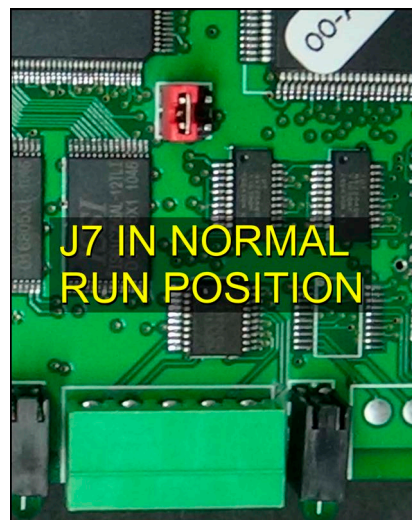


Figure 3-39 Original J7 Position

- k. Reinstall the Ethernet Adapter card into the Opto22 controller chassis box making sure the covers and set screws are in place. Connect the network cable to the Ethernet port on the Ethernet adapter card. Make sure the green I/O connector is connected to COM2 port on the LCM4 (do not connect to the Ethernet card).

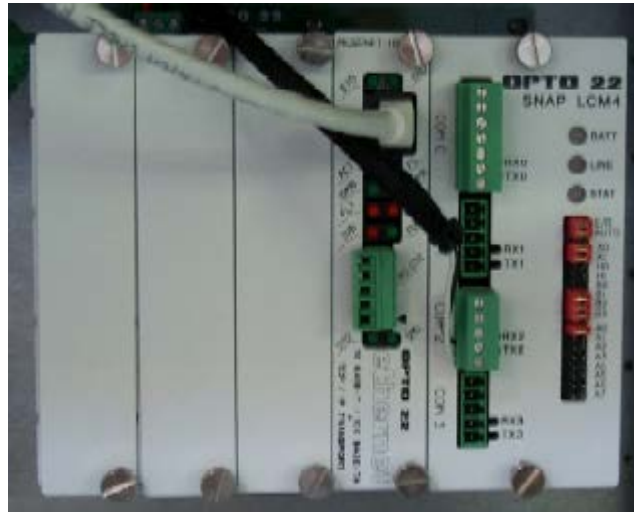


Figure 3-40 LCM4 Controller with Ethernet Adapter (on left)

- l. From the Windows® Toolbar, Select <Start/Programs\Opto22\OptoUtil\OptoBootP Utility>
- m. On the “OptoBoot Tool” dialog box, click the “Listen” pushbutton located at the upper right.

- n. After a few seconds, in the dialog box’s data window, a Mac address will be listed followed by 0.0.0.0 IP Address and a ??.?.?. Subnet Mask.

Double Click on the 0.0.0.0 field to assign an IP Address

Enter “**10.192.105.102**” for the IP Address and “**255.255.255.0**” for the Subnet Mask. Leave the Gateway field **0.0.0.0**.

Click the “Send” pushbutton to assign the entered address.

The data window should now be updated to display a “Yes” under the “Sent” Column.

- o. Click on “Exit” to leave the OptoBoot tool application.

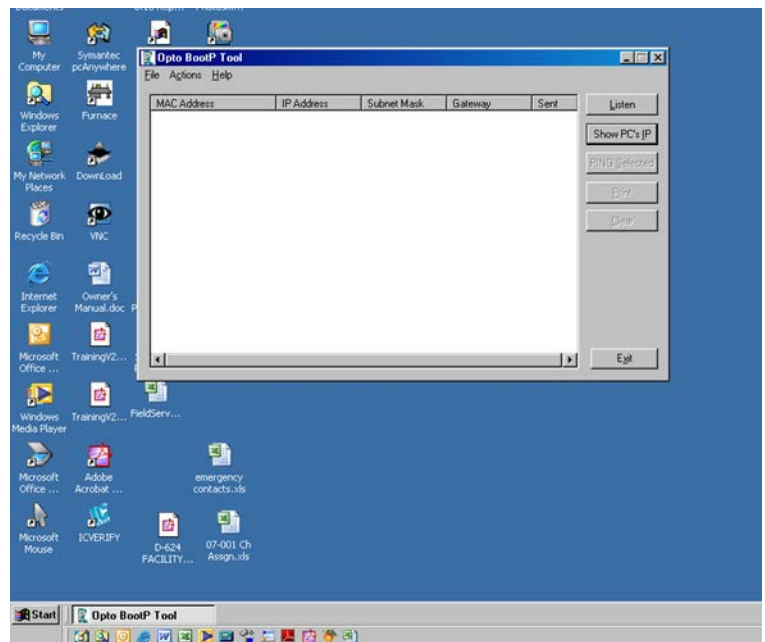


Figure 3-41 OptoBoot Screen