Building Automation, Inc.

CX Master/Secondary Panel Interface Cards
Installation Instructions

Hubbell Building Automation
9601 Dessau Road • Building One • Suite 100 • Austin, TX 78754
Toll Free: 888-698-3242 • Fax: 512-450-1215
www.hubbell-automation.com

CONTENTS

These instructions include information as follows:

PRECAUTIONS

- **READ AND FOLLOW ALL SAFETY INSTRUCTIONS.**
- **CAUTION - RISK OF ELECTRICAL SHOCK.** To prevent electrical shock, turn off power at the circuit breaker before installing or servicing unit. Never wire energized electrical components.
- **NOTICE:** For installation by a licensed electrician in accordance with National and/or local Electrical Codes and the following instructions.
- **CAUTION: USE COPPER CONDUCTOR ONLY, MINIMUM 75°C INSULATION.**
- Be sure to read and understand all instructions before installing or servicing unit
- Do not operate unit with panel door assembly or relay guard covers removed.
- For Indoor use only. Do not use outdoors.
- Do not mount near gas or electric heaters.
- Disconnect switch or a circuit breaker must be provided and marked as the disconnecting device.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Confirm that device ratings are suitable for application prior to installation.
- No user serviceable parts contained inside unit. Refer all service related questions to the factory. All servicing shall be performed by qualified service personnel.
- Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- Use only approved materials and components (i.e. twist on connectors, electrical box, etc.) as appropriate for installation.
- **NOTICE:** Do not install if product appears to be damaged.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Do not use this equipment for other than intended use.

SAVE THESE INSTRUCTIONS!

DESCRIPTION

The CX Secondary Panel is shipped with all required interface boards to connect the Secondary Panel to a CX Master Panel. The Secondary Panel has a Secondary Panel Interface Card factory pre-installed and includes a Master Panel Interface Card for field installation into a CX Master Panel. These instructions contain directions for installing the Master Panel Interface Card and include specifications for connecting the panels using CAT 5 or CAT5e cable. For programming information, refer to the "CX Panel Quick Start Guide" provided as a separate document with the Panel.

PRODUCT CONFIGURATIONS – CX SECONDARY PANELS

Panel Model	Relay Spaces	Input Voltage	Housing	Relay Quantity	Relay Type	Options
CX	08 8 Relay Spaces 16 16 Relay Spaces 24 24 Relay Spaces	2 120-208-220-277VAC 3 120-347VAC	S Surface NEMA 1	00 No relays 08 8 Relays Installed 16 16 Relays Installed 24 24 Relays Installed	2N 20A, 1P, N/O Elect Held 3L 30A, 1P, Latching TN 20A, 2P, N/O Elect Held SP Space Only	S Secondary

Example: CX082S082NS - CX 8 Relay Panel, 120/208/220/277VAC input, with 8 20A/1P N/O Electrically Held Relays installed in NEMA 1 Surface Mount Secondary Panel.

INSTALLING INDIVIDUAL RELAY CARDS

Relay PANELS ARE MOST COMMONLY SHIPPED WITH ALL RELAY CARDS INSTALLED. If the project requires different types of relays installed in the same panel then the relays are supplied separately and they will require field installation. In this application reference the applicable Relay Installation Instructions supplied with the individual Relay Cards on how to install relays.

Caution: ALWAYS remove supply power to the Panel control Transformer prior to making any connections between relay boards and panel processor board. Failure to do so may result in personnel injury, damage to the panel, and void its warranty

CONNECTING PANEL POWER

Refer to separate Relay Panel Installation Instructions included with the panel for directions to install and connect line voltage input power to the CX Lighting Control Panel.

CONNECTING LIGHTING LOADS

Refer to separate Relay Panel Installation Instructions included with the panel for directions to install and connect line voltage lighting circuit loads.

CONNECTING LOW VOLTAGE INPUTS

Refer to separate Relay Panel Installation Instructions included with the panel for directions to install and connect Low Voltage Inputs.

INSTALLING MASTER/SECONDARY INTERFACE CARDS

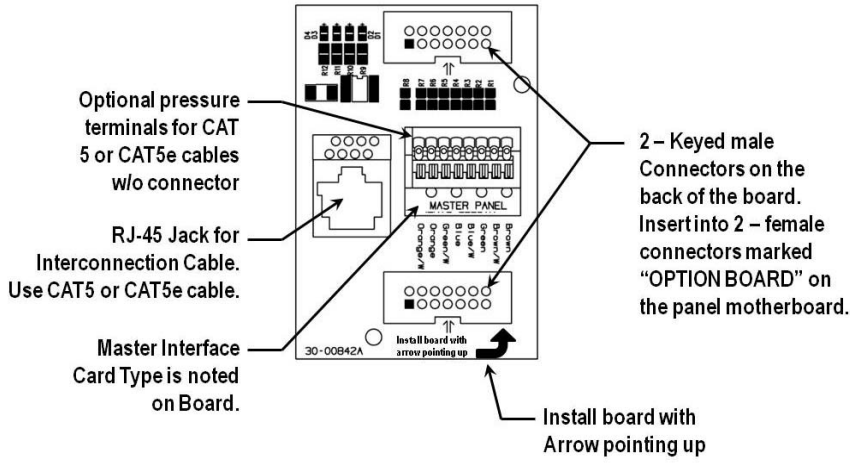
The Secondary Panel has the interface card factory installed and tested for proper operation. The master panel Interface card is included with the secondary panel. It is wrapped in an anti-static bag packed loose inside the secondary panel. This Master Interface Card must be installed in the CX Master Panel to allow for the Master and Secondary panels to be connected and controlled from the master panel user interface. Please NOTE that the interface cards are unique and marked "Master" and "Secondary" on the card. These cards also have specific orientation marked on them. Refer to Figure 1showing Master/Secondary Interface Cards for markings and orientation. Refer to Figure 2 for locations of Interface Cards in Panels.

WARNING: DISCONNECT the Low Voltage Control Input Power plug at the top of the motherboard prior to installing the interface card. Installing the Interface Cards with power on the motherboard will damage panels and VOID Equipment WARRANTY.

Figure 1 – CX Interface Cards

CX08, CX16, CX24 Master Interface Card

NOTE: Master Interface Card is supplied with Secondary panel and MUST be field installed



CX08, CX16, CX24 Secondary Interface Card

NOTE: Secondary Interface Card is factory installed and tested

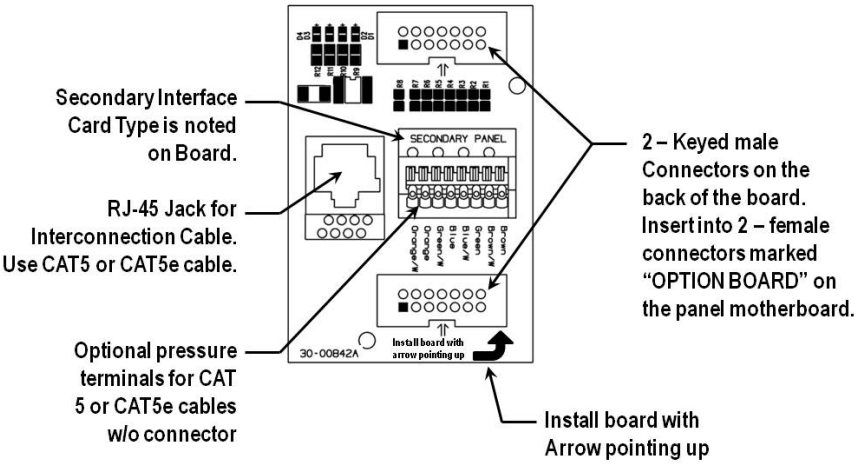
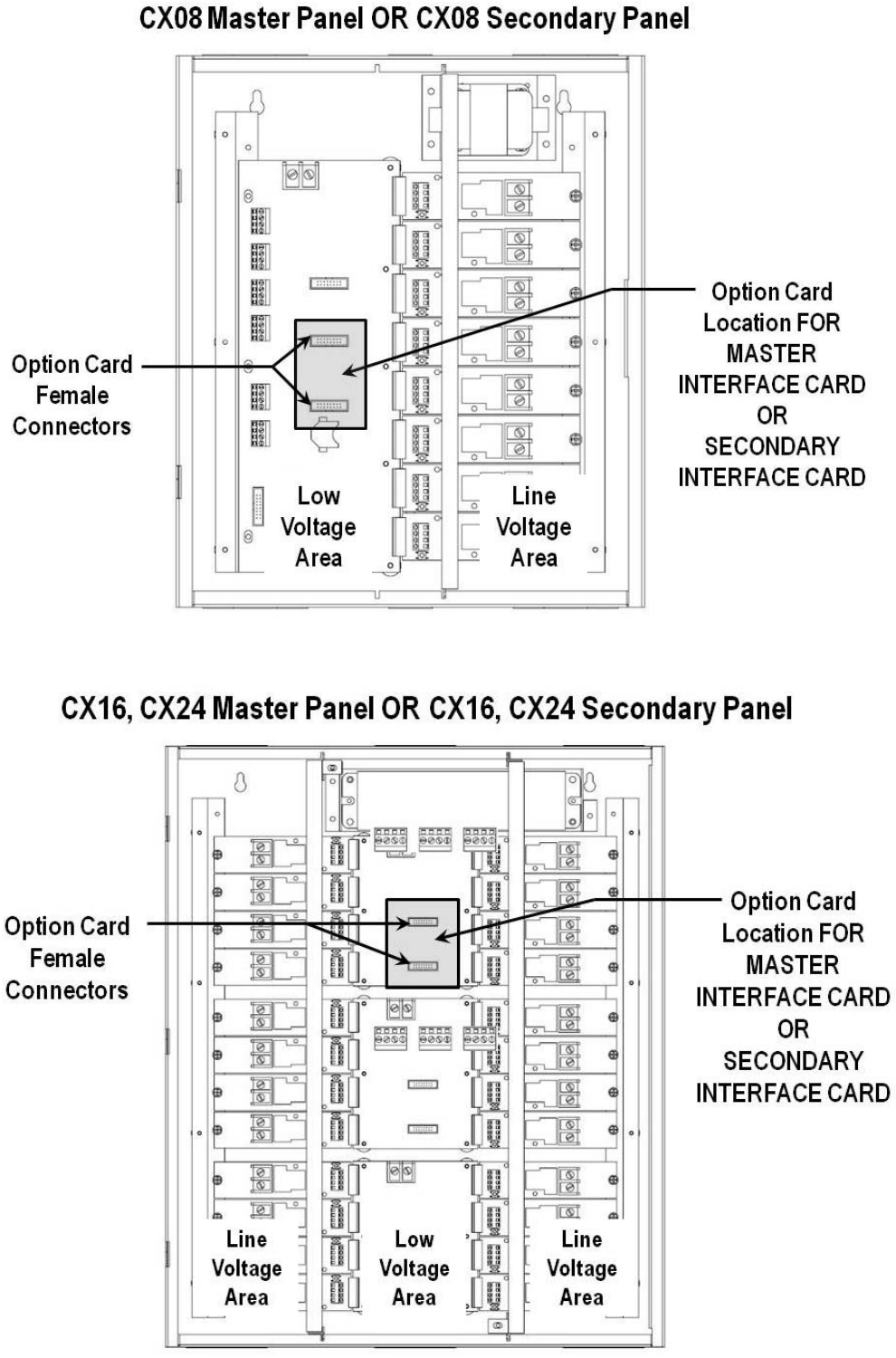


Figure 2 – Interface Card Locations in Panels



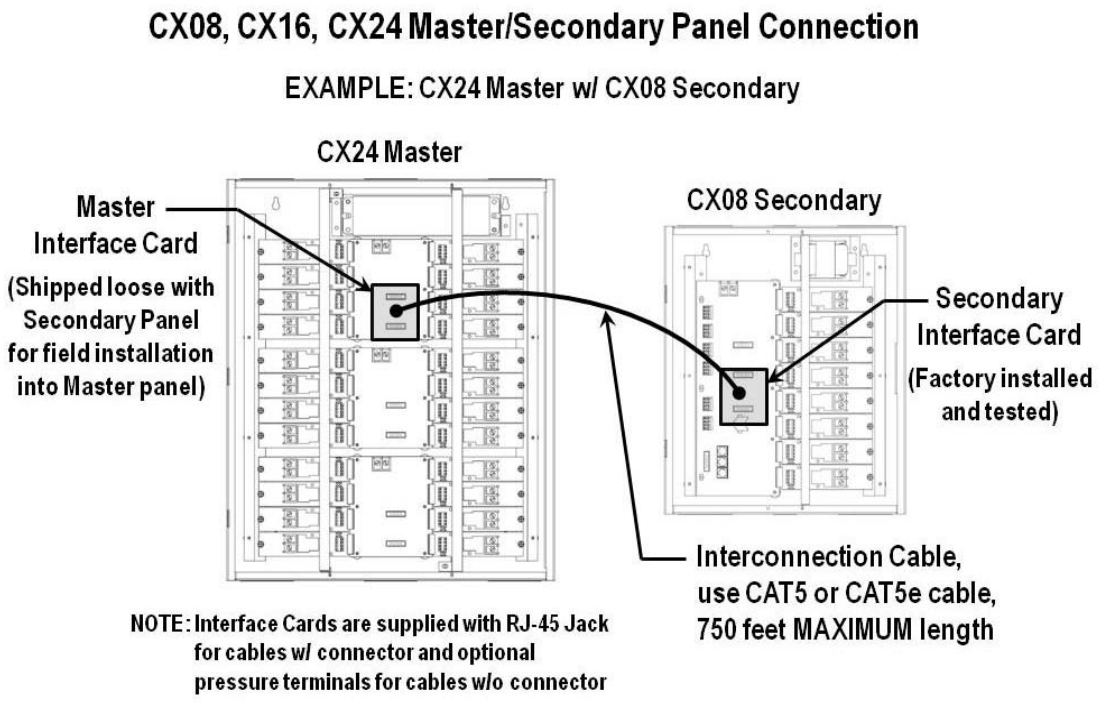
CONNECTING MASTER AND SECONDARY PANELS

Once the interface cards are installed in the Master and Secondary Panels the Low Voltage Control Power Input Plug at the top of the motherboard adjacent to the power supply can be reconnected and power restored to the motherboard. The interface card has 4 LED's at the upper left corner. These will activate as follows:

- Upon return of power to the Master panel the RED LED's will activate.
- Upon return of power to the Secondary panel the LED's will remain OFF.
- When the interconnecting cable is installed between the panels, all 4 LED's on each board will illuminate

WARNING: Failure to install cards in the proper panel and correct orientation can damage panels and VOID Equipment WARRANTY.

Figure 3 – Connecting Master and Secondary Panels



OPERATING THE MASTER AND SECONDARY PANELS

Follow the Panel Operation guidelines in the Panel Install Instructions and the Quick Start Guide for general use.

The Operation and programming of CX Master and Secondary Panels when connected together is performed from the user interface located on the master panel. All programming and manual relay control is available in the user interface menus. The relays, inputs and outputs will appear in the menu, master panel first and then secondary panel second. Master relays, inputs and outputs have the "M" suffix and secondary relays, inputs, and outputs have the "S" suffix. The system automatically presents the number relays, inputs and outputs based on the actual panels connected. If the master panel was an 8 relay panel then the relays would be numbered MR01 – MR08. If instead the master panel was a 16 relay panel the relays presented would be MR01-MR16. This is also true for secondary panels. If the secondary panel was a 16 relay panel then the relays would be presented immediately following the master relays in the list as SR01-SR16. The same numbering scheme follows for Inputs and outputs. Only relay slots with relays present will appear. Any empty slots will be skipped based on their actual numerical location.

TROUBLESHOOTING

If the Secondary panel relays, inputs, and outputs are not available in the user interface menus, or the LED's do not illuminate in the interface cards then the cards could be installed incorrectly or not fully seated. Contact Hubbell Building Automation Technical Service at (888) 698-3242 for assistance and replacement as required. A complete Troubleshooting Guide is contained in the "CX Panel User Manual" provided as a downloadable document at www.hubbell-automation.com.

CX PANEL SPECIFICATIONS

- Panel Input Power Requirements:
  - 8-Relay Panel - Input Voltage "2" designator – 40VA, 120, 208, 240, or 277VAC
  - 8-Relay Panel - Input Voltage "3" designator – 40VA, 120, 277 or 347VAC
  - 16 and 24-Relay Panel - Input Voltage "2" designator – 100VA, 120-277 VAC Universal
  - 16 and 24-Relay Panel - Input Voltage "3" designator – 100VA, 347-480 VAC Universal
- Overall Dimensions:
  - 8-Relay panel - Surface mount, 14.5" W x 17" H x 3.5" D.
  - 16 and 24-Relay panel - Surface mount, 20" W x 24" H x 3.5" D
- Relay Load Ratings:
  - CXR2N – 120/277VAC, Electrically Held, N/O, 20Amps, HID and Fluorescent Ballast 15Amps, Fluorescent Electronic Ballast 16 Amps, Tungsten (120V only) 15 Amps, 3/4HP at 120V and 277V,
  - CXR3L – 120/277/347VAC, Latching, 30Amps, HID and Fluorescent Ballast at 120/277 VAC, Fluorescent Electronic Ballast 16 Amps, and 20A mps Tungsten at 120VAC, 1HP at 120V, and 20Amps, HID and Fluorescent Ballast at 347V
  - CXRTN – 208/240/480VAC, Electrically Held, N/O, 20Amps, HID, Ballast, 2HP
  - CXR2C – 120/277VAC, Electrically Held, N/C, 20Amps, HID and Fluorescent Ballast 15Amps Fluorescent Electronic Ballast 16 Amps, Tungsten (120V only) 15 Amps, 3/4HP at 120V and 277V,
  - CXRTC – 208/240/480VAC, Electrically Held, N/C, 20Amps, HID, Ballast, 2HP
- Low Voltage Inputs:
  - CX 8-Relay panel – 12 available inputs
  - CX 16-Relay panel – 20 available inputs
  - CX 24-Relay panel – 30 available inputs
  - Low Voltage Switches – 2 or 3 wire momentary or maintained style, with or without LED indication. LED indication support is LED – "ON" when switch is active and LED – "OFF" when switch is inactive. Green "ON" with Red "OFF" indication is not supported.
  - Motion Sensor Input – Three wire 24 VDC, Maximum of 4 sensors can be connected to 4-Relay Panel and 8 sensors for 8-Relay Panel
  - Photocell – Three wire 24VDC power, 0-10V DC control input.
- Output Relay Contacts
  - Two each for 8-Relay panel only – Dry Contact Output, NO/NC, 24V AC/DC, 50mA
  - Two each for 16-Relay panel only – Dry Contact Output, NO/NC, 24V AC/DC, 50mA
  - Three each for 24-Relay panel only – Dry Contact Output, NO/NC, 24V AC/DC, 50mA
- Operating Environment:
  - Indoor Use Only; 0 to 50°C; Relative Humidity: 0 – 90% non-condensing.