CX

COMMERCIAL LIGHTING CONTROL PANELS

HUBBELL®
Control Solutions

HUBBELL Lighting

CX
COMMERCIAL LIGHTING CONTROL PANELS

Code Compliant, Cost Effective Commercial Lighting Control

The CX Commercial Lighting Control Panel is a self-contained lighting control system that replaces conventional timeclock and contactor combinations with a labor saving, simple and flexible module solution. CX provides a reliable standalone relay control solution to reduce energy consumption for small and intermediate size projects that are cost sensitive.

Table of Contents

Flexible and Cost-Effective Installation

Hubbell Control Solutions' (HCS) CX Panels use a simple approach to lighting controls by centralizing the interface and connection points in an enclosure providing an installer-friendly solution that reduces time and costs to deploy code compliant control solutions.

Save Time

- Compact single enclosure includes relays, control functions and input terminals for low voltage devices
- All inputs are software assignable to any HCS low voltage input device including switches, motion sensors and photocells
- Low voltage devices connect directly to panel without any ancillary parts such as power packs.
- LCD user interface incorporates easy to follow intuitive programming tools

Save Energy

- Meet ASHRAE 90.1, IEEC, and California (CEC) Title 24 energy codes
- Contribute to LEED certification requirements
- Allows multiple low voltage inputs from HCS switches, motion sensors and photocells to enhance energy savings for scenarios such as manual switch ON and automatic motion sensor OFF control

Lower Cost

- Can save up to 50% in parts and labor cost over conventional timeclock and contractor systems
- Lowers energy consumption with expanded programming options
- Astronomical clock eliminates the need for roof mounted photocells
- Pre-programmed scenarios offer a wide variety of options to maximize energy savings for each possible control zone

Increase Control

- Sunrise/sunset controls provided using internal astronomical clock
- Scenarios offer many easy to use control combinations
- Priorities and masking allow for personalized control solutions

Standards & Code

	ENERGY CODES				CX SOLUTIONS
	IECC 2015	ASHRAE 90.1 2016	Title 24 Part 6 2016	NFPA	
INDOOR					
High End Trim					✓
Local Control	C405.2.2.3	9.4.1.1 (a)	130.1 (a)		✓
Multi-Level Control	C405.2.2.2	9.4.1.1 (b)	130.1 (b)		✓
Scheduling	C405.2.2.1	9.4.1.1 (i)	130.1 (c) 4		✓
Occupancy Sensor Full OFF	C405.2.1.1	9.4.1.1 (h)	130.1 (c) 6		✓
Occupancy Senor Partial ON	C405.2.1.1	9.4.1.1 (c)	130.1 (c) 5		✓
Occupancy Sensor Partial OFF	C405.2.1.2	9.4.1.1 (g)	130.1 (c) 6		✓
Continuous Daylighting	C405.2.3	9.4.1.1 (e)	130.1 (d)		✓
Plug Load Control		8.4.2	130.5 (d)		✗
Demand Response			130.1 (e)		Contact Closure
BMS Integration					Contact Closure
Egress Lighting				✓	
OUTDOOR					
Astronomical Timeclock	C405.2.5(2)	9.4.1.4 (b)	C405.2.2.3		✓
Setback	C405.2.5(3)	9.4.1.4 (d)	C405.2.2.3		✓
Daylight OFF	C405.2.5(1)	9.4.1.4 (a)	C405.2.2.3		✓
Demand Response					Contact Closure
BMS Integration					Contact Closure

Meet Code and Save Energy

CX can maximize energy savings and meet or exceed today's energy code requirements.

HIGH END TRIM

High End Trim - An artificial maximum light output set below actual maximum light output for each space

CONTROLS

Local Control - Manual lighting controls that control all the lights in that space and requires human intervention

Multi-level control - Providing additional light levels in a space beyond Full ON and Full OFF

Plug Load Control - Automatically turns off designated receptacles in response to all occupants leaving the space or time of day

SCHEDULING/ TIMECLOCK

Scheduling - Controls light levels based on facility schedule

Astronomical Timeclock - Controls light levels based on sunrise/sunset and project location

OCCUPANCY SENSING

Full OFF - Automatically turns the lights off within a set period of time after all occupants leave the space

Partial ON - Automatically turns lights on to a reduced level between full on and full off when occupants enter the space

Partial OFF - Automatically turns lights down to a reduced level between full on and full off after all occupants leave the space

EGRESS LIGHTING

Egress Lighting - The code establishes minimum criteria for the design of egress facilities so as to allow prompt escape of occupants from buildings, or where desirable, into safe areas within buildings

CONTINUOUS DAYLIGHTING

Continuous Daylighting - Automatically turns lights down to a reduced level or off based on the amount of daylight present in a space

Daylight OFF - Automatically turns the lights off based on the amount of daylight

DEMAND RESPONSE

Demand Response - A defined temporary reduction of lighting load or load shedding in response to a request from an energy authority such as a utility or regional transmission operator

BMS INTEGRATION

BMS Integration - CX08/16 and 24 relay panels are capable of providing a dry contact closure to an outside BMS system based on schedule or input control.

SETBACK

Setback - Automatically turns lights down to a reduced level after all occupants leave the area

Application Success

CX supports exterior and interior lighting control applications with a broad feature offering and intuitive user interfaces to address energy code requirements and reduce energy costs all under a single relay panel.
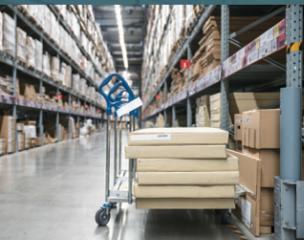
Commercial

- Single or Dual panels to maximize controlled loads
- Occupancy or Vacancy modes to meet energy codes
- Open or Closed loop daylight sensing options

Education

- Accommodate common area lighting typically on a schedule or occupancy control
- Single or multi-zone daylight harvesting
- Priorities to have a wall station be a master switch for alert functions or game day events

Industrial

- Accommodates high mounting heights found in warehouses and manufacturing
- Works well in scheduled situations where occupants come in and vacate on regular basis

Parking and Site Lighting

- Easily meets outdoor lighting code requirements
- Works with occupancy or schedule control
- Easily can use existing homeruns for retrofit applications

Retail

- Provides a centralized maintenance solution
- Flexible Schedule based control aligns well with retail requirements
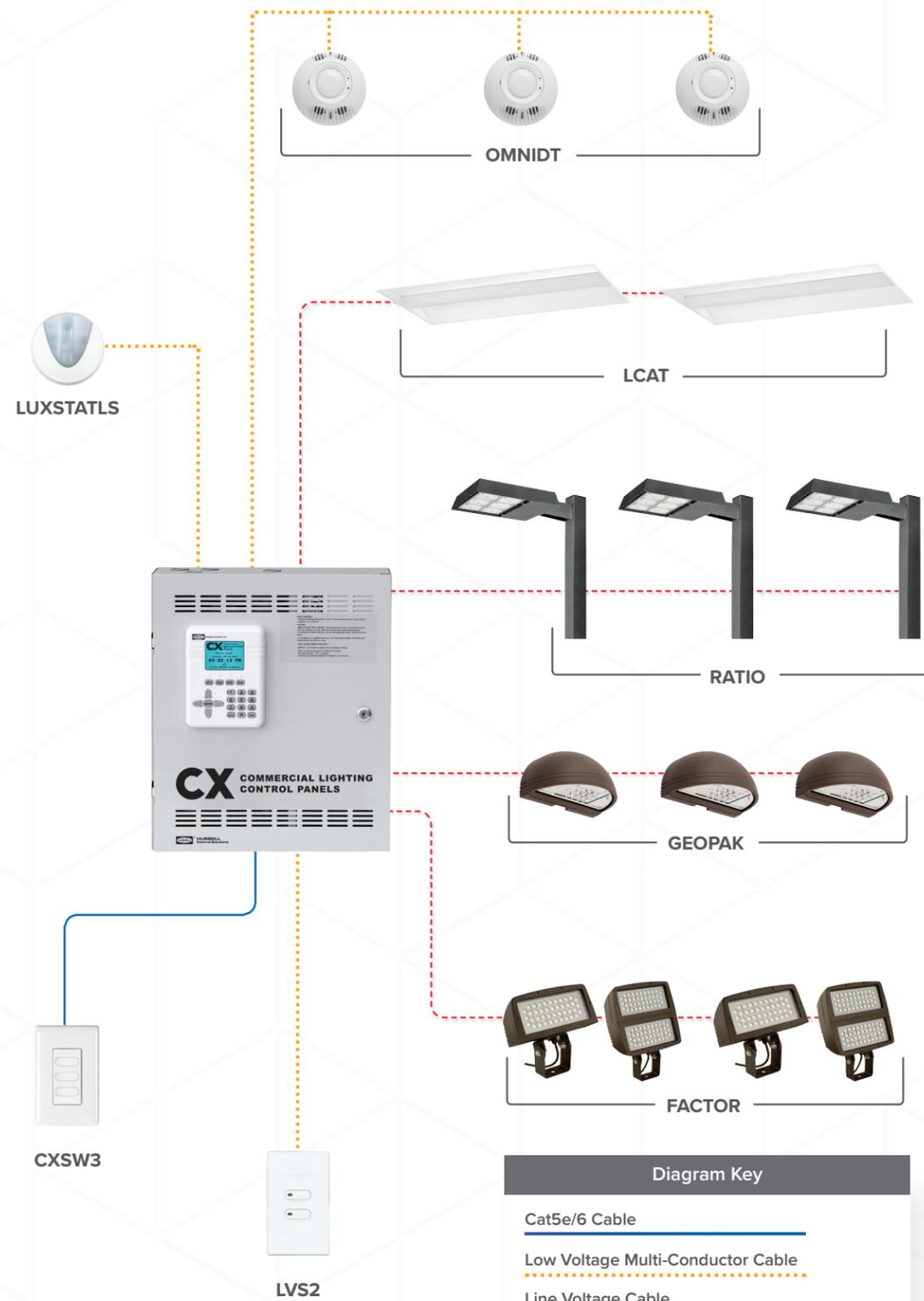- Scheduling offset from "open/close" time for easy changes

System Diagram

OMNIDT

LUXSTATLS

LCAT

RATIO

GEOPAK

CX COMMERCIAL LIGHTING CONTROL PANELS

FACTOR

CXSW3

LVS2

Diagram Key

Cat5e/6 Cable

Low Voltage Multi-Conductor Cable

Line Voltage Cable

For additional application solutions utilizing CX panels, please visit **www.hubbellcontrolsolutions.com**

CX Panel Features

All inputs are low voltage and hard-wired to terminal blocks in the panel. Input power supply is multi-tapped or universal for typical service voltages. Line voltage terminals are located with generous space for easy connection.
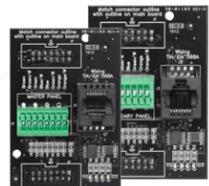
1 Auxiliary Input

- Provisions for multiple device control of a single relay or group
- Scenario programming allows for easy mapping of auxiliary inputs

2 Dry Contact Output

- Normally open or normally closed output
- Momentary or maintained
- Allows for interconnection to other building functions such as security, fire alarm, or building management system

3 Master/Secondary Interface Cards

- Compatible with 8, 16 and 24 relay panels
- Pre-installed in all Secondary panels
- RJ45 enabled for interfacing
- Automatically recognized

4 Panel Relays

- Five relay types
- UL924 listed relay for emergency lighting
- Compatible with all CX panels
- Relays all occupy one relay slot
- Relays are individually replaceable

5 Relay Card

- 1-pole and 2-pole relays fit in the same sized space
- Relay self-identifies once installed
- Available 20A/1P N/O, 20A/2P N/O or N/C and 30A/1P latching
- 14K SCCR for 20A/1P N/O, 20A/2P N/O or N/C
- 18K SCCR for 30A/1P latching

6 CX Dimming Card

- Full range dimming with present dimming levels
- Ramp Up, Fade Down, Minimum Dim level
- Maximum Dim level (Demand Response System Settings)
- Operates with 0-10V dimmable ballasts
- Provides manual and automatic control of dimming levels
- Eight dimming channels per card
- Works with CX switch stations

Connect Devices

Low Voltage Sensors

- Passive Infrared (PIR), Ultrasonic (US) and Dual Technology (DT) versions
- Self-adaptive IntelliDAPT® Technology
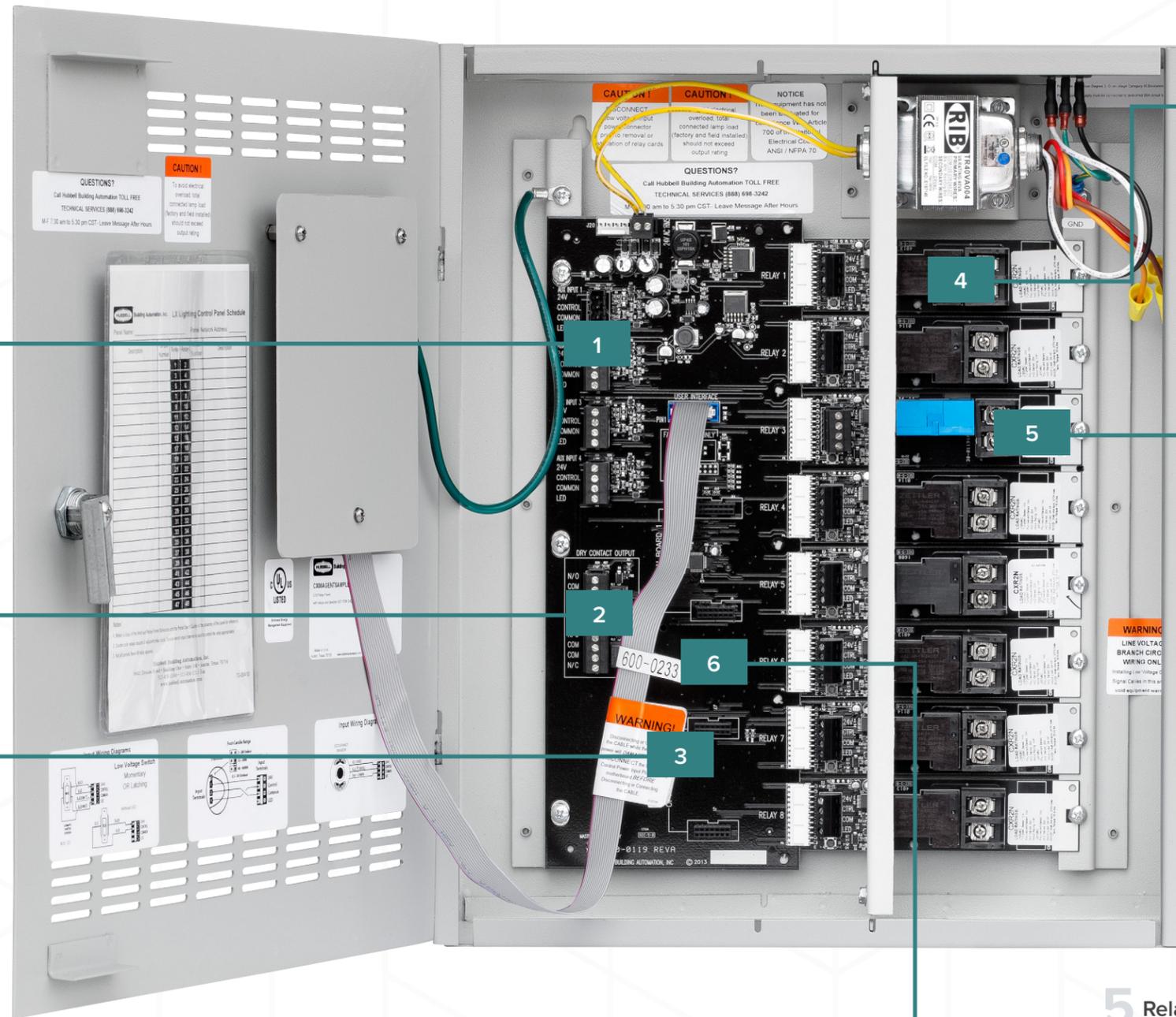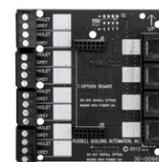- Optional relay and photocell control

Low Voltage Wall Stations

- Offered in 1, 2, 3 and 4 button configurations
- Momentary button action
- Optional LED indicators available

Controlled Receptacle

- Split or fully controlled 15A or 20A options
- Downstream Branch Circuit Control
- Straight Blade Switched Duplex Receptacle 2-pole, 3-wire Grounding

Product Listing

CX04 Panels

Product	Description
CX04081277XFMR	CX04 and CX08 transformer
CX042S00SPN	CX Lighting Control Panel, 4 Relay 120/277V Input, with Space for Field Installed CXR Relays NEMA 1 Surface Enclosure Standalone
CX042S042NN	CX Lighting Control Panel, 4 Relay 120/277V Input, with 4-20A/1P Electrically Held NO Relays NEMA 1 Surface Enclosure Standalone
CX042S043LN	CX Lighting Control Panel, 4 Relay 120/277V Input, with 4-30A/1P Latching Relays NEMA 1 Surface Enclosure Standalone
CX042S04TNN	CX Lighting Control Panel, 4 Relay 120/277V Input, with 4-20A/2P Electrically Held NO Relays NEMA 1 Surface Enclosure Standalone
CX043S00SPN	CX Lighting Control Panel, 4 Relay 120/347V Input, with Space for Field Installed CXR Relays NEMA 1 Surface Enclosure Standalone
CX043S043LN	CX Lighting Control Panel, 4 Relay 347/480V Input, with 4-30A/1P Latching Relays 120-277-347V, NEMA 1 Surface Enclosure Standalone
CX04MTHRBD	CX04 Motherboard

CX08 Panels

Product	Description
CX082S00SPM	CX Lighting Control Panel, 8 Relay 120/277V Input, with Space for Field Installed CXR Relays NEMA 1 Surface Enclosure Master
CX082S00SPS	CX Lighting Control Panel, 8 Relay, 120/277V Input, with Space for Field Installed CXR Relays NEMA 1 Surface Enclosure Secondary
CX082S082NM	CX Lighting Control Panel, 8 Relay 120/277V Input, with 8-20A/1P Electrically Held NO Relays NEMA 1 Surface Enclosure Master
CX082S082NS	CX Lighting Control Panel, 8 Relay, 120/277V Input, with 8-20A/1P Electrically Held N/O Relays NEMA 1 Surface Enclosure Secondary
CX082S083LM	CX Lighting Control Panel, 8 Relay 120/277V Input, with 8-30A/1P Latching Relays NEMA 1 Surface Enclosure Master
CX082S083LS	CX Lighting Control Panel, 8 Relay, 120/277V Input, with 8-30A/1P Latching Relays NEMA 1 Surface Enclosure Secondary
CX082S08TNM	CX Lighting Control Panel, 8 Relay 120/277V Input, with 8-20A/2P Electrically Held NO Relays NEMA 1 Surface Enclosure Master
CX082S08TNS	CX Lighting Control Panel, 8 Relay, 120/277V Input, with 8-20A/2P Electrically Held N/O Relays NEMA 1 Surface Enclosure Secondary
CX083S00SPM	CX Lighting Control Panel, 8 Relay 120/347V Input, with Space for Field Installed CXR Relays NEMA 1 Surface Enclosure Master
CX083S00SPS	CX Lighting Control Panel, 8 Relay, 120/347V Input, with Space for Field Installed CXR Relays NEMA 1 Surface Enclosure Secondary
CX083S083LM	CX Lighting Control Panel, 8 Relay 347/480V Input, with 8-30A/1P Latching Relays 120-277-347V, NEMA 1 Surface Enclosure Master
CX083S083LS	CX Lighting Control Panel, 8 Relay, 120/347V Input, with 8-30A/1P Latching Relays 120-277-347V, NEMA 1 Surface Enclosure Secondary
CX08MTHRBD	CX08 Motherboard
CX04081277XFMR	CX04 and CX08 transformer

CX16 Panels

Product	Description
CX16241277PWR	CX16 and 24 Transformer
CX1624MTHRBD	CX16 and CX24 Motherboard
CX162S00SPM	CX Lighting Control Panel, 16 Relay 120/277V Input, with Space for Field Installed CXR Relays NEMA 1 Surface Enclosure Master

CX16 Panels Continued

Product	Description
CX162S00SPS	CX Lighting Control Panel, 16 Relay, 120/277V Input, with Space for Field Installed CXR Relays NEMA 1 Surface Enclosure Secondary
CX162S162NM	CX Lighting Control Panel, 16 Relay 120/277V Input, with 16-20A/1P Electrically Held N/O Relays NEMA 1 Surface Enclosure Master
CX162S162NS	CX Lighting Control Panel, 16 Relay, 120/277V Input, with 16-20A/1P Electrically Held N/O Relays NEMA 1 Surface Enclosure Secondary
CX162S163LM	CX Lighting Control Panel, 16 Relay 120/277V Input, with 16-30A/1P Latching Relays NEMA 1 Surface Enclosure Master
CX162S163LS	CX Lighting Control Panel, 16 Relay, 120/277V Input, with 16-30A/1P Latching Relays NEMA 1 Surface Enclosure Secondary
CX162S16TNM	CX Lighting Control Panel, 16 Relay 120/277V Input, with 16-20A/2P Electrically Held N/O Relays NEMA 1 Surface Enclosure Master
CX162S16TNS	CX Lighting Control Panel, 16 Relay, 120/277V Input, with 16-20A/2P Electrically Held N/O Relays NEMA 1 Surface Enclosure Secondary
CX163S00SPM	CX Lighting Control Panel, 16 Relay 347-480V Input, with Space for Field Installed CXR Relays NEMA 1 Surface Enclosure Master
CX163S00SPS	CX Lighting Control Panel, 16 Relay, 347-480V Input, with Space for Field Installed CXR Relays NEMA 1 Surface Enclosure Secondary
CX163S163LM	CX Lighting Control Panel, 16 Relay 347-480V Input, with 16-30A/1P Latching Relays120-277-347V, NEMA 1 Surface Enclosure Master
CX163S163LS	CX Lighting Control Panel, 16 Relay, 347-480V Input, with 16-30A/1P Latching Relays120-277-347V, NEMA 1 Surface Enclosure Secondary

CX24 Panels

Product	Description
CX242S00SPM	CX Lighting Control Panel, 24 Relay 120/277V Input, with Space for Field Installed CXR Relays NEMA 1 Surface Enclosure Master
CX242S00SPS	CX Lighting Control Panel, 24 Relay, 120/277V Input, with Space for Field Installed CXR Relays NEMA 1 Surface Enclosure Secondary
CX242S242NM	CX Lighting Control Panel, 24 Relay 120/277V Input, with 24-20A/1P Electrically Held N/O Relays NEMA 1 Surface Enclosure Master
CX242S242NS	CX Lighting Control Panel, 24 Relay, 120/277V Input, with 24-20A/1P Electrically Held N/O Relays NEMA 1 Surface Enclosure Secondary
CX242S243LM	CX Lighting Control Panel, 24 Relay 120/277V Input, with 24-30A/1P Latching Relays NEMA 1 Surface Enclosure Master
CX242S243LS	CX Lighting Control Panel, 24 Relay, 120/277V Input, with 24-30A/1P Latching Relays NEMA 1 Surface Enclosure Secondary
CX242S24TNM	CX Lighting Control Panel, 24 Relay 120/277V Input, with 24-20A/2P Electrically Held N/O Relays NEMA 1 Surface Enclosure Master
CX242S24TNS	CX Lighting Control Panel, 24 Relay, 120/277V Input, with 24-20A/2P Electrically Held N/O Relays NEMA 1 Surface Enclosure Secondary
CX243S00SPM	CX Lighting Control Panel, 24 Relay 347-480V Input, with Space for Field Installed CXR Relays NEMA 1 Surface Enclosure Master
CX243S00SPS	CX Lighting Control Panel, 24 Relay, 347-480V Input, with Space for Field Installed CXR Relays NEMA 1 Surface Enclosure Secondary
CX243S243LM	CX Lighting Control Panel, 24 Relay 347-480V Input, with 24-30A/1P Latching Relays 120-277-347V, NEMA 1 Surface Enclosure Master
CX243S243LS	CX Lighting Control Panel, 24 Relay, 347-480V Input, with 24-30A/1P Latching Relays 120-277-347V, NEMA 1 Surface Enclosure Secondary

Product Listing

CX24 Panels Continued	
Product	**Description**
CX16241277PWR	CX16 and 24 Transformer
CX1624MTHRBD	CX16 and CX24 Motherboard

Panel Accessories	
Product	**Description**
CXMSTRCONTR2	CX Lighting Control Panel Master Controller Replacement
CXUICABLE	CX Replacement User Interface Cable
CXDIMCONTRBD	CX Lighting Control Panel 8-Channel Dimming Controller Option Board
CXKITSECINTFC	CX Lighting Control Panel Secondary Interface Replacement Kit
CXPBAR	CX Panel Relay Barrier, Metal, Gray, (Comes as a pair of plates)

Relays	
Product	**Description**
CXR2N	CXR Relay, 20A/1P Electrically Held N/O, for use with CX Panels
CXR3L	CXR Relay, 30A/1P Latching, for use with CX Panels
CXR3LEM	CXR Emergency Lighting Relay, 30A/1P Latching, for use with CX Panels
CXRTC	CXR Relay, 20A/2P Electrically Held N/C, for use with CX Panels
CXRTN	CXR Relay, 20A/2P Electrically Held N/O, for use with CX Panels

Low Voltage Wall Stations[1]	
Product	**Description**
LVSM1NPXX	Low Voltage Switch, Momentary, 1 Button, No Pilot
LVSM2NPXX	Low Voltage Switch, Momentary, 2 Button, No Pilot
LVSM3NPXX	Low Voltage Switch, Momentary, 3 Button, No Pilot
LVSM4NPXX	Low Voltage Switch, Momentary, 4 Button, No Pilot
LVSM1PLXX	Low Voltage Switch, Momentary, 1 Button, Pilot Light
LVSM2PLXX	Low Voltage Switch, Momentary, 2 Button, Pilot Light
LVSM3PLXX	Low Voltage Switch, Momentary, 3 Button, Pilot Light
LVSM4PLXX	Low Voltage Switch, Momentary, 4 Button, Pilot Light

Wall Stations[2]	
Product	**Description**
CXSW-1-XX	CX Low Voltage, 1 Button, Programmable Switch, No Pilot
CXSW-2-XX	CX Low Voltage, 2 Button, Programmable Switch, No Pilot
CXSW-3-XX	CX Low Voltage, 3 Button, Programmable Switch, No Pilot
CXSW-4-XX	CX Low Voltage, 4 Button, Programmable Switch, No Pilot
CXSW-6-XX	CX Low Voltage, 6 Button, Programmable Switch, No Pilot

1 Low Voltage Wall Stations XX= Color:
   WH - White
   IV - Ivory
   LA - Light Almond
   G - Gray

2 Wall Stations XX= Color:
   WH - White
   IV - Ivory
   LA - Light Almond
   GY - Gray
   BK - Black

Comprehensive Support Options to Meet Project Needs

Phone and Online Support

While it is our goal to provide you with intelligent, simple and scalable control solutions, customer experience level and project complexity may necessitate additional support during the design development, construction and post-occupancy stages of a project.

The Hubbell Control Solutions support team is available for consultation to evaluate multiple control scenarios to identify the ideal lighting control device or system to meet energy code requirement and customer criteria. Additionally, our team of friendly and experienced professionals is enabled to assist on-site personnel, such as installation contractors, third party integrators, certified field technicians and facilities personnel, to quickly resolve issues and provide additional support.

Design Service

Our team of lighting control system design professionals are available to provide sensor layouts, networked system design services and third party integration support for new and retrofit projects. Our goal is to provide you with on-time and accurate delivery of design deliverables optimized for your specific application, compliant with local building codes and project specifications.

On-site Support

Hubbell Control Solutions offers on-site support service to ensure your project goes smoothly. While Hubbell Control Solutions products are designed with simplicity in mind, some projects may benefit from a Certified Field Technician to perform an on-site pre-installation walk-through, after-hours and remote startup assistance, occupant training, sensor tuning, preset programming and other pre/post-occupancy services.

Warranty

Hubbell Lighting provides a 5-year limited warranty for LED luminaires and Hubbell Control Solutions devices.

Technical Service Center:
(800) 888-8006

ALERA LIGHTING

ARCHITECTURAL AREA LIGHTING

BEACON PRODUCTS

COLUMBIA LIGHTING

COMPASS

DUAL-LITE

HEALTHCARE SOLUTIONS

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HUBBELL INDUSTRIAL LIGHTING

HUBBELL OUTDOOR LIGHTING

KIM LIGHTING

KURT VERSEN

LITECONTROL

PRESCOLITE