Hubbell Lighting understands the challenge of code compliance and is here to lessen this burden on end-users. As of January 2017, California’s latest Building Energy Efficiency Standards (CA Title 24) went into effect. These revised standards improve energy efficiency in non-residential buildings. However, with a goal of Net Zero Energy in non-residential buildings by 2030, navigating the updated lighting code can be time consuming and confusing.

By breaking down the latest changes to the CA Title 24 by application space, Hubbell Lighting is able to simplify the complexities of code compliance. On the following pages you will find product solutions for each controls type based on application space and code requirements. These controls solutions range from the most basic solutions to the most advanced. The guidelines are focused on recent code revisions and are not intended to replace the complete CA Title 24 document.

The Hubbell Advantage
For over 128 years Hubbell Lighting has continued to make the ordinary extraordinary as one of the largest lighting fixture manufacturers in North America. Serving a multitude of markets Hubbell Lighting aims to provide innovative solutions that provide performance, quality, and ease of use regardless of the application. Supported by a prestigious portfolio of brand names Hubbell Lighting has a full range of indoor and outdoor lighting products that supply solutions to commercial, industrial, institutional, and residential markets.

Hubbell Lighting’s Commitment to the CA Title 24 Challenge

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### ONE COMPANY / DISTINCT BRANDS

- Alera Lighting
- Architectural Area Lighting
- Beacon Products
- Columbia Lighting
- Compass
- Dual-Lite
- Hubbell Control Solutions
- Healthcare Solutions
- Hubbell Industrial Lighting
- Hubbell Outdoor Lighting
- Kim Lighting
- Kurt Versen
- Litecontrol
- Prescolite
- Whiteway
Hubbell Lighting Core Capabilities - Complete Solutions

Stay on the leading edge of technology by selecting from Hubbell Lighting’s portfolio of solid-state lighting products.

Complete Solutions
From beautiful commercial environments to complex industrial applications, Hubbell Lighting provides high performance solutions across virtually every industry application.

Reducing Maintenance
Energy savings is only part of the story. Solid-state LED solutions from Hubbell Lighting last up to 3 times longer than Metal Halide or Fluorescent sources and up to 60 times longer than incandescent sources, dramatically reducing maintenance costs.

Control In Application
Hubbell LED solutions provide instant restrike performance, that when combined with factory integrated HCS, reduce energy usage by as much as 80% in application. It’s another innovative way we help meet fast evolving codes.

Easy Install, Easy Maintenance
Hubbell LED luminaires are designed with installation and ease of maintenance in mind. Our products offer simple access to electrical components that will reduce installation time and costs while making maintenance quick and efficient.

Electronic Tracking
In the fast evolving LED space, component performance upgrades are ongoing. To provide best-in-class field support, we’re integrating electronic tagging technology across our product lines, giving us a record of all the spec details of your luminaire. Years after installation a quick scan will reveal all of the critical specification details our teams will need to provide superior service and support.

Environmentally Friendly
With no mercury, unlike HID or fluorescent technologies, Hubbell Lighting LED luminaries require no lamp recycling and dramatically reduce CO2 emissions when replacing legacy technologies.

Energy Savings
Hubbell Lighting has broken the technology barriers to create cost effective, high performance LED luminaires that can save up to 70% in applications, replacing less efficient technologies such as HID or fluorescent.

Hubbell Lighting Controls
Having lights on only when needed, helps in reducing utility costs for energy savings and sustainability objectives. Easy installation, intuitive interfaces and web-based commissioning and monitoring make Hubbell Control Solutions (HCS) the logical choice for lighting control.

Rebate Program Approved
Utility rebate programs, where available, usually require products to be Design Lights Consortium® (DLC) or ENERGY STAR® qualified. Hubbell Lighting maintains an extensive collection of DLC and ENERGY STAR® qualified products available to reduce project costs and quicken payback. For a complete listing, visit https://www.hubbell.com/columbialighting/en/createchange
## Classroom / Lecture Hall / Training Room

### HUBBELL CONTROL SOLUTIONS

<table>
<thead>
<tr>
<th>Code Provision</th>
<th>Minimum Control Type</th>
<th>Requirement</th>
<th>Basic (Choice of)</th>
<th>Intermediate (Choice of)</th>
<th>Advanced (Choice of)</th>
</tr>
</thead>
<tbody>
<tr>
<td>130.1(p)</td>
<td>Local switch</td>
<td>Readily accessible device(s) to control lighting within an enclosed space.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• NX Room Control</td>
<td>• NX Distributed System</td>
</tr>
<tr>
<td>130.1(p)</td>
<td>Vacancy sensor (Manual On - Auto Off; Partial On (50-70% On - Full Off))</td>
<td>Automatically shuts off lighting power after vacancy of 30 minutes or less.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• NX Room Control</td>
<td>• NX Distributed System</td>
</tr>
<tr>
<td>130.1(b)</td>
<td>Multi-level lighting controls</td>
<td>At least one multi-level lighting control device (manual or automatic) in enclosed areas 100 sq. ft. or larger. Light level requirements are defined in Table 130.1-A. Note, the majority of lighting types require multiple control steps.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• NX Room Control</td>
<td>• NX Distributed System</td>
</tr>
<tr>
<td>130.1(d) and 140.6(d)</td>
<td>Multi-level daylight control</td>
<td>Sensor to reduce lighting in response to available daylight. Daylight zones defined in Section 130.1(d). Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting level requirements.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• NX Room Control</td>
<td>• NX Distributed System</td>
</tr>
<tr>
<td>130.4</td>
<td>Acceptance testing (functional testing)</td>
<td>Testing shall ensure that control hardware and software are calibrated, programmed, and functioning properly.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• NX Room Control</td>
<td>• NX Distributed System</td>
</tr>
<tr>
<td>130.1(p)</td>
<td>Demand Response</td>
<td>Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings larger than 10,000 sq. ft. or luminaire alterations that increase the lighting power in the enclosed space.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• NX Room Control</td>
<td>• NX Distributed System</td>
</tr>
</tbody>
</table>

**NOTE:** Areas where no change has been made:
- On/Off Control: Programmable Timeclock, Vacancy Sensor (Manual On - Auto Off); Automatic Partial-off
- Light Level Control: N/A
- Additional Control: Receptacle Control
## Conference / Meeting / Multi-Purpose Room

### HUBBELL CONTROL SOLUTIONS

<table>
<thead>
<tr>
<th>Code Provision</th>
<th>Minimum Control Type</th>
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</tr>
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<tbody>
<tr>
<td>130.1(a)</td>
<td>Local switch</td>
<td>Readily accessible device(s) to control lighting within an enclosed space.</td>
<td>OMNI Ceiling Sensor &amp; Override Switch</td>
<td>NX Room Control</td>
<td>NX Distributed System</td>
</tr>
<tr>
<td>130.1(c)</td>
<td>Vacancy sensor (Manual On - Auto Off)</td>
<td>Automatically shuts off lighting power after vacancy of 30 minutes or less.</td>
<td>OMNI Ceiling Sensor &amp; Override Switch</td>
<td>NX Room Control</td>
<td>NX Distributed System</td>
</tr>
<tr>
<td>130.1(b)</td>
<td>Multi-level lighting controls</td>
<td>At least one multi-level lighting control device (manual or automatic) in enclosed areas 100 sq. ft. or larger. Light level requirements are defined in Table 130.1-A. Note, the majority of lighting types require multiple control steps.</td>
<td>OMNI Ceiling Sensor &amp; Override Switch</td>
<td>NX Room Control</td>
<td>NX Distributed System</td>
</tr>
<tr>
<td>130.1(d) and 140.6(d)</td>
<td>Multi-level daylight control</td>
<td>Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(d). Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting level requirements.</td>
<td>OMNI Ceiling Sensor &amp; Override Switch</td>
<td>NX Room Control</td>
<td>NX Distributed System</td>
</tr>
<tr>
<td>130.4</td>
<td>Acceptance testing (functional testing)</td>
<td>Testing shall ensure that control hardware and software are calibrated, programmed, and functioning properly.</td>
<td>OMNI Ceiling Sensor &amp; Override Switch</td>
<td>NX Room Control</td>
<td>NX Distributed System</td>
</tr>
<tr>
<td>130.6(a)</td>
<td>Demand Response</td>
<td>Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings larger than 10,000 sq. ft. or luminare alterations that increase the lighting power in the enclosed space.</td>
<td>OMNI Ceiling Sensor &amp; Override Switch</td>
<td>NX Room Control</td>
<td>NX Distributed System</td>
</tr>
<tr>
<td>130.9(d)</td>
<td>Receptacle Control</td>
<td>Automatically turn OFF at least 50% of the receptacles in the space. This can either be achieved by switching every alternate receptacle within 6 feet or each uncontrolled receptacle or 50% of the outlets in each receptacle.</td>
<td>NX Room Control</td>
<td>NX Room Control</td>
<td>NX Distributed System</td>
</tr>
</tbody>
</table>

**NOTE:** Areas where no change has been made:
- Light Level Control: N/A
- Additional Control: N/A

### Conference / Meeting / Multi-Purpose Room Details

- **Conference / Meeting / Multi-Purpose Room**

  - **Code Provision:** Various code provisions from 130.1(a) to 130.9(d)
  - **Minimum Control Type:** Local switch, Vacancy sensor, Multi-level lighting controls, Multi-level daylight control, Acceptance testing, Demand Response, Receptacle Control
  - **Requirement:** Details on various control requirements and their implementation
  - **Basic Control:** Selection of basic control options
  - **Intermediate Control:** Selection of intermediate control options
  - **Advanced Control:** Selection of advanced control options

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**Code Provision:** 130.1(a) - Local switch. Readily accessible device(s) to control lighting within an enclosed space.

**Minimum Control Type:** Local switch

**Requirement:** OMNI Ceiling Sensor & Override Switch, NX Room Control, CX Panel Controls, NX Distributed System.
Office ≤ 250 Sq. Ft.

<table>
<thead>
<tr>
<th>Code Provision</th>
<th>Minimum Control Type</th>
<th>Requirement</th>
<th>Basic (Choice of)</th>
<th>Intermediate (Choice of)</th>
<th>Advanced</th>
</tr>
</thead>
</table>
| 130.1(p)       | Local switch         | Readily accessible device(s) to control lighting within an enclosed space. | • OMNI Ceiling Sensor & Override Switch  
• LightHAWK2 Wall Switch Sensor | • NX Room Control  
• CX Panel Controls | • NX Distributed System |
| 130.1(c)       | Vacancy sensor (Manual On - Auto Off; Partial On (50-70% On - Full Off)) | Automatically shuts off lighting power after vacancy of 30 minutes or less. | • OMNI Ceiling Sensor & Override Switch  
• LightHAWK2 Wall Switch Sensor | • NX Room Control  
• CX Panel Controls | • NX Distributed System |
| 130.1(b)       | Multi-level lighting controls | At least one multi-level lighting control device (manual or automatic) in enclosed areas 100 sq. ft. or larger. | • OMNI Ceiling Sensor & Override Switch  
• LightHAWK2 Wall Switch Sensor | • NX Room Control  
• CX Panel Controls | • NX Distributed System |
| 130.1(d) and 140.6(d) | Multi-level daylight control | Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(b). Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting level requirements. | • OMNI Ceiling Sensor & Override Switch  
• LightHAWK2 Wall Switch Sensor | • NX Room Control  
• CX Panel Controls | • NX Distributed System |
| 130.4          | Acceptance testing (functional testing) | Testing shall ensure that control hardware and software are calibrated, programmed, and functioning properly. | • OMNI Ceiling Sensor & Override Switch  
• LightHAWK2 Wall Switch Sensor | • NX Room Control  
• CX Panel Controls | • NX Distributed System |
| 130.1(e)       | Demand Response       | Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings larger than 10,000 sq. ft. or luminare alterations that increase the lighting power in the enclosed space. | • NX Room Control  
• CX Panel Controls | • NX Distributed System |
| 130.5(d)       | Receptacle Control    | Automatically turn OFF at least 50% of the receptacles in the space. This can either be achieved by switching every alternate receptacle within 6 feet or each uncontrolled receptacle or 50% of the outlets in each receptacle. | • NX Room Control  
• CX Panel Controls | • NX Distributed System |

NOTE: Areas where no change has been made:
On/Off Control: Programmable Timeclock, Vacancy Sensor (Manual On - Auto Off); Automatic Partial-off
Light Level Control: N/A
Additional Control: N/A
<table>
<thead>
<tr>
<th>Code Provision</th>
<th>Minimum Control Type</th>
<th>Requirement</th>
<th>Basic <em>(Choice of)</em></th>
<th>Intermediate <em>(Choice of)</em></th>
<th>Advanced <em>(Choice of)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>130.1(a)</td>
<td>Local switch</td>
<td>Readily accessible device(s) to control lighting within an enclosed space.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• NX Room Control</td>
<td>• NX Distributed System</td>
</tr>
<tr>
<td>130.1(b)</td>
<td>Programmable Timeclock</td>
<td>Scheduled time-of-day operated control that turns lighting on at specified times when typically unoccupied. Occupancy sensors or other building system signals that turn off lights during vacancy also comply. Maximum 2 hour manual override.</td>
<td></td>
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</tr>
<tr>
<td>130.1(c)1</td>
<td>Vacancy sensor (Manual On - Auto Off: Partial On (50-70% On - Full Off)</td>
<td>Automatically shuts off lighting power after vacancy of 30 minutes or less.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• NX Room Control</td>
<td>• NX Distributed System</td>
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<td>• NX Room Control</td>
<td>• NX Distributed System</td>
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<td>• NX Room Control</td>
<td>• NX Distributed System</td>
</tr>
<tr>
<td>130.1(b)</td>
<td>Multi-level lighting controls</td>
<td>At least one multi-level lighting control device (manual or automatic) in enclosed areas 100 sq. ft. or larger. Light-level requirements are defined in Table 130.1-A. Note, the majority of lighting types require multiple control steps.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• NX Room Control</td>
<td>• NX Distributed System</td>
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<td>• NX Room Control</td>
<td>• NX Distributed System</td>
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<td>• NX Room Control</td>
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<td></td>
</tr>
<tr>
<td>130.1(d) and 140.6(d)</td>
<td>Multi-level daylight control</td>
<td>Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(d). Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting-level requirements.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• NX Room Control</td>
<td>• NX Distributed System</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>• NX Room Control</td>
<td>• NX Room Control</td>
<td>• NX Distributed System</td>
</tr>
<tr>
<td>130.4</td>
<td>Acceptance testing (functional testing)</td>
<td>Testing shall ensure that control hardware and software are calibrated, programmed, and functioning properly.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• NX Room Control</td>
<td>• NX Distributed System</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• NX Room Control</td>
<td>• NX Room Control</td>
<td>• NX Distributed System</td>
</tr>
<tr>
<td>130.1(e)</td>
<td>Demand Response</td>
<td>Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings larger than 10,000 sq. ft. or luminare alterations that increase the lighting power in the enclosed space.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>130.1(f)</td>
<td>Receptacle Control</td>
<td>Automatically turn OFF at least 50% of the receptacles in the space. This can either be achieved by switching every alternate receptacle within 6 feet or each uncontrolled receptacle or 50% of the outlets in each receptacle.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: Areas where no change has been made:

- On/Off Control
- Light Level Control
- Additional Control


N/A
### Corridor

**NOTE: Areas where no change has been made:**
- On/Off Control
- Vacancy Sensor (Manual On - Auto Off)
- Automatic Full Off
- Light Level Control
- Additional Control

#### HUBBELL CONTROL SOLUTIONS

<table>
<thead>
<tr>
<th>Code Provision</th>
<th>Minimum Control Type</th>
<th>Requirement</th>
<th>Basic (Choice of)</th>
<th>Intermediate</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>130.1(a)</td>
<td>Local switch</td>
<td>May use a manual control not accessible to unauthorized personnel</td>
<td>- OMNI Ceiling Sensor &amp; Override Switch</td>
<td>- CX Panel Controls</td>
<td>- NX Distributed System</td>
</tr>
<tr>
<td>130.1(d)</td>
<td>Automatic Partial OFF</td>
<td>Automatically reduces lighting power in any one controlled zone by at least 50% after vacancy of 30 minutes or less</td>
<td>- OMNI Ceiling Sensor &amp; Override Switch</td>
<td>- CX Panel Controls</td>
<td>- NX Distributed System</td>
</tr>
<tr>
<td>130.1(b)</td>
<td>Multi-level lighting controls</td>
<td>At least one multi-level lighting control device (manual or automatic) in enclosed areas 100 sq. ft. or larger. Light level requirements are defined in Table 130.1-A. Note: the majority of lighting types require multiple control steps.</td>
<td>- OMNI Ceiling Sensor &amp; Override Switch</td>
<td>- CX Panel Controls</td>
<td>- NX Distributed System</td>
</tr>
<tr>
<td>130.1(d) and 140.6(d)</td>
<td>Multi-level daylight control</td>
<td>Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(d). Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting level requirements.</td>
<td>- OMNI Ceiling Sensor &amp; Override Switch</td>
<td>- CX Panel Controls</td>
<td>- NX Distributed System</td>
</tr>
<tr>
<td>130.4</td>
<td>Acceptance testing (functional testing)</td>
<td>Testing shall ensure that control hardware and software are calibrated, programmed, and functioning properly.</td>
<td>- OMNI Ceiling Sensor &amp; Override Switch</td>
<td>- CX Panel Controls</td>
<td>- NX Distributed System</td>
</tr>
<tr>
<td>130.1(e)</td>
<td>Demand Response</td>
<td>Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings larger than 10,000 sq. ft. or luminare alterations that increase the lighting power in the enclosed space.</td>
<td>- OMNI Ceiling Sensor &amp; Override Switch</td>
<td>- CX Panel Controls</td>
<td>- NX Distributed System</td>
</tr>
</tbody>
</table>

**NOTE:** Areas where no change has been made:
- On/Off Control
- Vacancy Sensor (Manual On - Auto Off)
- Automatic Full Off
- Light Level Control
- Additional Control

**Additional Control**

- N/A
### Restroom

#### ON/OFF Controls

<table>
<thead>
<tr>
<th>Code Provision</th>
<th>Minimum Control Type</th>
<th>Requirement</th>
<th>Basic (Choice of)</th>
<th>Intermediate</th>
<th>Advanced</th>
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</thead>
<tbody>
<tr>
<td>130.1(a)</td>
<td>Local switch</td>
<td>May use a manual control not accessible to unauthorized personnel</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• CX Panel Controls</td>
<td>• NX Distributed System</td>
</tr>
<tr>
<td>130.1(c)1</td>
<td>Programmable Timeclock</td>
<td>Scheduled time-of-day operated control that turns lighting off at specified times when typically unoccupied. Occupancy sensors or other building system signals that turn OFF lights during vacancy also comply. Maximum 2 hour manual override.</td>
<td>• TD300 Wall Switch Timer Switch</td>
<td>• CX Panel Controls</td>
<td>• NX Distributed System</td>
</tr>
<tr>
<td>130.1(c)5</td>
<td>Vacancy sensor (Manual On - Auto Off; Partial On (50-70% On - Full Off)</td>
<td>Automatically shuts off lighting power after vacancy of 30 minutes or less.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• CX Panel Controls</td>
<td>• NX Distributed System</td>
</tr>
</tbody>
</table>

#### Light Level Control

<table>
<thead>
<tr>
<th>Code Provision</th>
<th>Minimum Control Type</th>
<th>Requirement</th>
<th>Basic (Choice of)</th>
<th>Intermediate</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>130.1(b)</td>
<td>Multi-level lighting controls</td>
<td>Shall have at least one control step between 30-70 percent of full rated power.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• CX Panel Controls</td>
<td>• NX Distributed System</td>
</tr>
<tr>
<td>130.1(d) and 140.6(d)</td>
<td>Multi-level daylight control</td>
<td>Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(d). Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting-level requirements.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• CX Panel Controls</td>
<td>• NX Distributed System</td>
</tr>
</tbody>
</table>

#### Additional Control

<table>
<thead>
<tr>
<th>Code Provision</th>
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<th>Requirement</th>
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<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>130.4</td>
<td>Acceptance testing (functional testing)</td>
<td>Testing shall ensure that control hardware and software are calibrated, programmed, and functioning properly.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• TD300 Wall Switch Timer</td>
<td>• CX Panel Controls</td>
</tr>
<tr>
<td>130.1(e)</td>
<td>Demand Response</td>
<td>Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings larger than 10,000 sq. ft. or luminare alterations that increase the lighting power in the enclosed space.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• TD300 Wall Switch Timer</td>
<td>• CX Panel Controls</td>
</tr>
</tbody>
</table>

### NOTE: Areas where no change has been made:

- Light Level Control: N/A
- Additional Control: Receptacle Control
### Stairwell

#### HUBBELL CONTROL SOLUTIONS

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<tr>
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<tr>
<td>130.4</td>
<td>Acceptance testing (functional testing)</td>
<td>Testing shall ensure that control hardware and software are calibrated, programmed, and functioning properly.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• CX Panel Controls</td>
<td>• NX Distributed System</td>
</tr>
</tbody>
</table>

### ON/OFF CONTROLS

<table>
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<tr>
<th>Code Provision</th>
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<th>Requirement</th>
<th>Basic (Choice of)</th>
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<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>130.1(a)</td>
<td>Local switch</td>
<td>May use a manual control not accessible to unauthorized personnel.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• CX Panel Controls</td>
<td>• NX Distributed System</td>
</tr>
</tbody>
</table>

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<tr>
<th>Code Provision</th>
<th>Minimum Control Type</th>
<th>Requirement</th>
<th>Basic (Choice of)</th>
<th>Intermediate</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>130.1(c)6 &amp; 7</td>
<td>Automatic Partial-Off</td>
<td>Automatically reduces lighting power in any one controlled zone by at least 50% after vacancy of 30 minutes or less.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• CX Panel Controls</td>
<td>• NX Distributed System</td>
</tr>
</tbody>
</table>

### LIGHT LEVEL CONTROL

<table>
<thead>
<tr>
<th>Code Provision</th>
<th>Minimum Control Type</th>
<th>Requirement</th>
<th>Basic (Choice of)</th>
<th>Intermediate</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>130.1(b)</td>
<td>Multi-level lighting controls</td>
<td>At least one multi-level lighting control device (manual or automatic) in enclosed areas 100 sq. ft. or larger. Light level requirements are defined in Table 130.1-A. Note, the majority of lighting types require multiple control steps.</td>
<td>• WASP2 Sensor</td>
<td>• CX Panel Controls</td>
<td>• NX Distributed System</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code Provision</th>
<th>Minimum Control Type</th>
<th>Requirement</th>
<th>Basic (Choice of)</th>
<th>Intermediate</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>130.1(d) and 140.6(d)</td>
<td>Multi-level daylight control</td>
<td>Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(d). Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting-level requirements.</td>
<td>• WASP2 Sensor</td>
<td>• CX Panel Controls</td>
<td>• NX Distributed System</td>
</tr>
</tbody>
</table>

### ADDITIONAL CONTROL

<table>
<thead>
<tr>
<th>Code Provision</th>
<th>Minimum Control Type</th>
<th>Requirement</th>
<th>Basic (Choice of)</th>
<th>Intermediate</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>130.1(e)</td>
<td>Demand Response</td>
<td>Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings larger than 10,000 sq. ft. or luminaire alterations that increase the lighting power in the enclosed space.</td>
<td>• OMNI Ceiling Sensor &amp; Override Switch</td>
<td>• CX Panel Controls</td>
<td>• NX Distributed System</td>
</tr>
</tbody>
</table>

### NOTE: Areas where no change has been made:
- Light Level Control: N/A
- Additional Control: Receptacle Control
### Storage Room

#### HUBBELL CONTROL SOLUTIONS

<table>
<thead>
<tr>
<th>Code Provision</th>
<th>Minimum Control Type</th>
<th>Requirement</th>
<th>Basic (Choice of)</th>
<th>Intermediate</th>
<th>Advanced</th>
</tr>
</thead>
</table>
| 130.1(a)       | Local switch          | Readily accessible device(s) to control lighting within an enclosed space. | • LightHAWK2 Wall Switch Sensor  
• TD300 Wall Switch Timer | • CX Panel Controls  
• NX Distributed System |
| 130.1(c)1      | Programmable Timeclock| Scheduled time-of-day operated control that turns lighting off at specified times when typically unoccupied. Occupancy sensors or other building system signals that turn OFF lights during vacancy also comply. Maximum 2 hour manual override. | • TD300 Wall Switch Timer | • CX Panel Controls  
• NX Distributed System |
| 130.1(c)5      | Vacancy sensor (Manual On - Auto Off; Partial On 50-70% On - Full Off) | Automatically shuts off lighting power after vacancy of 30 minutes or less. | • LightHAWK2 Wall Switch Sensor  
• CX Panel Controls  
• NX Distributed System |
| 130.1(b)       | Multi-level lighting controls | At least one multi-level lighting control device (manual or automatic) in enclosed areas 100 sq. ft. or larger. Light level requirements are defined in Table 130.1-A. Note, the majority of lighting types require multiple control steps. | • LightHAWK2 Wall Switch Sensor  
• CX Panel Controls  
• NX Distributed System |
| 130.1(d) and 140.6(d) | Multi-level daylight control | Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(d). Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting level requirements. | • LightHAWK2 Wall Switch Sensor  
• CX Panel Controls  
• NX Distributed System |
| 130.4          | Acceptance testing (functional testing) | Testing shall ensure that control hardware and software are calibrated, programmed, and functioning properly. | • LightHAWK2 Wall Switch Sensor  
• TD300 Wall Switch Timer | • CX Panel Controls  
• NX Distributed System |
| 130.1(e)       | Demand Response       | Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings larger than 10,000 sq. ft. or luminare alterations that increase the lighting power in the enclosed space. | • CX Panel Controls  
• NX Distributed System |

**NOTE:** Areas where no change has been made:
- On/Off Control: Vacancy Sensor (Manual On - Auto Off; Automatic Partial-off)
- Light Level Control: N/A
- Additional Control: Receptacle Control
In-Fixture Controls

- On / Off control and two-channel dimming
- Suitable for indoor and outdoor applications
- Wireless programming

- Luminaire-integrated design reduces complexity and design times
- Out-of-the-box operation to meet code and simplify installation
- Bluetooth® enabled sensors available in five versions to address occupancy and daylight dimming

- Provide Hubbell® wireless network communication
- Robust and reliable IEEE 802.15.4 2.4GHz radio
- Remote, in-fixture and on-fixture mounting options

- Provide dual RJ45 ports for CAT5 daisy-chain connections
- Offer dual, mini SmartPORT™ connections for In-Fixture modules
- Simple attachment to luminaires

In-Fixture Control Modules
In-Fixture Sensor Modules
NX Radio Modules
Accessories

Room Controls

- Intelligent auto-configuration with devices
- Automatic code compliance
- CAT5 plug and play connectivity

- Embedded IntelliDAPT™ self-adaptive technology
- Passive Infrared, Ultrasonic and Dual Technology versions
- Occupancy or vacancy mode with up to 2000 sq. ft. coverage area

- Open-loop daylighting controls
- Supports up to 6 lighting zones per room
- Simple setup using the NX mobile App

- Allow third party interfaces
- Support A/V, Dry Contacts and HVAC options
- Moutns to standard junction box or DIN rail

- Provide dual RJ45 ports for CAT5 daisy-chain connections
- Offer dual, mini SmartPORT™ connections for In-Fixture modules
- Simple attachment to luminaires

Occupancy Sensors
Daylight Sensors
Interfaces

Enterprise / Building Controls

- Central component for enterprise solutions
- Realtime programming and monitoring
- Native BACnet® support

- Connect Room Controllers to HubbNET network
- Provide communication link for Area Controllers
- CAT5 plug and play connectivity

- Enable connection of additional NX devices
- Provide network connections and power to NX accessories
- Mount to standard DIN rail

- Provides programmable switching and dimming of lighting circuits
- Can be used exclusively or as part of a network solution
- Available in 8, 16, 24, 32 and 48 relay versions

Area Controllers
Network Bridge
Network Accessories
Lighting Control Panels

Device Setup App

The NX Device Setup App provides Bluetooth® wireless setup and configuration of NX Room Control devices and luminaires equipped with an NX In-Fixture module with smart sensor. The mobile App is available in Android® and iOS® versions for free download from Google Play™ or Apple® stores.

Intelliscop™

Intelliscop provides a unique and powerful tool for calibrating and testing NX In-Fixture smart sensors. Motion captured by the sensor is displayed in real time relative to the current sensitivity setting making precise calibration possible without the need for repetitive “test mode” trial and error calibration.

Wall Switch Stations

Single and multi-button wall switch stations are available in specialty pre-configured and programmable smart versions. Both offer a self-configuration feature that automatically configures the wall switch stations to perform the logical control and code compliant sequence of operation. All NX wall switch stations can be used with Room Controllers, Panels, or In-Fixture Modules in either standalone or networked applications.

Area Controller

The NX Area Controller is the central component in an enterprise or building networked system. The interface is web browser based and does not require the installation of any software. A native BACnet™ interface facilitates a standard TCP/IP connection providing monitoring and control of lighting by the Building Automation System.

These are the key components. For a full list of NX products please visit www.hubbellcontrolsolutions.com.

These are the key components. For a full list of NX products please visit www.hubbellcontrolsolutions.com.
CX COMMERCIAL LIGHTING SYSTEM
Feature rich, cost effective lighting control system for switching and 0-10V dimming.

CX 8 RELAY MASTER PANEL WITH DIMMING CARD
- 8 dimming channels
- 8 - 20AMP relays with 4 relay options - 20A/1P, N/O, 20A/2P, N/O, N/C (14K SSCR) and 30A/1P latching (IBK SCCR)
- Color LCD user interface with keypad
- 365 day programming with 64 schedules
- Astronomical and real time clock
- Programmable inputs accept low voltage switches, photocells, or motion sensors

OMNI CEILING MOUNT OCCUPANCY SENSOR
- Low voltage Form C contacts available
- Digital dual-technology (ultrasonic [US] and passive infrared [PIR]) sensor
- IntelliDAPT® self-adaptive technology
- Up to 2,000 square-foot coverage area
- Non-volatile memory for sensor settings—no manual adjustment required

CX Daylight Sensor
- Indoor and outdoor versions
- Open or Close loop operation (dependant on Daylight Sensor used)
- Foot-candle range: 3-75,000 (Dependant on Daylight Sensor used)
- Mounts vertically or horizontally

CX Switch Stations
- Discreet or connectorized switch
- Cat5e/6 compatible utilizing RJ45 ports
- Raise/lower dimming capabilities
- Toggle on/off capabilities
- Buttons are assignable

WASP2® AND DIMMING WASP™
Indoor and outdoor occupancy and photocell sensors for on/off or preset dimmed

WASP2 Occupancy and Photocell Sensor
- Digital Passive Infrared (PIR) sensor
- Multiple (single and dual) output versions
- Unique Smart Cycling® for improved fluorescent lamp life
- Interchangeable high/low mount detection lens options
- Low voltage and line voltage models available
- Factory Installed & Field Installed Options Available

Dimming WASP Outdoor Motion and Photocell Sensor
- Mounting heights: high mount lens: 30 ft outdoors, 45 ft indoors: low mount lens: 16 ft indoors/outdoors
- Controls 0-10V, 2-wire dimmable ballasts
- User controlled dimming with high/low area detection options
- Low temperature/water-tight/indoor-outdoor
- Factory Installed & Field Installed Options Available

LOW VOLTAGE SENSORS
Wall switch vacancy & occupancy sensors

LightHAWK® Wall Switch Sensor
- IntelliDAPT® self-adaptive technology – no manual adjustment required
- Available in Passive Infrared, Ultrasonic and Dual Technology versions
- Nightlight and Dimming versions available
- 1 or 2 relay models for single-level, bi-level or dual-circuit control
- Up to 1,000 square-foot, 180° coverage
- Built-in photocell
- Available in 24 VDC, Dual 120/277 VAC and 347 VAC versions

LightOWL™
- IntelliDAPT® self-adaptive technology – no manual adjustments required
- Available in Passive Infrared and Dual Technology versions
- 1,600 square-foot coverage area
- Optional relay and photocell control

OMNI®
- IntelliDAPT® self-adaptive technology – no manual adjustments required
- Available in Passive Infrared, Ultrasonic and Dual Technology versions
- 500 – 2,000 square-foot coverage area per sensor (depending on model)
- Optional relay and photocell control


CA Title 24 Glossary (Select Terms)

These are helpful terms pulled from the CA Title 24 glossary. The full glossary can be found in the CA Title 24 Joint Appendix A.

**ADDITION** is any change to a building that increases conditioned floor area and conditioned volume, which includes any change that increases the floor area and volume of an unconditioned building of an occupancy group or type regulated by Part 6. Addition is also any change that increases the illuminated area of an outdoor lighting application regulated by Part 6.

**ALTERATION** is any change to a building’s water-heating system, space-conditioning system, lighting system, or envelope that is not an addition. Alteration is also any change that is regulated by Part 6 to outdoor lighting system that is not an addition. Alteration is also any change that is regulated by Part 6 to signs located either indoors or outdoors.

**ALTERED COMPONENT** is a component that has undergone an alteration and is subject to all applicable standards requirements.

**ANSI** is the American National Standards Institute.

**ANSI C82.6-2005** is the American National Standards Institute document titled “Ballasts for High-Intensity Discharge Lamps – Methods of Measurement” (ANSI C82.6-2005).

**ANSI/IES RP-16-10** is the document co-authored by the American National Standards Institute and the Illuminating Engineering Society of North America, Recommended Practice titled “Nonmammalian and Definitional Definitions for Illuminating Engineering.”

**APPLIANCE EFFICIENCY REGULATIONS** are the regulations in Title 20, Section 160 at seq. of the California Code of Regulations.

**AUTOMATIC** is capable of operating without human intervention.

**BUILDING COMMISSIONING** is a systematic quality assurance process that spans the entire design and construction process, including verifying and documenting that building systems and components are planned, designed, installed, tested, operated and maintained to meet the owner’s project requirements.

**DAYLIT ZONE** is the floor area under skylights or next to windows. Types of Daylit Zones include Primary Side Lit Daylight Zone, Secondary Sidelite Daylight Zone, Secondary Sidelite Daylit Zone, and Skylit Daylight Zone.

**DEMAND RESPONSE** is short-term changes in electricity usage by end-use customers, from their normal consumption patterns. Demand response may be in response to: (a) a change in the price of electricity; or (b) participation in programs or services designed to modify electricity use: 1. in response to wholesale market prices; or 2. when system reliability is jeopardized.

**DOMINANT OCCUPANCY** is the occupancy type in mixed occupancy buildings with the greatest percentage of total conditioned floor area.

**DWELLING** is a building that contains one or two dwelling units used, intended or designed to be used, rented, leased, let or hired out to be occupied for living purposes.

**DWELLING UNIT** A single unit providing complete, independent living facilities for one or more persons including permanent provisions for living, sleeping, eating, cooking and sanitation.

**ENCLOSED SPACE** is space that is substantially surrounded by solid surfaces, including walls, ceiling, floor, roof, doors, fenestration areas, and floors or ground.

**ENERGY EFFICIENCY RATIO (EER)** is the ratio of net cooling capacity (in Btuh) to total rate of electrical energy input (in watts), of a cooling system under designated operating conditions, as determined using the applicable test method in the Appliance Efficiency Regulations or Title 2.

**ENERGY MANAGEMENT CONTROL SYSTEM (EMCS)** is a computerized control system designed to regulate the energy consumption of a building by controlling the operation of energy consuming systems, such as the heating, ventilation and air conditioning (HVAC), lighting, and water heating systems, and is capable of monitoring environmental and system loads, and adjusting HVAC operations in order to optimize energy usage and respond to demand response signals.

**ENTIRE BUILDING** is the ensemble of all enclosed space in a building, including the space for which a permit is sought, plus all existing conditioned and unconditioned space within the structure.

**ENVELOPE** See Building Envelope.

**FLOOR AREA** is the floor area (in square feet) of enclosed conditioned or unconditioned space on all floors of a building, as measured at the floor level of the exterior surfaces of exterior walls enclosing the conditioned or unconditioned space.


**FLUX** is the ensemble of all enclosed space in a building, including the space for which a permit is sought, plus all existing conditioned and unconditioned space within the structure.

**IES HB** See IES Lighting Handbook.


**LIGHTING definitions:**

- **Accent Lighting** is directional lighting designed to highlight or spotlight objects. It can be recessed, surface mounted, or mounted to a pendant, stem, or track.
- **Chandelier** is a ceiling-mounted, close-to-ceiling, or suspended decorative luminaire that uses glass, crystal, ornamental metals, or other decorative material.
- **Compact Fluorescent Lamp** is a fluorescent lamp less than 9 inches maximum overall length (M.O.L.) with a T5 or smaller diameter glass tube that is folded, bent, or bridged.
- **Decorative (Lighting/Luminaire)** is lighting or luminaires installed only for aesthetic purposes and that does not involve customer inspection of very fine detail from outside a glass enclosed display case.
- **General Lighting** is installed electric lighting that provides a uniform level of illumination throughout an area, exclusive of any provision for special visual tasks or decorative effect. Excludes decorative lighting, and also known as ambient lighting.
- **GU-24** is the designation of a lamp holder and socket configuration based on a coding system used by the International Energy Consortium, where “GU” indicates the broad type of two or more projecting contacts, such as pins or posts, “2” distinguishes between lamp and holder designs of similar type but that are not interchangeable due to electrical or mechanical requirements, and “24” indicates 24 millimeters center to center spacing of the electrical contact points.
- **Illuminance** is the incident luminous flux density on a differential element of surface located at a point and oriented in a particular direction, expressed in lumens per unit area.
- **Illumination** is light incident on a surface of body, or the general condition of being illuminated.
- **Lamp** is an electrical appliance that produces optical radiation for the purpose of visual illumination, designed with a base to provide an electrical connection between the lamp and a luminaire, and designed to be installed into a luminaire by means of a lamp holder integral to the luminaire.
- **Landscape Lighting** is a type of outdoor lighting that is recessed into or mounted on the ground, paving, or raised deck, which is mounted less than 42” above grade or mounted onto trees or railless, and that is intended to be aimed only at landscape features.
- **Latern** is an outdoor luminaire that uses an electric lamp to replicate the appearance of a pre-electric lantern, which used a flame to generate light.
- **Light** is the luminous equivalent of light and is properly called luminous flux.
- **Lighting**, or illumination, is the application of light to achieve some practical or aesthetic effect.
- **Light Emitting Diode (LED)** Definitions used in Part 6 are in section 6.8 of ANSI/IES RP-16-10.
- **Low Voltage** is less than 50 volts.
- **Lumen Maintenance is a strategy used to provide a precise, constant level of lighting from a lighting system regardless of the age of the lamps or the maintenance of the luminaires.**
- **Luminaire** is a complete lighting unit consisting of lamp(s) and the parts that distribute the light, position and protect the lamp(s), and connect the lamp(s) to the power supply.
- **Luminaire** is a measure of the light emitting power of a surface, in a particular direction, per unit area.
- **Luminous flux** is usually evaluated radiant flux and defines “light” for purposes of lighting design and illuminating engineering.
- **Marquee Lighting** is a permanent lighting system consisting of one or more rows of many small lamps, including light emitting diodes (LEDs), or fiber optic lighting, attached to a canopy.

**Lighting Applications:**

- **Outdoor Luminaires.**
Ornamental lighting for compliance with Part 6 is the following:

Luminaires installed outdoor which are rated for 100 watts or less that are post-top luminaires, lanterns, pendant luminaires, chandeliers, and marquee lighting.

Decorative Luminaires installed indoor that are chandeliers, sconces, lanterns, post-top luminaires, light emitting diodes, theatrical projectors, moving lights, and light color panels.

Pendant is a mounting method in which the luminaire is suspended from above.

Permanently Installed lighting consists of luminaires that are affixed to a building, in the meaning of Civil Code section 658 and 660, except as provided below. Permanently installed luminaries may be mounted inside or outside of a building or site. Permanently installed luminaries may have other plug-in or hardwired connections for electric power. Examples include track and flexible lighting systems, lighting attached to walls, ceilings, columns, inside or outside of permanently installed cabinets, internally illuminated cabinets, mounted on poles, in trees, or in the ground, attached to ceiling fans and integral to exhaust fans. Permanently installed lighting does not include portable lighting or lighting that is installed by the manufacturer in exhaust hoods for cooking equipment, refrigerated cases, food preparation equipment, and scientific and industrial equipment.

Portable Lighting is lighting, with plug-in connections for electric power, that is: table and freestanding floor lamp; attached to modular furniture; pendant luminaries; luminaries attached to workstation panels; attached to movable displays; or attached to other personal property.

Post top luminaire is an outdoor luminaire that is mounted directly on top of a lamp-post.

Precision Lighting is task lighting for commercial or industrial work that illuminates low contrast, finely detailed, or fast moving objects.

Radiant power is the time-rate-flow of radiant energy.

Radiant Energy is the electromagnetic or photonic radiant energy from a source.

Sconce is a wall mounted decorative accent luminaire.

Source (light) is the general term used to reference a source of light. It can refer variously to an electric lamp, a light emitting diode (LED), an entire luminaire with lamp and optical control, or foxtailor for daylighting.

Special Effects Lighting is lighting installed to give off luminance instead of providing illumination, which does not serve as general, task, or display lighting.

Task Lighting is lighting that is not general lighting and that specifically illuminates a location where a task is performed.

Temporary Lighting is a lighting installation, with plug-in connections, that does not persist beyond 60 consecutive days or more than 100 days per year.

Track Lighting is a system that includes luminaires and a track, rails, or cables that both mount the system, and deliver electric power.

MANDATORY MEASURES CHECKLIST is a form used by the building plan checker and field inspector to verify compliance of the building with the prescribed list of mandatory features, equipment efficiencies and product certification requirements. The documentation author indicates compliance by initialed, checking, or marking N/A (for features not applicable) in the boxes or spaces provided for the designer.

LIGHTING CONTROLS consist of the following:

- Astronomical Time-Switch Control is an Automatic Time-Switch Control that controls lighting based on the time of day and astronomical events such as sunset and sunrise, accounting for geographical location and calendar date.

- Automatic Daylight Control uses one or more photosensors to detect changes in daylight illumination and then automatically adjusts the luminous flux of the electric lighting system in response.

- Automatic Multi-Level Daylight Control adjusts the luminous flux of the electric lighting system in either a series of steps or by continuous dimming in response to available daylight. This kind of control uses one or more photosensors to detect changes in daylight illumination and then automatically adjusts the electric lighting levels in response.

- Automatic Time Switch Control controls lighting based on the time of day.

- Captive-Key Override is a type of lighting control in which the key that activates the override cannot be released when the lights are in the on position.

- Countdown Timer Switch turns lighting or other loads ON when activated using one or more selectable count-down time periods and then automatically turns lighting or other loads OFF when the selected time period had elapsed.

- Dimmer varies the luminous flux of the electric lighting system by changing the power delivered to that lighting system.

- Dimmer, Full-Range (Also known as a Continuous Dimmer) varies the luminous flux of the electric lighting system over a continuous range from the device’s maximum light output to the device’s minimum light output without visually apparent abrupt changes in light level between the various steps.

- Dimmer, Stepped varies the luminous flux of the electric lighting system in one or more predetermined discrete steps between maximum light output and OFF with changes in light level between adjacent steps being visually apparent.

- Lighting Control, Self Contained is a unitary lighting control module that requires no additional components to be a fully functional lighting control.

- Lighting Control System requires two or more components to be installed in the building to provide all of the functionality required to make up a fully functional and compliant lighting control.

- Multi-Level Astronomical Time Switch is an Astronomical Time Switch Control that reduces lighting power in multiple steps.

- Multi-Level Lighting Control reduces power going to a lighting system in multiple steps.

- Multiscene Programmable Control allows for two or more pre-defined lighting settings, in addition to all-OFF, for two or more groups of luminaires to suit multiple activities in the space.

- Occupant Sensing Controls automatically control levels of illumination, allow for manual operation.

- Motion Sensor is used outdoors, automatically turns lights OFF after an area is vacated of occupants, and automatically turns the lighting load ON when the area is occupied.

- Occupant Sensor is used indoors and automatically turns lighting load OFF after an area is vacated of occupants and is capable of automatically turning the lighting load ON when an area is occupied.

- Partial-ON Occupant/Motion Sensor automatically turns lights OFF after an area is vacated of occupants and is capable of automatically or manually turning ON the lighting load when an area is occupied.

- Partial-OFF Occupant/Motion Sensor automatically turns OFF part of the lighting load after an area is vacated of occupants and is capable of automatically turning ON the lighting load when an area is occupied.

- Vacancy Sensor automatically turns lights OFF after an area is vacated of occupants and requires lighting loads to be turned ON manually.

- Part-Night Outdoor Lighting Control is a time or occupancy-based lighting control device or system that is programmed to reduce or turn off the lighting power to an outdoor luminaire for a portion of the night.

- Photo Control automatically turns lights ON and OFF, or automatically adjusts lighting levels, in response to the amount of daylight that is available. A Photo Control may also be one component of a full assembled lighting system, the component having the capability to provide a signal proportional to the amount of daylight to a Lighting Control System to continuously dim or brighten the electric lights in response.

- Track Lighting Integral Current Limiter consists of a current limiter integral to the end-feed housing of a manufactured line-voltage track lighting system.

- Track Lighting Supplementary Overcurrent Protection Panel is a supplemental overcurrent protective device that is installed as defined in Article 100 of the California Electric Code, and used only with line voltage track lighting.