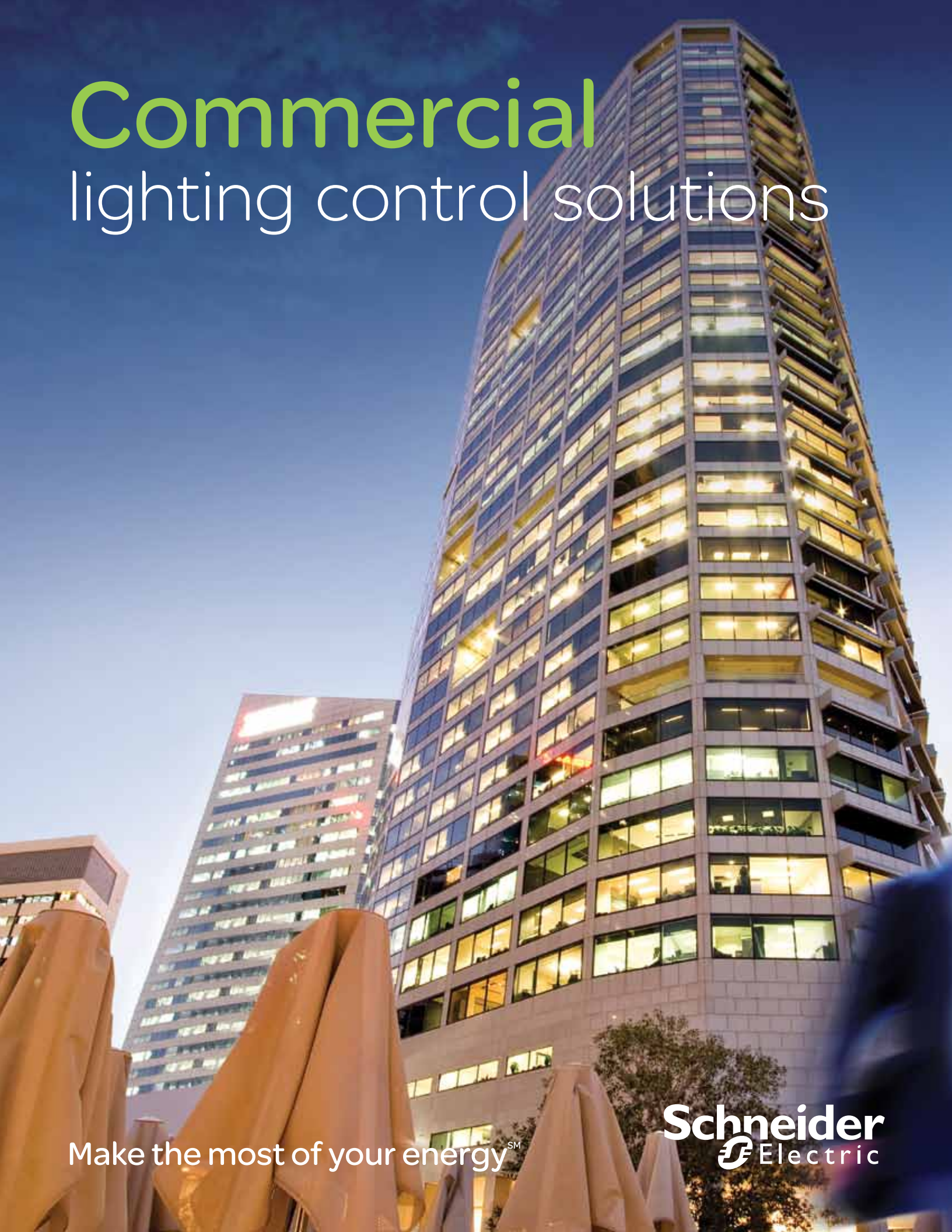


Commercial
lighting control solutions

Make the most of your energy℠

Schneider Electric

It's time to change the way you think about **lighting control**.

Seamlessly Integrated Lighting Control

No more hassles dealing with separate specs or coordinating between different vendors. One company that can handle your whole project. One point of contact you know you can always depend on, from beginning to end. One source that can deliver seamlessly integrated lighting control solutions — even entire electrical distribution systems. That source is Schneider Electric.

Comprehensive Lighting Control Offer

C-Bus™ network lighting control, Powerlink® intelligent panelboards and occupancy sensors from Schneider Electric create one of the most comprehensive energy-saving offers in the industry. They combine automated and web-enabled control with occupancy-based solutions and dimming capabilities.

Building System Integration

We design every lighting control solution to integrate easily with other facility operations, such as HVAC, security and safety systems, using open system integration and protocols. Just what you'd expect from a global leader in energy management. The result: seamless solutions that deliver the energy savings and connectivity you demand — meeting your highest performance and budget expectations. Now you can monitor and control each building function with a single system.

Environmentally Sustainable Design

Schneider Electric makes your building sustainable, flexible and energy efficient. As lighting is often the largest contributor to a building's energy usage, lighting control becomes critical to ensure lighting loads are effectively managed. Lighting control products from Schneider Electric can be used to both reduce energy consumption and peak electrical demand as well as provide years of sustainable savings through a reduction in energy usage with improved employee productivity.

Schneider Electric lighting controls can be applied to reduce light levels, operate shades and blinds for daylight harvesting, and switch lights on/off according to automatically adjusting sunset/sunrise schedules. Our network-based lighting control systems can seamlessly integrate lighting control and electrical metering functions of a building. These systems can track metered data by lighting zone, space and building. And our advanced web-based lighting controls allow advanced control capabilities from the convenience of a standard web browser.

Existing Buildings

For many retrofits, adding a suitable lighting control system has become a daunting task. Concerns include: space constraints, electical labor and installation costs and operational concerns, all while trying to ensure a code-compliant installation. Relax, Schneider Electric has a solution.

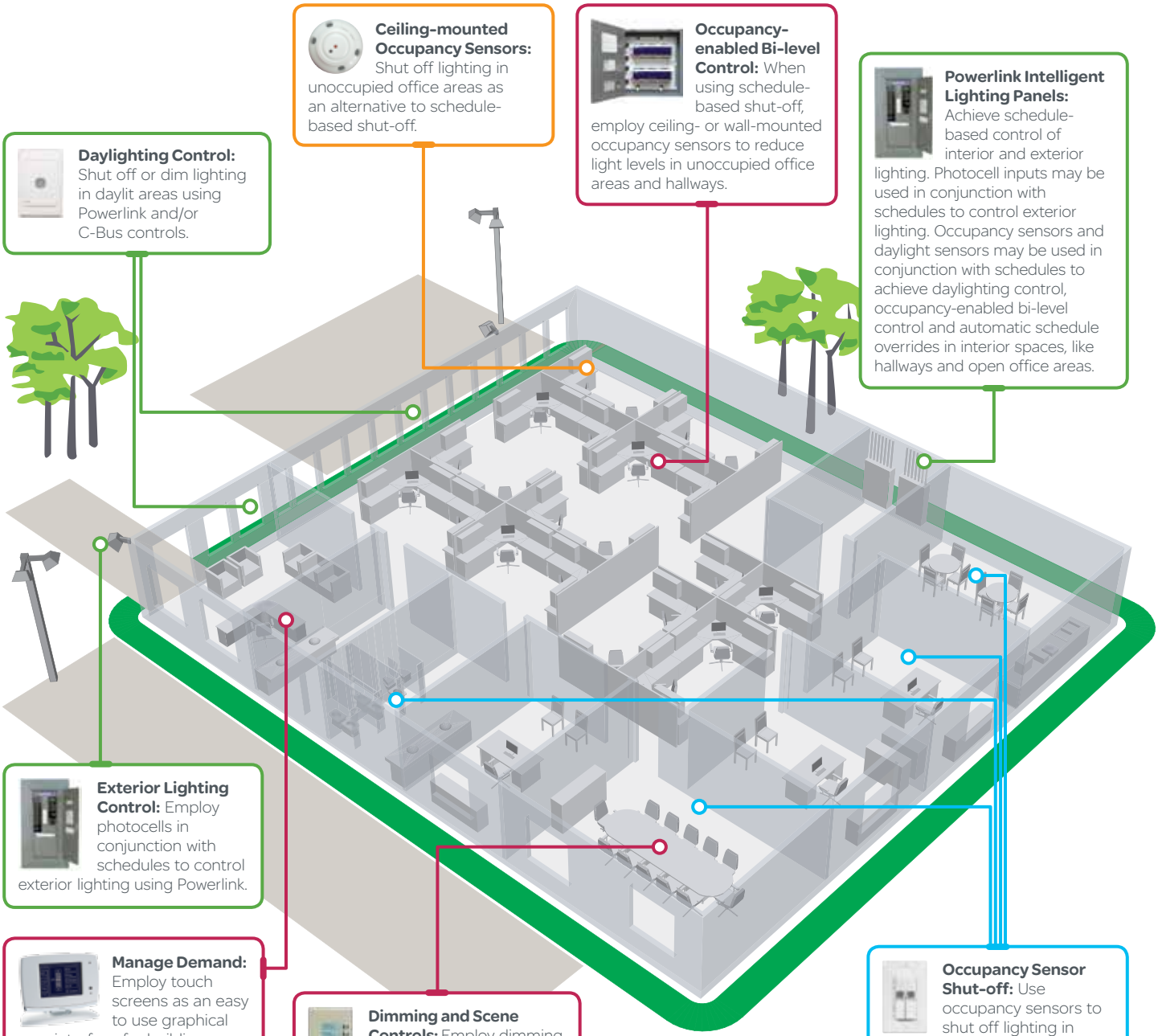
Powerlink intelligent lighting control components mount in a typical lighting panelboard just like a standard circuit breaker. Documenting your control system layout is as simple as indicating which branch circuits are to be controlled. Since the lighting control system is located inside the lighting panelboard, valuable wall and floor space is available for more productive uses. Schneider Electric also offers space-saving, column-width panelboards and flexible modular panelboard systems.

Our C-Bus brand of network lighting control makes it easy to add keypads and touchscreens, which are all connected by a simple Cat-5 wire, configured in any topology. What could be easier?

Both our C-Bus and Powerlink control systems will work together seamlessly, creating a powerful, completely scalable lighting control solution.

Office Buildings

For most commercial business, reducing the cost of operating their business and maximizing operating efficiency is critical. To achieve maximum efficiency, businesses must reduce waste. Today, businesses must do more with less. Lighting is no exception. There is no more obvious waste of energy than a fully-lit building with no one in it. Lighting unoccupied spaces or buildings is wasteful and expensive. Lighting controls help facility managers and building managers trim the waste, maximize energy and efficiency, and reduce building operating costs.



Ceiling-mounted Occupancy Sensors: Shut off lighting in unoccupied office areas as an alternative to schedule-based shut-off.

Occupancy-enabled Bi-level Control: When using schedule-based shut-off, employ ceiling- or wall-mounted occupancy sensors to reduce light levels in unoccupied office areas and hallways.

Powerlink Intelligent Lighting Panels: Achieve schedule-based control of interior and exterior lighting. Photocell inputs may be used in conjunction with schedules to control exterior lighting. Occupancy sensors and daylight sensors may be used in conjunction with schedules to achieve daylighting control, occupancy-enabled bi-level control and automatic schedule overrides in interior spaces, like hallways and open office areas.

Daylighting Control: Shut off or dim lighting in daylit areas using Powerlink and/or C-Bus controls.

Exterior Lighting Control: Employ photocells in conjunction with schedules to control exterior lighting using Powerlink.

Manage Demand: Employ touch screens as an easy to use graphical user interface for building lighting control.

Dimming and Scene Controls: Employ dimming and scene controls in executive offices, meeting rooms, boardrooms and conference rooms using C-Bus lighting controls.

Occupancy Sensor Shut-off: Use occupancy sensors to shut off lighting in conference rooms, restrooms, private offices and employee break rooms.

Wall Switch Occupancy Sensors

- Adaptive technology
- No neutral required
- Audible alert (alarm)
- Five colors to choose from
- Light-level sensor
- Walk-through mode
- Lamp-saver mode (dual-circuit sensors)
- One- and two-circuit models available

Ceiling- and Wall-mounted Occupancy Sensors

- Ultrasonic, PIR and dual-technology models
- Easy-access adjustment panel
- Adjustable time delay and sensitivity
- 360˚ field of view (ceiling-mounted sensors)
- Isolated relay
- Interchangeable PIR lenses (wall-mounted PIR)

C-Bus™ Network Lighting Control

- Granular control of aisle and area lighting
- Daylighting control (dim or turn lighting off in daylit areas)
- Industry-leading controls (keypads or touchscreens)
- Web-enabled control through SchedulePlus software
- Scalable and flexible solution

Powerlink® Intelligent Lighting Panels

- Desktop access via LCS user interface
- Web-enabled lighting control
- Seamless connectivity with network keypads, sensors, etc.
- BACnet capable
- Easy panelboard retrofit in existing buildings

Applications

Schedule-based Control

Employ schedule-based control of exterior lighting and interior lighting of large or shared spaces, like hallways, open office areas and warehouses.

Occupancy Sensor Controls

When rooms are not in use, employ dual-tech occupancy sensors to shut off lighting. Consider passive infrared (PIR) wall switch occupancy sensors for private offices, restrooms, conference rooms, board rooms, open office areas (bi-level lighting control), break rooms and storage rooms.

Multi-scene and Dimming Controls

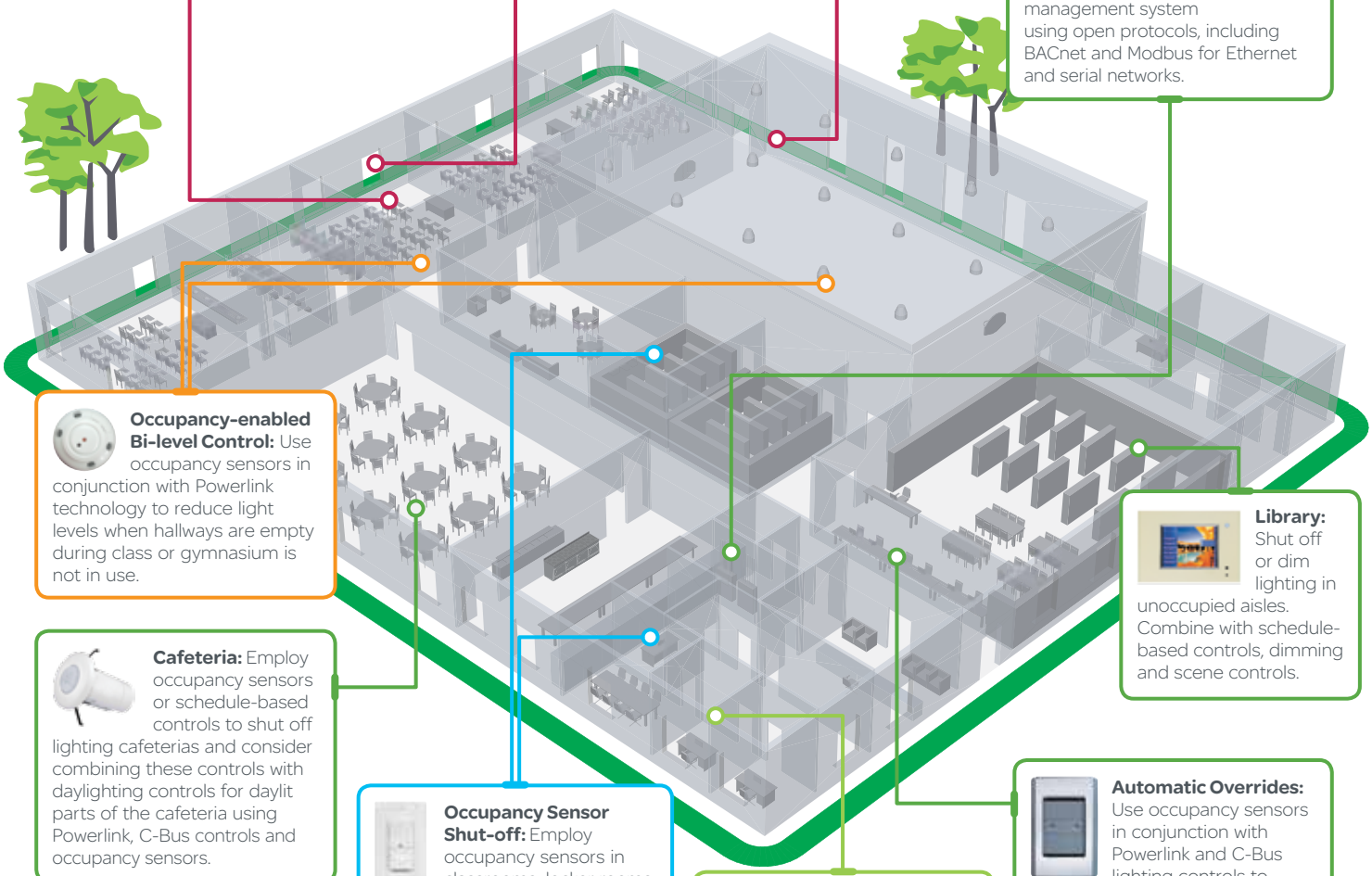
Employ multi-scene control of executive offices, board rooms, meeting rooms and multi-purpose rooms.

Daylighting Controls

Offices typically have an abundance of daylight from windows. More frequently, new buildings are constructed with skylights to let natural light into rooms. To take advantage of natural illumination, reduce electric light levels by switching off lighting circuits, groups of lights or dimming lighting in day-lit areas. Employ C-Bus network lighting controls to create a reliable closed-loop daylighting control system that ramps lighting up or down with the fall and rise of natural light levels with little or no disruption.

K-12 Schools & Universities

Educational buildings are a great opportunity to reduce lighting-related energy waste. Lighting accounts for approximately 25% of electricity consumed in educational buildings, and the opportunities to reduce waste by employing lighting controls are predictable and easily replicated. Web-enabled lighting controls using Powerlink lighting control panelboards may be employed on large school or university campuses or in large school districts to provide centralized maintenance personnel with access to lighting control systems remotely via the internet.



Classrooms: Employ occupancy sensors to shut off lighting in classrooms. Potentially combine occupancy-based controls with daylighting controls in daylit areas, dimming and scene controls using C-Bus controls.

Daylighting Control: Use daylighting controls to slowly dim lighting in daylit areas to minimize disruption caused by abrupt changes in light level.

Daylighting Control: Employ 0–10 V dimming controls to dim fluorescent or HID lighting in daylit areas, such as gymnasiums and corridors.

Powerlink Intelligent Lighting Panels: Employ Powerlink technology to achieve schedule-based control of interior and exterior lighting.

Web-enabled Lighting Control: Employ Powerlink technology to provide remote access to lighting control system via the Internet.

Building Automation System: Integrate Powerlink and downstream C-Bus network controls into the building management system using open protocols, including BACnet and Modbus for Ethernet and serial networks.

Occupancy-enabled Bi-level Control: Use occupancy sensors in conjunction with Powerlink technology to reduce light levels when hallways are empty during class or gymnasium is not in use.

Library: Shut off or dim lighting in unoccupied aisles. Combine with schedule-based controls, dimming and scene controls.

Cafeteria: Employ occupancy sensors or schedule-based controls to shut off lighting cafeterias and consider combining these controls with daylighting controls for daylit parts of the cafeteria using Powerlink, C-Bus controls and occupancy sensors.

Occupancy Sensor Shut-off: Employ occupancy sensors in classrooms, locker rooms, offices, restrooms and break rooms to shut off lighting when these areas are unoccupied.

Lighting Control Workstation: Locally manage lighting control system from desktop using LCS user interface from a standard PC.

Automatic Overrides: Use occupancy sensors in conjunction with Powerlink and C-Bus lighting controls to achieve an automatic schedule override for cleaning crews and after-hour activities. May also serve as an alarm input to the security system when security system is armed.

Wall Switch Occupancy Sensors

- Adaptive technology
- No neutral required
- Audible alert (alarm)
- Five colors to choose from
- Light-level sensor
- Walk-through mode
- Lamp-saver mode (dual-circuit sensors)
- One- and two-circuit models available

Ceiling- and Wall-mounted Occupancy Sensors

- Ultrasonic, PIR and dual-technology models
- Easy-access adjustment panel
- Adjustable time delay and sensitivity
- 360˚ field of view (ceiling-mounted sensors)
- Isolated relay
- Interchangeable PIR lenses (wall-mounted PIR)

C-Bus™ Network Lighting Control

- Granular control of aisle and area lighting
- Daylighting control (dim or turn lighting off in daylit areas)
- Industry-leading controls (keypads or touchscreens)
- Web-enabled control through SchedulePlus software
- Scalable and flexible solution

LCS Software with Powerlink® Lighting Panels

- Manage lighting control from your desktop
- Web-enabled control with remote access
- Fully configure panelboards
- Real-time monitoring system status
- Remote diagnostics, set-up and maintenance

Powerlink Intelligent Lighting Panels

- Desktop access via LCS user interface
- Web-enabled lighting control
- Seamless connectivity with network keypads, sensors, etc.
- BACnet capable
- Easy panelboard retrofit in existing buildings

Applications

Occupancy-enabled Bi-level Control

K-12 school hallways are empty 50 minutes out of every hour. Why not employ ultrasonic occupancy sensors to shed some of that load during class when the halls are normally unoccupied.

- Achievable savings: Up to 40%
- Payback period: Less than three years

Schedule-based Control

Employ schedule-based control of exterior parking and security lighting, and interior hallways, gymnasium, and library. When using occupancy-enabled bi-level lighting in hallways or the library, utilize occupancy sensors as an automatic override to the Powerlink controls for after-hour functions and cleaning crews.

- Achievable savings: 15% or more
- Payback period: Two to three years typically

Occupancy Sensor Shut-off

Classrooms are rarely used all day. When classrooms are not in use, employ dual-tech occupancy sensors to shut off lighting. Consider passive infrared (PIR) wall switch occupancy sensors for administrative offices, and PIR ceiling-mounted occupancy sensors for the cafeteria.

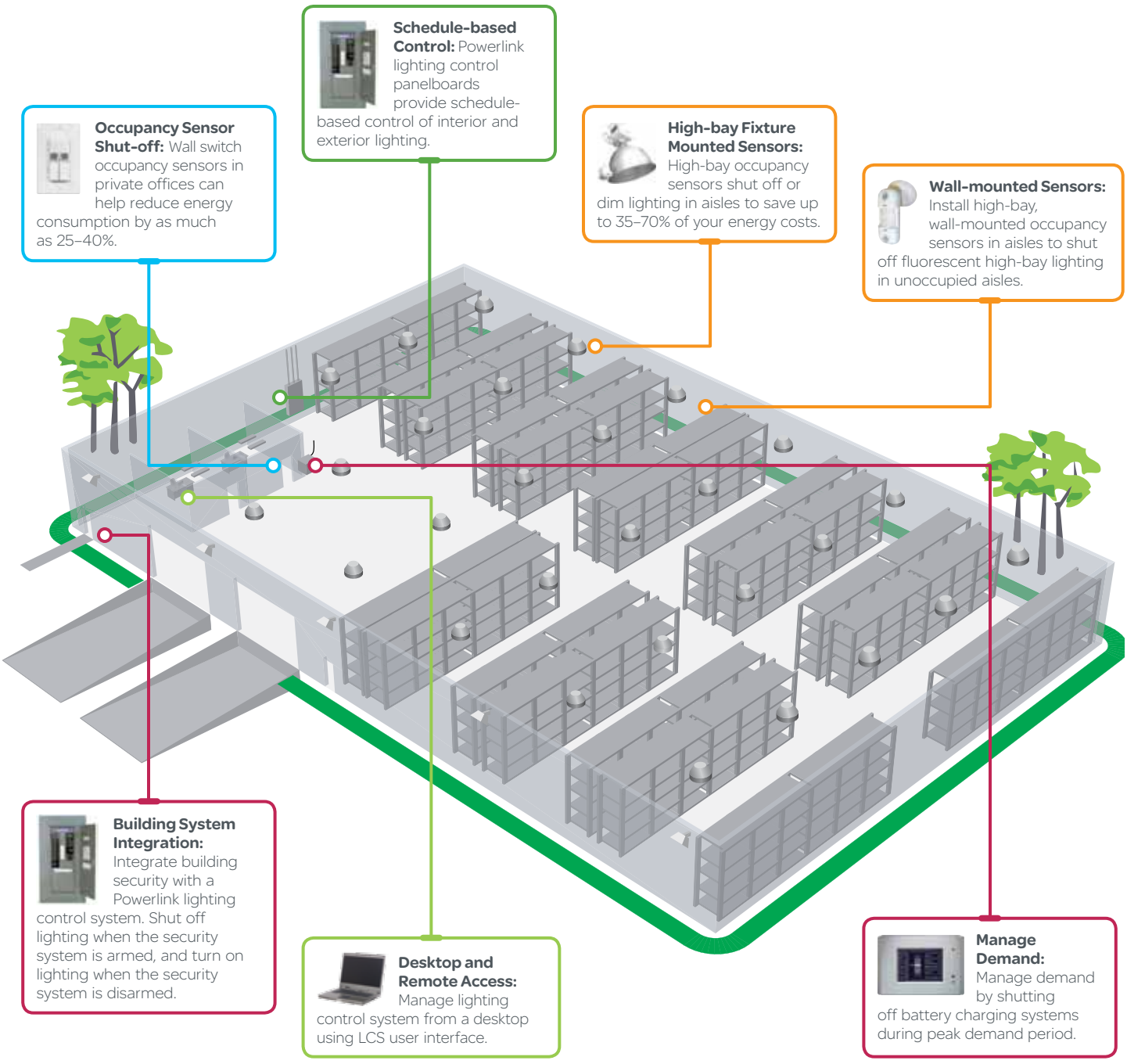
- Achievable savings: Up to 45%
- Payback period: Less than three years

Daylighting Controls

Classrooms typically have an abundance of daylight from windows. More frequently, new school buildings are constructed with skylights to let natural light into the classroom. To take advantage of natural illumination, reduce electric light levels by switching off lighting circuits, groups of lights or dimming lighting in day-lit areas. Employ C-Bus network lighting controls to create a reliable closed-loop daylighting control system that ramps lighting up or down with the fall and rise of natural light levels with little or no disruption.

Warehouses

Lighting accounts for approximately 50% of electricity consumed in warehouses. Properly installed lighting controls reduce, or virtually eliminate, lighting-related energy waste in warehouses, resulting in lower electric utility bills. That savings falls right to the bottom line year after year, and as the cost of electricity increases, the savings increases with it. Why stretch your operating budget to pay electric bills? Lighting controls are a capital investment in your facility that pay back dividends year after year. The average lighting control system in warehouses has less than a two-year payback, resulting in a ten-year return on investment that is four times the initial installed cost.



Wall Switch Occupancy Sensors

- Adaptive technology
- No neutral required
- Audible alert (alarm)
- Five colors to choose from
- Light-level sensor
- Walk-through mode
- Lamp-saver mode (dual-circuit sensors)
- One- and two-circuit models available

High-bay (HID) Occupancy Sensors

- Hi-lo control of high-bay HID lighting
- Reduce power by 50% in unoccupied spaces
- Fully-adjustable range and time delay
- Available with interchangeable aisle and area lenses
- 15 minute warm-up period

C-Bus™ Network Lighting Control

- Granular control of aisle and area lighting
- Daylighting control (dim or turn lighting off in daylit areas)
- Industry-leading controls (keypads or touchscreens)
- Web-enabled control through SchedulePlus software
- Scalable and flexible solution

LCS Software

- Manage lighting control from your desktop
- Web-enabled control with remote access
- Fully configure panelboards
- Real-time monitoring system status
- Remote diagnostics, set-up and maintenance

Powerlink® Intelligent Lighting Panels

- Desktop access via LCS user interface
- Web-enabled lighting control
- Seamless connectivity with network keypads, sensors, etc.
- BACnet capable
- Easy panelboard retrofit in existing buildings

Applications

Occupancy-enabled Bi-level Control

Perfect for warehouse aisles, employ high-bay HID hi-lo fixture-mounted occupancy sensors to dim HID lighting to 50% power when the controlled area, or aisle, is unoccupied.

- Achievable savings: 30% or more
- Payback period: One to two years

Schedule-based Control

Retrofit existing panelboards with Powerlink lighting control panelboards to execute schedule-based control of high-bay lighting in warehouses and industrial buildings. Compared to manual switching of circuit breakers and depending on maintenance crews to remember to switch off lighting, Powerlink controls do not adversely wear circuit breakers and the switching off of lights can happen when the security system is armed using a simple input from the security system. And Powerlink protects employees from potential arc flash hazards associated with switching circuit breakers manually.

- Achievable savings: 15% or more
- Payback period: One to two years

Daylighting Control

Increasingly, warehouses are constructed with skylights to allow natural illumination of interior spaces during the day when most warehouses operate. Employ daylight sensors to shed unnecessary lighting when natural light is available. C-Bus lighting controls may be used to dim fluorescent or HID lighting, or to switch off some lighting when natural light levels reach minimum levels. Powerlink lighting control panelboards may also be used to switch off lighting circuits in reaction to higher natural light levels.

- Green/sustainable
- Renewable energy systems may be eligible for utility rebates, tax incentives or both

One-line Diagram

C-Bus network lighting control, Powerlink® intelligent panelboards and occupancy sensors from Schneider Electric create one of the most comprehensive energy-saving offers in the industry. They combine automated and web-enabled control with occupancy-based solutions and dimming capabilities

Device Router

PC Web Browser

Ethernet

Powerlink Lighting Control Panelboard

Input Units

C-Bus™ Remote Control

Neo™ Keypad

Saturn™ Keypad

DLT™ Keypad

Output Units

Multi Channel Relays

Network Units

Power Supply

PC Interface

Schneider Electric Occupancy Sensors

Occupancy sensors from Schneider Electric are the perfect solution for applications needing simple occupancy-based controls. Low-voltage ceiling- and wall-mounted occupancy sensors can be tied into the C-Bus network using simple dry contact inputs.

Wall Switch

Ceiling Mount

Wall Mount

Fixture Mount

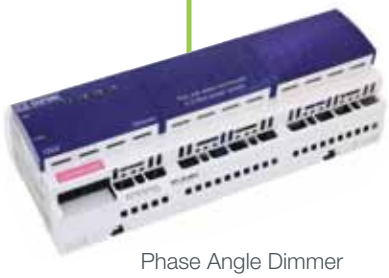
Touch Screen

Sensor
(PIR/IR/Light Level)

Bus Coupler
(Dry Contact Connections)

Auxiliary Input Unit

General Input Unit


Phase Angle Dimmer

Professional
Series Dimmer

0-10 V
Dimming Unit

Changeover Relay Unit

Network Bridge

Ethernet Gateway

DALI Gateway

Pascal Automation
Controller

Telephone
Interface Unit

The Complete Package

Reliable lighting control systems deserve reliable support to match. With Schneider Electric lighting control, you can always count on our Schneider Electric field sales engineers and factory-trained experts for help when you need it — before, during or after installation. Whether that means local support, troubleshooting or on-site commissioning.

To learn more, visit **www.schneider-electric.us**
or call **1-888-778-2733**.

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