Room Controller

Greengate

design and application guide

COOPER Lighting Solutions

CooperLighting.com

Table of contents

Room Controller system

The Room Controller System provides energy compliant lighting, plug and emergency control capabilities that allow for out-of-the-box functionality in virtually any space. The system can be ordered based on specific budget or performance requirements.

- Simplified compliance with a product designed to meet the latest energy codes
- Reduce cost of installation with single enclosure and simplified wiring
- Save time with out-of-the-box controls functionality, no programming needed

Features and benefits

Stand-Alone Architecture

- Code compliant automatic lighting, emergency and plug load control.
- Delivers occupancy status to HVAC system via contact closure.
- Receives local Demand Response signal.

Network Architecture

- Code compliant automatic lighting, emergency and plug load control with enhanced user control and centralized time schedule control.
- Integrates with BMS via BACnet IP.
- Centralized Demand Response via network.

Contractor Benefits

- Reduce material cost with the included Room Controller wiring compartment with direct conduit connections. No need for additional junction boxes.
- Simplified wiring with RJ45 connections for all low voltage devices saves time on the site.
- The Room Controller works immediately upon power up which saves time on network projects which require startup.

Distributor Benefits

- Give the electrical contractor what they need to start a project with convenient Room Controller starter kits.
- Reduce inventory requirements with sensors that work with Room Controllers or with stand-alone applications.
- Out-of-the-box functionality provides immediate verification of wiring and code compliance.

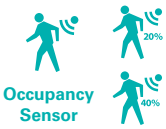
Specifier Benefits

- Worry free design with the Room Controller system that was designed to meet the current energy codes.
- Simplified sequence of operations definition and training with out-of-the-box functionality.
- Simplify complex user interaction with flexible wallstations that can be customized with zone or scene buttons.

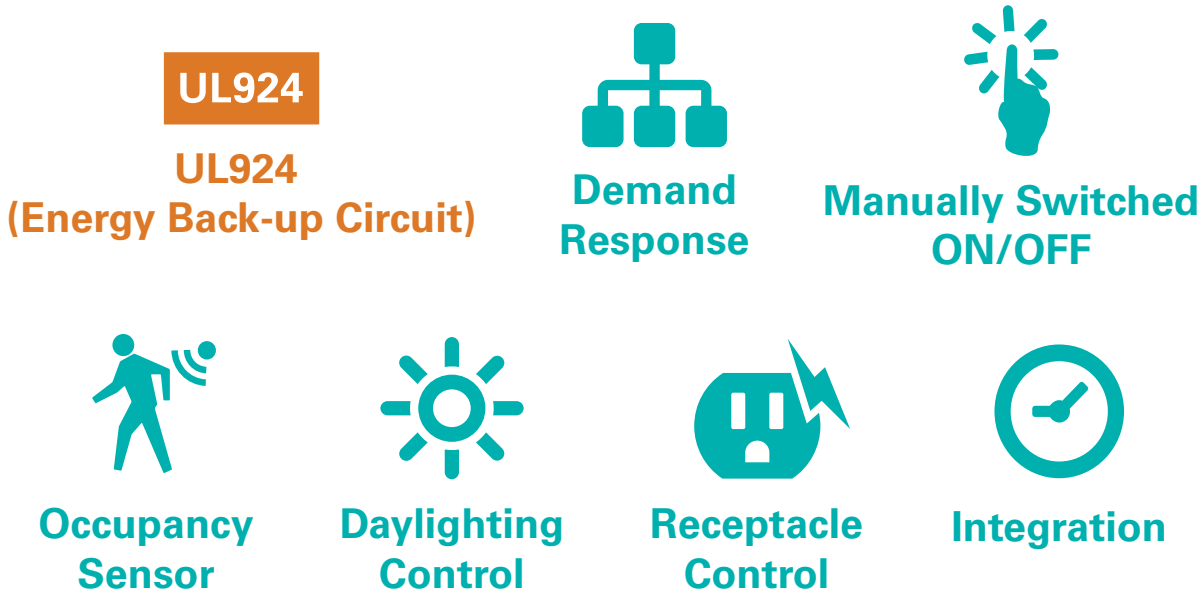
End User Benefits

- Reduce training time with simple and consistent user experience in all rooms that have the Room Controller installed.
- Remove maintenance concerns with RJ45 plug in low voltage devices that work immediately when connected.
- Save on operating costs with a system that was designed to provide consistent energy savings and drive energy efficiency throughout the building.

Built-in energy saving lighting control strategies

STRATEGY	DESCRIPTION	ESTIMATED SAVINGS
 Manual Dimmer	Manual/personal dimming control – is one of five alternative methods to meet the Multi-level lighting control requirements.	10-20%
 Occupancy Sensor	Occupancy/vacancy sensing – provides Manual On/Automatic Off or Automatic On/ Automatic Off and Partial Off capabilities.	20-60%
 Daylighting Control	Daylight dimming – provides three daylight dimming zone that automatically adjust the lighting based on daylight available in the space.	20-45%
 Receptacle Control	Plug load control – automatically turns On receptacles upon occupancy regardless of light status. Ensures receptacles are turned Off when the space is vacant.	15-50% Controlled loads
 Tuning Control	High-end/Task Tuning – lowers the maximum light level for automatic energy savings.	10-30%
 Demand Response	Demand Response – automatically reduces light level based on signal from OpenADR device or BMS closure.	10-40%
 Remote Signal Control	Remote Signal Control – Automatically sends a signal to the HVAC system based on occupancy.	20%

Out-of-the-box control strategies



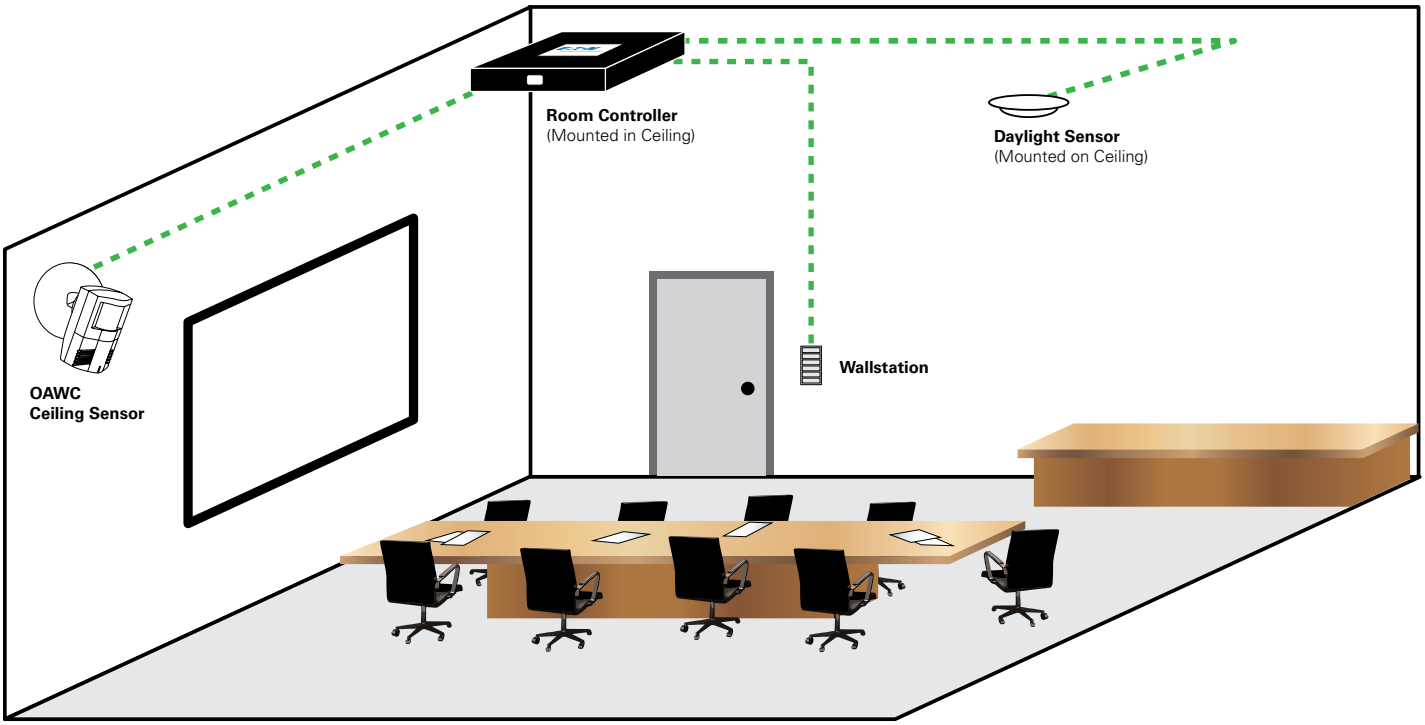
The Room Controller system can now be specified and ordered based on project needs. The Room Controller system is available in both a stand-alone and networked architecture.

- Individual components – Simple product offering list
- Room Controller Starter Kits – Basic Electrical Distributor stocking products, everything the electrical contractor will need for installation above the ceiling. Customize for each space with specific wallstations and sensor requirements.
- Room Controller QuicKits – Easy to order, designed and packaged for immediate in room installation and provide a complete all-in-one package solution, with pre-defined sequence of operations.

Supported by Eaton a global leader with expertise in power distribution and circuit protection; backup power protection; control and automation; lighting and security; structural solutions and wiring devices; solutions for harsh and hazardous environments; and engineering services. Eaton is positioned through its global solutions to answer today's most critical electrical power management challenges.

Stand-alone architecture

The Room Controller system was designed to meet the energy codes requirements of virtually any space. This application illustrates how conference rooms can use daylight dimming in conjunction with natural light entering the space, while providing Scene Control/Automatic Off and receptacle control to achieve energy savings up to 65% and achieve higher quality lighting. Providing optional control of individual lighting zones and HVAC output will allow for even greater energy savings.



Space Assumptions

Space

100 square feet or larger

Electrical Load

Greater than 0.5 watts per square feet planned

Daylighting

Contains glazing larger than 24 square feet total requiring daylighting for both primary and secondary sidelit zones

Others

The general lighting is not intended for continuous use (24/7, 365). Egress lighting is not part of the general lighting use.

Building

When larger than 10,000 square feet, Demand Response is required (capable of lowering lighting power by 15%)

SPACE LEVEL (AREA CONTROL)

- Must be accessible to occupants to operate the lighting

Manually Switched ON/OFF

Reference:

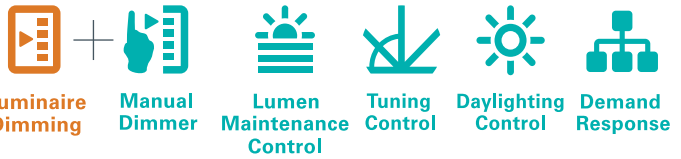
T24-2016
130.1(a)

ASHRAE 90.1-2018
9.4.1.1.a

IECC 2018
C405.2.2.3

MULTI-LEVEL LIGHTING

- Luminaire must provide uniform dimming
- Capable of reducing power by at lease one of five control functions
- When a dimming luminaire is present, a manual dimmer is recommended. Other functional options available



Reference:

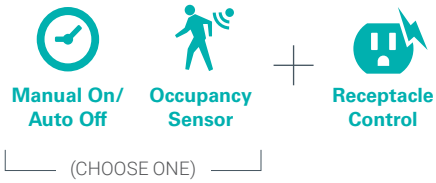
T24-2016
130.1(b)

ASHRAE 90.1-2018
9.4.1.1.d

IECC 2018
C405.2.2.2

SHUTOFF CONTROL

- Luminaires turned off when vacant
- 120V receptacles only, one within 6 feet of uncontrolled
- Each 5,000 square feet to have shutoff controls



Reference:

T24-2016
130.1(c), 130.5(d)

ASHRAE 90.1-2018
9.4.1.1.h, 9.4.1.1.i, 8.4.2

IECC 2018
C405.2.1

AUTOMATIC DAYLIGHTING CONTROL

- Eliminate energy waste when natural light present

Exceptions when daylighting control not required:

- No skylights
- Glazing <24 square feet
- Daylit zone is less than 120W

Reference:

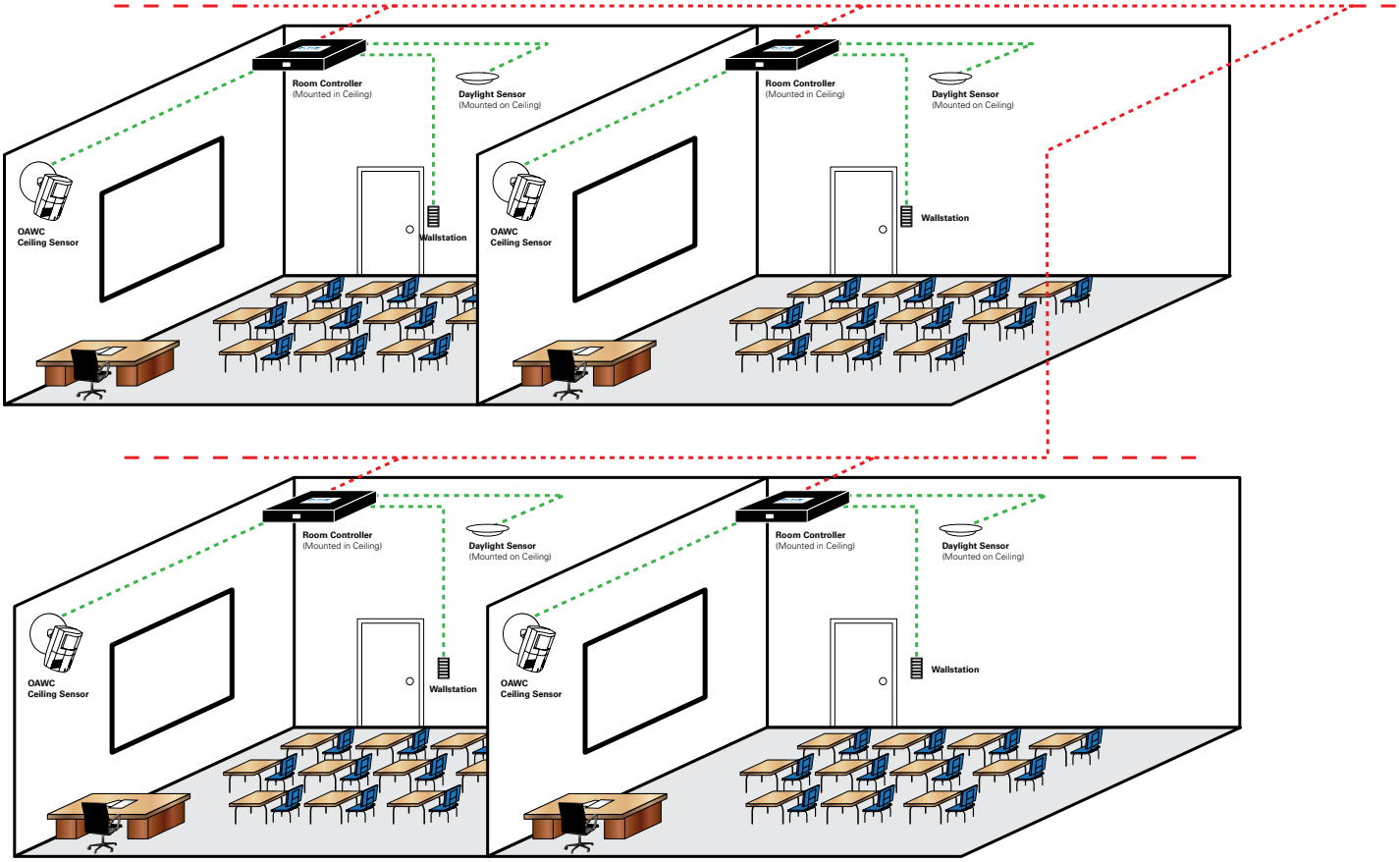
T24-2016
130.1(d)

ASHRAE 90.1-2018
9.4.1.1.e, 9.4.1.1.f,

IECC 2018
C405.2.3

Network architecture

The Room Controller products can be networked together to expand their out of the box capabilities. Perfect for projects that have multiple rooms that have similar requirements. The Room Controllers can be installed and provide control capabilities on day one without requiring network programming. As the project schedule allows network programming can be completed to provide centralized control and user training.



Space Assumptions

Space

Multiple spaces each less than 2000 square feet

Electrical Load

Greater than 0.5 watts per square feet planned

Daylighting

Contains glazing larger than 24 square feet total requiring daylighting for both primary and secondary sidelit zones

Others

The general lighting is not intended for continuous use (24/7, 365). Egress lighting is not part of the general lighting use.

Building

When larger than 10,000 square feet, Demand Response is required (capable of lowering lighting power by 15%)

SPACE LEVEL (AREA CONTROL)

- Must be accessible to occupants to operate the lighting

Exceptions when space level control not required:

- Areas or sections designed to serve as egress lighting are not accessible to unauthorized personnel

Manually Switched ON/OFF

Reference:

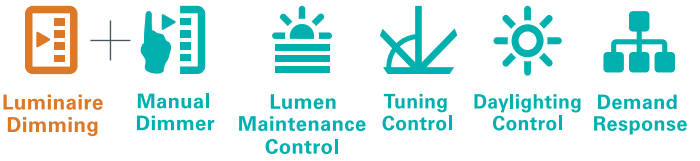
T24-2016
130.1(a)

ASHRAE 90.1-2018
9.4.1.1.a

IECC 2018
C405.2.2.3

MULTI-LEVEL LIGHTING

- Luminaire must provide uniform dimming
- Capable of reducing power by at lease one of five control functions
- When a dimming luminaire is present, a manual dimmer is recommended. Other functional options available



Reference:

T24-2016
130.1(b)

ASHRAE 90.1-2018
9.4.1.1.d

IECC 2018
C405.2.2.2

SHUTOFF CONTROL

- Luminaires turned off when vacant
- 120V receptacles only, one within 6 feet of uncontrolled
- Each 5,000 square feet to have shutoff controls. Automatic Time Switch remain on for no more than 2 hours.

Exception when shutoff control not required:

- Areas designed to serve 24 hour, 365 day continuous use considered egress lighting

Reference:

T24-2016
130.1(c), 130.5(d)

ASHRAE 90.1-2018
9.4.1.1.h, 9.4.1.1.i, 8.4.2

IECC 2018
C405.2.1

AUTOMATIC DAYLIGHTING CONTROL

- Eliminate energy waste when natural light present

Exceptions when daylighting control not required:

- No skylights
- Glazing <24 square feet
- Daylit zone is less than 120W

Reference:

T24-2016
130.1(d)

ASHRAE 90.1-2018
9.4.1.1.e, 9.4.1.1.f,

IECC 2018
C405.2.3

Ordering options

Room Controller Starter Kit

Ideal for distributor stocking programs to provide Electrical Contractors with components that are required for rough-in installation. The distributor can then finalize the order with off the shelf accessories based on individual product needs.

Room Controller QuicKits

Specially built to provide all components that are needed for typical room types. QuicKits include all components for specific room types.

Room Controller System Components

When a QuicKit or Starter Pack does not meet your requirements, individual components should be specified.

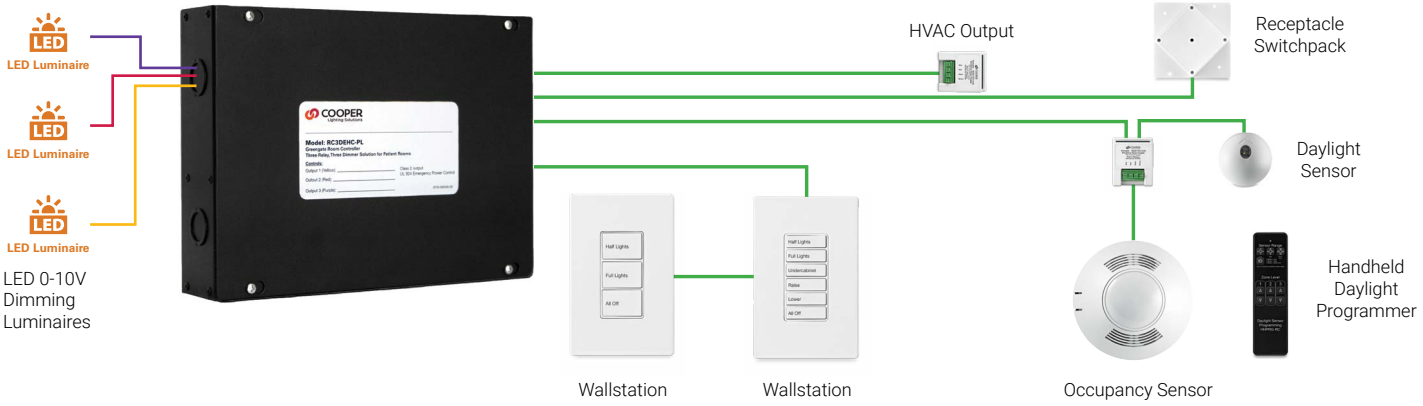
		ROOM CONTROLLER SYSTEM COMPONENT	ROOM CONTROLLER STARTER KIT	ROOM CONTROLLER QUICKITS
ROOM CONTROLLER PLENUM UL924 UL924 (Energy Back-up Circuit) Luminaire Dimming		RC3-PL RC3D-PL RC3DE-PL RC3DEHC-PL	RC3DE-PL-T24 RC3D-PL-T24 RC3DE-PL-KIT RC3D-PL-KIT	RCQK-RC3DE-CONF RCQK-RC3D-OFFICE RCQK-RC3DE-CLASS RCQK-RC3DEHC
ROOM CONTROLLER PLENUM NETWORK UL924 UL924 (Energy Back-up Circuit) Luminaire Dimming		RC3-PL-N RC3D-PL-N RC3DE-PL-N RC3DEHC-PL-N		
SCENE WALLSTATIONS Manual Dimmer		RC-3TLB-P1-* RC-6TSB-P2-* RC-6TSB-P3-* RC-6TSB-P4-*		RCQK-RC3DE-CONF
ZONE WALLSTATIONS Manually Switched ON/OFF		RC-*		RCQK-RC3DE-CONF RCQK-RC3D-OFFICE RCQK-RC3DE-CLASS RCQK-RC3DEHC

		ROOM CONTROLLER SYSTEM COMPONENT	ROOM CONTROLLER STARTER KIT	ROOM CONTROLLER QUICKITS
OCCUPANCY SENSOR Occupancy Sensor		OAC-* OAWC-*		RCQK-RC3DE-CONF RCQK-RC3D-OFFICE RCQK-RC3DE-CLASS
INPUT/OUTPUT DEVICE		OCC-RJ45	RC3DE-PL-T24 RC3D-PL-T24 RC3DE-PL-KIT RC3D-PL-KIT	RCQK-RC3DE-CONF RCQK-RC3D-OFFICE RCQK-RC3DE-CLASS RCQK-RC3DEHC
DAYLIGHT SENSOR Daylighting Control		DSRC-FMOIR		RCQK-RC3DE-CONF RCQK-RC3D-OFFICE RCQK-RC3DE-CLASS RCQK-RC3DEHC
RECEPTACLE SWITCHPACK Receptacle Control		SPRC-R-20-120	RC3DE-PL-T24 RC3D-PL-T24	RCQK-RC3DE-CONF RCQK-RC3D-OFFICE RCQK-RC3DE-CLASS
QUICKCONNECT CABLE Remote Signal Control		GGRJ45-*	RC3DE-PL-T24 RC3D-PL-T24 RC3DE-PL-KIT RC3D-PL-KIT	RCQK-RC3DE-CONF RCQK-RC3D-OFFICE RCQK-RC3DE-CLASS RCQK-RC3DEHC
PERSONAL REMOTE Manual Dimmer		HHPR-RC		RCQK-RC3DE-CONF
DAYLIGHT SETTING REMOTE Lumen Maintenance Control		HHPRG-RC		

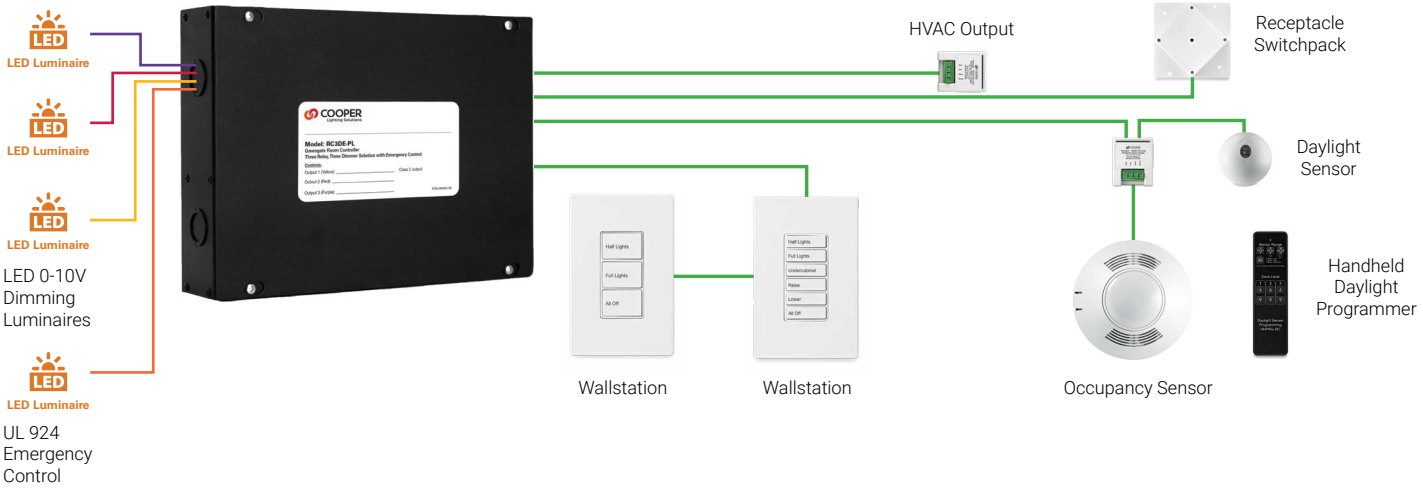
Model installation diagrams

RC3-PL with receptacle control

RC3D-PL with receptacle control



RC3DE-PL with receptacle and emergency control



Application: Office

Space Assumptions

Space

Less than 250 square feet

Electrical Load

Greater than 0.5 watts per square feet planned

Daylighting

Contains glazing larger than 24 square feet total requiring daylighting for both primary and secondary sidelit zones

Building

When larger than 10,000 square feet, Demand Response is required (capable of lowering lighting power by 15%)

Solutions

Room Controller QuicKit	RCQK-RC3DE-OFFICE
	OR
Room Controller Components	
RC3DE-PL	Room Controller
RC-3TLB-OS1-W	Wallstation
DSRC-FMOIR	Daylight Sensor
OAWC-DT-120W	Wall Corner Occupancy Sensor
OCC-RJ45	Input/ Output Device
SPRC-R-20-120	Receptacle Switchpack
GGRJ45-10-G	QuickConnect Cable
GGRJ45-25-G	QuickConnect Cable

Luminaire Controls

UL924
UL924 (Energy Back-up Circuit)

Luminaire Dimming

Functional Controls

Manually Switched ON/OFF

Manual Dimmer

Daylighting Control

Tuning Control

Demand Response

Occupancy Sensor

20%

40%

Receptacle Control

Sequence of Operations

Occupied

Lights Manual ON or Automatic ON – 50%

Receptacle ON

HVAC occupancy closed

Automatic daylight dimming

Occupant uses wallstations to control lighting

Demand Response dims lighting based on settings

Unoccupied

Lights turn Off after sensor time-out

Receptacle turns off after sensor time-out + 30 sec

HVAC occupancy opens

Application: Open office

Space Assumptions

Space

250 square feet or larger

Electrical Load

Greater than 0.5 watts per square feet planned

Daylighting

Contains glazing larger than 24 square feet total requiring daylighting for both primary and secondary sidelit zones

Building

When larger than 10,000 square feet, Demand Response is required (capable of lowering lighting power by 15%)

Solutions

Room Controller QuicKit	RCQK-RC3DE-CONF
OR	
Room Controller Starter Kit	RC3DE-PL-T24
OR	
Room Controller Components	
RC3DE-PL	Room Controller
RC-5TSB-OS2-W	Wallstation
DSRC-FMOIR	Daylight Sensor
OAC-DT-2000	Ceiling Occupancy Sensor
OCC-RJ45	Input/ Output Device
SPRC-R-20-120	Receptacle Switchpack
GGRJ45-10-G	QuickConnect Cable
GGRJ45-25-G	QuickConnect Cable

Luminaire Controls

UL924
UL924 (Energy Back-up Circuit)

Luminaire Dimming

Functional Controls

Manually Switched ON/OFF

Manual Dimmer

Daylighting Control

Tuning Control

Demand Response

Occupancy Sensor

20%

40%

Receptacle Control

Sequence of Operations

Occupied

Lights Manual ON or Automatic ON – 50%
Receptacle ON
HVAC occupancy closed
Three automatic daylight dimming zones
Occupant uses wallstations to control lighting
Demand Response dims lighting based on settings

Unoccupied

Lights turn Off after sensor time-out
Receptacle turns off after sensor time-out + 30 sec
HVAC occupancy opens

Application: Conference room

Space Assumptions

Space

100 square feet or larger

Electrical Load

Greater than 0.5 watts per square feet planned

Daylighting

Contains glazing larger than 24 square feet total requiring daylighting for both primary and secondary sidelit zones

Others

The general lighting is not intended for continuous use (24/7, 365). Egress lighting is not part of the general lighting use.

Building

When larger than 10,000 square feet, Demand Response is required (capable of lowering lighting power by 15%)

Solutions

Room Controller QuicKit	RCQK-RC3DE-CONF
	OR
Room Controller Components	
RC3DE-PL	Room Controller
RC-6TSB-P3-W	Scene Wallstation
RC-6TSB-ZAD-W	Wallstation
DSRC-FMOIR	Daylight Sensor
OAWC-DT-120W	Wall Corner Occupancy Sensor
OCC-RJ45	Input/ Output Device
SPRC-R-20-120	Receptacle Switchpack
GGRJ45-10-G	QuickConnect Cable
GGRJ45-25-G	QuickConnect Cable

Luminaire Controls

UL924
UL924 (Energy Back-up Circuit)

Luminaire Dimming

Functional Controls

Manually Switched ON/OFF

Manual Dimmer

Daylighting Control

Tuning Control

Demand Response

Occupancy Sensor

20%

40%

Receptacle Control

Sequence of Operations

Occupied

Lights Manual ON or Automatic ON – 50%
Receptacle ON
HVAC occupancy closed
Automatic daylight dimming
Occupant uses wallstations to control lighting
Demand Response dims lighting based on settings
Programmable Scene Wallstations

Unoccupied

Lights turn Off after sensor time-out
Receptacle turns off after sensor time-out + 30 sec
HVAC occupancy opens

Application: Corridor, hall or stairwell

Space Assumptions

Space

Accessible areas

Electrical Load

Greater than 0.5 watts per square feet planned

Daylighting

Contains glazing larger than 24 square feet total requiring daylighting for both primary and secondary sidelit zones

Building

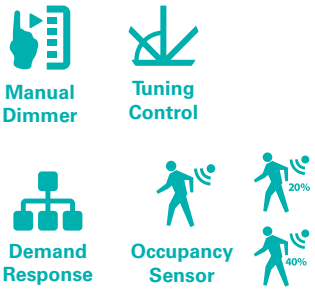
When larger than 10,000 square feet, Demand Response is required (capable of lowering lighting power by 15%)

Solutions

Room Controller QuicKit	RC3DE-PL-KIT
	OR
Room Controller Components	
RC3DE-PL	Room Controller
RC-6TSB-P3-W	Scene Wallstation
OAWC-DT-120W	Wall Corner Occupancy Sensor
OCC-RJ45	Input/ Output Device
GGRJ45-10-G	QuickConnect Cable
GGRJ45-25-G	QuickConnect Cable

Luminaire Controls

Functional Controls



Sequence of Operations

Occupied

Lights Automatic ON

Occupant uses wallstations to control lighting

Demand Response dims lighting based on settings

Programmable Scene Wallstations

Unoccupied

Lights turn Off or dim after sensor time-out

Timeclock turns lights off

Application: Classroom – Suspended fixtures and three daylight zones

Solutions

Room Controller QuicKit	RCQK-RC3DE-CLASS
	OR
Room Controller Starter Kit	RC3DE-PL-T24
	OR
Room Controller Components	
RC3DE-PL	Room Controller
RC-2TLB-ES1-W	Wallstation
RC-6TSB-P3-W	Scene Wallstation
DSRC-FMOIR	Daylight Sensor
OAWC-DT-120W	Wall Corner Occupancy Sensor
OCC-RJ45	Input/ Output Device
SPRC-R-20-120	Receptacle Switchpack
GGRJ45-10-G	QuickConnect Cable
GGRJ45-25-G	QuickConnect Cable

Space Assumptions

Space

Less than 2000 square feet

Electrical Load

Greater than 0.7 watts per square feet planned

Daylighting

Contains glazing larger than 24 square feet total requiring daylighting for both primary and secondary sidelit zones

Building

When larger than 10,000 square feet, Demand Response is required (capable of lowering lighting power by 15%)

Luminaire Controls

UL924
UL924 (Energy Back-up Circuit)

Luminaire Dimming

Functional Controls

Manually Switched ON/OFF

Manual Dimmer

Daylighting Control

Tuning Control

Demand Response

Occupancy Sensor

20%

40%

Receptacle Control

Sequence of Operations

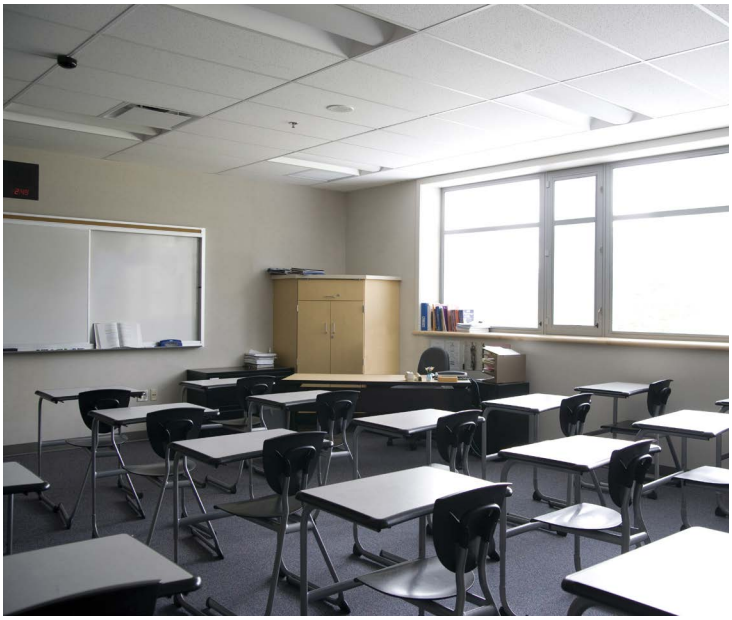
Occupied

Lights Manual ON or Automatic ON – 50%
Receptacle ON
HVAC occupancy closed
Three automatic daylight dimming zones
Occupant uses wallstations to control lighting
Demand Response dims lighting based on settings
Programmable Scene Wallstations

Unoccupied

Lights turn Off after sensor time-out
Receptacle turns off after sensor time-out + 30 sec
HVAC occupancy opens

Application: Classroom - Recessed fixtures and three daylight zones



Space Assumptions

Space

Less than 2000 square feet

Electrical Load

Greater than 0.7 watts per square feet planned

Daylighting

Contains glazing larger than 24 square feet total requiring daylighting for both primary and secondary sidelit zones

Building

When larger than 10,000 square feet, Demand Response is required (capable of lowering lighting power by 15%)

Solutions

Room Controller QuicKit	RCQK-RC3DE-CLASS
	OR
Room Controller Starter Kit	RC3DE-PL-T24
	OR
Room Controller Components	
RC3DE-PL	Room Controller
RC-2TLB-ES1-W	Wallstation
RC-6TSB-P3-W	Scene Wallstation
DSRC-FMOIR	Daylight Sensor
OAWC-DT-120W	Wall Corner Occupancy Sensor
OCC-RJ45	Input/ Output Device
SPRC-R-20-120	Receptacle Switchpack
GGRJ45-10-G	QuickConnect Cable
GGRJ45-25-G	QuickConnect Cable

Luminaire Controls

UL924
UL924 (Energy Back-up Circuit)

Luminaire Dimming

Functional Controls

Manually Switched ON/OFF

Manual Dimmer

Daylighting Control

Tuning Control

Demand Response

Occupancy Sensor

20%

40%

Receptacle Control

Sequence of Operations

Occupied

Lights Manual ON or Automatic ON – 50%
Front and back switching with mixed daylighting
Receptacle ON
HVAC occupancy closed
Three automatic daylight dimming zones
Occupant uses wallstations to control lighting
Demand Response dims lighting based on settings

Unoccupied

Lights turn Off after sensor time-out
Receptacle turns off after sensor time-out + 30 sec
HVAC occupancy opens

System components

Room Controller

Houses the central relay and dimmer controls. Also coordinates all the inputs from wallstations, daylight sensor and occupancy sensor.

Wallstation

The intuitive user interface provides for manual override and is pre-engraved buttons describing their respective functionality.

Occupancy sensor

Any Greengate low voltage occupancy sensors can be used with the Room Controller, so select one to meet your applications needs.

Daylight sensor

Dimmable daylighting requirements have increased with the latest version of ASHRAE 90.1. The Room Controller daylight sensor allows up to three dimming zones to be controlled from a single sensor.

Plug load control

Saving additional energy by shutting off plug loads is now part of ASHRAE 90.1, and is easily achieved with the Receptacle Switchpack and the Room Controller.

CATALOG NUMBER	DESCRIPTION	COLOR
Room Controller System		
RC3-PL	Room Controller, three relay, plenum, 120/277 VAC, 60 Hz, 20A	B
RC3D-PL	Room Controller, three relay, three dimmer, plenum, 120/277 VAC, 60 Hz, 20A	B
RC3DE-PL	Room Controller, three relay, three dimmer, one emergency output, plenum,120/277 VAC, 60 Hz, 20A	B
RC3DEHC-PL	Healthcare Room Controller for patient rooms, three relay, three dimmer, one emergency output, plenum, 120/277 VAC, 60 Hz, 20A	B
RC3-PL-N	Room Controller, network, three relay, plenum, 120/277 VAC, 60 Hz, 20A	B
RC3D-PL-N	Room Controller, network, three relay, three dimmer, plenum, 120/277 VAC, 60 Hz, 20A	B
RC3DE-PL-N	Room Controller, network, three relay, three dimmer, one emergency output, plenum,120/277 VAC, 60 Hz, 20A	B
RC3DEHC-PL-N	Healthcare Room Controller for patient rooms, network, three relay, three dimmer, one emergency output, plenum, 120/277 VAC, 60 Hz, 20A	B
Room Controller Wallstations		
RC-2TLB-ES1-*	Room Controller Wallstation, 2 large buttons (Entry, All Off)	W, V, G, B
RC-6TSB-TS1-*	Room Controller Wallstation, 6 small buttons (General, Whiteboard, Quiet Time, A/V Mode, Raise, Lower)	W, V, G, B
RC-6TSB-TS2-*	Room Controller Wallstation, 6 small buttons (General, Whiteboard, Quiet Time, Raise, Lower, All Off)	W, V, G, B
RC-5TSB-TS3-*	Room Controller Wallstation, 5 small buttons (General, Whiteboard, Quiet Time, A/V Mode, All Off)	W, V, G, B
RC-6TSB-TS4-*	Room Controller Wallstation, 6 small buttons (General, Whiteboard, A/V Mode, Raise, Lower, All Off)	W, V, G, B
RC-4TSB-TS5-*	Room Controller Wallstation, 4 small buttons (Entry, General, Whiteboard, All Off)	W, V, G, B
RC-6TSB-TS6-*	Room Controller Wallstation, 6 small buttons (Entry, General, Whiteboard, Raise, Lower, All Off)	W, V, G, B
RC-6TSB-TS7-*	Room Controller Wallstation, 6 small buttons (Row 1, Row 2, Row 3, Raise, Lower, All Off)	W, V, G, B
RC-6TSB-TS8-*	Room Controller Wallstation, 6 small buttons (Uplights, Downlights, Accent, Raise, Lower, All Off)	W, V, G, B

CATALOG NUMBER	DESCRIPTION	COLOR
Room Controller Wallstations - Continued		
RC-6TSB-CR1-*	Room Controller Wallstation, 6 small buttons (General, Meeting, Whiteboard, Presentation, Raise, Lower)	W, V, G, B
RC-5TSB-CR2-*	Room Controller Wallstation, 5 small buttons (General, Meeting, Whiteboard, Presentation, All Off)	W, V, G, B
RC-4TSB-HC1-*	Room Controller Wallstation, 4 small buttons (General, Exam, Reading, All Off)	W, V, G, B
RC-6TSB-HC2-*	Room Controller Wallstation, 6 small buttons (General, Exam, Reading, Raise, Lower, All Off)	W, V, G, B
RC-3TLB-OS1-*	Room Controller Wallstation, 3 large buttons (Half Lights, Full Lights, All Off)	W, V, G, B
RC-5TSB-OS2-*	Room Controller Wallstation, 5 small buttons (Half Lights, Full Lights, Raise, Lower, All Off)	W, V, G, B
RC-6TSB-OS3-*	Room Controller Wallstation, 6 small buttons (Half Lights, Full Lights, Undercabinet, Raise, Lower, All Off)	W, V, G, B
RC-2TLB-OS4-*	Room Controller Wallstation, 2 large buttons (All On, All Off)	W, V, G, B
RC-6TSB-ZAD-*	Room Controller Wallstation, 6 small buttons (Zone 1 UP, Sone 1 DN, Zone 2 UP, Zone 2 DN, Zone 3 UP, Zone 3 DN)	W, V, G, B
RC-3TLB-Z1D-*	Room Controller Wallstation, 3 large buttons (Zone 1 On/Off, Zone 1 UP, Zone 1 DN)	W, V, G, B
RC-3TLB-Z2D-*	Room Controller Wallstation, 3 large buttons (Zone 2 On/Off, Zone 2 UP, Zone 2 DN)	W, V, G, B
RC-3TLB-Z3D-*	Room Controller Wallstation, 3 large buttons (Zone 3 On/Off, Zone 3 UP, Zone 3 DN)	W, V, G, B
Room Controller Daylight Sensors		
DSRC-FMOIR	Room Controller Open Loop Daylight Sensor, fixture mount, RJ45 connection	W
DSCM-MT	Room Controller Open Loop Daylight Sensor mounting bracket	W
Handheld Remotes		
HHPRG-RC	Room Controller Open Loop Daylight Sensor handheld zone remote programmer	B
HHPR-RC	Room Controller Personal Remote	B
Room Controller Switchpacks		
SPRC-R-20-120	Room Controller receptacle rated switchpack, 120/2774 VAC, 50/60 Hz, 20A	W
SP-R-20-120	Occupancy sensor receptacle rated switchpack w/ Cat5 and flying leads, 120/277 VAC, 50/60 Hz, 20A	W
Room Controller Input/Output Devices		
OCC-RJ45	Room Controller BMS output	W
GGRC-COUPLER	Room Controller RJ45 coupler	W
GGRC-SPLITTER	Room Controller RJ45 splitter	W
GGRJ45-006-G	Room Controller RJ45 cable, 6 inches	Gr
GGRJ45-03-G	Room Controller RJ45 cable, 3 feet	Gr
GGRJ45-10-G	Room Controller RJ45 cable, 10 feet	Gr
GGRJ45-25-G	Room Controller RJ45 cable, 25 feet	Gr
GGRJ45-50-G	Room Controller RJ45 cable, 50 feet	Gr
GGRJ45-100-G	Room Controller RJ45 cable, 100 feet	Gr
GGRJ45-10P-G	Room Controller RJ45 cable, 10 feet, plenum rated	Gr
GGRJ45-25P-G	Room Controller RJ45 cable, 25 feet, plenum rated	Gr
GGRJ45-50P-G	Room Controller RJ45 cable, 50 feet, plenum rated	Gr
GGRJ45-100P-G	Room Controller RJ45 cable, 100 feet, plenum rated	Gr

QuicKits and starter kits

QuicKits

Easy to order, designed and packaged for immediate in room installation and provide a complete all-in-one package solution.

CATALOG NUMBER	INCLUDED COMPONENTS
RCQK-RC3DE-CONF	RC3DE-PL (QTY1)
	SPRC-R-20-120 (QTY1)
	DSRC-FMOIR (QTY1)
	OAWC-DT-120W (QTY1)
	OCC-RJ45 (QTY1)
	GGRJ45-10P-G (QTY1)
	GGRJ45-006-G (QTY1)
	GGRJ45-25P-G (QTY3)
	RC-6TSB-P2 (QTY1)
	RC-6TSB-ZAD (QTY1)
	HHPR-RC (QTY1)
RCQK-RC3D-OFFICE	RC3D-PL (QTY1)
	SPRC-R-20-120 (QTY1)
	OAC-DT-2000-R (QTY1)
	DSRC-FMOIR (QTY1)
	OCC-RJ45 (QTY1)
	GGRJ45-10P-G (QTY1)
	GGRJ45-25P-G (QTY3)
	RC-5TSB-OS2 (QTY1)
RCQK-RC3DE-CLASS	RC3DE-PL (QTY1)
	SPRC-R-20-120 (QTY1)
	DSRC-FMOIR (QTY1)
	OAC-DT-2000 (QTY1)
	OCC-RJ45 (QTY1)
	GGRJ45-10P-G (QTY1)
	GGRJ45-25P-G (QTY4
	RC-4TSB-TS5 (QTY1)
	RC-6TSB-TS4 (QTY1)
RCQK-RC3DEHC	RC3DEHC-PL (QTY1)
	OCC-RJ45 (QTY1)
	DSRC-FMOIR (QTY1)
	GGRJ45-25P-G (QTY4)
	GG37P (QTY1)
	GPCS-3Z-DIM (QTY1)
	RC-6TSB-HC2 (QTY1)
	RC-4TSB-HC1 (QTY1)

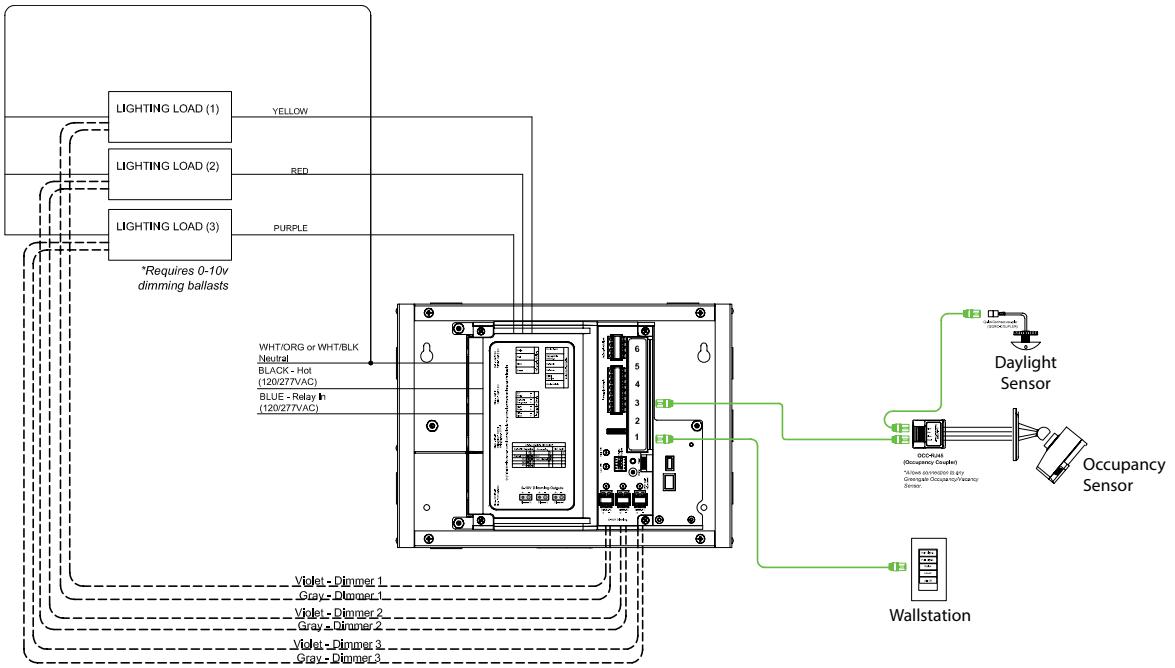
Starter Kits

Ideal stocking product for the Electrical Distributor.

CATALOG NUMBER	INCLUDED COMPONENTS
RC3DE-PL-T24	RC3DE-PL (QTY1)
	SPRC-R-20-120 (QTY1)
	OCC-RJ45 (QTY1)
	GGRJ45-10P-G (QTY1)
	GGRJ45-25P-G (QTY3)
RC3D-PL-T24	RC3D-PL (QTY1)
	SPRC-R-20-120 (QTY1)
	OCC-RJ45 (QTY1)
	GGRJ45-10P-G (QTY1)
	GGRJ45-25P-G (QTY3)
RC3DE-PL-KIT	RC3DE-PL
	OCC-RJ45
	GGRJ45-10P-G (QTY1)
	GGRJ45-25P-G (QTY2)
RC3D-PL-KIT	RC3D-PL (QTY1)
	OCC-RJ45 (QTY1)
	GGRJ45-10P-G (QTY1)
	GGRJ45-25P-G (QTY2)

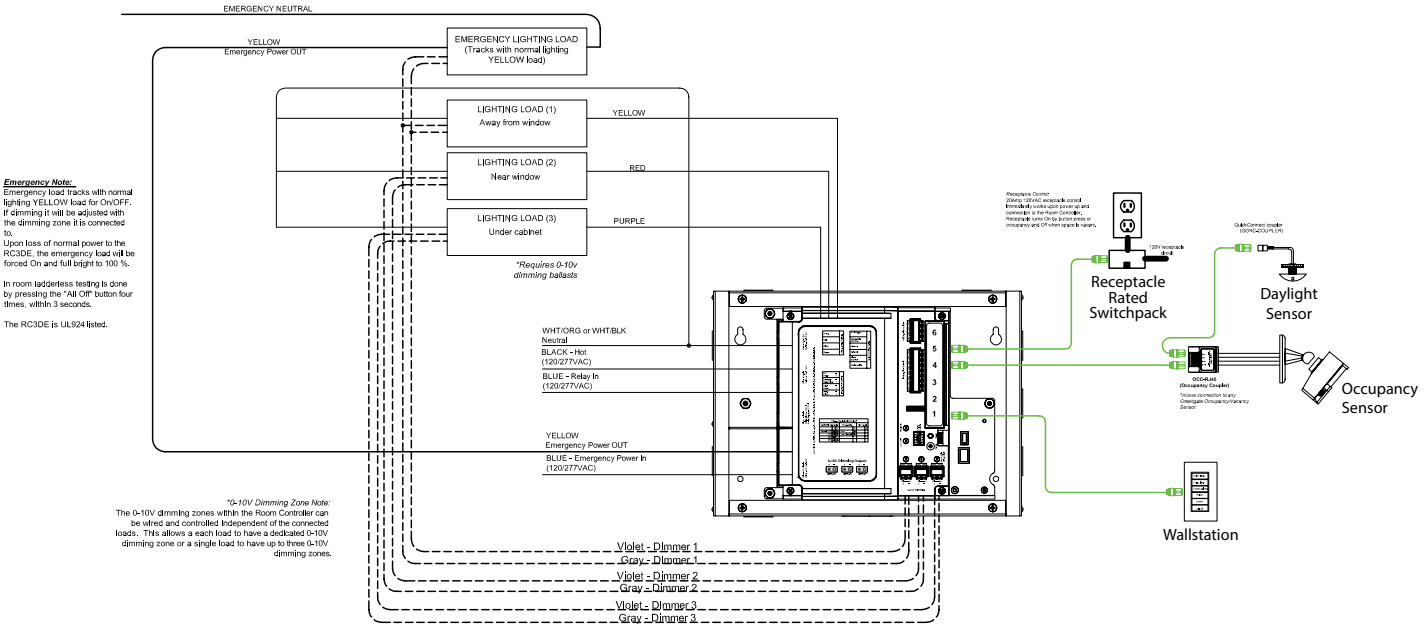
Typical wiring diagrams

Figure 1: Small Office with Daylighting



0-10V Dimming Zone Note:
The 0-10V dimming zones within the Room Controller can be wired and controlled independent of the connected loads. This allows a each load to have a dedicated 0-10V dimming zone or a single load to have up to three 0-10V dimming zones.

Figure 2: Office with Receptacle and Emergency Control



Emergency Note:
Emergency load tracks with normal lighting YELLOW load for On/OFF. If dimming it will be adjusted with the dimming zone it is connected to.
Upon loss of normal power to the RC3DE, the emergency load will be forced On and full bright to 100 %.

In room ladderless testing is done by pressing the "All Off" button four times, within 3 seconds.

The RC3DE is UL924 listed.

**0-10V Dimming Zone Note:*
The 0-10V dimming zones within the Room Controller can be wired and controlled independent of the connected loads. This allows a each load to have a dedicated 0-10V dimming zone or a single load to have up to three 0-10V dimming zones.

Typical wiring diagrams

Figure 3: Office with HVAC output

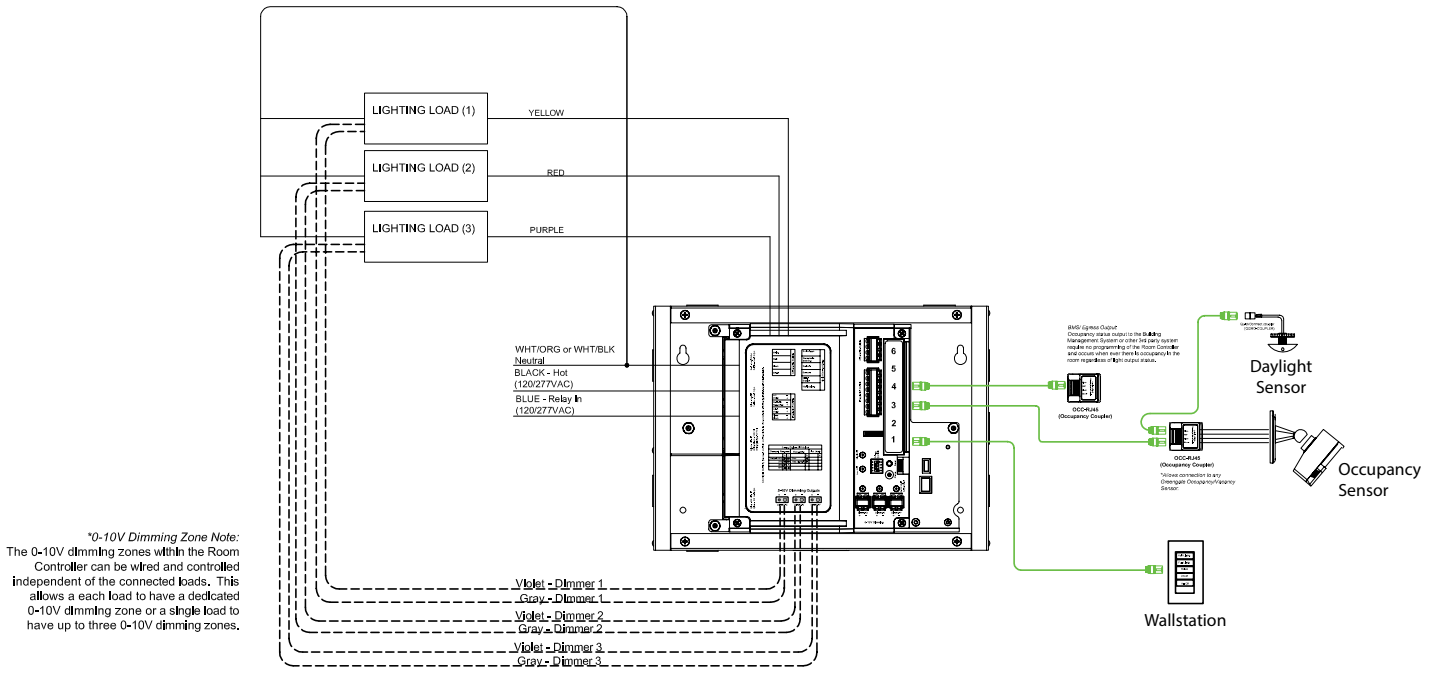
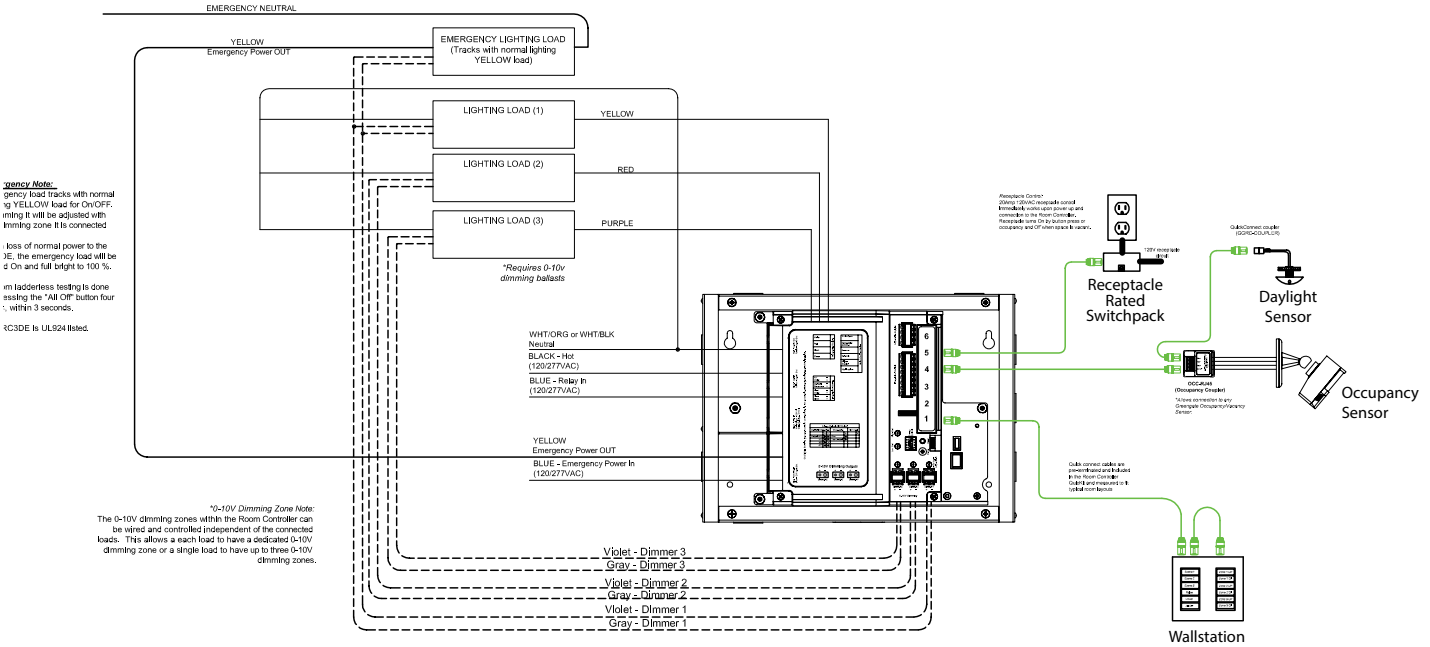


Figure 4: Conference room with receptacle and Emergency Control, daylighting and programmable scene wallstations



Typical wiring diagrams

Figure 5: Classroom with emergency and receptacle control

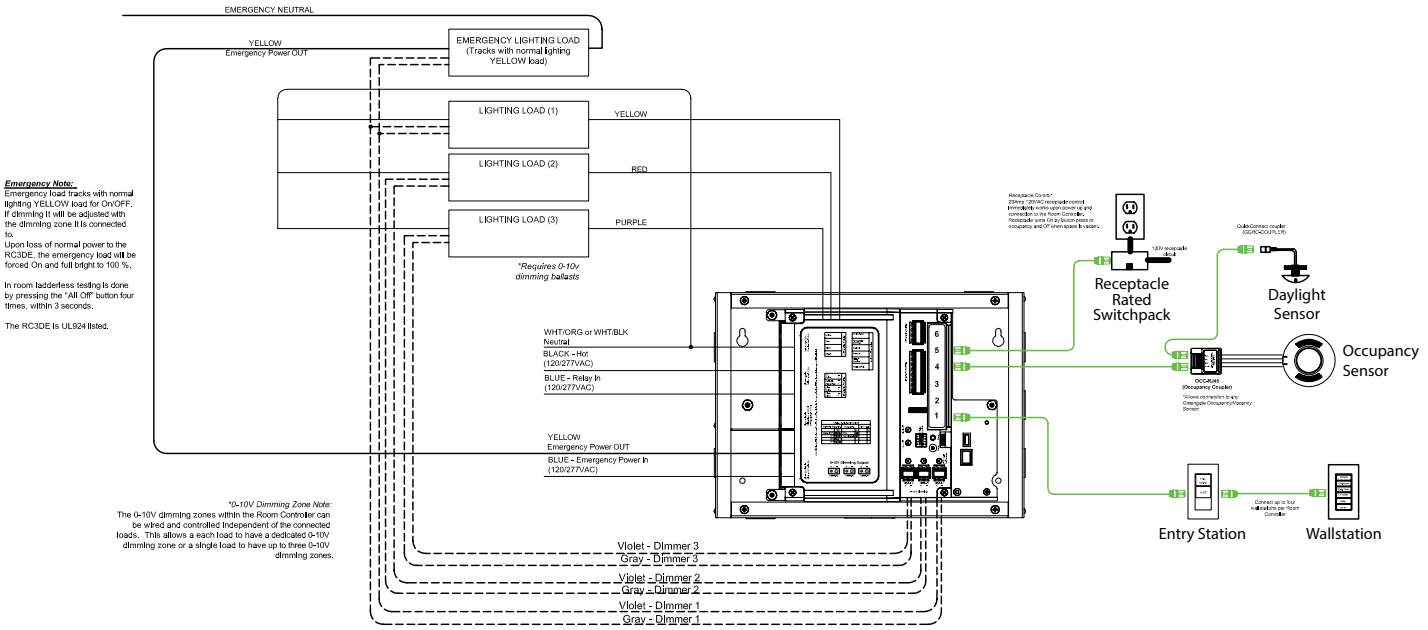
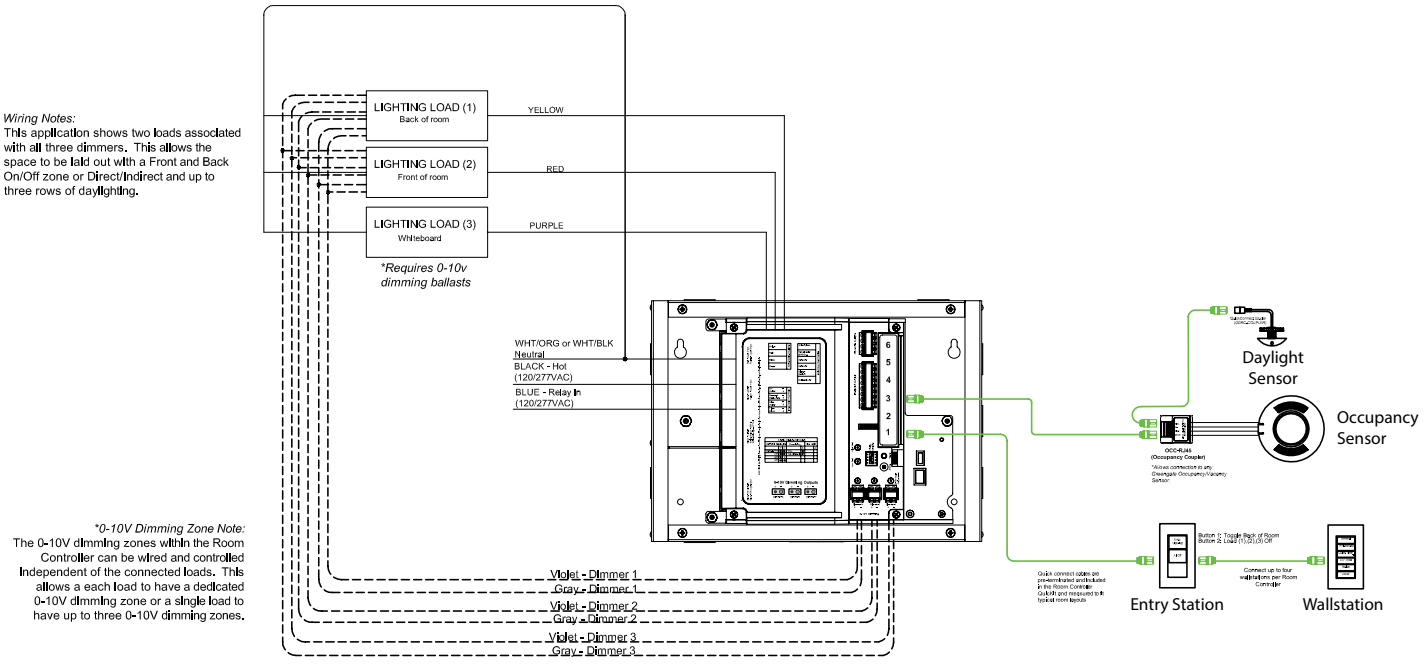
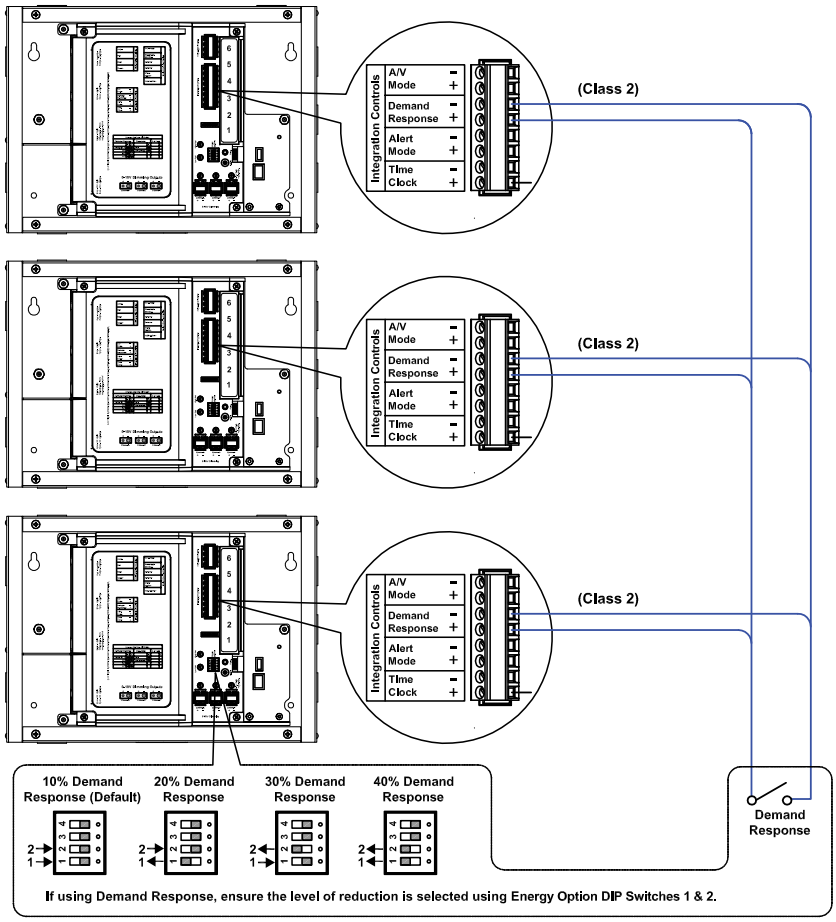


Figure 6: Classroom with daylight dimming



Typical wiring diagrams

Figure 7: Demand Response Connections

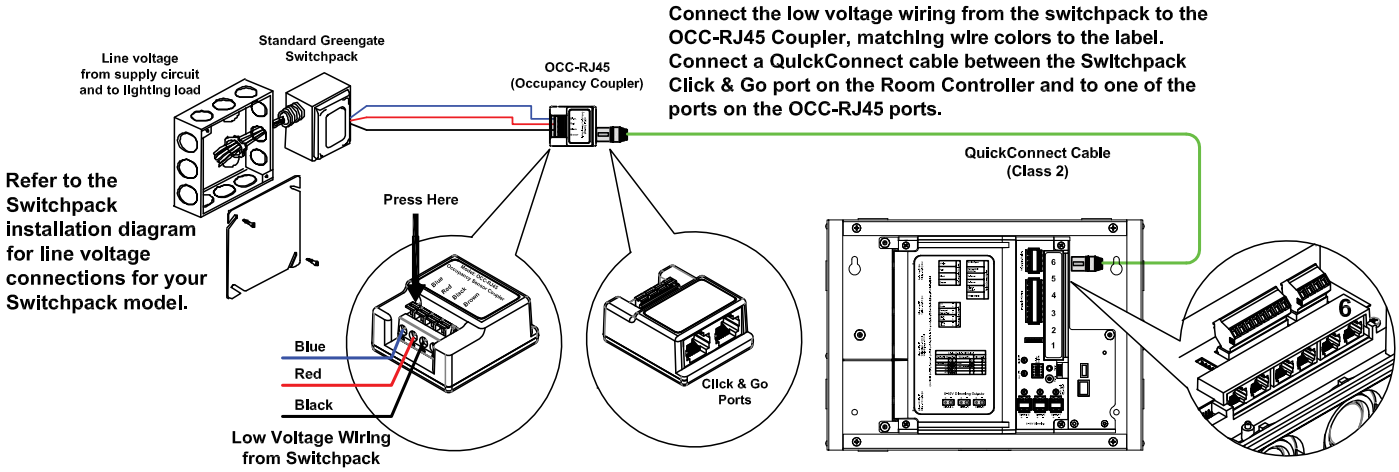


Control Sequence: Demand Response Input ensures light level reduction based on Energy Option DIP switch setting at each Room Controller. The light level reduction occurs regardless of Occupancy, Daylighting or Wallstation current setting. Demand Response light level reduction reduces lighting at a 5% dimming rate to limit occupant impact.

When Demand Response Input is removed the lighting will remain at the current level until a change of state from an Wallstation, Occupancy Sensor. This provides further energy savings by keeping the lighting at a reduced level until a user action.

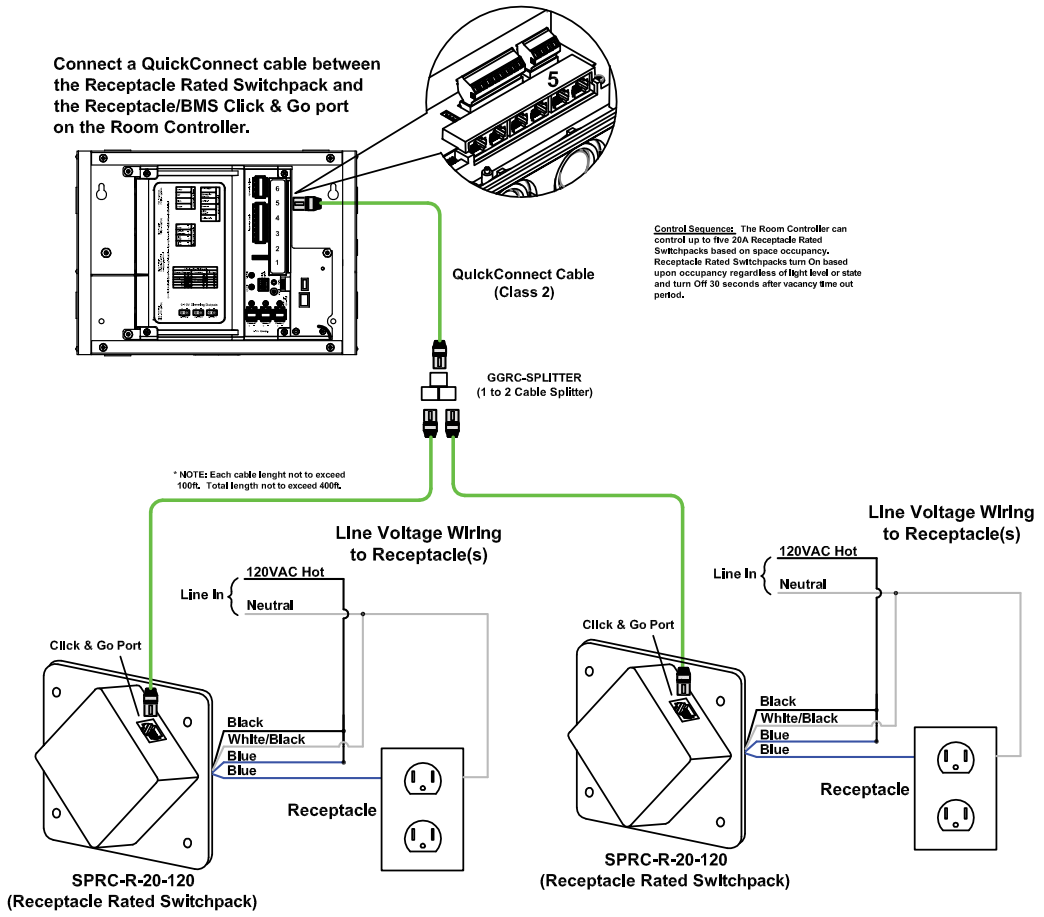
Demand Response Input
Demand Response Input from OpenADR device or other contact input.

Figure 8: Alternative voltage connection



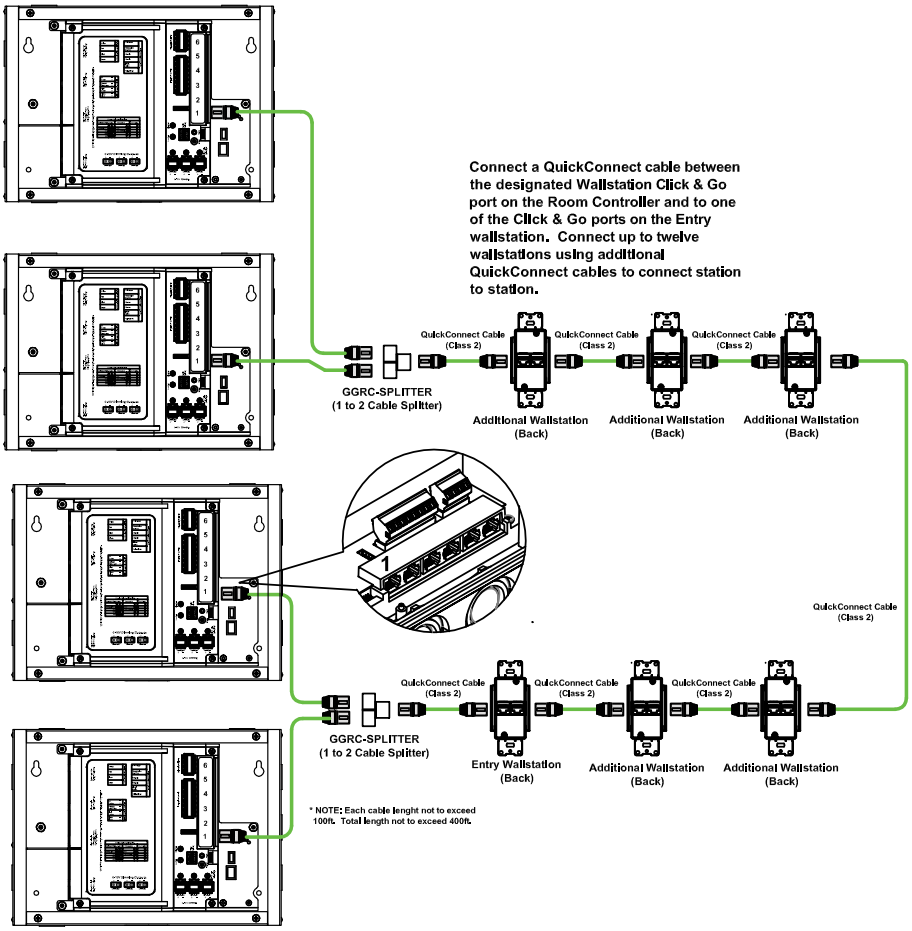
Typical wiring diagrams

Figure 9: Receptacle wiring



Typical wiring diagrams

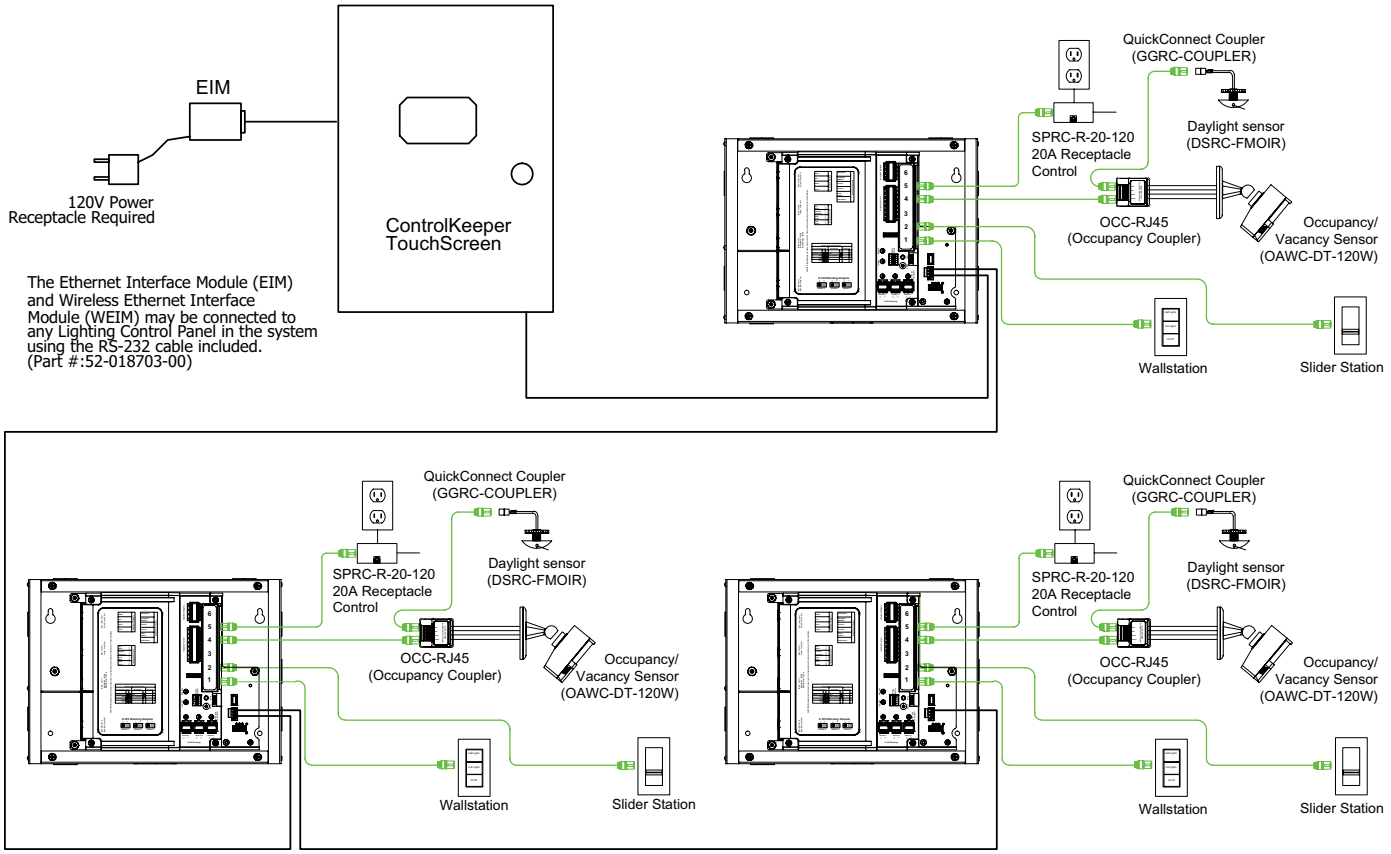
Figure 10: Wallstation Sharing



Control Sequence: Wallstations can be shared between up to four Room Controllers. Button presses will perform the same function in all connected Room Controllers.
Uniquely connected Occupancy Sensors and Daylight Sensors will control the Room Controller they are connected to only. This can allow for Wallstations to be shared over a large area and Occupancy and Daylight Sensors to control smaller zones.

Typical wiring diagrams

Figure 11: Network Wiring



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