Room Controller Network

Catalog#	Prepared by
Project	Date
Comments	Type

Model RC3D-PL-N Shown

Inside View

Overview

The Room Controller Network includes three relays and up to three 0-10 VDC dimming outputs to control compatible dimmable luminaires. The Room Controller Network is shipped to work out-of-the-box when connected to Room Controller devices, allowing quick and easy daylighting controls, occupancy/vacancy sensing and manual switching.
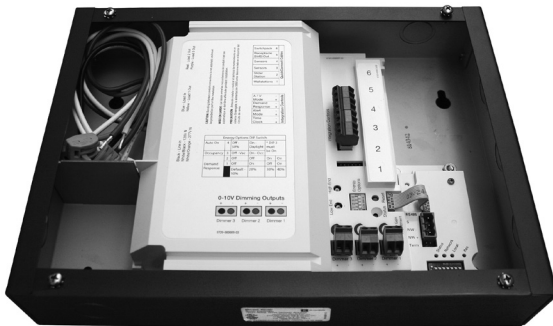
Network up to 254 ControlKeeper and Room Controller Network lighting control panels for a complete network system.

Features

- Click & Go ready, RJ45 connections
- Preconfigured for automatic functionality upon power-up
- Manual or Automatic On, bi-level, tri-level and dimming control strategies
- Local and network Demand Response input for automatic energy reduction
- Each 0-10V control supports up to 50 dimming drivers sourcing 2mA
- Integral pillow speaker connections for GPCS (RC3DEHC-PL-N)
- Integral Solatube® connection for classrooms
- Provides multi-level corridor lighting control
- Guaranteed compatibility with Cooper Lighting LED and 0-10V fluorescent fixtures
- Ladderless UL 924 Emergency Mode testing (RC3DE & RC3DEHC)
- Network up to 254 ControlKeeper and Room Controller Network lighting control panels

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Specifications

Size	11 1/2"H x 7 1/2"W x 2 1/4"D
Input/Output Voltage	120/277 VAC, 60Hz
	Maximum 20A combined load per Room Controller
	Ballast load: 20A @ 120/277 VAC (LED)
	Incandescent load: 15A @ 120 VAC
	Motor load: 1HP @ 120 VAC
Emergency Output (RC3DE/ RC3DEHC only) UL 924	LED, Ballast or Incandescent load: 3A
Class 2 Dimming Output	0-10 VDC, sinks up to 100mA per (40 µA max per circuit leakage to line)
	Each 0-10V output supports up to 50 ballasts/ drivers that draw the standard 2mA each
LED Drivers	Requires isolated LED drivers for optimal performance
Operating Environment	Temperature: 32°F to 104°F (0°C to 40°C)
	For indoor use
Standards	UL Approved UL 508 Listed UL 924 Listed c(UL)us

System Includes

- UL listed - UL 508 standard, UL 924 Optional
- NEMA 1 enclosure
- 12 Zone or Scene Wallstations
- Programmable Scene control
- Open loop three zone daylight sensor
- Time clock input
- Occupancy/Vacancy Sensor Connection
- Occupancy based receptacle control
- Occupancy based HVAC output
- RS-485 network standard
- Software programmable

Accessories (sold separately)

- Keeper Enterprise Software
- CEPC-1-D (UL 924 0-10V Accessory)
- Ethernet Interface Module
- EISSBox OpenADR device
- Receptacle Rated Switchpack
- Zone Wallstations
- Scene Wallstations
- Dimming Slider
- Daylight Sensor
- Occupancy Sensors
- Input/Output Device
- Personal Remote
- QuickConnect Cable
- Network Repeater (RPTR)
- BACnet interface (BMSPro)

Description/Operation

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.
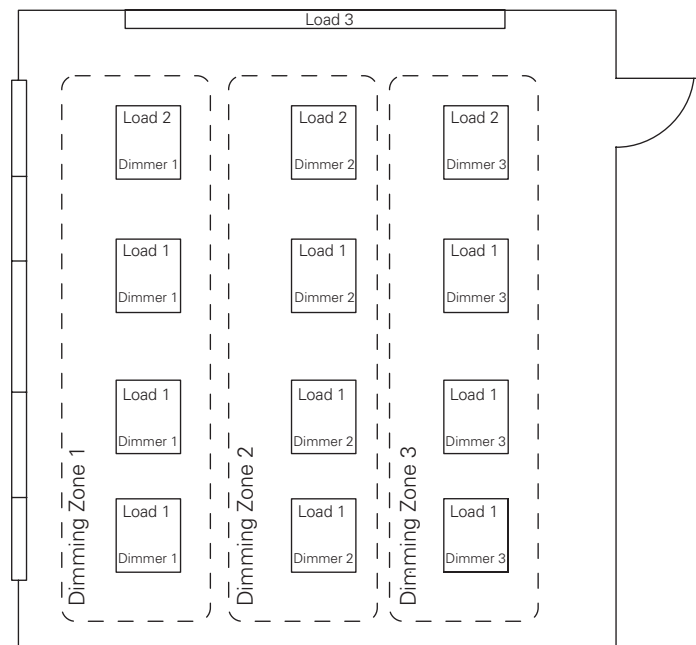
Installation

The line voltage section of the Room Controller provides the installing contractor space to make all line voltage connections and direct conduit access, reducing the need for additional junction boxes, while providing easy access to line voltage circuits. Low voltage devices are connected using Cat5 cables (ordered separately).

UL 924 relay is provided on some units for automatic emergency lighting control. The UL 924 relay automatically tracks with output 1 and can be connected to any of the three 0-10V dimmers. The UL 924 relay automatically closes and disconnects the 0-10V control open loss of normal power providing adequate egress lighting control. Ladderless maintenance testing of the UL 924 relay can be acheived by pressing the ALL OFF button four times.
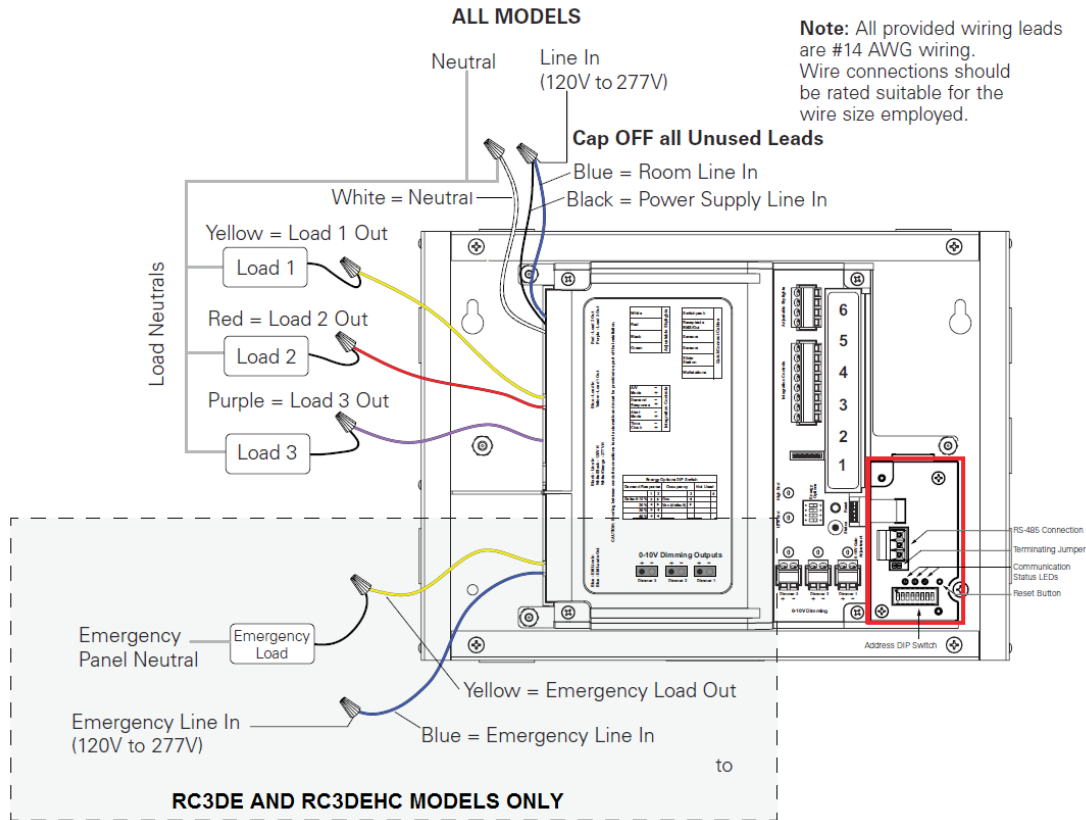
ControlKeeper and Room Controller Network lighting control panels are joined together using a RS-485 network cable sold separately (GG9841, GG9842, GG89841P, GG89842P).

Include the Network Repeater to provide the ability to extend the lighting control network beyond the specified 4,000 feet or more than 32 panels.
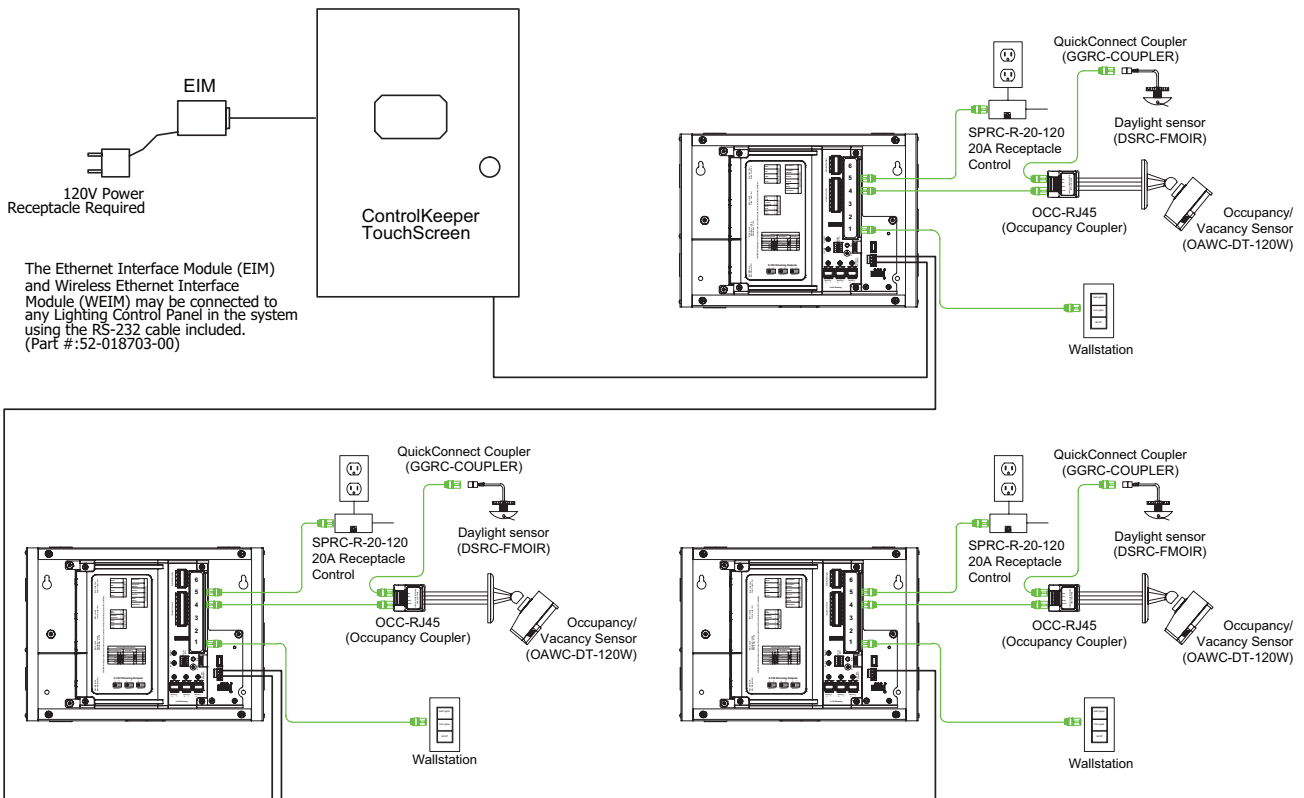
Sample Room Layout

Sample Wiring Diagram

ALL MODELS

Neutral

Line In
(120V to 277V)

Note: All provided wiring leads
are #14 AWG wiring.
Wire connections should
be rated suitable for the
wire size employed.

Cap OFF all Unused Leads

Blue = Room Line In
Black = Power Supply Line In

White = Neutral

Yellow = Load 1 Out

Load 1

Red = Load 2 Out

Load 2

Purple = Load 3 Out

Load 3

Load Neutrals

6
5
4
3
2
1

0-10V Dimming Outputs

RS-485 Connection
Terminating Jumper
Communication Status LEDs
Reset Button

Address DIP Switch

Emergency
Panel Neutral

Emergency
Load

Yellow = Emergency Load Out

Emergency Line In
(120V to 277V)

Blue = Emergency Line In

to

RC3DE AND RC3DEHC MODELS ONLY

Room Connections

EIM

ControlKeeper
TouchScreen

120V Power
Receptacle Required

The Ethernet Interface Module (EIM)
and Wireless Ethernet Interface
Module (WEIM) may be connected to
any Lighting Control Panel in the system
using the RS-232 cable included.
(Part #:52-018703-00)

QuickConnect Coupler
(GGRC-COUPLER)

Daylight sensor
(DSRC-FMOIR)

SPRC-R-20-120
20A Receptacle
Control

OCC-RJ45
(Occupancy Coupler)

Occupancy/
Vacancy Sensor
(OAWC-DT-120W)

Wallstation

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(GGRC-COUPLER)

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Wallstation

Ordering

Catalog #	Desctiption	Voltage	Ballast/Incandescent
RC3-PL-N	3 relays, Plenum, Network Room Controller	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3D-PL-N	3 relays, 3 0-10V dimming Plenum, Network Room Controller	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DE-PL-N	3 relays, 3 0-10V dimming, UL924 Plenum, Network Room Controller	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DEHC-PL-N	3 relays, 3 0-10V dimming UL924 for healthcare Plenum, Network Room Controller	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3D-PL-N-CP	3 relays, 3 0-10V dimming, Chicago Plenum Network Room Controller	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DE-PL-N-CP	3 relays, 3 0-10V dimming, UL924, Chicago Plenum Network Room Controller	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DEHC-PL-N-CP	3 relays, 3 0-10V dimming, UL924 for healthcare, Chicago Plenum Network Room Controller	120/277 VAC, 60 Hz	Maximum Combined Load 20A

Room Controller Upgrade Ordering Option

Catalog #	Desctiption
RCNN	Room Controller Network Node, upgrades stand alone Room Controller to the network option.
RPTR	Network Repeater is needed every 32 network panels and/or to extend the lighting network beyond 4000'

Additional Options (Sold Separately)

Catalog #	Desctiption
GGRC-COUPLER	RJ45 Coupler
GGRC-SPLITTER	RJ45 Splitter
GGRJ45-006-G	RJ45 cables 6 inches
GGRJ45-03-G	RJ45 cables 3 feet
GGRJ45-10-G	RJ45 cables 10 feet
GGRJ45-25-G	RJ45 cables 25 feet
GGRJ45-50-G	RJ45 cables 50 feet
GGRJ45-100-G	RJ45 cables 100 feet
GGRJ45-10P-G	RJ45 cables 10 feet plenum rated
GGRJ45-25P-G	RJ45 cables 25 feet plenum rated
GGRJ45-50P-G	RJ45 cables 50 feet plenum rated
GGRJ45-100P-G	RJ45 cables 100 feet plenum rated

Note: Please refer to the Room Controller page on our website for more information

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