Room Controller Network

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

Catalog# Prepared by
Project Date
Comments Type

Model RC3D-PL-N Shown

Inside View
Specifications

**Size**
11 1/2”H x 7 1/2”W x 2 1/4”D

**Input/Output**
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

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 achieved 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, GG9841P, GG9842P).

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)

White = Neutral

Yellow = Load 1 Out

Red = Load 2 Out

Purple = Load 3 Out

Load 1

Load 2

Load 3

Cap OFF all Unused Leads

Blue = Room Line In

Black = Power Supply Line In

ALL MODELS

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

ALL MODELS

Room Connections

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

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>Description</th>
<th>Voltage</th>
<th>Ballast/Incandescent</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC3-PLN</td>
<td>3 relays, Plenum, Network Room Controller</td>
<td>120/277 VAC, 60 Hz</td>
<td>Maximum Combined Load 20A</td>
</tr>
<tr>
<td>RC3D-PLN</td>
<td>3 relays, 3 0-10V dimming Plenum, Network Room Controller</td>
<td>120/277 VAC, 60 Hz</td>
<td>Maximum Combined Load 20A</td>
</tr>
<tr>
<td>RC3DE-PLN</td>
<td>3 relays, 3 0-10V dimming, UL924 Plenum, Network Room Controller</td>
<td>120/277 VAC, 60 Hz</td>
<td>Maximum Combined Load 20A</td>
</tr>
<tr>
<td>RC3DEHC-PLN</td>
<td>3 relays, 3 0-10V dimming UL924 for healthcare Plenum, Network Room Controller</td>
<td>120/277 VAC, 60 Hz</td>
<td>Maximum Combined Load 20A</td>
</tr>
<tr>
<td>RC3D-PLN-CP</td>
<td>3 relays, 3 0-10V dimming, Chicago Plenum Network Room Controller</td>
<td>120/277 VAC, 60 Hz</td>
<td>Maximum Combined Load 20A</td>
</tr>
<tr>
<td>RC3DE-PLN-CP</td>
<td>3 relays, 3 0-10V dimming, UL924, Chicago Plenum Network Room Controller</td>
<td>120/277 VAC, 60 Hz</td>
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### Room Controller Upgrade Ordering Option

<table>
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<tr>
<th>Catalog #</th>
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<tbody>
<tr>
<td>RCNN</td>
<td>Room Controller Network Node, upgrades stand alone Room Controller to the network option.</td>
</tr>
<tr>
<td>RPTR</td>
<td>Network Repeater is needed every 32 network panels and/or to extend the lighting network beyond 4000’</td>
</tr>
</tbody>
</table>

### Additional Options (Sold Separately)

<table>
<thead>
<tr>
<th>Catalog #</th>
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</thead>
<tbody>
<tr>
<td>GGRC-COPLER</td>
<td>RJ45 Coupler</td>
</tr>
<tr>
<td>GGRC-SPLITTER</td>
<td>RJ45 Splitter</td>
</tr>
<tr>
<td>GGRJ45-006-G</td>
<td>RJ45 cables 6 inches</td>
</tr>
<tr>
<td>GGRJ45-03-G</td>
<td>RJ45 cables 3 feet</td>
</tr>
<tr>
<td>GGRJ45-10-G</td>
<td>RJ45 cables 10 feet</td>
</tr>
<tr>
<td>GGRJ45-25-G</td>
<td>RJ45 cables 25 feet</td>
</tr>
<tr>
<td>GGRJ45-50-G</td>
<td>RJ45 cables 50 feet</td>
</tr>
<tr>
<td>GGRJ45-100-G</td>
<td>RJ45 cables 100 feet</td>
</tr>
<tr>
<td>GGRJ45-10P-G</td>
<td>RJ45 cables 10 feet plenum rated</td>
</tr>
<tr>
<td>GGRJ45-25P-G</td>
<td>RJ45 cables 25 feet plenum rated</td>
</tr>
<tr>
<td>GGRJ45-50P-G</td>
<td>RJ45 cables 50 feet plenum rated</td>
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<tr>
<td>GGRJ45-100P-G</td>
<td>RJ45 cables 100 feet plenum rated</td>
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**Note:** Please refer to the Room Controller page on our website for more information.