Room Controller Starter Kit

Overview
The Room Controller Starter Kit provides all components needed for installation above the ceiling. Ideal for stocking, simply add accessories (occupancy sensors, wallstations, etc.) to meet your application needs.

The Room Controller includes three relays and up to three 0-10 VDC dimming outputs to control compatible dimmable ballasts. The switching relays and 0-10 VDC outputs are controlled separately, allowing flexibility in wiring and control. The Room Controller is shipped preconfigured to work out-of-the-box when connected to Room Controller devices, allowing quick and easy daylighting controls, occupancy/vacancy sensing and manual switching.

Features
- Starter Kits contain all components needed for installation above the ceiling.
- Click & Go ready, RJ45 connections
- Pre-configured for automatic functionality upon power-up
- Manual or Automatic On, bi-level, tri-level and dimming control strategies
- Integral Demand Response input with four levels of preconfigured energy reduction
- Built in tubular lighting control with preconfigured wallstation controls
- Integral pillow speaker connections for GPCS (RC3DEHC)
- Integral Solatube® connection for classrooms
- Guaranteed compatibility with Eaton LED and 0-10V fluorescent fixtures
- Ladderless UL 924 Emergency Mode testing (RC3DE & RC3DEHC)
Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>8.5”H x 14”W x 11”D</td>
</tr>
<tr>
<td><strong>Input/Output Voltage</strong></td>
<td>120/277 VAC, 60Hz</td>
</tr>
<tr>
<td></td>
<td>Maximum 20A combined load per Room Controller</td>
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<tr>
<td></td>
<td>Ballast load: 20A @ 120/277 VAC</td>
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<tr>
<td></td>
<td>Incandescent load: 15A @ 120 VAC</td>
</tr>
<tr>
<td></td>
<td>Motor load: 1HP @ 120 VAC</td>
</tr>
<tr>
<td><strong>Emergency Output</strong></td>
<td>Ballast or Incandescent load: 3A</td>
</tr>
<tr>
<td><strong>Class 2 Dimming</strong></td>
<td>0-10 VDC, sinks up to 100mA per (40 µA max per circuit leakage to line)</td>
</tr>
<tr>
<td></td>
<td>Each 0-10V output supports up to 50 ballasts/drivers that draw the standard 2mA each</td>
</tr>
<tr>
<td><strong>LED Drivers</strong></td>
<td>Requires isolated LED drivers for optimal performance</td>
</tr>
<tr>
<td><strong>Operating Environment</strong></td>
<td>Temperature: 32°F to 104°F (0°C to 40°C)</td>
</tr>
<tr>
<td><strong>Standards</strong></td>
<td>UL Approved, UL 508 Listed, UL 924 Listed</td>
</tr>
</tbody>
</table>

Description/Operation

The Room Controllers are connected to a 120 VAC or 277 VAC 20 Amp circuit to provide unit power and input power to the individual relays. The wallstations, occupancy/vacancy sensors, daylight sensors and receptacle control devices connect via QuickConnect cables providing a Class 2 connection. Upon power up the pre-engraved wallstation automatically controls the On/Off relays and/or adjust the dimming outputs. The daylight sensor will immediately adjust the lighting levels based on natural light.

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 (See page 4 for included cables).

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 upon 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.

Sample Topology

- **A** Room Controller (Mounted in Ceiling)
- **B** Wallstation
- **C** OAWC/OAC Ceiling Sensor
- **D** Daylight Sensor (Mounted on Ceiling)
Wiring Diagram

ALL MODELS

White/Black = 120V Neutral
White/Orange = 277V Neutral
Connect Neutral for Appropriate Voltage.

Load Neutrals

Yellow = Load 1 Out
Red = Load 2 Out
Purple = Load 3 Out

Neutral

Line In
(120V or 277V)

Blue = Room Line In
Black = Power Supply Line In

Cap OFF all Unused Leads

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

Emergency Panel Neutral

Emergency Line In
(120V or 277V)

Yellow = Emergency Load Out
Blue = Emergency Line In

RC3DE MODEL ONLY

Room Connections

Daylight sensor

Adjustable daylight sensor dome

DSRC-FMOIR

Dual Technology Wall/Corner Occupancy/Vacancy Sensor

Up to 6 Lighting Zones (3 Relays and 3 Dimmers)

20A Receptacle Control

SPRC-R-20-120

Teacher Station

RC-6TSB-TS7-`

Entry Station

RC-2TLB-EC1-`

Room Controller

RC3DE

Egress Output (or additional lighting zone)

OCC-RJ45

BMS Output (BMS integration)

OCC-RJ45

Output for Egress Lighting Control, BMS output or Receptable Control

www.eaton.com/lightingsystems
## Ordering

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Included Components</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC3DE-PL-T24</td>
<td>RC3DE-PL (QTY1)</td>
<td>Room controller - Dimming, emergency relay, plenum rated</td>
</tr>
<tr>
<td></td>
<td>SPRC-R-20-120 (QTY1)</td>
<td>20A receptacle switchpack</td>
</tr>
<tr>
<td></td>
<td>OCC-RJ45 (QTY1)</td>
<td>Input/Output device</td>
</tr>
<tr>
<td></td>
<td>GGRJ45-10P-G (QTY1)</td>
<td>Quickconnect cable 10 ft. plenum rated</td>
</tr>
<tr>
<td></td>
<td>GGRJ45-25P-G (QTY3)</td>
<td>Quickconnect cable 25 ft. plenum rated</td>
</tr>
<tr>
<td>RC3D-PL-T24</td>
<td>RC3D-PL (QTY1)</td>
<td>Room controller - Dimming, plenum rated</td>
</tr>
<tr>
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<td>SPRC-R-20-120 (QTY1)</td>
<td>20A receptacle switchpack</td>
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<td>Quickconnect cable 25 ft. plenum rated</td>
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<tr>
<td>RC3DE-PL-KIT</td>
<td>RC3DE-PL</td>
<td>Room controller - Dimming, emergency relay, plenum rated</td>
</tr>
<tr>
<td></td>
<td>OCC-RJ45</td>
<td>Input/Output device</td>
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<td>Quickconnect cable 10 ft. plenum rated</td>
</tr>
<tr>
<td></td>
<td>GGRJ45-25P-G (QTY2)</td>
<td>Quickconnect cable 25 ft. plenum rated</td>
</tr>
<tr>
<td>RC3D-PL-KIT</td>
<td>RC3D-PL (QTY1)</td>
<td>Room controller - Dimming, plenum rated</td>
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<td>GGRJ45-25P-G (QTY2)</td>
<td>Quickconnect cable 25 ft. plenum rated</td>
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**Note:** Please refer to the Room Controller page on our website for more information.

## Accessories

### Scene Wallstation
- RC-3TLB-P1-
- RC-6TSB-P2-
- RC-6TSB-P3-
- RC-6TSB-P4-

### Input/Output Device
- OCC-RJ45

### QuickConnect Cable
- GGRJ45-

(*QTY 1 included in kit)

### Zone Wallstation
- RC-

### Daylight Sensor/Infrared Sensor
- DSRC-FMOIR

### Personal Remote
- HHPR-RC

### Occupancy Sensor
- OAC-
- OAWC-

(*QTY 1 included in kit)

### Receptacle Switchpack
- SPRC-R-20-120

### Daylight Setting Remote
- HHPRG-RC

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