

Common Lightcloud

Wiring Applications

Wiring Diagrams

Overview

Controller

Dimmer

Gateway

Integrator

Sensor

Touch

Wiring Diagrams

The following diagrams are commonly used for Lightcloud installations. If you're planning on using a Lightcloud Device in a manner that isn't covered by these diagrams, please contact us to ensure proper installation.

For additional wiring information or concerns, give us a call at **1 (844) - LIGHTCLOUD**

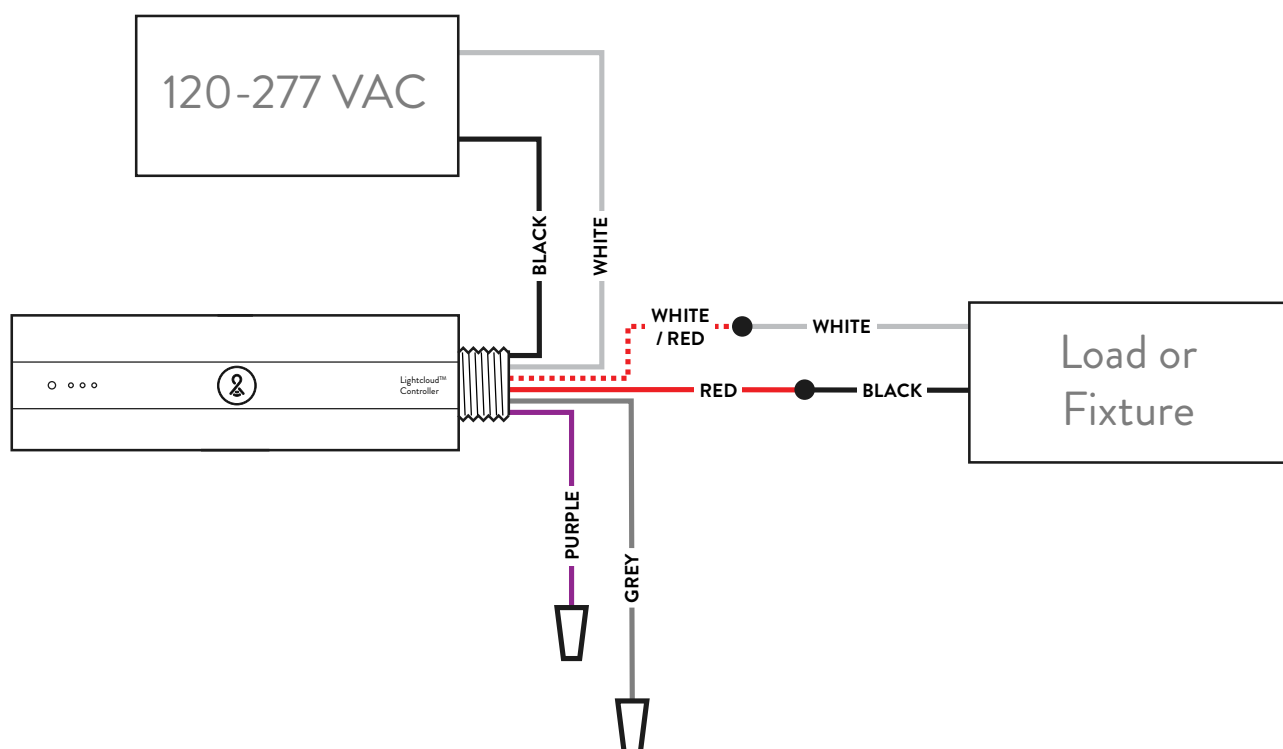
Table of Contents

Controller.....	3
0-10V Dimming.....	4
Repeater.....	5
Advanced Trigger Wiring	6
Emergency Lighting	7
Phase Dimming	11
Plug Load Control	13
Dimmer	14
Gateway	15
Integrator	16
Sensor.....	17
Touch	20



Lightcloud Controller Switch

Lightcloud Controller used to switch a load without dimming.



Input: 120-277VAC, 50/60Hz

Switching Capacity (Magnetic, Electronic Ballast or LED)

15.5A (120-277VAC)

277VAC: 20A Magnetic/Resistive

240VAC: 5A Tungsten/Electronic, 20A FLA/60 LRA, 2HP

120VAC: 15A Tungsten, 1HP

Switched Neutral: The “Switched Neutral” white with red stripe wire is the neutral line for the load being switched. This enables power measurement.



Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

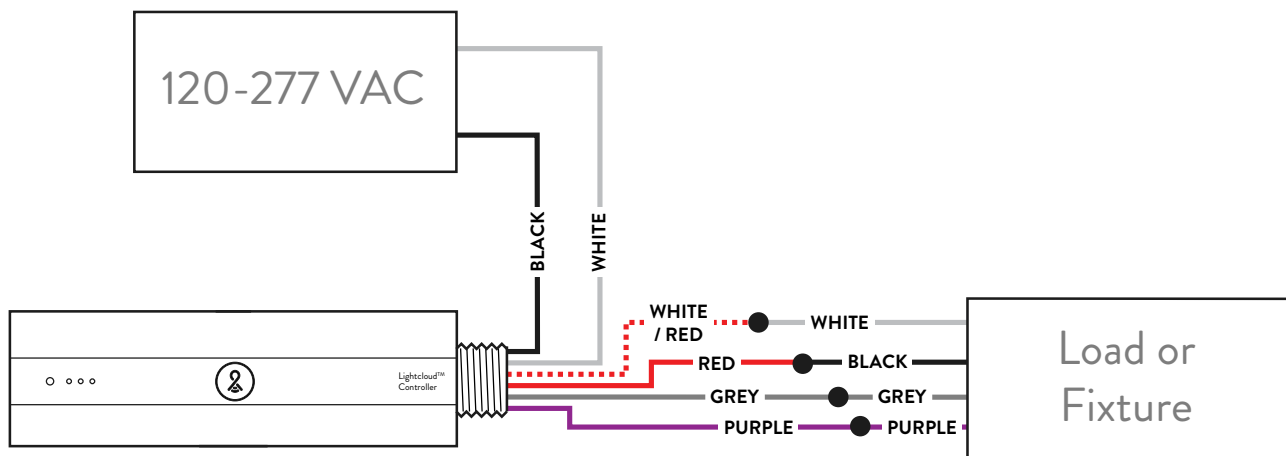
RAB

Controls



Lightcloud Controller 0-10V Dimming

Lightcloud Controller used to switch a load with 0-10V dimming.



Input: 120-277VAC, 50/60Hz

Purple: 0-10V positive

Grey: 0-10V common

Switching Capacity (Magnetic, Electronic Ballast or LED)

15.5A (120-277VAC)

277VAC: 20A Magnetic/Resistive

240VAC: 5A Tungsten/Electronic, 20A FLA/60 LRA, 2HP

120VAC: 15A Tungsten, 1HP

Switched Neutral: The “Switched Neutral” white with red stripe wire is the neutral line for the load being switched. This enables power measurement.

Note: The National Electrical Code requires that low-voltage wiring use in the same enclosure as high-voltage wiring have an equal or better insulation rating. You may need to complete your low-voltage wiring in another enclosure or use a partition.



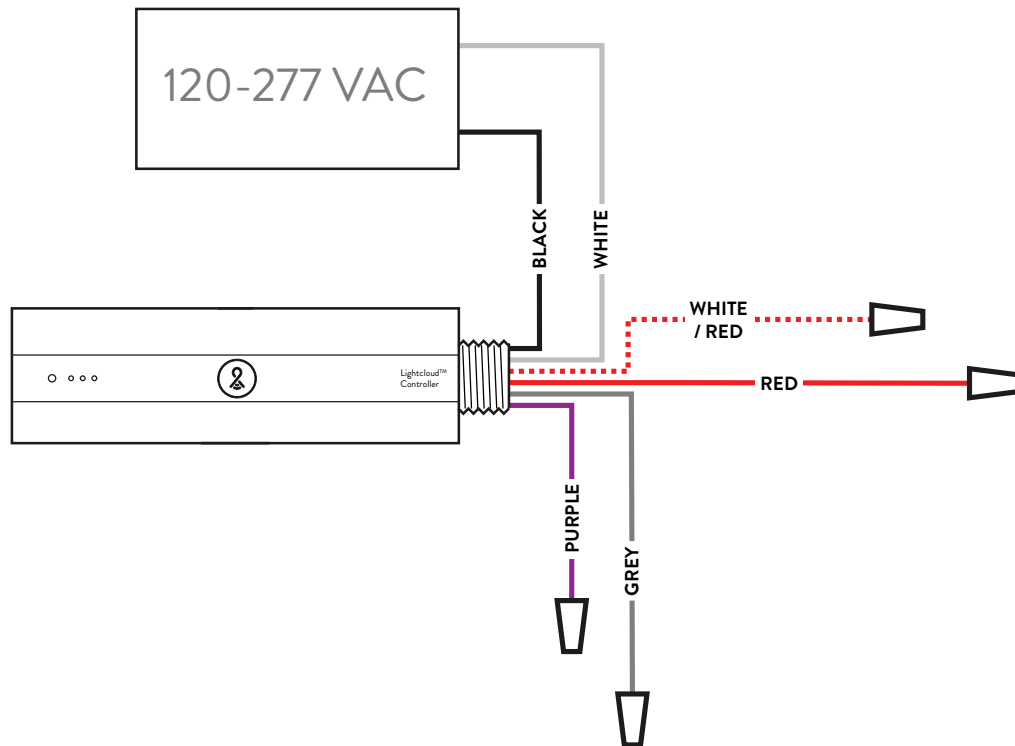
Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

RAB

Controls



Lightcloud Controller used to repeat Lightcloud mesh network signal without controlling a load.



Input: 120-277VAC, 50/60Hz



**Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.**

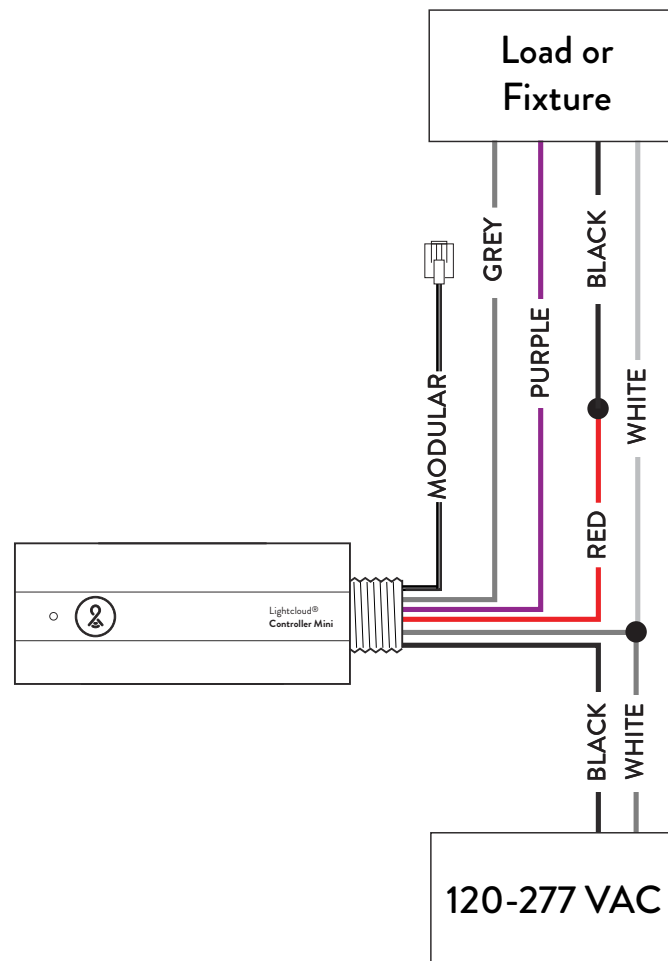
RAB

Controls



Lightcloud Controller Mini

Wireless switching, 0-10V dimming, and power monitoring with a smaller footprint for 3A applications.



Input: 120-277VAC, 50/60Hz

Switching Capacity

277V: 1.81A (500W) Electronic Ballast (CFL, LED Driver)

120V: 4.2A (500W) Electronic Ballast CFL, LED Driver)

120V: 4.24A (500W) Tungsten

277V: 1.81A (500W) Tungsten

120V: 2.2A (264VA) Standard Ballast (Magnetic Ballast)

277V: 1.8A (500VA) Standard Ballast (Magnetic Ballast)

120V: 4.2A (500W) Resistive or Inductive

0-10V SELV: Limited Energy (Class 2) 0-10V Dim output

Modular: The Lightcloud Controller Mini can connect to sensors via its modular RJ9 connector.



Any wires not in use must be capped off or otherwise insulated.

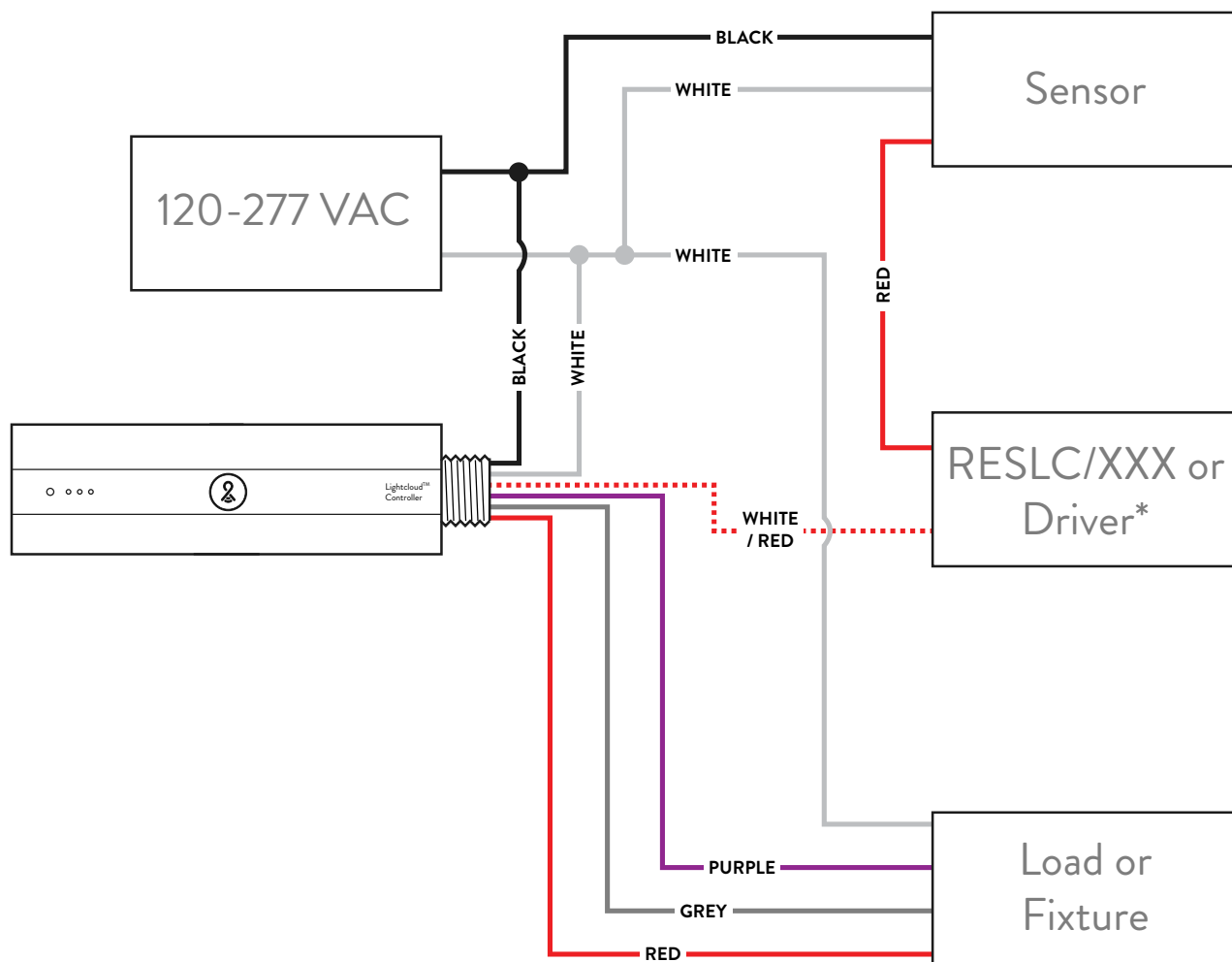
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

RAB

Controls

② Lightcloud Advanced Trigger

Lightcloud Controllers can receive inputs or triggers from 3rd party switching devices such as outdoor motion or light sensors.



Sample Occupancy Sensor RAB Stealth STL200



* A resistor or second fixture driver must be used between the Controller and Sensor. RESLC/120 for 120VAC applications or RESLC/277 for 277VAC applications. The driver must be greater than 10mA.



Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

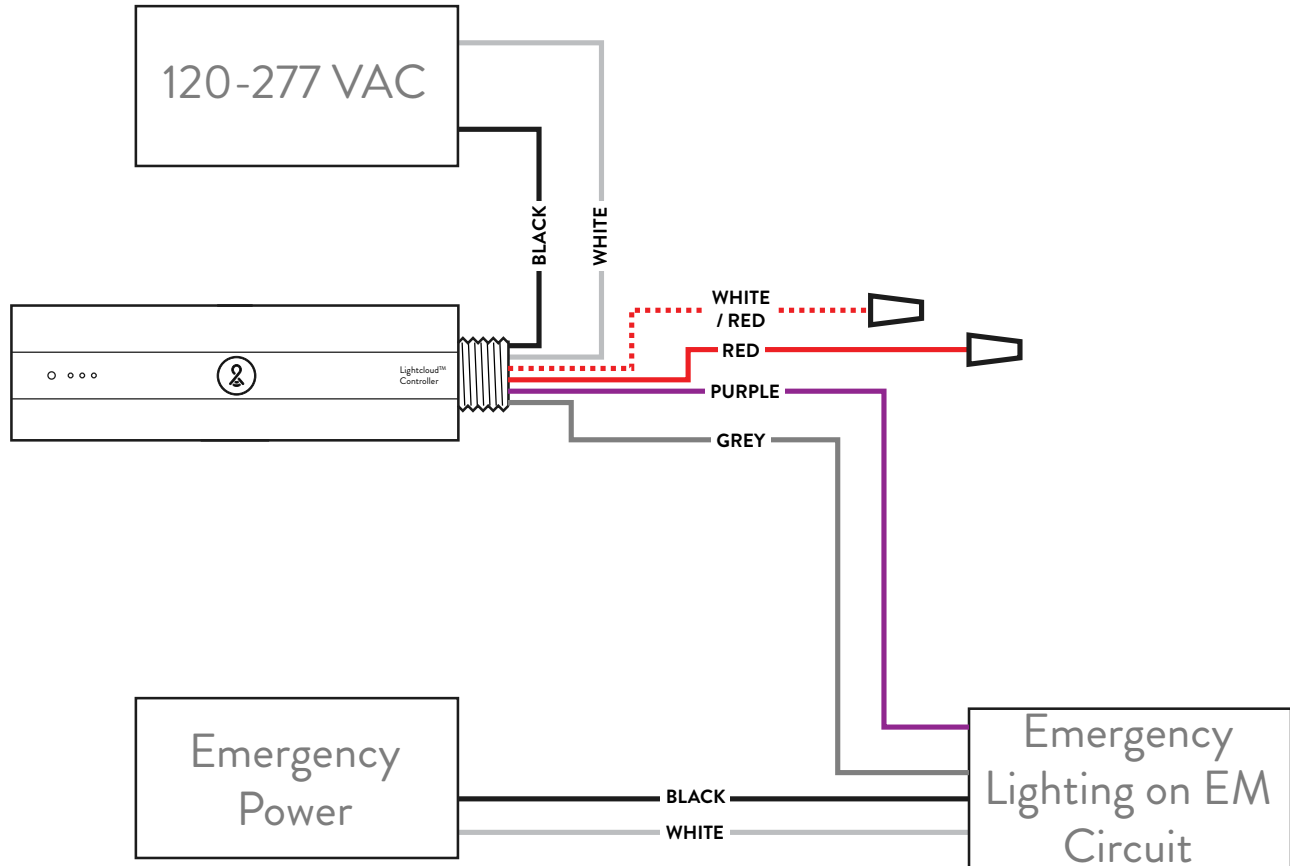
RAB

Controls



Lightcloud Emergency Lighting

Lightcloud Controllers can be used to control Emergency Lighting fed with “Always ON” Emergency Power. Upon loss of power, Emergency lighting will fail to “Full ON” light output.



Notes: In spaces where there is only one luminaire, and it is connected to emergency power, the Controller will need to be connected to a Normal Power Circuit for proper operation. Emergency fixtures with on-board battery backup don't require special wiring.



Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

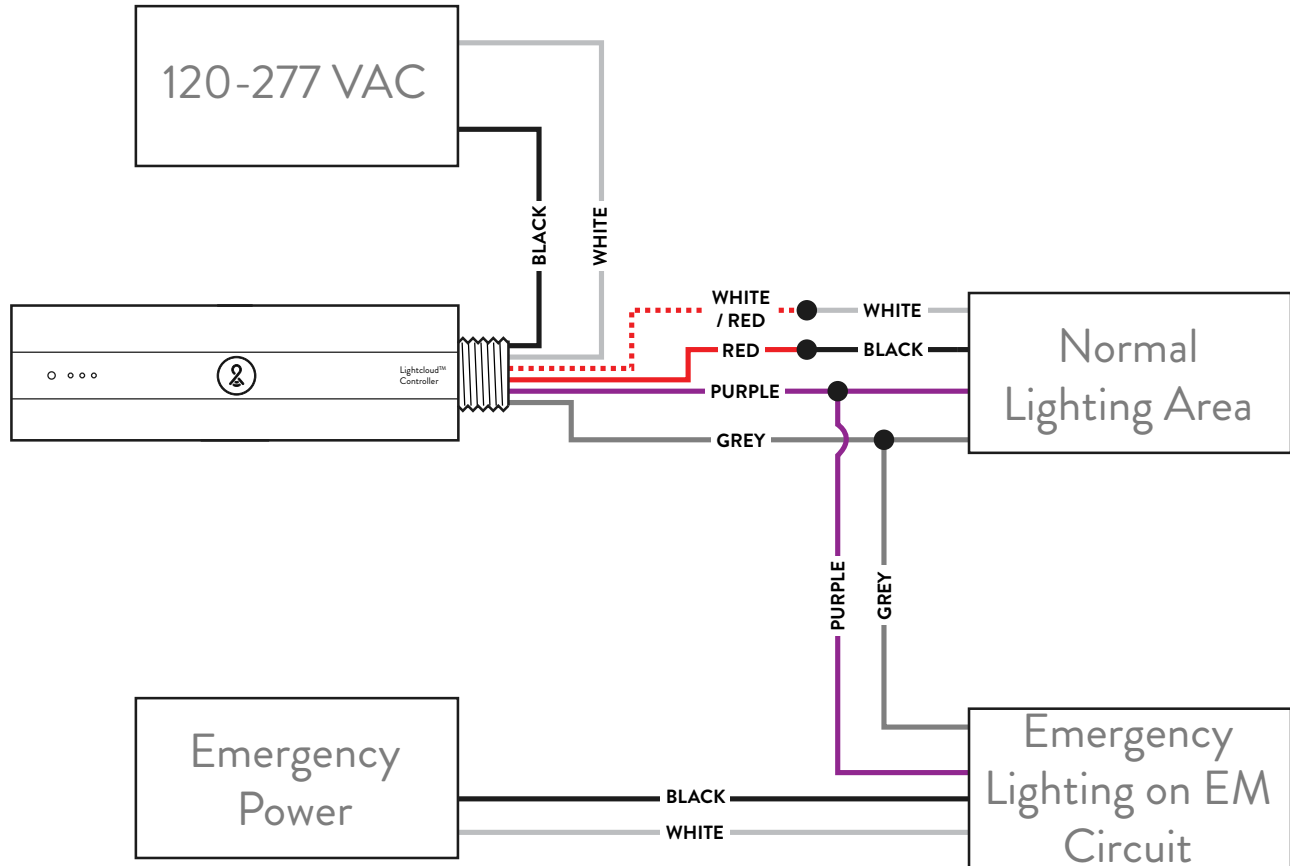
RAB

Controls



Lightcloud Emergency and Normal Lighting

Lightcloud Controllers can be used to control Emergency Lighting fed with “Always ON” Emergency Power. Upon loss of power, Emergency lighting will fail to “Full ON” light output.



Notes: In spaces where there is only one luminaire, and it is connected to emergency power, the Controller will need to be connected to a Normal Power Circuit for proper operation. Emergency fixtures with on-board battery backup don't require special wiring.



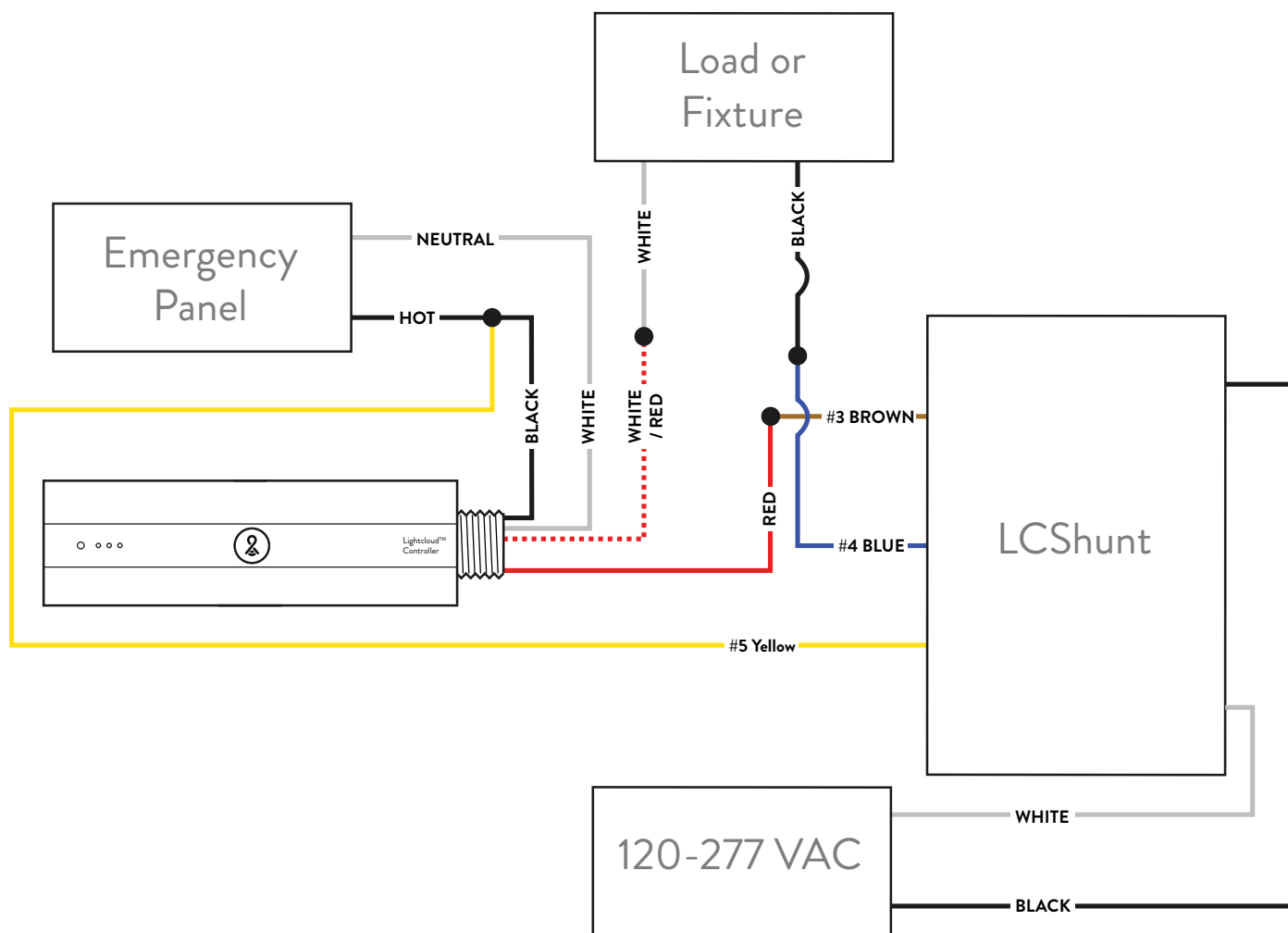
Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

RAB

Controls

Lightcloud Emergency Shunt On/Off

Lightcloud Controller emergency fixture wiring with LCShunt for on/off operation.



Note: The LCSHUNT includes a 20A rated high voltage Form C (N/O+N/C) relay and is UL924 Listed for emergency lighting control applications. The LCSHUNT can bypass a line voltage switch or dimmer, ensuring that an emergency fixture illuminates at full brightness during a utility power interruption.



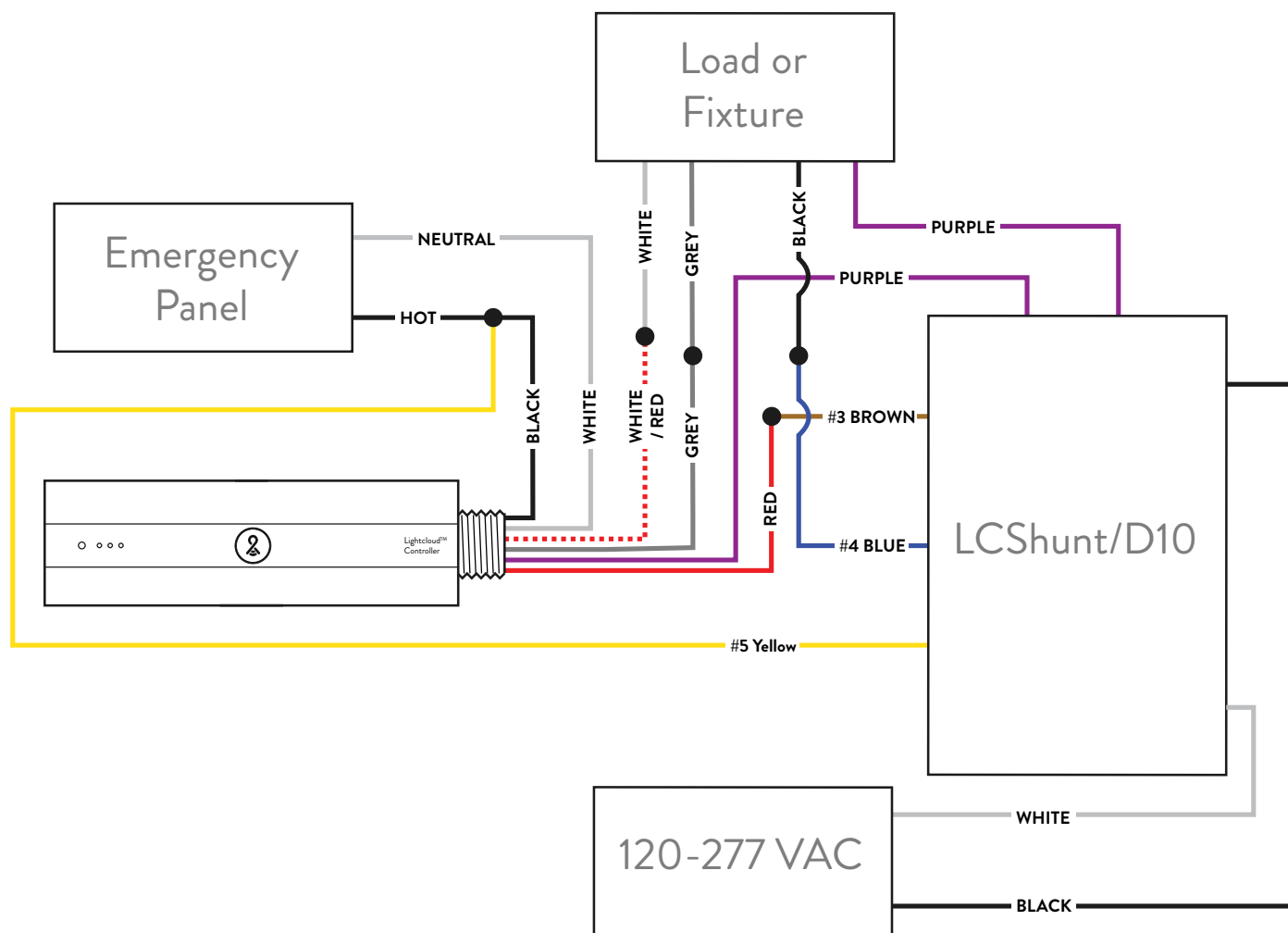
Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

RAB

Controls

② Lightcloud Emergency Shunt Dimming

Lightcloud Controller emergency fixture wiring with LCShunt/D10 for on/off and 0-10V dimmable operation.



Note: The LCSHUNT includes a 20A rated high voltage Form C (N/O+N/C) relay and a low voltage Form A (N/O) relay and is UL924 Listed for emergency lighting control applications. The LCSHUNT can simultaneously bypass both a line voltage switch and a 0-10V dimming signal, ensuring that an emergency fixture illuminates at full brightness during a utility power interruption.



Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

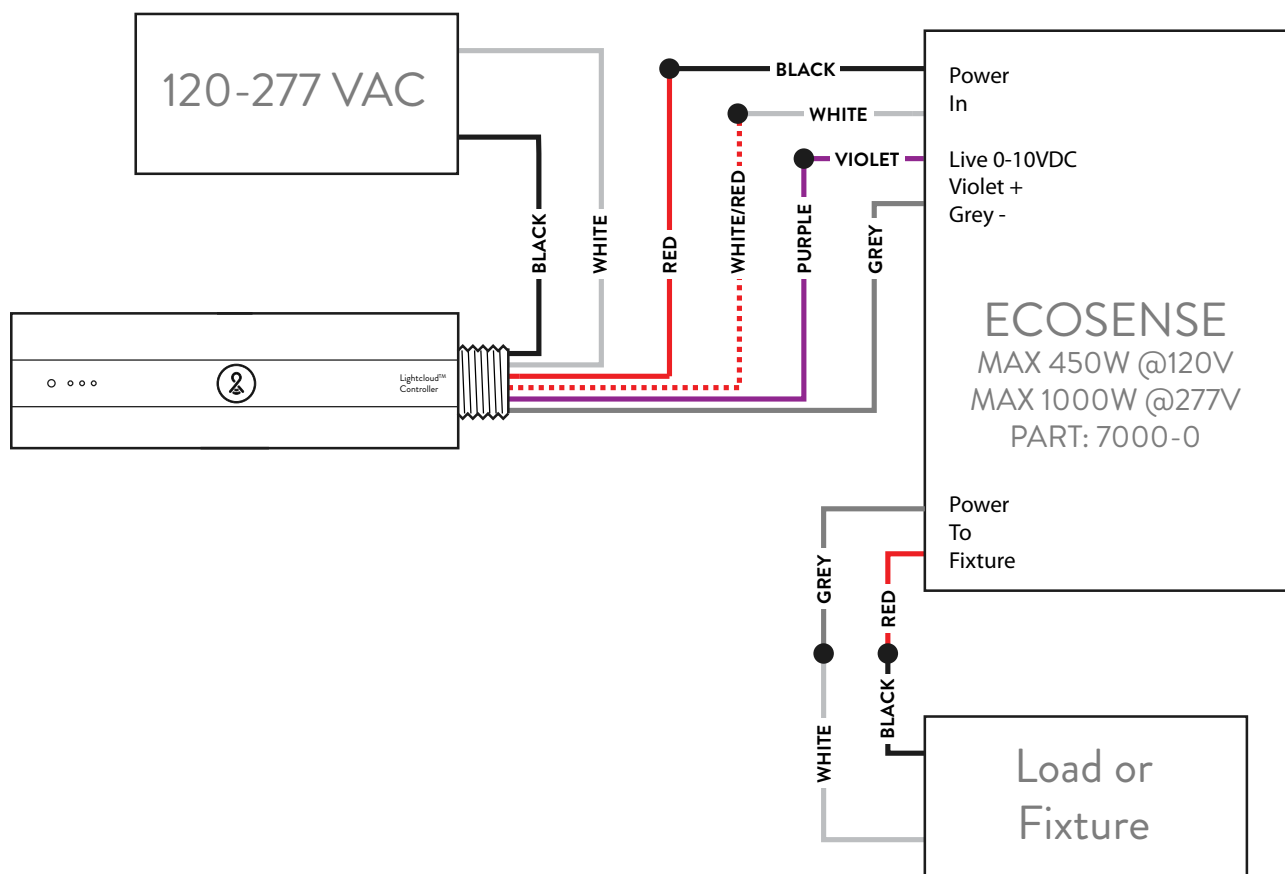
RAB

Controls



Lightcloud Phase Dimming <450W

Lightcloud Controllers can dim phase loads using a phase dimming adapter.
For loads under 450W @ 120V and 1000W @ 277V, we recommend the
Ecosense Ecospec adapter.



Phase Dimmer

Ecosense Ecospec Linear Dimming Control Module
450W MAX @ 120V
1000W MAX @ 277VD



Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance
with local and national electrical codes.

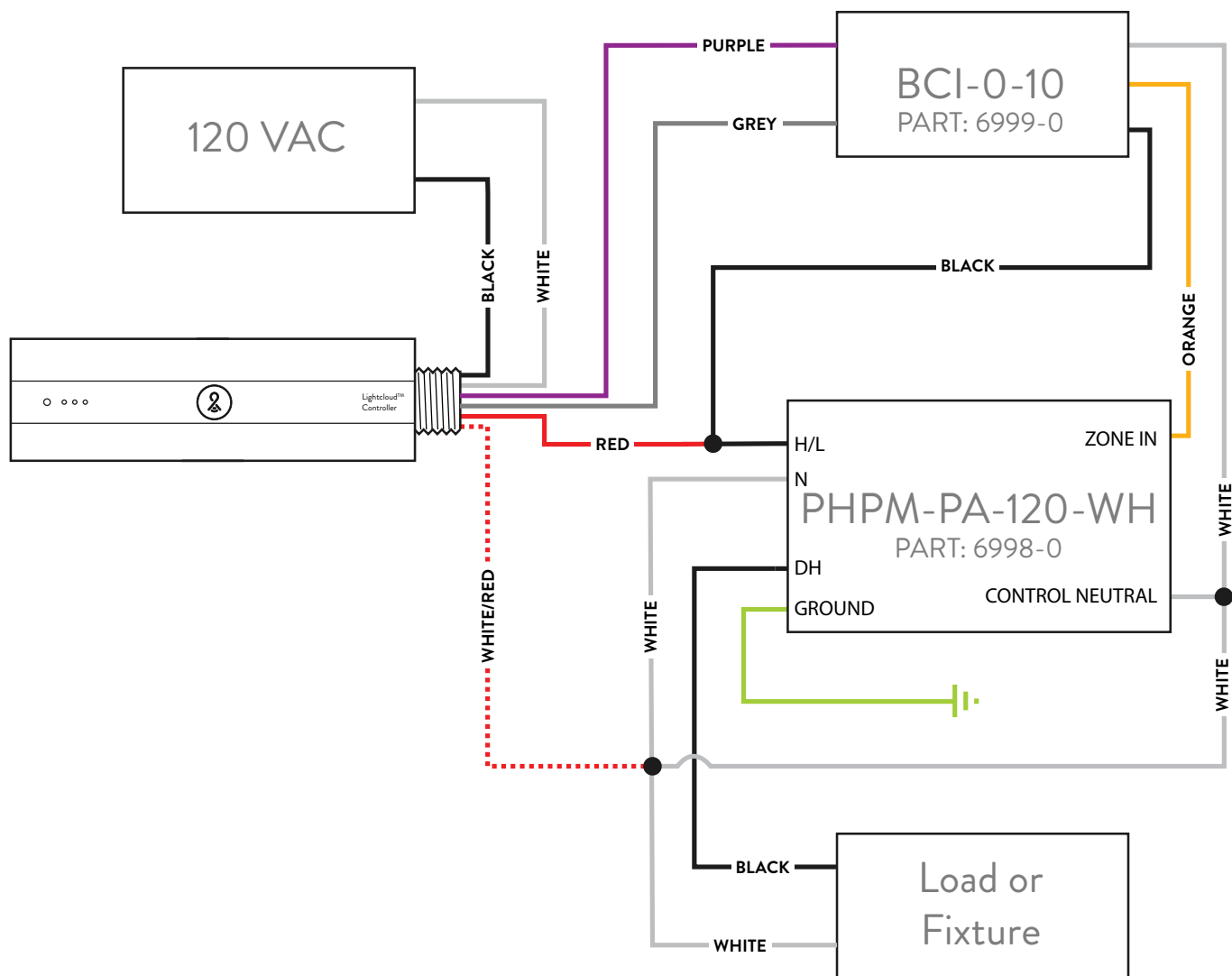
RAB

Controls



Lightcloud Phase Dimming 450-1800W

Lightcloud Controllers can dim phase loads using a phase dimming adapter. For loads between 450 and 1800W, we recommend the Lutron PHPM-PA-120-WH Phase Dimmer and BCI-0-10 Ballast Control Interface.



Phase Dimmer

Lutron PHPM-PA-120-WH
120 V @ 16 A

Ballast Control Interface

Lutron BCI-0-10
Control Input Voltage: 0-10 V-
Control Input Current: Source 500 μ A
Compatible Voltage: 120-277 V~ 50/60 Hz



Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

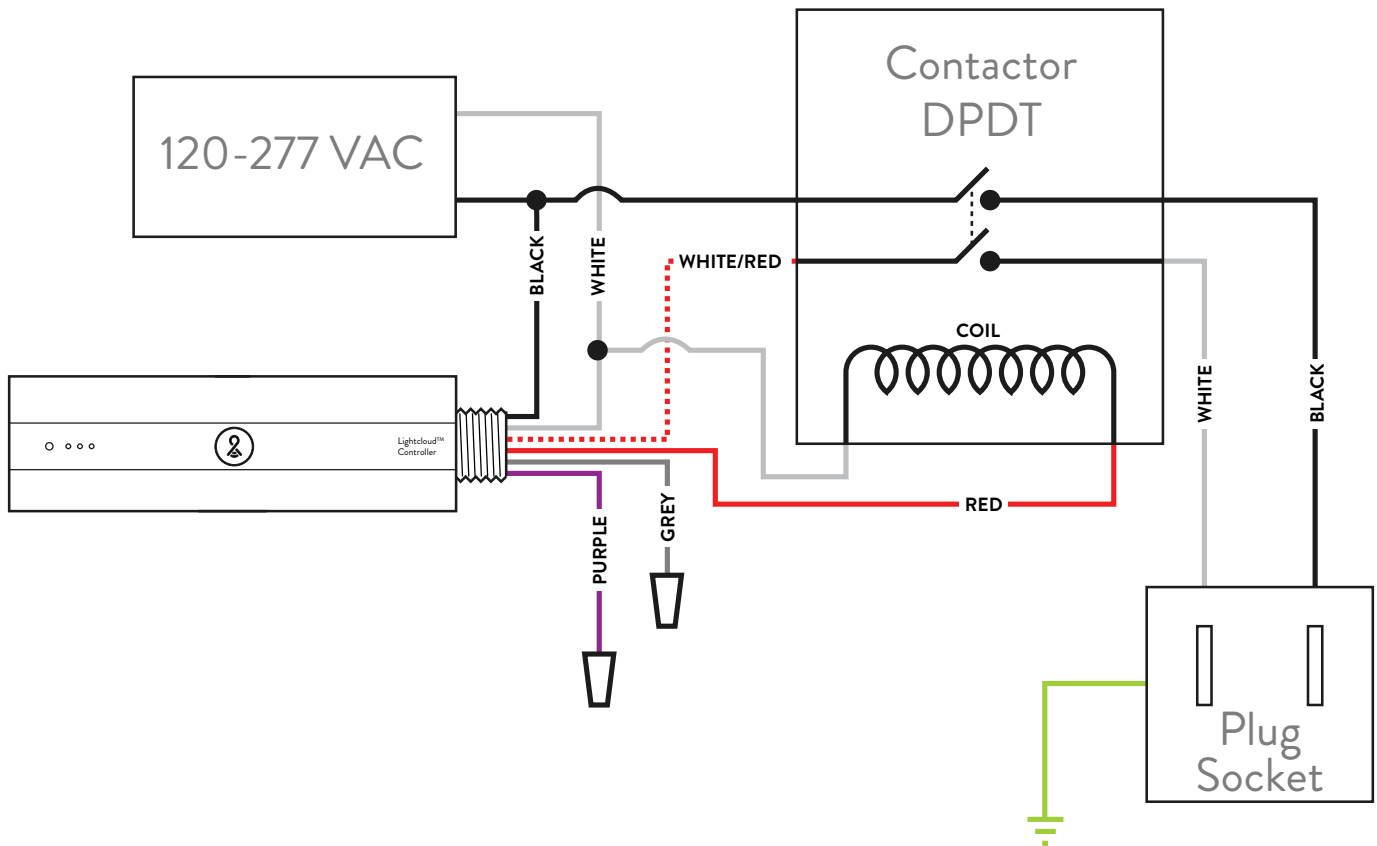
RAB

Controls



Lightcloud Plug Load Control

Lightcloud Controllers can control electrical outlets using a contactor.



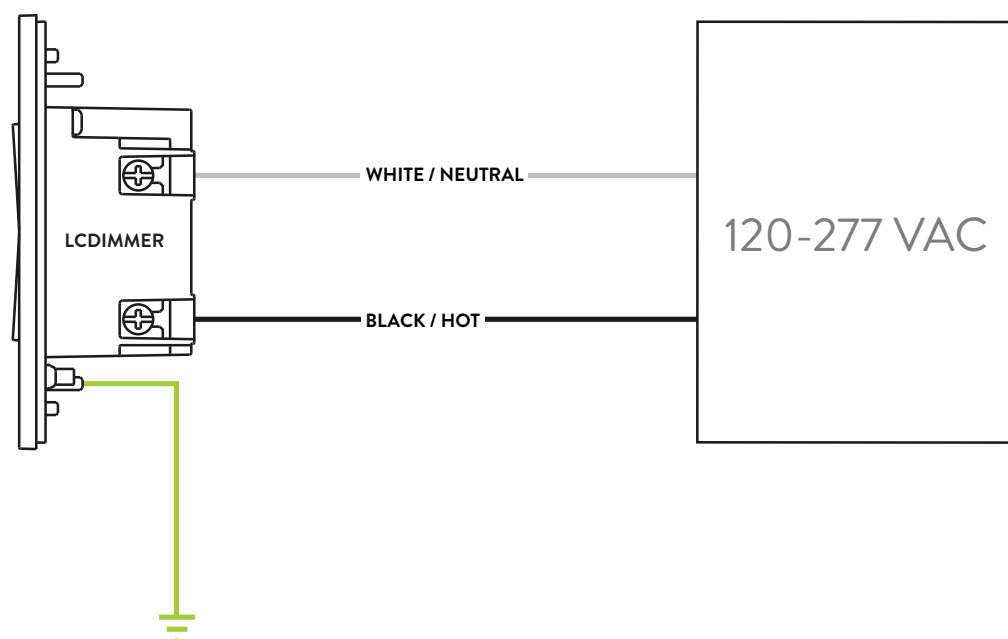
Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

RAB

Controls

Lightcloud Dimmer

Lightcloud Dimmer must be hard-wired to AC power to wirelessly controls zones, dimming, and scenes.



Input: 120-277VAC, 50/60Hz, 2W
18AWG grounding; terminals supporting up to 12AWG wire

Caution

Use only copper wire.
Do not operate with the faceplate removed.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.
This product should only be installed in a UL-approved single or double gang wall-box enclosure.
Indoor use only.



Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

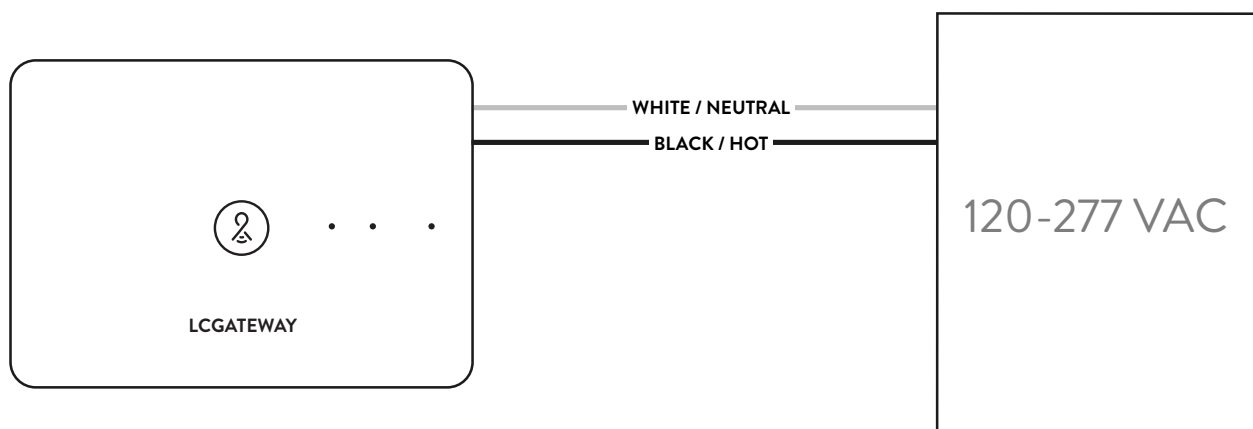
RAB

Controls



Lightcloud Gateway

The Lightcloud Gateway must be hard-wired to AC power.



Input: 120-277 VAC, 50/60 Hz 60-45mA



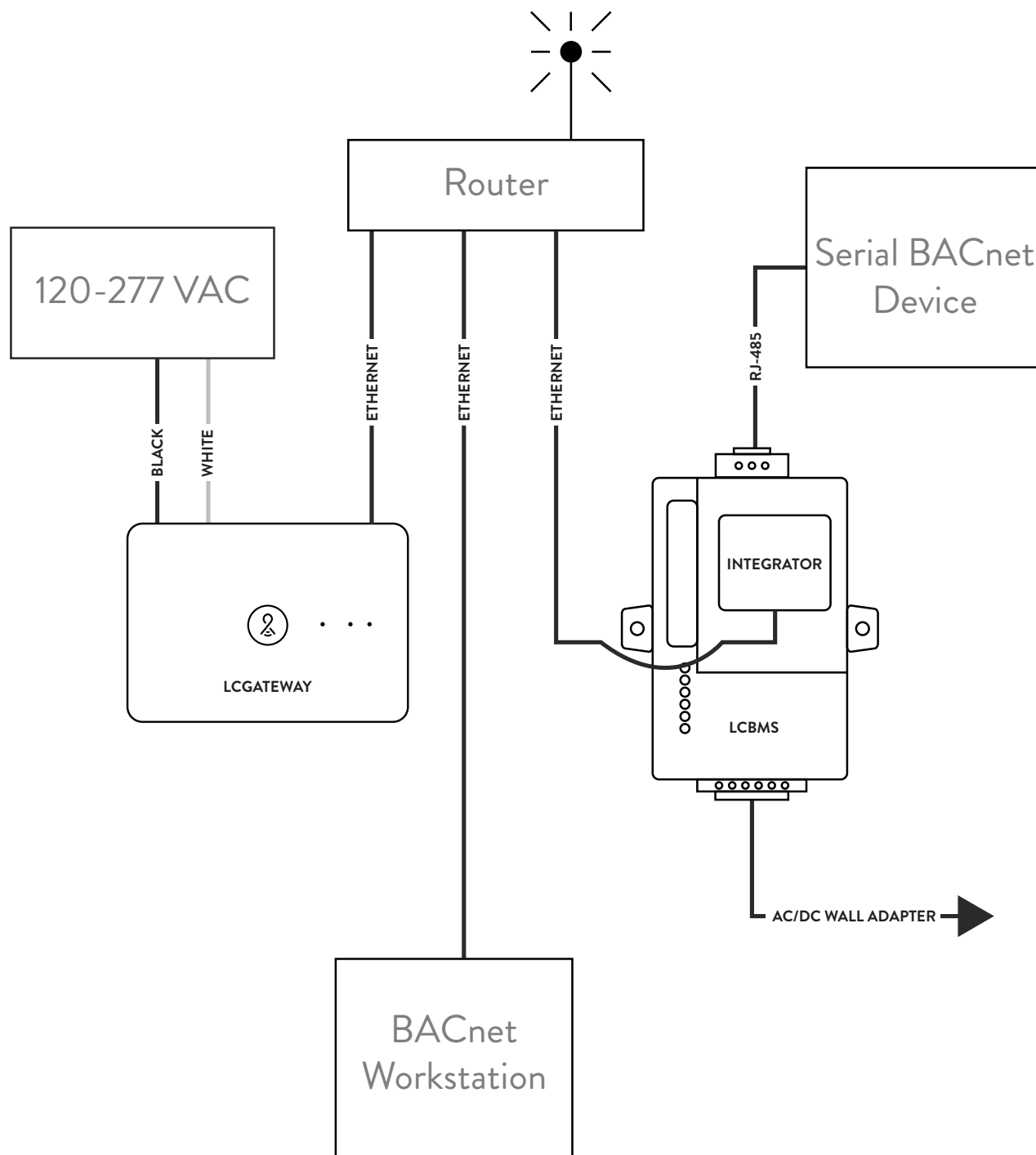
Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

RAB

Controls

Lightcloud Integrator

The Lightcloud Gateway must be hard-wired to AC power.



Input: 9-30 VDC or 12-24 VAC



Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

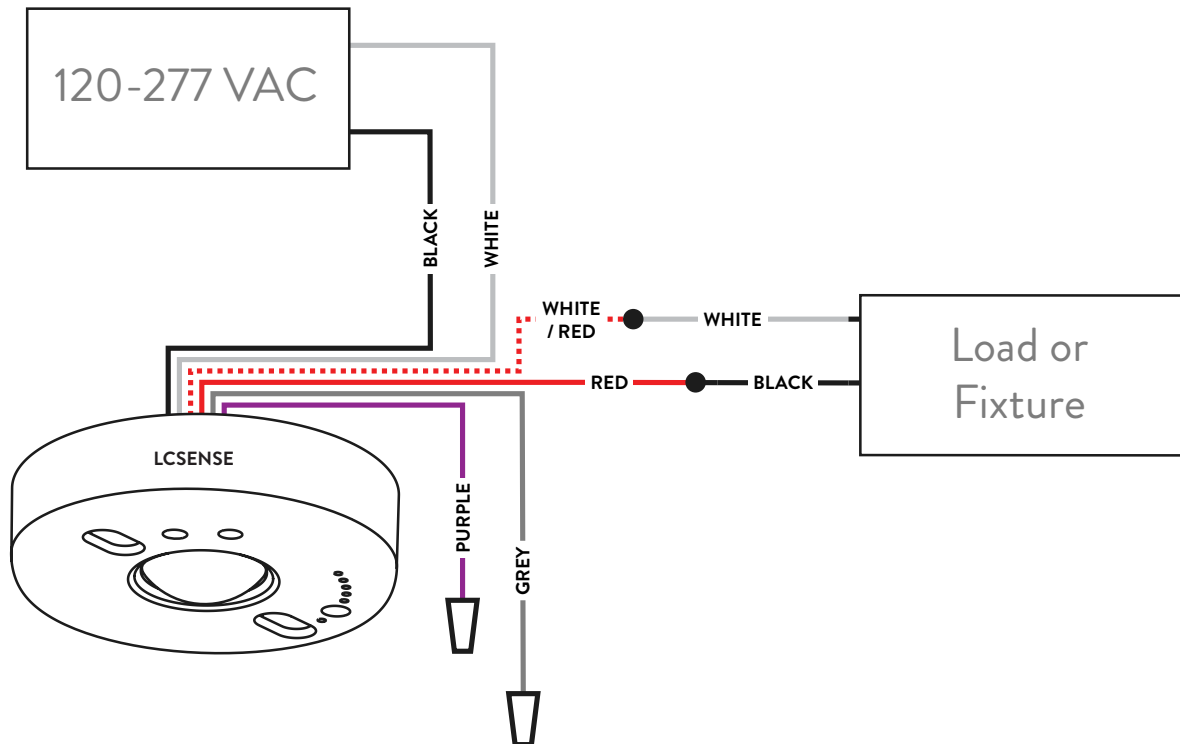
RAB

Controls



Lightcloud Sensor Switch

Lightcloud Sensor used to switch a load without dimming.



Input: 120-277VAC, 50/60Hz

Maximum Switched Load Ratings

Incandescent: 250VAC, 12A

Standard Ballast: 120/277VAC, 6A/4A

Electronic Ballast: 277VAC, 11A

Switched Neutral: The “Switched Neutral” white with red stripe wire is the neutral line for the load being switched. This enables power measurement.



Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

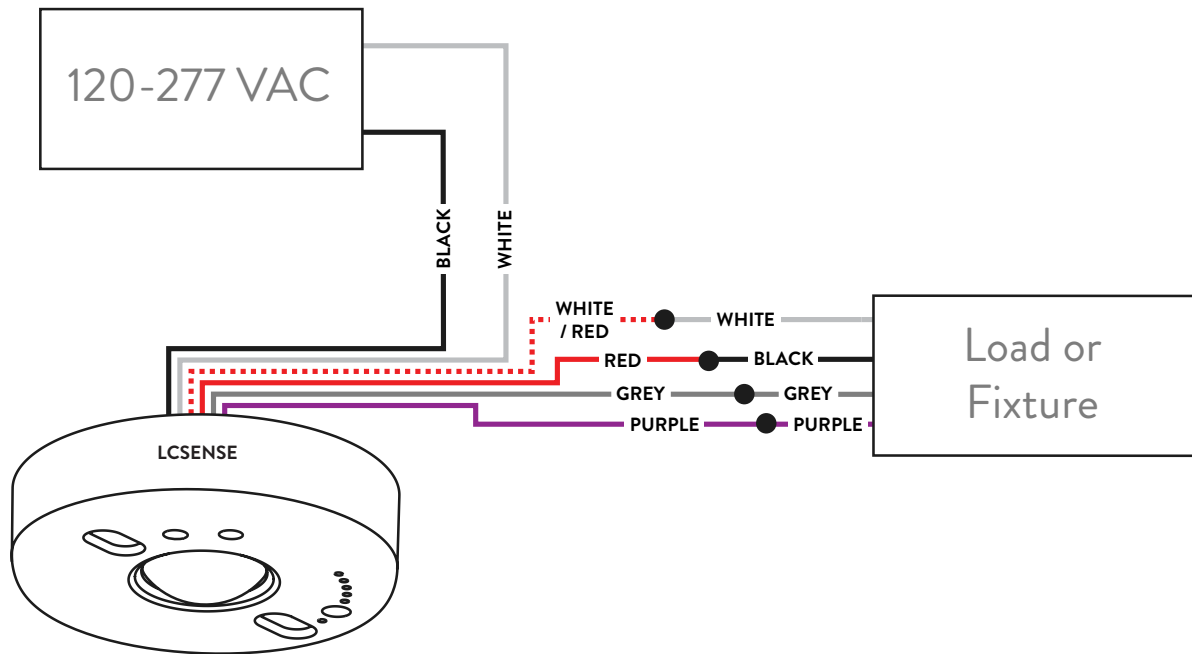
RAB

Controls



Lightcloud Sensor 0-10V Dimming

Lightcloud Sensor used to switch a load with 0-10V dimming.



Input: 120-277VAC, 50/60Hz

Purple: 0-10V positive

Grey: 0-10V common

Maximum Switched Load Ratings

Incandescent: 250VAC, 12A

Standard Ballast: 120/277VAC, 6A/4A

Electronic Ballast: 277VAC, 11A

Switched Neutral: The “Switched Neutral” white with red stripe wire is the neutral line for the load being switched. This enables power measurement.

Note: The National Electrical Code requires that low-voltage wiring use in the same enclosure as high-voltage wiring have an equal or better insulation rating. You may need to complete your low-voltage wiring in another enclosure or use a partition.



Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

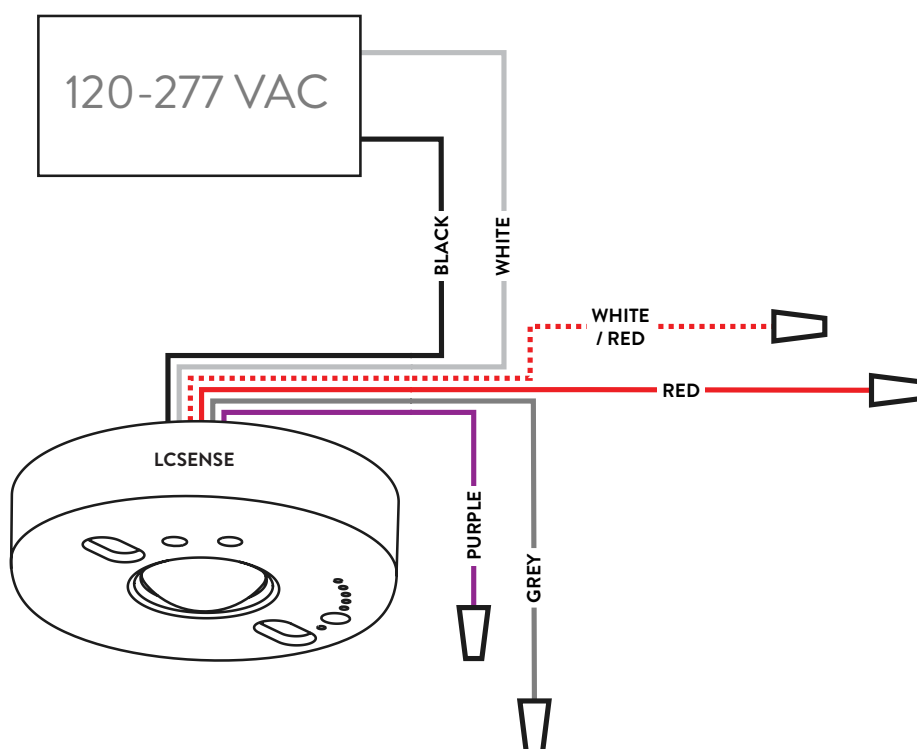
RAB

Controls



Lightcloud Sensor Without Load

Lightcloud Sensor not used to control loads.



Switched Neutral: The “Switched Neutral” white with red stripe wire is the neutral line for the load being switched. This enables power measurement.

Input: 120-277VAC, 50/60Hz



Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

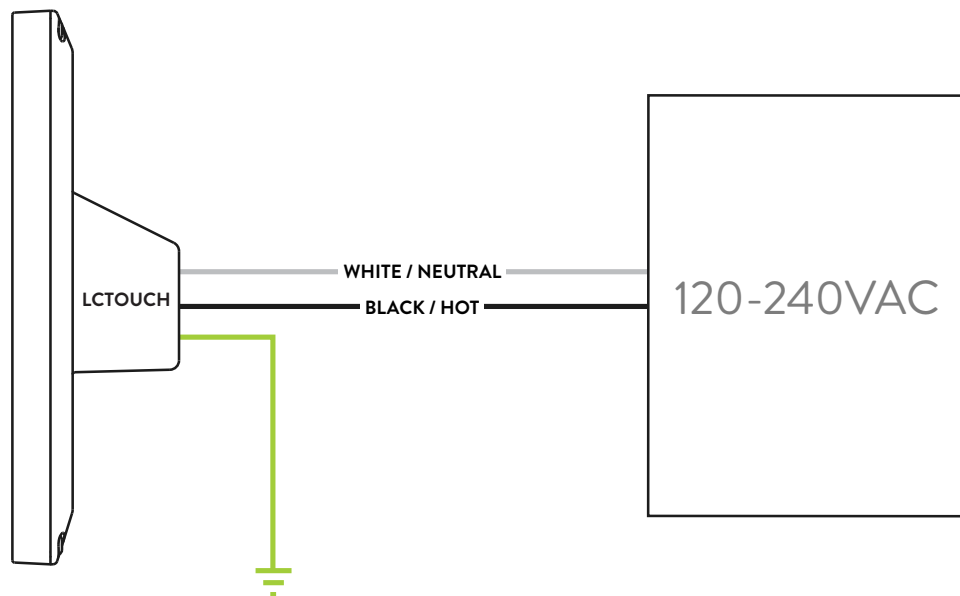
RAB

Controls



Lightcloud Touch

Lightcloud Touch must be hard-wired to AC power.



Input: 120-240 VAC, 0.3-0.15A, 50/60Hz



Any wires not in use must be capped off or otherwise insulated.
This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

RAB

Controls

Call For Additional Diagrams

lightcloud.com

1 (844) LIGHTCLOUD