CL Series Relay Panel 16-48

Mounting and Line Voltage Wiring Instructions

Attention

This section serves as a notice of the immediate or potential dangers involved when working with the equipment described throughout this manual. Any person involved in installation, maintenance, or service of the equipment should first carefully examine the equipment and read the instructions contained in this manual to ensure that personal and/or equipment injury is avoided.

The following safety messages appear throughout this manual to alert of immediate or potential danger to life as well as property.

Note : Indicates an important note.

Tip : Indicates a helpful tip or trick.

Safety Reminder : Applicable safety instructions will be included with this symbol.

DANGER : Indicates an immediately hazardous situation which ,if not avoided, will result in serious injury or death.

WARNING : Indicates a potentially hazardous situation which ,if not avoided, may result in serious injury or death.

CAUTION : Indicates a potentially hazardous situation which ,if not avoided, may result in minor or moderate injury.

Disclaimer

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designated to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Instructions contained in this user's guide should be performed only by qualified persons in accordance with local and national codes. Blue Ridge Technologies International, LLC and its affiliates assume no responsibility for any consequences related to the improper use of this manual.

Table of Contents

Visit www.BRTint.com/tandc.html for Terms and Conditions of Sale

Document Overview

This document provides instructions for mounting and line voltage connection of the following Blue Ridge Technologies products :

CL Series 16, 32, and 48 Relay Panels (RP)

RP enclosures are NEMA 1 rated and must be mounted in a dry / indoor environment.

Standard RP are UL Listed and conform to UL916.

For Relay Voltage Divider (RVD) installation instructions refer to the RVD Install Guide.

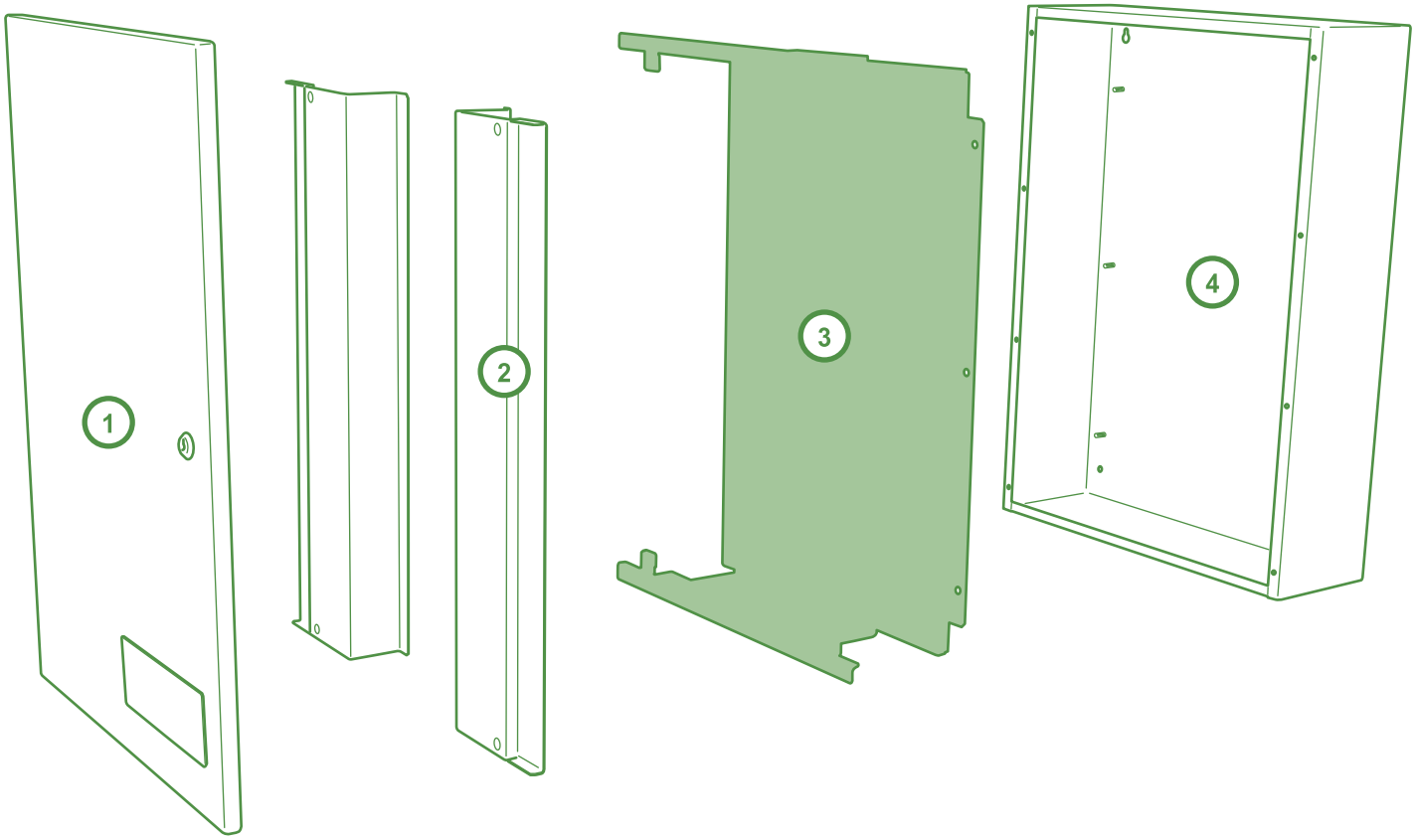
For Lx5 hardware configurations and low voltage wiring refer to the Lx5 Hardware User Guide.

For advanced Lx5 programming, including LPPK and AppLoader software instructions, refer to USB Tech Kit User Guide.

For Lx5 integration with a Building Automation System (BAS) refer to the Lx5 Integration Guide.

Assembly Overview

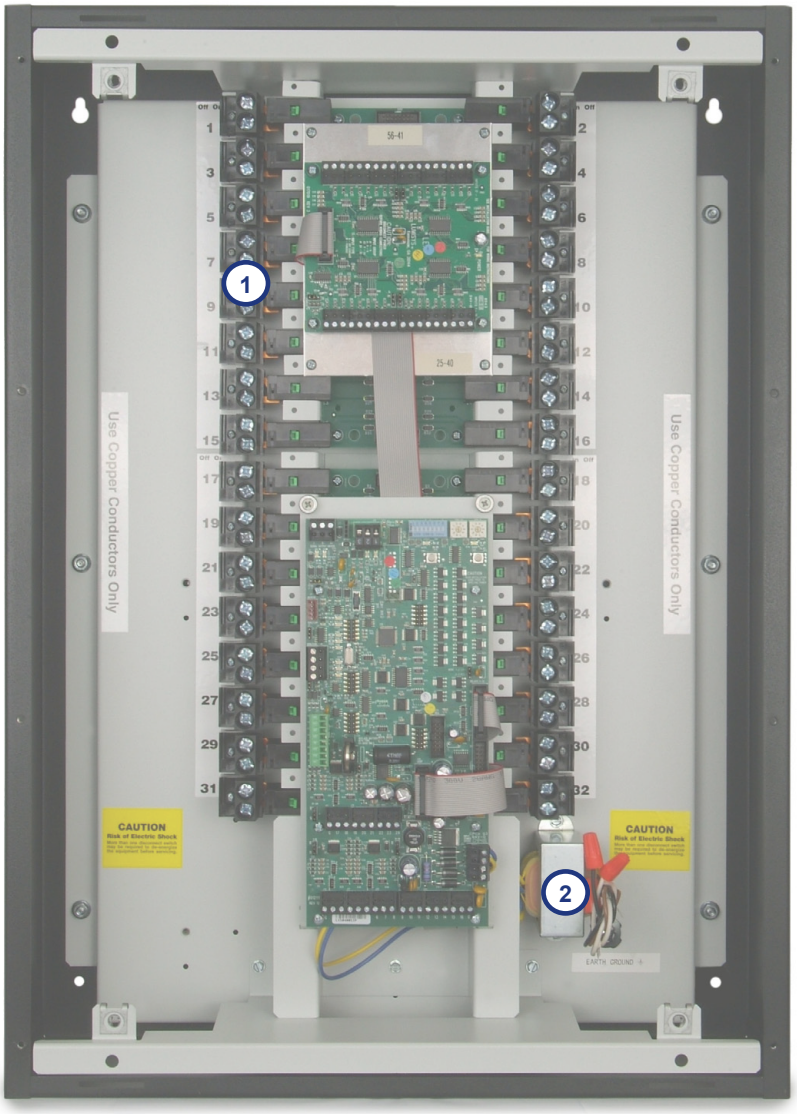
1. Panel Door
2. Relay Covers
3. Panel Interior
4. Panel Enclosure



(Figure 1)

Component Overview

1. Lighting Tough Relay (LTR)
2. Standard Dual Tap Transformer 120 or 277 VAC + 10%, 30 VA, 50 / 60 Hz

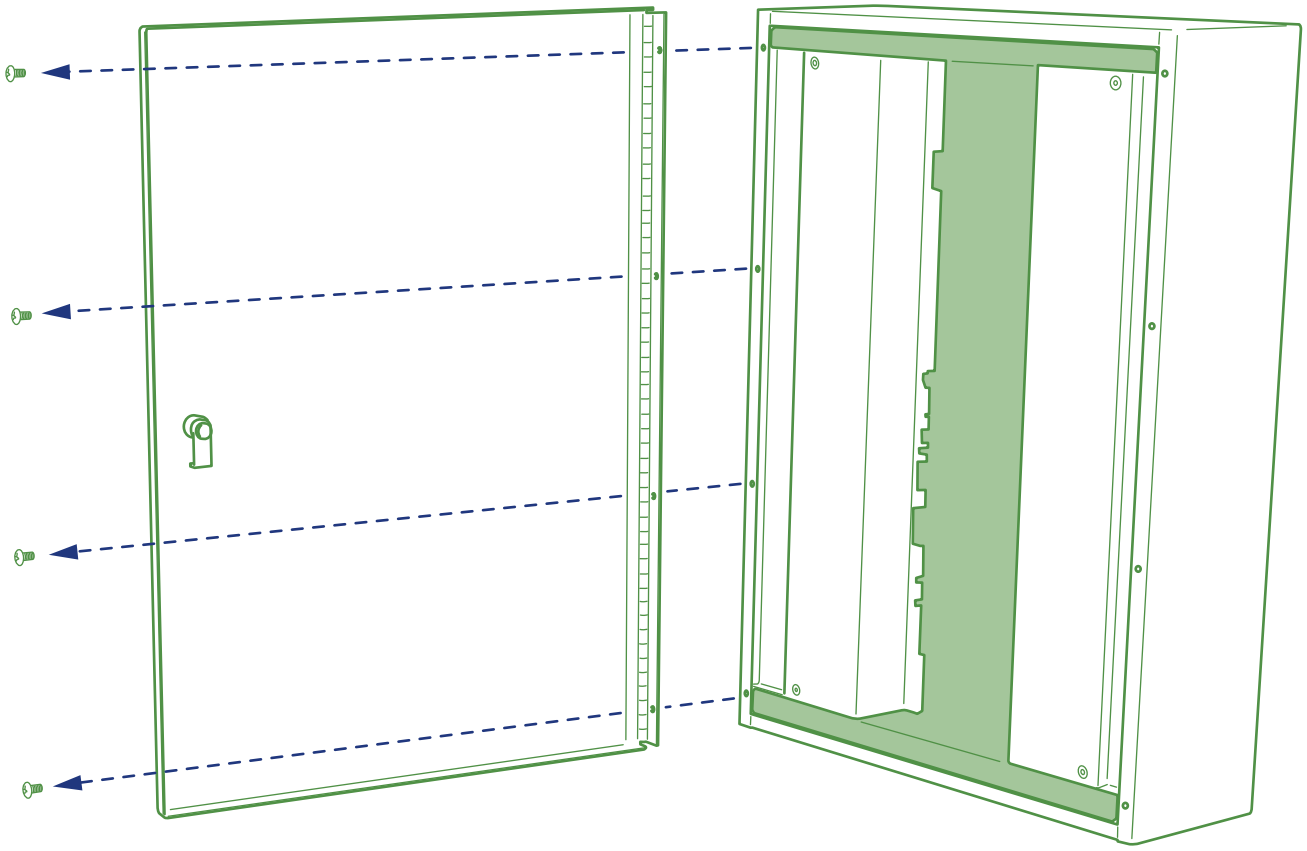


(Figure 2)

Panel Door Removal

Remove the Panel Door from the Panel Enclosure. (Figure 3)

1. Open Panel Door
2. Remove fasteners from the door's hinge.
3. Separate Panel Door from Panel Enclosure.

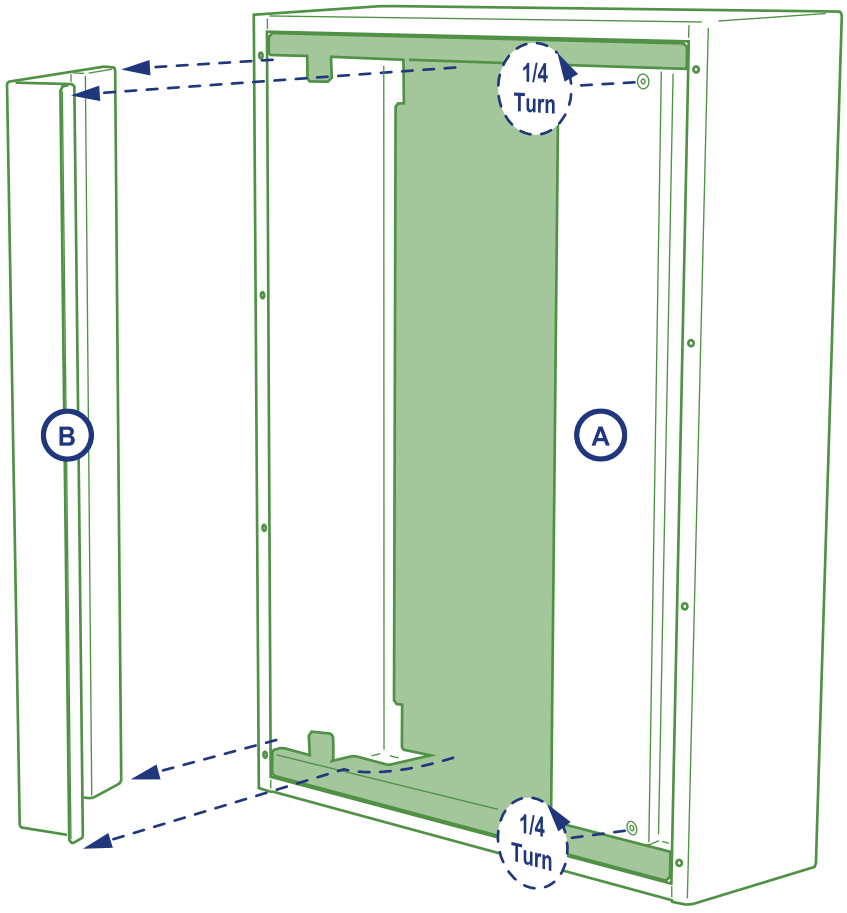


(Figure 3)

Relay Cover Removal

Remove the Relay Covers from the Panel Enclosure. (Figure 4)

1. Unlock 1/4 turn fasteners located near top and bottom of Relay Covers.
2. Remove Relay Covers by rotating inside edge outward and pulling Relay Cover free.

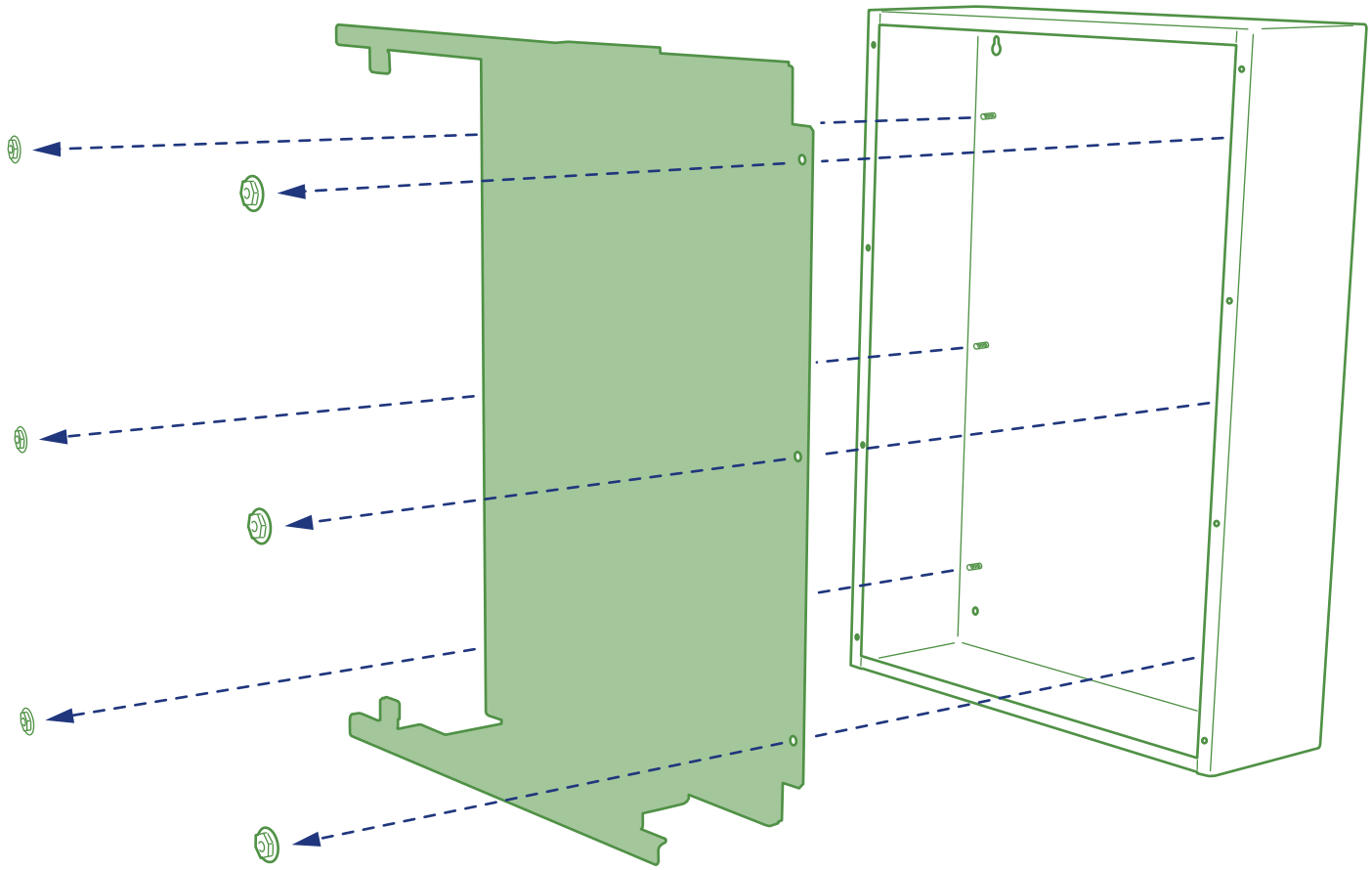


(Figure 4)

Panel Interior Removal

Remove the Panel Interior from the Panel Enclosure.[1] (Figure 5)

1. Unfasten the nuts retaining the Panel Interior.
2. Pull the Panel Interior outward to free it from the Panel Enclosure.
3. Store the Panel Interior in a secure location free of dust and debris.



(Figure 5)

[1] It is beneficial to mark position of conduit penetrations in the Panel Enclosure prior to removing the Panel Interior. (See page 10)

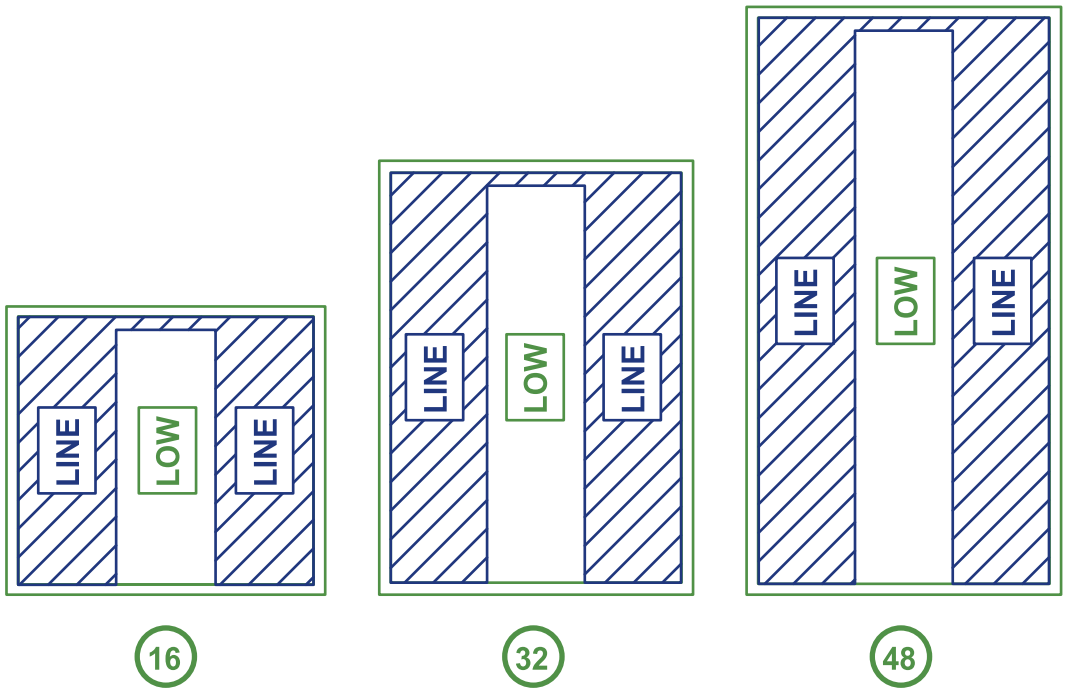
NOTE

[1] Panel Interiors may be modular. Prior to removing a modular Panel Interior ribbon cables must be disconnected to separate Panel Interior sections. Note cable termination positions to ease reinstallation.

Enclosure Preparation

Prior to mounting the Panel Enclosure prepare the enclosure with penetrations for all line and low voltage conduit. (Figure 6)

1. Ensure the Panel Enclosure is oriented correctly. (Key holes located at the top and round holes at the bottom) (Figure 7)
2. Drill or punch the appropriate hole(s) in the Panel Enclosure for the low voltage wiring to enter.
3. Drill or punch the appropriate hole(s) in the Panel Enclosure for the line voltage wiring to enter.

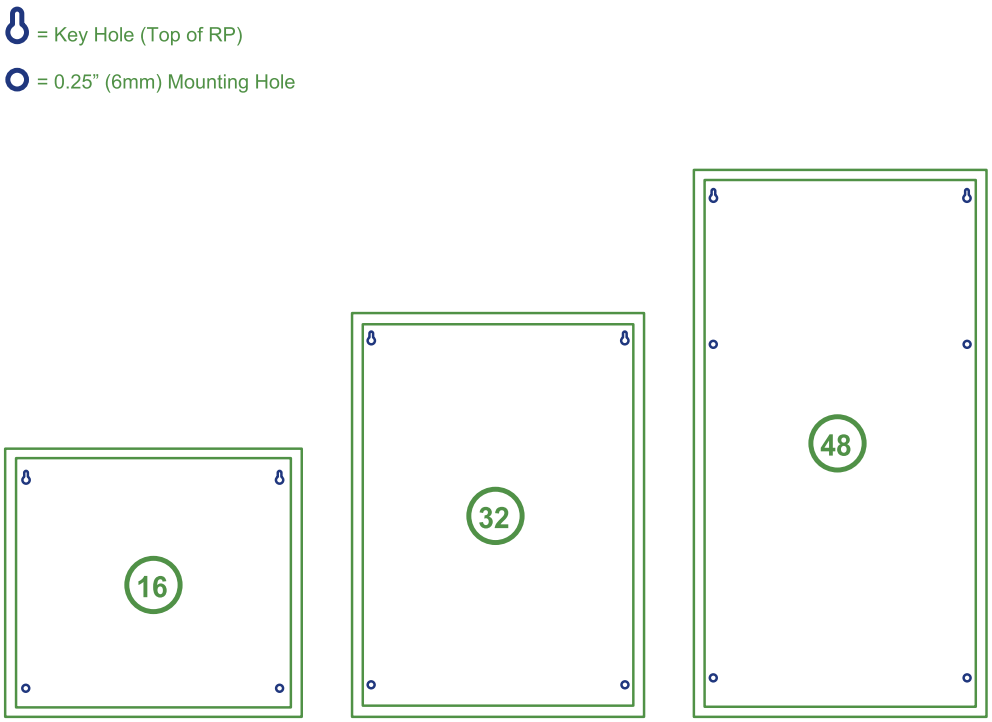


(Figure 6)

Enclosure Mounting

The Panel Enclosure may now be mounted. (Figure 7)

1. Ensure the Panel Enclosure is oriented correctly. (Key holes located at the top and round holes at the bottom)
2. Mark the location of all Panel Enclosure mounting holes to the mounting surface.
3. Prepare the mounting surface with hardware appropriate to support the panel's weight. (See Panel Weight Chart)
4. Hang Panel Enclosure.
5. Remove dust and debris from Panel Enclosure.
6. Reinstall Panel Interior. [1]
7. Install appropriate conduit and wire.



(Figure 7)

Relay Panel Capacity	Approximate Weight at Full Capacity
CL16	32 lbs (14.5 kg)
CL32	47.5 lbs (21.5 kg)
CL48	63.5 lbs (28.8 kg)

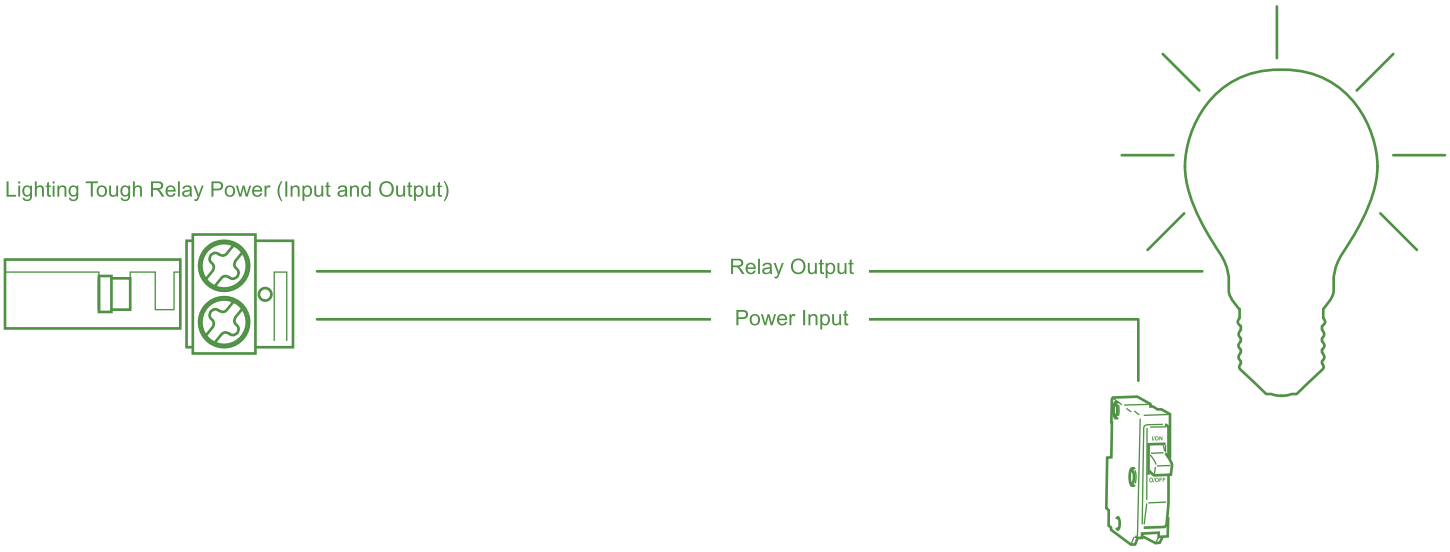
[1] DO NOT exceed 40 in-lbs when tightening Panel Interior retention nuts.

Connections : Relays

The lighting circuits may now be terminated to the Lighting Tough Relays (LTR). [1] (Figure 8)

Short Circuit Current Rating (SCCR) : 20,000 Amps @ 277 VAC
Wire Requirement : Accepts double 14-10 AWG or single 8 AWG (Solid or stranded copper wire only)

1. Confirm power is disconnected from the panel.
2. Route wires to the appropriate LTR.
3. Cut wires to length and strip as appropriate. [2]
4. Insert wires into LTR terminal block.
5. Torque each screw terminal to 36 in-lbs.
6. Repeat for each circuit.



(Figure 8)

[1] Ensure circuit is free of shorts and wiring errors before completing LTR terminations.

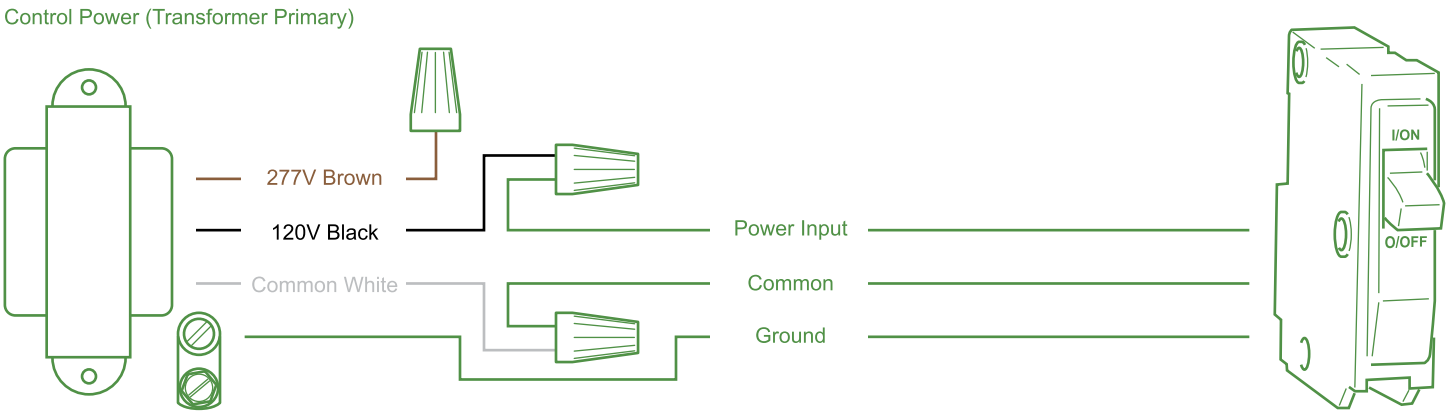
[2] A stripped length indicator is featured on each LTR terminal block.

Connections : Transformer Primary

The control power line voltage wires may now be terminated to the Transformer Primary. (Figure 9)

Transformer Primary : 120 or 277 VAC +/- 10%, 30 VA, 50 / 60 Hz
Transformer Secondary : 24 VAC +/- 10% Inherently Limited
Wire Requirement : 18 AWG Minimum (Solid or Stranded)

1. Confirm power is disconnected from the panel.
2. Select primary power wire according to system voltage.
3. Connect selected power wire and common to the corresponding leads from the circuit breaker.
4. Cap unused primary lead.
5. Land the ground from the breaker panel in the RP ground lug.



(Figure 9)