

Lighting Controls

LightSweep Retrofit Kit For 48 Relay Legacy Panels CLCRET48



DESCRIPTION

This instruction sheet is intended to guide an installer through the process of converting a GE Lighting Control panel from its original configuration to use the new GE LightSweep modular control components.

The RINTERxx48 series of interiors is the component that provides functionality for up to 48 relays to be controlled in the Centralized Lighting Control System Relay Panel. The complete relay panel assembly will include the following:

1. Tub (RTUB48)
2. Interior (RINTERxx48)
3. Power Supply (RPWRxxx)
4. Cover (RCOV48xx)

This instruction sheet will describe:

1. Removal of existing panel control components
2. Installation of new interface hardware
3. Reconnection of relays and low voltage wiring



BEFORE YOU BEGIN

Read these instructions completely and carefully.

⚠ WARNING

RISK OF ELECTRIC SHOCK

**TURN OFF POWER BEFORE SERVICING
INSTALL IN ACCORDANCE WITH NATIONAL
ELECTRIC CODE**

**CAUTION: Make sure all power is off before wiring.
Do not energize wiring until the unit is fully
assembled. Conform to all applicable codes.**



imagination at work

If you have questions, call GE Lighting Control Service at: 1-877-584-2685 (LTG-CNTL) in the USA and Canada.

Installation Instructions

PREPARATION

Typical items required to complete retrofit

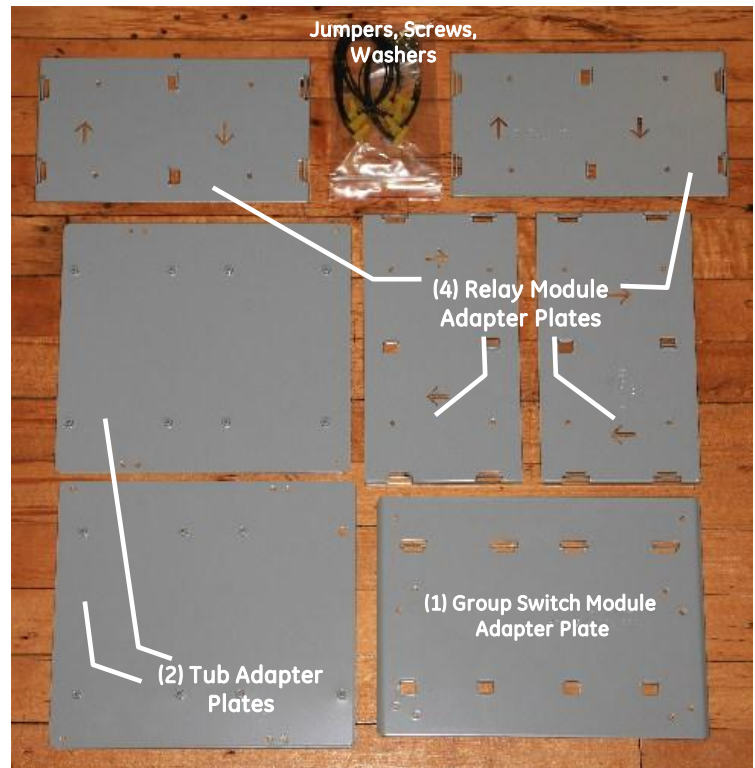
- Philips head screwdriver
- Flathead screwdriver
- Small flathead screwdriver (1/8")
- Hex nut driver - 5/16"
- Hex nut driver - 1/4"
- Wire cutter
- Wire stripper (small gauge wire)
- Small gauge signal wire (18 - 22 AWG, 300V)
- Pliers
- Wire nuts
- Electrical tape
- Wire markers
- Work light

Assure that your kit is complete

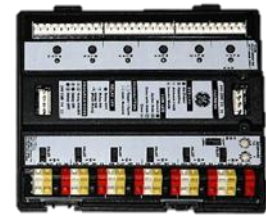
- (4) Relay Module adapter plates,
- (1) Group Switch Module adapter plate,
- (2) Tub adapter plates,
- (28) screws,
- (28) lock washers,
- (4) long jumpers

Assure that you have all required modules

- (1) Group Switch Module,
- One Relay Module for every six relays,
- And optionally, either (1) Network Scheduler or (1) BACnet module



Group Switch Module



Relay Module

NOTICE! Before Disconnecting Power

Using your lighting control panel, turn on any and all lighting circuits that may be needed immediately following the installation. During the installation, all panel functionality will be lost. Latching relays switched to the ON position will be maintained throughout the installation process. Therefore, when panel power is restored, these lights will turn back on immediately.

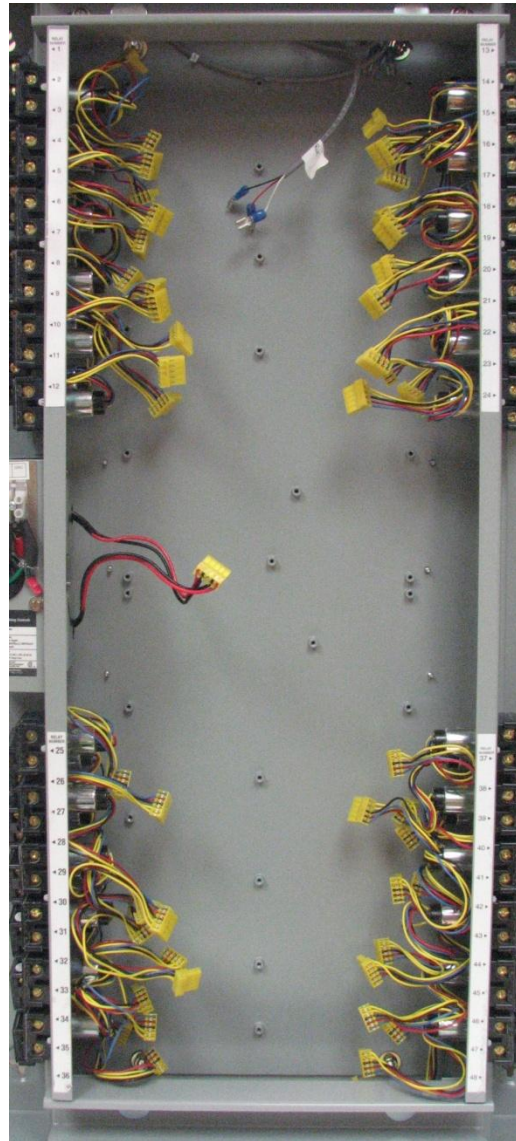
Installation Instructions

INSPECT TUB

The tub should be checked to make sure that it is in good condition, and free of debris or other obstructions before continuing with the retrofit.

If everything is in order, you are now ready to proceed with the installation of the retrofit kit.

Skip to pg. 25



Installation Instructions

48 INTERIOR RETROFIT KIT

WARNING

RISK OF ELECTRIC SHOCK

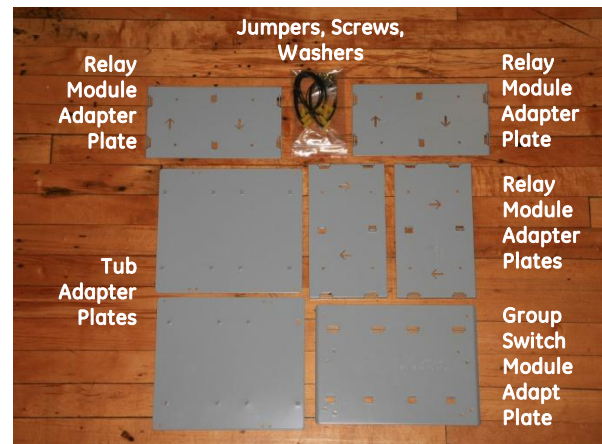
**TURN OFF POWER BEFORE SERVICING
INSTALL IN ACCORDANCE WITH NATIONAL
ELECTRIC CODE**

Note: System Configurations May Vary by:

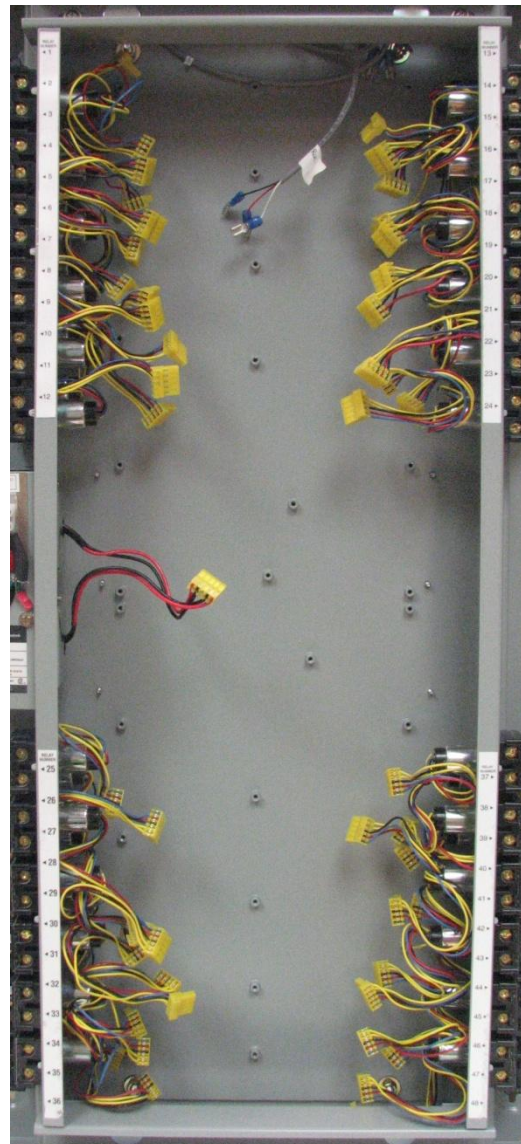
- Number of installed relays
- Number of connected switch inputs
- Number of data-line network connections
- Type of cover (door)

Typical items required to complete retrofit

- Philips head screwdriver
- Small flathead screwdriver (1/8")
- Wire cutter
- Wire stripper (small gauge wire)
- Small gauge signal wire (18 - 22 AWG, 300V)
- Wire nuts
- Electrical tape
- Wire markers
- Work light



Retrofit Kit

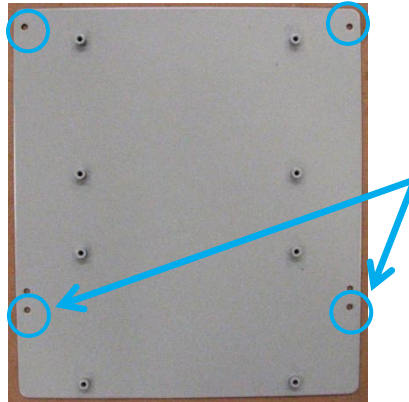


Installation Instructions

INSTALL TOP TUB ADAPTER PLATE

Installation of Tub Top Adapter Plate

- The Tub adapter plate is secured with 4 screws – see circled holes in photo for location
- **NOTE:** Use lower holes at bottom of plate



Use lower holes during installation

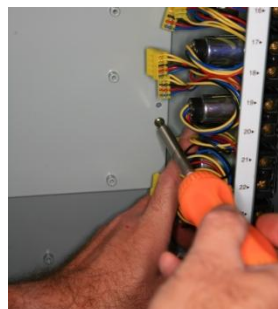
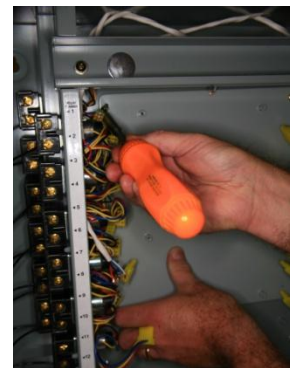
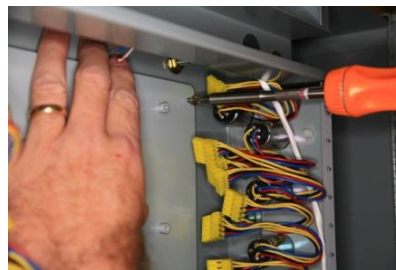
Mounting hole location

- Orient plate as shown in photo – tilt plate at an angle to slide under end of relays
- Flatten out plate and slide under relays on opposite side of panel – slide up into position



Plate orientation

- Insert screw/lock washer in upper right corner of plate – do not fully tighten at this time
- Insert screw/lock washer in upper left corner of plate – do not fully tighten at this time
- Insert remaining two screws/lock washers into plate
- Completely tighten all four screws



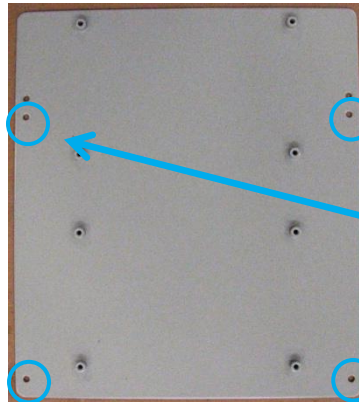
Securing Plate

Installation Instructions

INSTALL BOTTOM TUB ADAPTER PLATE

Installation of Bottom Tub Adapter Plate

- The Tub adapter plate is secured with 4 screws – see circled holes in photo for location
- **NOTE:** Use lower set of holes at top of plate as shown



Use lower holes during installation

Mounting hole location

- Orient plate as shown in photo – **NOTE:** plate is installed 180 degrees compared with top adapter plate
- tilt plate at a an angle to slide under end of relays
- Flatten out plate and slide under relays on opposite side of panel – slide down into position

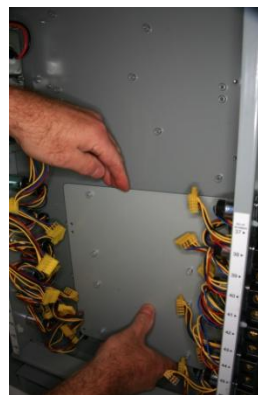
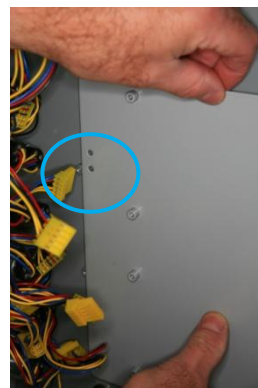
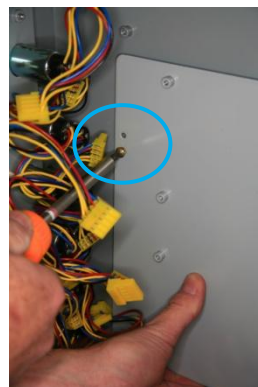


Plate orientation



- Insert screw/lock washer in upper left corner of plate – do not fully tighten at this time
- Insert screw/lock washer in upper right corner of plate – do not fully tighten at this time
- Insert remaining two screws/lock washers into plate
- Completely tighten all four screws



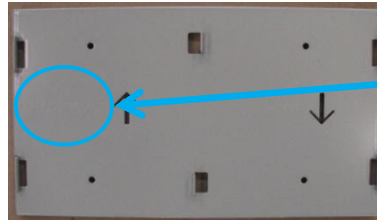
Securing Plate

Installation Instructions

INSTALL RELAY MODULE ADAPTER PLATES

Installation of Top Relay Module Adapter Plate

- The Relay Module adapter plate is secured with 4 screws
- **NOTE:** For proper orientation, the arrow pointing up should be labeled "LEFT RELAY MODULE"



Labeled:
"LEFT RELAY
PLATE"

Relay Module Adapter Plate

- Orient plate with "LEFT RELAY MODULE" wording on the left side
- Start in open area in the middle of interior
- Slide plate upwards under end of relays
- Align holes in plate with top four standoffs in Tub Adapter Plate

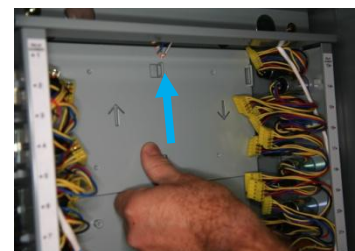
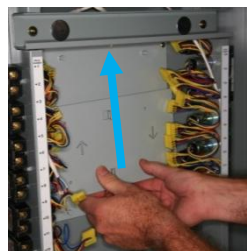
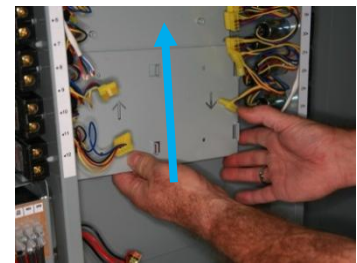
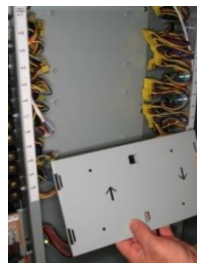


Plate Alignment

- Insert screw/lock washer in upper left corner of plate – do not fully tighten at this time
- Insert screw/lock washer in upper right corner of plate – do not fully tighten at this time
- Insert remaining two screws/lock washers into plate
- Completely tighten all four screws



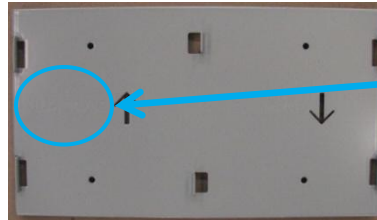
Securing
Plate

Installation Instructions

INSTALL RELAY MODULE ADAPTER PLATES

Installation of Second Relay Module Adapter Plate

- The Relay Module adapter plate is secured with 4 screws
- **NOTE:** For proper orientation, the arrow pointing up should be labeled "LEFT RELAY MODULE"



Labeled:
"LEFT RELAY
PLATE"

Relay Module Adapter Plate

- Orient plate with "LEFT RELAY MODULE" wording on the left side
- Start in open area in the middle of interior
- Slide plate upwards under end of relays
- Align holes in plate with bottom four standoffs in Tub Adapter Plate

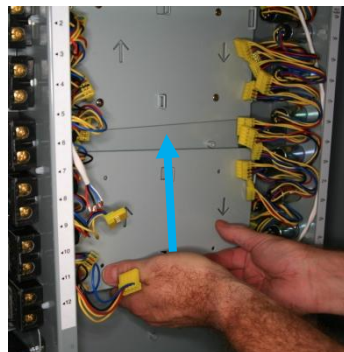
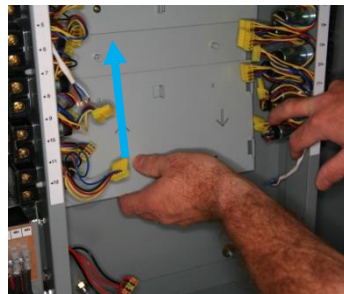
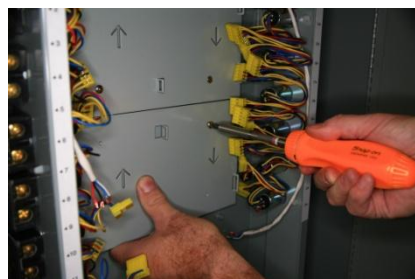


Plate
Alignment

- Insert screw/lock washer in upper right corner of plate – do not fully tighten at this time
- Insert screw/lock washer in lower left corner of plate – do not fully tighten at this time
- Insert remaining two screws/lock washers into plate
- Completely tighten all four screws



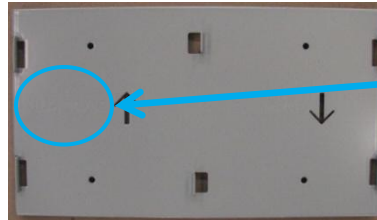
Securing
Plate

Installation Instructions

INSTALL RELAY MODULE ADAPTER PLATES

Installation of Bottom Relay Module Adapter Plate

- The Relay Module adapter plate is secured with 4 screws
- **NOTE:** For proper orientation, the arrow pointing up should be labeled "LEFT RELAY MODULE"



Labeled:
"LEFT RELAY
PLATE"

Relay Module Adapter Plate

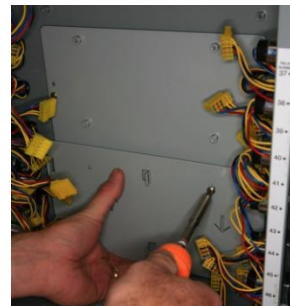
- Orient plate with "LEFT RELAY MODULE" wording on the left side
- Start in open area in the middle of interior
- Slide plate downwards under end of relays
- Align holes in plate with bottom four standoffs in Tub Adapter Plate



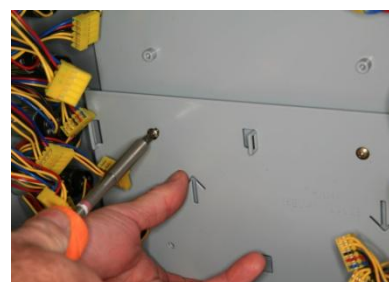
Plate
Alignment



- Insert screw/lock washer in upper right corner of plate – do not fully tighten at this time
- Insert screw/lock washer in upper left corner of plate – do not fully tighten at this time
- Insert remaining two screws/lock washers into plate
- Completely tighten all four screws



Securing
Plate

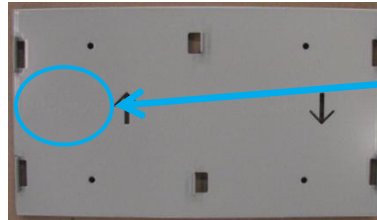


Installation Instructions

INSTALL RELAY MODULE ADAPTER PLATES

Installation of Last Relay Module Adapter Plate

- The Relay Module adapter plate is secured with 4 screws
- **NOTE:** For proper orientation, the arrow pointing up should be labeled "LEFT RELAY MODULE"



Labeled:
"LEFT RELAY
PLATE"

Relay Module Adapter Plate

- Orient plate with "LEFT RELAY MODULE" wording on the left side
- Start in open area in the middle of interior
- Slide plate downwards under end of relays
- Align holes in plate with bottom four standoffs in Tub Adapter Plate

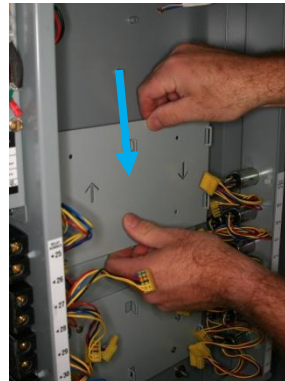
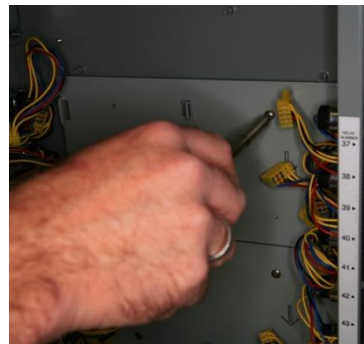
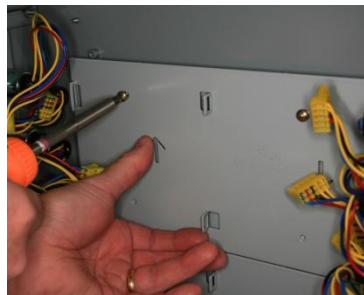


Plate
Alignment

- Insert screw/lock washer in upper right corner of plate – do not fully tighten at this time
- Insert screw/lock washer in upper left corner of plate – do not fully tighten at this time
- Insert remaining two screws/locks washer into plate
- Completely tighten all four screws



Securing
Plate

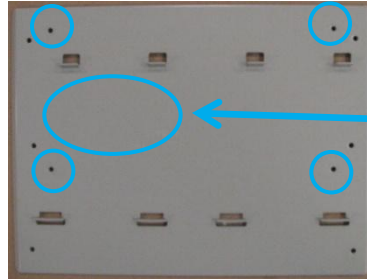


Installation Instructions

INSTALL GROUP SWITCH MODULE ADAPTER PLATE

Installation of Group Switch Module Adapter Plate

- The Group Switch Module adapter plate is secured with 4 screws – see circled holes in photo for location
- **NOTE:** For proper orientation, the left side of the plate should be labeled “MODULE POWER SOURCE”



Labeled:
“MODULE
POWER
SOURCE”

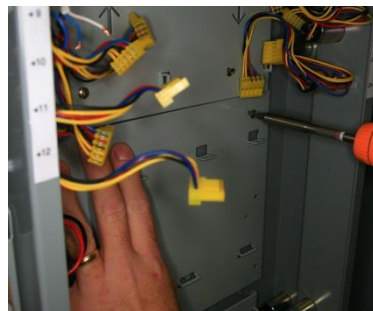
Group Switch Module Adapter Plate

- Orient plate with “MODULE POWER SOURCE” wording on the left side
- Plate locates between Relay Module adapter plates
- Align holes in plate with standoffs in sheet metal interior

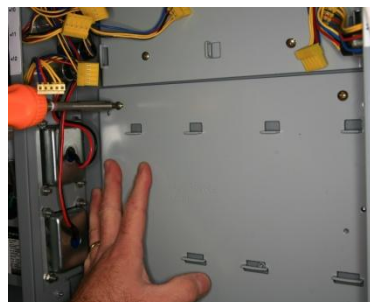


Plate
Alignment

- Insert screw/lock washer in upper right corner of plate – do not fully tighten at this time
- Insert screw/lock washer in upper left corner of plate – do not fully tighten at this time
- Insert remaining two screws/lock washers into plate
- Completely tighten all four screws



Securing
Plate

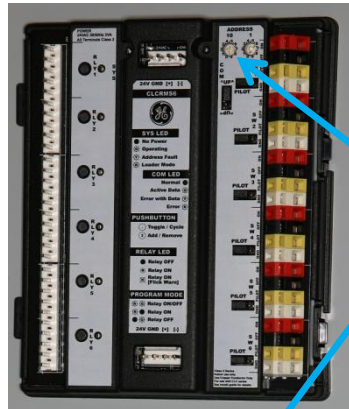


Installation Instructions

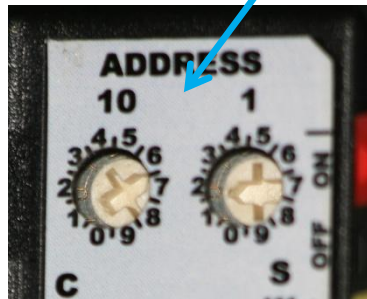
RELAY MODULE INFORMATION

Relay Module Information

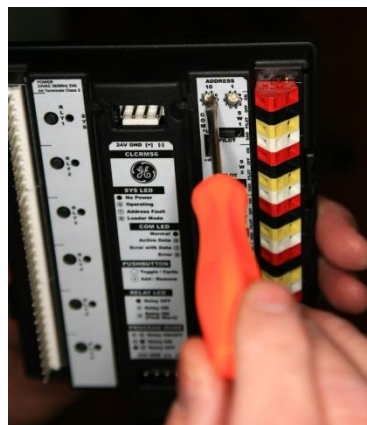
- Each relay module should be supplied with a short module to module jumper
- Each relay module will need a unique address



Module address location



- To change module address, use small screwdriver to align arrow on switch with number on label
- The 10's location is on the left
- The 1's location is on the right
- Example: address 62 equals "6" in the 10's location and "2" in the 1's location



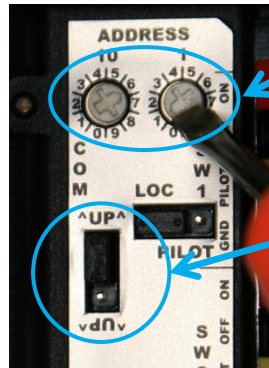
Change module address

Installation Instructions

RELAY MODULE INSTALLATION

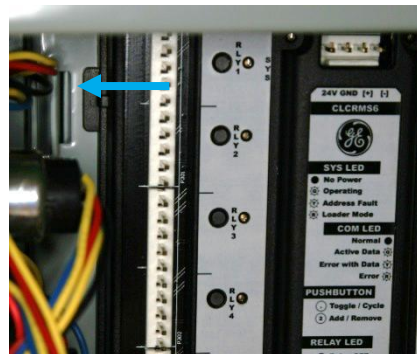
Install First Relay Module

- Set address of first module to **60**
- Make sure module position jumper ("UP") is oriented as shown
- First relay module is installed in the upper left position (next to relays #1- #6)
- Slide the two tabs on left side of module under raised slots in sheet metal interior
- Press down on right side of module to snap into place

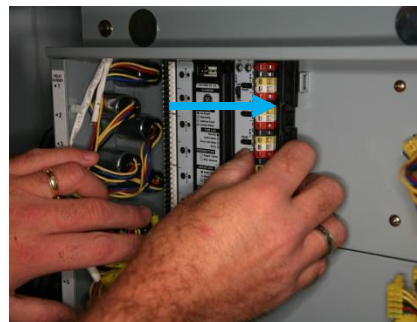


Set address

Orientation Jumper



Module 1 Installation



Install Second Relay Module

- Set address of second module to **61**
- Make sure module position jumper ("UP") is oriented the same as the first module
- Install second module in the lower left position, below the first module (next to relays #7 - #12)



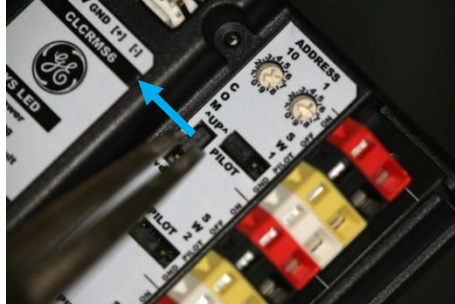
Module 2 Installation

Installation Instructions

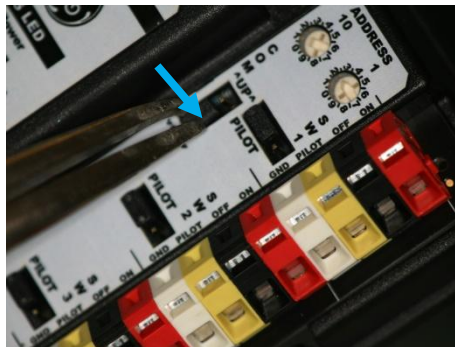
RELAY MODULE INSTALLATION

Install Third Relay Module

- Set address of third module to **62**
- The module position jumper ("UP") **MUST** be moved as shown - this re-numbers the relay order to account for the inverted relay module
- Use a pair of pliers to lift the jumper and move down one position



Moving of Orientation Jumper



- Flip the module 180 degrees and install in the upper right position (next to relays #13- #18)
- Slide the two tabs on left side of module slide under raised slots in sheet metal interior
- Press down on right side of module to snap into place



Module 3 Installation

Install Fourth Relay Module

- Set address of second module to **63**
- The module position jumper ("UP") **MUST** be moved
- Install fourth module in the lower right position, below the third module (next to relays #19 - #24)



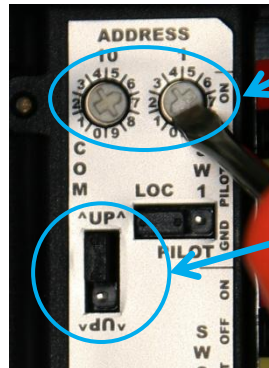
Module 4 Installation

Installation Instructions

RELAY MODULE INSTALLATION

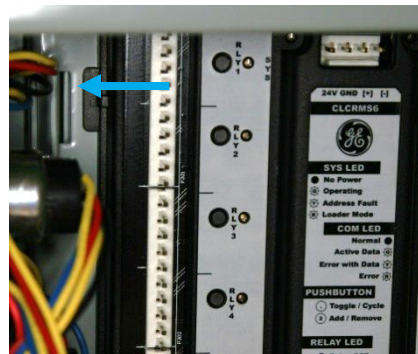
Install Fifth Relay Module

- Set address of fifth module to **64**
- Make sure module position jumper ("UP") is oriented as shown
- Fifth relay module is installed in the upper left position in the lower section of interior (next to relays #25- #30)
- Slide the two tabs on left side of module under raised slots in sheet metal interior
- Press down on right side of module to snap into place

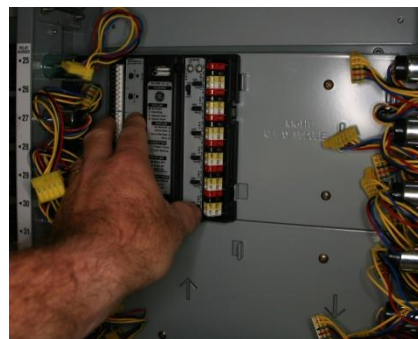


Set address

Orientation Jumper



Module 5 Installation



Install Sixth Relay Module

- Set address of second module to **65**
- Make sure module position jumper ("UP") is oriented the same as the fifth module
- Install sixth module below the fifth module (next to relays #31 - #36)



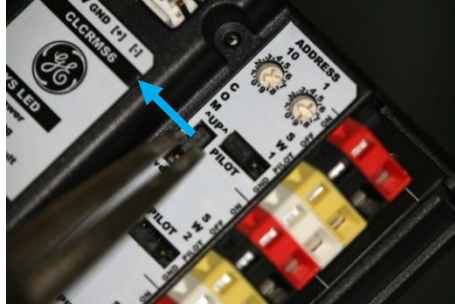
Module 6 Installation

Installation Instructions

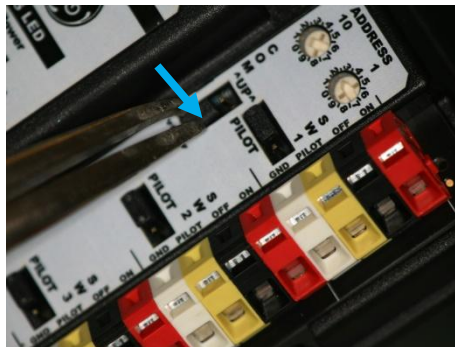
RELAY MODULE INSTALLATION

Install Seventh Relay Module

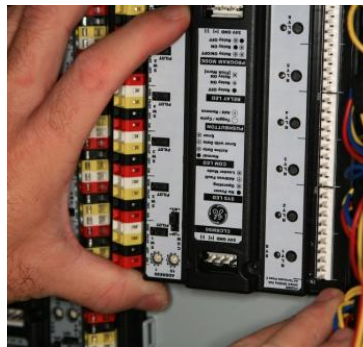
- Set address of third module to **66**
- The module position jumper ("UP") **MUST** be moved as shown - this re-numbers the relay order to account for the inverted relay module
- Use a pair of pliers to lift the jumper and move down one position
-



Moving of Orientation Jumper



- Flip the module 180 degrees and install in the upper right position in the lower section of interior (next to relays #37- #42)
- Slide the two tabs on left side of module side under raised slots in sheet metal interior
- Press down on right side of module to snap into place



Module 7 Installation

Install Eighth Relay Module

- Set address of eighth module to **67**
- The module position jumper ("UP") **MUST** be moved
- Install eighth module below the seventh module (next to relays #43 - #48)



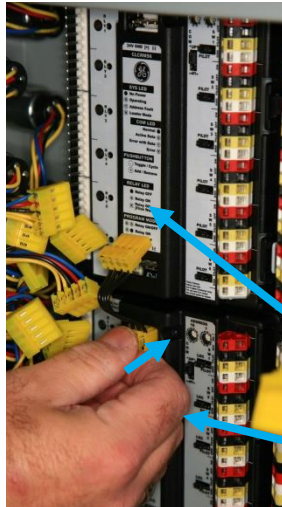
Module 8 Installation

Installation Instructions

RELAY MODULE JUMPER INSTALLATION

Install Jumper Between First and Second Relay Modules

- Use short jumper supplied with each relay module
- Jumpers are polarized – wires always exit connector **AWAY** from the module
- Plug one end into the **TOP** of the second relay module
- Plug the other end into the **BOTTOM** of the first relay module

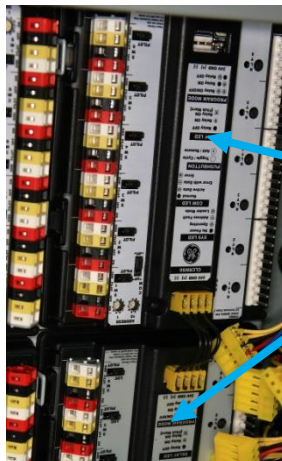


Module 1

Module 2

Install Jumper Between Third and Fourth Relay Modules

- Repeat this process for the jumper between the third and fourth relay module

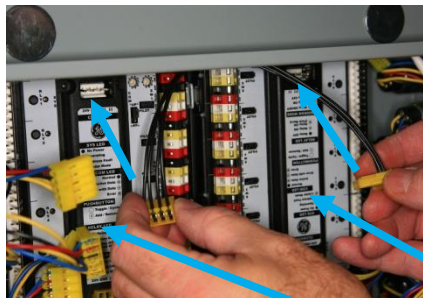


Module 3

Module 4

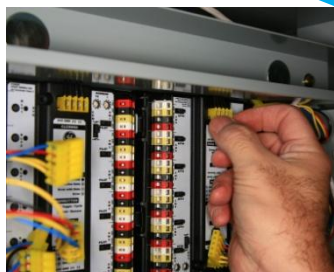
Install Jumper Between First and Third Relay Modules

- Use long jumper supplied with this kit
- Plug one end into the **TOP** of the first relay module
- Plug the other end into the **TOP** of the third relay module



Module 3

Module 1

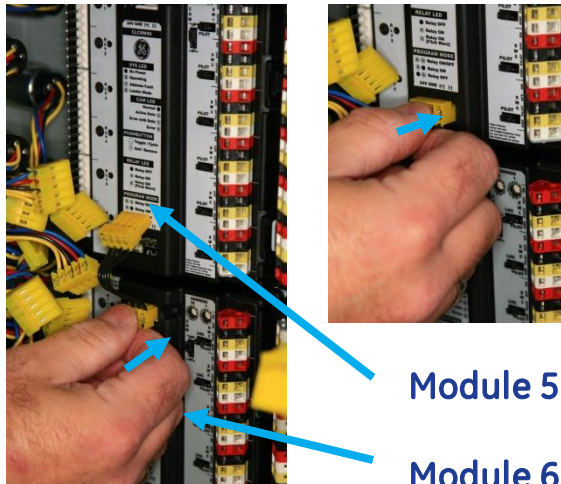


Installation Instructions

RELAY MODULE JUMPER INSTALLATION

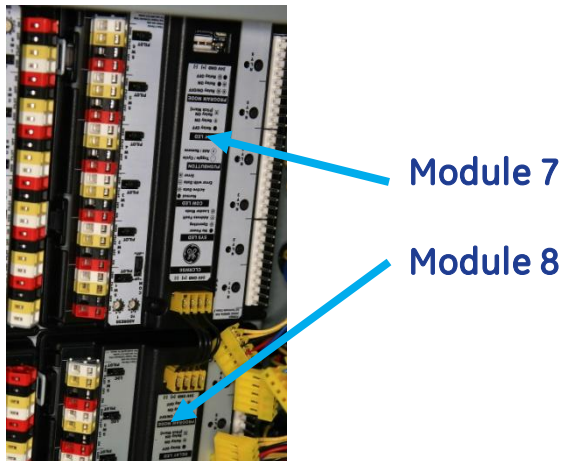
Install Jumper Between Fifth and Sixth Relay Modules

- Use short jumper supplied with each relay module
- Plug one end into the TOP of the sixth relay module
- Plug the other end into the BOTTOM of the fifth relay module



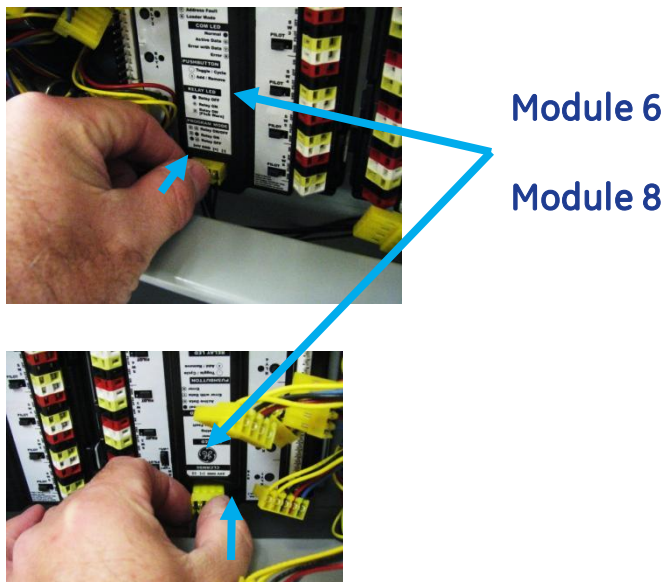
Install Jumper Between seventh and eighth Relay Modules

- Repeat this process for the jumper between the seventh and eighth relay module



Install Jumper Between sixth and eighth Relay Modules

- Use long jumper supplied with this kit
- Plug one end into the BOTTOM of the sixth relay module
- Plug the other end into the BOTTOM of the eighth relay module

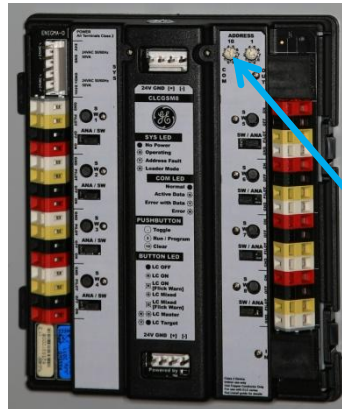


Installation Instructions

GROUP SWITCH MODULE INFORMATION

Group Switch Module Information

- The group switch module should be supplied with a short module to module jumper
- The group switch module will need a unique address



Module address location

- To change module address, use small screwdriver to align arrow on switch with number on label
- The 10's location is on the left
- The 1's location is on the right
- Example: address 40 equals "4" in the 10's location and "0" in the 1's location



Change module address

GROUP SWITCH MODULE INSTALLATION

Install Group Switch Module

- Set address of module to **40**
- Group switch module is installed below the second relay module (to the right of the power supply)
- Slide the two tabs on the module side under raised slots in sheet metal interior
- Press down on right side of module to snap into place



Set address



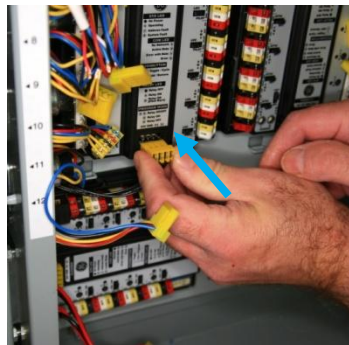
Module Installation

Installation Instructions

GROUP SWITCH MODULE JUMPER INSTALLATION

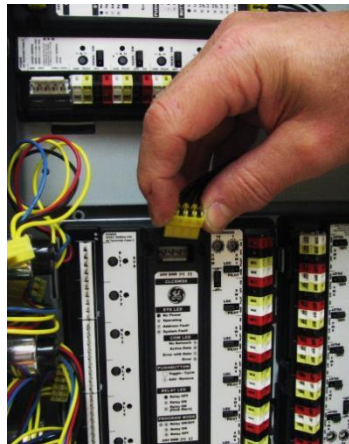
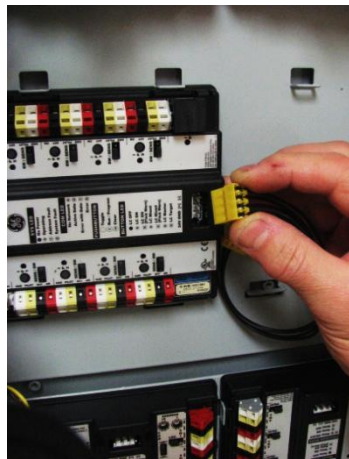
Install Jumper Between Group Switch and Second Relay Modules

- Use long jumper supplied with this kit
- Plug one end into the TOP of the Group Switch module
- Plug the other end into the BOTTOM of the second relay module



Install Jumper Between Group Switch and Fifth Relay Modules

- Use long jumper supplied with this kit
- Plug one end into the BOTTOM of the Group Switch module
- Plug the other end into the TOP of the fifth relay module

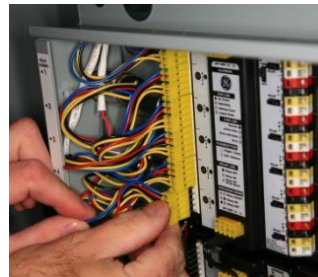
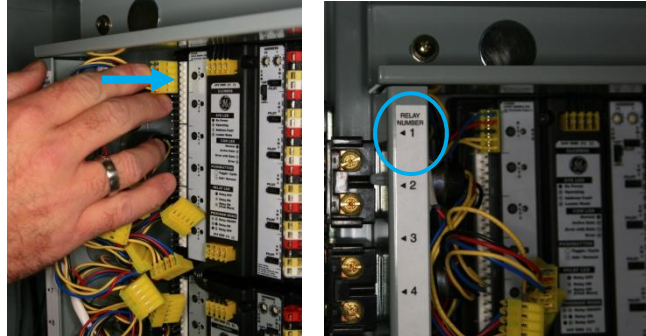


Installation Instructions

RELAY CONNECTIONS

Connect Relays to First Relay Module

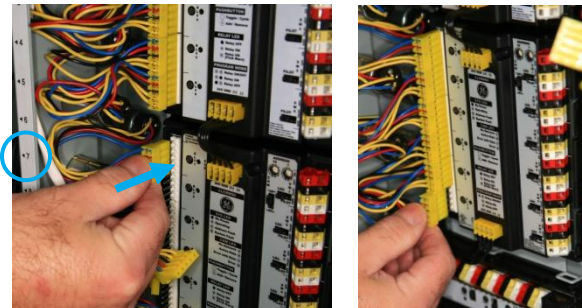
- Start in upper left corner – relay #1
- Slide relay #1 connector over header on first relay module – **NOTE:** Relay numbers are labeled along the side of the sheet metal interior
- Repeat process to connect relay #2 -#6 to first relay module



Relay #1 - #6
connection to
first relay
module

Connect Relays to Second Relay Module

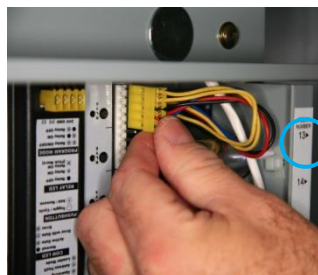
- Start with relay #7
- Slide relay #7 connector over header on second relay module – **NOTE:** Relay numbers are labeled along the side of the sheet metal interior
- Repeat process to connect relay #8 -#12 to second relay module



Relay #7 - #12

Connect Relays to Third Relay Module

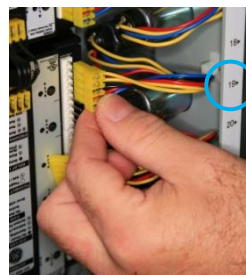
- Start with relay #13
- Slide relay #13 connector over header on third relay module – **NOTE:** Relay numbers are labeled along the side of the sheet metal interior
- Repeat process to connect relay #14 -#18 to third relay module



Relay #13
connection to
third relay
module

Connect Relays to Fourth Relay Module

- Start with relay #19
- Slide relay #19 connector over header on fourth relay module – **NOTE:** Relay numbers are labeled along the side of the sheet metal interior
- Repeat process to connect relay #20 -#24 to third relay module



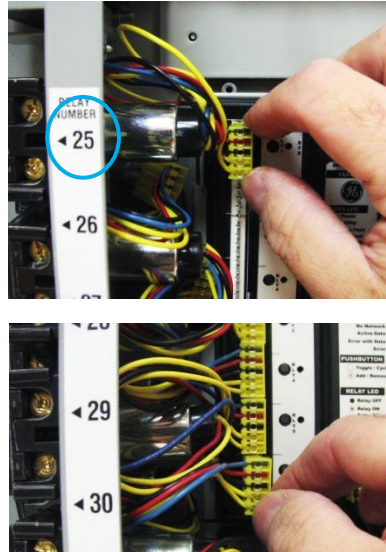
Relay #19
connection to
fourth relay
module

Installation Instructions

RELAY CONNECTIONS

Connect Relays to Fifth Relay Module

- Start in upper left corner – relay #25
- Slide relay #25 connector over header on fifth relay module – **NOTE:** Relay numbers are labeled along the side of the sheet metal interior
- Repeat process to connect relay #26 -#30 to fifth relay module



Relay #25 - #30 connection to fifth relay module

Connect Relays to Sixth Relay Module

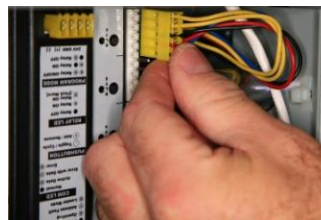
- Start with relay #31
- Slide relay #31 connector over header on sixth relay module – **NOTE:** Relay numbers are labeled along the side of the sheet metal interior
- Repeat process to connect relay #32 -#36 to sixth relay module



Relay #31 - #36

Connect Relays to Seventh Relay Module

- Start with relay #37
- Slide relay #37 connector over header on seventh relay module – **NOTE:** Relay numbers are labeled along the side of the sheet metal interior
- Repeat process to connect relay #38 -#42 to third relay module



Relay #37 connection to seventh relay module

Connect Relays to Eighth Relay Module

- Start with relay #43
- Slide relay #43 connector over header on eighth relay module – **NOTE:** Relay numbers are labeled along the side of the sheet metal interior
- Repeat process to connect relay #44 -#48 to third relay module



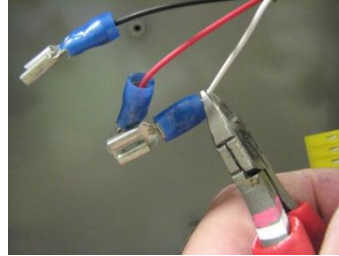
Relay #43 connection to fourth relay module

Installation Instructions

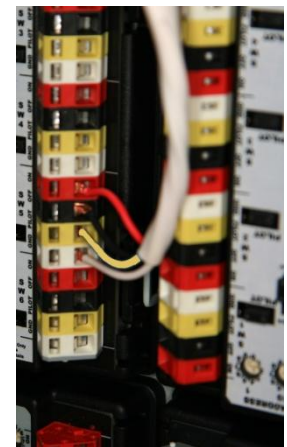
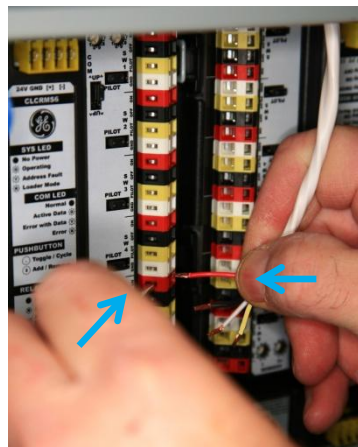
CONNECT SWITCH INPUTS

Connect Relay Switch Inputs

- Connect relay switch inputs that were labeled and disconnected at the start of retrofit process
- **NOTE:** some wires may contain quick connect terminals, which must be removed to connect to modules
- **NOTE:** some wires may not reach intended target – splice and insulate with small gauge wire to extend the wires
- Use small screwdriver to apply pressure to back of terminal – slide wire in opening
- Repeat for all wires



Trimming off quick connect

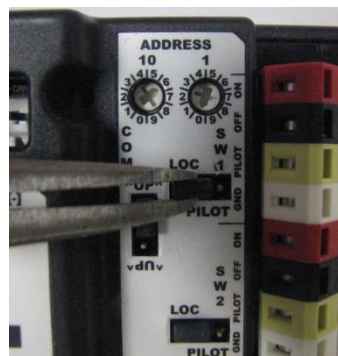


Switch input wiring

| Switch Input Color Code | |
|-------------------------|---------------------|
| RED | Relay ON signal |
| BLACK | Relay OFF signal |
| YELLOW | PILOT signal |
| WHITE | Relay COMMON signal |

Pilot/Locator Jumper Position

- For lighted switches, move jumper to the correct position – LOC for locator or PILOT



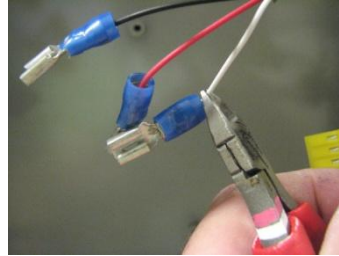
Locator/Pilot jumper

Installation Instructions

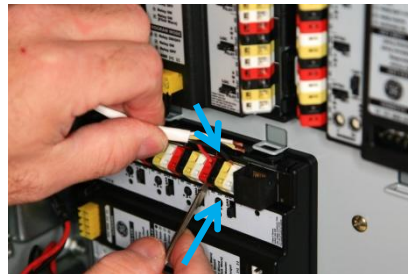
CONNECT GROUP INPUTS

Connect Group Inputs

- Connect group switch inputs that were labeled and disconnected at the start of retrofit process
- **NOTE:** some wires may contain quick connect terminals, which must be removed to connect to modules
- **NOTE:** some wires may not reach intended target – splice and insulate with small gauge wire to extend the wires
- Use small screwdriver to apply pressure to back of terminal – slide wire in opening
- Repeat for all wires



Trimming off quick connect



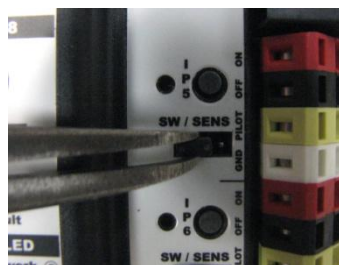
Group input wiring



| Terminal Color | Switch Position | Sensor Position |
|----------------|---------------------|-----------------|
| RED | Relay ON signal | Signal |
| BLACK | Relay OFF signal | Not used |
| YELLOW | PILOT signal | Power |
| WHITE | Relay COMMON signal | Common |

Switch / Sensor Jumper

- For Switch inputs, jumper should be in SW position
- For Sensor inputs, jumper should be in SENS position



Switch/Sensor jumper

Installation Instructions

CONNECT CLASS 2 POWER SUPPLY

Class 2 Power Supply Connection

- Slide Class 2 power supply connection onto header on group switch module
- **NOTE:** wires should exit connector **AWAY** from the module



RECONNECT POWER

If cover was removed, reinstall using original hardware.
Reconnect live power to the panel.

These instructions do not cover all details or variations in equipment nor do they provide for every possible contingency that may be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise that are not covered for the purchaser's purposes, the matter should be referred to the GE Company. Information provided is subject to change without notice.

For additional product and application information,
please consult GE's Website: www.gelighting.com

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