

# Lighting Controls

## LightSweep Retrofit Kit For 24 Relay Legacy Panels CLCRET24



## 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 RINTERxx24 series of interiors is the component that provides functionality for up to 24 relays to be controlled in the Centralized Lighting Control System Relay Panel. The complete relay panel assembly will include the following:

1. Tub (RTUB24)
2. Interior (RINTERxx24)
3. Power Supply (RPWRxxx)
4. Cover (RCOV24xx)

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

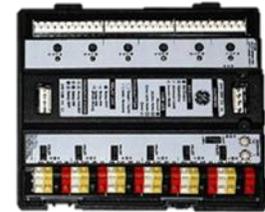
- (2) Relay Module adapter plates,
- (1) Group Switch Module adapter plate,
- (1) Tub adapter plate,
- (16) screws,
- (16) lock washers,
- (2) long jumpers

### 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

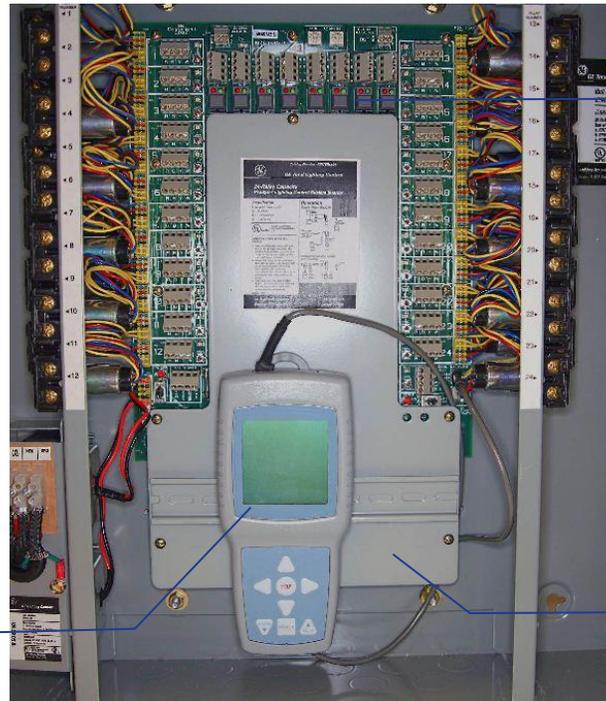
## IDENTIFY YOUR SYSTEM

**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

Using the features shown, identify the panel type:

- If your panel is a ProSys, turn to the **next page**,
- If your panel is a Level III , turn to the page **9**.

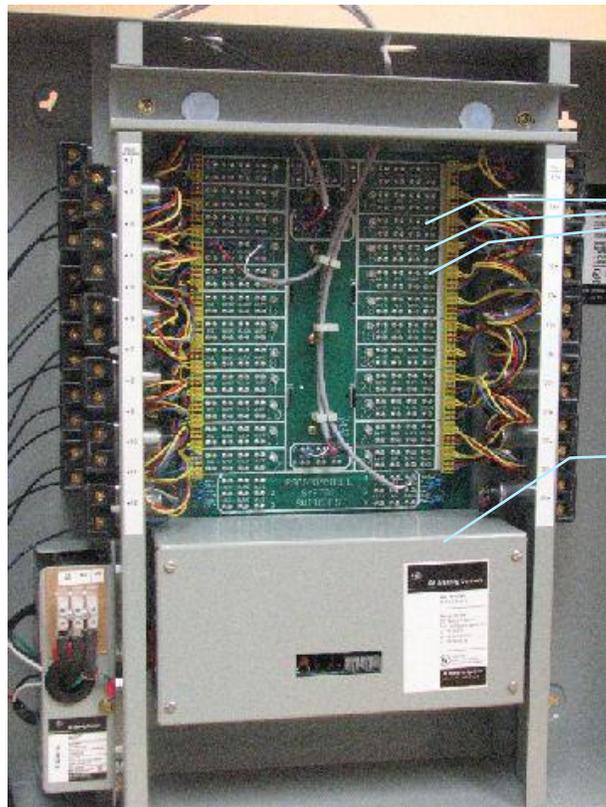


Row of Pushbuttons

(Optional)  
DIN-Rail  
Mounted Clock

Metal Cover  
Plate

**ProSys Panel**



Push- Terminal  
Inputs

Rectangular  
Metal Enclosure

**Level III Panel**

# Installation Instructions

## PROSYS RETROFIT

### Note: System Configurations May Vary by:

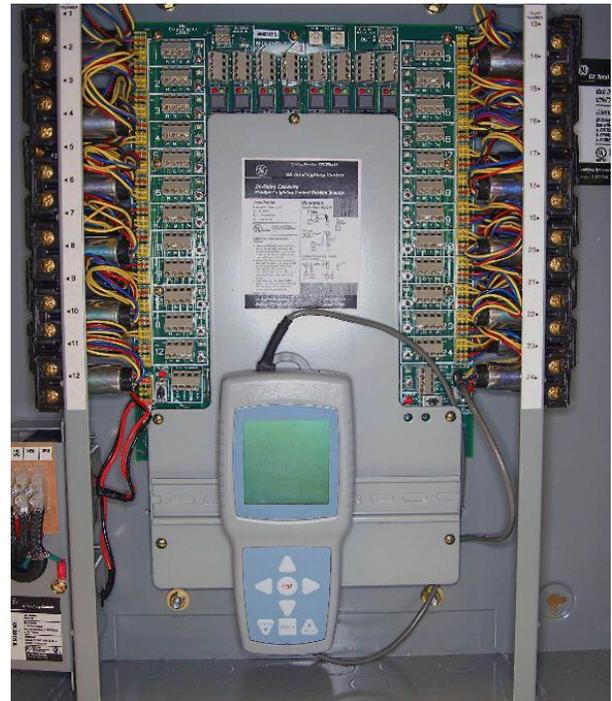
- Number of installed relays
- Number of connected switch inputs
- Number of data-line network connections
- Type of cover (door)

### Depending on your specific type of cover

- An "SL" cover allows access to both the Class 2 Low Voltage wiring area and Class 1 wiring area.
- Flush mount covers restricts access to only the Class 2 Low Voltage wiring area. The removal of the entire cover may be required to complete the retrofit.

### Typical items required to complete retrofit

- Philips head screwdriver
- Flathead screwdriver
- Small flathead screwdriver (1/8")
- 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



ProSys Panel

## DISCONNECT POWER

### ⚠ 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.

Turn off live power to the panel before servicing. A risk of electric shock will otherwise exist once the cover is removed from the panel. Note: Any lighting circuits you want to have ON immediately following the retrofit should be turned ON prior to disconnecting power.

As an additional precaution, turn off the power supply switch on the ProSys control board. This will prevent any damage to the printed circuit board components if power should need to be unexpectedly restored before retrofit is completed.

Set switch to OFF position



# Installation Instructions

## POWER SUPPLY

### Disconnect power supply connector from Printed Circuit Board

- Carefully unplug connector from PC Board
- Do not cut or damage the wire during removal
- This same cable will be used to power your new replacement control gear.

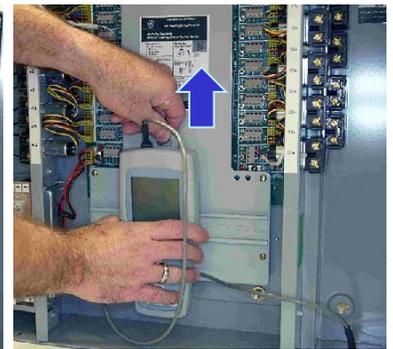
### Power Supply Connection



## CLOCK REMOVAL

### If your panel is equipped with a DIN-Rail mounted clock, disconnect and remove the clock from the panel

- First, disconnect the cable from the panel,
- Then pull UP on the tab on top of the clock
- Remove the clock assembly from the panel



## SWITCH CONNECTIONS

### If applicable, label & disconnect low voltage switch inputs

- Label switch-inputs so that they can be identified later
- Disconnect the wires from the terminal blocks using 1/8" slotted screwdriver



# Installation Instructions

## NETWORK CONNECTIONS

If your panel is so equipped, disconnect dataline network connections

### Note!

Dataline network cable may not be used with the new modular panels system. Any existing dataline connections must be replaced with compatible wiring with. Use CAT 5 (or higher) UTP, 4-pair, 24AWG cable.

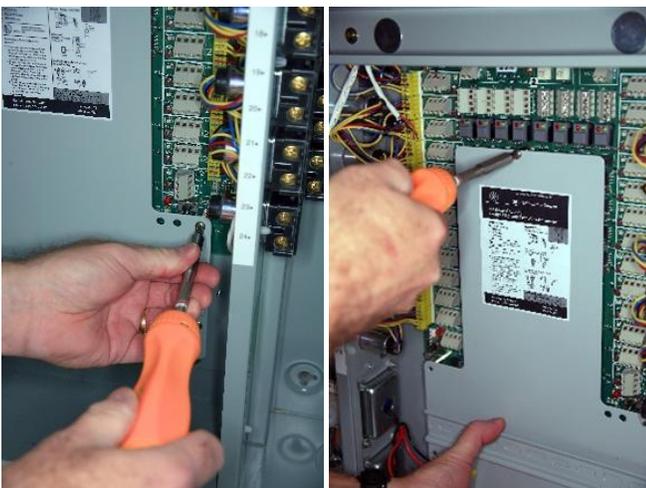


Dataline Connection

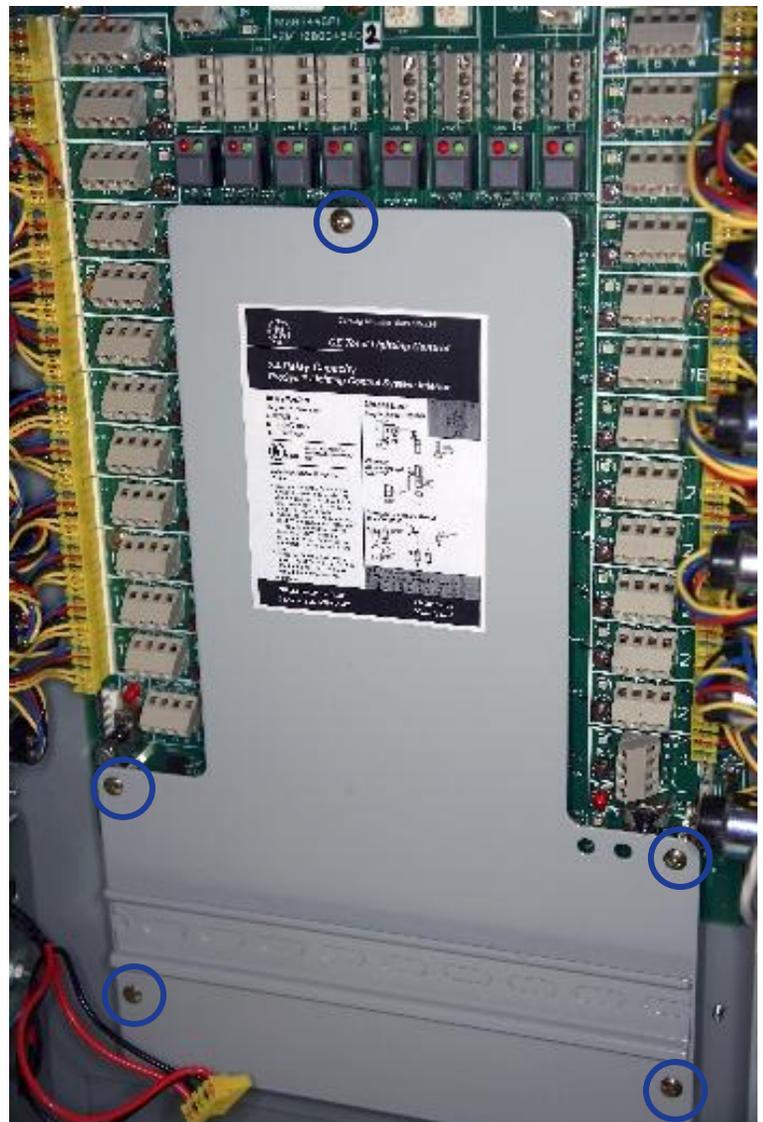
## REMOVE COVER PLATE

Locate and remove the five screws securing the metal cover plate to the tub

- Use Phillips Head Screwdriver
- Remove the lower screws first
- Remove & discard the pan head screws and lock washers



Metal Cover Plate

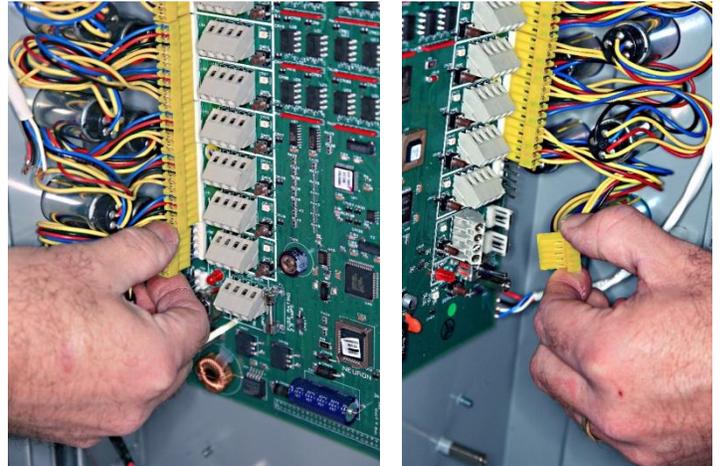


# Installation Instructions

## DISCONNECT ALL RELAYS

After removing the Metal Cover Plate, disconnect all relays

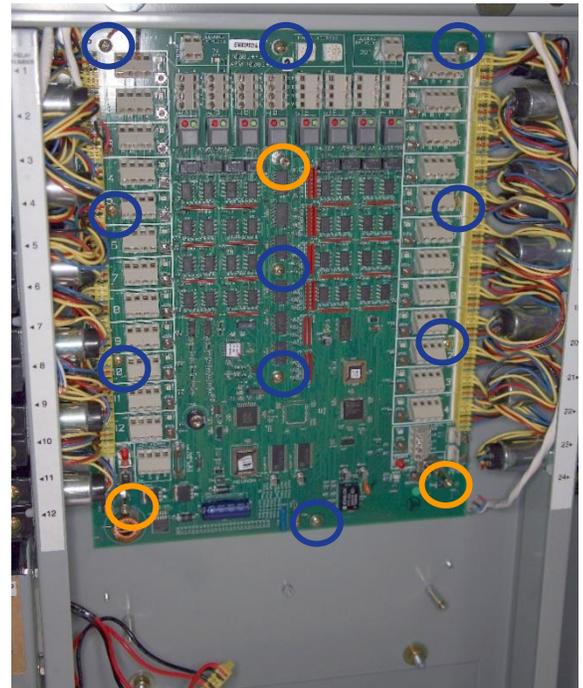
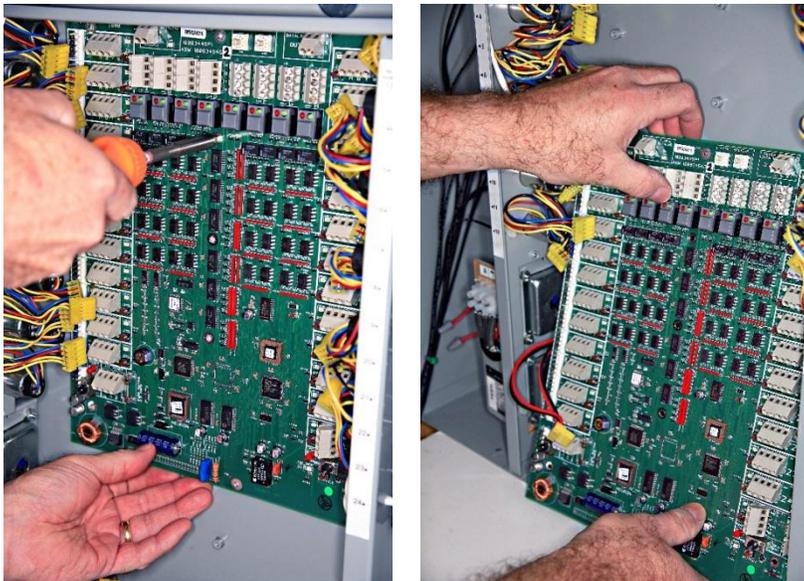
- Carefully pull relay connectors away from the PC Board
- Disconnect relays from both the left & right side of the panel



## REMOVE THE PC BOARD

Locate and remove 10 screws and 3 standoffs that secure the printed circuit board to the tub

- Remove the standoffs first, using a 1/4" hex nut driver
- Then, starting at the bottom, use Phillips head screwdriver to remove screws
- Carefully remove and discard each screw and lock washer
- Removing the top screws last, hold the PC board with your opposite hand
- Lift Printed Circuit Board from panel.
- Discard according to local laws and regulations



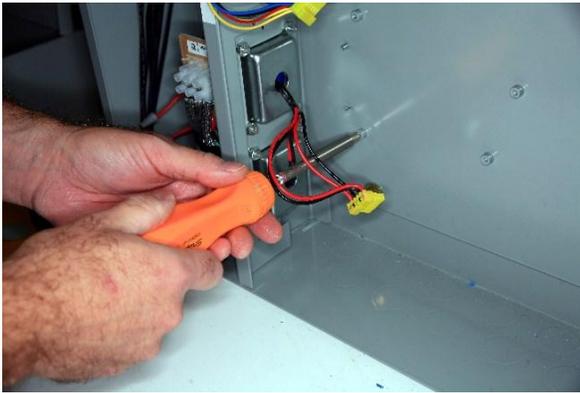
Printed Circuit Board

# Installation Instructions

## REMOVE REMAINING STANDOFFS

Locate and remove the two remaining standoffs near the bottom of your panel

- Use 1/4" nut driver to remove standoffs at the bottom of the panel
- Discard standoffs



## 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.

**Skip to pg. 19**



# Installation Instructions

## LEVEL III RETROFIT

### Note: System Configurations May Vary by:

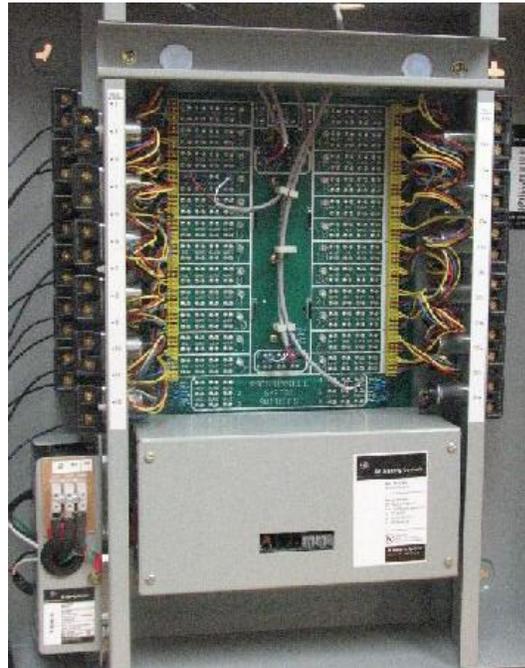
- Number of installed relays
- Number of connected switch inputs
- Number of data-line network connections
- Type of cover (door)

### Depending on your specific type of cover

- An "SL" cover allows access to both the Class 2 Low Voltage wiring area and Class 1 wiring area.
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- Flathead screwdriver
- Small flathead screwdriver (1/8")
- Hex nut driver – 5/16"
- Wire cutter
- Wire stripper (small gauge wire)
- Small gauge signal wire (18 – 22 AWG, 300V)
- Pliers
- Wire nuts
- Electrical tape
- Wire markers
- Work light



Level III Panel

## DISCONNECT POWER

**⚠ WARNING**

**RISK OF ELECTRIC SHOCK**

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INSTALL IN ACCORDANCE WITH NATIONAL  
ELECTRIC CODE**

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Turn off live power to the panel before servicing. A risk of electric shock will otherwise exist once the cover is removed from the panel. Note: Any lighting circuits you want to have ON immediately following the retrofit should be turned ON prior to disconnecting power.

# Installation Instructions

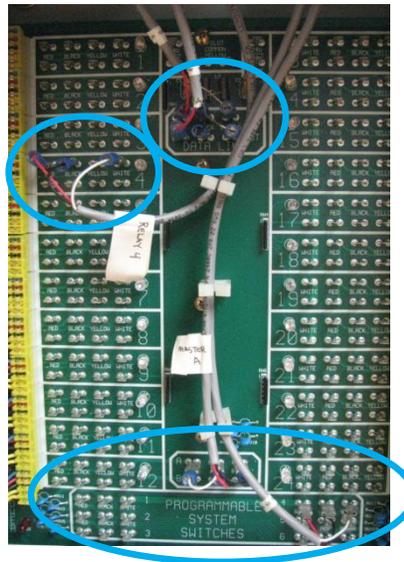
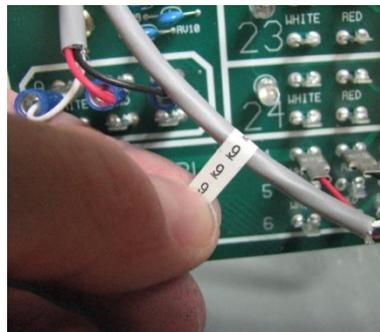
## LOW VOLTAGE WIRING

### Label Low Voltage Wiring

- It is recommended that all low voltage wiring be labeled
- Label relays switch inputs, Master Switches, Programmable System Switches and Auxiliary connections
- Individual relay connectors do not need to be labeled. A label on the side of the interior indicates relay location

### Note!

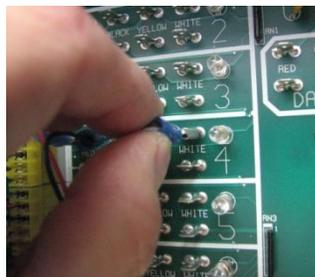
Dataline network cable may not be used with the new modular panels system. Any existing dataline connections must be replaced with compatible wiring with. Use CAT 5 (or higher) UTP, 4-pair, 24AWG cable.



Label Low Voltage Wire

### Disconnect Low Voltage Wiring

- Wires are attached with quick connect terminals
- Pull straight back by hand or pliers if necessary
- Move/tuck wires out of way - this will aid in the removal of printed circuit board in future step



Low Voltage Wire removal

# Installation Instructions

## COVER REMOVAL

### Locate Metal Cover

- The metal cover is located at the bottom of the interior
- The cover is held in place by four captive screws
- The cover protects several plug-in printed circuit cards



Metal Cover

### Remove Metal Cover

- Unscrew the four captive screws holding the cover
- Remove cover by pulling in an outward direction

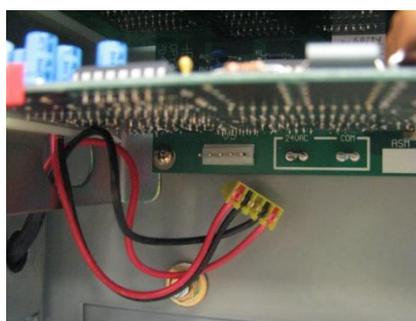
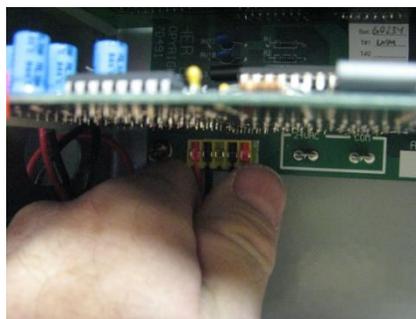


Metal Cover Removal

## DISCONNECT CLASS 2 POWER

### Locate/Remove Power

- Class 2 power connection to the main printed circuit board is located beneath the bottom plug-in printed circuit card
- Grasp the connector (**not** the wires) and pull outward to disconnect



Class 2  
Power  
Removal

# Installation Instructions

## PLUG-IN CARD REMOVAL

### Removal of Plug-In Printed Circuit Cards

- Slide card ejectors "outward"
- Grasp plug-in printed circuit card and pull outward
- Plug-in printed circuit cards will slide on card guides in metal brackets



Card Ejectors

### Remove Top Plug-in Printed Circuit Card

- Remove the top most plug-in Printed Circuit Card
- Discard according to local laws and regulations



Top Plug-In Card

### Remove Middle Plug-in Printed Circuit Card

- Remove the middle plug-in Printed Circuit Card
- Discard according to local laws and regulations



Middle Plug-In Card

### Remove Bottom Plug-in Printed Circuit Card

- Remove the bottom plug-in Printed Circuit Card
- Discard according to local laws and regulations



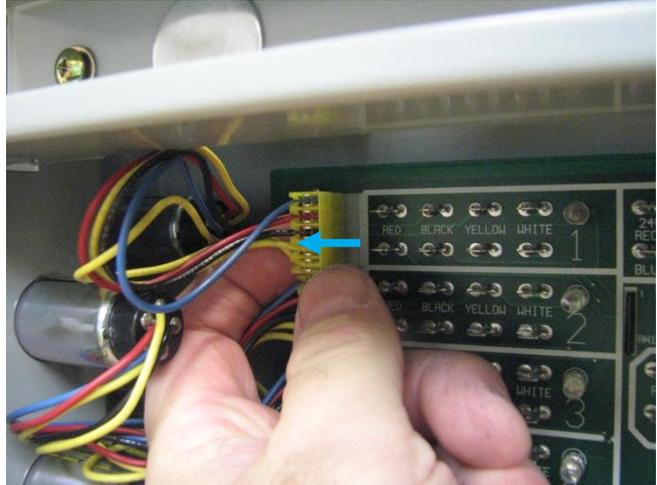
Bottom Plug-In Card

# Installation Instructions

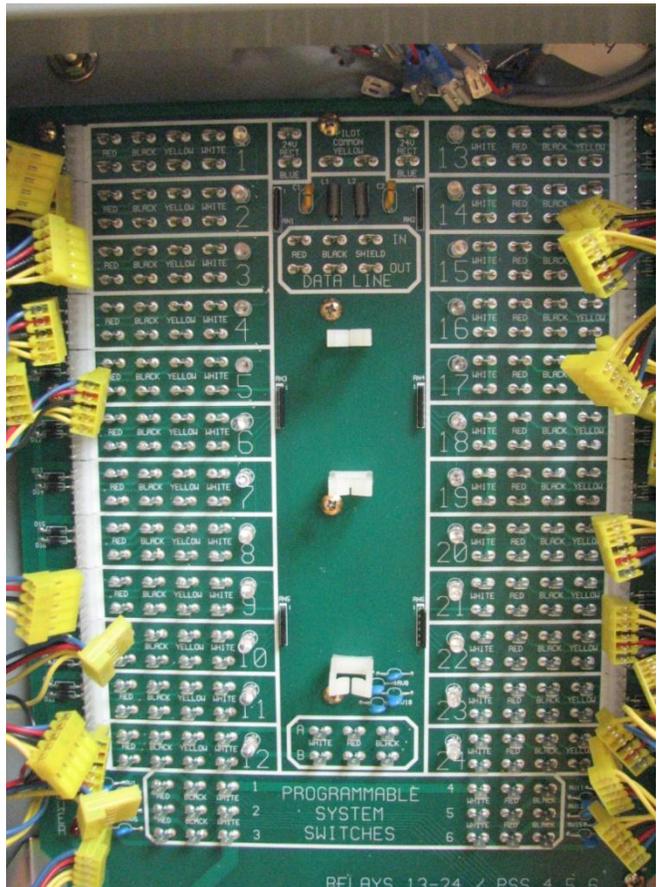
## DISCONNECT RELAY CONNECTIONS

### Relay Connectors

- Relays are connected to printed circuit board with connectors
- Grasp the connector (**not** the wires) and pull outward to disconnect
- Repeat for all relays connected to printed circuit board



Relay Connection



All Relays Disconnected

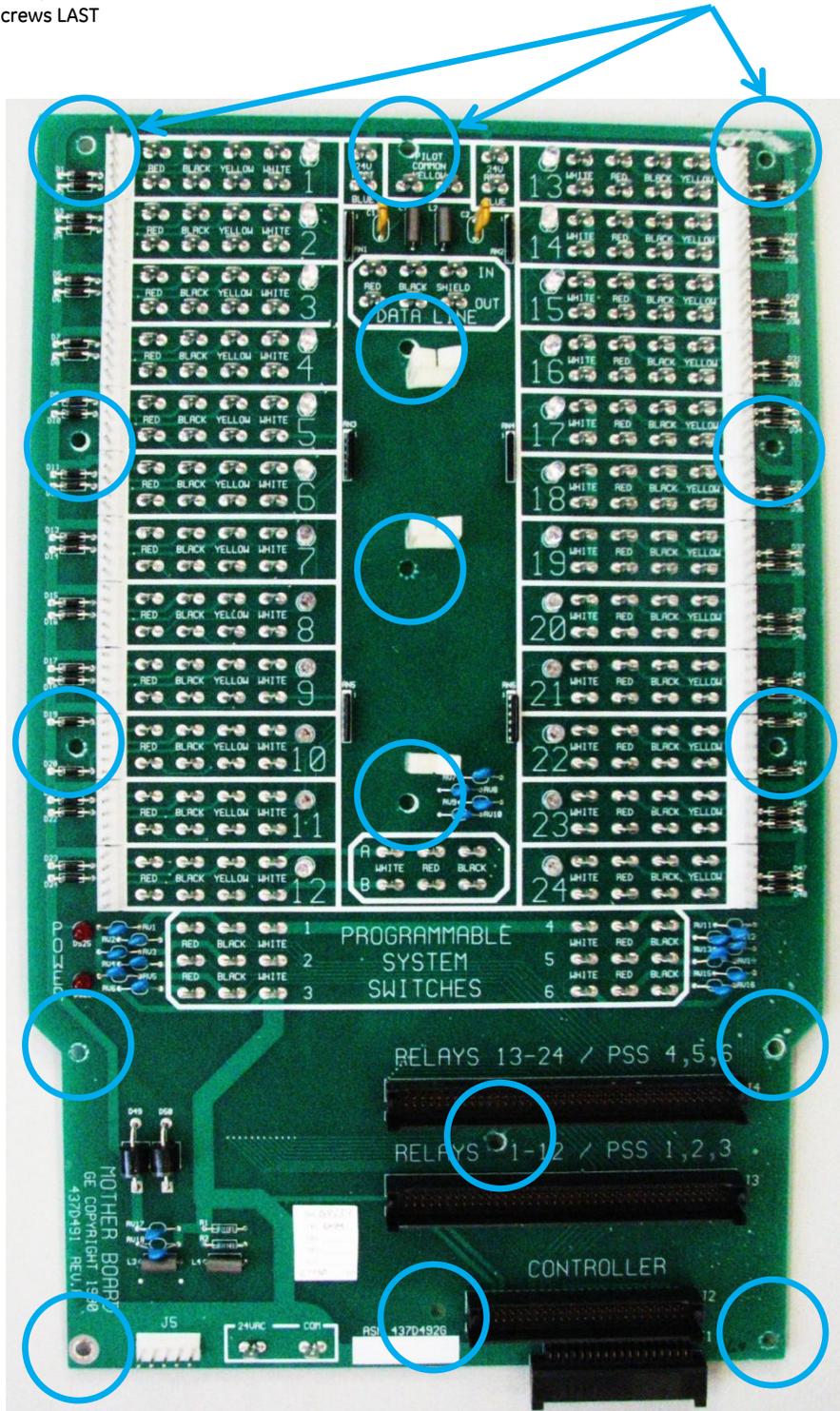
# Installation Instructions

## PRINTED CIRCUIT BOARD SCREW LOCATION

### Screw Location

- Screw location (16 total) are circled below
- Note: remove top screws LAST

Remove these 3 screw Last



# Installation Instructions

## SCREW REMOVAL

### Removal of Screws Securing Main Printed Circuit Board

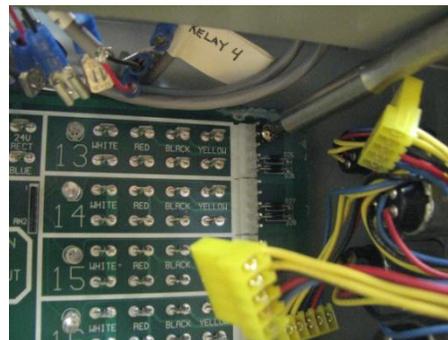
- Remove all but top three screws securing printed circuit board to sheet metal interior
- **NOTE:** the top three screws should be done last – refer to previous page



Screw removal

### Remove top right screw

- Remove the top right screw next



Top Right Screw

### Remove top left screw

- Remove the top left screw next
- Printed circuit board will now be held by the last remaining screw



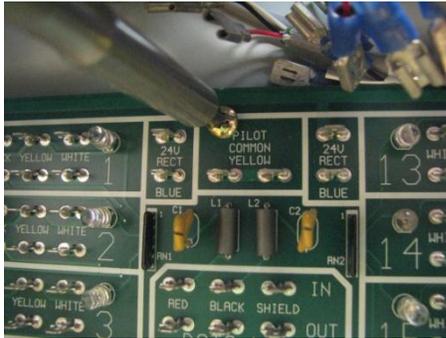
Top Left Screw

# Installation Instructions

## LAST SCREW/PRINTED CIRCUIT BOARD REMOVAL

### Last Screw Removal

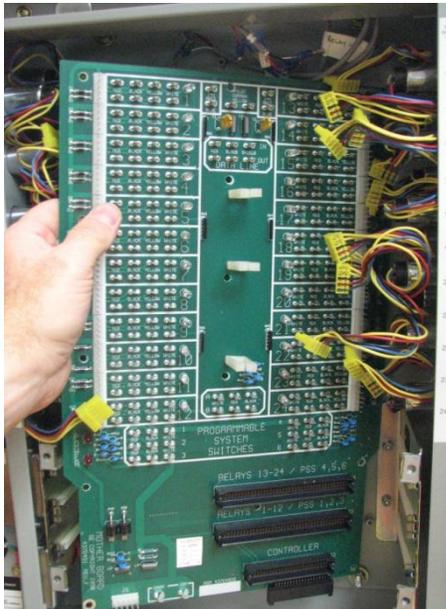
- Hold bottom of printed circuit board
- Remove top middle screw



Top Middle Screw

### Printed Circuit Board Removal

- Clear any wires or relay connectors from surface of printed circuit board
- Grasp printed circuit board
- Tilt and pull outward from the sheet metal interior – **NOTE:** take care to avoid damage to connectors or wires for relay and power supply connections
- Discard according to local laws and regulations



Printed Circuit Board Removal

# Installation Instructions

## BRACKET REMOVAL

### Remove Right bracket/card guide

- Use 5/16" hex nut driver to remove two nuts
- Lift bracket outward to remove from sheet metal interior



Right Bracket Removal

### Loosen Left bracket/card guide

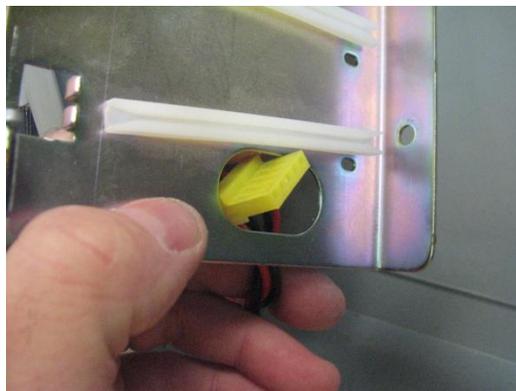
- Use 5/16" hex nut driver to remove two nuts
- Support bracket



Loosen Left Bracket

### Removal of Left bracket/card guide

- Carefully guide power supply connector through opening in bracket - **NOTE:** take care to avoid damage to connector or wires for power supply connection
- Lift bracket outward to remove from sheet metal interior



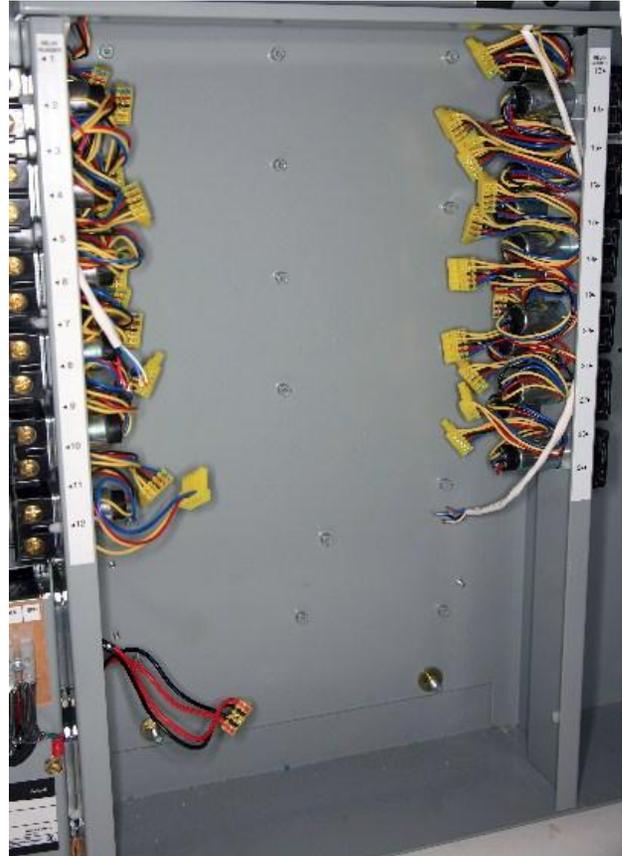
Power Supply Connector

# 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.



# Installation Instructions

## 24 INTERIOR RETROFIT KIT

### WARNING

**RISK OF ELECTRIC SHOCK**

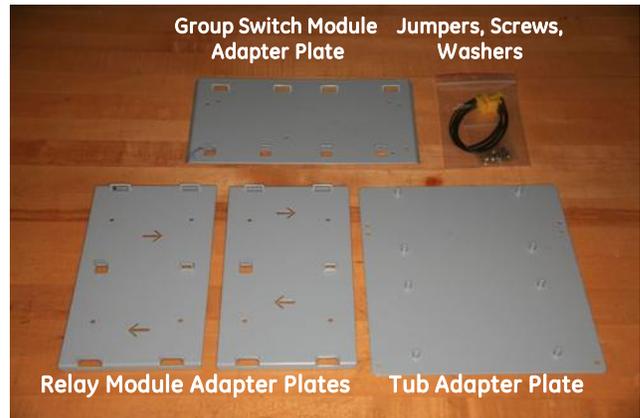
**TURN OFF POWER BEFORE SERVICING  
INSTALL IN ACCORDANCE WITH NATIONAL  
ELECTRIC CODE**

**Note: System Configurations May Vary by:**

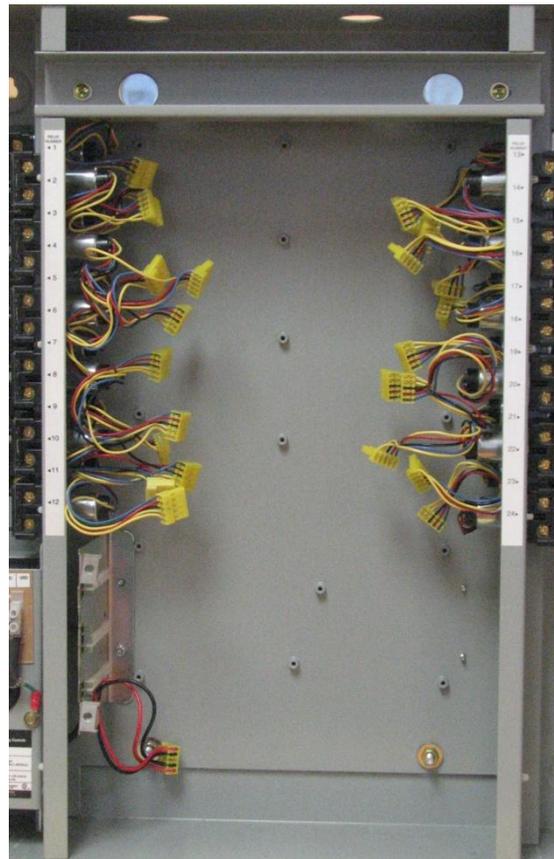
- Number of installed relays
- Number of connected switch inputs
- Number of data-line network connections
- Type of cover (door)

**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

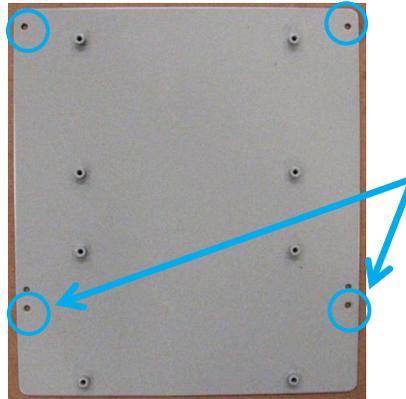


# Installation Instructions

## INSTALL TUB ADAPTER PLATE

### Installation of Tub 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

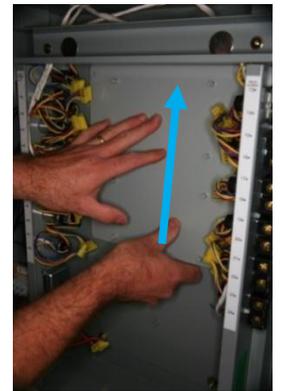
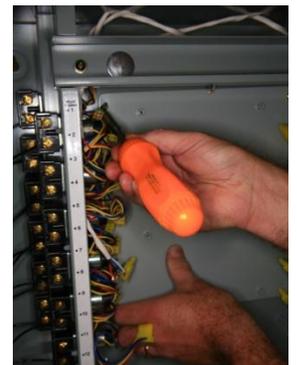
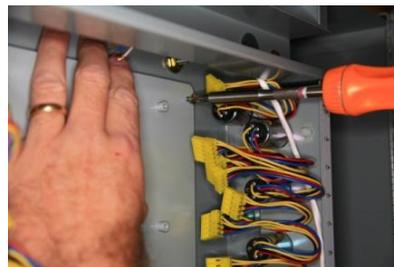


Plate orientation

- 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



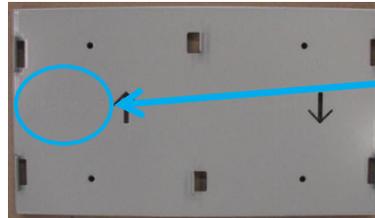
Securing Plate

# Installation Instructions

## INSTALL RELAY MODULE ADAPTER PLATES

### Installation of Upper Relay Module Adapter Plate

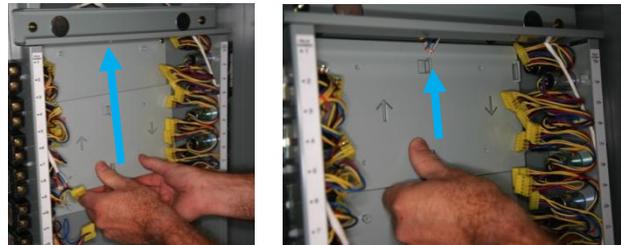
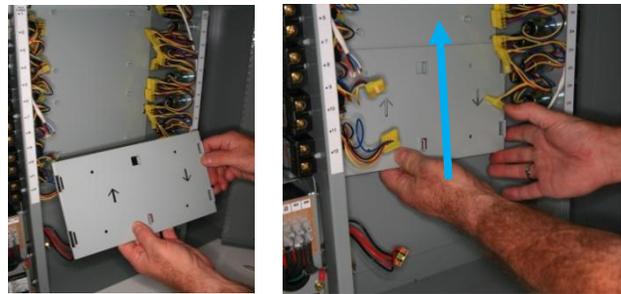
- The Relay Module adapter plate is secured with 4 screws
- **NOTE:** For proper orientation, the arrow pointing up should be labeled "LEFT RELAY MODULE"



Labeled:  
"LEFT RELAY  
PLATE"

### Relay Module Adapter Plate

- Orient plate with "LEFT RELAY MODULE" wording on the left side
- Start in open area below relays
- 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



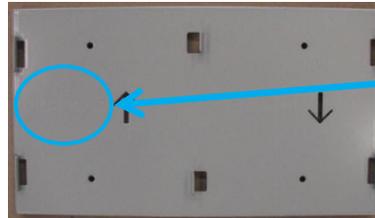
### Securing Plate

# Installation Instructions

## INSTALL RELAY MODULE ADAPTER PLATES

### Installation of Lower 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 below relays
- Slide plate upwards under end of relays
- Align holes in plate with bottom four standoffs in Tub Adapter Plate

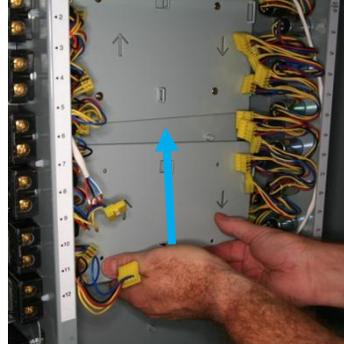
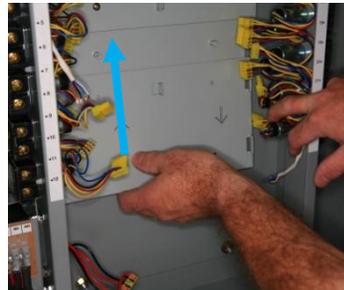
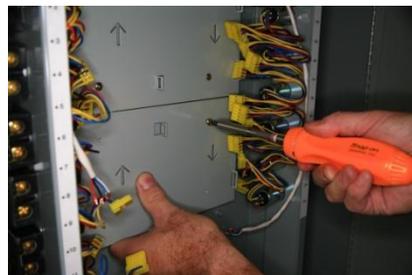


Plate  
Alignment

- 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



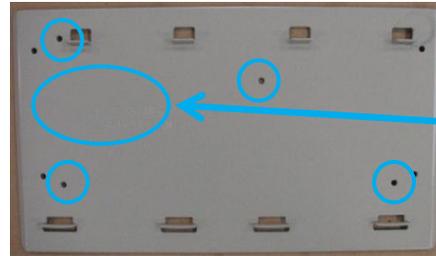
Securing  
Plate

# Installation Instructions

## INSTALL 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”

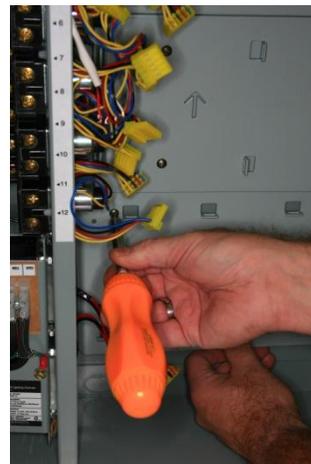
Group Switch Module Adapter Plate

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

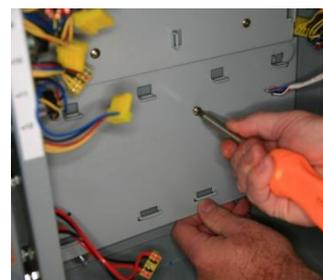


Plate Alignment

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



Securing  
Plate

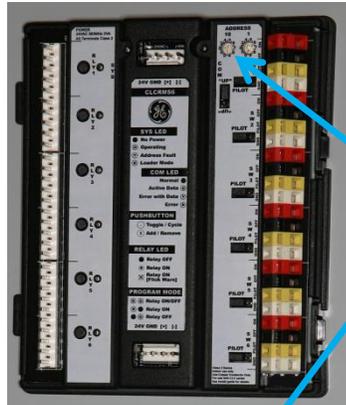


# Installation Instructions

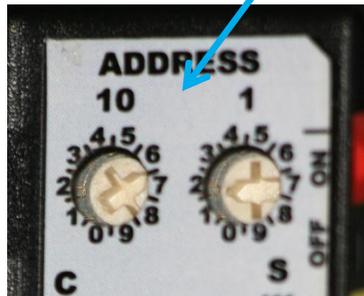
## RELAY MODULE INFORMATION

### Relay Module Information

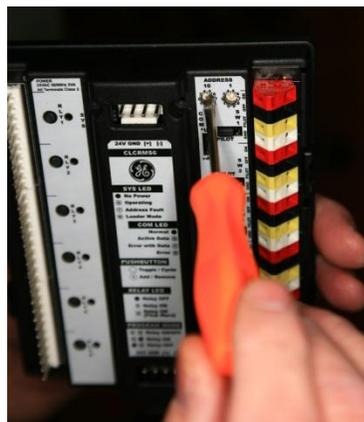
- Each relay module should be supplied with a short module to module jumper
- Each relay module will need a unique address



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



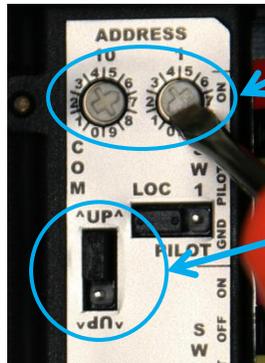
Change  
module  
address

# Installation Instructions

## RELAY MODULE INSTALLATION

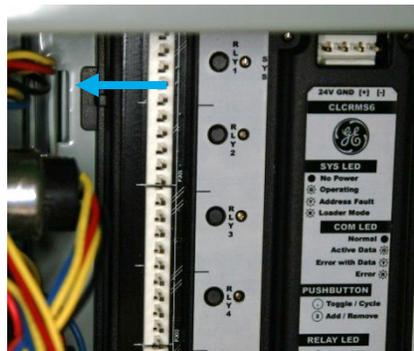
### Install First Relay Module

- 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

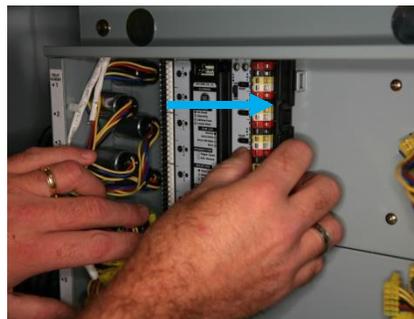


Set address

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

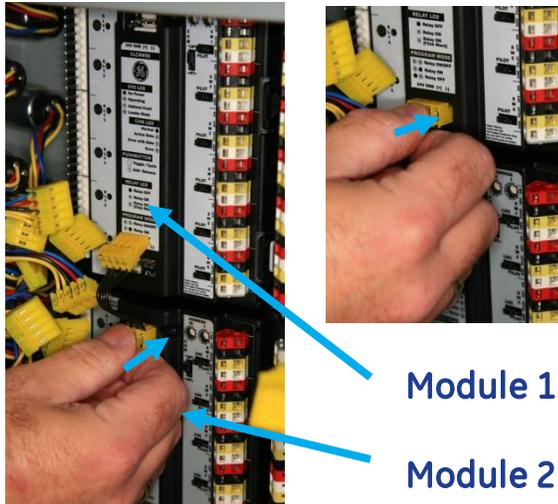


# Installation Instructions

## RELAY MODULE JUMPER INSTALLATION

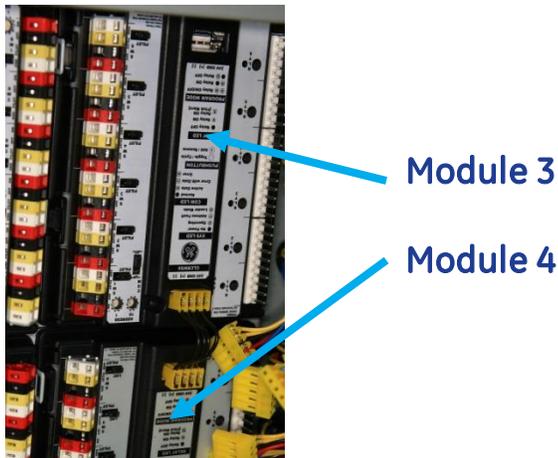
### Install Jumper Between First and Second Relay Modules

- 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



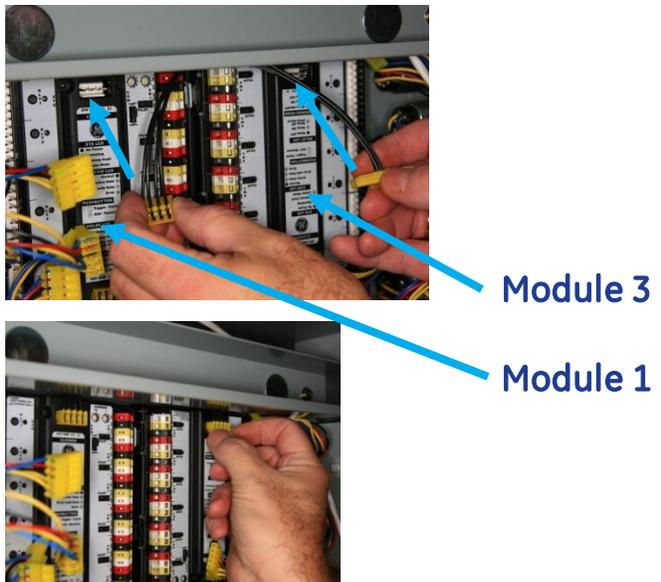
### Install Jumper Between Third and Fourth Relay Modules

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



### 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

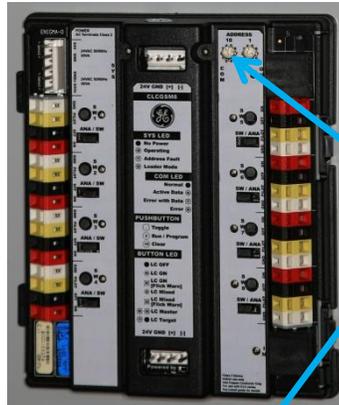


# Installation Instructions

## 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

# Installation Instructions

## 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 slide under raised slots in sheet metal interior
- Press down on right side of module to snap into place



Set address



Module  
Installation

## 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



Jumper  
Installation

# Installation Instructions

## RELAY CONNECTIONS

### Connect Relays to First Relay Module

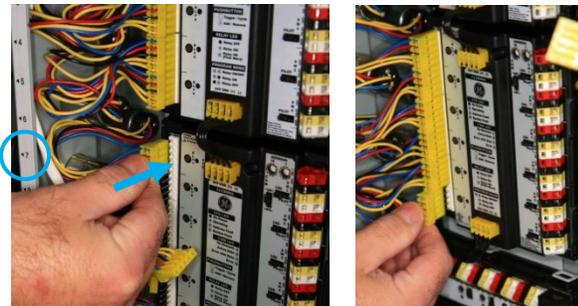
- Start in upper left corner – relay #1
- Slide relay #1 connector over header on first relay module – **NOTE:** Relay numbers are labeled along the side of the sheet metal interior
- Repeat process to connect relay #2 -#6 to first relay module



Relay #1 - #6  
connection to  
first relay  
module

### Connect Relays to Second Relay Module

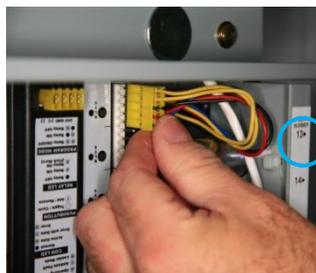
- Start with relay #7
- Slide relay #7 connector over header on second relay module – **NOTE:** Relay numbers are labeled along the side of the sheet metal interior
- Repeat process to connect relay #8 -#12 to second relay module



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



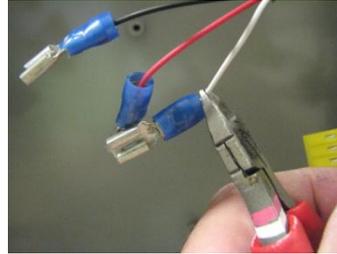
Relay #19  
connection to  
fourth relay  
module

# Installation Instructions

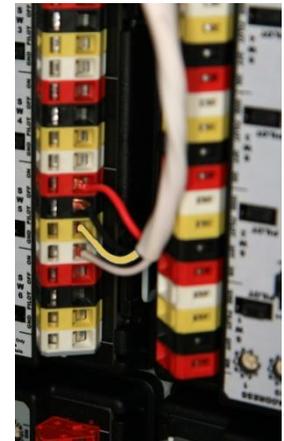
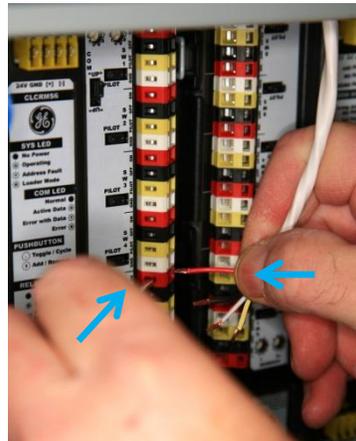
## CONNECT SWITCH INPUTS

### 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

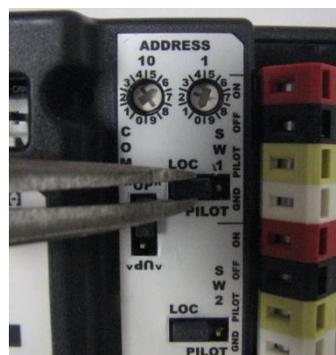


Switch input wiring

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



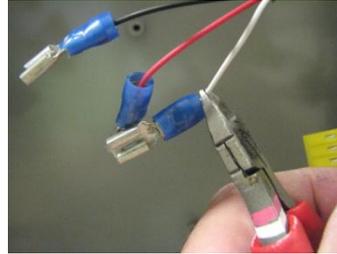
Locator/Pilot jumper

# 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



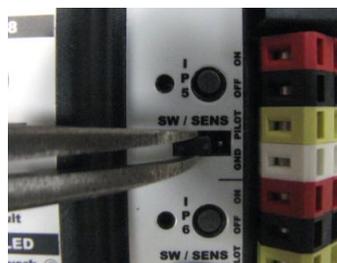
Group input wiring



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 DATA LINE

### Data Line Connection – no scheduler or BACnet module

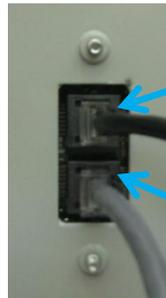
- Connect CAT5 Cable to RJ45 OUT jack on Group Switch module
- Route cable out of cabinet to required location



Data Line connection

### Data Line Connection – with scheduler

- Connect CAT5 Cable to TOP RJ45 jack on back of scheduler – label if necessary
- Connect another CAT5 Cable (if required) to BOTTOM jack on back of scheduler – label if necessary



TOP connection – to Group Switch Module

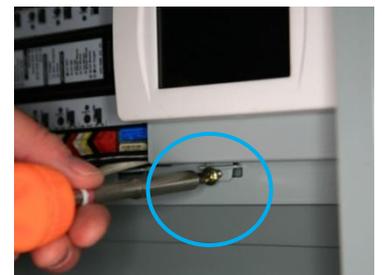
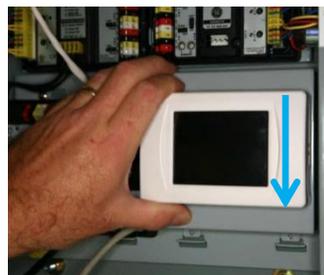
BOTTOM connection – to external location

Back of Scheduler

- Scheduler bracket mounts to the right of the group switch module, and below the fourth relay module
- Route CAT5 cable(s) out open area on left side of bracket
- Align tabs on bracket with raised slots in sheet metal interior
- Slide scheduler bracket downward into place on plate
- **NOTE:** the top tabs on bracket are a “blind fit” – the tabs bend under the bracket
- Insert and tighten screw to lock in place



“Blind Fit” tabs



# Installation Instructions

## CONNECT DATA LINE

### Data Line Connection – with scheduler

- Connect CAT5 Cable from TOP of scheduler to RJ45 OUT jack on Group Switch module



Connection to Group Switch Module

- Route cable from BOTTOM of scheduler out of cabinet to required location



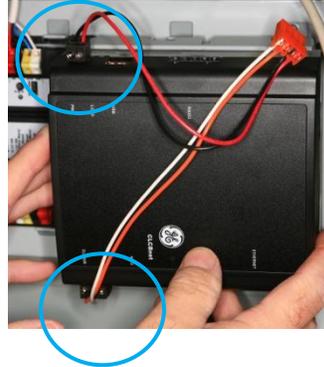
Route CAT5 cable out of cabinet

# Installation Instructions

## CONNECT DATA LINE

### Data Line Connection – with BACnet module

- Connect supplied jumpers to module – **NOTE:** the two ends of the cable are polarized



Jumper location

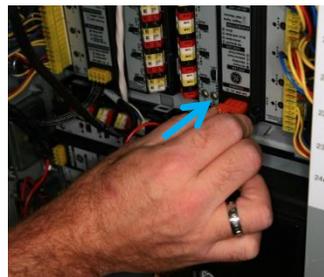
- BACnet module bracket mounts to the right of the group switch module, and below the fourth relay module
- Align tabs on bracket with raised slots in sheet metal interior
- Slide bracket downward into place on plate
- **NOTE:** the top tabs on bracket are a “blind fit” – the tabs bend under the bracket
- Insert and tighten screw to lock in place



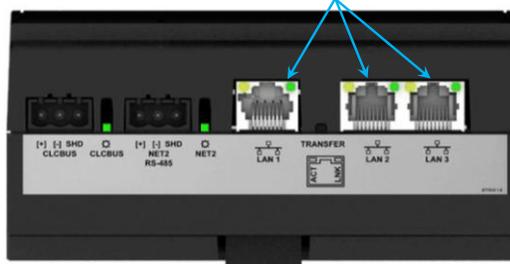
Mounting



- Plug in jumper from module into BOTTOM of fourth relay module
- Plug CAT5 cable into Ethernet port on module
- Route CAT5 cable out of cabinet to required location



Ethernet Ports



# 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](http://www.gelighting.com)

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<b>Project Name:</b>	<b>MILLHAVEN INSTITUTION BUILDING Y</b>
<b>Location:</b>	<b>BATH, ONTARIO</b>
<b>Distributor/ PO</b>	<b>OSSO ELECTRIC/112855</b>
<b>Project #:</b>	<b>4042</b>

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## ***PROGRAMMING INSTRUCTIONS***

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GE Technical Support  
#108-3228 South Service Rd  
Burlington, ON. Canada L7N 3H8  
Toll Free 1-877-584-2685  
Fax (905) 631-6880

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## Navigation

### Button Icons

#### Home page (GE logo)



The home page can be accessed at any time by touching the GE logo. The logo is located in the top-left of each page.

#### Exit (X)



The X symbol, located in the top right of each page, exits the current page.

#### Setup (Gear)



The gear symbol displays the setup page.

#### Look-up (Magnifying Glass)



Touch the magnifying glass to access the look-up.

### Swiping pages

If multiple pages are available, swipe a finger from right to left, across the page, to advance to the next page. Swipe from left to right to return back to the previous page.

Multiple pages are indicated by a sequence of circles in the center of the screen. The number of circles indicates the number of pages available, and the filled circle indicates which page is currently displayed.



## Status Icons

Schedules have color coding to provide additional information.



*Schedule Color:*



- Red – Schedule is On
- Light Gray – Schedule is Off
- Dark Gray – Schedule has no current entries.

*Status Color:*



- Red – All lighting targets match active state
- Green – Some lighting targets match active state
- White – All lighting targets match inactive state
- Yellow – Status of lighting targets is unknown
- Grey – No targets defined

- Blue – Circular reference detected (Nested LC references have created a loop that needs to be fixed)

## Basic Procedures

### Schedule configuration

Schedules are configured from the system home page. Eight schedules can be setup from the Main page. They are labeled A-H.

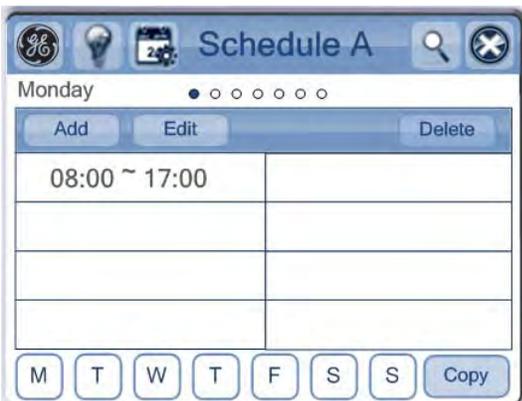
To set/modify a schedule:



1. Touch a schedule icon to select that schedule.



2. The selected Schedule is displayed.



## System Setup

System setup is done from the Setup screen, which is easily accessed from the system home page.

*To modify the System Setup:*



1. From the main screen, touch Setup.



2. The Setup page is displayed.



The following options are available:

- CAN ID
- Location
- Calibration
- Chg Pwd
- Clear DB
- Network
- Devices

- Panel ID

## Network View

Network configuration is accessed from Setup menu. The network page displays a list of all devices connected to the system.

To access the Network View:



1. Touch Network from the Setup menu.



2. The Network page appears.



## Device Programming

Devices are programmed from the Device List.

To view Devices:



1. Touch Devices from the Setup menu.

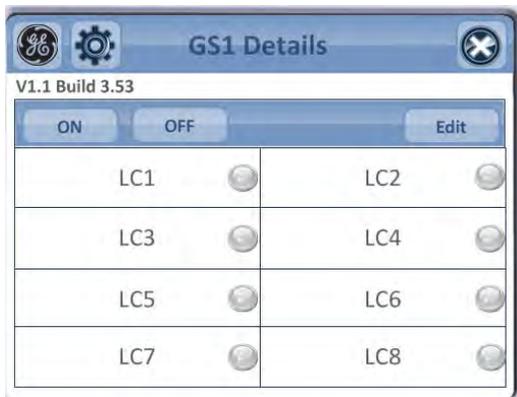


2. The Device List appears.

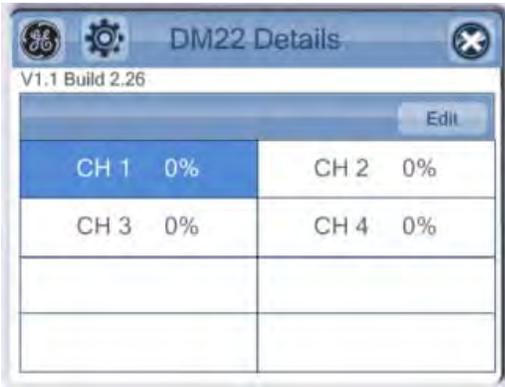


3. Select a Device and touch Details

### GS / SW



## DM



## RM



## Detailed Instructions:

### Date/Time

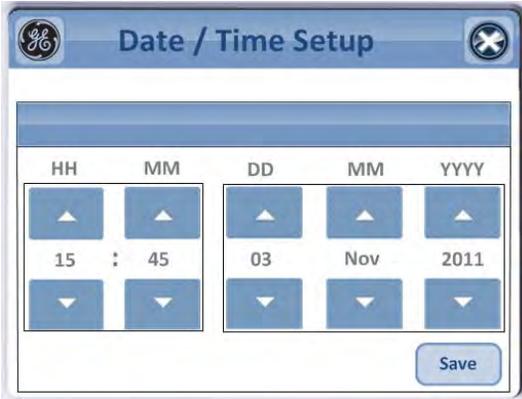
Time and date are set from a common page, easily accessed from the system home page.

*To set or change the Time and Date:*



1. From the main screen, touch the Date/Time icon on the display.

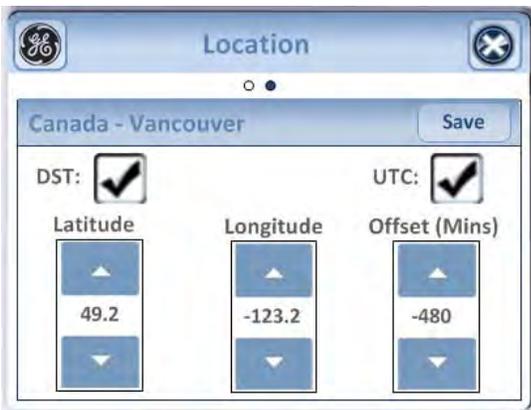
2. The Date/Time Setup page appears.



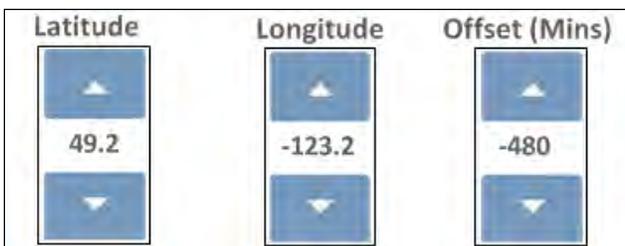
## Location Setup

Time adjustments for daylight savings are handled automatically by configuring the system location coordinates. This can be done manually or automatically.

*To manually set the Location Coordinates:*



1. From the Location page, adjust the Longitude and Latitude for the current location.



2. Use the checkboxes for DST (daylight savings time) or UTC (Coordinated Universal Time) if needed.

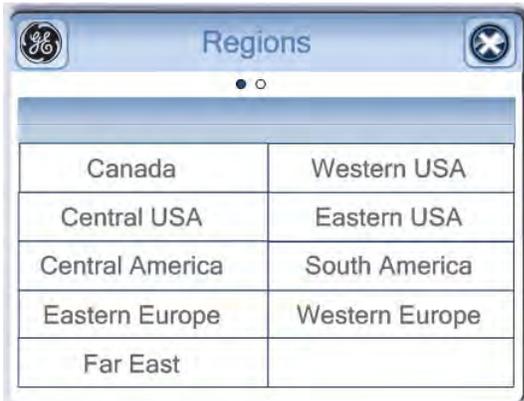


3. Touch Save to set the location.

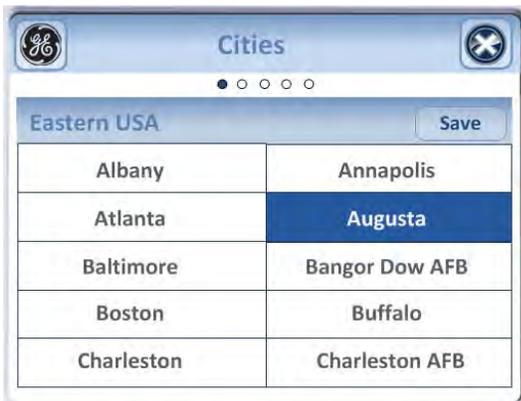
If the exact longitude and latitude are not known, select a city from the included list that is nearest the current location.

*To automatically set the Location Coordinates:*

1. From the Regions page, select a Region.



2. Select a specific City from the Region. Swipe left or right to view the complete list of available cities.



3. If the specific location is not available, select a nearby city. Since the location is used primarily for Time Zone purposes, an approximate location is usually sufficient.

## Schedule configuration

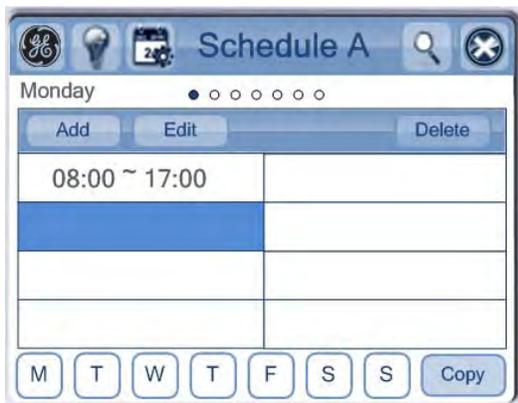


### Selecting a Schedule

Schedules are selected from the Main Screen. There are eight schedules available, identified as A to H.

Active Schedules display their current status (On or Off) and the next time an On/Off event is scheduled to occur.

Touch a Schedule to view the Schedule details and options.



Options:

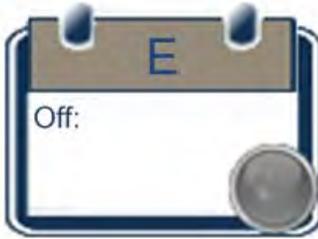
- Return to Main Screen
- Targets
- Exceptions
- Look up
- Cancel

### Daily Schedule setup

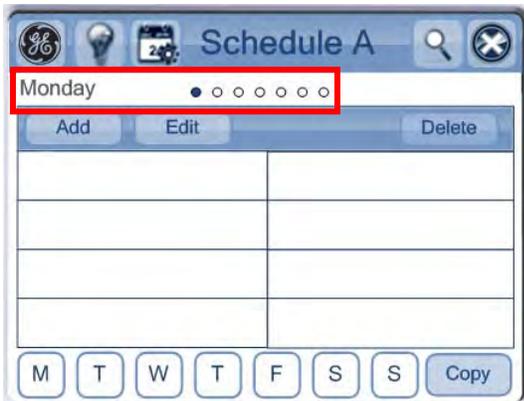
When viewing a Schedule, the screen displays the current day's Schedule. Swipe left or right to change the day being displayed. There are seven pages, one for each day of the week.

To create a new Schedule:

1. Touch an empty Schedule on the Main Screen.



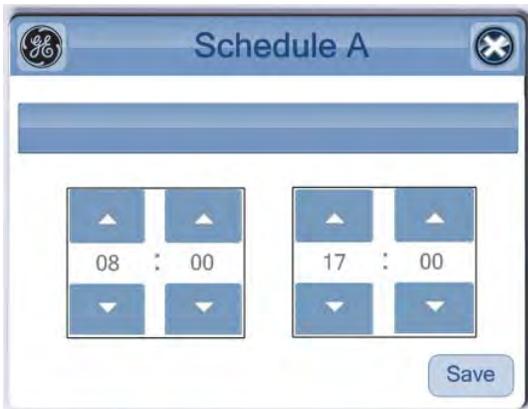
2. Swipe left or right to select the correct day in which to add the Schedule entry. For Schedules entries that are expected to for multiple days, simply select one of the days.



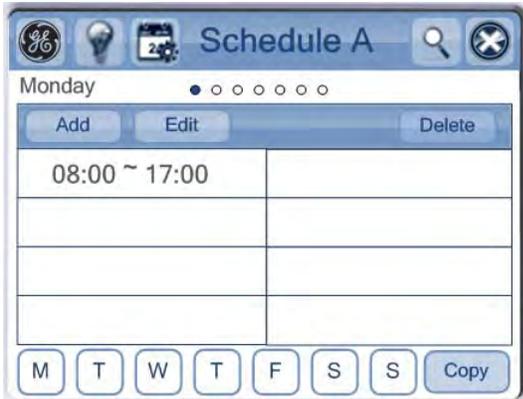
3. Touch Add.



4. Select a start and end time.

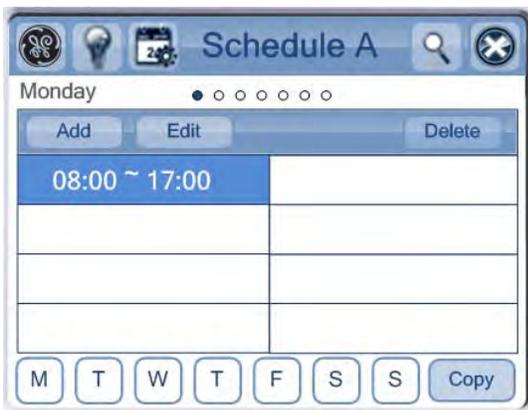


5. Touch Save. The new Schedule entry is created.



To copy a Schedule entry to other days:

1. Select the desired Schedule entry.



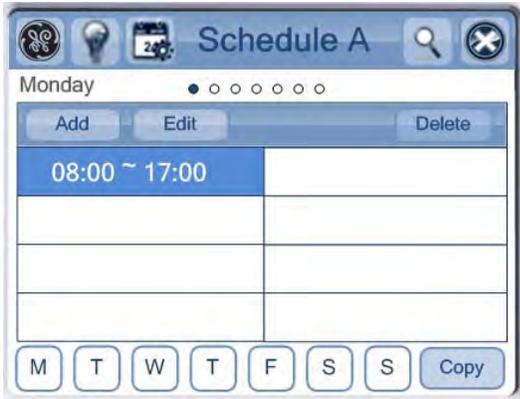
2. Use the days of the week buttons along the bottom to select which days the Schedule entry applies to. Select as many as necessary. Selecting the current day isn't required.



3. Touch Copy to copy the Schedule entry to the selected days.

To edit a schedule entry:

1. Select the desired Schedule entry.



2. Touch Edit.



3. Make changes as needed. Touch Save.



### Special days

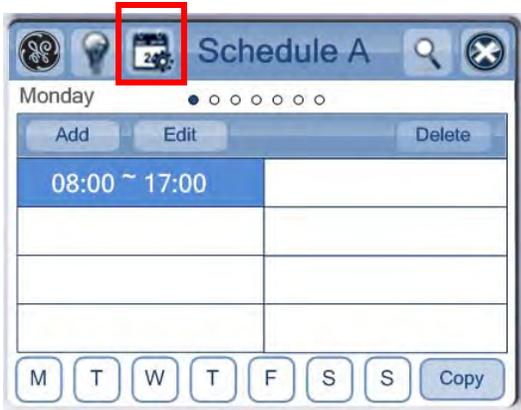
Exceptions entries can be added to a schedule for days when the normal schedule entries should not apply.

There are three types of exceptions that can be created.

- Single Recurring Date
- Date Range
- Recurring Week/Day

*To create an exception entry:*

1. From the Schedule screen, touch the Exceptions button.



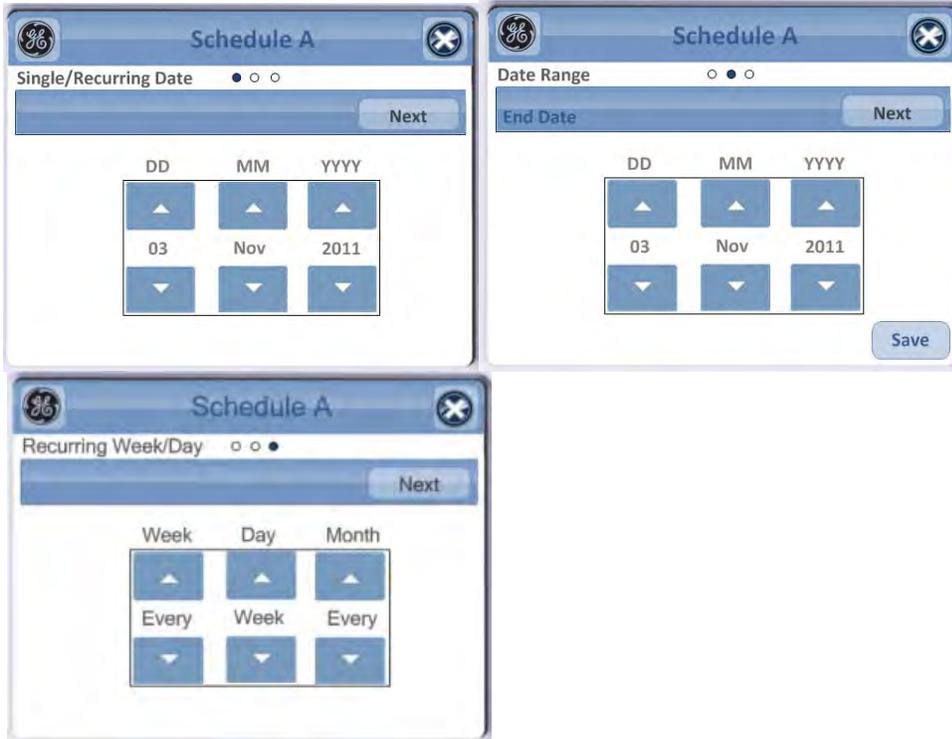
2. The Schedule Exceptions screen appears.



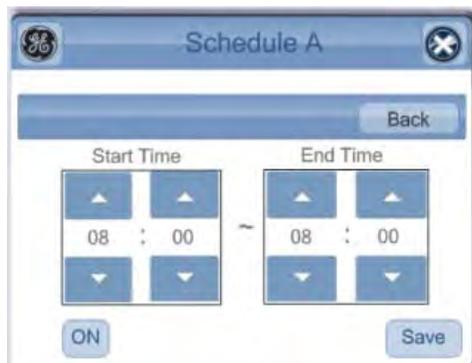
3. Touch Add



4. Select the Exception type by swiping left or right.



- Single/Recurring Date – Best used an exception that applies on a specific day. Either a day each month, or a day every year. For example, a Christmas Schedule can be set up to apply every December 25<sup>th</sup>.
- Date Range – Used for exceptions that apply for a specific amount of time. Both a start and end date must be defined. For example, an exception could be created for a temporary closure.
- Recurring Week/Day – Used for exceptions which occur on specific days (not dates) of the month. For example, an exception could be set up for every Monday in January.
- Select a start and end time.



5. Touch Save.

Save

To edit an Exception schedule:

1. Select an exception entry from the list.



2. Touch Edit and make the necessary changes.

Edit

3. Then touch Save.

To delete an Exception entry:

1. Select an exception entry from the list.



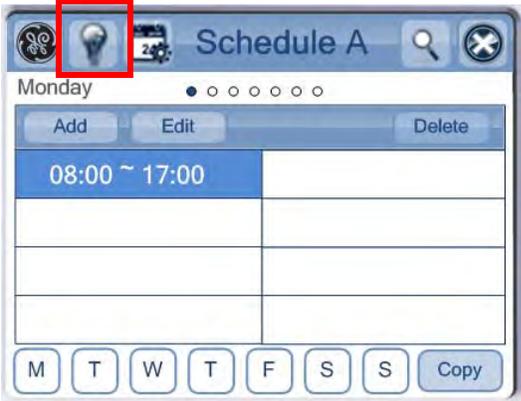
2. Touch Delete.

Delete

**Assign targets**

To assign targets

- 1. Touch the Targets icon.



- 2. The Targets page appears.



- 3. Touch Add.
- 4. The Target Add page appears.



5. Select a target type, and touch Next.

### Assign targets

Different types of targets can be added depending on what devices are connected to the controller.

### RM



1. Select RM
2. Touch one or more Relay Targets to select it them.

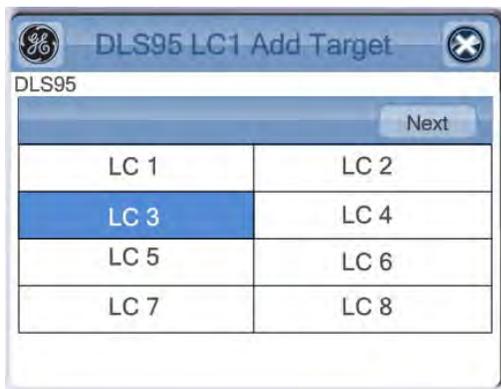


3. Use the Up/Down arrow to choose between the Standard ON/OFF, or scene control On Only or Off Only.
4. Touch Next

**DLS**



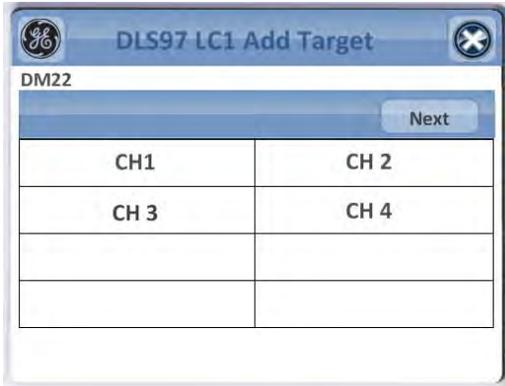
1. Select DLS
2. Touch one or more Lighting targets to select it them.



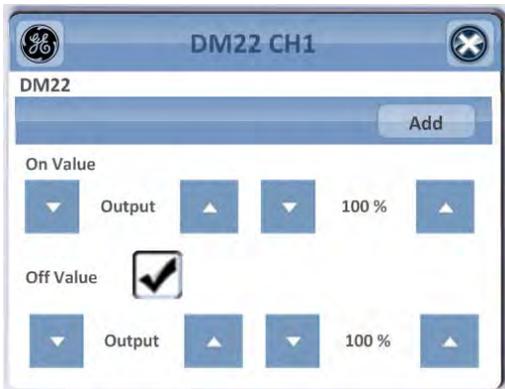
3. Touch Next.

**DM**





1. Select DM
2. Touch one or more Channels to select them.



3. Use the Up/Down arrows to set the On and Off Value.
  - Setpoint
  - Output
  - Local Control
  - Release
4. Use the Up/Down arrows to select the value (if applicable). The Local Control and Release options do not require a value set.
5. Check to use an Off Value.
6. Touch Add.

**GS**



1. Select GS
2. Touch one or more LC targets to select them.
3. Touch Next

**SW**



1. Select SW
2. Touch one or more LC targets to select them.
3. Touch Next

## Target Details

### Relays



On/Off – Standard button control where it can command the LC's targets to their Active or Inactive values

On only – Scene button control where it can command the LC's targets to their Active value

Off only – Scene button control where it can command the LC's targets to their Inactive value



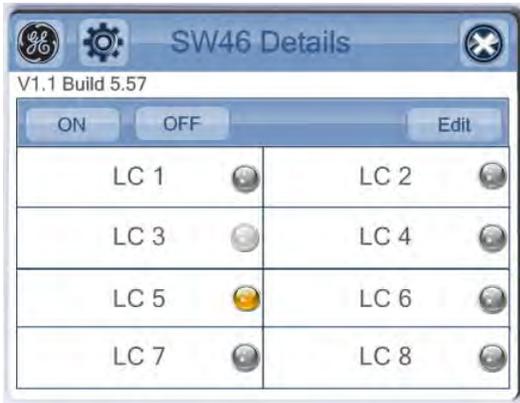
Flick Warning – The Flick Warning provides a visible warning (by quickly flicking the lights on/off) that the scheduled end time is approaching, and that the lights will be turning off.

Flick Duration – The Flick Duration determines how long before the scheduled end time the Flick Warning occurs.

Min ON Time – The Minimum On Time establishes the minimum time that the lights will remain on.

Max ON Time – The Maximum Off Time establishes the maximum time that the light will remain on.

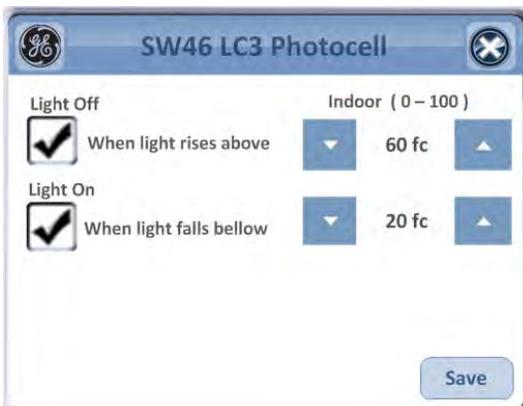
## LC's



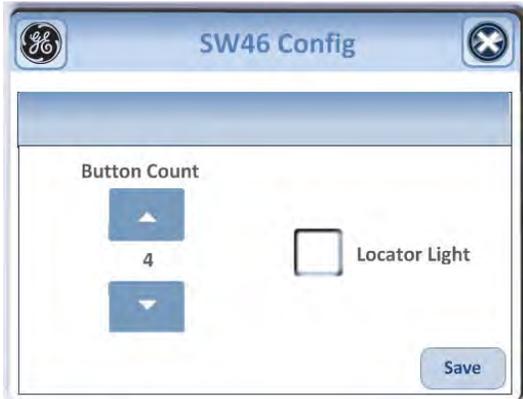
LC's are all On/Off type only.

Select an LC and touch Edit to modify the Targets

## SW



*Network Switch (similar with GSM configuration)*



- Button Count – Defines the number of active buttons on the Switch
- Locator Light – If checked, enables the small locator light LED on the switch

## Dimming Modules

- Photocell (Indoor)

DM22 CH1

Input: DM22 PC 1 (Indoor) 0 fc

Default Setpoint: 50 fc Output: 100%

Response Rate: 40 %

Save

- Photocell (other)

DM22 CH2

Input: DM22 PC 2 (Outdoor) 0 fc

Light fully on at: 0 fc Output: 100%

Light off at: 250 fc

Save

- None – Provides a default output used at startup

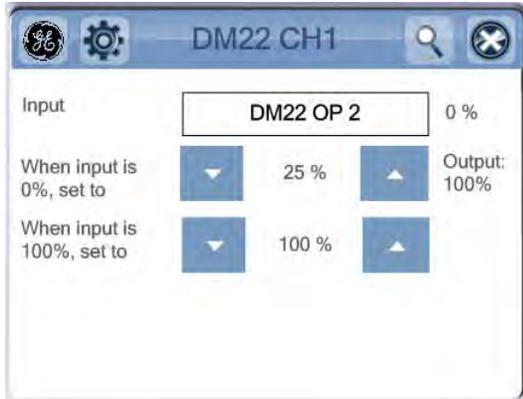
DM22 CH1

Input: None

Default Output: 100 % Output: 100%

Save

Define setpoints



## Define input type

*To modify the Input Configuration*

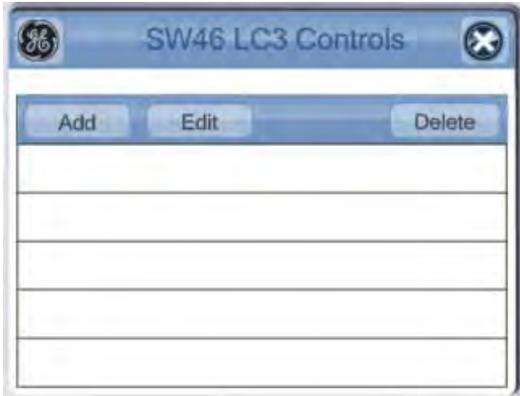
1. Go to the manage Targets page.



2. Touch Configure.



3. Touch Add from the Target Controls page.



4. Select a Control Type.



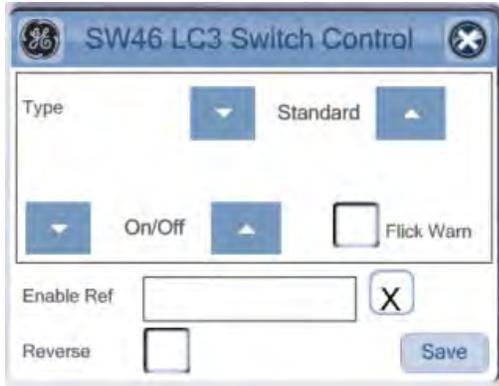
### LC Control Type

#### Switch

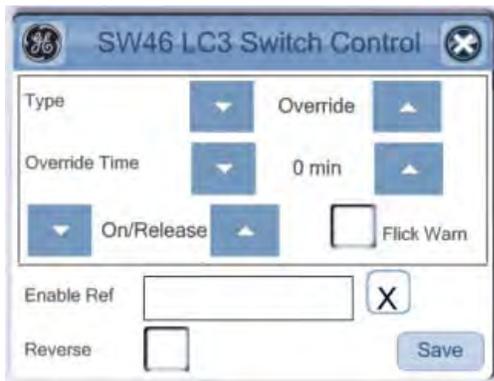


Switch Type:

- Standard



- On/Off – Standard switch action able to turn On and Off
- On Only – Single action able to turn On only
- Off Only – Single action able to turn Off only
- Override



- On/Off – Commands outputs into the override priority at On and Off
- On/Release – Commands outputs into the override priority On, and releases from override priority
- Off/Release - Commands outputs into the override priority Off, and releases from override priority
- On Only – Single action commands outputs into the override priority On only
- Off Only - Single action commands outputs into the override priority Off only
- Release - Single action releases outputs from the override priority
- Cleaning
  - On/Release - Commands outputs into the cleaning priority On, and releases from cleaning priority
  - On Only - Single action commands outputs into the cleaning priority On only
  - Release - Single action releases outputs from the cleaning priority
- Emergency
  - On/Off – Commands outputs into the emergency priority at On and Off
  - On/Release – Commands outputs into the emergency priority On, and releases from Emergency priority

- Off/Release - Commands outputs into the emergency priority Off, and releases from Emergency priority
- On Only – Single action commands outputs into the emergency priority On only
- Off Only - Single action commands outputs into the emergency priority Off only
- Release - Single action releases outputs from the emergency priority

Timeout – Set to 0 minutes for no timeout functionality, or up to 1200 minutes in 5 minute intervals. At the end of that timeout, if not other commands have been made to the outputs, the command will be released at the set priority, or turned off if at Standard priority

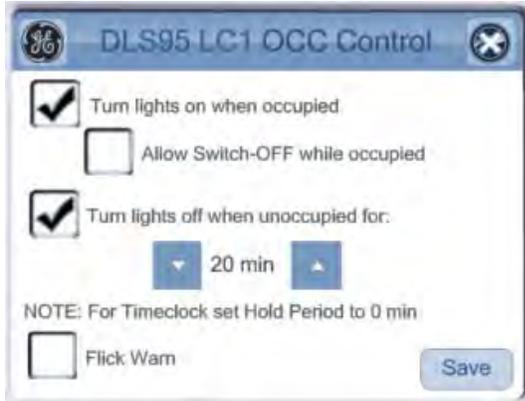
Flick Warn – Enabling Flick Warn will command the LC's output to use the output's configured Flick Warn settings and egress time.

Enable Ref – Select a Schedule (SCH) or Occupancy input (BI) to only allow the switch to operate during specific periods. Useful when a switch needs to operate a certain way during normal hours and another way after hours, or in places where lights should be on during occupied periods but switch functionality is required after hours.

Reverse – Use reverse if the switch functionality is required to be enabled during off hours (when the schedule or timeclock input is Off)

**Occupancy sensor - time delay**





- Turn lights on when occupied – When selected, the lights turn on during occupied periods of the Schedule.
- Allow Switch-OFF while occupied – When enabled, the lights can turn Off during occupied periods. Occupancy will not retrigger the lights to go on until the sensor has not detected motion for the unoccupied duration.
- Turn lights off when unoccupied for: - The lights automatically turn off when the targets are unoccupied for the set amount of time.
- Flick Warn – The lights will flicker briefly as a warning before turning off.

**Photocell - Light level triggers**



The Photocell option uses the ambient light levels to determine if the lights should turn on or off.

- Light Off When light rises above – set the illumination required to turn the lights off.
- Light On When light falls below – set the illumination required to have the lights turn on.

### ***Astronomical***



DLS95 LC1 Controls Enable

Select Type

Photocell	Occupancy
Schedule	<b>Astro</b>
Common Area	Sweep

Next



DLS95 LC1 Astro Control

Sunrise

Lights Off 0 min After

Sunset

Lights On 0 min After

Save

The Astronomical settings allow the lights to be turned off/off with the Sunrise/Sunset

- Toggling the Lights On/Off for either Sunrise or Sunset will automatically toggle the action of the opposite setting.

### Schedule

**DLS95 LC1 Controls Enable**

Select Type

Photocell	Occupancy
<b>Schedule</b>	Astro
Common Area	Sweep

**DLS95 LC1 Controls Enable**

Select Input

DSL95 SCH 1	DSL95 SCH 2	DSL95 SCH 3	DSL95 SCH 4
DSL95 SCH 5	DSL95 SCH 6	DSL95 SCH 7	DSL95 SCH 8

**DLS95 LC1 SCH Control**

Schedule On

Lights On 0 min After

Schedule Off

Lights Off 0 min After

Flick Warn Save

- Toggling the Lights On/Off for either Sunrise or Sunset will automatically toggle the action of the opposite setting.

### Sweep

**DLS95 LC1 Controls Enable**

Select Type

Photocell	Occupancy Sensor
Schedule	Astro
Common Area	<b>Sweep</b>

**DLS95 LC1 Sweep**

Sweep Time 120 min

Flick Warn Save

- When Sweep is On, it commands its target lights Off when the Sweep Time has elapsed, (if no other control wants the lights on)

## Common Area

### DLS95 LC1 Controls Enable

Select Type

Next

Photocell	Occupancy
Schedule	Astro
Common Area	Sweep

### DLS95 LC1 CA Control

Areas

Select to add

Hold Period 0 min

Flick Warn

Save

## System troubleshooting

### Network health status - Network screen

Network									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	SW1 5	16	17	18	19	GS2 0
21	DM2 2	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	SW4 6	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	DM3 3	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	DLS9 5	96	97	98	99	100

- Relay Override command – On/Off buttons on Device -> RM Details screen allows for the relays to be commanded on or off at the CLCDLS
- LC override command - On/Off buttons on Device -> SW or GS Details screen allows for the all LC targets to be commanded to their Active or Inactive state at the CLCDLS
- Time and date – red color for system time not setup



GE Lighting Control

# [ LIGHT SWEEP CLC340X SOFTWARE GUIDE ]

**Contents**

Software Installation ..... 2

Configuring Navigator ..... 3

    Configuring BACnet communication..... 4

    Configuring CLCBnet ..... 7

System Configuration..... 9

    Lighting BACnet Objects..... 10

Relay properties ..... 12

Configure the Lighting Group – LC..... 13

Assigning Time Schedules ..... 16

## Software Installation

GE LC software is used to setup the BACnet communication parameters to interface with BMS and to program proprietary objects or create custom programming.

### 1. Software installation:

Install the Sentinel System Driver – located in Third party Software folder

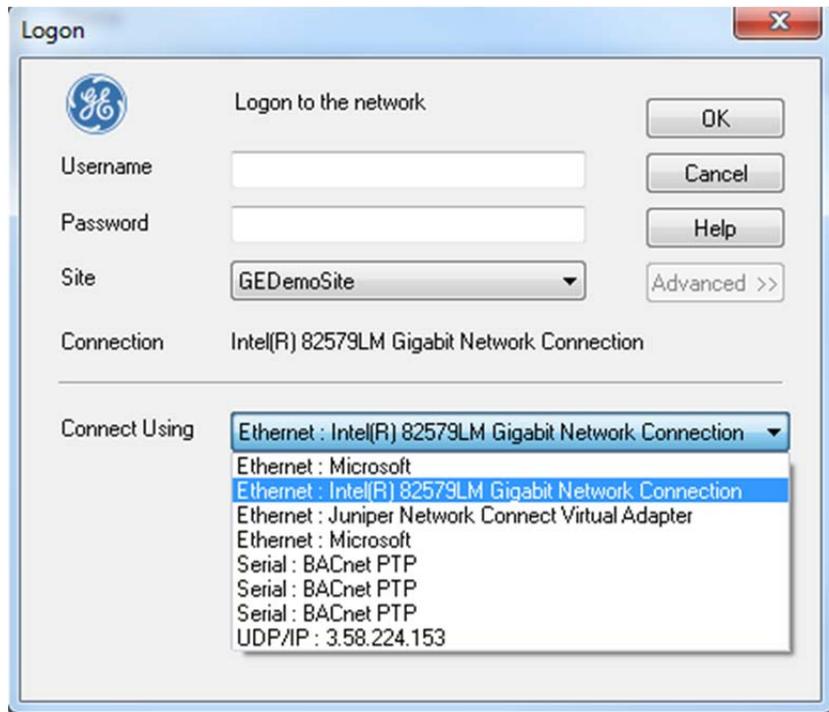
Plug in the Sentinel Rainbow key – containing the software license

Run the GELC Suite Setup to install the appropriate software – according to the license key.

### 2. Establishing communication to the CLCBnet device

Once the software is installed, connect to the CLCBnet controller using the Ethernet port and launch the application.

At the Login screen select the Ethernet port under the Advanced Tab – the interface name will be displayed in the Connection line as per below window. Make sure this is the internal port and not the wireless or virtual port created by other applications.



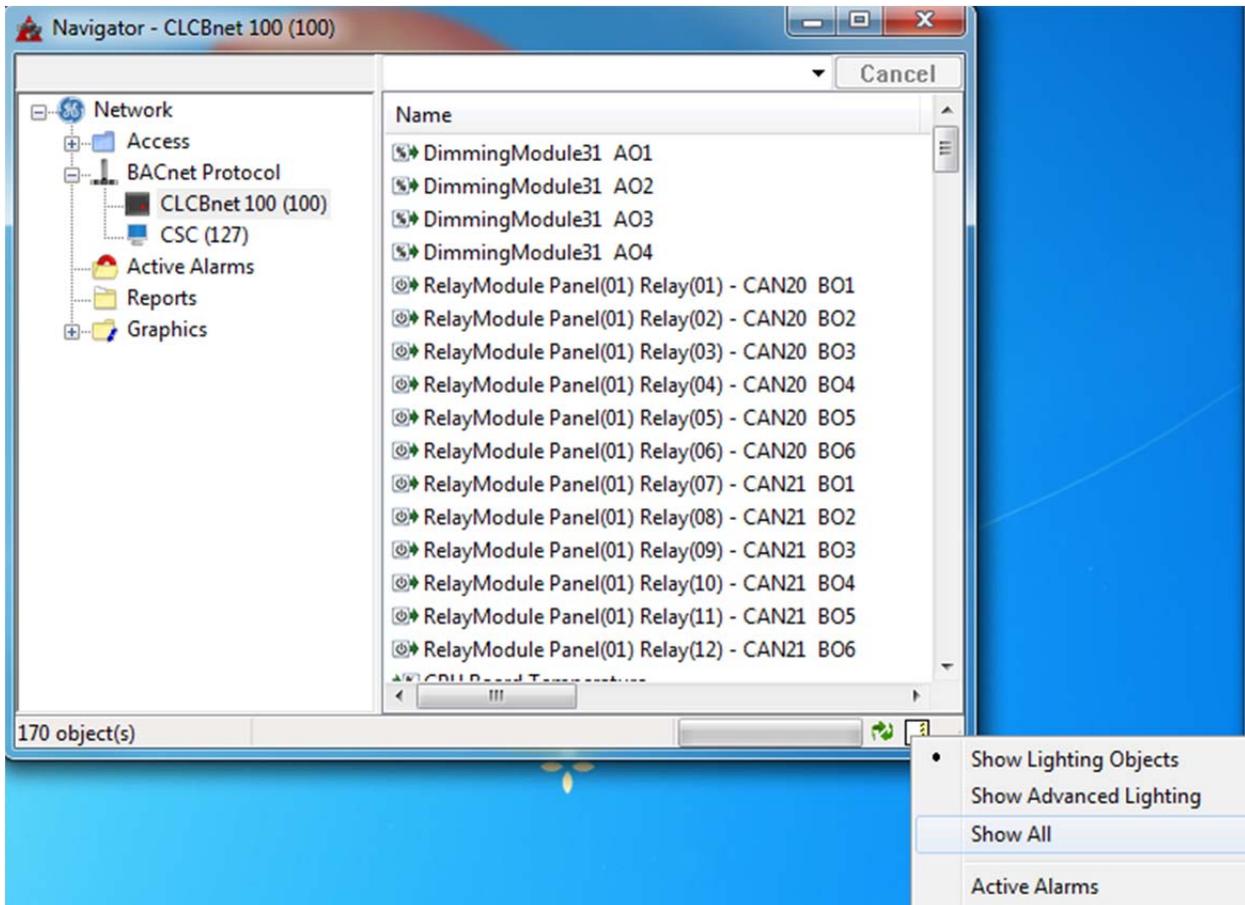
## Configuring Navigator

CLCBnet device will show in the navigator – (with the default address 100).

### 1. Setting the CLCBnet communication parameters

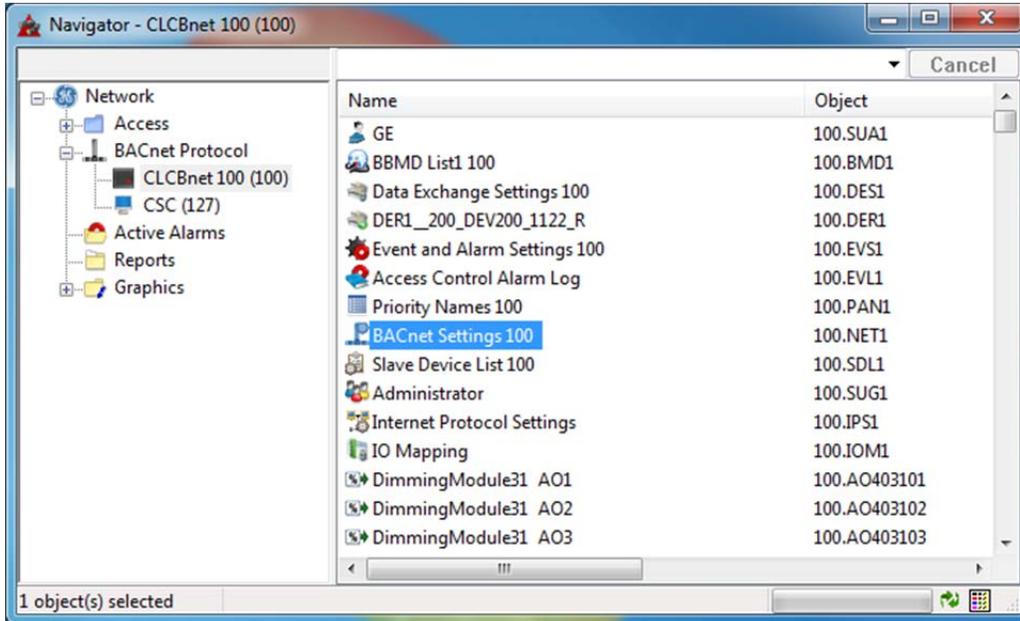
The default view of the navigator will show only the Lighting Objects. To adjust the communication parameters this will require changing the filter to Show All option:

- Right click on the lower right corner of the Navigator window and select Show All. This will allow you to see all BACnet objects to make changes for communication type of controller and speed.



## Configuring BACnet communication

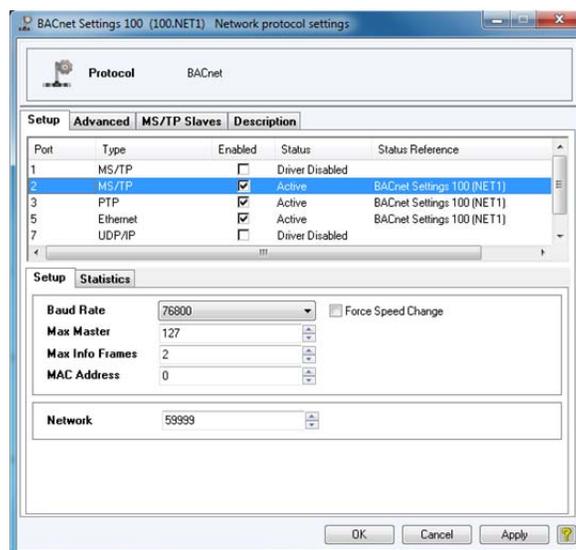
The object used to adjust the communication parameters is called BACnet Settings 100 (where 100 is the device address). Changes required to the BACnet Settings only required if integrating to building automation systems or accessing lighting control system over TCP/IP network.



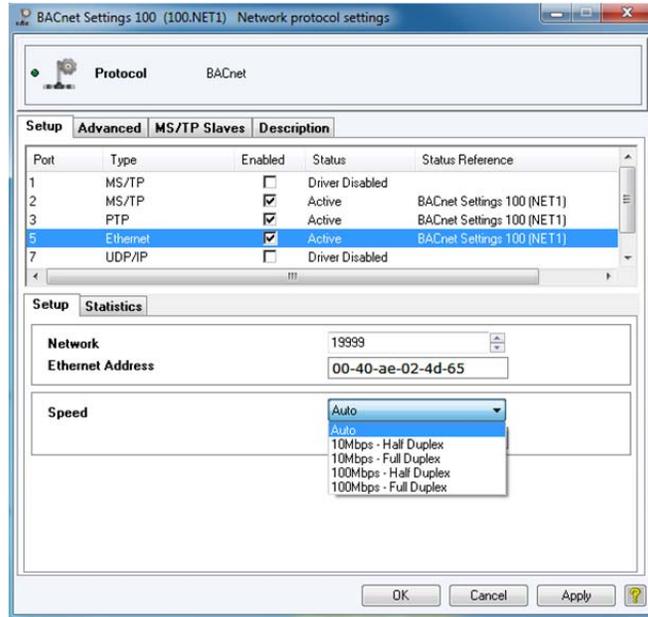
Double clicking on the BACnet Settings icon will bring the network protocol setting dialog box as seen below.

Communication parameters:

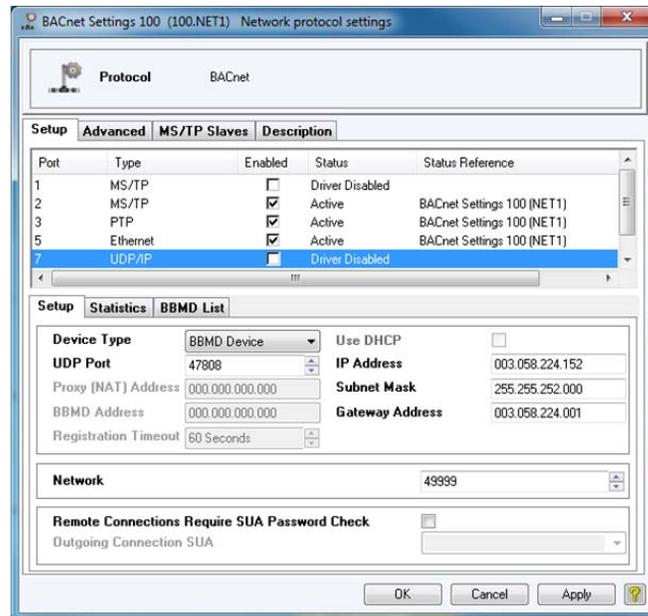
- MS/TP – Port 2 - Using the twisted shielded pair – labeled on the controller as NET2 RS-485.
  - o Adjust the Baud rate required by the BMS controller
  - o Change the MAC address to a unique number – default is setup to 0.



- Ethernet – enabled as default.
  - o Allows changing the Speed to Auto or one of the available values: 10 or 100 Mbps with half or Full Duplex.



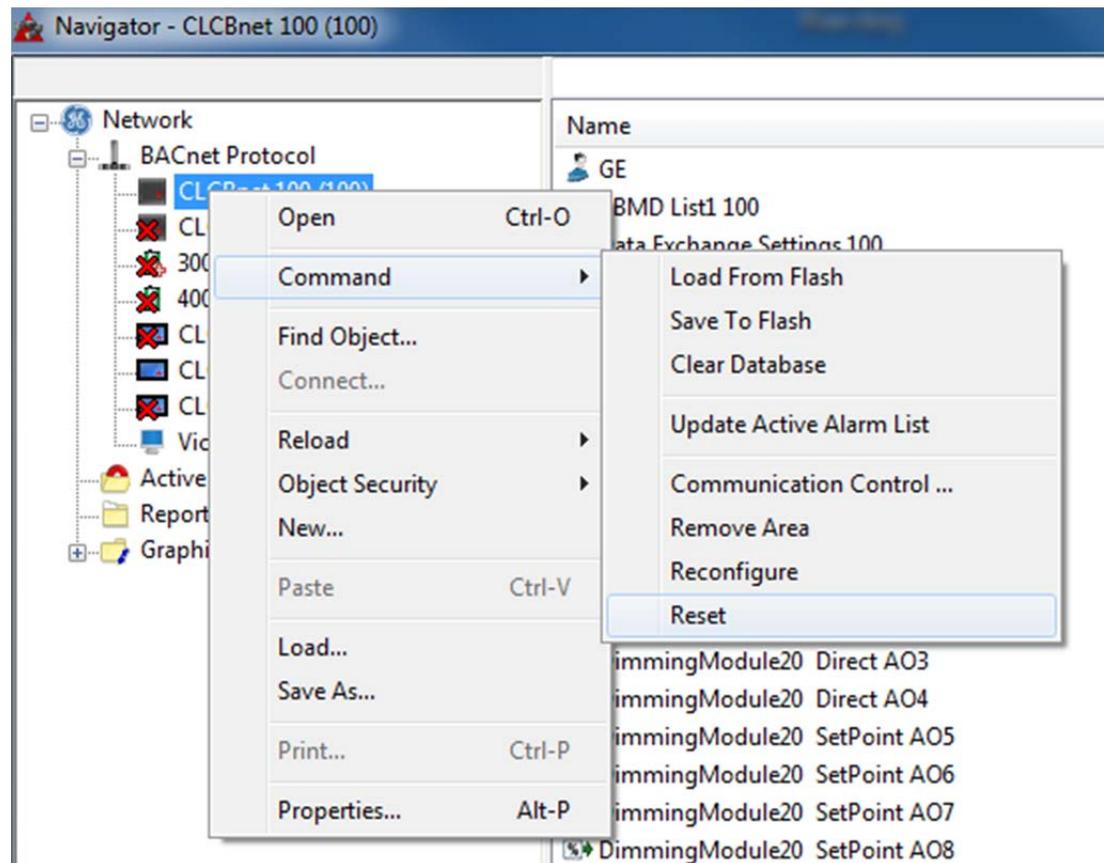
- UDP/IP – disabled by default.
  - o Set the IP address, Subnet Mask and Gateway.
  - o Configure the UDP Port to match the BMS controller (default is 47808).
  - o If the device is in a different network than the BMS controller/computer, set the device type as BBMD. If the device is in the same network, set the type as Regular.



To enable or disable any of the ports, double click the square box and apply.

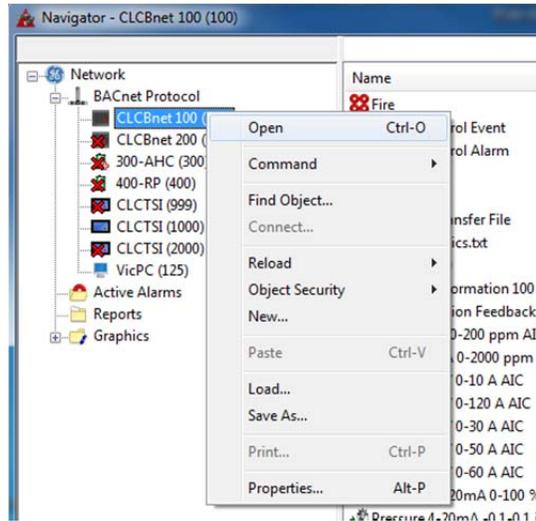
**Important Notes:** If the device will use the UDP/IP communication, disable the Ethernet port; else the device will create a circular network communication.

Reset the device after changing the communication parameters. To reset the device from the navigator left click on the CLCBnet controller in the network list and select Command -> Reset and seen below.

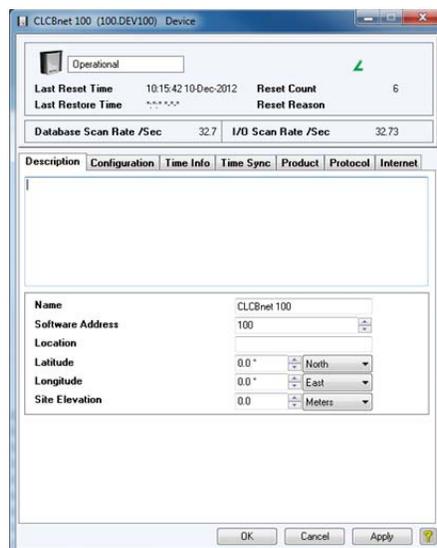


## Configuring CLCBnet

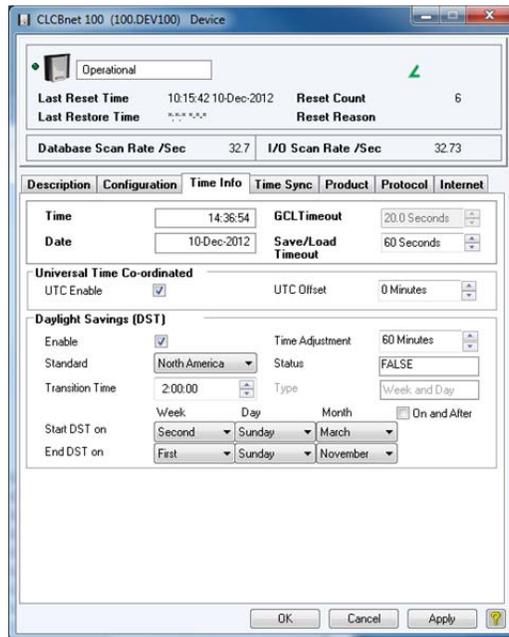
1. Setting the CLCBnet device name and BACnet address  
Right click on CLCBnet 100 in the Navigator window and select Open.



- o Description tab:
  - Name
  - Software Address
  - Latitude and Longitude used for Astronomical clock function

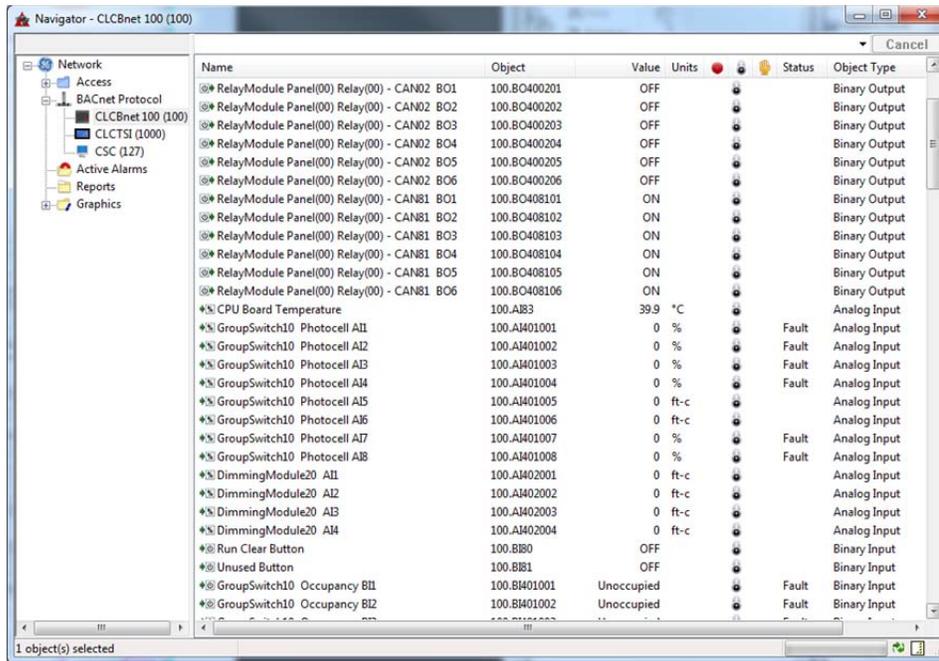


- Time Info tab:
  - Universal Time Coordinate (Enable or Disable). Used in conjunction with location parameters for Astronomic clock. UTC offset = time zone value in minutes with “-“ sign (Eastern time zone = -300 minutes, Pacific time zone = -480 minutes).
  - DST Enable or Disable. Allow to select the relative dates and the transition time.



## System Configuration

All network objects will be displayed in the Navigator screen. To make it easier to program the system, change the filter to Show Lighting Objects.



Based on type the lighting objects are categorized as:

- Analog Outputs – AO – dimming channels
- Binary Outputs – BO – relays
- Analog Inputs – AI – inputs defined as analog objects- dimming module inputs or group switch inputs
- Binary inputs – BI- inputs on GSM module defined as Occupancy sensors.
- Analog Values – AV – for CLCDIM module allow to setup the dimming parameters
- Binary Values – BV – Virtual objects on CLCBnet controller. Can be used as triggers for LC groups
- Schedules – SCH – eight objects on CLCBnet controller. Each CLCDLS touchscreen has also 8 schedules.
- Lighting Control Groups – LC – sixteen local groups on CLCBnet and 8 groups on each group switch module CLCGSM8 or dataline switch CLCSWT. The lighting groups are used to create the field control scenarios

## Lighting BACnet Objects

2. Dimming Module - Channel Objects			
Name	Object type/Offset	Units of Measure	Description
Dimming level output	AO 1	%	Used in a closed-loop configuration for daylight harvesting. Manual control - used for scenes (priority 10).
Room light level input	AI 1	ft-c	This value indicates the light level in the room. The value is used to adjust the SETPOINT for closed-loop daylight harvesting
Light Level Setpoint	AV 11	ft-c	Indicates that value that level input must be greater than to cause the channel relay to turn off
Min	AV 12	%	Minimum dimming level output value
Max	AV 13	%	Maximum dimming level output value
LocalCtrlMin	AV 14	ft-c	
LocalCtrlMax	AV 15	ft-c	
Response Rate	AV 16	%	
RampRate	AV 17	%	
InputRef	AV 18	None	
FlickWarnPeriod	AV 19	min	Amount of time the lights will remain on after a flick-warn signal has been executed
LocalFadeTime	AV 20	sec	
AdaptationCompensation	AV 21	Fc/min	

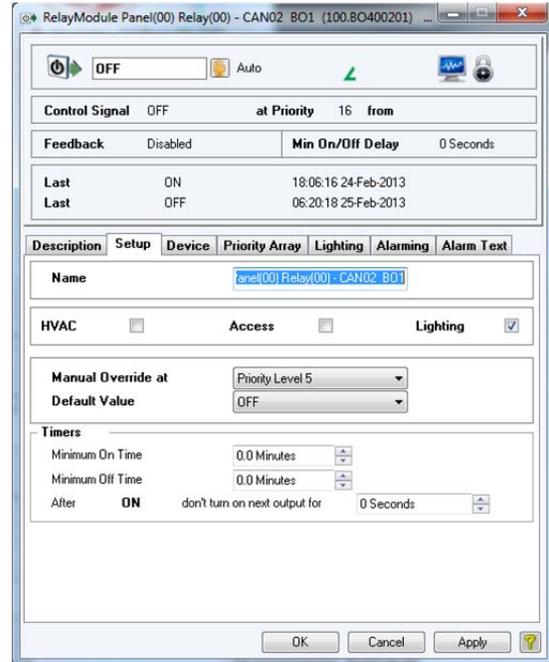
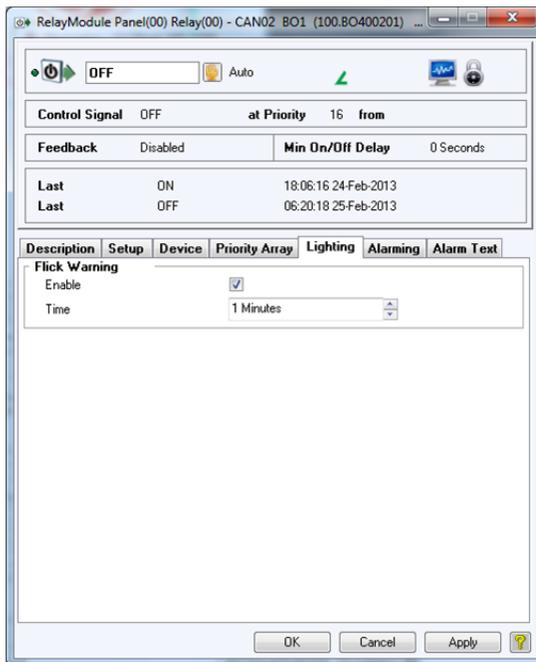
<b>Group Switch Module - Channel Objects</b>			
Name	Object type/Offset	Units of Measure	Description
Photocell	AI 1	%	Percent of light in space relative to maximum ft-c value
Occupancy	BI 1		Active, Inactive
Type	MV 1		
Group Output	BV 1		
Group Members	Proprietary		List of relay circuits controlled by the group

<b>Relay Module - Channel Objects</b>			
Name	Object type/Offset	Units of Measure	Description
Relay Output	BO 1		Control the lighting circuit power relay (Priority 5 - Emergency - override - demand Response Priority 15 - Schedule - includes the Flick Warning Priority 16 ON/OFF)

## Relay properties

To adjust relay for flick warn and duration amount this is done through the relay properties dialog box for each individual relay. To access the dialog box double click on relay.

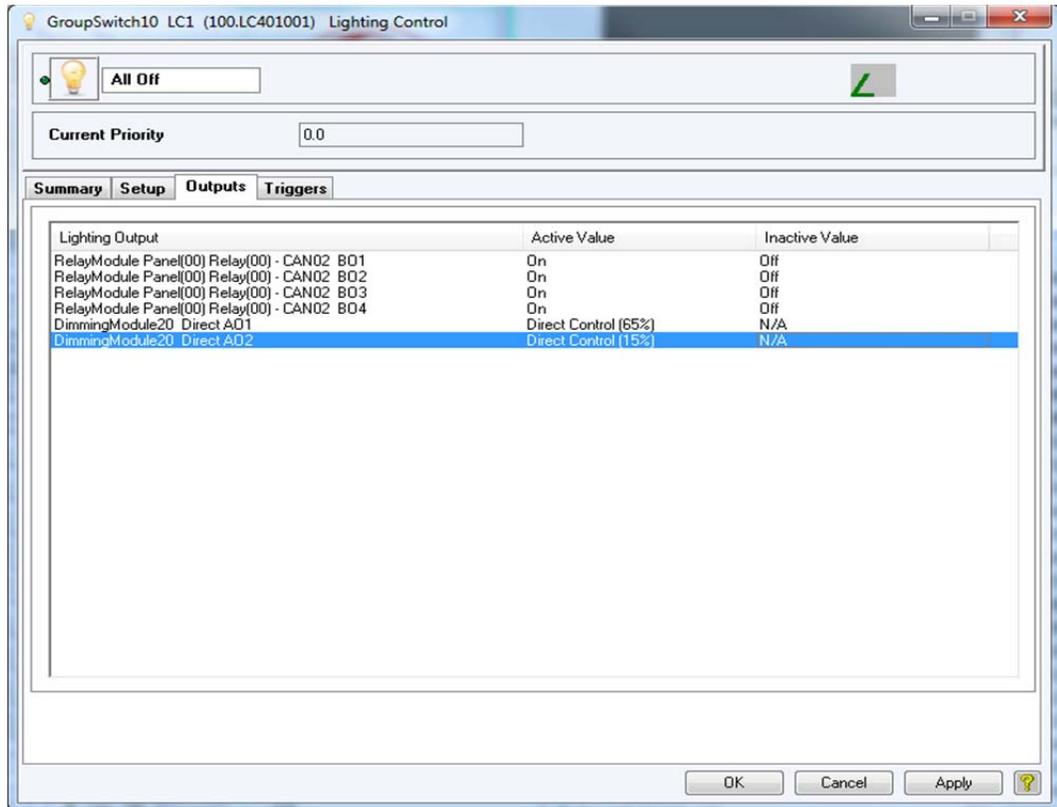
- Lighting tab: Flick Warning: Enable/Disable and Flick time – the time between the relay flicker and the OFF transition.
- The relay will flick only if the OFF command received is a flick type command.
- The Setup tab allows changing the relay name.



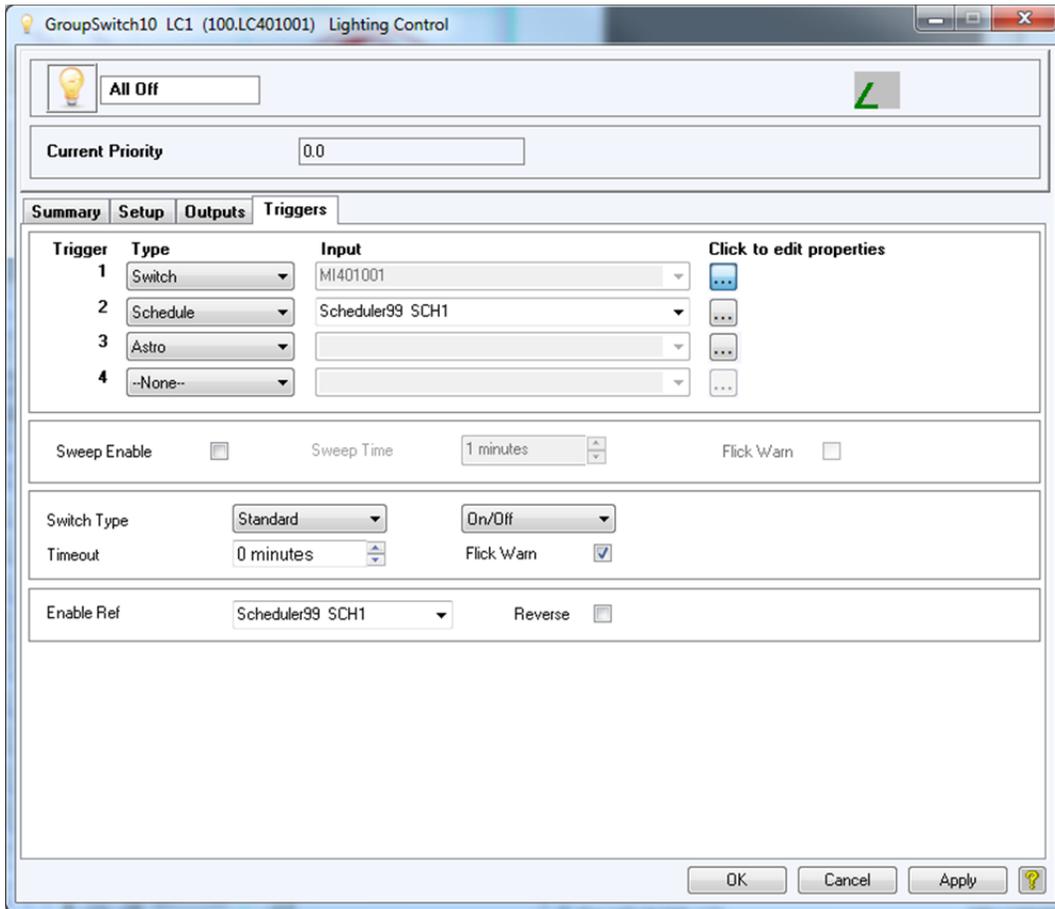
## Configure the Lighting Group - LC

The LC objects are used to create the control logic:

1. Grouping multiple relays for the same type of control
  2. Assigning trigger points – schedules, occupancy sensors, photocells
  3. Create the control logic for each trigger point – ON only, ON/OFF or OFF only mode.
  4. Define control scenes – when relays and dimming outputs are combined.
1. Assign relays or analog outputs to a lighting group – using the **Outputs** Tab.



2. Assign the trigger points – under **Triggers** tab



3. Select the type from the drop down Type list:

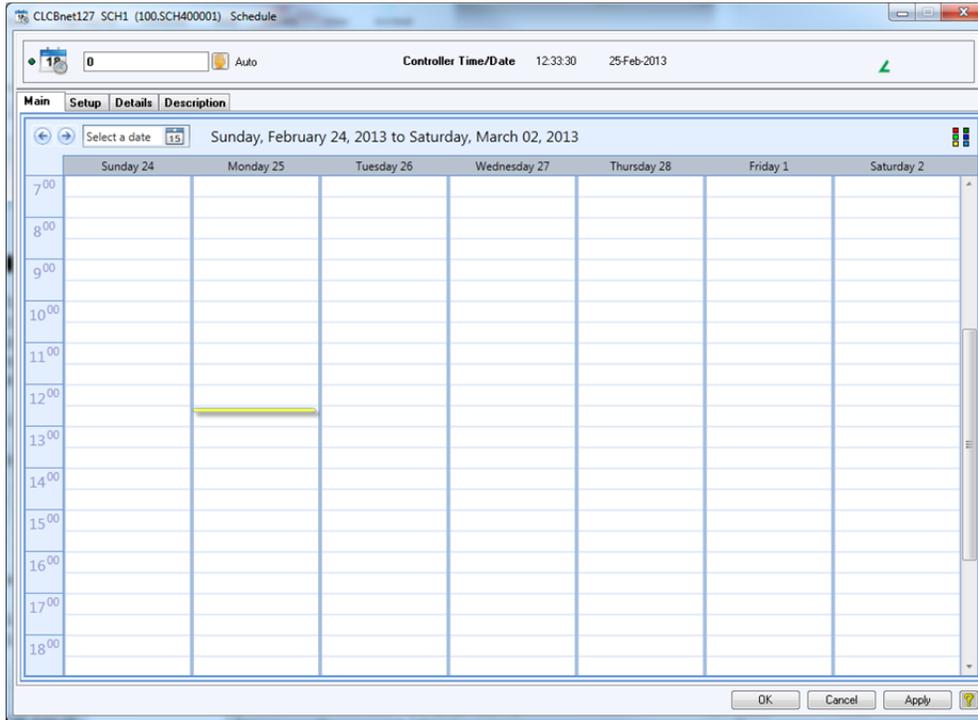
- Schedule – time schedule
- Astro – based on sunrise and sunset
- Photocell
- Occupancy sensor
- Switch
- Sweep Enable – if lights are turned ON by local override and all triggers are OFF, the sweep will turn lights OFF after the Sweep Time. If the Flick Warn is enabled, the lights will flick at the end of the Sweep Time

4. Edit the trigger properties:

- Schedule – enable the ON & OFF action and select the offset. The offset allows to utilize same schedule for multiple groups – store scheduler for retail applications. Enable the Flick warning.
- Astro – select the offset for ON and OFF based on sunrise and sunset time
- Photocell – Set the high and low light levels to turn lights ON and OFF. For indoor lighting use a dead-band equivalent to the amount of artificial lighting provided by the luminaires in order to avoid the ON/OFF oscillations.

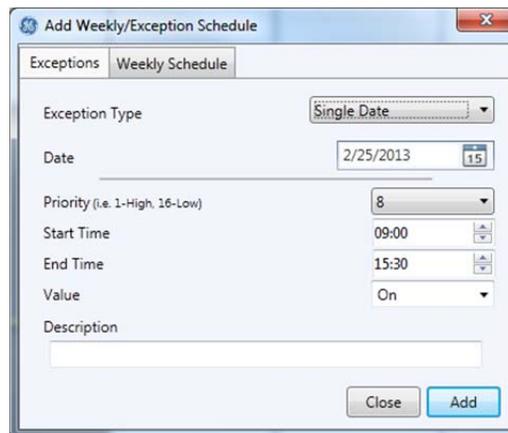
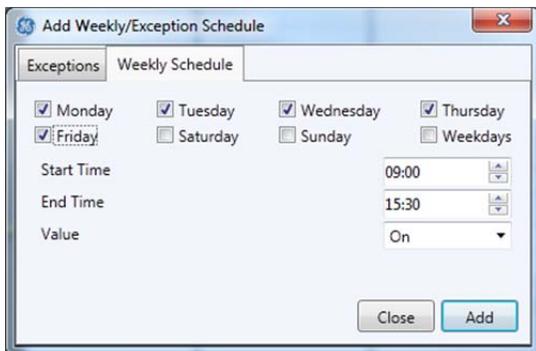
- Occupancy sensor – allow to setup a time delay through the software. This time delay will add to the time delay configured at sensor level. Recommended is to use a sensor with time delay less than 1 minute.
- Switch – can select a reference schedule to enable/disable the switch functionality – either in direct mode (switch enabled when schedule is ON) or reverse (switch is enabled when the schedule is OFF).

## Assigning Time Schedules

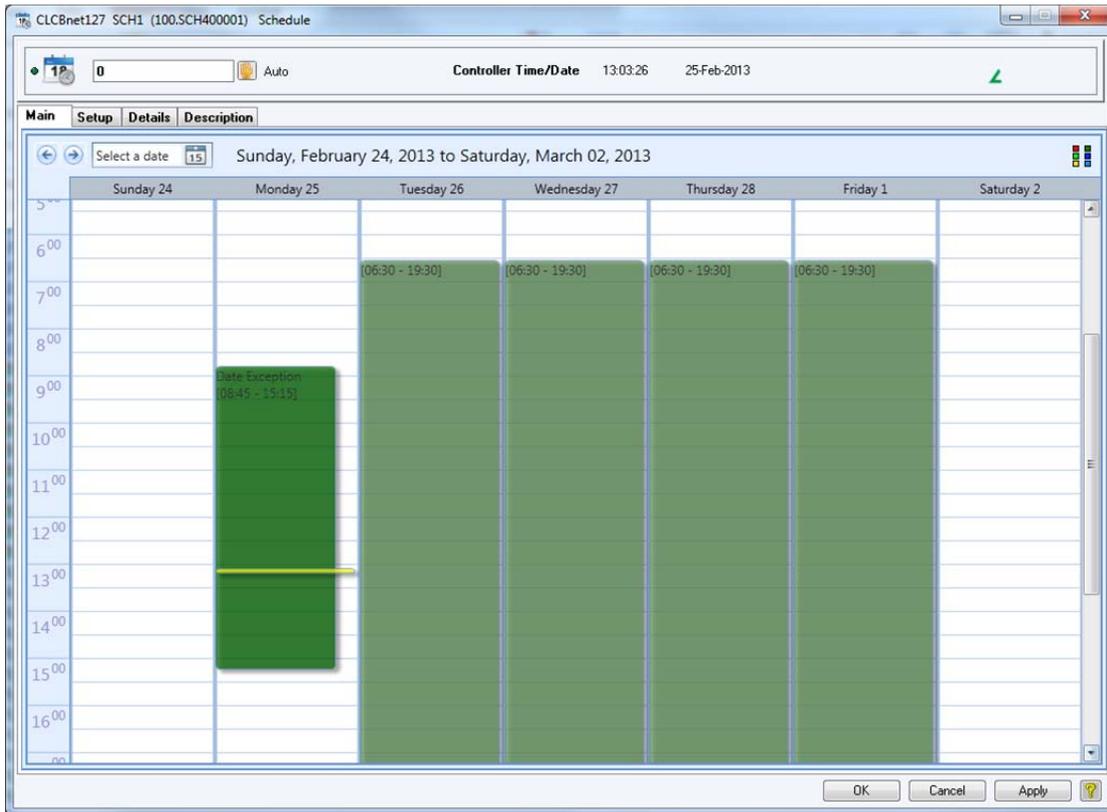


To define a time schedule:

- Double click the schedule object: For example CLCBnetxxx SCH1
- Select the day of the week to update
- Click the start time and drag to end time
- In the box that pops up select the weekly schedule
- Enter check marks for all days with similar schedule



Exceptions – holidays – must be defined for each schedule used in the system, creating a bigger flexibility in case a custom event must be assigned to a particular zone, without affecting the other schedules.



On the schedule screen, the exception is in darker color than the regular schedule.