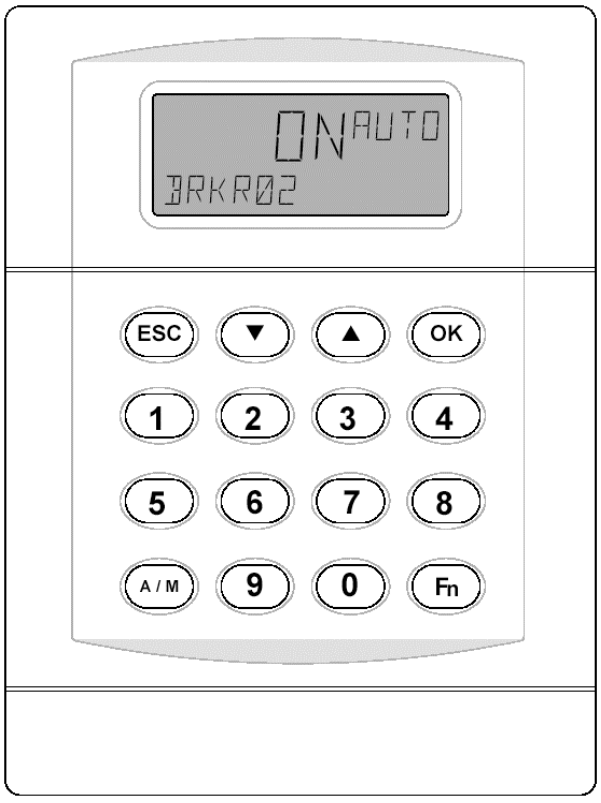
A Series® Lighting Control Panelboards

A Series® Lighting Controller Programmer User Guide



Programmer Layout

The key features of the Programmer are illustrated in Figure 1.

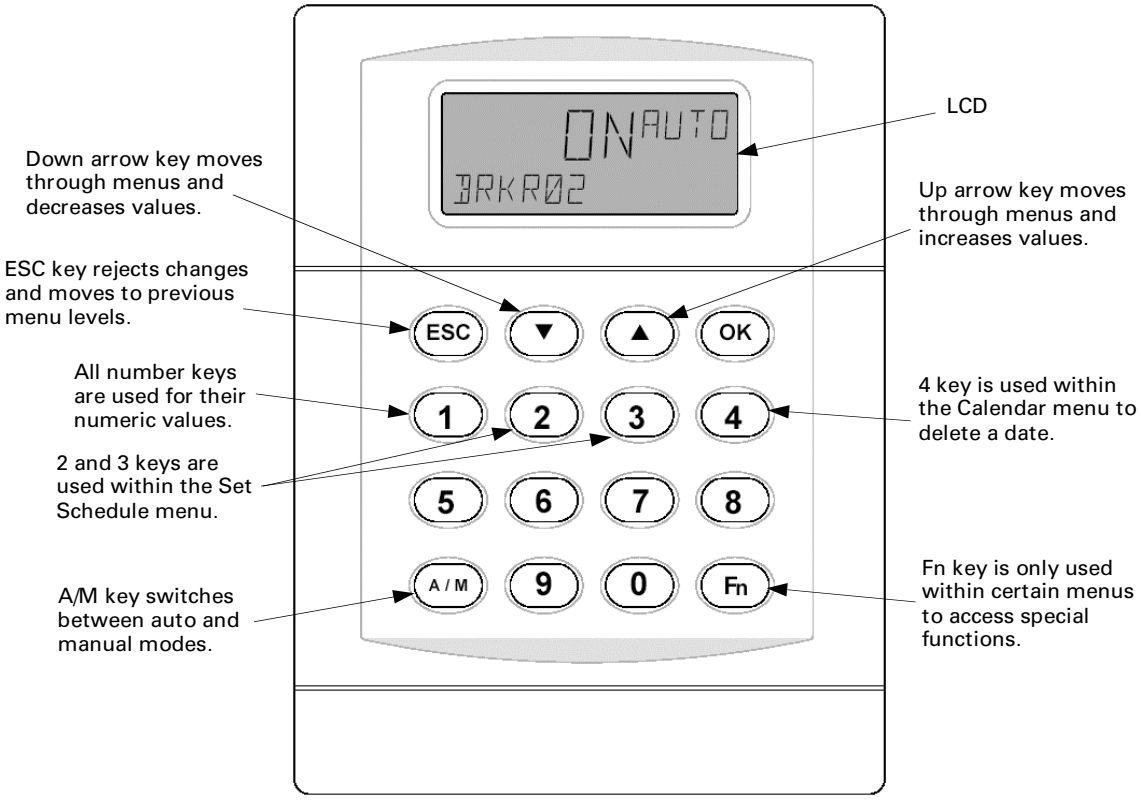


Figure 1. Key features of programmer keypad and display.

Navigating the Programmer Menus

The top four keys of the LCD keypad are used to navigate the controller menus, as follows:

- Press the OK key to enter the desired programmer menus, accept selections, or make value changes.
- Press the up or down arrow keys to navigate through the main menus or submenus. The down arrow scrolls from the first item to the last and then rolls over to the beginning when all menus have been viewed. The up arrow does the opposite, scrolling back from the last menu item to the first.
- Press the ESC key to go back to a previous menu or to initiate a user logoff from the main menu.

Programmer Default Screen

Figure 2 is a representation of the default Programmer display (also shown on the front cover). It is also the display that appears when the programmer has timed out. The LCD screen is configured to show a rotating display of the breaker (BRKR01–BRKR66) values. Pressing any key on the keypad activates the backlighting for a default time of 30 seconds. When a user has logged in, the keypad stays backlit until he or she logs off.

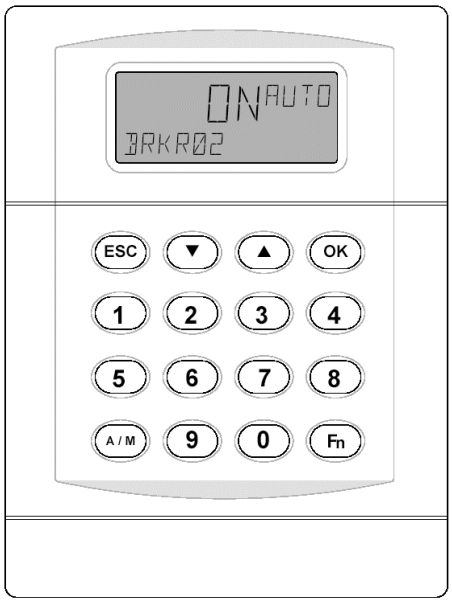


Figure 2. Display and keypad of the Lighting Controller Programmer.

Login

The programmer provides a secure connection into the network and requires logging in to access its functions. The ability to login and make changes to the programmer is based on permissions. If a password is approved, then a user has access to the appropriate level of system menus. If the password is not approved, the programmer returns to the default display, as shown in Figure 2.

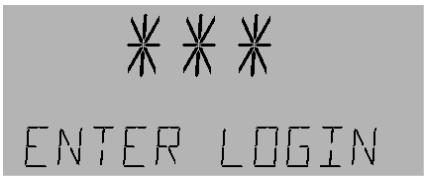
The two levels of permission are as follows:

- Edit Level – Default password 4129 gives full edit mode access to the system.
- Display Level – Default password 1234 gives access to view mode only.

To login to the Programmer for the first time:

1. Press OK to bring up the Login display:

2. Enter the appropriate password for the desired level of access using the Programmer keypad:



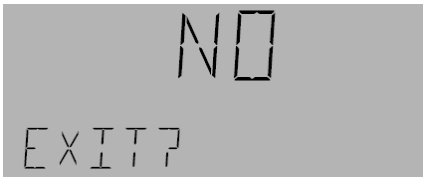
3. The Programmer displays the following when the password is approved:

You can now access the menu selections appropriate to your level of access.

Logout

To logout of the Programmer:

1. Press ESC until the display appears as follows:



2. Use the arrow keys to select YES:

3. Press OK to return to the default display.

Timeout Mode

Timeout Mode occurs after the default value of 15 minutes. If there is no activity during that time, the Programmer logs out automatically. No user input is required for this timeout to occur, and any changes made before the Programmer timed out will remain.

Menu Sequences

The following diagrams are a representation of the menus within the programmer. Figure 3 shows the menu sequence for display-only mode and Figure 4 shows the menu sequence for full-edit mode.

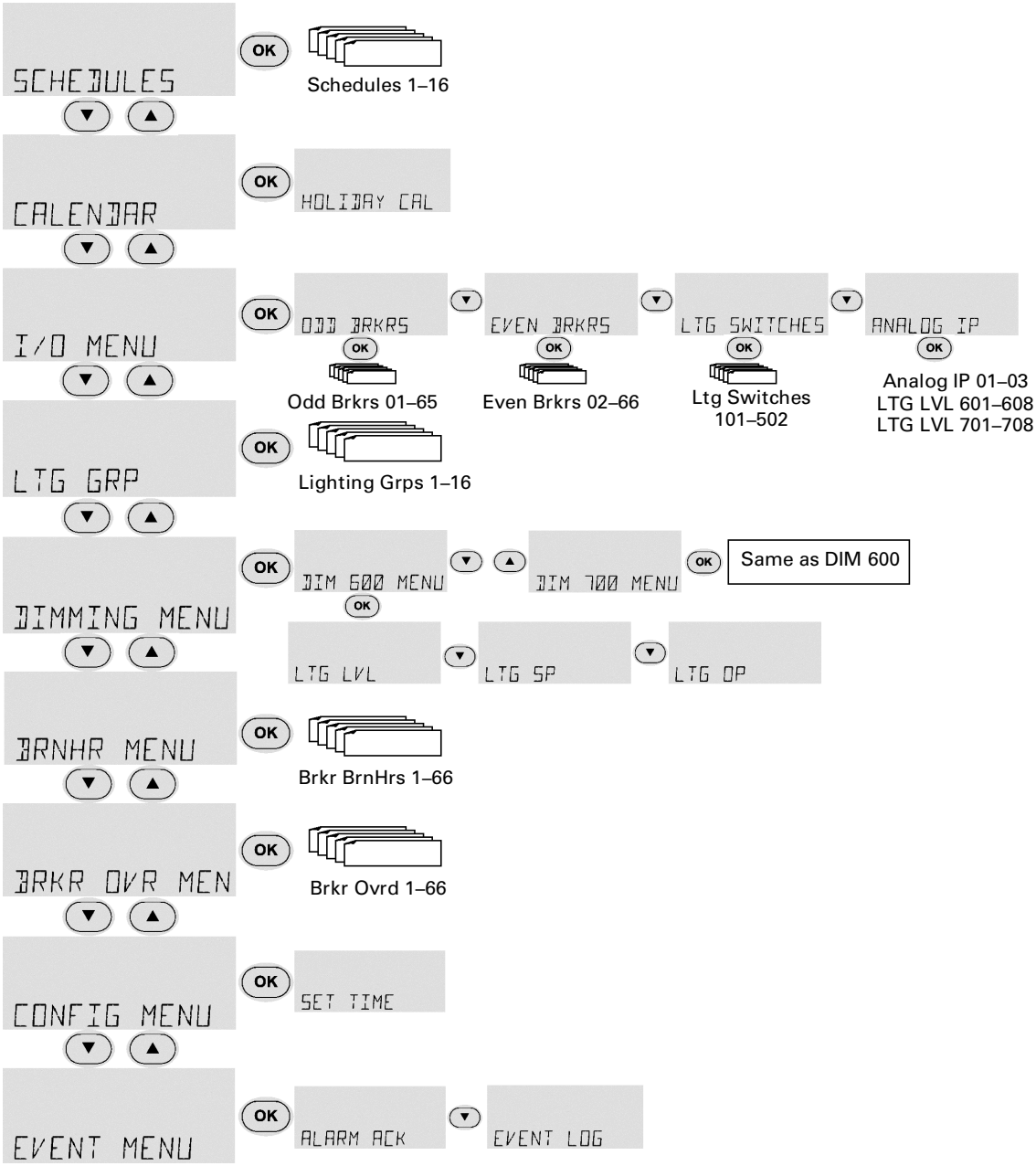


Figure 3. Menu structure of lighting controller programmer, display-only mode.

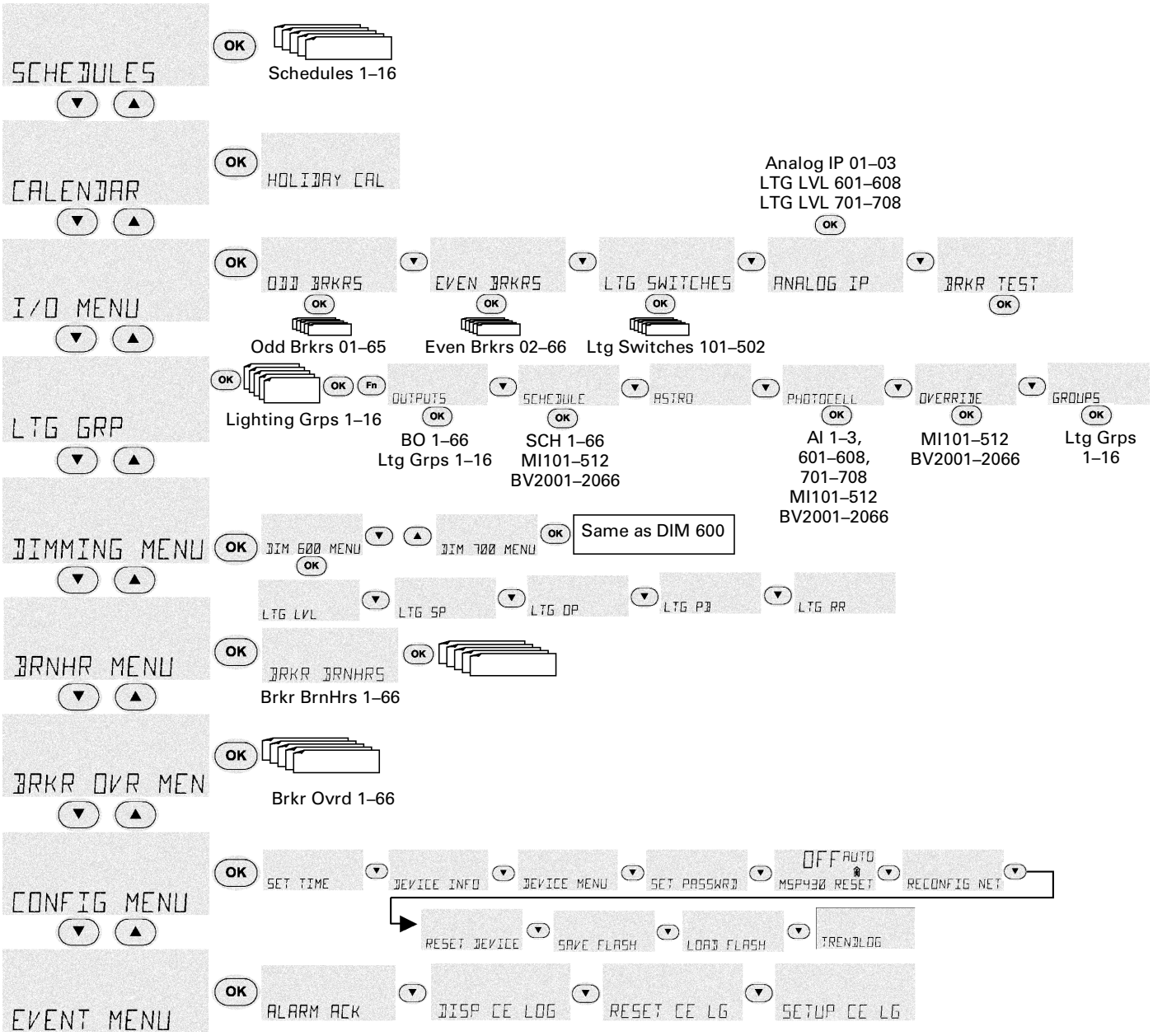


Figure 4. Menu structure of lighting controller, editor mode.

Menu Descriptions

Following are brief descriptions of the menus and the functions they provide.

Schedules

This function views or edits Zn 1–16 schedules and turns them on or off manually. Up to eight turn on and off times can be scheduled per day for each day of the week and two calendar references.

Calendar

This function views or edits the Calendar reference, which is used to select days of the year. Calendar is referenced in the schedule object and when the controller date matches the calendar date, the schedule follows the calendar on and off times.

I/O Menu

These menu items view and/or edit the inputs and outputs.

Odd Breakers. The odd breakers are those numbered 1, 3, 5, …, 65. These functions provide the following:

- Commissioning
- Manually turning on or off
- Linking override inputs
- Assigning override times
- Enabling event logging for breaker on, breaker off, tripped breaker, and command failure
- Direct/reverse feedback setting
- Enabling flick warning
- Setting the time of flick warning
- Determining the status of the odd breakers

Even Breakers. The even breakers are those numbered 2, 4, …, 66. These functions provide the same operations as those of Odd Breakers.

Lighting Switches. This function is used to manually turn the switches on or off and to commission them.

Analog Input. This function finds the value/status of the three analog inputs on the controller and to commission them.

Breaker Test. This function tests the breakers for a set time.

Lighting Group

These menu items are used to view or edit Zn 1–16 groups and to turn them on or off manually.

Outputs. This function links breakers and/or lighting groups to the group output. It also assigns a specific switch input (analog or digital) to each breaker or group.

Schedule. This function turns the group on and off according to a set schedule.

Astro. This function links Astro time to turn the group on and off.

Photocell. This function turns the group on and off with analog or digital inputs.

Override. This function overrides the group from off to on for a set time.

Groups. This function turns the group on or off when all nested groups turn on or off, following OR logic.

Dimming Menu

These menu items are used to view and/or edit the dimming modules that can be optionally attached to the product (Linknet devices 6 and 7) to control the lighting ballast. The input to these modules is a photocell (AI) and the output is the analog output (AV).

Dim Mod 600 Submenu. These functions adjust each control loop for dimming module 1 with Linknet device 6. There are eight control loops on a board and each consists of the following functions:

- Ltg Lvl (input) – the input from the photocell
- Ltg SP – the set light level
- Ltg OP
- Ltg PB (controller PB) – the proportional gain of the feedback loop
- Ltg RR (controller rest rate) – the integral gain of the feedback loop

Dim Mod 700 Submenu. These functions are the same as Dim Mod 600 but for Linknet device 7.

Burn Hours Menu

This function is used to view and/or reset the breaker burn/run hours for an individual breaker.

Breaker Override Menu

This function views the Override BV for each breaker. Override is used to turn an individual breaker on for a set time and then shut it off. It is used for integration but not by default.

Configuration Menu

These menu items are used to configure the lighting controller and system.

Set Time. This function sets the time and date of the controller.

Device Information. This function provides information about the device, such as the device name, model number, firmware version build, and software version.

Device Menu. This function sets up the location and daylight savings time.

Set Password. This function sets the password for the current user.

Reset MSP430. This function resets the back plane of the controller. Note that this item should only be used for instant remapping of the breaker or for diagnostic purposes.

Reconfig Net. This function reconfigures the controller's address using DNA. This is done when the controller is first connected to the network; since it is a subnet device, it inherits the address of the master above. For example, if the master address is 100 and the address of the subnet is 1, Reconfig Net sets the address to 101.

Reset Device. This function performs a hardware reset of the controller.

Save Flash. This function saves the changes made to flash memory so they can be reloaded if the battery goes dead or to return to the previous version.

Load Flash. This function loads the database with the last version saved to flash memory. It overwrites the current contents of the database and performs a hardware reset.

Event Menu

These menu items are used to acknowledge alarms, view battery status, view or reset the CE Log, and set up the CE Log. The CE log captures the events listed in Table 1.

Event	**Display**
Alarm	ALARM
Alarm Acknowledged	ALARM ACK
Dead Battery	DEAD BATT
Dead Battery Restored	DEAD BATT RESTORED
Command Failure	CMD FAIL
Command Fail Restored	CMD FAIL RESTORED
Status ON	STATUS ON
Status OFF	STATUS OFF
Under Voltage	UNDER VOLT
Under Voltage Restored	UNDER VOLT RESTORED
Reset	DEV RESET
Time / Date change	TIME CHG
DB Load	DB LOAD
DB Save	DB SAVE
DB Clear	DB CLEAR
Lnk Online	DEV ONLINE
Lnk Offline	DEV OFFLINE
Breaker Trip	BREAKER TRIP
Breaker Trip Restored	BREAKER TRIP RESTORED
No events occurred	NONE

Table 1. Events captured in the CE Log.

Display-Only Mode

The display-only mode is used to view information on specific objects. The objects that can be displayed are:

- Analog and multistate inputs
- Binary outputs
- Analog and binary variables
- Lighting group
- Schedules
- Calendars
- Binary totalizers
- Compact event log
- Device

To view information about an object, use the four keys at the top of the keypad as follows:

- Press the up and down arrow keys to navigate to a specific menu; press OK to view the first object within the menu.
- Press the arrow keys to navigate to the desired properties submenu (if there are more than one); press OK to view the data for the object.
- Press ESC at any time to return to the previous menu.

Edit Mode

Edit mode is used to change the values of objects. An object must be placed in manual mode before it can be edited. An object in manual mode stays in manual until changed back to auto mode. Manual mode overrides any control sequence.

To edit the value of an object, do the following:

1. Press the up and down arrow keys to navigate to a specific menu; press OK to view the first object within the menu.
2. Press the arrow keys to navigate to the desired properties submenu (if there are more than one); press OK to edit the data for the object.
3. If the object has special functions (see below), press the Fn key to access them.
4. If the object is in auto mode, press the A/M key to place it in manual mode.
5. Use the keypad to adjust the object's value as follows:
   - Use the up and down arrow keys to adjust a binary value (Yes/No, Off/On).
   - Use the numeric keys to set an analog value; the up and down arrow keys set the value to positive or negative.
6. Press OK to accept the change.
7. Use the arrow keys to scroll to the next item to change or press Esc to return to the previous menu.
8. When finished editing, press the A/M key to return to auto mode.

Special Functions – Fn Key

Some objects have values that are accessed by pressing the Function (Fn) key on the lower right corner of the LCD. These objects and functions are listed in Table 2.

Object	Use Fn key to set these values:
Binary Output(s)	Commissioned YES/NO Direct/Reverse Acting Override, Flick Warn, and Event Enable
Analog Input(s)	Commissioned YES/NO
Multi-State Input(s)	Commissioned YES/NO
Schedule(s)	Set Schedule
Calendar(s)	Set Calendar
Lighting Group(s)	Set Outputs, Schedule, Astro, Photocell, Override, Groups

Table 2. Edit mode functions accessible with Fn key.

The Schedules menu is used to control and configure the 16 lighting schedules, ZN01 SCH to ZN16 SCH. These schedules can be operated in manual or auto mode; manual mode has highest priority. The Schedules menu is used to add, edit, and delete On and Off times, and to add calendar references. One calendar reference can be added to any one schedule.

Navigating the Schedules Menu

The Schedules menu and the special functions of several of the keys are illustrated in Figure 5. The following items relate to setting schedules:

- Use the arrow keys to scroll directly to a specific day of the week, an existing CAL reference, or to Add CAL.
- If no adjustments are made to a specific day of the week, pressing 3 moves to the next day of the week.
- Press the number 2 key at any point to go back to a previous selection.
- On/Off times are not accepted into the schedule unless they are modified. To keep a displayed time the same, adjust it using the arrow keys up one minute, back down one minute, and then press 3 to accept the change.
- Schedules that contain more that one set of On/Off time blocks in a single day cannot overlap. However, the time blocks can be scheduled side by side.

  For example, one set of time blocks can start at 8:00 A.M. and stop at 4:00 P.M. The next set time blocks can start at 4:01 P.M. and stop at 5:30 P.M.

Manually Adjusting a Schedule

Any of the 16 schedules, ZN01 SCH to ZN16 SCH, can be manually turned on and off independent of the time and day setting of the schedule. Do the following to manually operate the schedule:

1. Navigate to the Schedules menu and press OK.

2. Use the arrow keys to view all schedules and press OK to select a specific schedule.

3. Press the A/M key to change to manual mode.

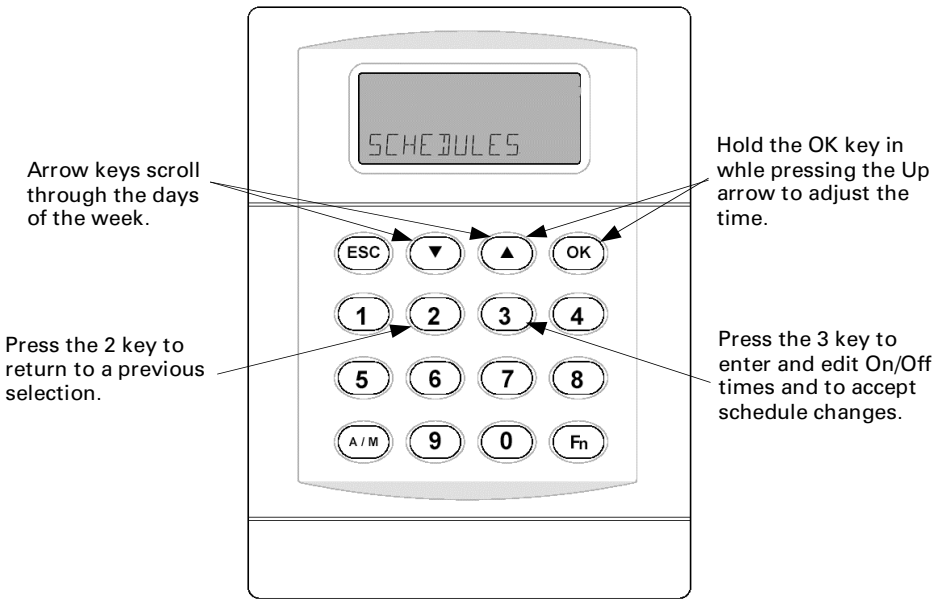


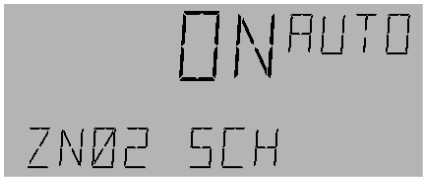
Figure 5. Schedules menu and special key functions.

4. Press the down arrow key to change On to Off or the up arrow key to change Off to On, and then press OK to accept the change.
5. Press OK again, followed by the A/M key, to return to auto mode.

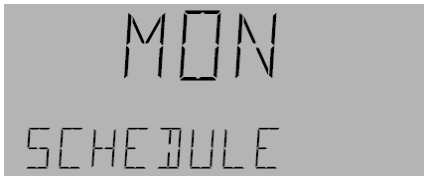
Adding On/Off Times to a Schedule

Use the following procedure to add On and Off times to a schedule:

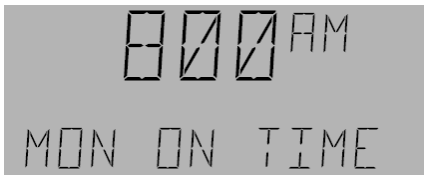
1. From the Schedules menu, use the arrow keys to navigate to the desired schedule. If the schedule is in manual mode, press the A/M key to change to auto mode.



2. Press the OK and Fn keys to enter the schedule.



3. Use the down arrow to scroll to a specific day of the week, and then press 3 on the number keypad to add a new On time. The time (8:00 AM) flashes when adjustable.



4. Hold down the OK key while pressing the up arrow key to adjust the hour.
5. Use only the up and down arrow keys to adjust the minutes.
6. Press 3 to accept the On time and switch to setting the Off time.

7. Adjust the hours and minutes as in steps 4 and 5.
8. Press 3 to accept the Off time and return to the display in step 2, so that additional time blocks can be added to the day. Press 3 again to go to the next day of the week and continue adding On/Off times.

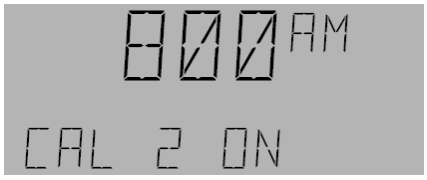
Adding a Calendar Reference to a Schedule

After Sunday, the LCD screen displays CAL to add up to two Calendar references to a schedule.

1. Use the arrow keys to scroll through the days of the week until the LCD displays the following:

2. Press OK to add a calendar reference:

3. Press OK to add the CAL reference number.
4. When the CAL reference number is flashing, adjust the reference number using the arrow keys.
5. Press OK to accept the changes; the LCD screen moves to the CAL On time:

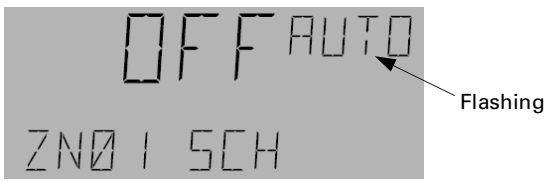


6. While the time is flashing, adjust the On/Off times as in the previous section for setting Schedule times.

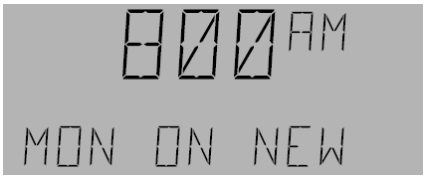
Editing On and Off Times in a Schedule

Use the following procedure to edit On and Off times:

1. Use the arrow keys to navigate to the desired schedule, then press OK to edit that schedule:



2. Press the Fn key to use the Set Schedule function. On/Off times are not accepted into the schedule unless they are modified. To keep a displayed time the same, adjust it using the arrow keys up one minute, back down one minute, and then press 3 to accept the change.
3. Use the arrow keys to scroll to the time blocks for that day.
4. Press the 3 key to edit a time block.
5. Hold down the OK key while pressing the up arrow key to adjust the hour of the On time.
6. Use only the arrow keys to adjust the minutes.
7. Press 3 to accept the change and then repeat the process to edit the Off time. When the Off time is accepted, the option to enter a new On time appears:



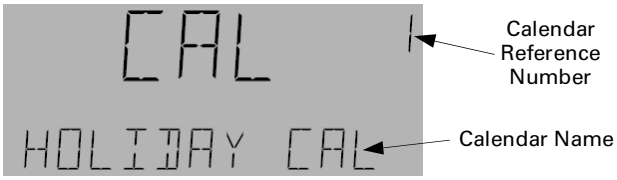
8. Add a New time block as explained above or press 3 to go to the next CAL/DAY. The LCD screen displays the next day. Continue to edit times or press ESC twice to exit the Schedules menu.

Editing a Calendar Reference in a Schedule

Use the following procedure to edit a calendar reference:

1. Use the arrow keys to scroll to the desired schedule and press OK. Press Fn to enter the schedule:

2. Use the arrow keys to scroll though the days of the week until the LCD screen displays the calendar reference and press OK. The calendar reference number flashes. Press OK again to edit the calendar schedule.



3. Hold down the OK key while pressing the up arrow key to adjust the hour of the On time.
4. Use only the arrow keys to adjust the minutes.
5. Press 3 to accept the change and then repeat the process to edit the Off time.
6. Press 3 to accept the changes and press ESC twice to exit the Schedules menu.

Deleting On and Off Times in a Schedule

To delete time blocks in a schedule, set the On time to the same time as the Off time for a specific day of the week. Once these changes have been accepted, the controller deletes that time block automatically.

1. Navigate to the desired schedule and press the OK key:

2. Press the Fn key and scroll with the arrow keys to the desired day of the week.
3. Press the 3 key to adjust that day. Keep pressing 3 until the time block to be deleted appears.
4. Hold down the OK key while pressing the arrow key to adjust the hour; release the OK key and use only the arrow keys to adjust the minutes so that the On time matches the scheduled Off time for that time block.
5. Press 3 to accept the changes; the LCD screen displays the next time block, if there is any, or it shows a new On time. Press 3 again to advance to the next day.
6. Continue deleting times, or press Esc twice to exit the Schedules menu.

Deleting Calendar References in a Schedule

A calendar reference can be deleted by setting the reference number to 0.

1. Navigate to the desired schedule, and press the OK key:

2. Press the Fn key and scroll with the arrow keys to the desired day of the week with the Cal reference on the screen.

3. Press OK; the calendar reference flashes.
4. Use the down arrow to set the reference number to 0 and press OK to delete that calendar reference.
5. The previous submenu (Add Calendar) appears; press Esc to return to the Schedules menu.

The Calendar menu is used to add, edit, and delete dates in either of two calendars. The calendar can be operated in either auto or manual mode.

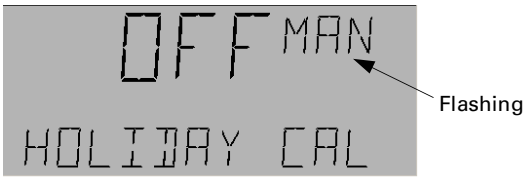
Manually Operating a Calendar

Calendar objects can be operated in manual mode, as follows:

1. Use the arrow keys to navigate to the Calendar menu.

2. Press OK for the following display:

3. Press the A/M key to change to manual mode:



4. Use the arrow keys to change to ON or OFF status. Press OK to accept the change.
5. Press A/M to return to and OK to accept auto mode.

Adding Dates to a Calendar

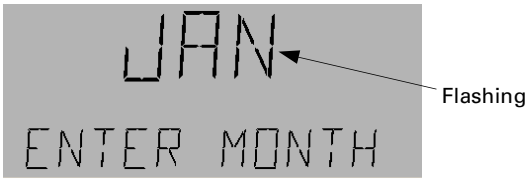
Use the following procedure to add dates to a calendar:

1. Use the arrow keys to navigate to the Calendar menu.

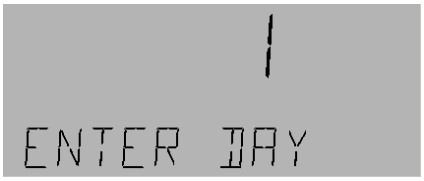
2. Press OK for the following display. If the object is in manual mode, switch to auto by pressing the A/M key.

3. Press the Fn key for the New Date display:

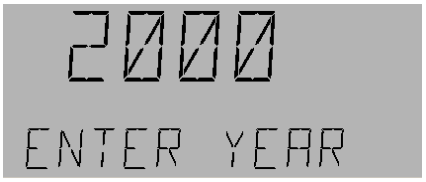
4. Press OK for the month display. Use the arrow keys to change to the desired month.



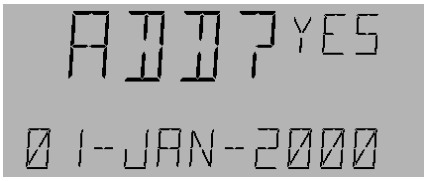
5. Press OK to accept the month and switch to the day of the month display. Use the arrow keys to select the desired date.



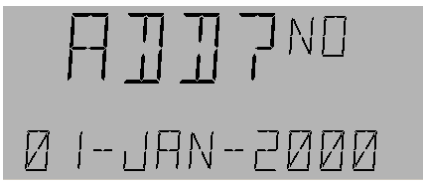
6. Press OK to accept the day and switch to the year display. Use the arrow keys to select the desired year.



7. Press OK to accept the year and switch to the Add? display. Press OK to accept the date.



Otherwise, use the down arrow to select Add No and press OK to reject the change.



8. Add all desired dates to the calendar and then use the arrow keys to view them. Exit the Calendar menu by pressing the ESC key.

Editing Calendar Dates

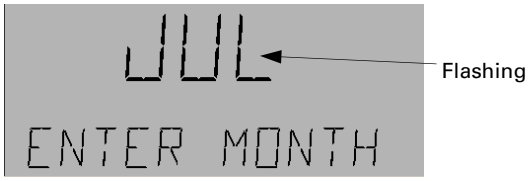
Use the following procedure to edit a calendar date:

1. At the Calendar menu, press OK to reach the OFF display:

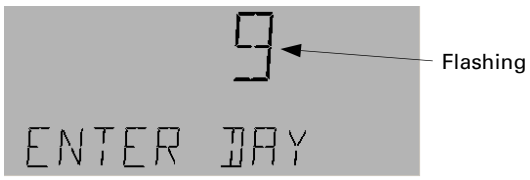
2. Press the Fn key for the following display:

3. Press the down arrow key to select No:

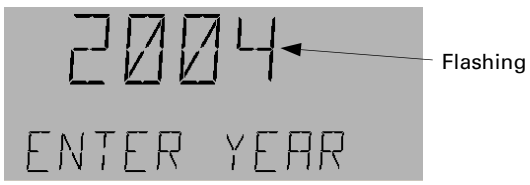
4. Press OK to display the first Calendar date and press the arrow keys to scroll through the dates.
5. Press OK when the desired date appears to display the month:



6. Press the arrow keys to change the month. Press OK to accept the new month and display the day:



7. Press the arrow keys to change the day. Press OK to accept the new day and display the year:



8. Press the arrow keys to change to the desired year and press OK to accept it. The following display appears:

9. Do one of the following:
   - If the date is correct, press OK to accept it.
   - If the date is incorrect, press the down arrow key to change to No and then press OK to reject the change.
10. Press Esc as needed to return to the desired previous menu.

Deleting Calendar Dates

Use the following procedure to delete a calendar date:

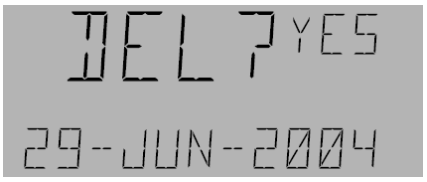
1. At the Calendar menu, press OK to reach the OFF display:

2. Press the Fn key for the following display:

3. Press the down arrow key to select No:

4. The first date added is displayed. Press the arrow keys to scroll to the date to be deleted.
5. Press the 4 key for the Delete display:

6. Press the down arrow key to change to Yes:

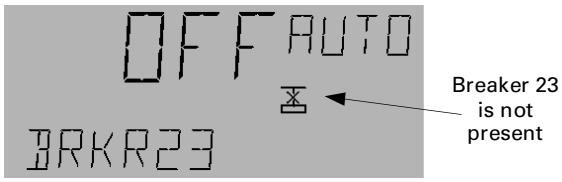


7. Press OK to delete the date.

8. Press Esc as needed to return to the desired previous menu.

Editing Binary Outputs

Note that if any breaker is not physically present, this is indicated by a special symbol on the display:



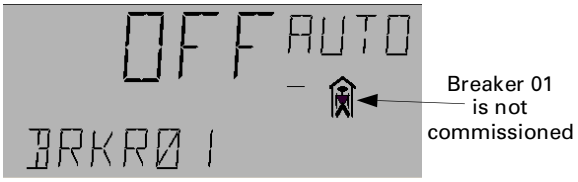
If any breaker is not present in the database of the controller, it is indicated as follows:

Use the following procedure to edit binary breaker outputs.

1. Use the arrow keys to scroll to the I/O menu, the press OK twice to display the odd breakers (numbered 1, 3, …, 65) submenu. If the even breakers (numbered 2, 4, …, 66) are desired, press OK and the down arrow to advance to that submenu from the I/O menu.
2. Press the arrow keys to scroll to the desired breaker output (BO) and press OK to edit:

3. Do one of the following:
   - Press the Fn key to go to the Commissioned screen of the BO (skip to step 5).
   - Press the A/M key to put the object in manual mode and then use the arrow keys to command the BO On or Off. Press the OK key to execute the command.
4. If the BO is in manual mode, press OK to make the MAN symbol flashing (if it is not flashing). Press the A/M key to change from manual to auto mode and press OK to accept the change. Exit the procedure by pressing Esc to return to the main menu.
5. If the Fn key was pressed in step 3, the Commissioned (with either No or Yes) screen appears:

If the breaker is not commissioned, this is indicated on other displays by the special symbol shown:



6. Press the arrow keys to change between No and Yes. Press OK to accept the change and display the Reverse Acting screen:

7. Press the arrow keys to change between No and Yes. Press OK to accept the change and display the Override screen:

8. Do one of the following (each is described below):
   - Press OK to edit the Override.
   - Press the down arrow key once to go to the Flick Warn submenu:

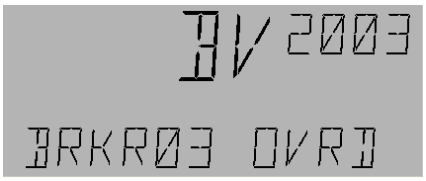
   - Press the down arrow key twice to go to the Event Enable submenu:

Editing Override

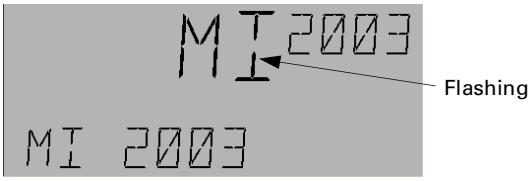
The Override function is used to command a Binary Output On from the Off condition, for a set time, and then to command it Off by relinquishing control of override. Override references can be BV and MI, both local and remote. *If Override references indicate BI and MV, they should be ignored.* The Override time can be set from 1 to 240 minutes, with a default of 120 minutes.

Use the following procedure for editing Overrides:

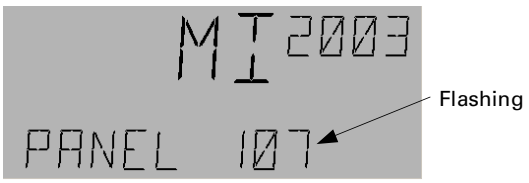
1. Navigate to the Override menu and press OK to edit:



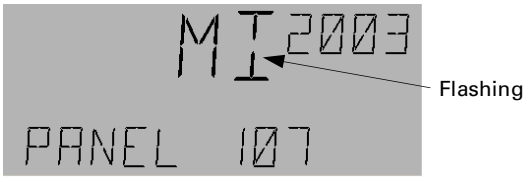
2. Use the arrow keys to change BV to MI:



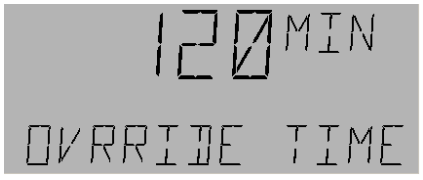
3. Do one of the following:
   - Press OK, use the numeric keys to change to the desired value, and press OK to accept the change.
   - Press Fn to display the panel number. Use the numeric keys to change to the desired panel number:



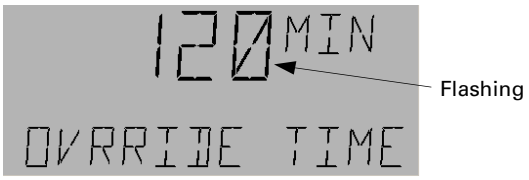
   Press OK to accept the change:



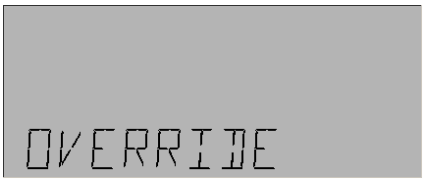
4. The Override time display appears:



5. Press OK to edit:



6. Press the arrow keys or numeric keys to adjust the value of the override time. Press OK to accept the change.
7. Press ESC to return to the Override menu:



   Press the down arrow key to jump to the Flick Warn menu or the up arrow key to jump to the Event Enable menu.

Editing the Flick Warning

Flick Warn is used to warn people in a lighting area that the lights are going to turn off. Flick warn occurs for 1–2 seconds immediately after a schedule expires, which is user selectable from 1 to 240 minutes.

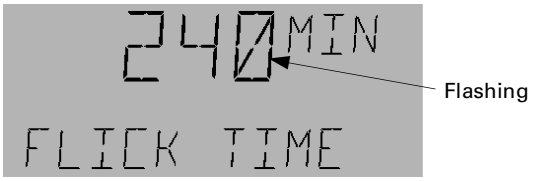
Do the following to edit Flick Warn:

1. From the Flick Warn submenu press OK. Yes or No displays on the LCD screen and Flick Warn On, scrolls across the bottom, depending on the current value. Press OK to edit:

2. Use the arrow keys to select Yes or No.

3. Press OK to accept any change. If Flick Warn is enabled, the Flick Time is displayed:

4. Press OK to adjust the time. Use the number keypad to adjust a Flick Time from 1–240 minutes.



5. Press OK to accept the change. Press ESC and then the down arrow to continue to Event Enable.

Editing Event Enable

Event Enable is used to enable the breaker events to be captured in compact event log. Use the following procedure to edit Event Enable:

1. From the Event Enable submenu press OK.

2. Press OK to edit; YES or NO STATUS ON appears on the display.

YES/NO STATUS ON enables or disables, respectively, the recording (in the CEL) of a breaker when it changes to ON.

3. Use the arrow keys to select No or Yes and then press OK. Press OK again to edit.

YES/NO STATUS OFF enables or disables, respectively, the recording (in the CEL) of a breaker when it changes to OFF condition.

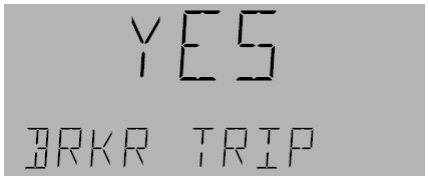
4. Use the arrow keys to select No or Yes. Press OK to accept any change.

5. The Command Failure submenu is displayed; press OK to edit.

YES or NO CMD FAIL enables or disables the recording (in the CEL) of the CMD event A CMD event occurs when the breaker is ON and it is commanded to turn OFF.

6. Use the arrow keys to select No or Yes. Press OK to accept any change.

7. No or Yes Breaker Trip is displayed; press OK to edit.



Breaker Trip enables or disables the recording (in the CEL) of a breaker going to trip position from ON.

8. Use the arrow keys to select No or Yes. Press OK to accept any change; the menu rolls back to the Status On screen.

9. Use the arrow keys to scroll through the changes or press ESC to return to the Event Enable submenu. Press ESC as needed to return to the desired previous menu.

Lighting Switches

Lighting switches are maintained and momentary switches mounted on the standard/remote input expansion board. Maintained switches are defined by the states ON, OFF, and N/A. N/A means that the switch is not present on the board. Momentary switches are toggling switches. When the switch is turned on, it toggles its state. There are 66 switches, LTG SW 101–116, 201–216, 301–316, 401–416, and 501–502. LTG SW 101–116 are mounted on the standard input expansion module which is on the main controller and LTG SW 201–216, 301–316, 401–416, and 501–502 are controlled from the remote expansion module. (Please refer to DEH41083 for further information). Each

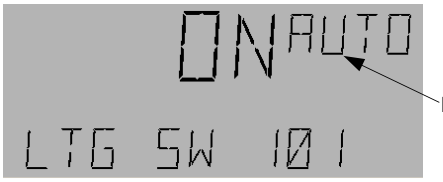
switch can be configured in the maintained (tristate) or momentary configuration. If the expansion board is not connected to the system, a symbol appears on the display to indicate that the input is not physically present in the system.

Editing Multistate Inputs

Use the following procedure to edit a multistate input:

1. Navigate to the Lighting Switches menu and press OK.

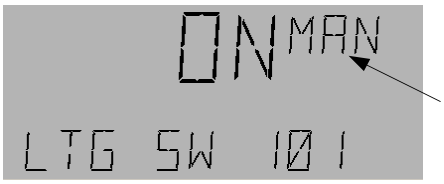
2. Use the arrow keys to scroll to the desired MI and then press OK to edit.



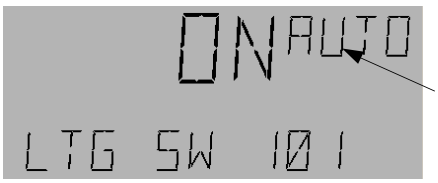
Do one of the following:

- Press the A/M key to change the switch to manual mode; continue with step 3.
- Press the Fn key to access the special functions; jump to step 7.

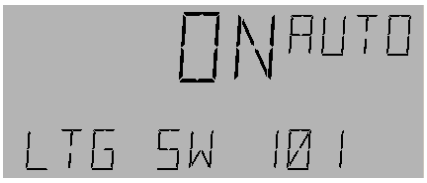
3. If the A/M key is pressed, MAN and the value flash on the display:



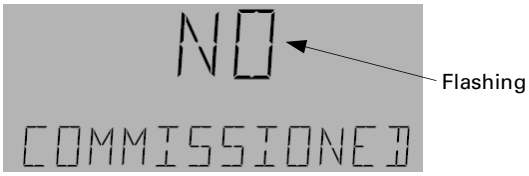
4. Use the arrow keys to adjust the value to OFF/ON or N/A. (Note that, in manual mode, the items displayed depend on the type of switch. If the switch is the toggle type, it will display only ON and OFF. If the switch is the maintained type, it will indicate OFF, ON and N/A.) Press OK to accept the changes.
5. Press OK again, followed by the A/M key to return to auto mode.



6. Press OK to accept the change; auto mode the switch is indicated. Go to step 12.



7. If the Fn key is pressed, COMMISSIONED with NO or YES flashing displays on the LCD screen. When an object is not commissioned, then no events or alarms are logged. When an object is commissioned, events and alarms are logged as selected.

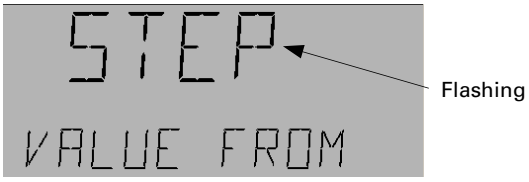


or

8. Press the arrow keys to adjust the Commissioned status to YES or NO. If the switch is not commissioned, the symbol appears on the display.
9. Press OK to accept the changes. The following screen appears:

This option (MIC) configures the switch as a multistate maintained switch. Do either of the following:

- Press OK to accept the switch as a multistate maintained switch.
- Press up the arrow key twice to move to the next option:



This option (STEP) configures the switch as a toggle switch. Press OK to accept the choice.

10. The following screen may appear:

Do one of the following:

- If switch is to be configured as a toggle switch, press OK.
- If the switch is to be configured as a maintained switch, press numeric key 1. The following display appears:

Press OK to accept the change.

11. The following is displayed:

12. Press ESC as needed to return to the desired previous menu.

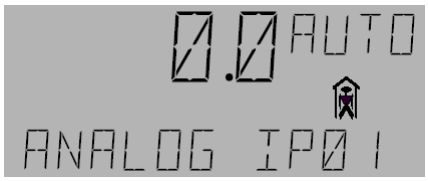
Editing Analog Inputs

The analog input menu is used to get the values of sensors on the analog input ports (AI1–AI3) of the controller. ANALOG IP01 corresponds to AI1, IP02 to AI2, and IP03 to AI3. It is also used to get the light level signal generated by the dimming module (LTG LVL 601–615 and 701–715). (Please refer to the dimming module user's guide, DEH41085, for further information.)

Use the following procedure to edit analog inputs:

1. Navigate to the ANALOG IP (AI) and press OK:

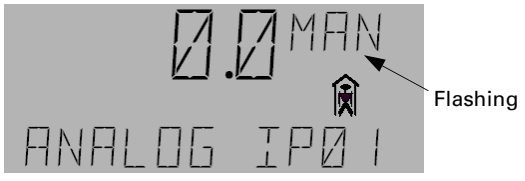
2. Use the arrow keys to scroll to the desired AI and then press OK to edit. Note that if the board is not connected to the system, then its analog input displays the symbol.



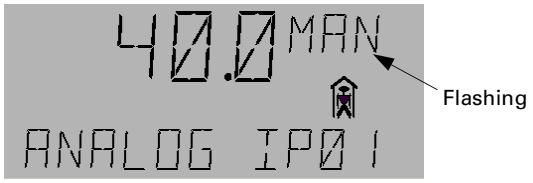
Do one of the following:

- Press the A/M key to adjust the AI value manually; continue with step 3.
- Press the Fn key to access the special functions; jump to step 6.

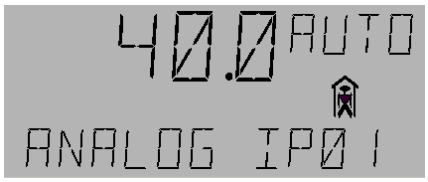
3. If the A/M key is pressed, the following display appears:



4. Use the number keys to set the desired value and press OK to accept the change.



5. Press OK followed by the A/M key to put the AI back into Auto Mode. Press OK to accept change to AUTO mode. Go to step 8.



6. If the Fn key is pressed, the Commissioned menu appears, with NO or YES flashing. When an object is not commissioned then no events or alarms are logged. When an object is commissioned, events and alarms are logged as selected.

7. Press the arrow keys to adjust Commissioned to YES or NO. If NO is selected, appears on the display. Press OK to accept the changes.

8. Press ESC as needed to return to the desired previous menu.

Breaker Test

The breaker test is used to toggle the breaker output for test time (test time can be adjusted in the device submenu of the Configuration menu) and then relinquish the breaker.

To edit Breaker Test, use the following procedure:

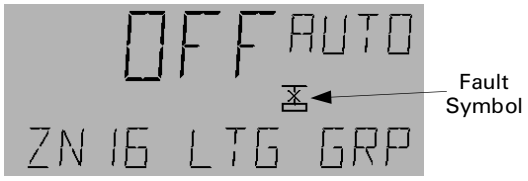
1. Navigate to the Breaker test menu and press OK.

2. Press the A/M key to change to manual mode:

3. Press the arrow keys to change from off to on or vice versa:

4. Press OK to accept changes and switch to auto mode:

The Lighting Group menu is used to control and configure the 16 lighting groups, ZN01 to ZN16. These groups can be operated in auto and manual modes; manual mode has higher priority. A group indicates fault mode if the switch is linked to the group is not in the network. For example, if the switch MI101 has been linked to the group ZN16 LTG GRP and the Linknet device (standard expansion board) is not in the network, the group indicates a fault condition, as shown:



Within each Lighting Group (ZN01 to) menu there are six main submenus:

- Outputs
- Schedule
- Astro
- Photocell
- Override
- Groups

The following sections describe how to set up a lighting group and access the six submenus.

Manual Mode Operation

To operate a group in manual mode, do the following:

1. Navigate to the Lighting Group menu:

2. Press OK to display the first lighting group (ZN01):

3. Use the arrow keys to scroll to the desired group and press OK to select it. For example, if Lighting Group 2 (ZN02 LTG GRP) is selected, the display is as follows:

4. Press the A/M key to switch to manual mode:

5. Use the arrow keys to change OFF to ON or ON to OFF and press OK to accept the change:

6. To return to auto mode, press OK, followed by the A/M key and OK again:

7. Press ESC as needed to return to the desired previous menu.

Outputs

Lighting Outputs can be either local or remote references of Binary Outputs (BOs) or Lighting Groups (LGs). The Programmer is used to tell the LG what lighting outputs (BO/LG) to control. (Note that Lighting Groups cannot reference themselves.) With each output a local or remote switch can be linked. The switch can be a physical one (MI type) or a binary variable (BV), whose values can be changed with the keypad. The BV variables are accessible using the Breaker Override menu of the Programmer.

The switch controls individual breakers/group On and Off. For each lighting output entered, an optional switch can be assigned to control the individual breaker On and Off. *Switch references to BI and MV should be ignored.*

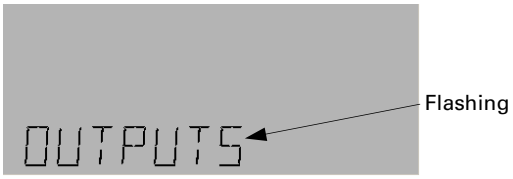
Viewing Outputs and Switches

1. Navigate to the Lighting Group menu:

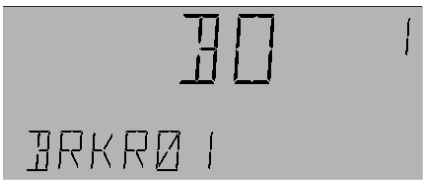
2. Press OK to display the first lighting group (ZN01):

3. Use the arrow keys to scroll to the desired lighting group and then press OK to select it:

4. Press the Fn key to display the Outputs submenu:

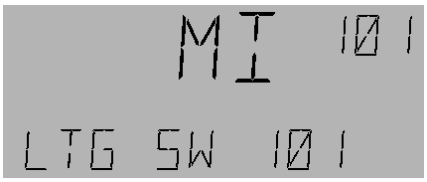


5. Press OK to display the first output.



If there are no outputs, the following message is displayed; jump to step 8.

6. Press the down arrow key to view the switch associated with the selected output:



7. Continue to use the arrow keys to scroll through the lighting outputs and their associated switches.
   - If no switch is associated with a particular output, then the following display appears:

8. After the last output/switch is displayed, the display requests a new output:

9. Do one of the following:
   - Press OK and then follow the procedure for adding outputs and switches (described in the next subsection).
   - Press the down arrow to go back to the first output and use the arrow keys to scroll through the outputs and switches again.
   - Press ESC to exit to the Outputs submenu.

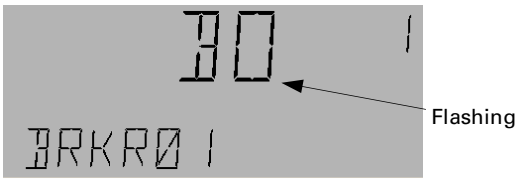
Adding an Output

Use the following procedure to add an output:

1. Navigate to the desired lighting group and press OK.

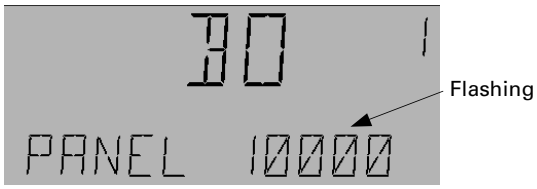
2. Press the Fn key to display the Outputs submenu:

3. Press OK to add a new output:

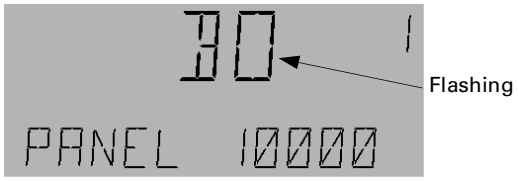


4. Do one of the following:
   - Press OK to accept a BO object type and jump to step 8.
   - Use the arrow keys to adjust the output type and press OK to accept it and jump to step 8.

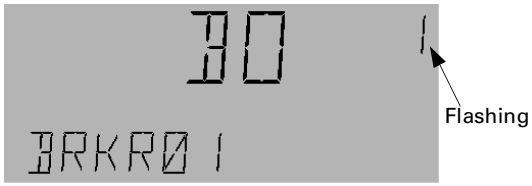
   - Press the Fn key to edit the panel number and continue with step 5.
5. When the Panel number flashes, use the number keys to adjust the panel number.



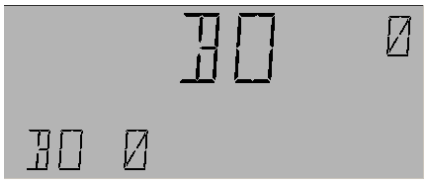
6. Press OK to accept the change:



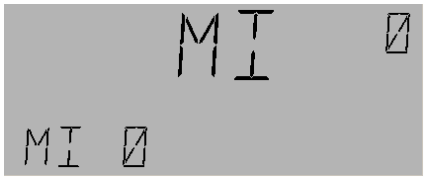
7. Use the arrow keys to change the object type from BO to LG Group or vice versa and press OK when the desired object appears on the screen.
8. Once the object type is accepted, the instance number flashes:



9. Do one of the following:
   - Use the arrow number keys to change the instance number. Press OK to accept the instance number and add the object.
   - Use the arrow keys to set the number to 0 to delete the output.



or



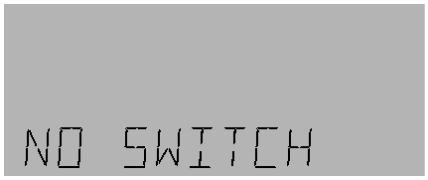
Note that to delete any Output or Switch, set the output instance to 0 and then press OK.

Adding a Switch

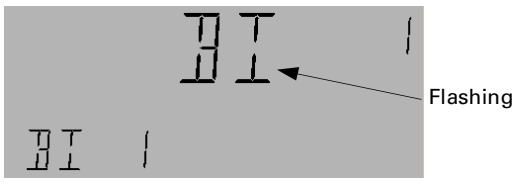
Use the following procedure to add a switch to a new output:

1. Use the arrow keys to navigate to the newly added output:

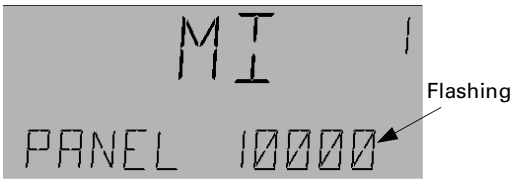
2. Press the down arrow to reach the NO SWITCH display:



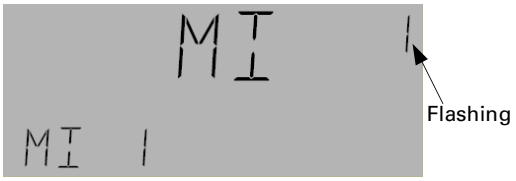
3. Press OK to add a switch:



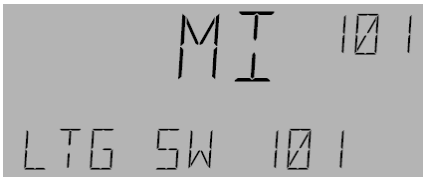
4. Press the arrow keys to select either the BV or MI (the BI and MV options should be ignored, as they do not exist in the system).
5. Do one of the following:
   - Press OK to accept a BV or MI object type.
   - Press the Fn key to edit the panel number. When the panel number flashes, use the number keys to adjust it.



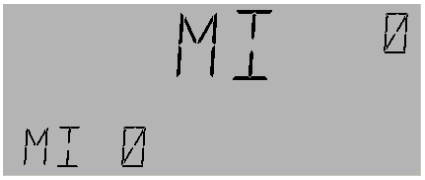
6. Press OK twice to accept the change; the instance number flashes:



7. Do one of the following:
   - Use the arrow or number keys to change the instance number and then press OK to accept the change:



   - If the switch input is to be deleted, use the arrow keys to set the instance number to 0. Press OK to delete the input.



8. The next output of the group is now displayed:

9. Press the down arrow once to view the switch associated with that output.

Schedule

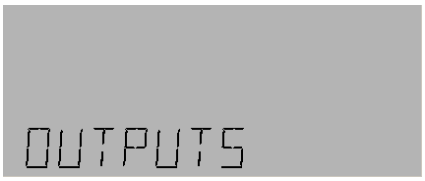
Lighting Groups can be scheduled to turn lights On and Off. During holidays, lights are not normally turned On or Off according to the normal schedule. Holidays are set in the system by using the Calendar object that is linked to the schedule object. The schedule can be a local or remote schedule (SCH) or Binary Variable (BV) and multi-input (MI) reference. *References to BI and MV in the input schedule should be ignored.*

Viewing a Schedule

Use the following procedure to view Schedule on and off times:

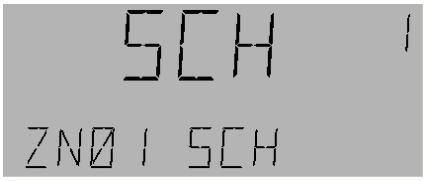
1. Navigate to the desired lighting group and press OK to select it:

2. Press Fn to display the Outputs submenu:



3. Press the down arrow key to display the Schedule submenu:

4. Press OK to display the Schedule input:



   If there is no input, the following is displayed:

5. Use the arrow keys to view the schedule values.

or

Editing a Schedule Input

To link a lighting group On or Off using a schedule, do the following:

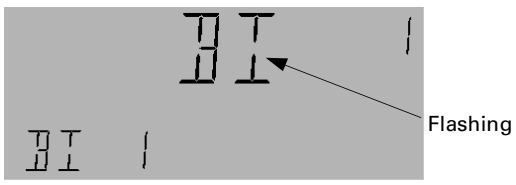
1. Navigate to the Schedule submenu under the Group menu as explained above:

2. Press OK to display the schedule input:

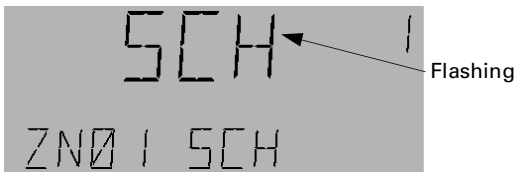
3. Press OK to edit the schedule input.
   - If there is no input, the following is displayed:

   Press OK twice to add a Schedule input.

4. The following is displayed:

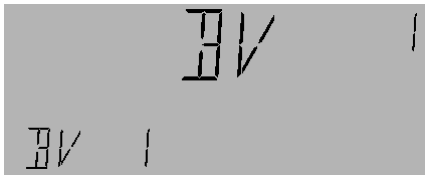


5. Press up arrow key to move to the following display:



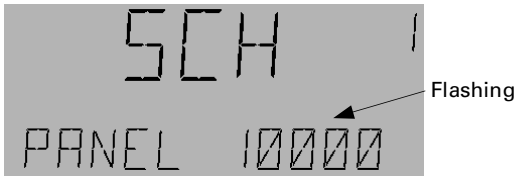
6. Do one of the following:
   - Use the up and down arrow keys to accept a schedule, a binary variable, or a multi-input (MV or BI references should be ignored) as a schedule reference, and then press OK to accept the change. Jump to step 8.

   or

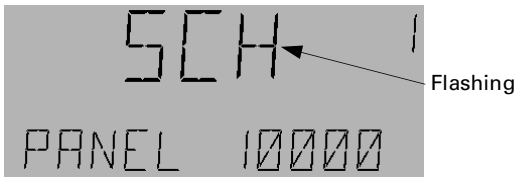


   or

   - Press the Fn key to edit the panel number. When the Panel number flashes on the LCD screen, use the number keypad to adjust the panel number. Continue with step 7.

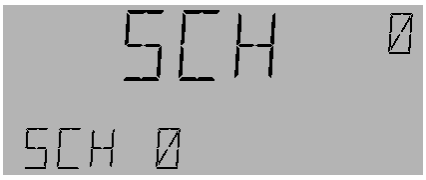


7. Press OK to accept the change; SCH starts flashing.



8. Use the arrow keys to select the type of schedule and press OK.
9. When the Schedule is accepted, the instance number flashes on the LCD screen. Do one of the following:

- Use the arrow or number keys to change the instance number.
- Press OK to accept the instance number and add the object.
- Use the arrow keys and set the number to zero to delete this Schedule instance:



10. The following display appears; press OK. Lights On allows the lighting group to turn on with the schedule.

11. When Yes is flashing, use the arrow keys to select Yes or No. Press OK to accept the changes.

12. The following display appears; press OK. Lights Off allows the lighting group to turn off with the schedule.

13. When Yes is flashing, use the arrow keys to select Yes or No:

14. Press OK to accept any change.

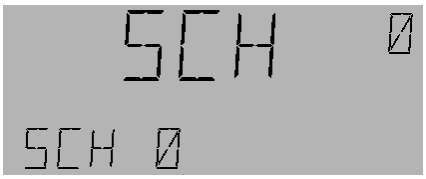
15. Press ESC to return to the schedule submenu.

Deleting a Schedule

Use the following procedure to delete a schedule reference:

1. Navigate to the desired schedule:

2. Set the output instance number to 0 and press OK to accept the change.



Astro

The Astro menu is used to enable an Astro Calculation to decide whether the lighting group is turned off at sunrise (Astro Off) and/or if the lights are turned on at sunset (Astro On). Based on controller location, Astro On is calculated by sunset time minus an offset; e.g., night time. Astro Off is calculated by sunrise time plus an offset; e.g., morning.

To use the Astro function, Set Latitude/Longitude for the location must be calculated in the object, and the Universal Time Coordinate (UTC) Offset must be enabled with an accurate Offset calculation. The UTC should be set with the time zone list or by entering the time as a manual offset in ±hours to one decimal place.

Apart from this there are locations given in the Programmer (Config. menu), which can be selected by using the arrow keys. The selection of the location automatically adjusts the DST, UTC, and latitude and longitude of the location.

Enabling Astro On and Off

1. Navigate to the desired Lighting group submenu and press OK.

2. Press the Fn key, navigate to the Astro submenu with the arrow keys:

3. Press OK to display Astro On No or Yes:

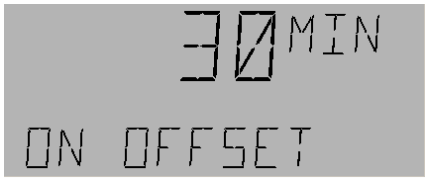
4. Do either of the following:

- Press OK to edit the value.

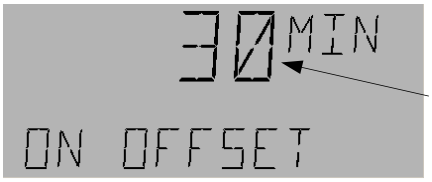
Use the arrow keys to select Astro On Yes or No and then press OK to accept the change.

- Use the down arrow key to view the offset if Astro On is already enabled.

5. The default value of On Offset 30 (setting range is 0–240) is displayed on the LCD screen.



6. Press OK to edit the On Offset.

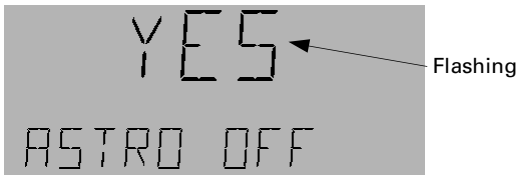


7. Use the number keys to set the numerical value of the offset and the arrow keys to make the offset time minus or plus.

8. Press OK to accept the changes; Astro Off No or Yes is displayed.

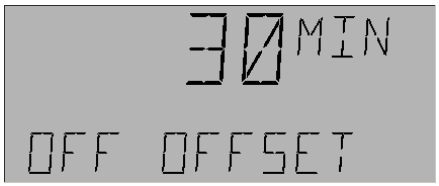
9. Do either of the following:

- Press OK to edit the value.

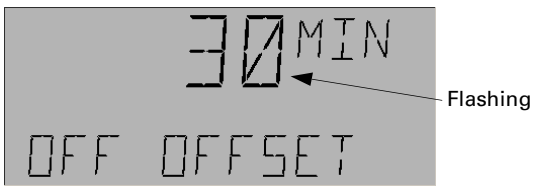


Use the arrow keys to select Astro Off Yes or No, and then press OK to accept changes.

- Use the down arrow key to view the offset if Astro Off is already enabled.



10. The default value of OFF Offset 30 (the setting range is 0–240) is displayed. Press OK to edit the OFF Offset.



11. Use the number keys to edit the OFF Offset numerical value. Use the arrow keys to make the offset subtractive or additive. Press OK to accept the changes.

12. Press ESC to return to the Astro submenu.

Photocell

The Photocell menu is used to control the lighting group On or Off via a photocell (light level). The Photocell input reference can be local or remote AV/AI/BV/MI/MV/BI. *BI and MV references should be ignored.*

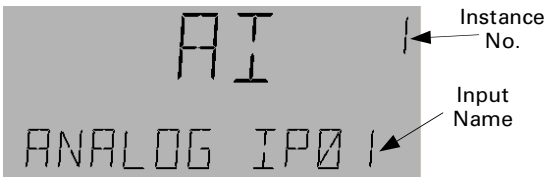
Viewing the Photocell Input

1. Navigate to the desired lighting group submenu and press OK.

2. Press the Fn key and navigate to the Photocell submenu using the arrow keys.

3. Press OK to display either of the following:
   - If there are no inputs, the LCD screen displays the following:

   - If there is an input, the input type, input name, and instance number are displayed:



4. Use the arrow keys to view whether Lights On and Lights Off are enabled.

or

5. Press ESC to return to the Photocell submenu or use the following procedure to edit the Photocell input.

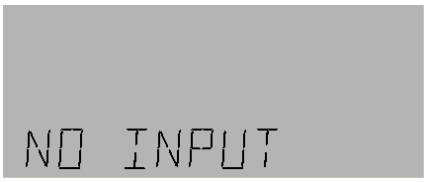
Editing the Photocell Input

When editing the Photocell input, MI, AV, BV, and AI can be selected, depending upon the requirement.

1. Navigate to Photocell menu:

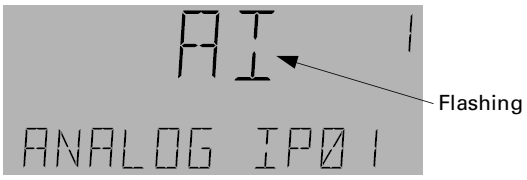
2. Press OK to display the photocell reference. (This example shows an analog photocell.)

If there is no photocell reference, the following is displayed:

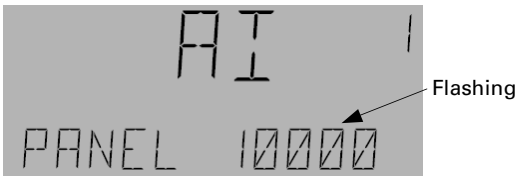


3. Press OK and use the arrow keys to select the object type (AI, MI, BV and AV). BI and MV should be ignored.

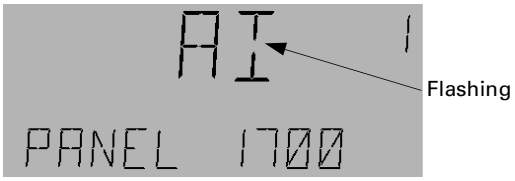
4. When the desired object type is selected, press OK. The type of object will flash.



5. Press the Fn key to change the panel number (if a reference to the remote panel photocell inputs is needed) with the numeric keys. Press OK to accept the new panel number.



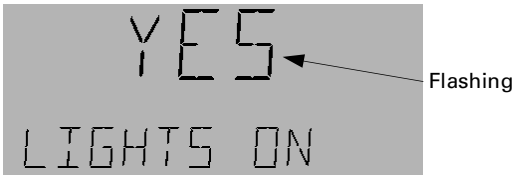
6. The object type flashes. Press OK to accept the object type.



7. The object instance flashes. Use the arrow keys to change the instance number.

Press OK to accept the changes and switch to the Lights On display:

8. Press OK to adjust the Lights On Yes/No value.



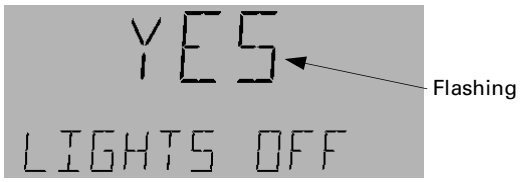
9. Use the arrow keys to change the setting and press OK to accept it.

The Lights On feature enables or disables photocell control for turning the lighting group on. If no change is required, press the arrow key to go to the Lights Off menu.

10. If the input is an AI and Lights On is enabled, then On When LT/EQ scrolls across the display. Press OK to adjust this value using the number keys. Press OK to accept the change. The analog inputs are defined as percentages. (For example, if the jumper on the controller is set for 5 V, then the range 0–5 V range is indicated as 0–100%)

The display may show the following:

11. Press OK to adjust the Lights Off Yes/No value.



12. Use the arrow keys to change the setting and press OK to accept the change.

The Lights Off feature enables or disables photocell control for turning the lighting group Off.

13. If the input is an AI and Lights Off is enabled, then the Off When GT/EQ scrolls across the display. Press OK to adjust this value using the number keypad and press OK to accept any changes.

14. Use the Arrow keys to scroll and review the changes or press ESC to return to the Photocell submenu.

Override

The Override function is used to command a Lighting Group On from the Off condition for a set time, and then to command it Off by relinquishing control. Override references can be BV, MI, BI, MV, both local and remote. *Any reference to BI and MV should be ignored.* The Override time can be set from 1 to 240 minutes. The default value is 120 minutes.

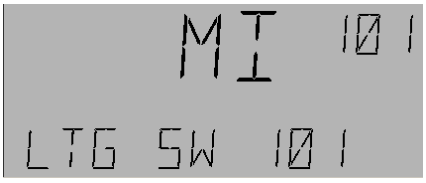
Viewing Override

Use the following procedure to view override times:

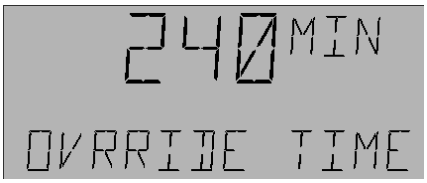
1. Navigate to the desired lighting group and press OK.

2. Press the Fn key and use the arrow keys to navigate to the Override menu:

3. Press OK to display the Override input:



4. Press the arrow keys to view the Override time (1–240 minutes):

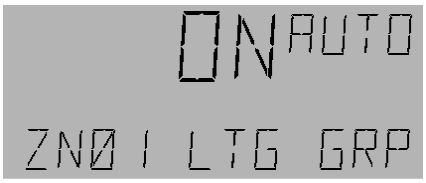


5. Press ESC to return to the Override submenu.

Adding an Override Input

Use the following procedure to add an Override input:

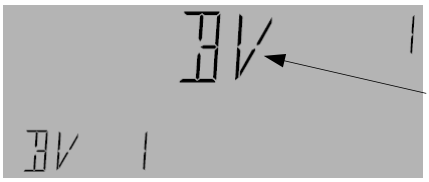
1. Navigate to the desired lighting group and press OK.



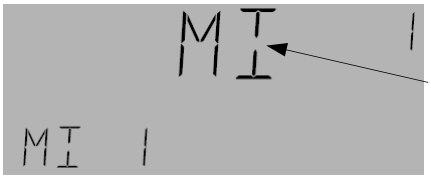
2. Press the Fn key and use the arrow keys to navigate to the Override menu:

3. If there are currently no inputs, the following display appears:

4. Press OK and then use the arrow keys to select the object type (BV, MI).



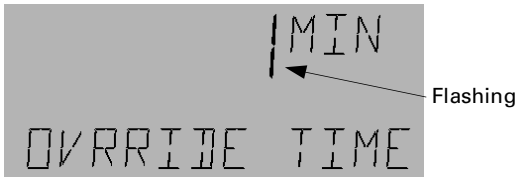
or



5. Press the Fn key to edit the panel number. Press the numeric keys to change the panel number (if a

remote object reference should be made) and press OK to accept the changes.

6. Press OK. Use the arrow keys to edit the object number and press OK to accept the changes.
7. The Override time is displayed. Press OK to edit the override time.

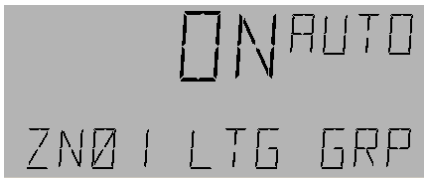


8. Use the arrow keys to change the value and press OK to accept the change.
9. Press ESC to return to the Override submenu.

Editing an Override Input

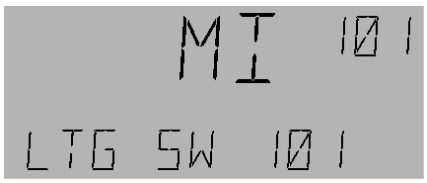
Use the following procedure to edit an Override input:

1. Navigate to the desired lighting group and press OK.

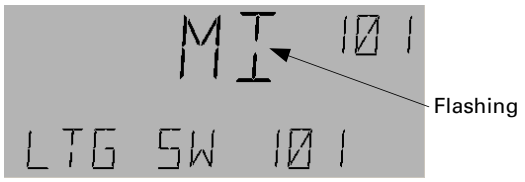


2. Press the Fn key and use the arrow keys to navigate to the Override menu:

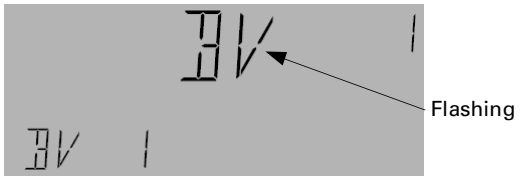
3. Press OK to display the Override:



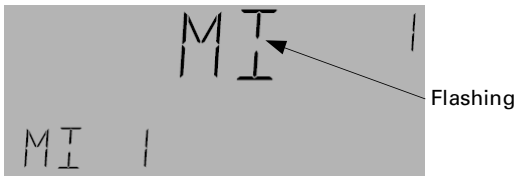
4. Press OK to edit the override input:



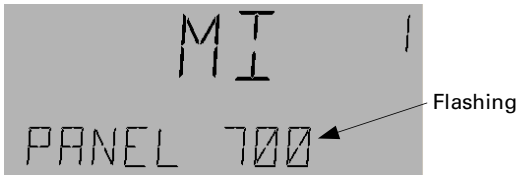
5. Use the arrow keys to change the override input type:



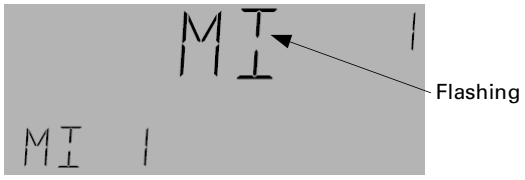
or



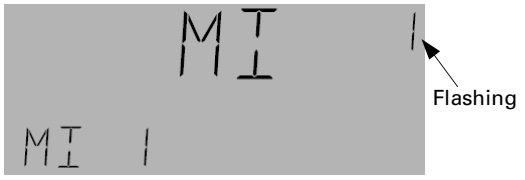
6. Press the Fn key to edit the panel number:



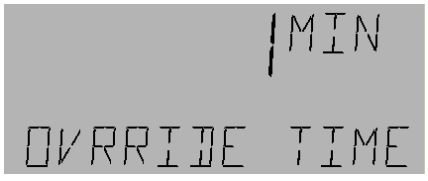
7. Use the numeric keys to change the panel number and press OK. The input type flashes again:



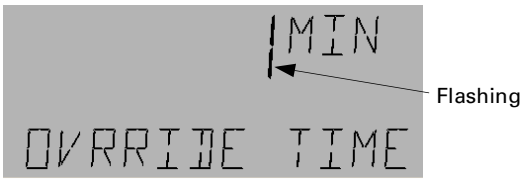
8. Press OK to edit the Instance number:



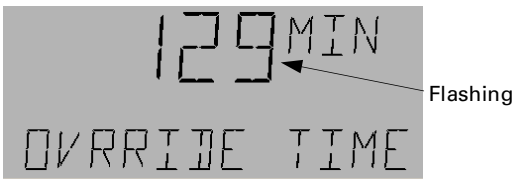
9. Use the arrow numeric keys to change the instance number and press OK to display the Override time:



10. Press OK to edit the Override time.



11. Use the arrow keys or the number keypad to adjust the time, up to 240 minutes:



12. Press OK to accept the changes.

13. Press ESC to return to the Override submenu.

Groups

The Groups function is used for common areas so that lights stay on when any one of the nested Lighting Groups is on. Lights stay on until all the nested groups are OFF and the off time delay times out. Note that if a Schedule, Photocell, Astro, or Override turns the group on, then the group remains on.

Viewing a Group

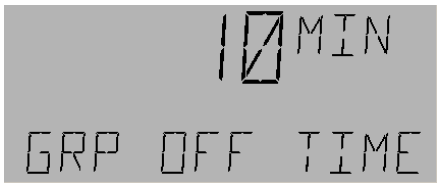
1. Navigate to the Lighting Group menu.

2. Press OK to display the first Lighting Group and use the arrow keys to navigate to the desired group.

3. Press OK and AUTO starts to flash:

4. Press the Fn key and press the down arrow key five times to reach the Groups submenu:

5. Press OK to display the Group Off time:



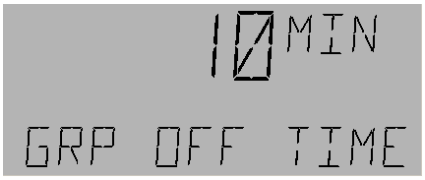
6. Use the arrow keys to continue to scroll and view all available groups.

Changing the Group Off Time

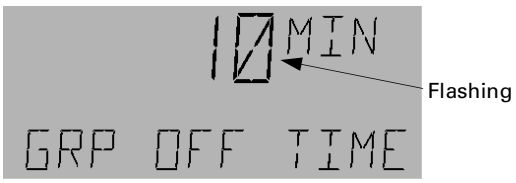
Use the following procedure to adjust the group Off time.

1. Navigate to the Groups submenu as in the previous procedure.

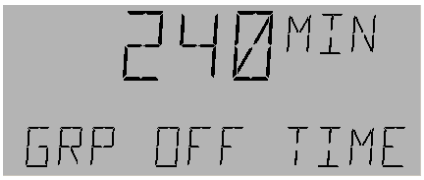
2. Press OK to display the Group Off time.



3. Press OK to edit the Group Off Time:



4. Use the number keys to adjust the Group Off time, and then press OK.



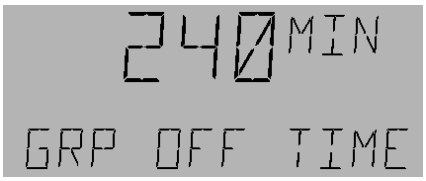
5. Continue to scroll through the groups and make any adjustments, or press ESC to return to the Groups submenu.

Adding a New Group

Use the following procedure to add a new lighting group:

1. Navigate to the Groups submenu as in the previous two procedures:

2. Press OK to display the Group Off Time:

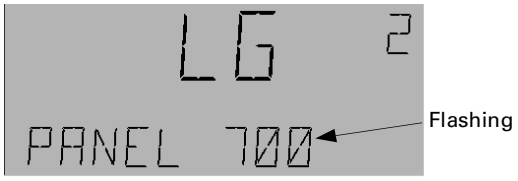


3. Use the arrow keys to scroll through all the nested groups. After the last group, Add New Group is displayed. (This appears immediately if there are no groups present.)

4. Do either of the following:
   - Press OK to edit the LG instance number:

Use the arrow keys to select a different LG:

   - Press the FN key to edit the panel number for a remote LG.



Use the numeric arrow keys to change the panel number and press OK key:

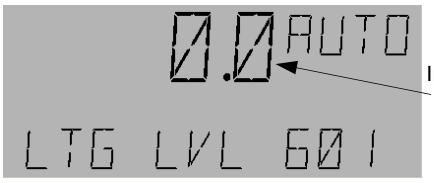
5. Use the arrow keys to change the instance number and press OK to accept the changes.
6. Do either of the following:
   - Press the down arrow to add another New Group.
   - Press ESC to return to the Groups submenu.

Scroll to the dimming menu with the arrow keys:

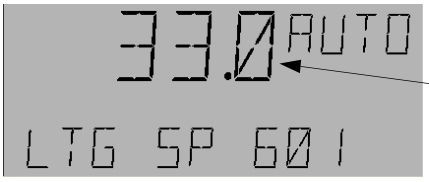
Viewing the 600/700 Series Daylight Optimization Modules

1. Press OK for the Dim 600 menu:

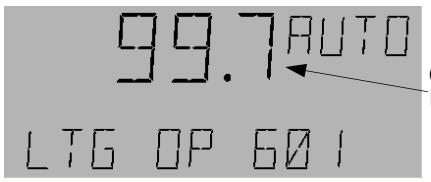
2. Press OK to display the input light level. This example shows the input light level at input port 1 of Daylight Optimization Module 600:



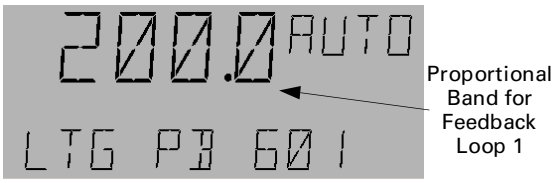
3. Press the down arrow key to display the set light level:



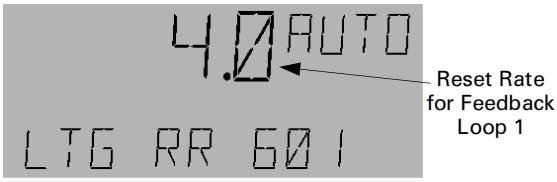
4. Press the down arrow key to display the output value of the feedback loop, which goes to the dimming ballast.



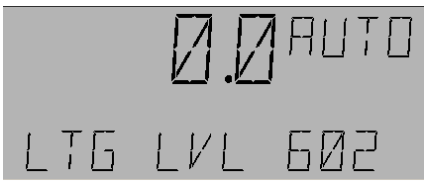
5. Press the down arrow key to display the proportional band value for the feedback loop.



6. Press the down arrow key to display the reset rate for the feedback loop.



7. Pressing the down arrow key further scrolls to next object's values. For example, this display indicates the input light level at the input port 2 of Daylight Optimization Module 600:



There are eight input ports and output ports and their associated feedback loops on each Daylight Optimization Module.

8. Press ESC to return to the Dim 600 menu:

9. Press the down arrow key to scroll to the Dim 700 menu:

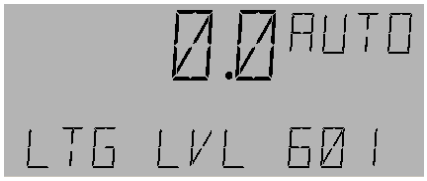
10. Press OK and the arrow keys to view the different objects of Daylight Optimization Module 700, as above.

Editing the 600/700 Series Daylight Optimization Modules

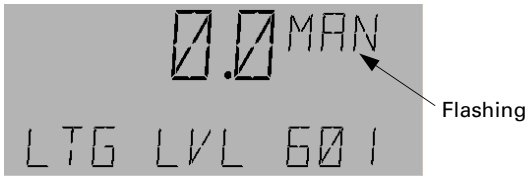
The following procedures are used to edit the various objects of these Daylight Optimization Modules.

Input Light Level

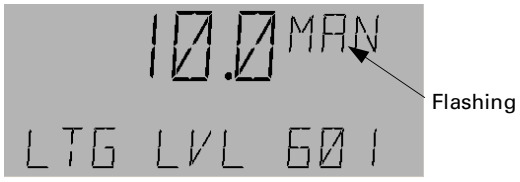
1. These objects can be edited by going to a particular Light Level object (in the example below it is 601) as explained above. Press OK to edit.



2. Press the A/M key to change to manual mode:



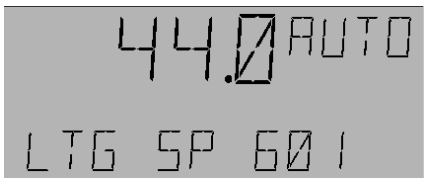
3. Press the numeric keys to set the desired value. Press OK to accept the changes.



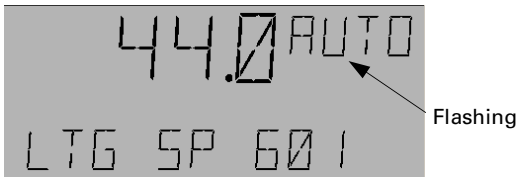
4. To return the object (LTG LVL 601) to auto mode, press OK, followed by the A/M key, followed again by OK.
5. Press the down arrow key to scroll to the Lighting SP object.

Set Light Level

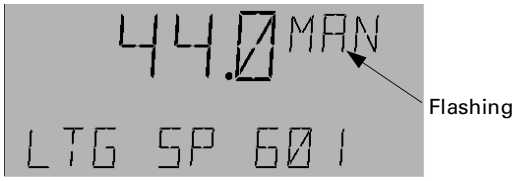
1. Scroll to the LTG SP object; the display will be similar to the following:



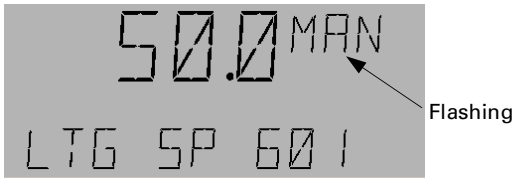
2. Press OK to edit the settings:



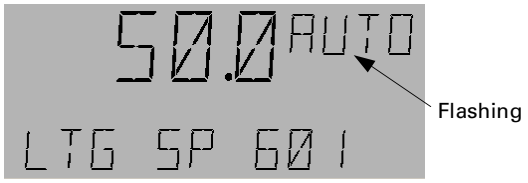
3. Press the A/M key to switch to manual mode.



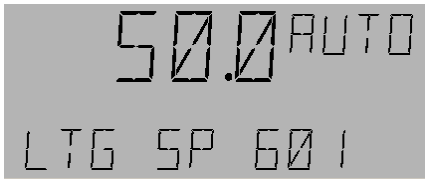
4. Use the numeric keys to set the desired value; in this example, from 44.0 to 50.0:



5. Press OK to accept the change. Press OK again, followed by the A/M key to return to auto mode:



6. Press OK to complete the switch to auto mode.



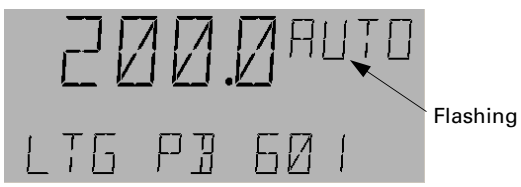
7. Press the down arrow key will scroll to the LTG OP object.

Lighting OP

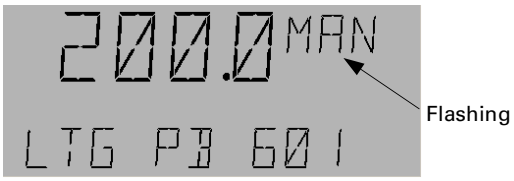
The Lighting OP value is automatically generated by the feedback loop.

Setting Lighting Feedback Loop Gain

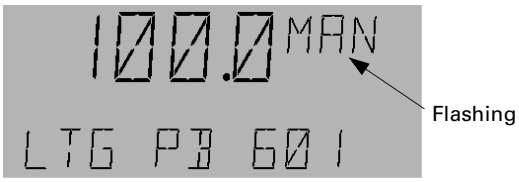
1. Scroll to the LTG PB object, and press OK:



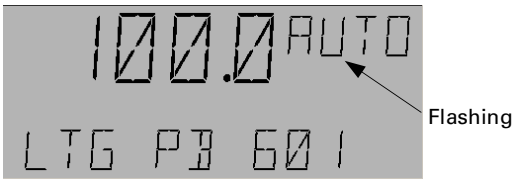
2. Press the A/M key to switch to manual mode:



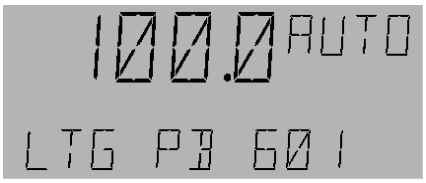
3. Use the numeric keys to set the desired value; in this example, from 200 to 100.



4. Press OK to accept the change. Press OK again, followed by the A/M key to return to auto mode:



5. Press OK key to make the switch to auto mode:

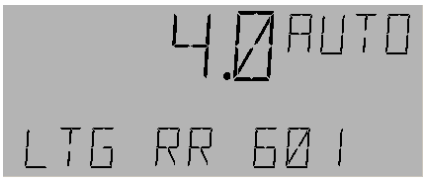


Note that unless you are familiar with the feedback loop, it is advisable to not change the default value.

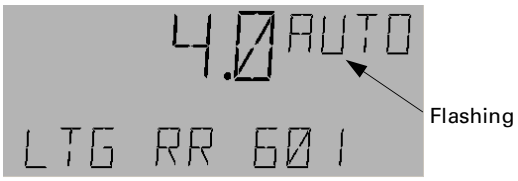
6. Press down arrow key to go to the LTG RR object.

Setting Lighting Feedback Loop Rest Rate

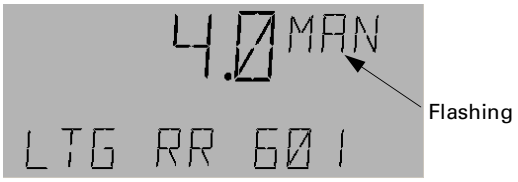
1. Scroll to the LTG RR object; the display will be similar to the following:



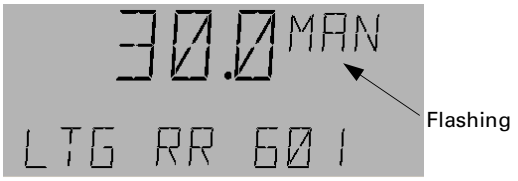
2. Press OK to edit the settings:



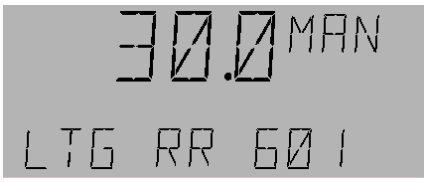
3. Press the A/M key to switch to mode.



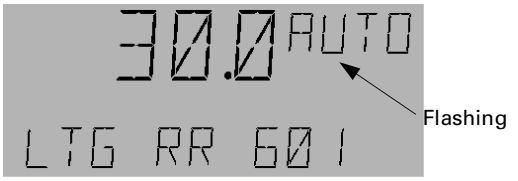
4. Press the numeric keys to set the desired value; in this example, from 4 to 30:



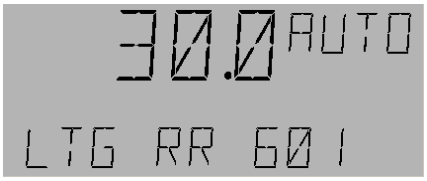
5. Press OK to accept the change.



6. Press OK again, followed by the A/M key to return to auto mode:



7. Press OK to make the switch to auto mode.



Note that unless you are familiar with the feedback loop, it is advisable to not change the setting of the RR object.

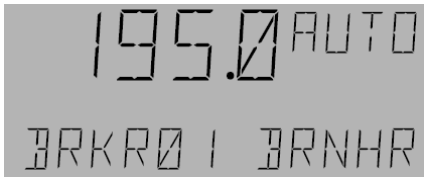
The Burn Hours menu is used to view and set the number of hours a breaker is ON.

Viewing Breaker Burn Hours

1. Navigate to the Burn Hours menu:

2. Press OK to advance to the Breaker Burn Hours submenu:

3. Press OK and then use the arrow keys to view the burn hours of the different breakers.



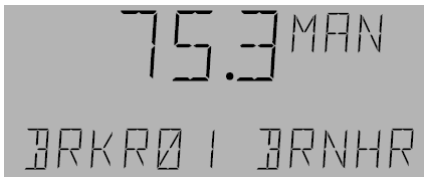
Editing the Breaker Burn Hours

1. Navigate to the Burn Hours menu:

2. Press OK to advance to the Breaker Burn Hours submenu:

3. Use the arrow keys to scroll to the desired breaker burn hours and press OK:

4. Pres the A/M key to change to manual mode. Use the number and arrow keys to change the setting:



5. Press ESC twice to return to the Burn Hours menu.

Resetting Breaker Burn Hours

1. Navigate to the Burn Hours menu:

2. Press OK and use the arrow keys to advance to the Reset Burn Hours submenu:

3. Press OK to reset a particular breaker:

4. Use the arrow keys to scroll to the desired breaker, then press OK:

5. Do either of the following

- Press OK to not reset the breaker burn hours.
- Use the arrow keys to change NO to YES and press OK to reset the breaker burn hours:

6. Press ESC twice to return to the Breaker Burn Hour menu.

The Breaker Override menu is used to view and edit the override binary variable. These variables can be used to manually turn the breakers and groups on and off. These variables are referred in the I/O menu with the even and odd breakers as the override inputs. Similarly, they can be used as switch inputs for the outputs of the groups.

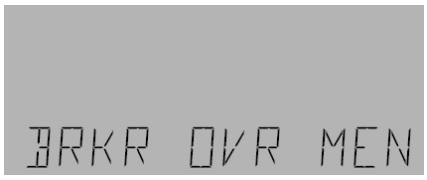
Viewing Override Objects

1. Navigate to the Breaker Override menu:

2. Press OK to view the first breaker's override status. Use the arrow keys to scroll through the remaining override binary variable objects:

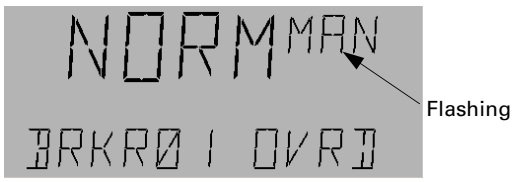
Editing Override Objects

1. Navigate to the Breaker Override menu:

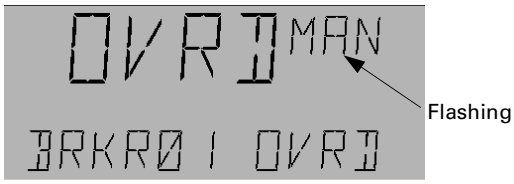


2. Press OK to view the first breaker's override status. Use the arrow keys to scroll to a specific override binary variable object:

3. Press OK and then the A/M key to change to manual mode:



4. Use the upper arrow key to change to Override mode. (Override mode turns the variable on, normal mode turns the variable off.)



5. Press ESC to return to normal mode.

Note that once the breaker is in override mode, it must be returned to normal mode before it can be switched again to override mode.

These functions are used to configure the lighting controller.

Set Time

The Set Time menu is used to set the time and date on the display and the network. When a command is entered into the controller, the new time and date are broadcast to the network so that all the devices connected to that controller are set from this single command.

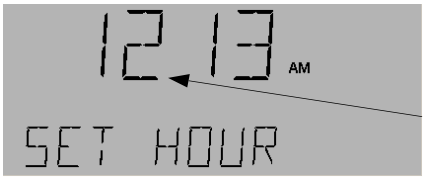
This process is sequential: first the hour is set, then the minute, month, day, and year. When setting the time and date, to go to a previous menu press the A/M key; to exit the Set Time menu, press the ESC key.

Use the following procedure to set the time:

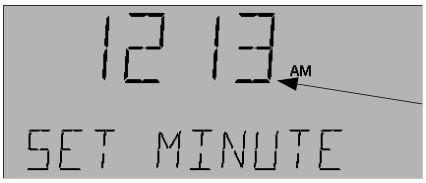
1. Navigate to the configuration menu:

2. Press OK to display the Set Time submenu:

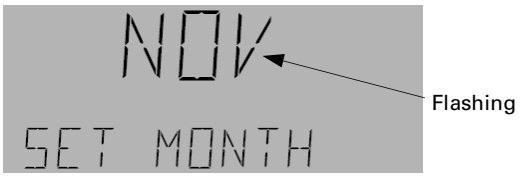
3. Press OK to display the current set time and use the arrow keys to adjust the hour:



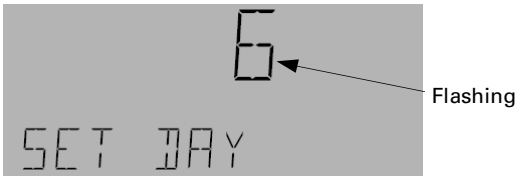
4. Press OK to accept the new hour and then use the arrow keys to set the minutes:



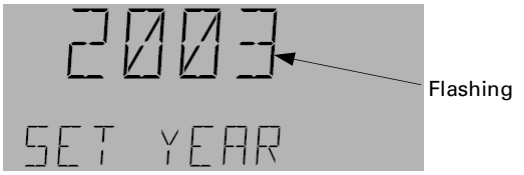
5. Press OK to accept the new minutes and then use the arrow keys to adjust the month:



6. Press OK to accept the month setting and then use the arrow keys to adjust the day of the month:



7. Press OK to accept the day setting and then use the arrow keys to adjust the year:



8. Press OK to accept the year setting. Press ESC to return to the Set Time menu.

Device Information

The Device Information menu displays information on specific devices. The information that can be viewed is the device name, model name, firmware version, and application software information. When the text contains more characters than fit on the display, the text scrolls along the lower area of the LCD screen.

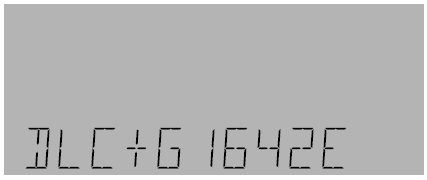
Use the following procedure to display Device Information:

1. Navigate to the Configuration menu and press OK.

2. Use the arrow keys to scroll to the Device Info menu:

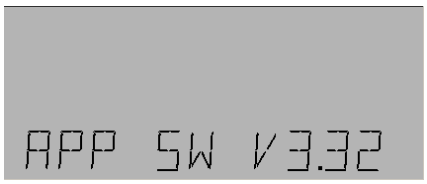
3. Press OK and then use the arrow keys to scroll through the device information in the following order:
   - Device Name.

   - Model Name.



   - Firmware Version.

   - Application Software Version.



4. Press ESC followed by the down arrow key to return to the Device menu.

Device Menu

The Device menu is used to select a city (for the time zone), to enable Daylight Saving Time, Set Latitude and Longitude, set UTC, and Breaker Test time. Breaker test time feature is used along with breaker test (explained in the I/O menu section).

From the Configuration menu, press OK and the down arrow twice to reach the Device menu:

Selecting a City

1. At the Device menu, press OK to access the Location submenu:

2. Press the up or down arrow keys to scroll through the list of regions, which appear in the following order:
   - Western USA
   - Central USA
   - Eastern USA
   - Canada
   - Central America
   - South America
   - Eastern Europe
   - Western Europe
   - Far East
3. when the desired region is displayed, press OK to display a list of cities in that region. Use the arrow keys to scroll through the different cities which are grouped in alphabetical order.
4. Press OK to select the city where the system is located; for example:

5. Use the arrow keys to select YES to choose this city:

6. Press OK to set the latitude, longitude, DST, and UTC for that particular city.
7. Press ESC to return to the Device menu.

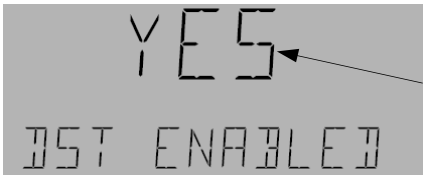
In addition to choosing the city and automatically setting its longitude and latitude, UTC, and DST, these parameters can all be set manually (explained below).

Enabling or Disabling Daylight Saving Time

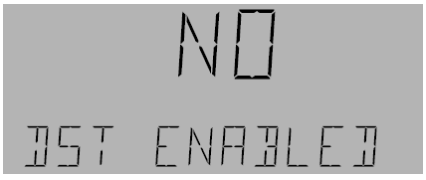
The Enable/Disable DST menu is used to turn on or off the DST function. DST must be enabled to use the ASTRO function up.

1. From the Device menu, press the arrow keys to scroll to the Enable DST submenu:

2. Press OK to view and/or edit the setting:



3. Press the up arrow to change DST ENABLED to YES if it is NO or press the down arrow to change DST ENABLED to NO if it is YES:



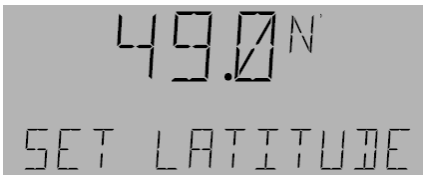
4. Press OK to accept any changes and return the display the Enable DST menu.
5. Press ESC to return to the Device menu.

Set the Latitude and Longitude

The Set Latitude/Longitude submenu is used to set the Latitude and Longitude within the controller network. This function must be set accurately for the Astro function. The value can be set between latitude of 90° N and S and longitude of 180° E and W.

1. From the Device menu, press the arrow keys to scroll to the Set Latitude and Longitude submenu:

2. Press OK to set the latitude and select N or S using the arrow keys. Use the numeric keys to set the latitude value:



3. Press OK to accept the changes and set the longitude and use the arrow keys to select E or W. Use the numeric keys to select the longitude value:

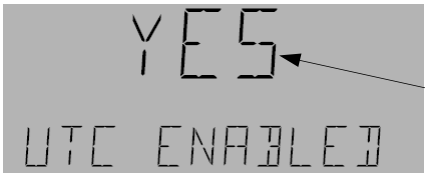
4. Press OK to accept the changes and return to the Set Latitude and Longitude submenu.
5. Press ESC to return to the Device menu.

Set UTC Offset

The Set UTC (Universal Time Coordinate) function calculates accurate times for the Astro function. The UTC Offset must be enabled with an accurate offset calculation. The UTC is set either from the time zone list or by entering the time as a manual offset in ± hours to one decimal place.

1. From the Device menu, press the arrow keys to scroll to the UTC Offset submenu:.

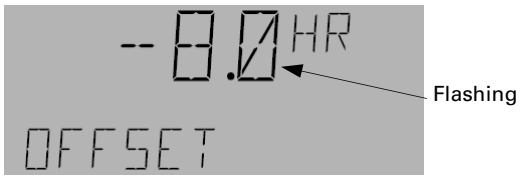
2. Press OK to view and/or edit the setting:



3. Use the arrow keys to select Yes or No and then press OK to accept the selection:

4. If Yes is selected, use the up arrow (to increase) and down arrow (to decrease) keys to change the Offset values. These values increase or decrease in

increments of 0.5 hours from a maximum +12.0 to a minimum –12.0 hours. The value flashes on the LCD screen until accepted:

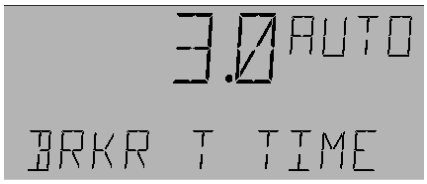


5. Press OK to accept the changes and return to the Set UTC submenu.
6. Press ESC to return to the Device menu.

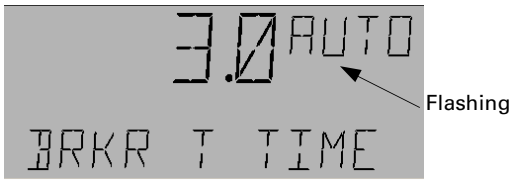
Setting the Breaker Test Time

The Breaker Test time submenu is used to set the breaker test time in conjunction with the Breaker Test function in the I/O menu.

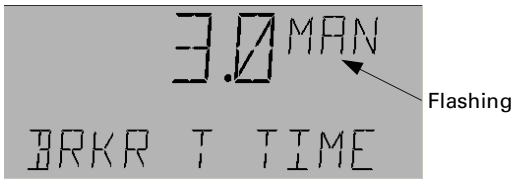
1. From the Device menu, press the arrow keys to scroll to the Breaker Test Time submenu:



2. Press OK to edit the test time:



3. Press the A/M key to switch the object to manual mode:

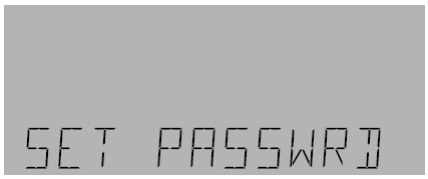


4. Use the numeric keys to change the test time (in seconds) to the desired value and press OK to accept the change.
5. Press ESC to return to the Device menu.

Setting the Password

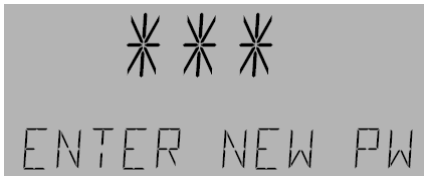
The Set Password function is used to change the four-digit numeric password for logging in to the network.

1. From the Device menu, press the arrow keys to scroll to the Set Password submenu:



2. Press OK to enter a new password:

3. Enter a four-digit password with the numeric keypad:



4. When Confirm PW is displayed, re-enter the password:

5. One of the following occurs:
   - If the two numbers entered are the same, then PW Reset is displayed, indicating that the change has been accepted. Go to step 6.

   - If the passwords do not match, Reset Fail is displayed on the LCD screen. Press ESC or OK and repeat the sequence for setting the password.

6. Press OK or ESC to return to the Set Password submenu.
7. Press ESC to return to the Device menu.

Reset the Controller Backplane (MP 430)

This function resets the back plane of the controller. Note that it should only be used instant remapping of the breaker is needed or the breaker is remapped for diagnostic purposes.

1. From the Configuration menu, use the arrow keys to scroll to the MSP430 RESET menu.

2. Press OK to start the edit:

3. Press the A/M key to change to manual mode:

4. Press the up arrow key to change OFF MAN to ON MAN:

5. Press OK to reset the MSP430 and turn off the function:

6. Press OK key twice to jump to return to auto mode:

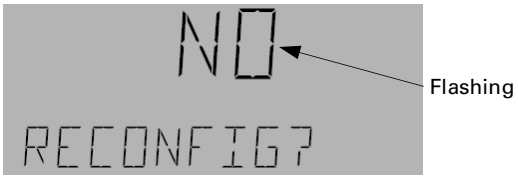
7. Press ESC to return to the Configuration menu.

Reconfigure Network

The Reconfigure menu is used to resolve address conflicts when installing new control equipment onto a network. Each device uses information from its DIP switch settings and from the other devices on the network to determine its proper address. The Reconfigure function changes the addresses of devices so that they can communicate on the network.

1. From the Configuration menu, use the arrow keys to scroll to the Reconfigure Network submenu:

2. Press OK to display the following:



3. Use the arrow keys to select Yes or No”

4. Press OK to accept the changes and start the configuration:

5. When the reconfiguration is complete, the display returns to the Reconfigure Network submenu.
6. Press ESC to return to the Configuration menu.

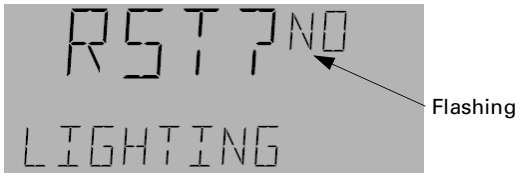
Reset Device

The Reset Device function is used to reset the controller.

1. From the Configuration menu, use the arrow keys to navigate to the Reset Device submenu.

2. Press OK for the following display:

3. Press OK to activate the reset function. Use the arrow keys to change Yes to No or No to Yes.



or

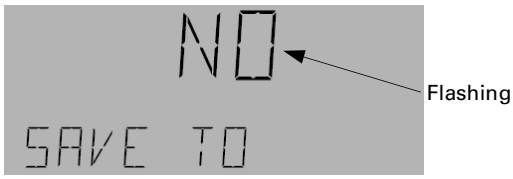
4. Press OK to accept the changes and return to the default display.
5. You must log in again to access additional menus.

Save to Flash

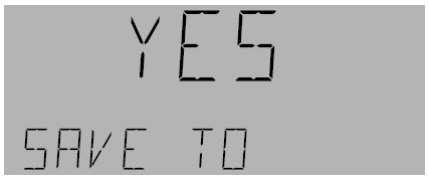
The Save to Flash menu is used to save the database to controller Flash memory.

1. From the Configuration menu, use the arrow keys to scroll to the Save to Flash menu:

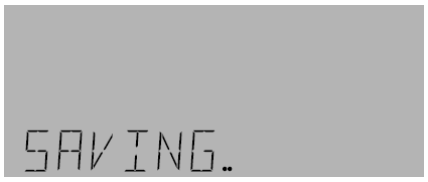
2. Press OK for the following display:



3. Use the arrows keys to select Yes or No:



4. Do either of the following:
   - Select YES and press OK. The following display appears until the function is complete:



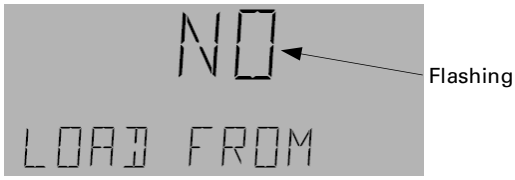
   - Select No and the previous menu is displayed.
5. When the Save is complete, the LCD screen returns to the Save Flash menu.
6. Press ESC to return to the Configuration menu.

Load from Flash

The Load from Flash menu is used to load the saved database to the controller from flash memory.

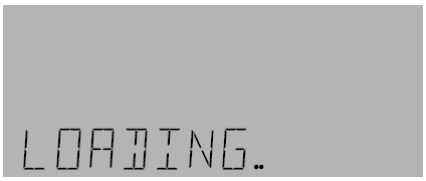
1. From the Configuration menu, use the arrow keys to scroll to the Load Flash menu:

2. Press OK for the following display:

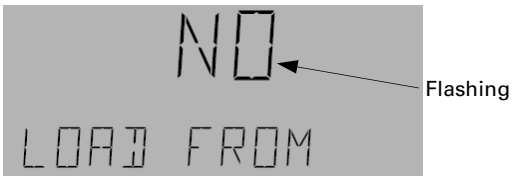


3. Use the arrow keys to select Yes or No.
4. Do either of the following:
   - Select YES:

Press OK to start loading the database from flash memory:



- Select No:



Press OK to return the display to the Load Flash menu.

5. When Loading is complete, the LCD screen returns to the default display. You must log in again to access additional menus.

Trendlog Configuration

1. From the Configuration menu, use the arrow keys to scroll to the Trending configuration menu:

2. Press OK for the following display:

The Event menu is used to view and reset event entries and to set the size of event buffer. They are also used to enable and disable the alarm output for different conditions, such as device status, time change, lighting alarm, and lighting status and to acknowledge the alarm output. Acknowledging the alarm output turns off the alarm relay, which is triggered in response to the device status change (device goes offline, device reset, dead battery, and undervoltage), time change (time of the controller changes), lighting status (breaker turns on or off), and lighting alarms (breaker is tripped or there is a command failure).

The events listed in Table 3 are displayed on the Programmer. Events are displayed beginning with the most recent events. A maximum of 2000 events can be viewed at a time.

Event	Display
Alarm	ALARM
Alarm Acknowledged	ALARM ACK
Dead Battery	DEAD BATT
Dead Battery Restored	DEAD BATT RESTORED
Command Failure	CMD FAIL
Command Fail Restored	CMD FAIL RESTORED
Status ON	STATUS ON
Status OFF	STATUS OFF
Under Voltage	UNDER VOLT
Under Voltage Restored	UNDER VOLT RESTORED
Reset	DEV RESET
Time / Date change	TIME CHG
DB Load	DB LOAD
DB Save	DB SAVE
DB Clear	DB CLEAR
Lnk Online	DEV ONLINE
Lnk Offline	DEV OFFLINE
Breaker Trip	BREAKER TRIP
Breaker Trip Restored	BREAKER TRIP RESTORED
No events occurred	NONE

Table 3. Events captured in the CE log.

Acknowledging an Alarm

Use the following procedure to acknowledge an alarm:

1. Press any key on the keypad to silence the alarm.

2. Press OK and then login using the appropriate password.
3. Use the arrow keys to navigate to the Event menu:

4. Press OK to reach the following display:

5. Press OK and AUTO flashes:

6. Press the A/M key to put into manual mode and press the arrow key until ACK is displayed. Press OK to acknowledge the alarm.

7. Press ESC to exit to the Event submenu.

8. The Alarm Acknowledge submenu returns to the default auto mode without further user input.

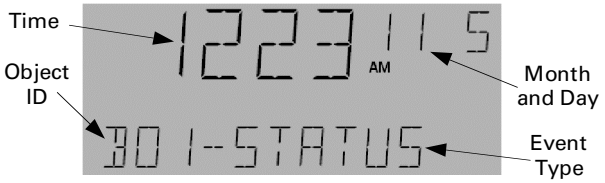
Displaying the CE Log – Viewing Events

Use the following procedure to view an event:

1. Navigate to the Event menu with the arrow keys:

2. Navigate to the Display CE Log menu with the arrow keys:

3. Press OK to display the following event information:



4. Use the arrow keys to scroll through the different events.

Note that the month and day display as four digits. In the example above, November 5th is displayed as 11 5.

Reset the CE Log

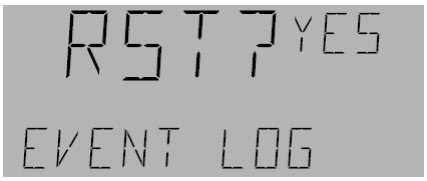
1. Navigate to the Event menu with the arrow keys:

2. Navigate to the Reset CE Log submenu with the arrow keys:

3. Press OK for the following display:

4. Do either of the following:
   - Press OK to not reset the CE log:

   - Use ARROW keys to change NO to YES:



   Press OK to reset the CE log:

   The Reset CE Log display returns the reset is complete:

5. Press ESC to return to the Event menu.

Set Up the CE Log

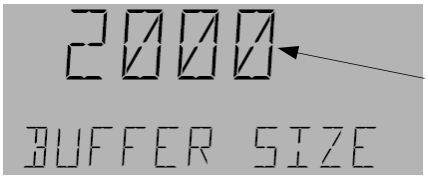
Logged events can be edited from the Event menu. Events are stored in Compact Event Logs (CEL), with a default buffer size of 2000 events. CELs can be set to hold from 1–2000 events. CELs can be enabled or disabled for the following: device status, time change, lighting alarms, and lighting status.

1. Navigate to the Events menu:.

2. Press OK and use the arrow keys to scroll to a specific Setup CE Log:

3. Press OK to display the current buffer size:

4. To edit the buffer press OK:



5. Use the numeric keypad or arrow keys to enter the new buffer size.

6. Press OK to display Device Status. Device status consists of dead battery, reset device, device offline, or undervoltage.

7. Do either of the following:

- Use the arrow keys to scroll to the next category if no change is required.
- To edit press OK. Press the arrow key to adjust Yes or No, and then press OK to accept the change.

8. The Time Change display appears next:

9. Do either of the following:

- Use the arrow keys to scroll to the next category if no change is required.
- To edit press OK. Press the arrow key to adjust Yes or No and then press OK to accept the change.

10. The Lighting Alarms display is next. Lighting alarms consists of breaker trip and command failure.

11. Do either of the following:

- Use the arrow keys to scroll to the next category if no change is required.
- To edit press OK. Press the arrow key to adjust Yes or No and then press OK to accept the change.

12. The Lighting Status display appears. Lighting status consists of status on and status off.

13. Do either of the following:

- Use the arrow keys to scroll to the next category if no change is required.
- To edit press OK. Press the arrow key to adjust Yes or No and then press OK to accept the change.

14. Press ESC to return to the Setup CE Log display.

Analog Input (AI) – An analog input is denoted by an AI object. The four types are 10 K, 5 V, 10 V and 4–20 mA, and are selected by the jumper location on the controller board.

Analog Variable (AV) – The analog variables types are LTG SP, LTG OP, LTG PB, and LTG RR

Binary Output (BO) – A binary output is denoted by a BO object. It is output for different breaker.

Binary Totalizer (BT) – A binary totalizer is denoted by a BT object. It gives the cumulative ON time of a BO object.

Binary Variable (BV) – A binary variable is denoted by a BV object. It is used to assign binary values to an object.

Calendar (CAL) – A calendar is denoted by a CAL object. It is used to define holidays.

Compact Event Log (CEL) – A compact event log is denoted by a CEL object. It is used to register events and generate alarms.

Lighting Group (LG) – A lighting group is denoted by an LG object. It is used to create a group of binary objects and link them to different switches, groups, schedules, and analog inputs.

Multistate Input (MI) – A multistate input is denoted by an MI object. It is used to accept the lighting switch inputs.

Schedule (SCH) – A schedule is denoted by an SCH object. It is used to create schedules for different lighting groups (LG objects).

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