

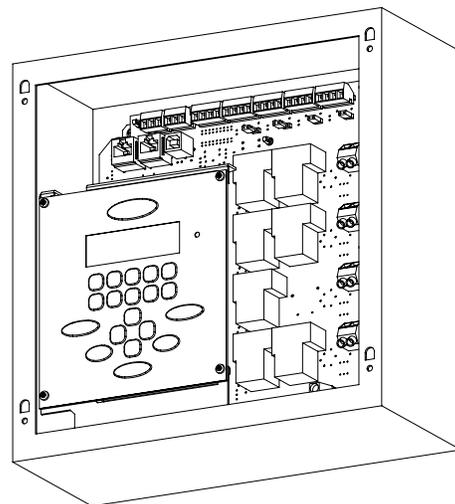
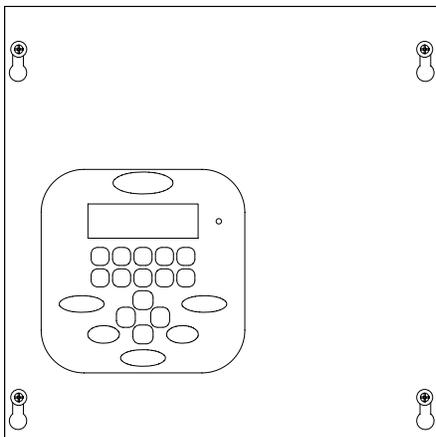


User Guide

EZ-MAX™

LIGHTING CONTROL RELAY PANELS

...another Z-MAX™ product by Leviton Manufacturing.



Software revision 1.00 and up

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Overview

Inspection

Carefully unpack the relay cabinet, and inspect to make sure there has been no hidden shipping damage. Report all damage to the freight carrier who delivered the system. Claims for damages are filed with the freight carrier as all freight is shipped FOB Tualatin, Oregon.

In case of damaged components, your EZ-MAX relay cabinet can be serviced in the field with factory replacement parts.

Description

The compact physical design of your EZ-MAX Relay cabinet takes up a minimum of wall space. The product is only designed for surface mounting. The properties of your cabinet are as follows:

Cabinet Size	# of Relays	Weight	Dimensions - in. (CM)
4	4	10.6 lbs. (4.83 Kg)	10" W x 10" H x 4 ⁹ / ₃₂ " D (25.4 x 25.4 x 10.44)

Cabinet Properties

Some of the relay features are:

- UL & cUL Listed for use in USA and Canada
- Compliant with NEMA requirements
- Easy to install
- Quick & Easy to Configure

The control portion of the relay cabinet employs all digital circuitry for accuracy and for minimum wiring requirements between the relay cabinet and its control systems.

Control Overview

The Leviton EZ-MAX relay Cabinet uses an intelligent central control card (Digital Main Control Module), enabling the relays in this system to control the loads connected to it as well as respond to a variety of inputs. These inputs include:

- Low Voltage (constant voltage)
- Photocell 0-10VDC or Switched
- Occupancy sensor
- 0-10VDC analog
- Dry Contacts

The LCD display provides an easy user interface with full configuration from the front panel.

Feed and Load Wiring

The cabinets have been designed for multiple entry and exit points for feed (from branch circuit breaker) and load wiring. Refer to the appropriate section in this guide which discusses this topic.

Control Input Wiring

The cabinets have been designed for multiple entry and exit points for low voltage control wiring. Refer to the appropriate section in this guide which discusses this topic.

Turn On

Prior to turn on, verify the following is installed correctly:

- Feed wiring
- Load wiring
- Control wiring

Warnings

- To be installed and/or used in accordance with appropriate electrical codes and regulations.
- To be installed by a qualified Electrician.
- DO NOT CONNECT line voltage wires to low voltage terminals.
- Mount in a location where audible noise is acceptable.
- When using with fluorescent ballasts, both lighting fixture and ballast must be grounded.
- Use this relay cabinet only with minimum 75° C copper wire at 75° C ampacity.
- Disconnect power when servicing the relay cabinet, fixture or when changing lamps.
- Indoor use only.
- TO AVOID FIRE, SHOCK OR DEATH: TURN OFF POWER AT MAIN CIRCUIT BREAKER OR FUSE AND TEST THAT THE POWER IS OFF BEFORE WIRING, OPENING THE PANEL, OR REPLACING ANY COMPONENT!
- During Operation, cabinet cover is to be removed by qualified personnel ONLY!. Heed all caution markings indicating the presence of High Voltage. High voltage may be up to 600V.
- Test each circuit to make sure it is free of short circuits before connecting it to relay.

Warnings, Turn On

Installation

Installation Checklist

Install the cabinets by following these simple steps:

- Step 1:** Unpack the system
- Step 2:** Report any damages to the freight carrier
- Step 3:** Remove the cover
- Step 4:** Remove the mounting plate assembly and store where damage will not occur to the electronics
- Step 5:** Attach the cabinet to the wall (note the "UP" orientation as indicated on the sticker)
- Step 6:** Drill holes and attach conduit where appropriate
- Step 7:** Pull all wire into the cabinet
- Step 8:** Blow out any dust, dirt, or debris which has accumulated in the cabinet
- Step 9:** Test & Verify all wiring by directly connecting line to load - Correct any faults and re-test wiring prior to proceeding.
- Step 10:** Install the mounting plate assembly
- Step 11:** Terminate the feed & load wiring to each relay
- Step 12:** Terminate control wiring
- Step 13:** Verify the feed wiring
- Step 14:** Verify the load wiring
- Step 15:** Verify the remote control wiring
- Step 16:** The firmware of the cabinet is constantly updated by the Lighting Control Division. Check the website, www.leviton.com, for the latest version of the firmware and see Appendix B for instructions on how to update your cabinets firmware
- Step 17:** Setup & Program the Cabinet

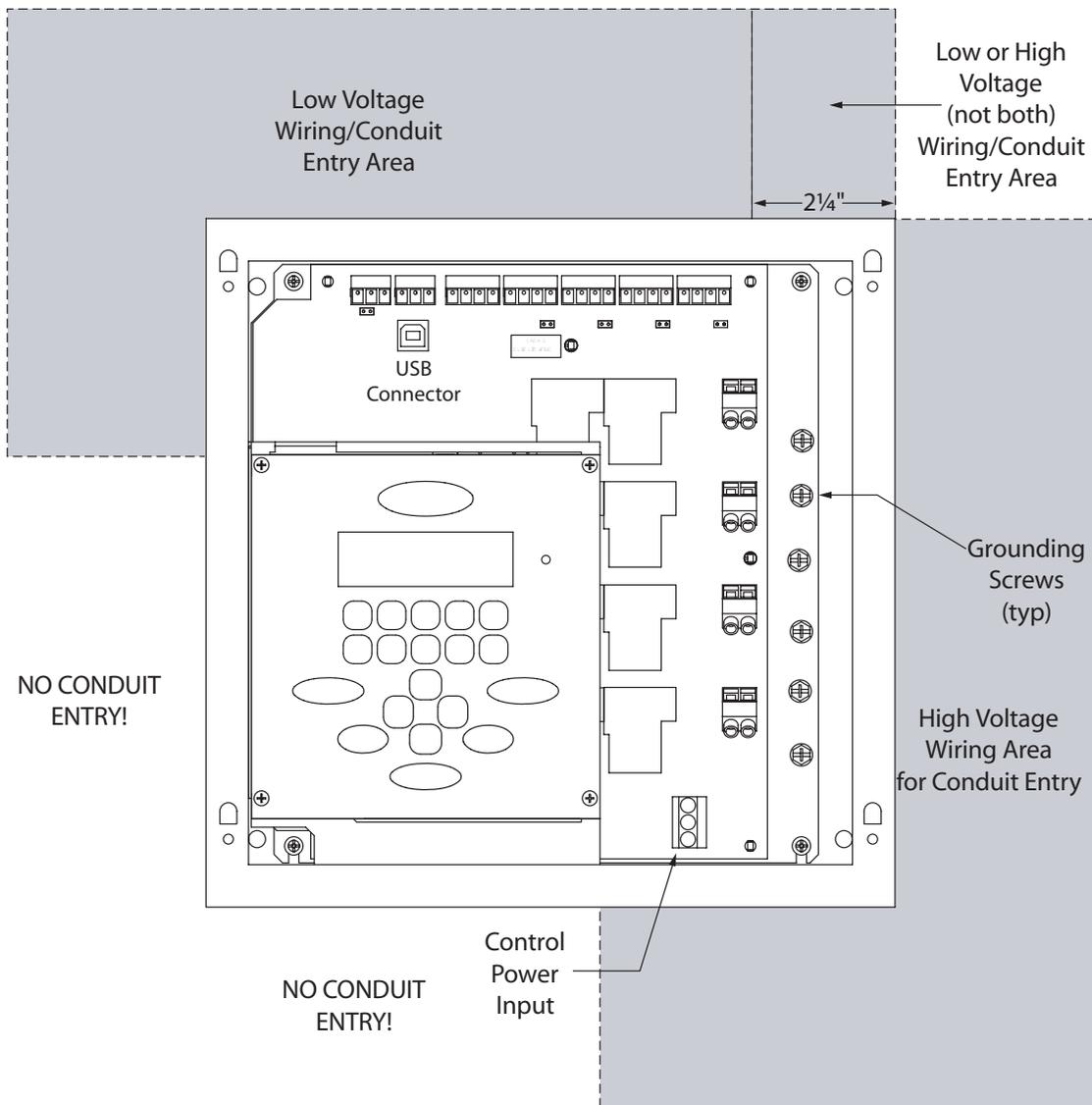
Mounting

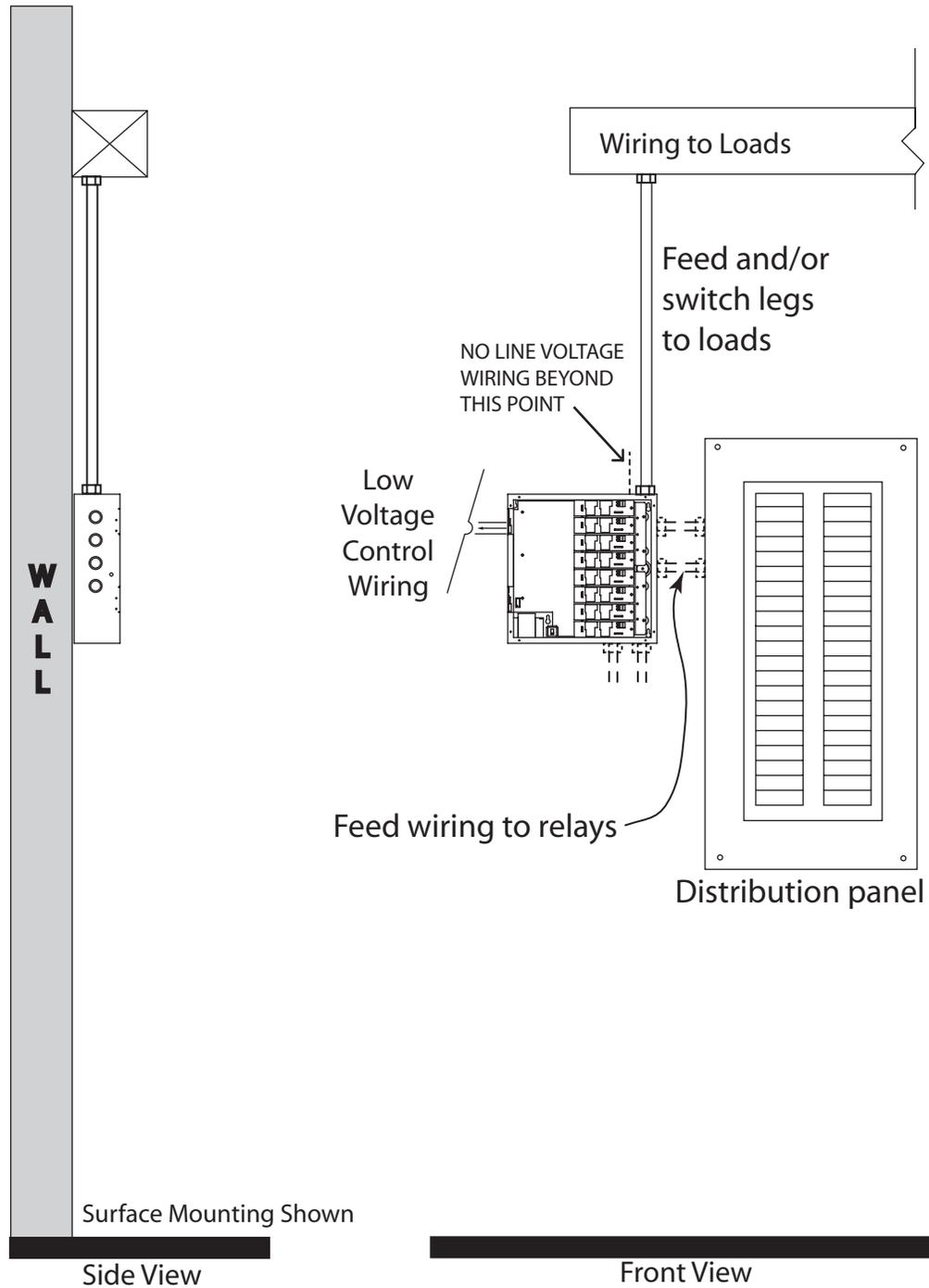
The cabinets can be mounted only on the surface of the wall. The EZ-MAX Relay Cabinet is not designed for any flush mounting method.

NOTE

All cabinets have ample location for conduit entry for feed, load output, and control wiring. Ensure that conduit entry is only in the allowed locations. Refer to the above figures in the proceeding pages for possible locations. Also please ensure that the power and control electronics are removed prior to drilling or punching holes for conduit entry.

Prior to the consideration of any mounting location, please pay special attention to the allowed locations for conduit entry.





Suggested Mounting

Suggested Mounting Heights:

Leviton recommends the following mounting heights in order for the control module to be at a reasonable height:

Cabinet	Suggested Mounting height to bottom of cabinet
4 Relay Panel	62" (157 cm)

Location of cabinets

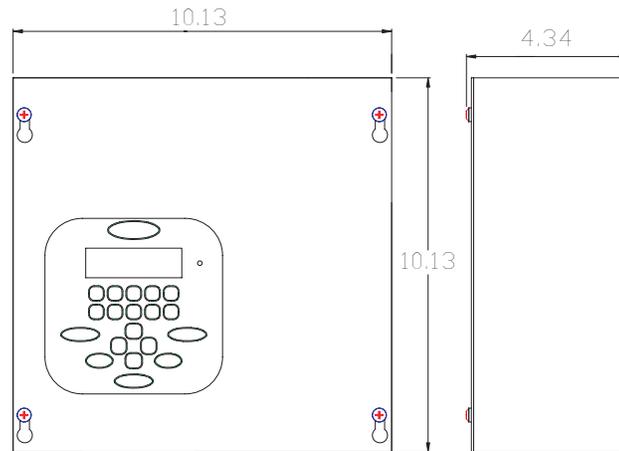
- Cabinets generate heat (see table below). Make sure they are mounted in a conditioned space where the temperature will be 0-40° C (32-104°F)
- Reinforce the wall for strength as required for weight and local code
- Clearance on left and right side of the panel should be maintained at 1 1/2 " or greater
- Relays will click while in operation. Please locate the panels where audible noise is acceptable.

Cabinet	MAX BTU/HR
4 Relay Cabinet	97

Mounting Cabinet

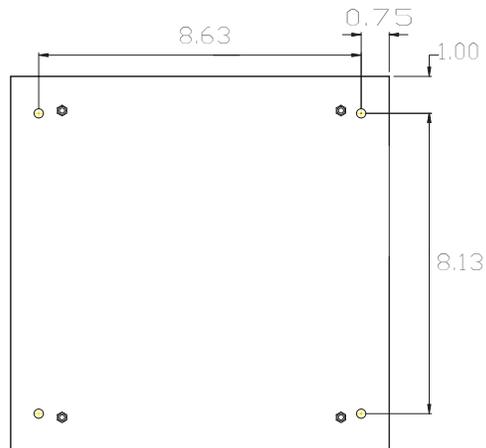
- Step 1:** Locate where the cabinet will be hung on the wall. Choose a location in a dry area that is convenient to the branch circuit panel.
- Step 2:** Leviton recommends that cabinet mounting hardware reach through the drywall and attaches to wall studs or other suitable solid backing. However, properly sized struts and suitable drywall hardware can also be used. They must distribute the load to the anchors without exceeding the recommended anchor limit. Using drywall screws directly through drywall without a stud is not recommended. Make sure that there is adequate support
- Step 3:** Loosen the (4) cover screws and remove the cover by sliding the cover up and off. Appropriately store the cover for future use.
- Step 4:** Locate the mounting plate assembly attached to the back wall of the enclosure. Locate the 4 mounting screws in the 4 corners of the rear plate. Loosen these 4 screws. Lift the entire electrical assembly up and out of the enclosure. Do not attempt to remove the keyboard separately from its mounting bracket. Store the assembly in a protected, clean, dry place. Tighten the 4 screws so they don't get lost.
- Step 5:** Prior to proceeding, reference the figures below which show the location of the mounting holes and allowed conduit entry locations.
- Step 6:** Orient the enclosure so that the "UP" arrow on the label inside the enclosure is pointing up. Note that the high-voltage conduit access is through the right end of the bottom, the right side and the right end of the top. Note that the low-voltage (Class 2) conduit access is through the top end of the left side and the left end of the top. Cut or punch the desired conduit openings. Do not cut openings in the back of the enclosure or the bottom end of the left side or the left end of the bottom as it will no longer be possible to re-install the electrical assembly.
- Step 7:** Mount to a substantial indoor vertical surface with hardware supplied by others through the 4 - 0.24 holes in the back wall for #10 hardware. The enclosure is Type 1 for indoor use only

- Step 8:** Cut or Punch holes for conduit only in areas indicated on the product labeling as appropriate.
- Step 9:** Install Conduit and pull wire
- Step 10:** Blow out any dust, dirt, or debris from the enclosure.
- Step 11:** Re-Install the Mounting Plate Assembly
- Step 12:** Proceed to Feed and Load Wiring Section.



FRONT VIEW
(all dimensions in inches)

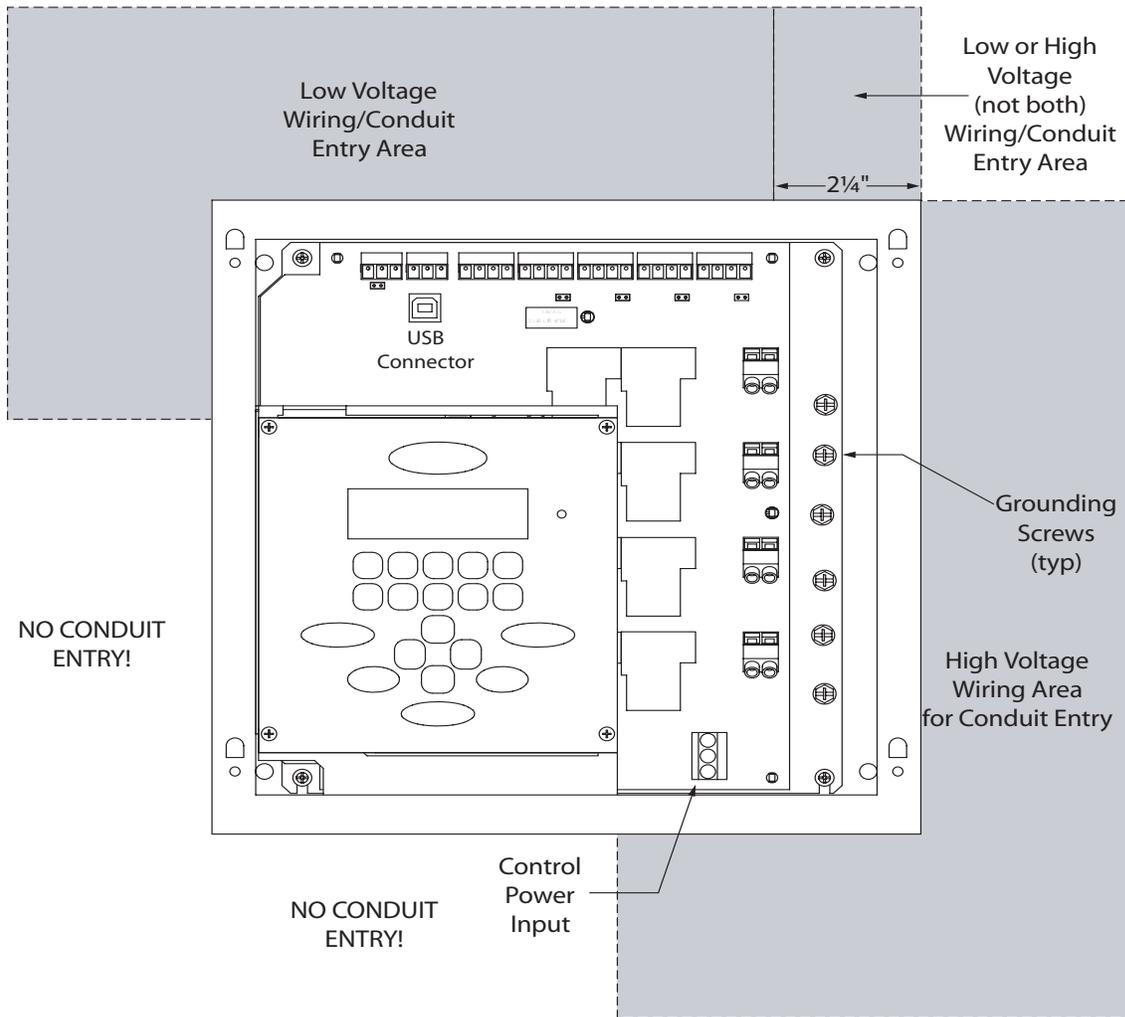
SIDE VIEW
(all dimensions in inches)



MOUNTING HOLES VIEW
(all dimensions in inches)

Cabinet Dimensions and Mounting Hole locations and knockout locations

Conduit Entry



Allowed Wiring/Conduit Entry Areas

Feed and Load Wiring

Overview of Power Wiring - Feed\Line Wiring

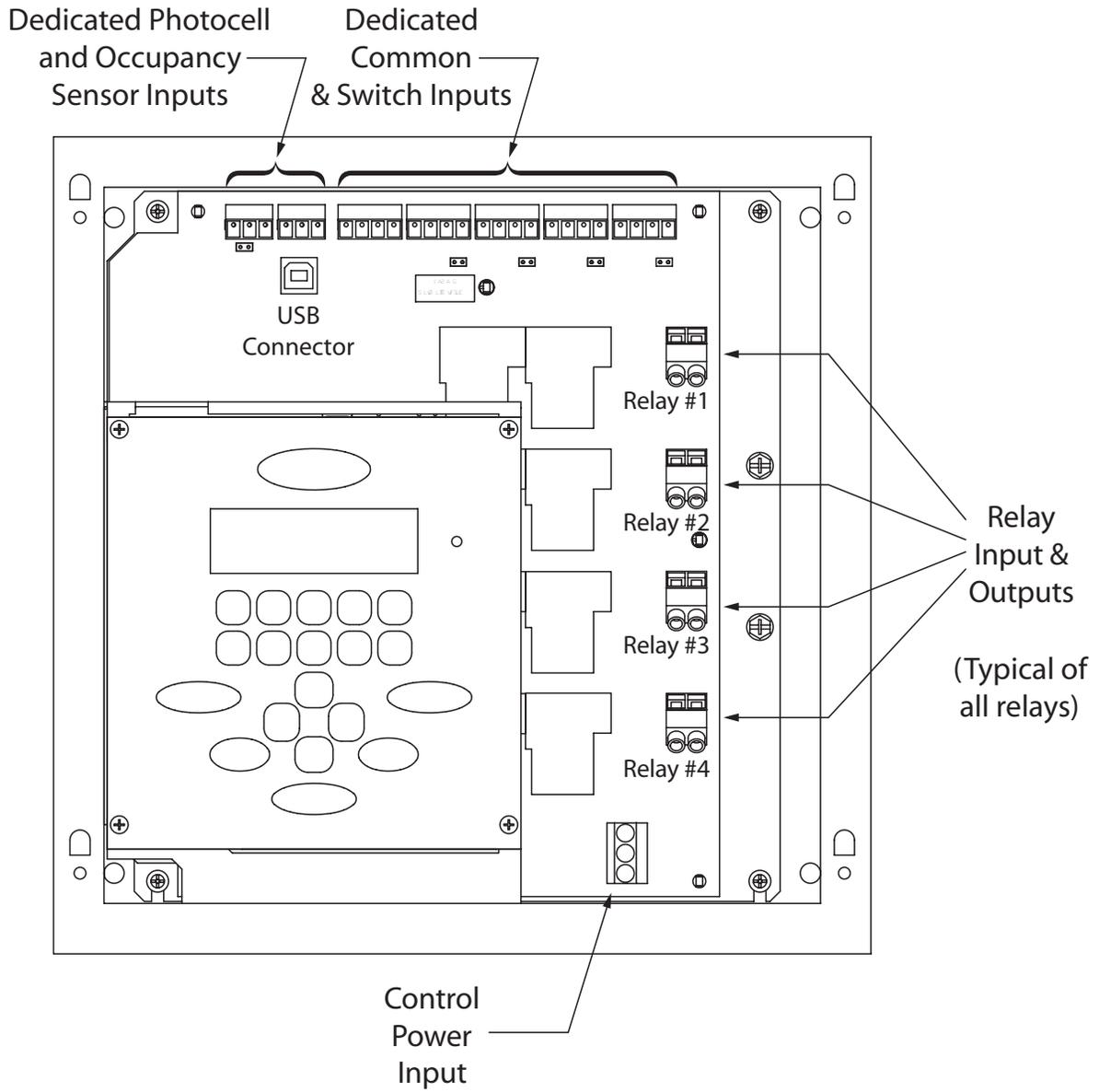
Wiring is simple. All you need is the following:

- Dedicated circuit for control power - Hot, Neutral and Ground
- Individual feeds from branch circuit breakers, input circuits
- Individual load wires leaving relays, output circuits.

NOTE

Since the panel is fed from multiple circuits, locate each one and lock-out each feed in the OFF position.

All cabinets have ample location for conduit entry for feed, load output, and control wiring. Ensure that conduit entry is only in the allowed locations. Refer to the above figures in the proceeding pages for possible locations. Also please ensure that the power and control electronics are removed prior to drilling or punching holes for conduit entry.



Cabinet Connections & Orientation

Control Electronics Power Wiring

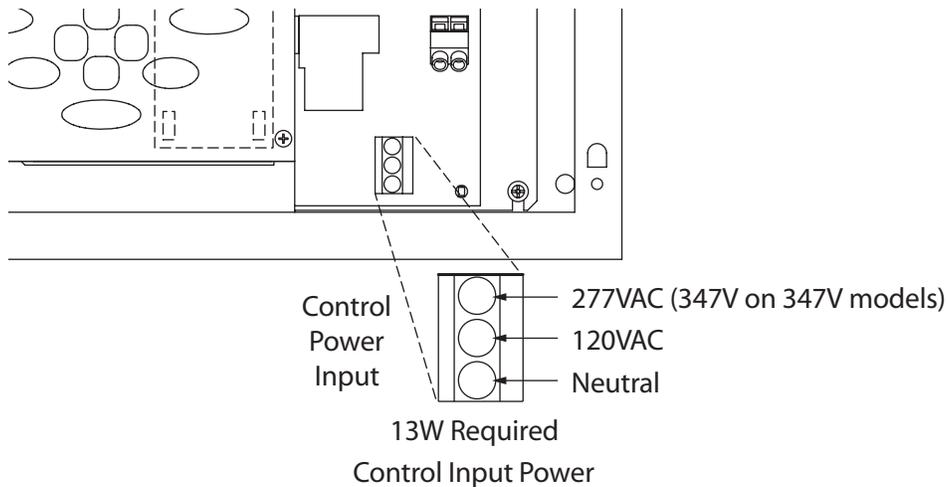
Your relay cabinet requires specific power circuit for the control electronics. Leviton recommends that this power circuit be dedicated specifically and used only for power to the control electronics.

NOTE

If the control electronics must function during a power outage or other interruption, the control electronics power must be fed from a UPS, generator, or other guaranteed source.

To connect your relay cabinet's control electronics to power, please follow the following steps:

- Step 1:** Connect the relay cabinet to the circuit breaker panel using conduit.
- Step 2:** Remove all cuttings and dirt.
- Step 3:** Run a dedicated circuit from the circuit panel or distribution panel to the relay panel for the control electronics. Make sure the power is off at the breaker.
- Step 4:** Wire the circuit as shown in the following figure:



- Step 5:** Connect the circuits ground wire to the relay cabinet
- Step 6:** Keep the circuit off until all wires are landed in the cabinet.

Line and Load Circuit Wiring

Your relay cabinet has multiple relay circuits of a specific type depending on your relay cabinet model. For specifications of the different relay types, please reference the chart below.

Testing the Circuits

Prior to connecting any circuit to a relay, and after all load and feed connections have been made opposite the relay cabinet, test the circuit by following this procedure:

- Step 1:** Turn off the breaker feeding the circuit
- Step 2:** Ensure that all connections and wiring between the relay cabinet and the circuit breaker panel are complete

- Step 3:** Ensure that all connections and wiring between the relay cabinet and the load are complete
- Step 4:** At the relay cabinet, connect the feed(s) for relay #1 to the load for relay #1 with a wire nut or other appropriate means.
- Step 5:** Energize the circuit by turning on the circuit breaker.
- Step 6:** Resolve any mis-wiring, shorts, etc. for the connected circuit
- Step 7:** Repeat the above steps for all circuits in this relay panel. When all circuits have been tested, disconnect all Line's from Loads and proceed to the next section.

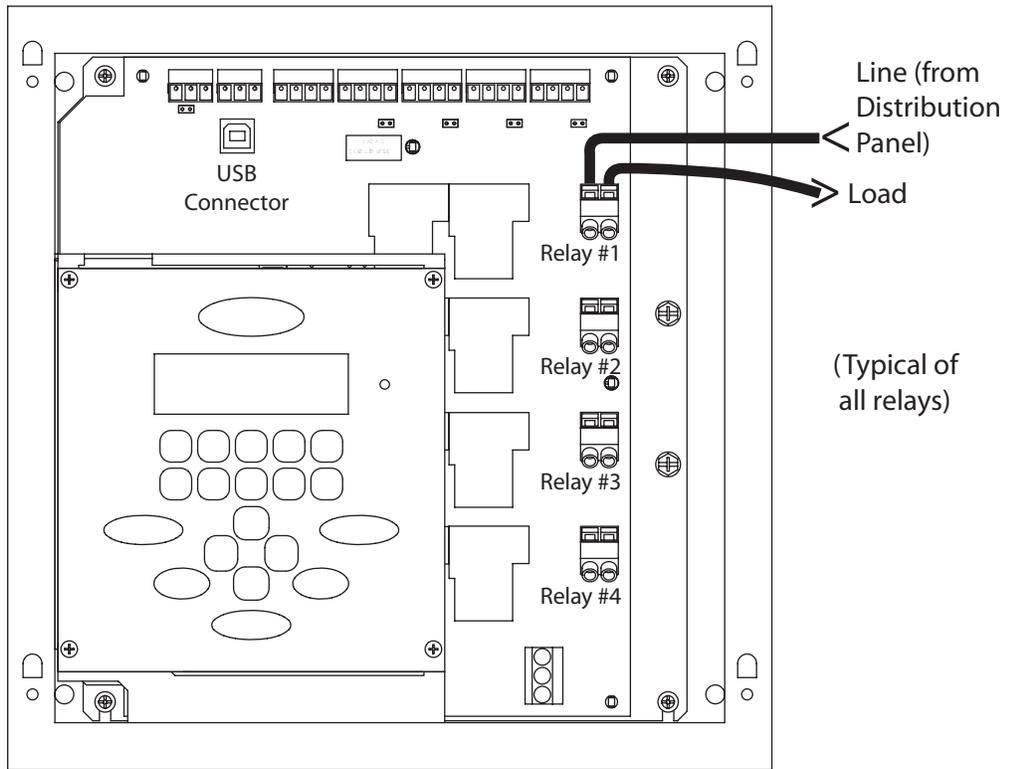
Wiring the relays

- Step 1:** Connect the line (feed/circuit breaker) side of the circuit to the "input" terminal(s) on the relay card.
- Step 2:** Connect the load side of the circuit to the "output" terminal(s) on the relay card.
- Step 3:** Please note that relay card terminals accept the following wire sizes:

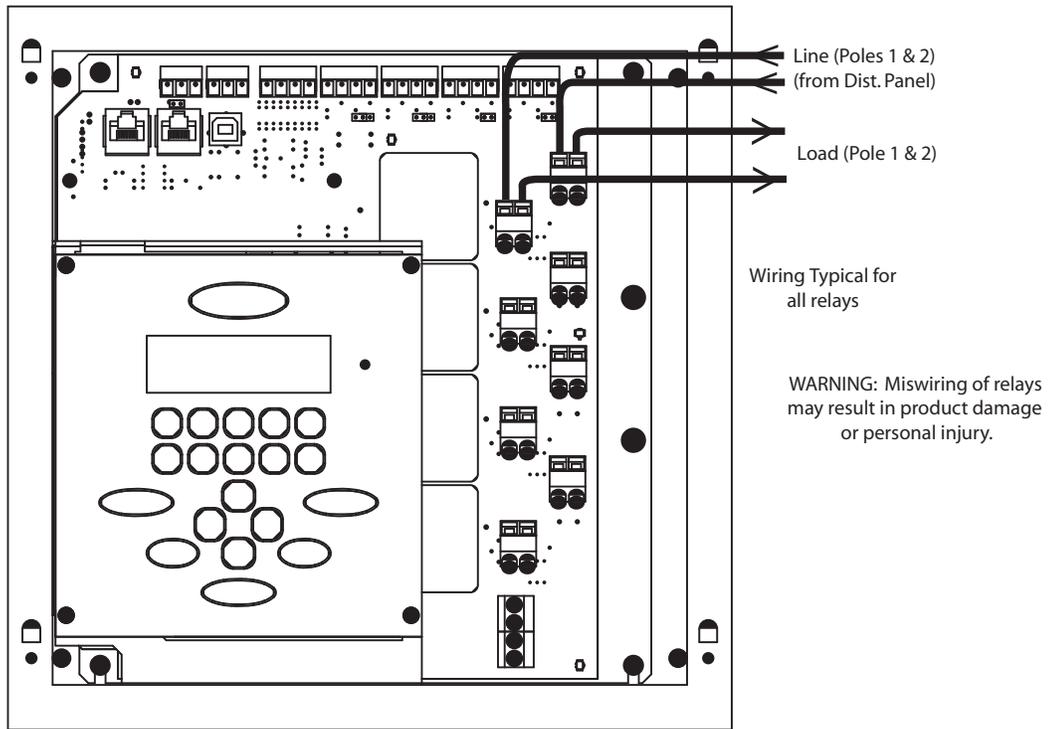
Model	Relay	Wire Size	Wire Type	Torque
re4bd-104	Z-MAX(Standard, 1-Pole)	20-8 AWG Copper	Solid or Stranded	7 in-lbs
re4bd-204	2-Pole	20-6 AWG Copper	Solid or Stranded	20.5 in-lbs
re4bd-C04	347V	20-6 AWG Copper	Solid or Stranded	20.5 in-lbs

Wire Sizes for Relays

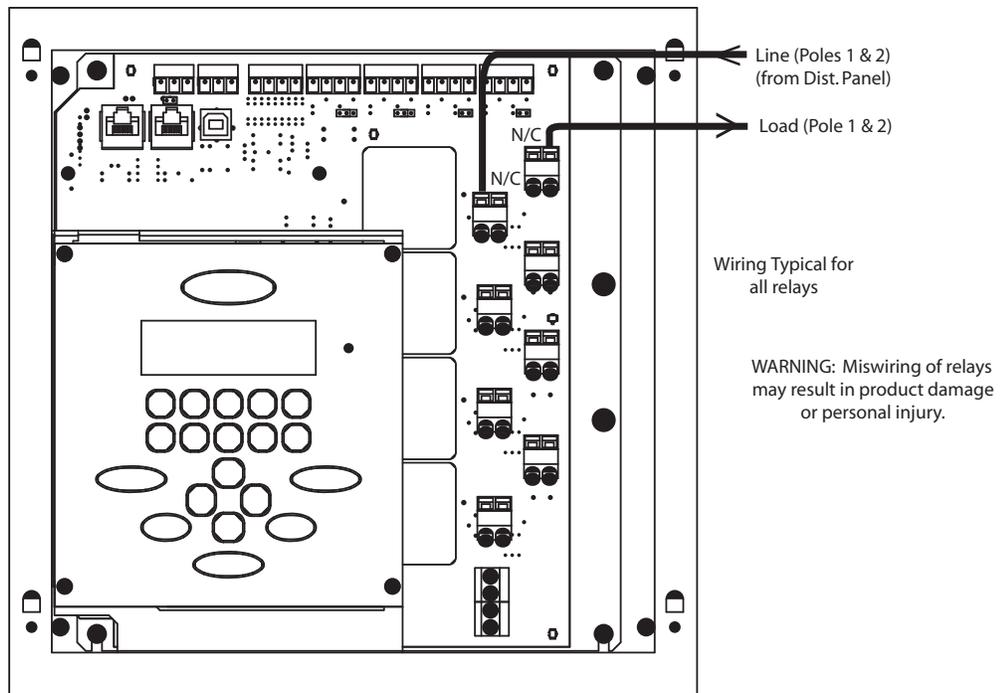
Wire the relay cards by following the wiring diagrams.



Wiring Diagram for EZ-MAX Standard 1-Pole Relay (re4bd-104)



Wiring Diagram for 2-Pole Relay Card (re4bd-204)



Wiring Diagram for 347V Canadian Relay (re4bd-C04)

NOTE Multiple relays can be tied together on the same branch circuit breaker. Simply pigtail the line.

Circuit Schedule

Relay/Circuit			Control		Load Circuits			
Relay No.	Panel Breaker	Field Circuit	Input #1	Input #2	Relay Type	Load Watts	Notes/Circuit Description	Group
1								
2								
3								
4								

Low Voltage Control Wiring

Control Input Wiring

Once the power wiring has been completed, control wiring can be addressed. Terminate all control wiring directly to the terminal blocks on the printed circuit board. Use a small 1/8-in. flat screwdriver on these terminals

NOTE Terminal blocks are 2-part terminals and can be removed for ease of termination. When reinstalling them make sure they are plugged in the correct direction for the way they were wired.

Connector Type	Wire Size and type	Torque
Switch Inputs	14-24 AWG, Stranded	2 in-lb.

Control Wire Type and Size

The digital control panel can accept the following control signals:

- Low Voltage inputs (Switches)
- Photocells
- Occupancy Sensors
- Dry Contacts
- Analog 0-10VDC Inputs

NOTE All Control wiring is Class 2!

Configuring Low Voltage Inputs

For each input there are (3) things which you must consider:

- 1 What will be connected to the input,
- 2 Will it supply voltage to trigger an "on" or provide a connection to common to signal an "on",
- 3 What are the power requirements for this input --> what are the power requirements for all inputs

Low Voltage Input Connections

Your EZ-MAX relay cabinet has a total of (6) inputs which can be configured as follows:

- Inputs #1-4 can have any of the following functions
 - Low Voltage Switch
 - Occupancy Sensor
 - Photocell, Switched (on or off, trigger point set at photocell)

- Photocell, 0-10V, 0-10V returned proportional to the amount of light received by the photocell. Trigger point(s) set at relay cabinet.
- Contact Closure
- Input #5, Dedicated Occupancy Sensor
- Input #6, Dedicated Photocell, either -Switched or 0-10V

Each input type is discussed in detail in the following pages. For now, please just find it helpful to identify what will be connected to each input. That will in turn tell you how to wire the input and make any necessary hardware and later on software configurations. There is a switch input schedule as part of this chapter which gives you a location to document your connections.

Input Trigger

Each of the low voltage inputs can be triggered by either voltage or a connection to common. When supply voltage to the input to trigger, we call this "pulling up the input" or also "active high." When a connection to common triggers the input, we call this "pulling down the input" or also "active low."

As shipped from the factory, all inputs are expecting to be active high, that is receiving voltage to trigger. Active High inputs must not exceed a nominal 24VDC. To change this from an active high input to an active low input, the polarity jumper must change position. Please reference the illustrations in this chapter for the location and settings of this jumper.

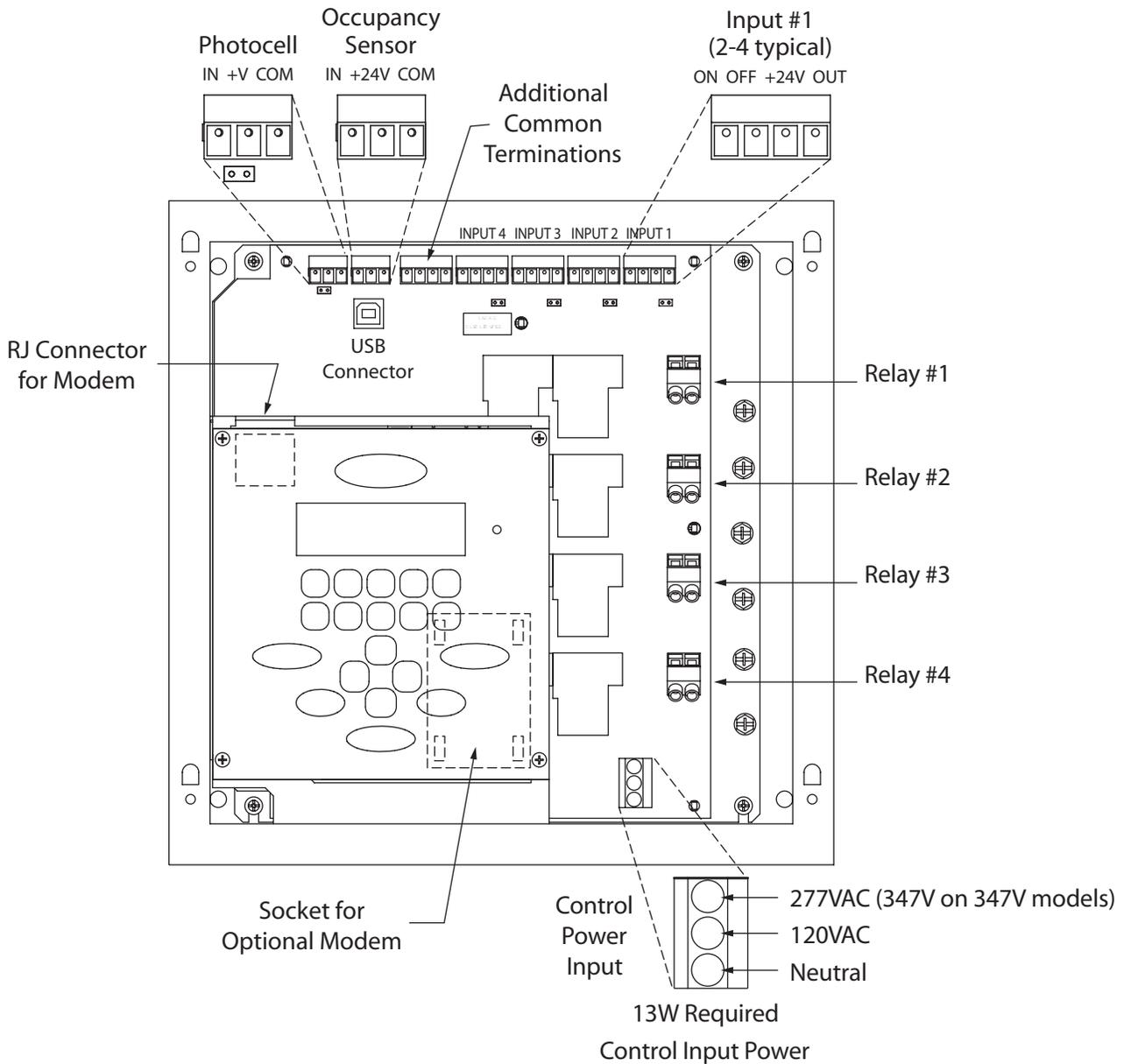
Input Power Requirements

Your relay cabinet has a finite amount of power which it can supply to all inputs and connected devices. This topic is discussed in detail in the following section titled "Power Requirements" Please make sure that you do not exceed the amount of available power or damage to your relay cabinet or connected devices may occur.

Switch Input Schedule

Input			Switch Circuits		
TB# Input #	Jumper	Wire Labels	Description	Switch Type	Action Type
1	OFF				
2	OFF				
3	OFF				
4	OFF				
Photocell (PC)	OFF				
Occupancy (Occ)	ON				

Low Voltage Input Terminals & Connections



Each of the low voltage inputs has different wiring requirements. However, this section is designed to give you a brief introduction to the inputs and sections later in this manual give detail as to the specific wiring based on each connection type.

Each Input has a four position screw terminal. The terminal can be pulled off its base for ease of wiring. The pin assignments are shown in the figure above. The terminal labeled LED Out is used to drive an LED or pilot lamp on the switch or other annunciating device if one is available. This output is rated at 24Vdc and xmA maximum.

Each input has an associated 2 pin polarity header. This header is shipped from the factory un-jumpered. Please reference the illustrations in this section for the appropriate configuration of this jumper. Generally, if you are supplying voltage to trigger the input, the jumper should remain in it's default state, OFF.

General Requirements for connecting device to Low Voltage Inputs

- Step 1:** Connect leads per wiring diagram as illustrated in the figure below.

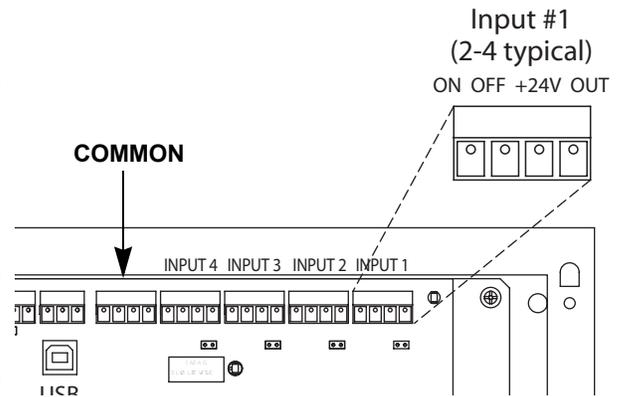
- Step 2:** Twist strands of each lead tightly (making sure that there are no stray strands) and push firmly into appropriate plug connector location.
- Step 3:** Tighten the screws on the plug connector—making sure that no bare conductor is showing.
- Step 4:** Plug the connector back onto the control module with the screws facing the front and the wires coming out of the connector towards the top of the cabinet.

Connecting Low Voltage Switches

Your EZ-MAX relay panels has (4) inputs which can be used to connect low voltage inputs.

Leviton recommends using 18 gauge wire for the low voltage connections.

Each Input has a four position screw terminal. The terminal can be pulled off its base for ease of wiring. The pin assignments are shown in the figure to the right. The terminal labeled LED Output is used to drive an LED or pilot lamp on the switch, or other annunciator panel as may be available. The output is active low with an open collector output. It is capable of sinking up to 0.04 amps.



Both Maintained and Momentary type switches can be used. Although they are wired the same, the input has to be configured accordingly for the switches to work as expected (See Define Switch Types within the Configuration section). The figure below illustrates wiring for both switch types and both polarity settings.

NOTE

When using Leviton Low Voltage Switches, use the factory default, polarity jump off and +24 volt connection.

Step 1: Connect leads per the diagram above and as follows:

- ON = Output from Switch, indicates when to turn lights on/off if in momentary operation, or ON when switch pressed, OFF when switch released in a maintained operation, or ON if in Momentary On/Off mode. (ON & OFF inputs must be used for this mode. This is the mode used when using a GE style switch.
- OFF = Output from Off switch when in Momentary On/Off Mode
- +24V = +24V DC power to device
- LED = LED on device or other annunciator

Step 2: Twist strands of each lead tightly (making sure that there are no stray strands) and push firmly into appropriate plug connector location.

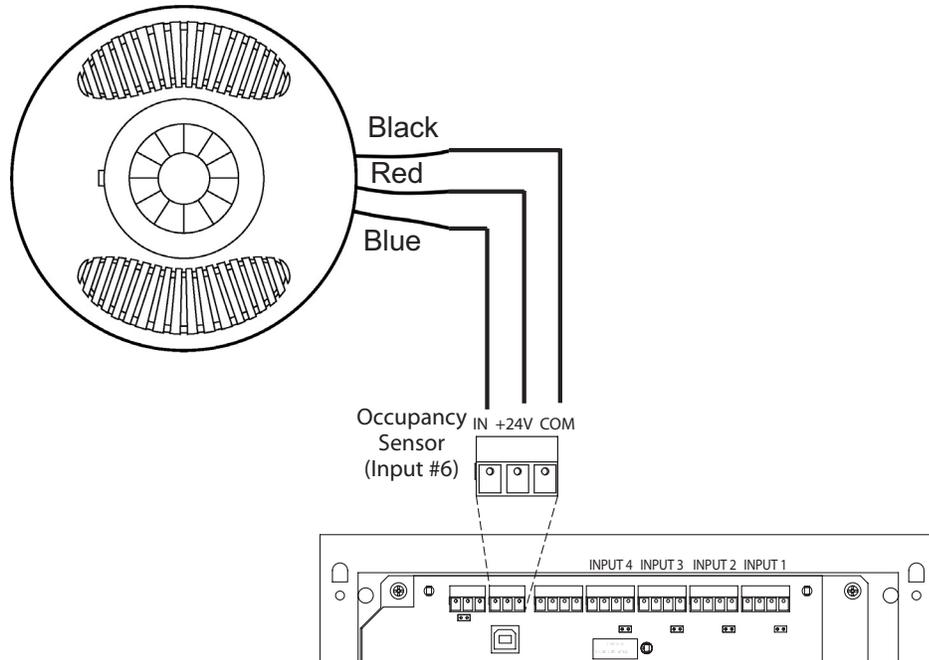
Step 3: Tighten the screws on the plug connector—making sure that no bare conductor is showing.

Step 4: Plug the connector back onto the control module with the screws facing the front and the wires coming out of the connector towards the top of the cabinet.

Occupancy Sensors

Your EX-MAX relay cabinet has (1) dedicated Occupancy Sensor input. This should be the first place you connect an Occupancy Sensor. If more sensors are required for your project, they may be connected to any of the other (4) switch inputs. Wiring for both styles of input is similar, however, the switch inputs #1-#4 do not have a common terminal so you must use the common terminal block for common connections.

Step 1: Connect leads per wiring diagram below.



Occupancy Sensor Termination using Dedicated Occ Sensor Terminal

- Step 2:** Twist strands of each lead tightly (making sure that there are no stray strands) and push firmly into appropriate plug connector location.
- Step 3:** Tighten the screws on the plug connector—making sure that no bare conductor is showing.
- Step 4:** Plug the connector back onto the control module with the screws facing the front and the wires coming out of the connector towards the top of the cabinet.

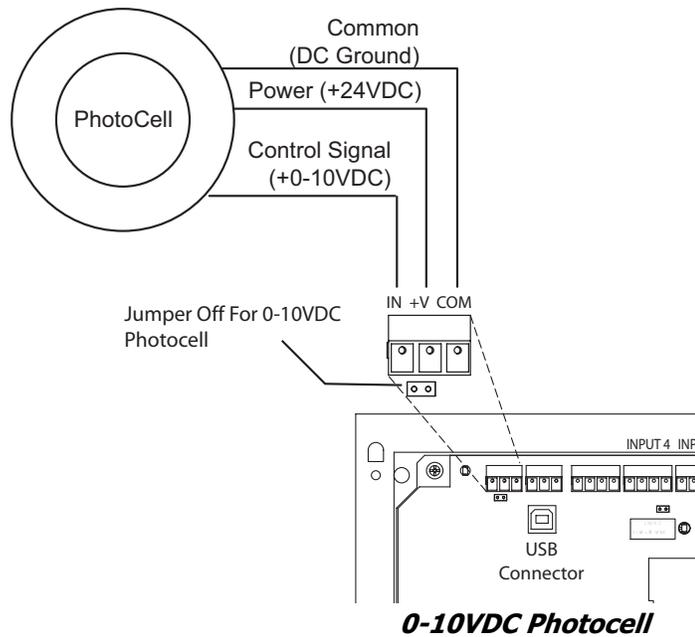
Photocells

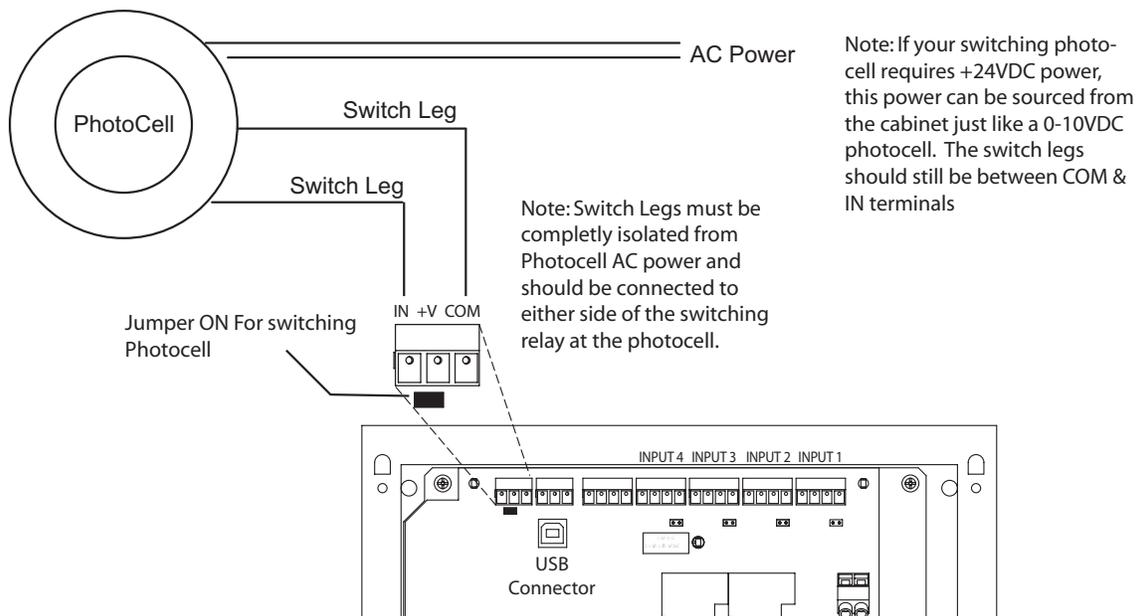
Your EX-MAX cabinet is capable of supporting the following types of photocells:

- Switched Photocell (On/Off, trigger point set at photocell) connected to the dedicated photocell input
- 0-10V Photocell, connected to the dedicated photocell input
- Switch Photocell connected to one of the switch inputs
- 0-10V Photocell connected to one of the switch inputs

If you're using a photocell, you should have it connected to the dedicated input first prior to connecting it to any of the other inputs.

Step 1: Connect leads per wiring diagram as illustrated in one of the figures below:



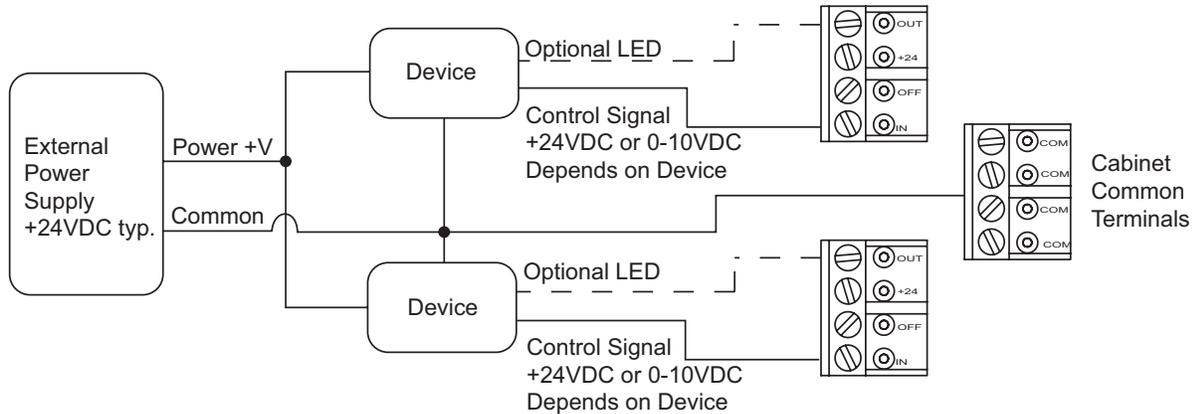


Switching Photocell

- Step 2:** Twist strands of each lead tightly (making sure that there are no stray strands) and push firmly into appropriate plug connector location.
- Step 3:** Tighten the screws on the plug connector—making sure that no bare conductor is showing.
- Step 4:** Plug the connector back onto the control module with the screws facing the front and the wires coming out of the connector towards the top of the cabinet.
- Step 5:** If using a switched photocell, make sure that the jumper below the connector is in the "ON" position.

Wiring with an External Power Supply

When needed, an external class 2 power supply can be used to supply power to Low Voltage devices connected to the low voltage inputs. When this is required, wire the system by following the diagram below.



Using an External Power Supply

You must consider the following when using an external power supply:

- Use the external supply for +24V (or other required device) and common to the devices
- Any return from a device which is connected to a switch input must not exceed +24VDC.
- Connect the common from the external supply to the common of any switch input
- Use the device output (Control Signal) to the "IN" terminal of the respective switch input
- Use the "OUT" terminal from the switch input for device feedback, like a low voltage switch LED
- DO NOT connect the +V of the external supply to any of the +24V terminals of the relay panel. This will nullify the Class 2 rating of the power supplies.

Power Considerations for Control Systems

The control system should be carefully planned out to take into consideration these important issues:

- Power Supply for connected devices
- Wire Size for Power Runs

On systems where full factory drawings have been provided, our Applications Engineering department has already managed these calculations for you so you need only follow the instructions on the system drawing. However, on any installation where factory drawings were not provided, the information contained within this chapter must be followed to ensure that all of your devices operate properly and without over-current failures or complete inoperability.

NOTE

The contents of this chapter contains information which applies to many Leviton products and is not necessarily limited in scope to just the product which included this manual. As such, there may be information in this chapter which is not relevant to your particular installation. Please overlook this. If you have questions about ANY information contained herein, please immediately contact our Technical Services Department prior to proceeding with installation.

Terminology

Please review these definitions which are used throughout this chapter:

- *Power Supply* or *Supply* - references a device which supplies power to other devices
- *Power Control Device (PCD)* - refers to a device which controls power. Examples of Devices in our product line which control power our dimming racks, relay panels, A-2000, i-series e, Z-MAX, etc. Generally PCD's also supply a certain amount of power to connected low voltage control devices
- *Control Devices* or *Low Voltage Control Devices* or *Device* - these terms all refer to a control devices which is connected to a Power Control Device (PCD.) These devices could be simple low voltage switches, Occupancy Sensors, or D8000 control stations.
- *Luma-Net* - is one of our network lighting control protocols. Luma-Net is an RS-485 based control protocol used by D8000 & D4200 control devices. Many of our PCD (Power Control Device) products have a direct data connection for a Luma-Net device. All Luma-Net Control Devices require power in one form or another. This power generally accompanies the data wires.
- *Unit Load* - (1) Unit load is defined as 25mA, or 0.025A. It is an arbitrary definition defined by Leviton and was created to simplify power calculations.

Power Requirements & Maximum Run Length

Each Control Device used in your system has a different load (draw) and each PCD's can support a different total load (supply.) The steps although at times involved for determining the total load of your network and verifying that the supply is sufficient are quite simple--or at least logical:

- Step 1:** Determine the maximum supply current of your supply, be it a PCD or other Power Supply. Convert this available to Unit Loads if necessary.
- Step 2:** Sum the required load of each Control Device, expressed in unit loads

Step 3: Verify that the Sum from Step 2 \leq the maximum available power from your supply in Step 1.

- If this verification fails, that is the Sum of required loads is $>$ than the available supply, either use an external power supply or reduce the number of control devices. If this condition occurs, contact our Technical Services department for help.

NOTE One Unit Load = 25mA = .025A

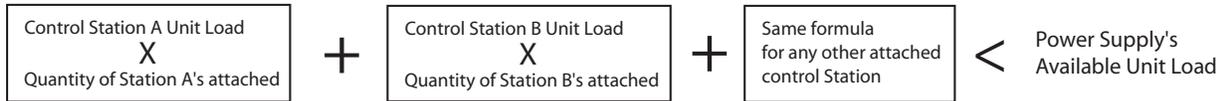


Figure 15 - Load Rating Verification Formula

Power Control Devices - Available Supply Current

The Z-MAX cabinets are designed to be able to power external control loads from the internal power supply. See the table below for the available power from each cabinet.

Power Control Device (PCD)	Maximum # of Unit Loads	Supply Voltage	Power Control Device (PCD)	Maximum # of Unit Loads	Supply Voltage
a-2000D, 12 Circuit, Standard Power Supply	52	12VDC	Z-MAX 8 Cabinet	20	24 VDC
a-2000D, 18 Circuit, 277V, Standard Power Supply (discontinued product)	49	12VDC	Z-MAX 24 Cabinet	20	24 VDC
a-2000D, 24 Circuit Standard Power Supply	46	12VDC	Z-MAX 48 Cabinet	20	24 VDC
a-2000D, 12 Circuit, Large Power Supply	120	12VDC	Z-MAX Switch Input Board (accessory to Z-MAX 24 & 48 size Cabinets)	20	24 VDC
a-2000D, 18 Circuit, 277V, Large Power Supply	117	12VDC	EZ-MAX	6	24 VDC
a-2000D, 24 Circuit Large Power Supply	114	12VDC	i Series e (all Racks)		
NPC – XP	49	12 VDC 24 VDC			
NPC – DHV	N/A	N/A			
NPC – DLR	49	12 VDC 24 VDC			

Power Supply Maximum Unit Loads

NOTE

The sum of all devices connected to all power output terminals can not exceed the Maximum number of Unit Loads for your cabinet.

Control Devices	Unit Load @ 12VDC	Unit Load @ 24VDC	Station Type	Unit Load @ 12VDC	Unit Load @ 24VDC
D4200 LCD	5	2	Z-MAX Digital Switch, 1 Button	N/A	0.6
D4200 Entry (Button),	2	1	Z-MAX Digital Switch, 2 Buttons	N/A	0.8
D4200 Room Combine Station	3	1	Z-MAX Digital Switch, 3 Buttons	N/A	1.0
D4200 Remote I/R	2	1	Z-MAX Digital Switch, 4 Buttons	N/A	1.1
Luma-Net Hub	6	3	Z-MAX Digital Switch, 5 Button	N/A	1.3
D8000 LCD	3	2	Z-MAX Digital Switch, 6 Button	N/A	1.0
D8000 Entry (Button)	2	1	Z-MAX Digital Switch, 8 Button	N/A	1.1
D8000 Slider	2	1	Z-MAX Digital Switch, 10 Button	N/A	1.3
D8000 Key switch	1	1	1 Button Low Voltage Switch		0.6
D8000 Port (LumaEdit, A/V, etc.)	2	1	2 Button Low Voltage Switch		0.9
D8000 Combine/Closure (Advanced)	11	10	3 Button Low Voltage Switch		1.2
Infrared Only Occupancy Sensor	N/A	1.2	4 Button Low Voltage Switch		1.5
Ultrasonic Only Occupancy Sensor	N/A	1.2	5 Button Low Voltage Switch		1.8
Multi-tech Occupancy Sensor	N/A	1.2	6 Button Low Voltage Switch		2.1
Ultrasonic 2-Way Occupancy Sensor	N/A	1.4	8 Button Low Voltage Switch		2.7
Multi-tech 2-Way Occupancy Sensor	N/A	1.4	10 Button Low Voltage Switch		3.3
Photocell, odc0p-00w			Photocell, pcatr-000		
Photocell, pcind-000			-		
Photocell, pcout-000			-		
Photocell, pcsky-000			-		

Control Device Loads

Power Wire - Run Length

The maximum total run length of each segment is a function of the total number of unit loads. A run becomes too long when the voltage drop, due to wire size and run length, increases to a point where the station does not have sufficient voltage to operate. The maximum run length, in feet, based on the total number of unit loads is shown below:

NOTE (2) Tables are provided, (1) @ 12VDC and (1) at 24VDC. Make sure that you use the correct table!

	14 AWG (Feet)	12 AWG (Feet)	10 AWG (Feet)
10 Unit Loads	1905	3000	4800
20 Unit Loads	950	1500	2400
30 Unit Loads	630	1000	1600
40 Unit Loads	475	750	1200
50 Unit Loads	380	600	960
60 Unit Loads	315	500	800
70 Unit Loads	270	425	685
80 Unit Loads	235	375	600
90 Unit Loads	210	330	530
100 Unit Loads	190	300	480
110 Unit Loads	170	270	435
120 Unit Loads	155	250	400

Wire Size vs. Length of Runs - Power Wiring @12 VDC

Modem Installation/Phone Line Connection

Your Relay Cabinet has an optional modem which can be installed. The part number for this modem is rac00-mod and must be ordered separately from the cabinet. When the modem module is installed, the additional functionality is available:

- Touch-Tone Remote Control from a telephone (TIM) - In this mode, you dial in to the relay cabinet from a touch-tone telephone and activate/deactivate relays by using different combinations of button presses on your telephone
- Remote Programming via computer Modem - In remote programming mode, you can dial in to your relay panel from a computer which operates our Z-MAX configuration software. Once connected, the configuration software can be used to configure your cabinet remotely.

Installation of a modem is a two step process,

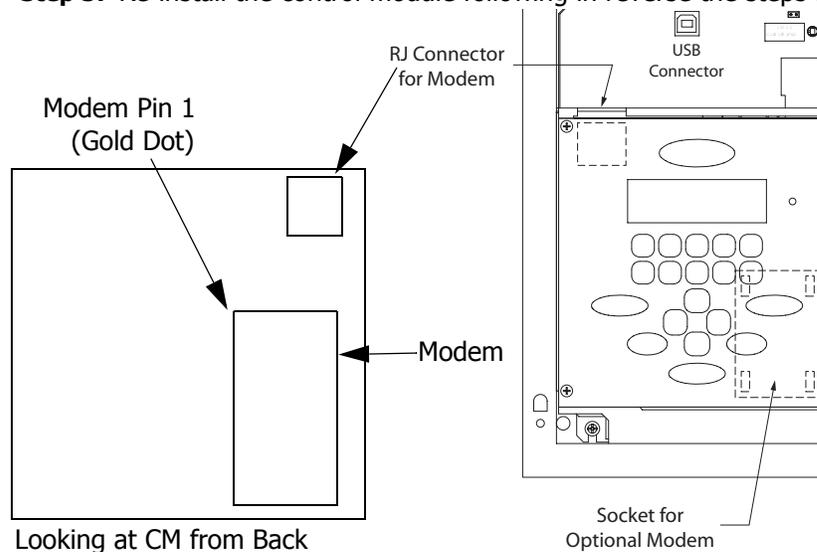
- Step 1:** Install the Modem Module
- Step 2:** Connect the Telephone Line

Modem Module Installation

NOTE

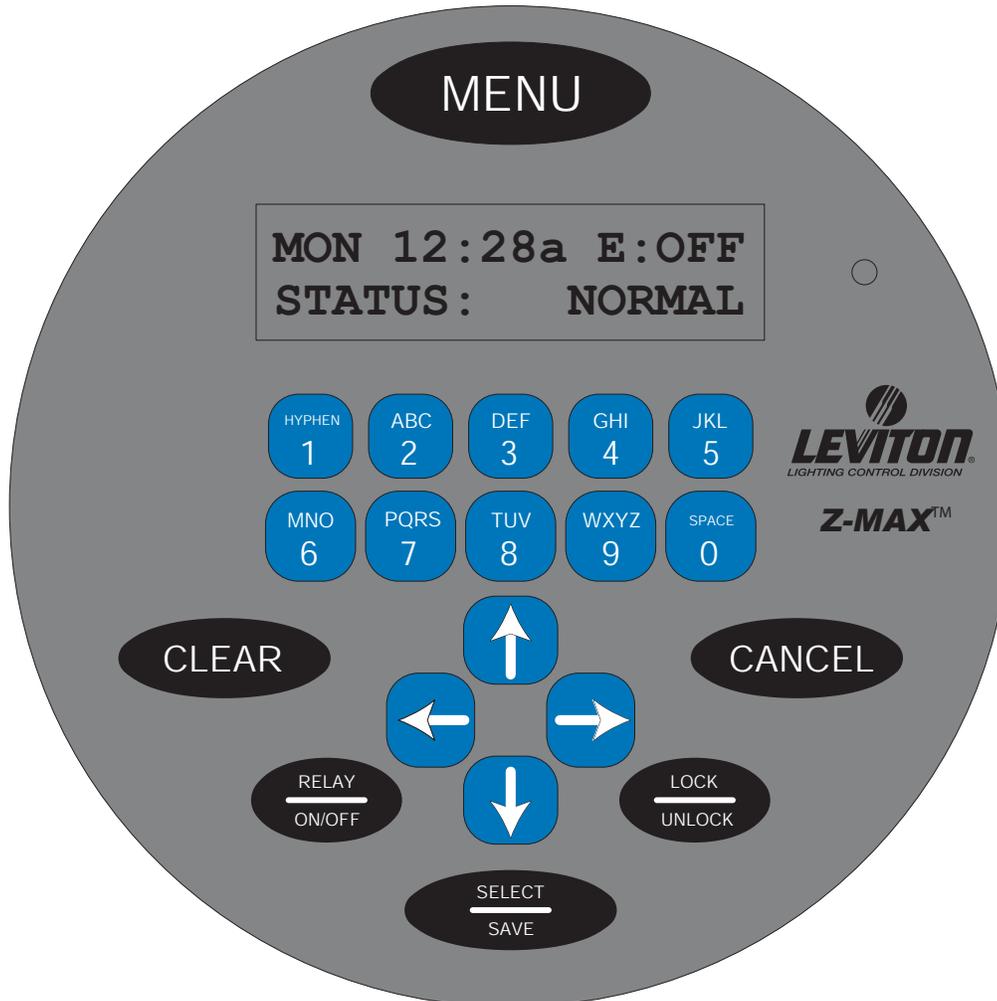
Prior to touching any part of any electronics, make sure that you first touch any grounded metal surfaces so that you can discharge any build up of static electricity.

- Step 1:** Loosen approximately 2 turns the right two screws of the keypad/control module
- Step 2:** Remove the left two screws of the keypad/control module
- Step 3:** Carefully lift up and turn around the control module, exposing the modem socket.
- Step 4:** Remove the modem module from it's packaging, and install into the modem socket. Reference the drawing below which shows the correct orientating of the modem.
- Step 5:** Re-install the control module following in reverse the steps followed for removal.



Operation

This section discusses how your cabinet can be operated from the front panel, and the actions that can be accessed from the front panel. It's designed to give you a general overview of the functions that can be accessed from the front panel. The next section, Configuration, deals with the specific configuration and programming of your cabinet.



LCD Display

The LCD display helps you determine that the system is operating properly as well as providing an easy and intuitive means of programming the panel.

When the system is operating normally the top line of the LCD display shows the current day, time and the status of the event scheduler. The second line shows the status of the four relays in your cabinet.

Here is how you decipher the screen:

- Day and Time - The clock can display in either 12 or 24 hour mode.
 - Daylight Savings settings for 12 Hour Clock
 - Lower case "a" or "p" indicates that daylight savings is inactive
 - Uppercase "A" or "P" indicates that daylight savings is active
 - Daylight Savings settings for 24 Hour Clock
 - Lower case "s" indicates that daylight savings is inactive
 - Lower case "d" indicates that daylight savings is inactive
- Event Scheduler
 - "E:" will either show
 - OFF - Indicating that the event scheduler is turned off
 - a number indicates the last event that occurred
- Bottom Line - shows the current status of the four relays in your panel. Either On, or Off. An asterik (*) adjacent to any relay indicate that that particular relay is in an override state. The override could be either a timed override or other front panel override.

Programming/Function Buttons

The several programming buttons are located around the display:

- **MENU.** Allows the user to navigate through the system
- **SELECT/SAVE.** Causes a new readout on the LCD display.
- **CANCEL:** Returns to the previous menu
- **CLEAR.** Clears the text or value that was just entered.
- **RELAY ON/OFF:** Button that allows a user to turn a relay ON or OFF, execute a timed override, or execute a permanent relay override.
- **LOCK/UNLOCK:** Locks and Unlocks the user interface.

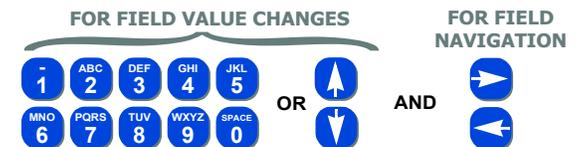
NOTE Many parameters can be modified using the LCD screen and a password (setup code), however these modifications should be made by a qualified factory technician.

Navigation Buttons

The lower center four buttons, used for navigation of menu items, are **LEFT** ← , **UP** ↑ , **DOWN** ↓ , and **RIGHT** → . Generally, the **LEFT** ← and **RIGHT** → buttons are used to navigate between 'fields' on the screen, whereas the **UP** ↑ and **DOWN** ↓ buttons generally change values in the fields.

The  keys are used for alpha-numeric data entry.

NOTE After approximately 30 seconds of inactivity on any menu screen, the LCD will revert back to the status screen.



Arrow Key & Alpha-Numeric Key Functions

Turning Relays On/Off & Relay Overrides

Pressing the **Relay** Button enters relay control mode. When in this mode, the following keys can be used

- Use   to adjust the relay number (number keys can also be used)
- Use   to adjust the relay state, UP for ON, DOWN for off.
- Pressing   (up arrow twice) puts the relay into an override ON state. When in this state, no other relay panel function can alter the state of this relay other than the front panel.
- Pressing   (down arrow twice) puts the relay into an override OFF state. When in this state, no other relay panel function can alter the state of this relay other than the front panel.
- Pressing **Select** when in either override on or off mode will allow you to enter a time and then activate Timed Override mode by pressing **Select** again. A timed override forces the relay into the ON (or off) state for the elapsed period of time. Once the time expires, the relay returns to the function indicated by other controlling devices, or off if none are indicated.

To Turn a Relay On or Off

Step 1: Press **Relay**

Step 2: Use   to adjust to the relay number you want to effect. Use   to turn the relay off or on

```

R L Y :   0 1           O N
P R E S S   U P   F O R
  
```

Step 3: Press **Menu** when complete to return to the main screen, or repeat Step 2

To Override a Relay On or Off

Step 1: Press **Relay**

Step 2: Use   to adjust to the relay number you want to effect. Use   to override the relay ON, or   to override the relay OFF

```

R L Y :   0 1   O V R D E   O N
P R E S S   U P   F O R
  
```

Step 3: Press **Menu** when complete to return to the main screen, or repeat Step 2

To Override a Relay On or Off for a specified time

Step 1: Press **Relay**

Step 2: Use   to adjust to the relay number you want to effect. Use   to override the relay ON, or   to override the relay OFF

```
R L Y : 0 1 O V R D E O N
P R E S S U P F O R
```

Step 3: Press **Select** to access the override timer

```
R L Y : 0 1 O V R D E O N
O V R D T I M E R = 0 0 : 0 0
```

Step 4: Use     
    

```
R L Y : 0 1 O V R D E O N
O V R D T I M E R = 1 5 : 0 0
```

Step 5: Pressing **1 5 0 0** would result in the above screen, entering an override time of 15 minutes.

Step 6: Press **Select** a second time to set and start the timer

Step 7: Press **Menu** to return to the main screen, or repeat steps 2-6.

Determine the Firmware/Software Build

Knowing the current version of your the operating software in your cabinet is helpful when communicating with the factory about problems with your cabinet or checking against the software version on the website to ensure that you have the latest software.

NOTE Leviton recommends checking our website www.leviton.com periodically to ensure that you always have the most current software your relay cabinet.

The Software version is one of the available menu options directly off of the main menu

Step 1: Press the **Menu** button

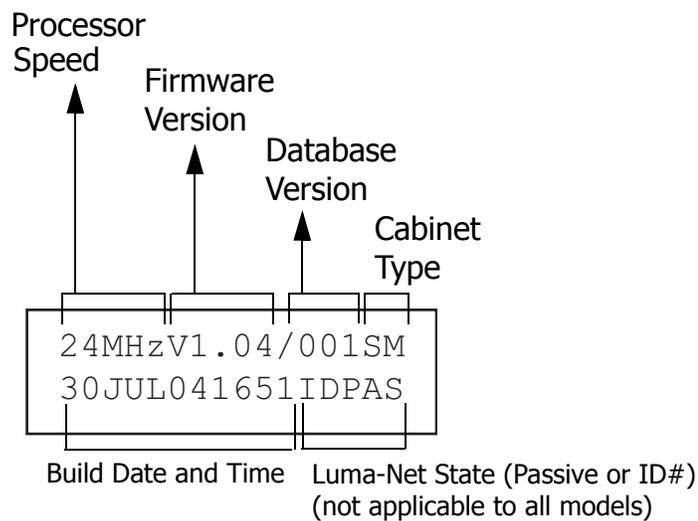
Step 2: Press  until the display reads:

```
MAIN MENU SELECT
SOFTWARE BUILD
```

Step 3: Press Select/Save

The display will now show you the version of firmware the unit is running.

How to Decipher the software Build:



Step 4: Pressing  in this screen will show you similar screens, indicating similar software/hardware information regarding other components in your relay cabinet. This information may be useful and used by our Technical Services department when diagnosing problems with your relay cabinet

, Determine the Firmware/Software Build

Factory Defaults

If it ever becomes necessary to restore the factory defaults and begin the programming from a clean slate, simply:

Step 1: Press the **Menu** Button

Step 2: Press  until you get to the Configuration Screen

Step 3: Press Select/Save

Step 4: Press  until you get to the Factory Defaults Screen

Step 5: Press Select /Save

Step 6: Press  once and the N will change to a Y.

FACTORY DEFAULTS
INITIALIZE ? N

Step 7: Press Select/Save

NOTE

Resetting to factory defaults will erase any programming or configuration you've completed. Any parts of this programming you desire to use after the rest will have to be recreated from scratch programming in your system.

, Factory Defaults

Setting the Date, Time, & Astronomical Time Clock

The menu structures for the set date, time, and astronomical clock are as follows:

```
MON 02:37P E:001
OFF ON ON OFF
```

```
MAIN MENU SELECT
TIME/DATE/ASTRO
```

```
TIME/DATE/ASTRO
SET TIME & DATE
```

```
TIME/DATE/ASTRO
SET ASTRO CLOCK
```

Set the Date & Time

Step 1: Press the Menu button

Step 2: Press  until the display reads as below then press Select/Save:

```
MAIN MENU SELECT
TIME / DATE / ASTRO
```

Step 3: To set the time, press UP until the display reads as below, then press Select/Save:

```
TIME / DATE / ASTRO
SET TIME & DATE
```

Step 4: You now will see the screen below:

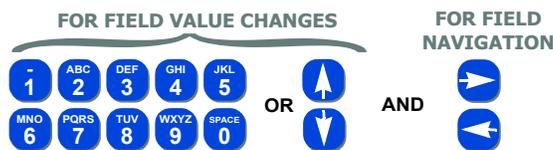
```
08 : 33 PM FRI 12H
04 / 15 / 2005 D : OFF
```

From this screen, the following can be edited

- Hours
- Minutes
- AM/PM
- 12H or 24H
- Month
- Date
- Year

- Daylight Saving Time

The editable field will be flashing. As always, use the following keys



NOTE

To the right of the time field, the day of the week is displayed. This field is not editable and is set based on the date setting.

NOTE

When 12 hour mode is active, the AM/PM field is active for editing. If Daylight Savings Time is active, the field will display in upper case characters. If Daylight Savings Time is inactive, the field will display in lower case characters. If 24 hour mode is active, the AM/PM field is replaced with an "s" or a "d" and is not editable. Instead, the value is determined by the Daylight Savings Time setting. The "s" indicates standard time (Daylight Savings Time inactive); the "d" indicates that Daylight Savings Time is active.

NOTE

If Daylight Savings time is active, the am/pm will be displayed in Upper class letters.

NOTE

If you exit from this menu via the MENU or CANCEL button, all changes will be lost.

Set the Astronomical Time Clock

The Z-MAX Scheduler allows you to turn lights on or off in relation to sunrise and sunset. For example, yard lights can be set to turn on an hour before sunset, and turn off an hour after sunrise, according to the time of year.

The astronomical time clock (Astro Time) calculates the time of sunrise and sunset for every week of the year depending on the location of the installation. To use Astro Time you must know the approximate latitude (in degrees) (See Appendix A for various cities in North America) of the controller's location, as well as the present time of sunrise and sunset (often found in the daily newspaper). Visit www.srrb.noaa.gov/highlights/sunrise/sunrise.html for a complete listing of Latitude, Longitude, Sunrise and Sunset information.

NOTE

Sunrise and Sunset times must be entered as Standard Time. Therefore if you are in the middle of daylight savings time, you must adjust the sunrise and sunset times by 1 hour (2 Hours if European Daylight Savings Time) to bring them back to Standard Time

To set up the astronomical clock:

Step 1: Press the Menu button

Step 2: Press  until the display reads



*then press **Select/Save***

Step 3: To set the time, press UP until the display reads

```
TIME / DATE / ASTRO  
SET ASTRO CLOCK
```

then press **Select/Save**

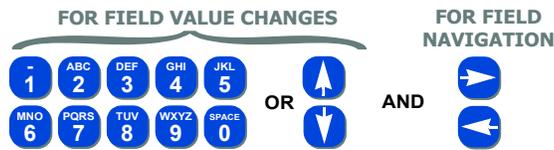
Step 4: You now will see the screen below:

```
SR = 07 : 01 A .  
SS = 08 : 25 P LAT = 45
```

From this screen, the following can be edited

- SR=Sunrise time of any day this week
- SS=Sunset time of any day this week
- LAT=approximate Latitude of the current location (see appendix)

The editable field will be flashing. As always, use the following keys



, Setting the Date, Time, & Astronomical Time Clock

Configuration the Simple Way

Your relay panel has two modes of configuration, Simple Mode and Advanced Mode. The default configuration mode is called Simple Mode and is designed to be a less complex streamlined mode for configuring and operating your relay panel. Simple mode differs from advanced mode in that many of the advanced features and configuration items have been removed from the menu structures. Additionally, all configuration is more question and answer based allowing for more self-navigation without dependence on the this manual.

NOTE

Changing Configuration from either simple mode to advanced mode, or from advanced mode to simple mode will never result in loss of configuration information. This can be used to your and the end-users advantage by first making all required configuration settings, then changing the panel configuration mode to Simple Mode. This will allow the user to make basic changes, but prevent them from making potentially dangerous configuration changes.

The following configurations and configuration changes can be performed when the panel is in simple mode:

- Setup the Time Clock Date, Time, and Astronomical Time Clock Settings
- Add & Change Scheduled Events
- Configure Inputs, Devices connected to inputs, and relays assigned to inputs
- Change Configuration Mode

All other configuration options must be defined in Advanced Configuration Mode.

Panel Configuration in Simple Mode

Configuration of your relay panel by simple mode is really a simple process. (pun intended) The steps are as follows:

Step 1: Install your cabinet and terminate all power and control wiring

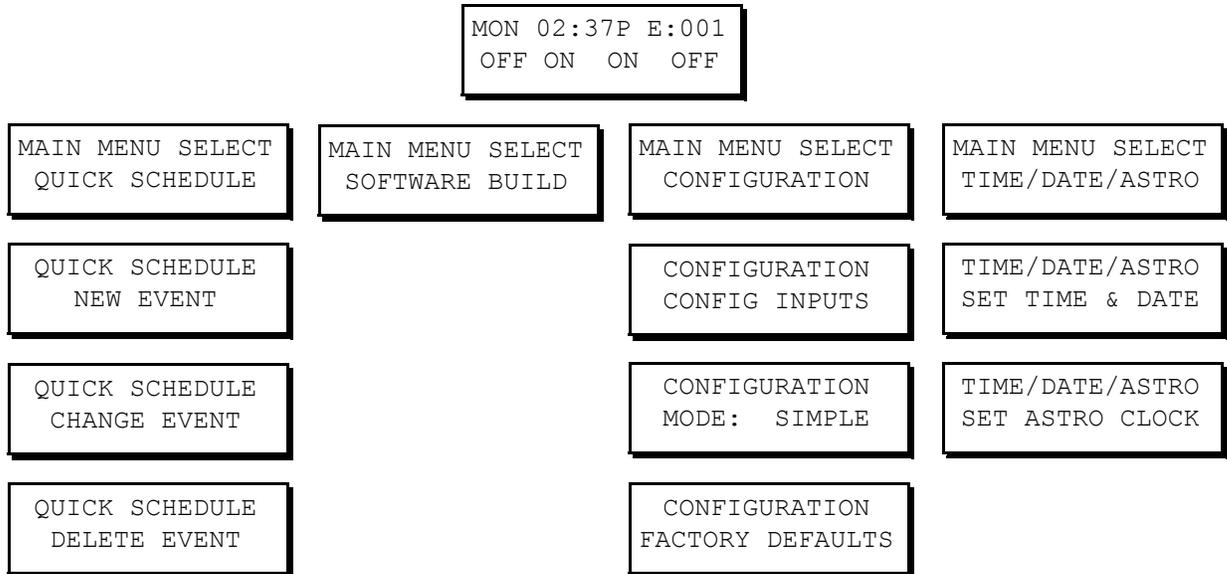
Step 2: Configure your inputs

Step 3: Configure any scheduled events

These three steps of course will vary greatly depending upon your particular installation so generalized instructions are provided here to help you learn what some of the functionality is. The next few pages will show you how to configure a low voltage switch, a photocell, and then an occupancy sensor. That will cover step 2. Step 1 has already been covered in prior chapters. Step 3 illustrates the methods used to create and schedule events, or rather relays turning on or off at a specific time.

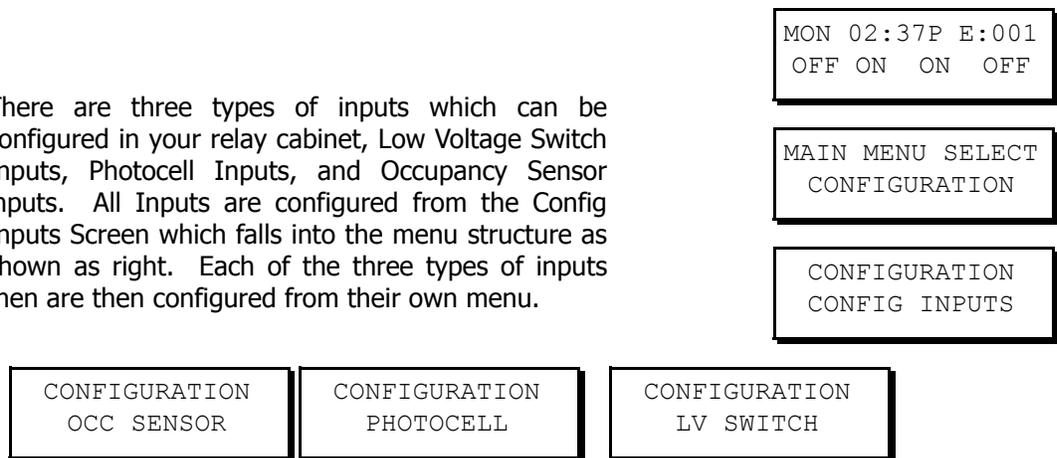
Simple Mode Menu Structure

For re reference as you are navigating through the menus, please find below the complete simple mode menu structure:



Configure Inputs

There are three types of inputs which can be configured in your relay cabinet, Low Voltage Switch Inputs, Photocell Inputs, and Occupancy Sensor inputs. All Inputs are configured from the Config Inputs Screen which falls into the menu structure as shown as right. Each of the three types of inputs then are then configured from their own menu.



L**ow Voltage Switch Inputs**

Configuration of this type of input is used when you have some type of switch or other triggering device connected to one of the inputs from which you desire to turn on or off relays. Several different behaviors are available for configuring of this type of input.

```

CONFIG INPUTS
LV SWITCH

```

Step 1: From the main menu, navigate to Configuration, Config Inputs, then LV Switch.

NOTE

Remember that when navigating menus, pressing **Select** always selects the current menu, and pressing **Cancel** always navigates to the previous menu.

Step 2: Enter the input number of the switch input you wish to configure. This is determined by looking at the terminal on your cabinet to which the switch is connected. After entering the number, press the **Select** key

```

ENTER LV SWITCH
INPUT NUMBER : 002

```

Step 3: The relay panel now asks for a behavior:

```

SELECT BEHAVIOR
MOMENTARY

```

Your selection for the behavior of your switch will be determined by the type of switch you have and how you desire it to operate. The available behaviors are as follows:

- Momentary - The first press turns on the assigned relays, the second press turns off the assigned relays
- Momentary Timed - Upon the first press, turn on the assigned relays for the specified amount of time. When the time elapses, control of the relays is relinquished to other controls (which generally results in the relays turning off. If the switch is pressed a second time, the timer is reset.

NOTE

To specify the amount of time used for timed inputs, change configuration mode to Advanced, go to System Setting under the configuration menu, then Global Defaults and change the **XXXX** value.

- Maintained - Maintained inputs turn On the relays while the switch is pressed, then turn off the relays when the switch is released
- Preset Off - Turns off all relays in the current preset group. See "Switch/Discrete Inputs" on page 181.
- Preset On - Turns on all relays in the defined preset group. See "Switch/Discrete Inputs" on page 181.

- Momentary On/Off - Momentary On/Off is used with switch inputs connected to switches that have separate on & off outputs and in coordination with our switch input adapter cards or switch input adapter kits. These kits provide both the on and off signal on the same switch leg AND require the switch input setting to be defined as Momentary On/Off

Step 4: This optional step only applies when using the Preset On/Off Types

```
A S S O C I A T E   P R E S E T
N E W   N U M B E R :   N O
```

- Z-MAX panels use associate preset groups to define the group of buttons that are all a part of the preset group. All inputs that are part of the same group number work together and only one of the inputs can be active at any one point in time.
- If you have already defined a number for the group to which this input belongs, select **NO** at this prompt and select the number.
- If you have not defined a associate preset group number or need to create a new group, select **YES** at this prompt and then enter the new number.

Step 5: Add the relays which should be controlled by this input by using the following keys

- Use   to increase or decrease the relay number
- Use   to select any of the possible three actions for this relay
 - ON - turns this relay on when the switch is pressed
 - OFF - turns this relay off when this switch is pressed
 - IGNORE - instructs the relay panel to not change the state of this relay when the switch is pressed

Step 6: Press **Save/Select** to save your settings and complete configuration of this input.

Photocell Configuration

Photocells are used with relay panels to control the switching on and off of relays relative to the amount of light received by the relay panel. Two types of photocells are supported by your relay panel, called switching and 0-10V. Switching photocells interact with your relay panel just like a switch. They output a low voltage signal to the relay panel when the amount of light received by the photocell crosses a pre-set threshold. 0-10V photocells output 0-10V, proportional to the amount of light received. Switching photocells must be configured to trip at a specific level which is also appropriate for your project. 0-10V photocells must be optimized for the range of lighting levels to which the photocell is intended.

Step 1: Using the menu navigation buttons, navigate the menus to Configuration, Config Inputs, then to Photocell, and press **Select/Save**

```

CONF I G U R A T I O N
P H O T O C E L L
    
```

Step 2: Enter the Input Number. Usually a photocell is connected to the PhotoCell input and the screen would read as follows

```

E N T E R   P H O T O C E L L
I N P U T   N U M B E R : P C
    
```

Step 3: Select Photocell Behavior

```

S E L E C T   B E H A V I O R
F O R C E   O F F
    
```

- Force Off - The photocell will be turning off relays when the input receives voltage, usually indicating that the photocell is receiving more light. The trigger to turn on the relays must be from another source, like the scheduler or a switch. This application is useful for parking lot lighting which is turned on by the scheduler and off during the day.
- Force On/Off - The photocell will be turning on and off relays and no other source (at the current or lower priority level) will be able to alter this condition. This behavior is appropriate for applications where the photocell will be the only controlling source for the relay's.
- Force On - The photocell will only be turning on lights and some other control will turn off the lights. This behavior is appropriate when lights must be on when it's dark, but only turned off by a switch, building sweep, scheduler, switch, or other control device.

Step 4: Enter the delay time. This is the time between when the photocell triggers the action and the action actually occurs. Longer delay times are necessary when false triggering due to rapidly changing lighting conditions is likely.

```
ENTER TIME DELAY
DELAY TIME : 0 0 5
```

Step 5: Photocell type=0-10V

```
PHOTOCELL TYPE
TYPE : 0 - 1 0 V
```

Step 6: Enter number of fc per volt for your photocell. For example, if you have a photocell with range 0-100fc at 0-10V, that's 10fc per volt

```
PHOTOCELL
FC / VOLT = 0 1 0 V
```

Step 7: Enter fc trigger level, that is when the relays should turn "on", or rather the trigger point of the photocell

```
ENTER FOOTCANDLE
ON FC : 0 8 5 FC
```

Step 8: Add relays which should be controlled

```
ASSIGN RELAYS
RELAY 0 0 1 : YES
```

- Use  or  to increase or decrease the relay number
 - Use  to select any of the possible three actions for this relay
 - YES - turns this relay on (and/or off) when the switch the trigger point is crossed
 - IGNORE - instructs the relay panel to not change the state of this relay when the trigger point is crossed
- Step 9:** Press **Save/Select** to save your settings and complete configuration of this input.

Step 5: Photocell type=Switching

```
PHOTOCELL TYPE
TYPE : SWITCHED
```

Step 7: Add relays which should be controlled

```
PC RELAYS
RELAY 0 0 1 : ON
```

- Use  or  to increase or decrease the relay number
- Use  to select any of the possible three actions for this relay
- YES - turns this relay on (or off, depending on behavior) when the photocell activates
- IGNORE - instructs the relay panel to not change the state of this relay when the switch is pressed

Step 8: Press **Save/Select** to save your settings and complete configuration of this input.

Occupancy Sensor Configuration

Occupancy sensors are devices which sense when a person enters a particular room or area. Leviton's Occupancy Sensor's are designed for a variety of applications, using a variety of technologies which can be applied to your specific need. The Occupancy sensors which this relay panel is designed to work with are those which are powered by +24Vdc and provide a ~+24Vdc output when the covered area is occupied.

These instructions assume that your Occupancy Sensor is connected to the OCC input. If your Occupancy Sensor is connected to one of the other inputs, configuration will be similar.

Step 1: Using the menu navigation buttons, navigate the menus to Configuration, Config Inputs, then to Occ Sensor, and press **Select/Save**

```

CONFIG INPUTS
OCC SENSOR
  
```

Step 2: Enter the Input number to which your occupancy sensor is connected. If connected to the input labeled "Occ Sensor", the input number should be "OCC"

```

ENTER OCC SENSOR
INPUT NUMBER : OCC
  
```

Step 3: Enter the Behavior of the occupancy sensor

```

SELECT BEHAVIOR
MANUAL ON
  
```

The choices for behavior are as follows:

- Manual On - The occupancy sensor will turn off the assigned relays when the occupancy sensor indicates an occupied state. When the room become occupied, the relays will not be automatically turned on, instead, the user will have to manually turn on the lights from a wall switch or other input.
- Auto On - In this mode, the Occupancy Sensor will turn the assigned relays both on and off based on either an occupied or unoccupied stated indicated by the occupancy sensor

Step 4: If you desire a blink warn to be issued prior turn turning off the lights, the response to this question should be Yes. If not, the response should be No

```
ENTER BLINK WARN
ENABLED : YES
```

NOTE

A Blink Warn is not only advisable to keep people from suddenly being left in the dark but is also required by some authorities having jurisdiction. When blink warn is enabled, the lights will "blink" prior to actually being turned off. After the blink, the user can press the on button to cancel the off, otherwise, the lights will automatically turn off.

Step 5: Enter the time delay between when the occupancy sensor indicates an unoccupied state and the relays actually turn off

```
ENTER TIME DELAY
MINUTES : 000
```

Step 6: Assign Relays

```
ASSIGN RELAYS
RELAY : 001 YES
```

- Use  or  to increase or decrease the relay number
- Use  to select any of the possible three  actions for this relay
- YES - turns this relay on (and/or off) when the switch the trigger point is crossed
- IGNORE - instructs the relay panel to not change the state of this relay when the trigger point is crossed

Step 7: Press **Save/Select** to save your settings and complete configuration of this input.

Quick Schedule

The quick schedule menus are used to create a new event, change the time of an existing event, and delete an event. An event is an action which occurs at a time. For example, Relays 1, 2, & 4 turn ON at 7:30am is an example of an event which might be schedule in a venue where relays 1, 2, & 3 are connected to lobby lights, when doors open at 8:00am.

NOTE

In technical Z-MAX lingo, an "Action" is what actually occurs. In the case of the above example, the action is relays 1, 2, & 4 turning on. An "Event" is one scheduled occurrence of an action. In quick schedule programming, both actions and events are rolled into one seamless programming process.

To create a scheduled event using the quick scheduler:

Step 1: Press the **Menu** button and use  until the display reads

```

MAIN MENU SELECT
QUICK SCHEDULE
    
```

then press **Select**.

Step 1: Use  until the display reads

```

QUICK SCHEDULE
NEW EVENT
    
```

then press **Select**.

Step 2: Enter a name for your event

```

ENTER EVENT NAME
LIGHTS ON .
    
```

NOTE

Although not required, all events should be given a name which uniquely identifies both the event itself and gives some sort of indication of what the event does. This make modification of panel programming easy.

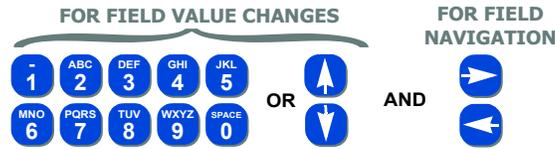
- Use      for alpha-numeric data entry, just like the keys on your cell      phone.

Step 3: Enter the time the event is to occur

```

ENTER EVENT TIME
07:30AM .
    
```

As always, use



Using combinations of the time entry and am/pm fields, there are a variety of ways to schedule the event:

- Using or in the am/pm field, will allow you to select
 - AM indicating in the morning
 - PM indicating in the afternoon
 - -SR indicating the specified hours:minutes before sunrise
 - +SR indicating the specified hours:minutes after sunrise
 - -SS indicating the specified hours:minutes before sunset
 - +SS indicating the specified hours:minutes after sunset

*When done entering the time, press **Select***

Step 4: Enter the days of the week on which this event is to occur

```

SELECT DAYS
MTWTFSS H1:OFF
    
```

- An uppercase day of the week indicates that the event will occur on that day.
- A lowercase day of the week indicates that the event will not occur on that day
- H1:ON indicates that the event will occur on any day which is part of the holiday schedule #1
- H1:OFF indicates that the event will not occur on days which are part of the specified holiday schedule

Step 5: Assign Relays

```

ASSIGN RELAYS
RELAY:001 ON
    
```

- Use or to increase or decrease the relay number
- Use to select any of the possible three actions for this relay
 - ON - turns this relay on when this event occurs
 - OFF - turns the relay off when this event occurs
 - IGNORE - instructs the relay panel to not change the state of this relay when this event occurs

Step 6: Press **Select/Save** to save your changes.

Advanced Mode Configuration

Additional "Advanced" configuration options are available in the advanced configuration menus of your EZ-MAX product. For additional information and instructions on these menus, please contact our Technical Services Department.

Additionally, you may find it helpful to review other Z-MAX product line documentation at www.leviton.com.





Warranty Information

Limited Warranty

Leviton Manufacturing Co Inc. warrants the products represented in this manual to be free of material and workmanship defects for a period of ten years after system acceptance or ten years after shipment from Leviton, whichever comes first.

This Warranty is limited to repair or replacement of defective equipment returned Freight Pre-Paid to Leviton Manufacturing at 20497 SW Teton Ave., Tualatin, Oregon 97062, USA. User shall call 1-800-959-6004 and request a return authorization number to mark on the outside of the returning carton, to assure that the returned material will be properly received at Leviton.

All equipment shipped back to Leviton must be carefully and properly packed to avoid shipping damage. Replacements or repaired equipment will be returned to sender freight prepaid, F.O.B. factory. Leviton is not responsible for removing or replacing equipment on the job site, and will not honor charges for such work. Leviton will not be responsible for any loss of use time or subsequent damages should any of the equipment fail during the warranty period, but agrees only to repair or replace defective equipment returned to its plant in Tualatin, Oregon.

This Warranty is void on any product that has been improperly installed, overloaded, short circuited, abused, or altered in any manner. Neither the seller nor Leviton shall be liable for any injury, loss or damage, direct or consequential arising out of the use of or inability to use the equipment. This Warranty does not cover lamps, ballasts, and other equipment which is supplied or warranted directly to the user by their manufacturer. Leviton makes no warranty as to the Fitness for Purpose or other implied Warranties.



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