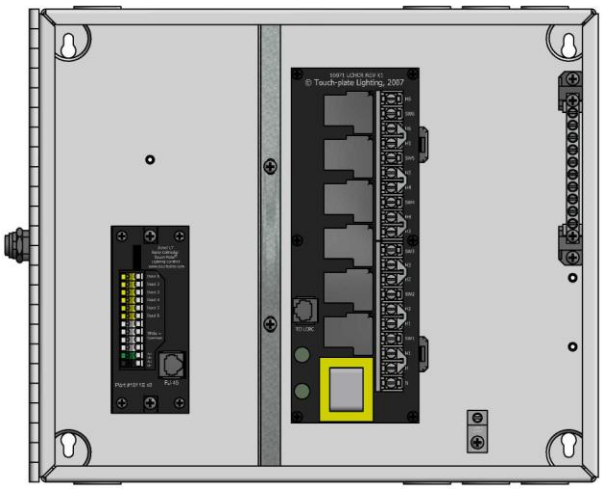
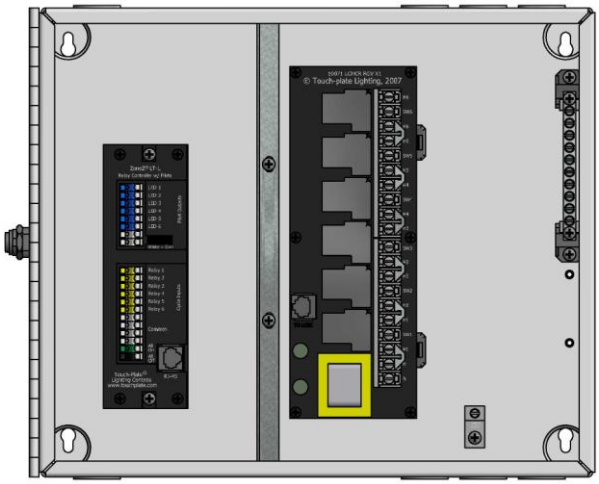
touch-plate®
LIGHTING CONTROLS





This document is intended to help technicians/electricians install a ZoneZ-LT system.

Table of Contents

Preparation

Unpack the ZoneZ-LT and inspect the contents for damaged or missing products. If any problems arise, please contact Touch-Plate at 260.426.1565 for assistance.

Precautions

The ZoneZ-LT hardware is designed to be in environments that have a temperature range of 0-60°C (non-condensing atmosphere). Installing in an environment outside of these parameters will shorten the life span of the hardware.

Touch-Plate recommends the use of 18 to 22 AWG wire for low voltage wiring.
All 120VAC wiring must use wire as specified by National Electric Code for load size and wire length.

Compatible Hardware

This product was designed to be compatible with the following items:

Control Station Series:

5000 Series
Genesis Series
Eclipse Series
Mystique Series
Ultra Series
Classic Series

Warranty

Touch-Plate® warrants this hardware product against defects in materials or workmanship, under normal use for a period of ONE (1) year from date of shipment. If a hardware defect is to arise and a valid claim is received within the Warranty Period, Touch-Plate® will repair or replace the product at no charge.
This warranty does not apply to:

a. Damage to unit(s) caused by accident, acts of God, inappropriate installation, faulty installation, or any negligent use;
b. Unit(s) which have been subject to being taken apart or otherwise modified;
c. Unit not used in accordance with instructions;
d. The finish on any portion of the product, such as surface and/or weathering, as this is considered normal wear and tear;
e. Non-Touch-Plate hardware installed by the user;
f. Damage caused by Non-Touch-Plate products;
g. Damage caused by operating the product outside the permitted or intended uses described by Touch-Plate®;
   or
h. Specific plans or Specific application requirements, unless the plans and specifications have been forwarded to Touch-Plate and Touch-Plate has approved and accepted the plans in writing.

EXCEPT AS PROVIDED IN THIS WARRANTY, TOUCH-PLATE IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, INCLUDING BUT NOT LIMITED TO, INSTALLATION OR REPLACEMENT LABOR COSTS.

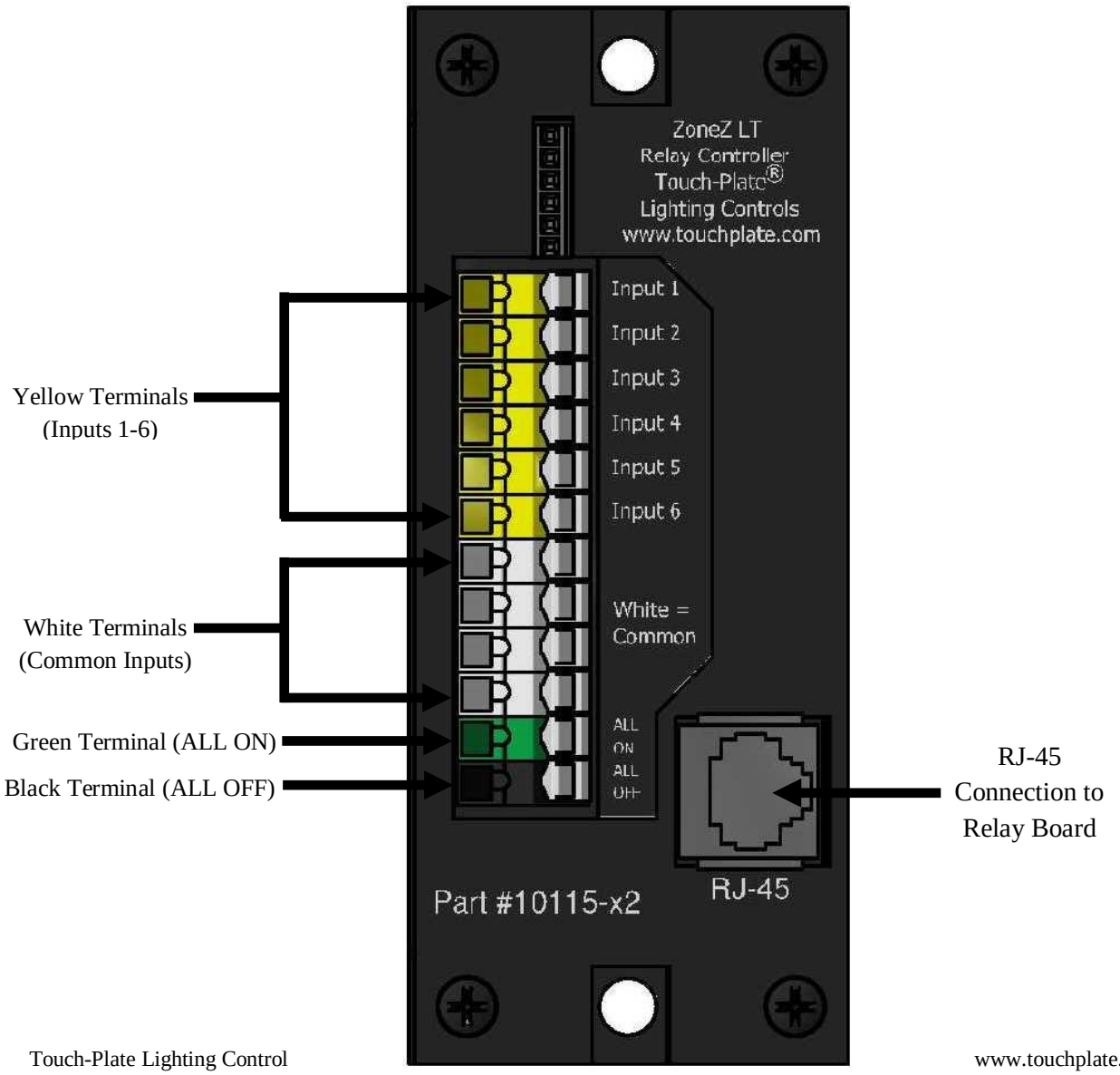
Introduction to ZoneZ-LT-N

The ZoneZ-LT-N was designed to retrofit existing systems or to provide new installations with a clean, easy solution.
It can control up to six (6) relays and provides "ALL OFF" and "ALL ON" functions.
The ZoneZ-LT-N also has four (4) Common Inputs (white terminals). The common is the positive DC voltage (VDC) that is supplied to every wall switch. No matter the amount of wall switches, each has to have one (1) wire per station that is landed in the Common Inputs.

Colored Terminals

- Yellow – Individual switch inputs for Relays 1-6
- White – Switch common
- Green – All On for the 6 relays directly connected to ZoneZ-LT-N
- Black – All Off for the 6 relays directly connected to the ZoneZ-LT-N

Note: It does not matter which White Terminal is used during installation, there are four (4) to help keep the wiring easier and cleaner. If desired all commons can be tailed together and can be landed in any of the White Terminals



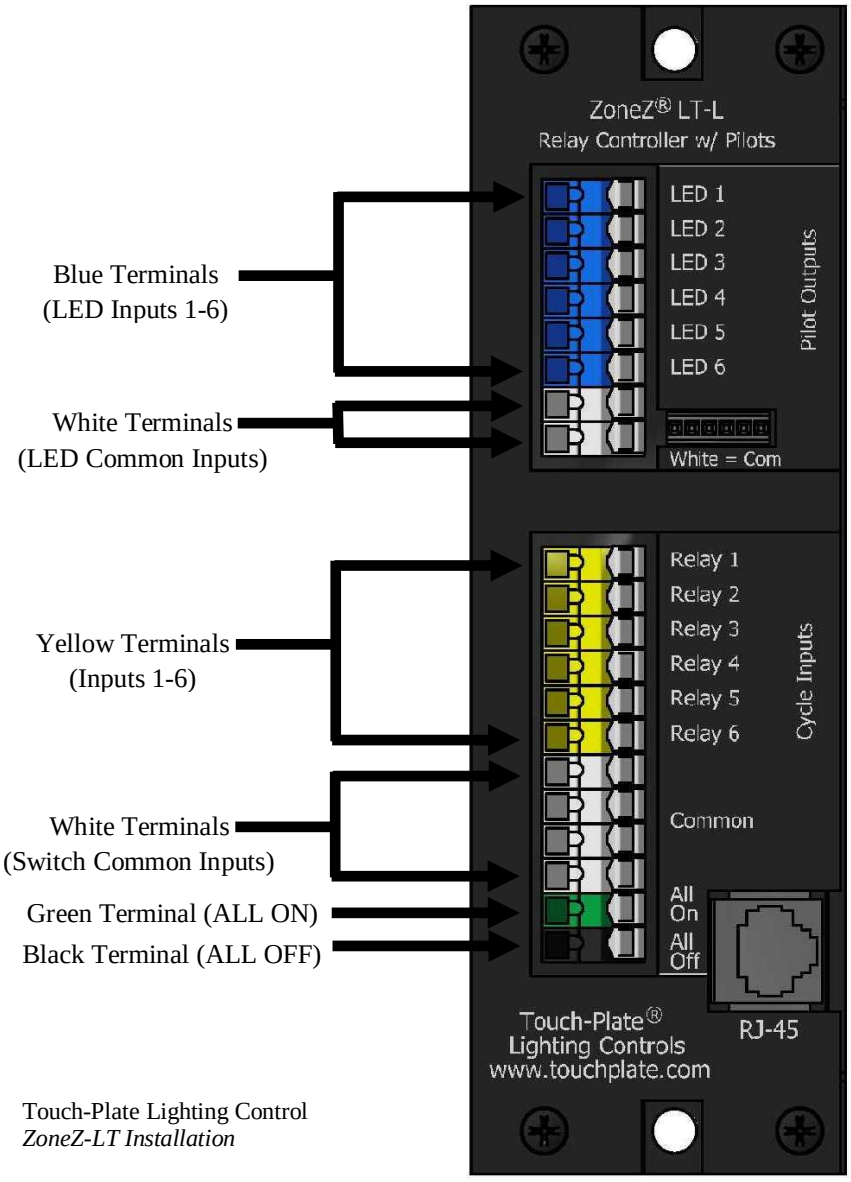
Introduction to ZoneZ-LT-L

The ZoneZ-LT-L was designed to retrofit existing systems or to provide new installations with a clean, easy solution.
It can control up to six (6) relays, provides "ALL OFF" and "ALL ON" functions, and has LED capabilities.
The ZoneZ-LT-L also has four (4) Common Inputs (white terminals). The common is the positive DC voltage (VDC) that is supplied to every wall switch. No matter the amount of wall switches, each has to have one (1) wire per station that is landed in the Common Inputs.

Colored Terminals

- Yellow – Individual switch inputs for Relays 1-6
- White – Switch common
- Green – All On for the 6 relays directly connected to ZoneZ-LT-L
- Black – All Off for the 6 relays directly connected to the ZoneZ-LT-L
- Blue – Individual LED inputs for LEDs 1-6
- White – LED Common

Note: It does not matter which White Terminal is used during installation, there are two (2) & four (4) to help keep the wiring easier and cleaner. If desired all commons can be tailed together and can be landed in any of the White Terminals



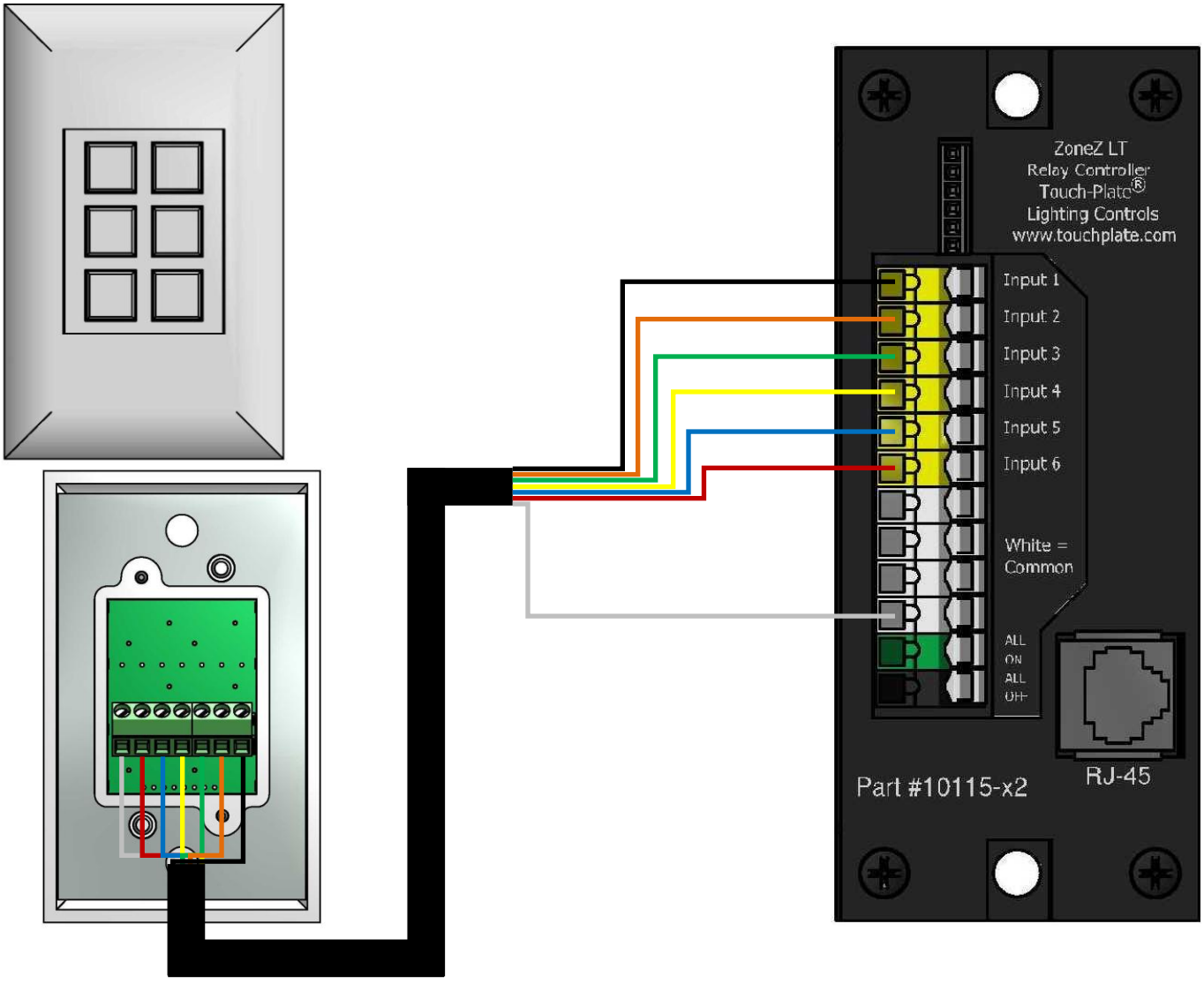
ZoneZ-LT-N Control Station Wiring

- Descending order is used for the Switch Inputs (yellow terminals)

This diagram indicates how a Control Station should be wired to the ZoneZ-LT-N

Wiring Instructions

1. Switch Input Wiring
    a. The wire from the switch block position 1 is landed to the 1st Yellow Terminal
    b. The wire from the switch block position 2 is landed to the 2nd Yellow Terminal
    c. The wire from the switch block position 3 is landed to the 3rd Yellow Terminal
    d. The wire from the switch block position 4 is landed to the 4th Yellow Terminal
    e. The wire from the switch block position 5 is landed to the 5th Yellow Terminal
    f. The wire from the switch block position 6 is landed to the 6th Yellow Terminal
    g. The wire from the switch block position SC is landed to any of the White Terminals



ZoneZ-LT-L Control Station Wiring

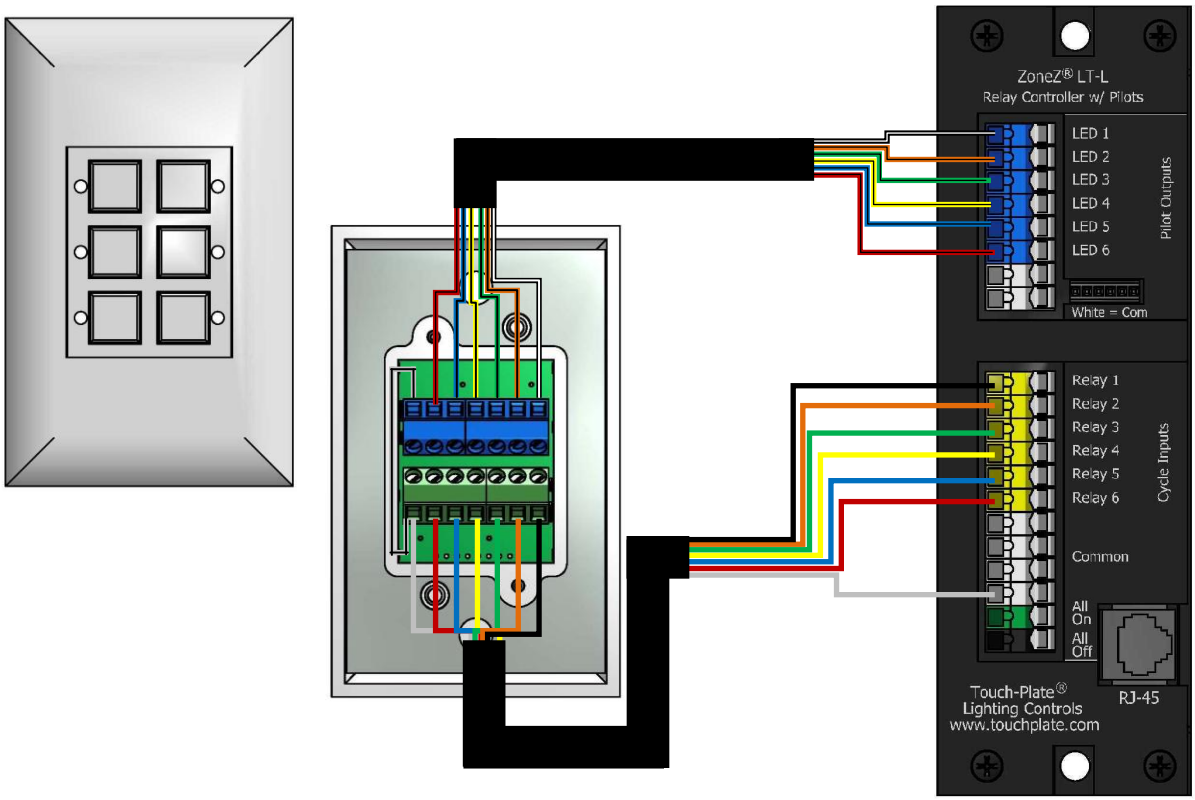
- Descending order is used for the Switch Inputs (yellow terminals)
- Descending order is used for the Common Inputs (blue terminals)
- Each LED has to have one (1) wire per Control Station that is landed to the Common Inputs

This diagram indicates how a Control Station should be wired to the ZoneZ-LT-L

Wiring Instructions

1. Switch Input Wiring
    a. The wire from the switch block position 1 is landed to the 1st Yellow Terminal
    b. The wire from the switch block position 2 is landed to the 2nd Yellow Terminal
    c. The wire from the switch block position 3 is landed to the 3rd Yellow Terminal
    d. The wire from the switch block position 4 is landed to the 4th Yellow Terminal
    e. The wire from the switch block position 5 is landed to the 5th Yellow Terminal
    f. The wire from the switch block position 6 is landed to the 6th Yellow Terminal
    g. The wire from the switch block position SC is landed to any of the White Terminals

2. LED Input Wiring
    a. The wire from the pilot block position 1 is landed to the 1st Blue Terminal
    b. The wire from the pilot block position 2 is landed to the 2nd Blue Terminal
    c. The wire from the pilot block position 3 is landed to the 3rd Blue Terminal
    d. The wire from the pilot block position 4 is landed to the 4th Blue Terminal
    e. The wire from the pilot block position 5 is landed to the 5th Blue Terminal
    f. The wire from the pilot block position 6 is landed to the 6th Blue Terminal
    g. The wire from the pilot block position PC is landed to any of the White Terminals



ZoneZ-LT All On and All Off Wiring

- Descending order is used for the Switch Inputs (yellow terminals)
- Descending order is used for the Common Inputs (blue terminals)

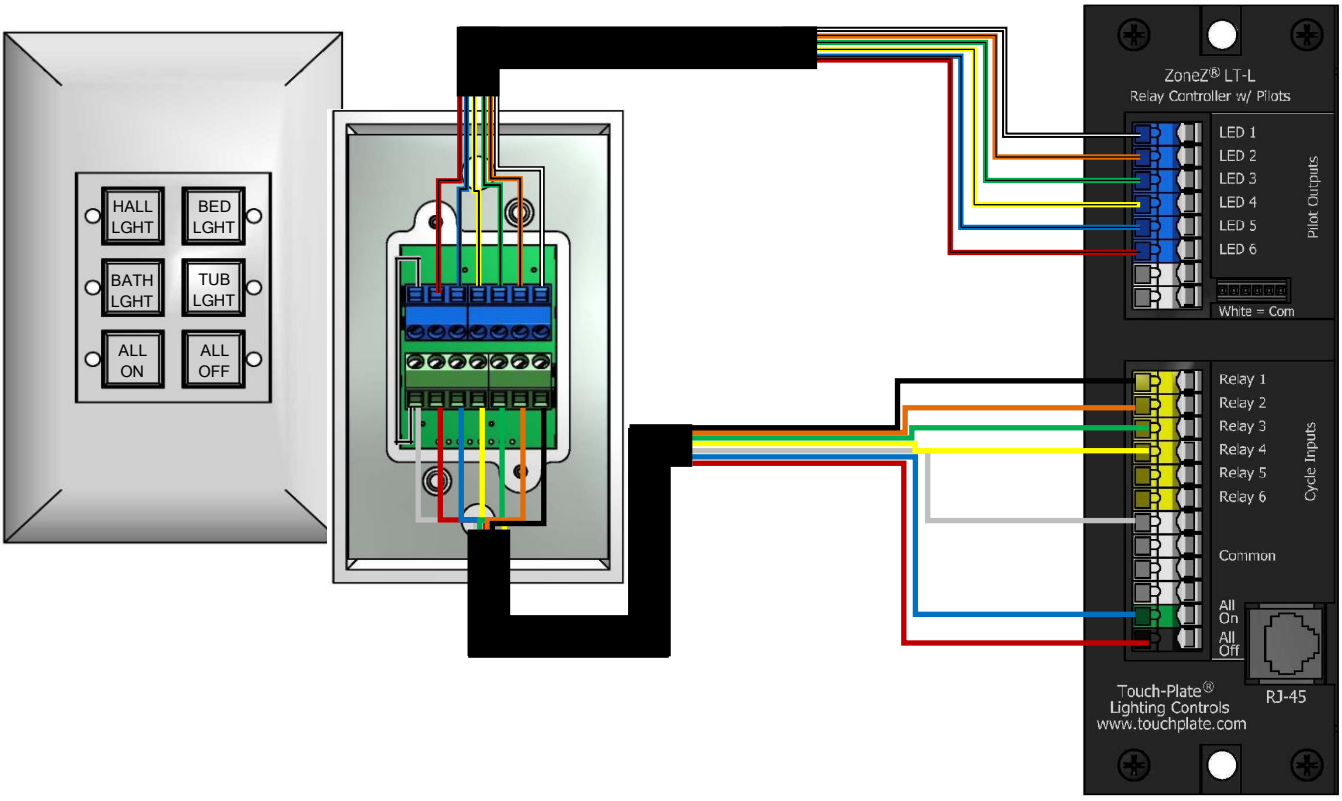
This diagram indicates how a Control Station should be wired to the ZoneZ-LT-L

Wiring Instructions

1. Switch Input Wiring
    a. The wire from the switch block position 1 is landed to the 1st Yellow Terminal
    b. The wire from the switch block position 2 is landed to the 2nd Yellow Terminal
    c. The wire from the switch block position 3 is landed to the 3rd Yellow Terminal
    d. The wire from the switch block position 4 is landed to the 4th Yellow Terminal
    e. The wire from the switch block position SC is landed to any of the White Terminals

2. LED Input Wiring
    a. The wire from the pilot block position 1 is landed to the 1st Blue Terminal
    b. The wire from the pilot block position 2 is landed to the 2nd Blue Terminal
    c. The wire from the pilot block position 3 is landed to the 3rd Blue Terminal
    d. The wire from the pilot block position 4 is landed to the 4th Blue Terminal
    e. The wire from the pilot block position 5 is landed to the 5th Blue Terminal
    f. The wire from the pilot block position 6 is landed to the 6th Blue Terminal
    g. The wire from the pilot block position PC is landed to any of the White Terminals

3. All ON /OFF Wiring
    a. The wire from the switch block position 5 is landed to the Green Terminal
    b. The wire from the switch block position 6 is landed to the Black Terminal



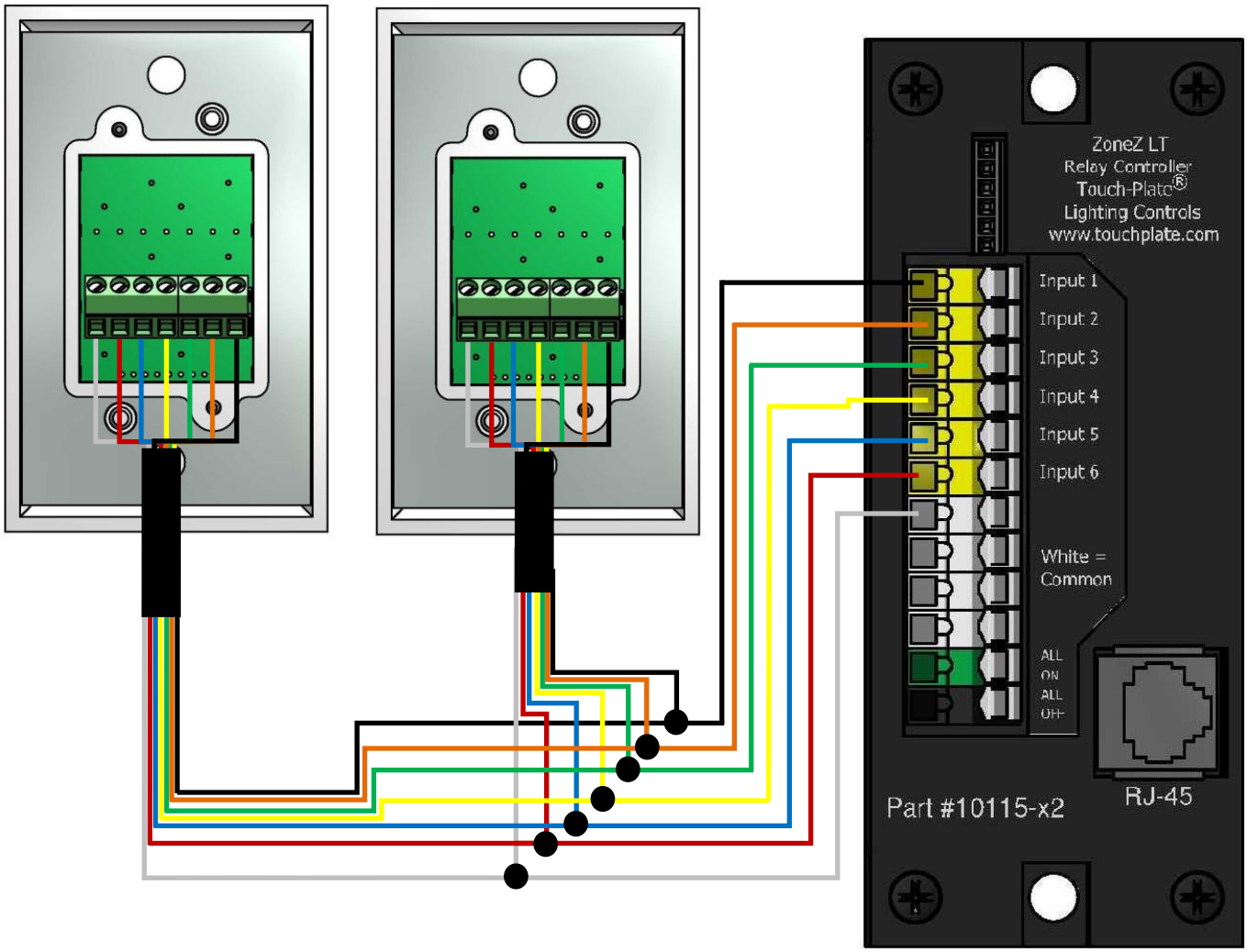
Other Control Station Wiring Examples

- 3-way switching can be done using the ZoneZ-LT-N
- The ZoneZ-LT uses a descending order for the Switch Inputs (yellow terminals)

This diagram indicates how to wire a Control Station using 3-way switching to the ZoneZ-LT-N

Wiring Instructions

1. Switch Input Wiring
    a. The wire from the switch block position 1 is landed to the 1st Yellow Terminal
    b. The wire from the switch block position 2 is landed to the 2nd Yellow Terminal
    c. The wire from the switch block position 3 is landed to the 3rd Yellow Terminal
    d. The wire from the switch block position 4 is landed to the 4th Yellow Terminal
    e. The wire from the switch block position 5 is landed to the 5th Yellow Terminal
    f. The wire from the switch block position 6 is landed to the 6th Yellow Terminal
    g. The wire from the switch block position SC is landed to any of the White Terminals

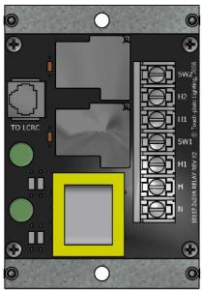


Introduction to the ZoneZ Relay Boards

The ZoneZ Relay Boards have two (2) options available; electronically and mechanically latching relays.

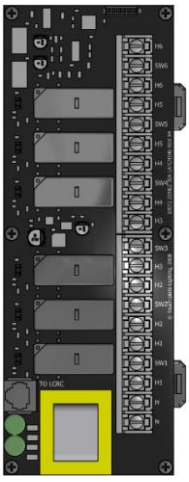
ZoneZ Electronically held Relay Boards

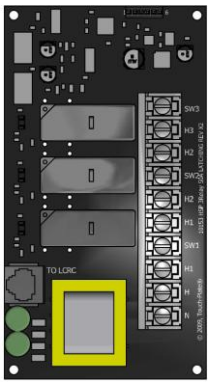
- Z-6R15
  - 10 AMP rating
  - 960 Watts per Relay – assuming each relay has a feed from the breaker panel
- Z-6R20
  - 20 AMP rating
  - 1920 Watts per Relay – assuming each relay has a feed from the breaker panel
- Z-2R20
  - 20 AMP rating
  - 1920 Watts per Relay – assuming each relay has a feed from the breaker panel



ZoneZ Mechanically latching Relay Boards

- Z-6R25L
  - 25 AMP rating
  - 2400 Watts per Relay – assuming each relay has a feed from the breaker panel
- Z-3R25L
  - 25 AMP rating
  - 2400 Watts per Relay – assuming each relay has a feed from the breaker panel





ZoneZ Relay Boards Wiring

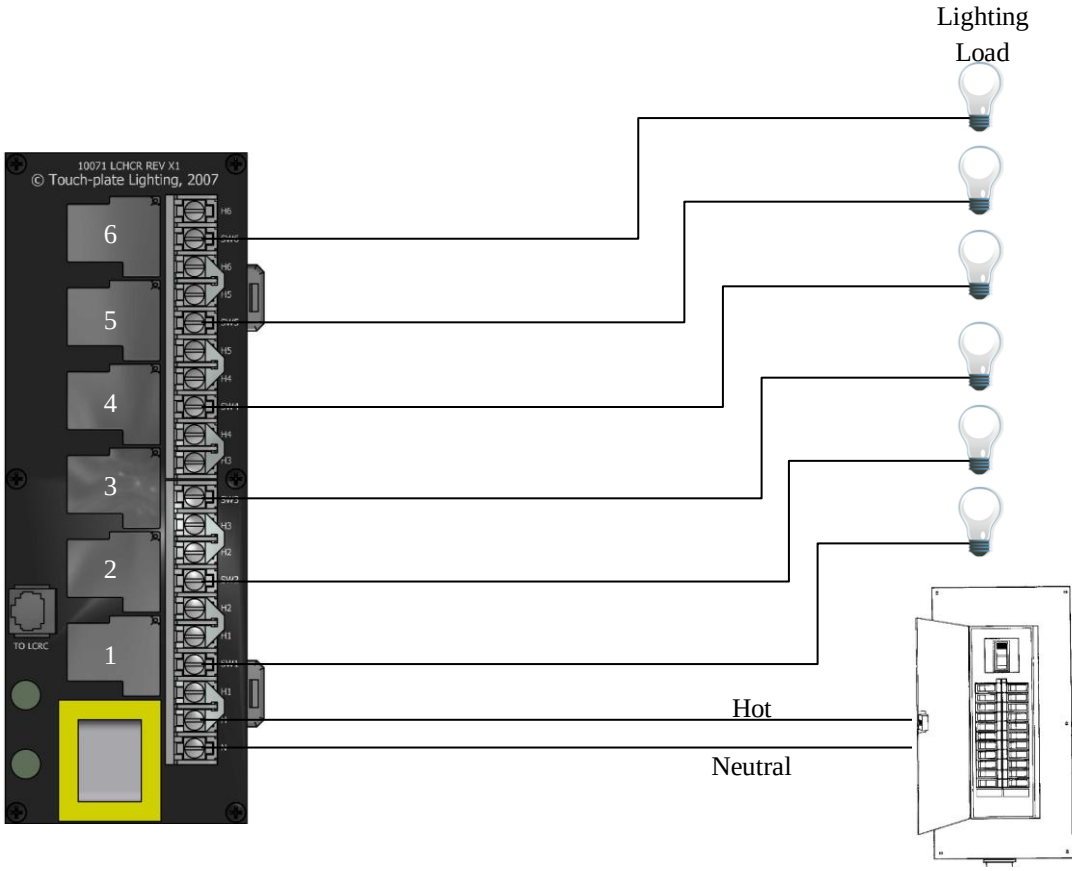
- Each of the ZoneZ Relay Boards will come from the factory with 'jumpers'
    - Jumpers allow all relays on a ZoneZ Relay Board to share a single HOT (120V) feed
    - If more than one (1) HOT feed is needed, the jumpers can be removed

This diagram indicates how the ZoneZ Relay Boards should be wired

Wiring Instructions

1. "H" stands for Hot (120V) and this wire must come from the circuit breaker panel
2. "N" Stands for Neutral and this wire must come from the circuit breaker panel
    a. Each relay does not need to have its own neutral feed; each light fixture must have a Neutral which terminates at the circuit breaker panel
3. From the Breaker Panel, one (1) Hot – 120V and one (1) Neutral are brought to the ZoneZ Relay Board
4. From the ZoneZ Relay board there will be 6 individual wires going to the lighting loads, commonly referred to as the "switched leg"
    a. Numbers SW1 through SW6 designate these terminals.

Note: The Relay Board is numbered opposite of the Low Voltage Control Board. The numbers ascend on the Relay Board with Relay # 1 (SW1) as the lowest relay on the board.

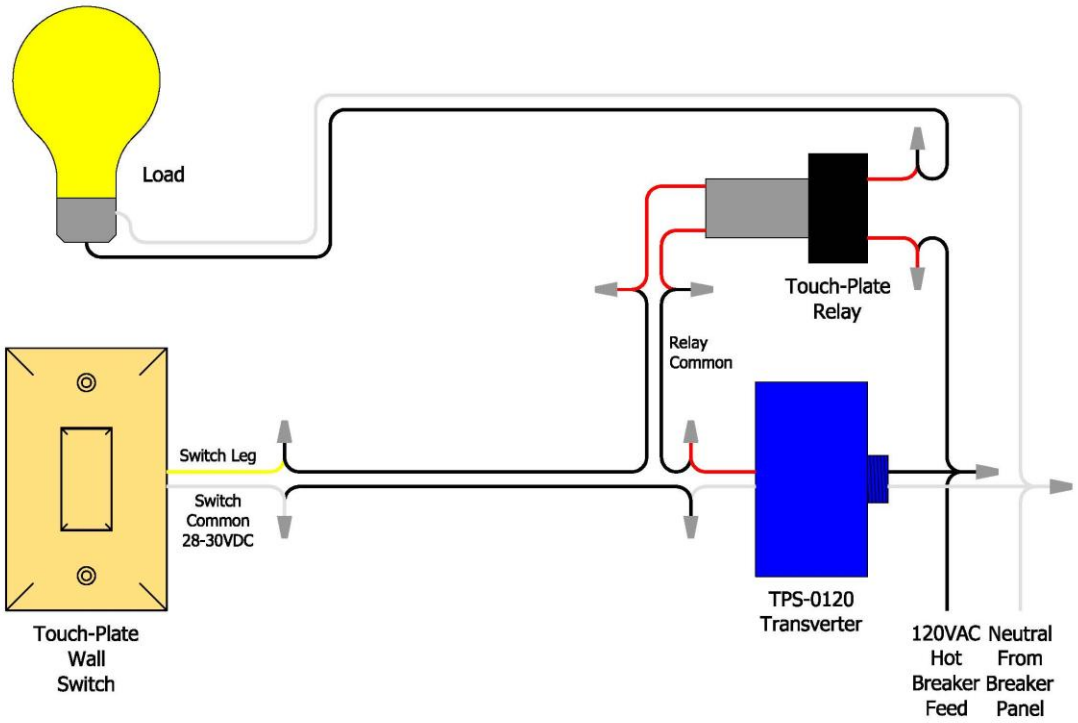


Retrofitting an Existing Touch-Plate® System without Pilot Lights

- **TO RETROFIT A TOUCHPLATE SYSTEM, MAKE SURE THAT THE ENTIRE SYSTEM IS BEING UPDATED.**
- **BE SURE TO TURN OFF POWER AT THE CIRCUIT BREAKER BEFORE DOING ANYTHING.**

This diagram indicates how to label, disconnect, and remove existing Touch-Plate components

1. Label the following wires – VERY IMPORTANT AND VITAL FOR A SUCCESSFUL INSTALLATION
    a. LV Switch Leg – wire from the Control Station to the Relay (1550/2500/3000/4000)
    b. Common – wire from the Control Station to the Transverter (TVR-1/TPS-0120)
    c. Breaker – wire from the Breaker to the Transverter (TVR-1/TPS-0120)
    d. Line Voltage Switch Leg – wire from the Breaker to the Lighting Load



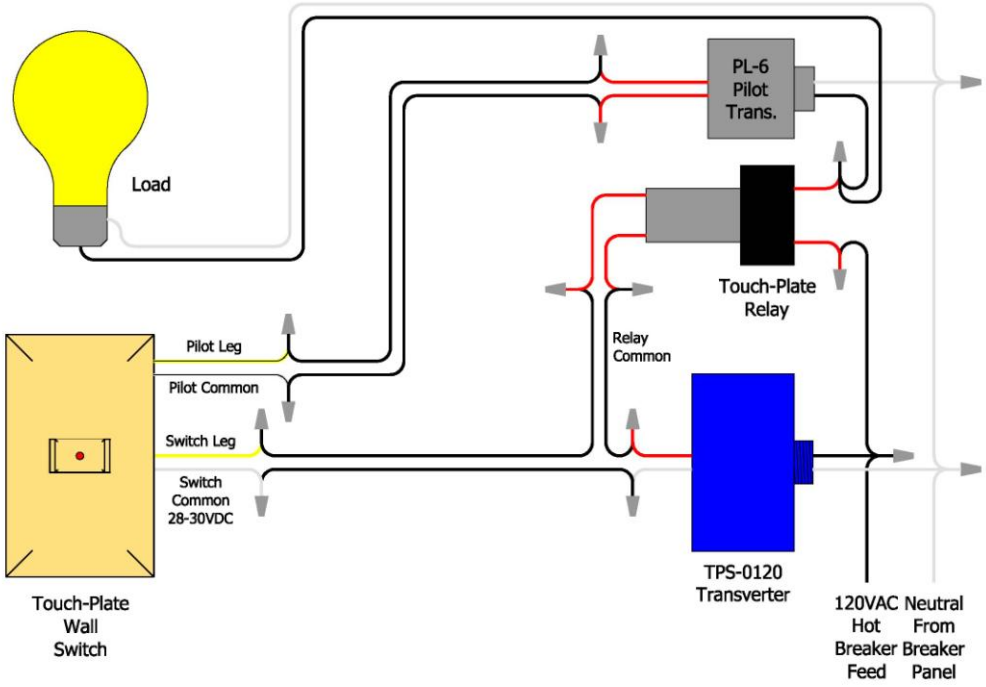
2. Disconnect the Transverter (TVR-1 / TPS-0120)
3. Disconnect the Line Voltage from the relay (2 wires from the base of each relay)
    a. Many times the 'Hot' wires are together
4. Disconnect the Low Voltage from the relay (Red and Brown wire from the coil)
5. Remove the enclosure with all Relays, Transverter, and Pilot Light Transformer(s) disconnected
    a. If re-using the enclosure, only remove the Relays and Transverter

Retrofitting an Existing Touch-Plate® System with Pilot Lights

- **TO RETROFIT A TOUCHPLATE SYSTEM, MAKE SURE THAT THE ENTIRE SYSTEM IS BEING UPDATED.**
- **BE SURE TO TURN OFF POWER AT THE CIRCUIT BREAKER BEFORE DOING ANYTHING.**
- **BE SURE TO DISCONNECT & REPLACE ANY EXISTING CONTROL STATION THAT HAVE PILOT LIGHTS BEFORE BRINGING POWER TO THE UPDATED RELAY PANEL.**

This diagram indicates how to label, disconnect, and remove existing Touch-Plate components

1. Label the following wires– VERY IMPORTANT AND VITAL FOR A SUCCESSFUL INSTALLATION
    a. LV Switch Leg – wire from the Control Station to the Relay (1550/2500/3000/4000)
    b. Common – wire from the Control Station to the Transverter (TVR-1/TPS-0120)
    c. Common – wire from the Control Station to the Pilot Light Transformer (PL-6/TPS-2001)
    d. Breaker – wire from the Breaker to the Transverter (TVR-1/TPS-0120)\
    e. Line Voltage Switch Leg – wire from the Breaker to the Lighting Load

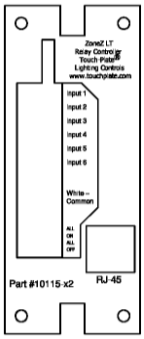


2. Disconnect the Transverter (TVR-1 / TPS-0120)
3. Disconnect the Line Voltage from the relay (2 wires from the base of each relay)
    a. Many times the 'Hot' wires are together
4. Disconnect the Low Voltage from the relay (Red and Brown wire from the coil)
5. Disconnect the Pilot Light Transverter from the Lighting Load and the Control Station(s)
    a. The line voltage wires connected to the Pilot Light Transformer(s) are no longer needed
6. Remove the enclosure with all Relays, Transverter, and Pilot Light Transformer(s) disconnected
    a. If re-using the enclosure, only remove the Relays and Transverter

Troubleshooting Guide

- If no response occurs when the system is powered up, use the following steps to identify the problem.
  1. Remove the Diecut from either the ZoneZ-LT-N or the ZoneZ-LT-L
  2. Look for the LED indicator to be blinking on the board
     a. For the indicator to be blinking, power has to be correctly brought to the system

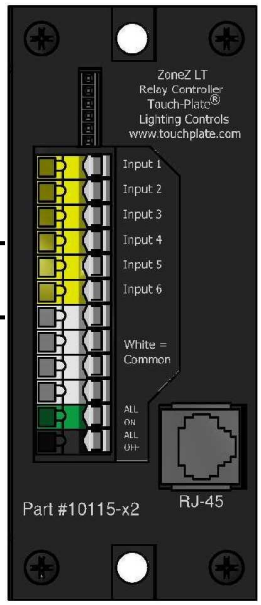
Diecut



- If the LED indicator is not blinking, confirm power connections and then contact the factory for assistance.
- If the LED indicator is blinking, move on to the next steps. If moving on be sure of the following:
  - Line Voltage has to be fed to each relay
  - Each light fixture is connected to the Switched Leg ('SW')
  - 120VAC has been connected to the transformer on the Relay Board
  3. Take a short piece of thin wire (both ends need to be stripped) and insert one end into a White Terminal on either the ZoneZ-LT-N or the ZoneZ-LT-L
  4. Use the other end of the wire and tap it to the conductive metal of each of the Yellow Terminals, one at a time
     a. Each touch should energize the relay and change the relay state. The lights in the respective rooms should go ON and/or OFF when the Terminal is touched

Wire tapped to Yellow Terminal

Wire into White Terminal



  5. If the lights do not respond, use a meter on the line voltage relay outputs to see if the voltage switches from 0 to 120VAC
  6. Once these steps are complete and the line voltage is correct, all wiring of either the ZoneZ-LT-N or the ZoneZ-LT-L can take place

Frequently Asked Questions

1. Why are there so many 'HOTS' and what are 'jumpers'?
    a. There are many 'HOTS' so power can be fed to all relays on the relay board without using wire nuts. Touchplate desires to make the installation as neat and orderly as possible. Power is fed to all 6 relays via the 'jumpers'. 'Jumpers' are metal inserts that jump the previous 'HOT' to the next 'HOT'.

2. How can switch commons be tracked during a retrofit?
    a. If the Transverter is still present, the Switch Common wire will have a positive 28 – 31VDC reading. Another way to track the commons is to unscrew a Control Station from the wall and look at what color wire is used for the common. If it is not obvious from the above methods, use a ringer (tone generator and receiver) and tone out the common.

3. What do the functions 'ALL ON' and 'ALL OFF' do and how do I use them?
    a. 'ALL ON' turns all the relays on the relay board to the ON position, no matter what the previous state was. 'ALL OFF' turns all the relays on the relay board to the OFF position, no matter what the previous state was. An example of when this would be beneficial is if there were 6 relays controlling exterior lights, garage lights, and a foyer light, all of the relays could be turned ON or OFF with the push of a single button.

4. Are the Switch / Pilot Inputs dry contacts?
    a. Yes, the Switch / Pilot inputs are dry contacts. Common outputs put out voltage.

5. There are multiple ZoneZ-LT-N or ZoneZ-LT-L boards being used. Can all of the commons be jumped together?
    a. Yes! We recommend doing this to avoid missing commons or loose connections.

6. Can I update just one part of my Touch-Plate System?
    a. There are several reasons why the existing Touch-Plate system must be replaced entirely. The key reason is due to how the wiring was originally run. Many, if not all, of the fixtures and switches will share the same common wires. The newer systems have transformers that operate on a slightly different voltage. The existing Touch-Plate systems operated on 28 VDC. The newer Touch-Plate systems operate on 24 VDC. Since the commons throughout the home or building are shared, both a 24 VDC and a 28 VDC signal will be sent and this will cause confusion between the two systems. They are not able to work with one another. If connected together, each system is vulnerable to damage from the other. The only way a Touch-Plate system can be upgraded partially is if there are two or more panel locations, each with its own power supply. If a relay panel is completely stand-alone, it can be replaced as it does not share any common wires with other panels.