

# poolLUX Plus

**pLX-PL60 & pLX-PL100**



**Intertek**

5005508

ETL LISTED

Conforms to UL STD 379;

Certified to CSA STD C22.2 #218.1

## Installation Instructions

Read all instructions before attempting to perform installation work  
Type 3R Rainproof Enclosure

FOR USE WITH POOL AND SPA PRODUCTS



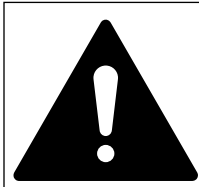
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# IMPORTANT SAFETY INFORMATION

## CAUTION: POWER AND SIGNAL OUTPUT CONDUITS MUST BE NON-METALLIC

ATTENTION: CONDUITS POUR PUISSANCE DE SORTIE ET SORTIE SIGNAL DOIT ETRE NON METALLIQUE



### **ELECTRICAL SHOCK HAZARD – SWITCH DOES NOT TURN OFF INPUT POWER.**

Failure to disconnect input power before servicing can lead to serious injury, or death.

Disconnect input power before servicing.

Replace all parts and panels before reconnecting power and operating

**DANGER – FAILURE TO FOLLOW THESE WARNINGS, INSTRUCTIONS, AND THE OWNER'S MANUAL MAY RESULT IN SERIOUS INJURY OR DEATH.**

Basic safety precautions shall be observed when installing and operating the poolLUX Plus (p/n pLX-PL60/PL100) and other associated equipment:

1. A qualified electrician must install the poolLUX Plus (p/n pLX-PL60/PL100) in accordance with the requirements of NEC ANSI/NFPA 70 and Article 680.
2. The poolLUX Plus (p/n pLX-PL60/PL100) must be mounted on a flat vertical surface. The unit must be a minimum of 4 inches above the ground level, pool deck, or higher than 8 inches above the maximum pool water level, whichever provides greatest elevation. The unit must be positioned a minimum of 4 feet (1.2 m) away from the inside wall of the pool, unless separated from the pool by a solid fence, wall, or other permanent barrier.
3. CAUTION: THE EQUIPMENT AND CONTROLS SHALL BE LOCATED NOT LESS THAN 1 M HORIZONTALLY FROM THE SPA OR HOT TUB.
4. ATTENTION: MAINTENIR UNE DISTANCE MINIMALE, MESURÉE DANS UN PLAN HORIZONTAL, DE 1 M ENTRE LA CUVE DE RELAXATION ET LES APPAREILS ET COMMANDES.
5. ONLY USE COPPER CONDUCTORS.
6. Do not exceed the maximum electrical ratings of the poolLUX Plus (p/n pLX-PL60/PL100) components (indicated on page 4), wiring devices, and current carrying capacity of the conductors.
7. poolLUX Plus (p/n pLX-PL60/PL100) is intended to be used with low voltage underwater luminaires that comply with Article 680 of the National Electrical Code and does not require bonding due to their polymeric or isolated application design.
8. This device should never operate equipment that could cause property damage, bodily injury, or death should it be activated unexpectedly.
9. Use with branch circuit breakers with 15 amperes or less.
10. This device must be used with an approved ground-fault circuit interrupter (GFCI).
11. Use rain-tight or wet location hubs that comply with the requirements in the standard (UL514b) for conduit, tubing, and cable fittings only.
12. The conduit hub is to be connected to the power input conduit before the hub is connected to the enclosure.
13. Never allow children to operate the pLX-Plus unit unsupervised.

## RF Exposure Statement

To maintain compliance with FCC's RF Exposure guidelines, this equipment should be installed and operated with minimum distance of 20cm between the radiator and your body. Only use the supplied antenna.

## IC Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

## FCC WARNING

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
2. Changes or modifications not expressly approved by S.R.Smith, LLC will void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment on a different circuit than that of the receiver.
- Consult the dealer or an experienced Radio and Television Technician for help.

# Electrical Ratings

Do not exceed the maximum electrical output rating of each unit listed below.

Model	Input	Output
pLX-PL60	120 VAC, 60 Hz, 0.6A max	12-13 VAC, 60 Watt max
pLX-PL100	120 VAC, 60 Hz, 1.0A max	12-13 VAC, 100 Watt max

Use a 15 Amp, 120VAC GFCI Circuit Breaker for input power.

## ELECTRICAL PROTECTION MEASURES

### Dual Internal Fuses

**1) Self-Resetting Thermal Fuse:** This fuse keeps the unit from overheating in instances where a load in excess of the transformer's capacity is present for an extended period of time. Once normal operating temperatures return, the unit will reset and operation will continue.

**2) Current Fuse:** This fuse shuts down the low-voltage output of the transformer during an abnormal electrical condition (i.e. "Short"). This fuse has a higher trigger threshold than the Replaceable Current Fuse and serves as a fail-safe for the Replaceable Current Fuse to ensure that an abnormal electrical condition does not lead to an unsafe operating condition.

### Replaceable Current Fuse\*

This field replaceable part is the primary protection against abnormal electrical conditions. This fuse has a lower trigger threshold than the Internal Current Fuse and is designed to blow first in the event of a short and helps reduce whole transformer replacement due to field induced shorts ("sparking wires"), as well as, other abnormal electrical conditions. In addition, this fuse is fast acting which helps protect against abnormal electrical conditions that can lead to an unsafe operating condition.

**\*ONLY USE SR SMITH REPLACEMENT FUSES:** pLX-PL60 (Part Number: 36-15017-00) / pLX-PL100 (Part Number: 36-15018-00)

## Recommended Tools and Supplies

1. Circular hole saw for installation of 3/4" and or 1" non-metallic conduit depending on installation requirements. **Do not use spade bits for opening the conduit knockouts.**
2. Application appropriate and approved 'rain-tight' or 'wet location' conduit hubs.
3. Additional duct seal may be required for three or more conduit installations.

**\* Note:** Every installation will have at least two conduits - one for input power and one for output power. Most installations will likely have several output power conduits.

4. Slotted screwdriver, size #2
5. Phillips screwdriver, size #2
6. Drill
7. #10 Screws appropriate for installing the product onto a wall (**installer supplied**)

**\* Note:** It is recommend to hand tighten all screw terminals and screw fasteners inside the enclosure and front cover until snug and secure. Be sure not to overtighten as permanent damage may occur.

# INSTALLATION INSTRUCTIONS

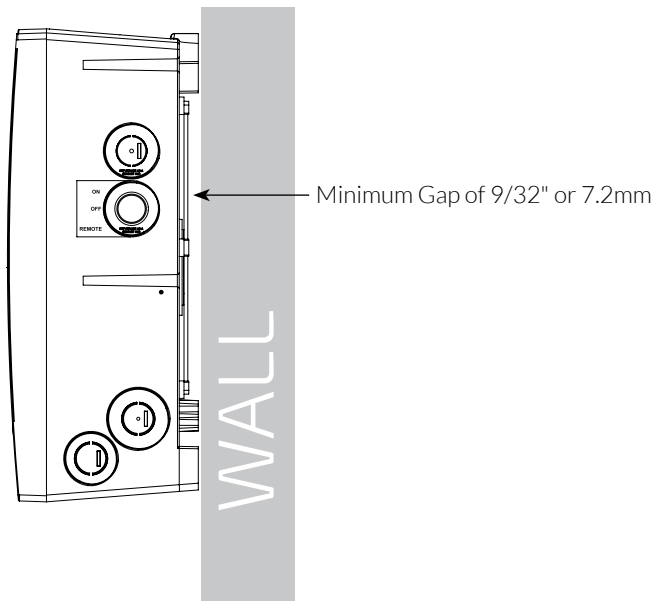
## WARNING

- TURN OFF INCOMING POWER BEFORE SERVICING EQUIPMENT.
- ALL INSTALLATION AND MAINTENANCE WORK MUST BE PERFORMED BY A QUALIFIED ELECTRICIAN.
- GFCI BREAKER MUST BE USED TO CONNECT (p/n pLX-PL60/PL100) TO INPUT POWER.
- VERIFY ALL ELECTRICAL RATINGS BEFORE INSTALLATION IS COMPLETE.
- FOLLOW PROPER WIRING PRACTICES IN ACCORDANCE WITH ALL NATIONAL AND LOCAL REGULATORY REQUIREMENTS.

## Enclosure mounting

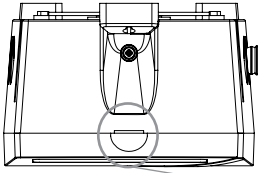
1. Locate the poolLUX Plus (p/n pLX-PL60/PL100) in an appropriate area that meets the following requirements:
  - a. Must be mounted on a flat vertical surface.
  - b. Must be a minimum of 4 inches above the ground level, pool deck, or higher than 8 inches above the maximum pool water level, whichever provides greatest elevation.
  - c. Must be positioned a minimum of 4 feet (1.2 m) from the inside wall of the pool unless separated from the pool by a solid fence, wall, or other permanent barrier.

For the unit to be adequately air cooled, allow a minimum gap of 9/32" (7.2mm) between the wall and the back surface of the unit. The stand-off mounting tabs will make contact with the wall.



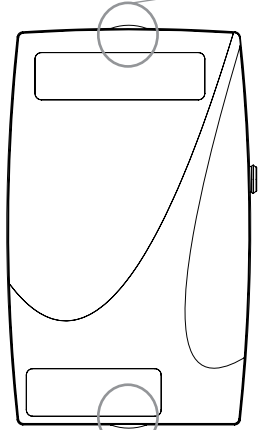
- By hand, open the enclosure by pulling the front cover off evenly by the top and bottom tabs. Do not angle or 'hinge' the cover when removing or damage may occur. If you cannot open the enclosure by hand, use a flat blade screwdriver to twist open the finger tabs of the cover at the top and bottom of the unit.

**Top View  
Enclosure**



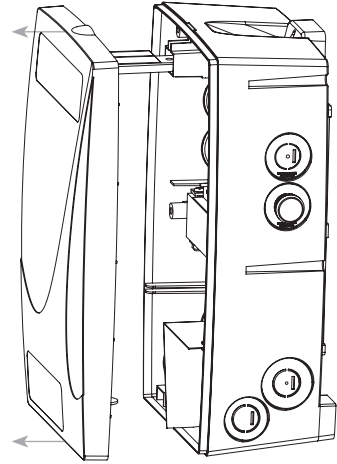
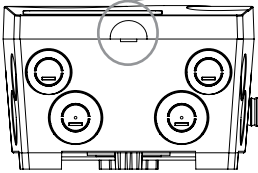
Top Tab

**Front View  
Enclosure**



Bottom Tab

**Bottom View  
Enclosure**



**Side View Enclosure**

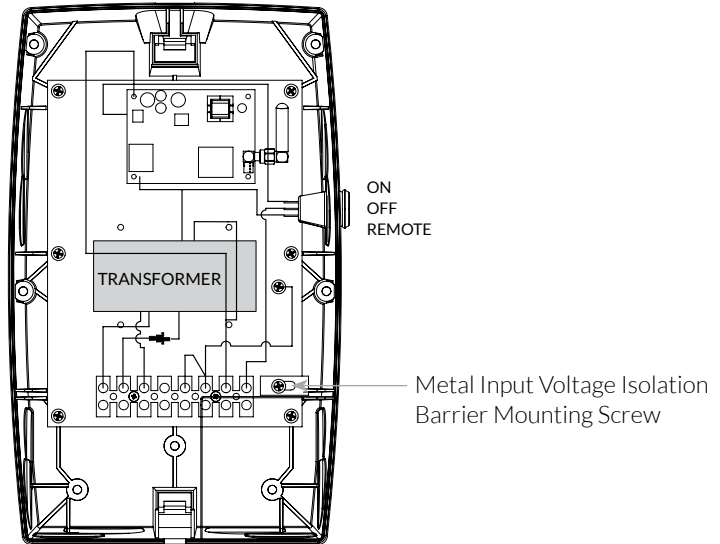
Remove front cover by evenly pulling the top and bottom tabs

- Securely install a wall material appropriate #10 screw (Installer Supplied) into the location where the unit will be installed. The screw head must be 1 1/8" away from the wall to allow the unit to be mounted correctly.
- Place the mounting tab of the poolLUX Plus (p/n pLX-PL60/PL100) over the #10 screw and let it hang in place. Level the unit and mark the remaining 2 mounting screw locations on the wall. Use 2 more material appropriate #10 screws (Installer Supplied) to secure the unit to the wall through the mounting holes on the back of the unit. Once the lower two screws are secure, tighten the top screw to securely hold the upper portion of the enclosure in place.



## Input / Supply Line Voltage

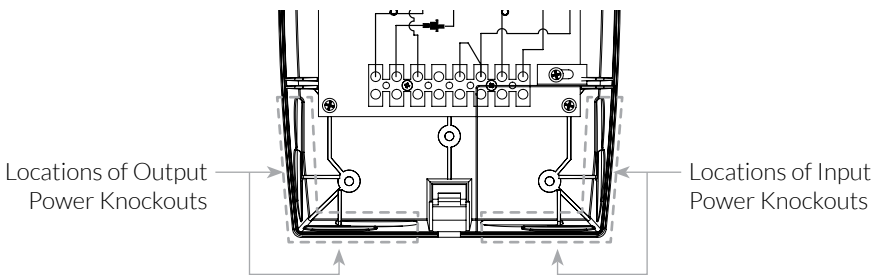
1. Remove the metal input voltage isolation barrier by unscrewing the mounting screw. Once the securing screw is removed, the isolation cover will pull straight out to allow easier access to the conduit knockout locations.



**\*Note:** Once all conduits are connected, replace the metal input voltage isolation barrier and mounting screw. Tighten until the mounting screw is secure.

2. Bring the supply power conduit to one of the four, lower right input power conduit knockout locations that terminate 'inside' the isolation barrier. No output connections are allowed through these knockout locations.

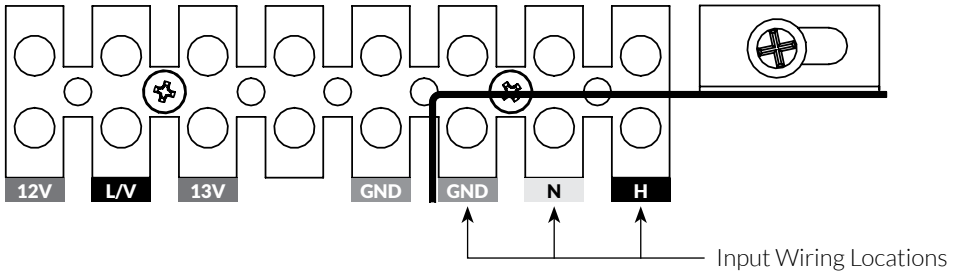
**\*Note:** The wiring of the input and output power are required to use separate conduits and must not share an individual conduit. No conduit should contain both input and output power wiring.



3. Using a hole saw, open the knockouts for the size of the conduit ( $\frac{3}{4}$ " or 1") being installed.

- Attach an approved 'rain-tight' or 'wet location' hub to the conduit. After the hub is attached to the conduit, attach the hub to the enclosure.
- Connect the GFCI protected, 15A max, supply voltage line to the right side of the terminal block. Strip  $\frac{3}{4}$ " of insulation and then connect the wires to the marked terminals and tighten securely.

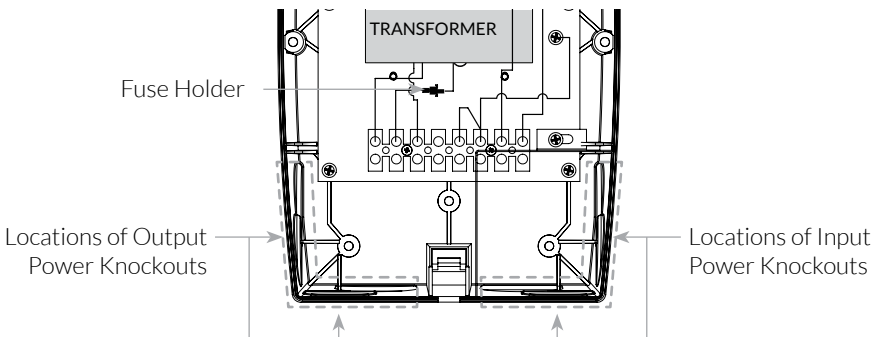
120V Hot GFCI Load to terminal marked: **H**  
 120V Neutral GFCI Load to terminal marked: **N**  
 Electrical System Ground to terminal marked: **GND**



- Replace and secure the metal input voltage isolation barrier and verify that the input wiring screw terminals are secure.

## Output Wiring for Lights and Light Sources

- The combined load of all lights connected to the poolLUX Power must not exceed the following:
  - pLX-PL60 = 60 watts max
  - pLX-PL100 = 100 watts max
- The enclosure provides four (4) output conduit locations. If additional conduit terminations are required, an approved junction box may be used as a termination point and multiple output cables may be run through a single feeder conduit to the poolLUX Plus.



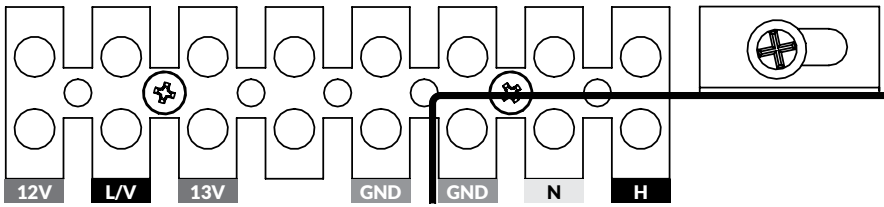


**CAUTION** – IF USING FEEDER OR SUPPLY LINES TO A JUNCTION BOX, BE SURE TO USE THE APPROPRIATE WIRE GAUGE FOR THE LOAD AND DISTANCES INVOLVED.

- Using a hole saw, open the knockout for the size of the conduit ( $\frac{3}{4}$ " or 1") being installed.
- Bring output conduits to the open conduit locations. Any conduit used as output wiring runs between the lights and pLX-Plus unit (p/n pLX-PL60/PL100) and any external controller shall be Non-Metallic (Polymeric).

**ATTENTION: LES CONDUITS DOIVENT ÊTRE RELIÉS PAR LA MASSE**

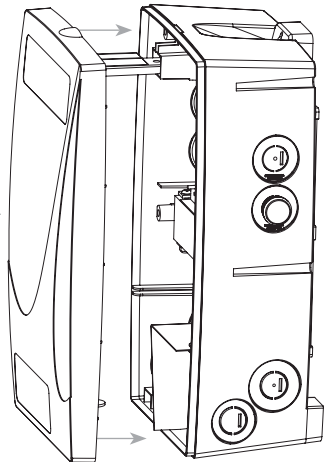
- Attach an approved 'rain-tight' or 'wet location' hub to the conduit first, and then attach hub to the enclosure.
- The poolLUX Power has two low voltage electrical output terminals (Taps) or connection points that allow for 12VAC or 13VAC operation. Securely connect the lights' two conductors to the electrical (taps) output terminals. Most installations will utilize the terminal configuration of 12VAC terminal and low voltage common terminal. In some cases additional voltage may be required to operate the lights requiring use of the 13VAC terminal and the low voltage common terminal.



Output Wiring Locations

**\*Note:** DO NOT use or bridge both the 12VAC and 13VAC terminal positions at the same time.

- Do a final inspection to verify all wiring connections are correct.
- Once inspected, align the panel bayonet guides to the snap-in receivers along the centerline of the enclosure. Evenly and gently, push the cover in place ensuring that both the top and bottom latches 'snap' in place.
- Apply power from the input supply voltage to the unit and function test the unit via the two-way rocker switch on the upper, right side of the unit.



# OPERATING INSTRUCTIONS

## Manual Rocker Switch Operation

The poolLUX Plus comes with one rocker switch for operation. The switch must be in the OFF (Down) position before powering on for the first time. To turn ON (Up) the 12VAC connected lights, flip the rocker switch UP or to the ON position. To turn OFF the 12VAC connected lights, flip the rocker switch to the DOWN or OFF position. To enable wireless control, flip the rocker switch to the REMOTE position.

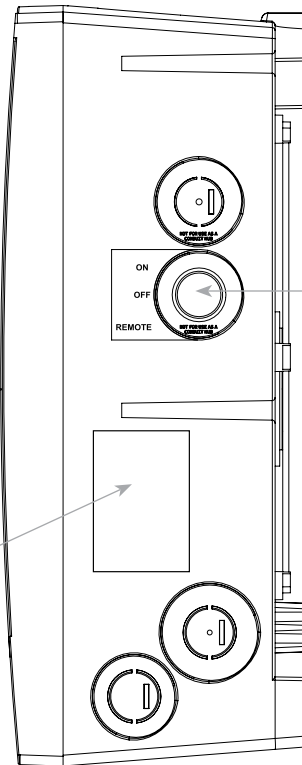
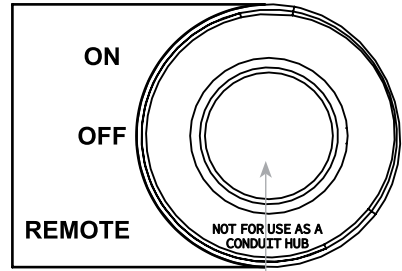
### Color Changing Operation


To change LED pool light colors simply toggle between the ON/OFF position within 1 second of each toggle until the desired color or light show is reached.

### Wireless Remote Operation:

Flip the rocker switch in the 'Down' position or the 'Remote' position.

**\*Note:** Remote Operations will not work unless the rocker switch is in the REMOTE position.



<b>⚠ WARNING</b>

<b>ELECTRICAL SHOCK HAZARD</b> -SWITCH DOES NOT TURN OFF INPUT POWER.
Failure to disconnect input power before servicing can lead to serious injury, or death.
Disconnect input power before servicing.
Replace all parts and panels before reconnecting power and operating.

# Wireless Remote Operation

The new poolLUX Plus wireless remote system is shipped ready to use and requires no additional programming. In the event that another poolLUX Plus or similar device is installed nearby and is operating on the same pairing code, that code may be easily changed by setting an alternative code via the 4 position DIP switch inside the battery compartment of the remote. The receiver board inside the control panel will also need to be changed to match the new remote settings. See Pairing Code chart below for additional details.

**Note:** The default code as shipped is Code A on both the remote and the receiver.

## Sleep Mode

To conserve battery power, the remote will enter standby mode when no function has been selected for 30 seconds or more. To wake the remote, simply press the '1' or 'S' button momentarily. The indicator will light up solid for 5 seconds indicating that it is ready to transmit. A rapidly flashing light from the LED indicator that is located between the two command buttons indicates that a command signal was sent to the control panel.

## To Turn On Using the Wireless Remote

Wake the remote out of Sleep Mode, press the (1) button to turn the system ON/OFF.

**Note:** The rocker switch on the poolLUX Plus must be set to REMOTE for wireless operation.

## Color Changing Operation

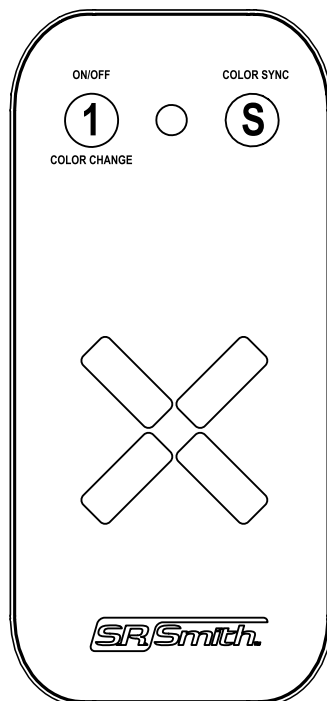
To change pool light colors, simply toggle the (1) button ON/OFF within 1 second. Continue toggling until the desired color or light show is reached.

## 1-Button - Color Sync / Reset Operation

(For use only with SR Smith LED Treo, FG, Treo Micro & LED water features)

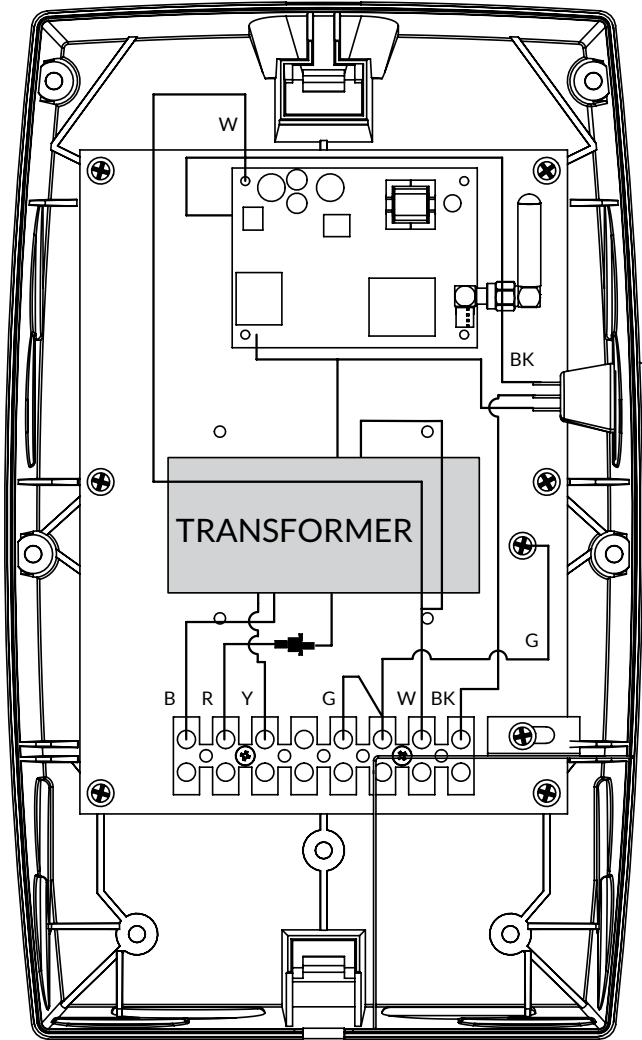
To color synch lights in a multi-light installation, simply press the "S" button once and wait 15 seconds. During this time, the lights will flash on and off several times, pause in the OFF mode, then reset to color mode 1 (soft color change).

**Performance Note:** For best results, hold the remote vertically (pointed at the sky) when pressing the command buttons.



PAIRING CODE CHART				
DIP Switch	1	2	3	4
Code A	OFF	OFF	OFF	OFF
Code B	ON	OFF	OFF	OFF
Code D	OFF	ON	OFF	OFF
Code C	ON	ON	OFF	OFF
Code E	OFF	OFF	ON	OFF
Code F	ON	OFF	ON	OFF
Code G	OFF	ON	ON	OFF
Code H	ON	ON	ON	OFF
Code I	OFF	OFF	OFF	ON
Code J	ON	OFF	OFF	ON
Code K	OFF	ON	OFF	ON
Code L	ON	ON	OFF	ON
Code M	OFF	OFF	ON	ON
Code N	ON	OFF	ON	ON
Code O	OFF	ON	ON	ON
Code P	ON	ON	ON	ON

# WIRING DIAGRAM



ON  
OFF  
REMOTE

NOTES: UNLESS OTHERWISE SPECIFIED

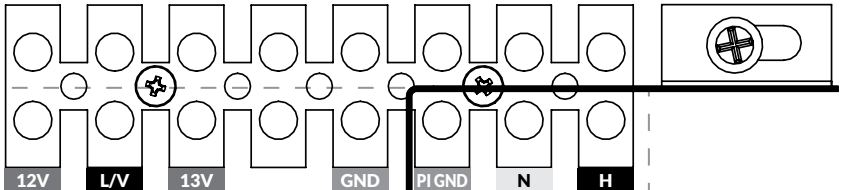
1. WIRE COLOR LEGEND:

- R = RED
- W = WHITE
- BK = BLACK
- B = BLUE
- Y = YELLOW
- G = GROUND

2. ELECTRICAL CONNECTIONS LEGEND:

- 12V = 12VAC
- L/V = LOW VOLTAGE COMMON
- 13V = 13VAC
- GND = GROUND
- PI GND = POWER INPUT GROUND
- N = POWER INPUT NEUTRAL
- H = POWER INPUT

**Electrical Connections**



# REPLACEMENT PARTS

## Replacement parts for the poolLUX Plus (pLX-PL60 or pLX-PL100):

Transformer (pLX-PL60)	44-15039-00
Transformer (pLX-PL100)	44-15040-00
3-Way Switch	38-15002-01
Isolation Barrier	02-15342-00
Isolation Barrier mounting screw, 8-32	10-15078-05
Fuse Holder	36-15016-00
Fuse (pLX-PL60)	36-15017-00
Fuse (pLX-PL100)	36-15018-00
RF Receiver, PCB	94-15262-00
RF Remote, Transmitter	94-15261-00
Antenna, 5 CM	94-15265-00

## Questions?

Contact One of Our Dedicated Lighting Specialists. **1-800-824-4387** x4012 or x2282



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