HAYWARD®

Low Voltage Pool Transformer

for ColorLogic® and CrystaLogic™ Pool/Spa Lights

Owner's Manual

Contents

c UL us

LTBUY11300

Basic safety precautions should always be followed, including the following: Failure to follow instructions can cause severe injury and/or death.
⚠ This is the safety-alert symbol. When you see this symbol on your equipment or in this manual, look for one of the following signal words and be alert to the potential for personal injury.
⚠ **WARNING** warns about hazards that could cause serious personal injury, death or major property damage and if ignored presents a potential hazard.
⚠ **CAUTION** warns about hazards that will or can cause minor or moderate personal injury and/or property damage and if ignored presents a potential hazard. It can also make consumers aware of actions that are unpredictable and unsafe.
The **NOTICE** label indicates special instructions that are important but not related to hazards.

Hayward Pool Products
620 Division Street, Elizabeth NJ 07207
www.hayward.com

IMPORTANT SAFETY INSTRUCTIONS

Before installing or servicing this electrical equipment, turn power supply OFF. READ AND FOLLOW ALL INSTRUCTIONS

WARNING – Read and follow all instructions in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.

WARNING – This product should be installed and serviced only by a qualified professional.

CAUTION – All electrical wiring MUST be in conformance with all applicable local codes, regulations, and the National Electrical Code (NEC).

ATTENTION INSTALLER – THIS MANUAL CONTAINS IMPORTANT INFORMATION ABOUT THE INSTALLATION, OPERATION, AND SAFE USE OF THIS PRODUCT THAT MUST BE FURNISHED TO THE END USER OF THIS PRODUCT. FAILURE TO READ AND FOLLOW ALL INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

WARNING – Risk of Electric Shock. All electrical wiring MUST be in conformance with all applicable local codes, regulations, and the National Electrical Code (NEC). Hazardous voltage can shock, burn, and cause death or serious property damage. To reduce the risk of electric shock, do NOT use an extension cord to connect unit to electric supply.

WARNING – An equipment grounding terminal is provided in the field wiring compartment. To reduce the risk of electric shock, this terminal must be connected to the grounding means provided in the electric supply panel with a conductor equivalent in size to the circuit conductors supplying this equipment.

IMPORTANT - Reference NEC codes for all wiring standards including, but not limited to, grounding, bonding and other general wiring procedures.

WARNING – Networked ColorLogic Lights and related electrical connections are receiving electrical power at all times, even when the lights are OFF! Turn off power at the main breaker before servicing ColorLogic lights.

SAVE THESE INSTRUCTIONS

Introduction

The Hayward® 300 Watt Pool Transformer LTBUY11300 is a low voltage transformer for use with pool and spa lights and submersible fixtures. It can be used to power up to four Hayward Universal ColorLogic® and CrystaLogic™ LED lights and offers a dedicated mounting location for the Coupler LKBUN1000 (necessary when using a powerline networking connection from a Hayward Pro Logic® controller). The LTBUY11300 has 3 output options, 12v, 13v and 14v.

Specifications

Enclosure Size: 7 1/4" (19.4 cm) high x 5 1/4" (13.3 cm) wide x 4 1/2" (11.4 cm) deep. Mounting brackets top and bottom.

Enclosure Type: (A) 0.054" corrosion resistant steel with electrostatically applied white coating.

Knockouts: Total of ten 1/2"-3/4" combination. (4) bottom, (2) right side, (2) left side

Electrical: Input: 120v, 60Hz, 3A max.
Output: 12, 13 or 14 Vac @ 300W max
For field connections, use wires suitable for at least 90ºC (194ºF)

Circuit Protection: A "Split Bobbin" between the primary and secondary windings assures safe operation and the built-in circuit protection will disconnect power to the transformer in case of defect or overload. This transformer is suitable for direct connection to underwater Pool and Spa lights when used with adapter, clamp and duct seal.

.

Installation

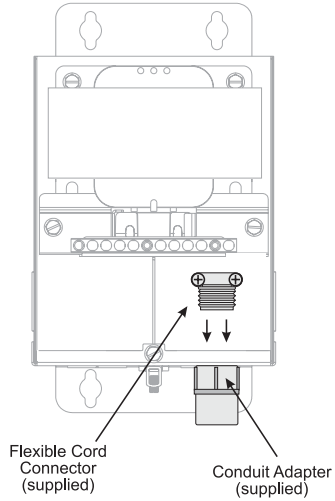
NOTE: Lever action terminal blocks are included to aid in installation. Open the levers all the way when inserting wires. Close the levers to lock the wires in place.

Safety Installation Requirements

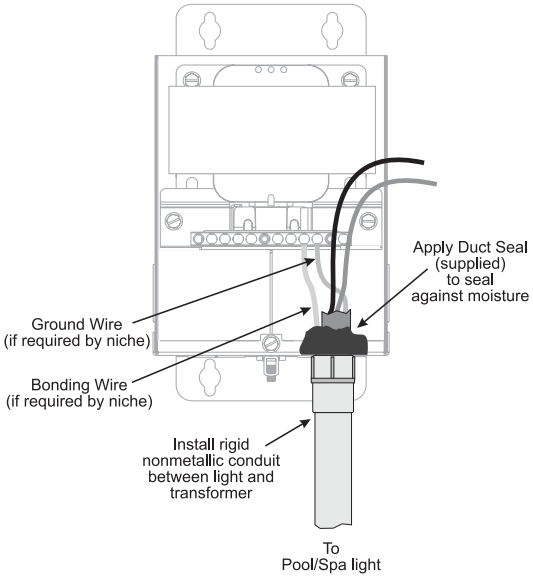
- For direct wiring of underwater lights, the installation must comply with provisions of the National Electric Code, ANSI/NFPA 70, including those in Article 680 - Swimming Pools, Fountains, and Similar Installation, or articles 68-060, 062 and 066 of the Canadian Electric Code
- The enclosure of the transformer must be provided with a fail-proof ground as required by NEC, Article 680 and any applicable local codes. For Canadian installations, the supply circuit must be protected by a ground fault circuit interrupter.
- Be sure to run the branch circuit grounding conductor to the equipment grounding conductor terminal of the panel board and that this terminal must be directly connected to the panel board enclosure.
- The transformer should be mounted at least 1 foot above the deck level with the field wiring compartment down.
- Locate the LTBUY11300 at least 4 feet (1.2m) away from the inside wall of the pool.
- Make sure that all unused taps (leads) are separately insulated.
- Use the included waterproof fitting and duct seal to connect the conduit from the pool/spa light to the transformer. See diagram on page 5.
- All unused openings in the LTBUY11300 must be closed with acceptable plugs.
- Install to permit access for servicing.

Connecting directly to Pool/Spa Light

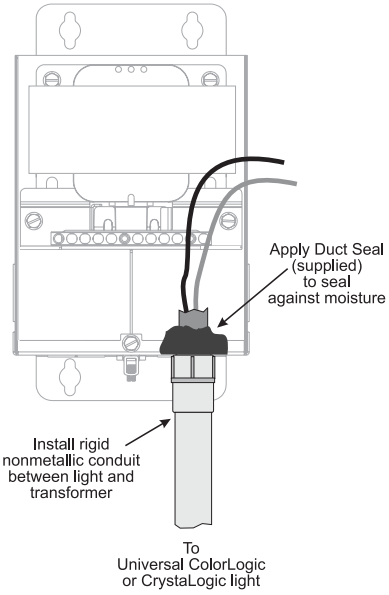
When the low voltage pool light will be directly connected to the LTBUY11300, use the included non-metallic conduit adaptor and duct seal. Refer to the diagram below. Any connections to the bus bar should be tightened to 10 in/lbs.



Connecting to Luminaires with bonding and grounding wires



Connecting to Universal ColorLogic or CrystaLogic Luminaires



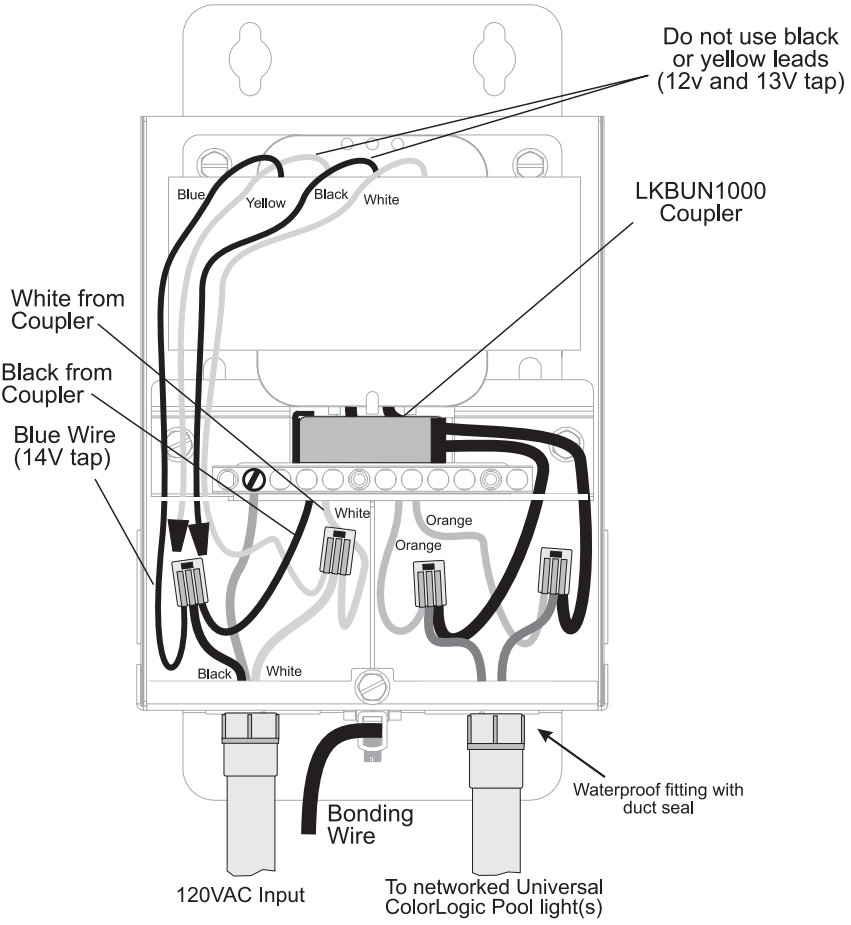
Wiring to Networked Hayward Universal ColorLogic Lights

If networked communications between a Hayward Pro Logic controller and Universal ColorLogic light(s) will be employed, a Hayward Coupler must first be installed into the LTBUY11300. Refer to the Coupler LKBUN1000 manual for detailed installation instructions.

On the input side, the LKBUN1000's black and white wires are connected in parallel with the 120VAC input wires and the blue (14V) tap and black wires from the primary side of the transformer.

On the output side, the LKBUN1000's orange wires are connected in parallel with the black transformer wires and the yellow leads from the Universal ColorLogic pool light(s).

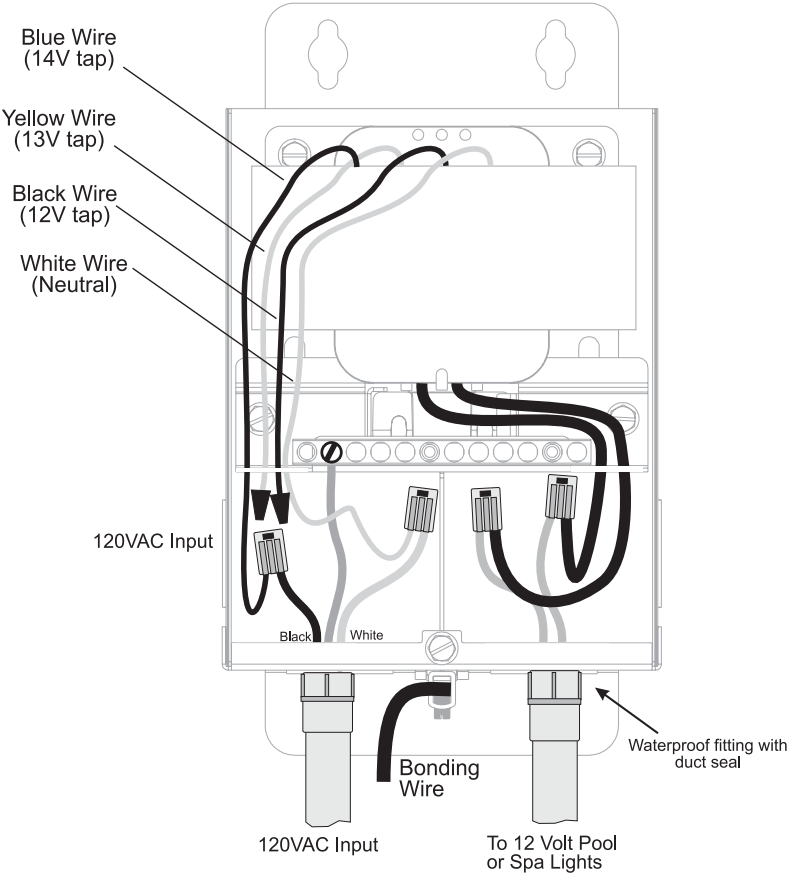
Hayward LTBUY11300 300 watt transformer powering networked Hayward Universal ColorLogic Light(s)



Wiring to ColorLogic/CrystaLogic Lights (not networked) and other low voltage Pool or Spa Lights

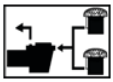
For field wiring information, please refer to the instructions attached to the inside front cover of the LTBUY11300 as well as the diagram below.

Hayward LTBUY11300 300 watt transformer powering low voltage Pool or Spa Lights



WARNING - Read and follow all instructions in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.

WARNING – Suction Entrapment Hazard Suction in suction outlets and/or suction outlet covers which are, damaged, broken, cracked, missing, or unsecured can cause severe injury and/or death due to the following entrapment hazards:
Hair Entrapment- Hair can become entangled in suction outlet cover.
Limb Entrapment- A limb inserted into an opening of a suction outlet sump or suction outlet cover that is damaged, broken, cracked, missing, or not securely attached can result in a mechanical bind or swelling of the limb.
Body Suction Entrapment- A negative pressure applied to a large portion of the body or limbs can result in an entrapment.
Evisceration/ Disembowelment - A negative pressure applied directly to the intestines through an unprotected suction outlet sump or suction outlet cover which is, damaged, broken, cracked, missing, or unsecured can result in evisceration/ disembowelment.
Mechanical Entrapment- There is potential for jewelry, swimsuit, hair decorations, finger, toe or knuckle to be caught in an opening of a suction outlet cover resulting in mechanical entrapment.



WARNING - To Reduce the risk of Entrapment Hazards:

- When outlets are small enough to be blocked by a person, a minimum of two functioning suction outlets per pump must be installed. Suction outlets in the same plane (i.e. floor or wall), must be installed a minimum of three feet (3') [1 meter] apart, as measured from near point to near point.
- Dual suction fittings shall be placed in such locations and distances to avoid "dual blockage" by a user.
- Dual suction fittings shall not be located on seating areas or on the backrest for such seating areas.
- The maximum system flow rate shall not exceed the flow rating of as listed on Table 1.
- Never use Pool or Spa if any suction outlet component is damaged, broken, cracked, missing, or not securely attached.
- Replace damaged, broken, cracked, missing, or not securely attached suction outlet components immediately.
- In addition two or more suction outlets per pump installed in accordance with latest ASME, APSP Standards and CPSC guidelines, follow all National, State, and Local codes applicable.
- Installation of a vacuum release or vent system, which relieves entrapping suction, is recommended.

WARNING – Failure to remove pressure test plugs and/or plugs used in winterization of the pool/spa from the suction outlets can result in an increase potential for suction entrapment as described above.

WARNING – Failure to keep suction outlet components clear of debris, such as leaves, dirt, hair, paper and other material can result in an increase potential for suction entrapment as described above.

WARNING – Suction outlet components have a finite life, the cover/grate should be inspected frequently and replaced at least every ten years or if found to be damaged, broken, cracked, missing, or not securely attached.

CAUTION – Components such as the filtration system, pumps and heater must be positioned so as to prevent their being used as means of access to the pool by young children. To reduce risk of injury, do not permit children to use or climb on this product. Closely supervise children at all times. Components such as the filtration system, pumps, and heaters must be positioned to prevent children from using them as a means of access to the pool.

WARNING – Hazardous Pressure Pool and spa water circulation systems operate under hazardous pressure during start up, normal operation, and after pump shut off. Stand clear of circulation system equipment during pump start up. Failure to follow safety and operation instructions could result in violent separation of the pump housing and cover, and/or filter housing and clamp due to pressure in the system, which could cause property damage, severe personal injury, or death. Before servicing pool and spa water circulation system, all system and pump controls must be in off position and filter manual air relief valve must be in open position. Before starting system pump, all system valves must be set in a position to allow system water to return back to the pool. Do not change filter control valve position while system pump is running. Before starting system pump, fully open filter manual air relief valve. Do not close filter manual air relief valve until a steady stream of water (not air or air and water) is discharged.

WARNING – Separation Hazard Failure to follow safety and operation instructions could result in violent separation of pump and/or filter components. Strainer cover must be properly secured to pump housing with strainer cover lock ring. Before servicing pool and spa circulation system, filters manual air relief valve must be in open position. Do not operate pool and spa circulation system if a system component is not assembled properly, damaged, or missing. Do not operate pool and spa circulation system unless filter manual air relief valve body is in locked position in filter upper body. Never operate or test the circulation system at more than 50 PSI. Do not purge the system with compressed air. Purging the system with compressed air can cause components to explode, with risk of severe injury or death to anyone nearby. Use only a low pressure (below 5 PSI), high volume blower when air purging the pump, filter, or piping.

WARNING – Risk of Electric Shock All electrical wiring MUST be in conformance with applicable local codes, regulations, and the National Electric Code (NEC). Hazardous voltage can shock, burn, and cause death or serious property damage. To reduce the risk of electric shock, do NOT use an extension cord to connect unit to electric supply. Provide a properly located electrical receptacle. Before working on any electrical equipment, turn off power supply to the equipment. To reduce the risk of electric shock replace damaged wiring immediately. Locate conduit to prevent abuse from lawn mowers, hedge trimmers and other equipment. Do NOT ground to a gas supply line.

WARNING – Risk of Electric Shock Failure to ground all electrical equipment can cause serious or fatal electrical shock hazard. Electrical ground all electrical equipment before connecting to electrical power supply.

WARNING – Risk of Electric Shock Failure to bond all electrical equipment to pool structure will increase risk for electrocution and could result in injury or death. To reduce the risk of electric shock, see installation instructions and consult a professional electrician on how to bond all electrical equipment. Also, contact a licensed electrician for information on local electrical codes for bonding requirements.

Notes to electrician: Use a solid copper conductor, size 8 or larger. Run a continuous wire from external bonding lug to reinforcing rod or mesh. Connect a No. 8 AWG (8.4 mm^2) [No. 6 AWG (13.3 mm^2) for Canada] solid copper bonding wire to the pressure wire connector provided on the electrical equipment and to all metal parts of swimming pool, spa, or hot tub, and metal piping (except gas piping), and conduit within 5 ft. (1.5 m) of inside walls of swimming pool, spa, or hot tub.
IMPORTANT - Reference NEC codes for all wiring standards including, but not limited to, grounding, bonding and other general wiring procedures.

WARNING – Risk of Electric Shock The electrical equipment must be connected only to a supply circuit that is protected by a ground-fault circuit-interrupter (GFCI). Such a GFCI should be provided by the installer and should be tested on a routine basis. To test the GFCI, push the test button. The GFCI should interrupt power. Push reset button. Power should be restored. If the GFCI fails to operate in this manner, the GFCI is defective. If the GFCI interrupts power to the electrical equipment without the test button being pushed, a ground current is flowing, indicating the possibility of an electrical shock. Do not use this electrical equipment. Disconnect the electrical equipment and have the problem corrected by a qualified service representative before using.

CAUTION – HAYWARD® pumps are intended for use with permanently-installed pools and may be used with hot tubs and spas if so marked. Do not use with storable pools. A permanently-installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it is capable of being readily disassembled for storage and reassembled to its original integrity.

SAVE THESE INSTRUCTIONS

Hayward® Pool Products Limited Warranty

To original purchasers of this equipment, Hayward Pool Products, Inc. warrants its Universal ColorLogic® and CrystaLogic™ pool and spa lights, niches, pool light transformers, and couplers to be free from defects in materials and workmanship for a period of ONE (1) year from the date of purchase, when used in single family residential applications.

The limited warranty excludes damage from freezing, negligence, improper installation, improper use or care or any Acts of God. Parts that fail or become defective during the warranty period shall be repaired or replaced, at our option, within 90 days of the receipt of defective product, barring unforeseen delays, without charge.

Proof of purchase is required for warranty service. In the event proof of purchase is not available, the manufacturing date of the product will be the sole determination of the purchase date.

To obtain warranty service, please contact the place of purchase or the nearest Hayward Authorized Service Center. For assistance on your nearest Hayward Authorized Service Center please visit us at www.hayward.com.

Hayward shall not be responsible for cartage, removal, repair or installation labor or any other such costs incurred in obtaining warranty replacements or repair.

The Hayward Pool products warranty does not apply to components manufactured by others. For such products, the warranty established by the respective manufacturer will apply.

The express limited warranty above constitutes the entire warranty of Hayward Pool Products with respect to its' pool products and is in lieu of all other warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose. In no event shall Hayward Pool products be responsible for any consequential, special or incidental damages of any nature.

Some states do not allow a limitation on how long an implied warranty lasts, or the exclusion of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

HAYWARD®

Product Registration
(Retain For Your Records)

DATE OF INSTALLATION _____

Retain Warranty in a safe and convenient location for you records.

DETACH HERE: Fill out bottom portion completely and mail within 10 days of purchase/installation or register online

✂ ----------

LOW VOLTAGE POOL TRANSFORMER

First Name_____ **Last Name**_____

Street Address_____

City_____**State**_____**Zip**_____

Phone Number_____**Purchase Date**_____

E-mail Address_____

Serial Number (may not be applicable)

Model Number_____

Pool Capacity (US gallons)_____

Warranty Card Registration

Years pool has been in service:
☐ **<1yr** ☐**1-3** ☐**4-5**
☐ **6-10** ☐**11-15** ☐ **>15**

Purchased from:
☐**Builder** ☐**Retailer**
☐**Pool Service** ☐**Internet/Catalog**

Company Name_____

Address_____

Type of Pool:
☐**Gunite/Concrete** ☐**Vinyl** ☐**Fiberglass**

Purchased for:
☐**New Installation** ☐**Replacement**

Installation for:
☐**Inground** ☐**Spa**

☐ Please include me on all e-mail communications regarding Hayward® Equipment or promotions.

Mail to: Hayward Pool Products, 620 Division Street, Elizabeth, NJ 07207
Attn: Warranty Dept or REGISTER YOUR WARRANTY ON-LINE AT WWW.HAYWARD.COM

For further information or consumer
technical support, visit our website at
www.hayward.com

HAYWARD®

USE ONLY HAYWARD GENUINE REPLACEMENT PARTS