

Important: Read all instructions prior to installation.

Low Voltage Landscape Transformers



Safety

This fixture must be installed in accordance with the National Electric Code and local code specifications. Failure to follow these codes and installation instructions will void the warranty and may result in serious injury and/or damage to the fixture. This product is designed for above ground installation only. Keep these instructions for future use.

- **WARNING!** Risk of fire or electrical shock. Install transformer at least 5 feet (1.5m) from pool or spa and at least 10 feet (3.05m) from a fountain.
- This transformer must be connected to GFCI-protected receptacle. If receptacle is outdoors then it must be protected by an in-use weather-proof cover.
- All transformers are indoor and outdoor rated, but we recommend transformer be mounted outdoors. If mounted indoors, then codes should be followed that apply to indoor wiring - especially for wires that pass through exterior walls.
- Transformer must be mounted in a vertical orientation with bottom plate at least 1 foot from ground.
- It is normal for unit to become hot, do not allow contact with PVC or plastic sidings. In hot climates, avoid mounting in direct sunlight, but allow photocell to be exposed to sky. Near salt-water, protect unit by enclosing in weather-proof structure.

Circuit Breaker

This product has a built in circuit breaker to help protect against electrical short circuits. This does not prevent using GFCI outlets marked for "wet location." It also does not prevent requirement to follow all local and electrical building codes for main circuit breaker protection.

If a circuit break occurs, immediately disconnect transformer from power source. Make all repairs to lighting system that caused circuit breaker to trip. Once the problem has been determined and fixed, reset breaker by switching to on position.

Mounting Transformer

Mount transformer to solid surface or stand using stainless steel screws and anchors (if needed) (hardware not included). Screws will pass through keyholes. Use bubble level to ensure vertical mounting. Bottom of transformer must be at least 1 foot above ground.

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Transformer Sizing

Total lamp VA (load) of all fixture connected to one transformer must not exceed 70% of the VA capacity of the transformer. Therefore, transformer selections is primarily based on Total Fixture Load:

$$\text{Total Fixture Load (Watts or VA)} \div 0.7 = \text{Min. Transformer Capacity}$$

Example: Total fixture load is 200 watts, divide by 0.7 to equal 286 watts, a 300W transformer would be ideal.

Wire Selection

We recommend using 12 AWG low voltage direct landscape wire. It is important to distribute fixtures evenly along cable with higher wattage fixtures closer to transformer if possible. Only use bottom terminals for wiring to light. Do not loosen top terminals. They are for internal wiring for transformer.

Higher voltage terminals are for long wire runs to lights. These will help account for voltage loss along the long run of wire.

Voltage Loss Calculation

$$\left(\frac{\text{Distance (Ft.)}}{1000} \times \frac{\text{Load (W)}}{1000} \times 2 \right) \div \frac{\text{Cable Constant}}{1000} = \text{Voltage Loss}$$

Wire Gauge	Cable Constant	Wire Gauge	Cable Constant
#18/2	1380	#12/2	7500
#16/2	2200	#10/2	11920
#14/2	3500		

Select Voltage Taps

Transformer is Multi-Tap, giving you a selection of voltages for your wire run connections. Selecting a higher voltage at transformer compensates for voltage that may be lost along wire runs.

Timer Operation 75W:

Rotate outer portion of timer until arrow on right side points to current time (24 hour time). Then, slide dark gray tabs towards center for allotted time one wants. Follow instructions for timer to set clock on and off times or manually turn ON/OFF system.

Timer Operation 150W, 300W, 600W:

*BND-60SU92, BND60U92: See manuals for operation



Disconnect the source power from the transformer before installing the timer. Unplug the plug as shown above.



Insert that plug into the side as shown above.



Follow the instructions for the timer to set the clock on and off times or manually turn on/off your system.

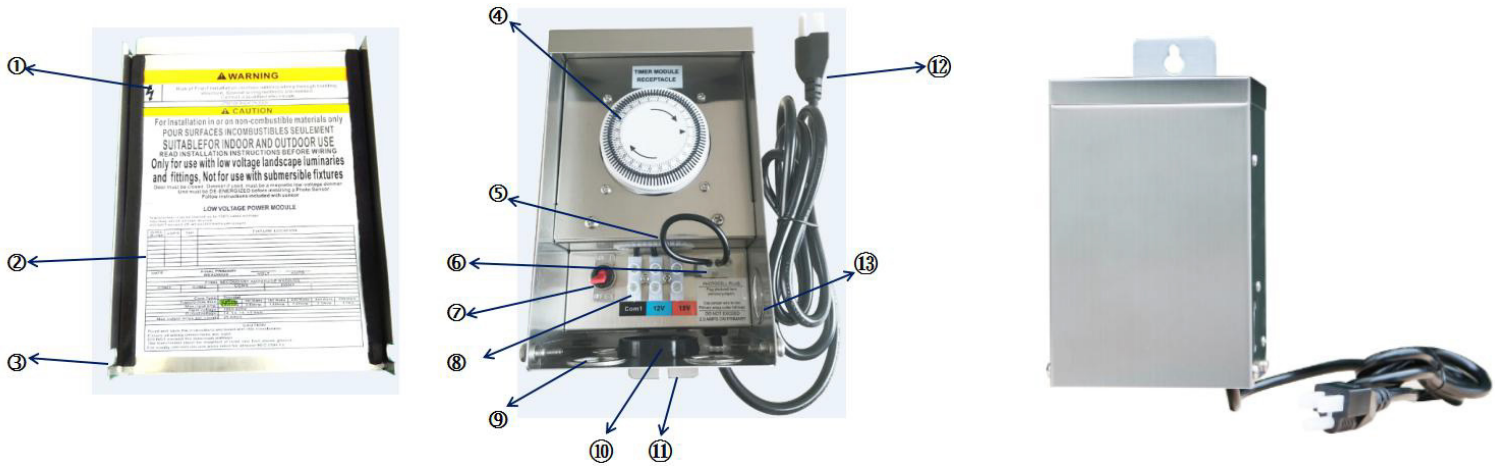
Check System

After installing entire low voltage system, operate system for five minutes. On low voltage side, all electrical connection spots should be cool to touch. If a connection is hot to touch, re-tighten connection and check to ensure that temperature decreases. Place transformer cover back and tighten all four provided screws on both sides.

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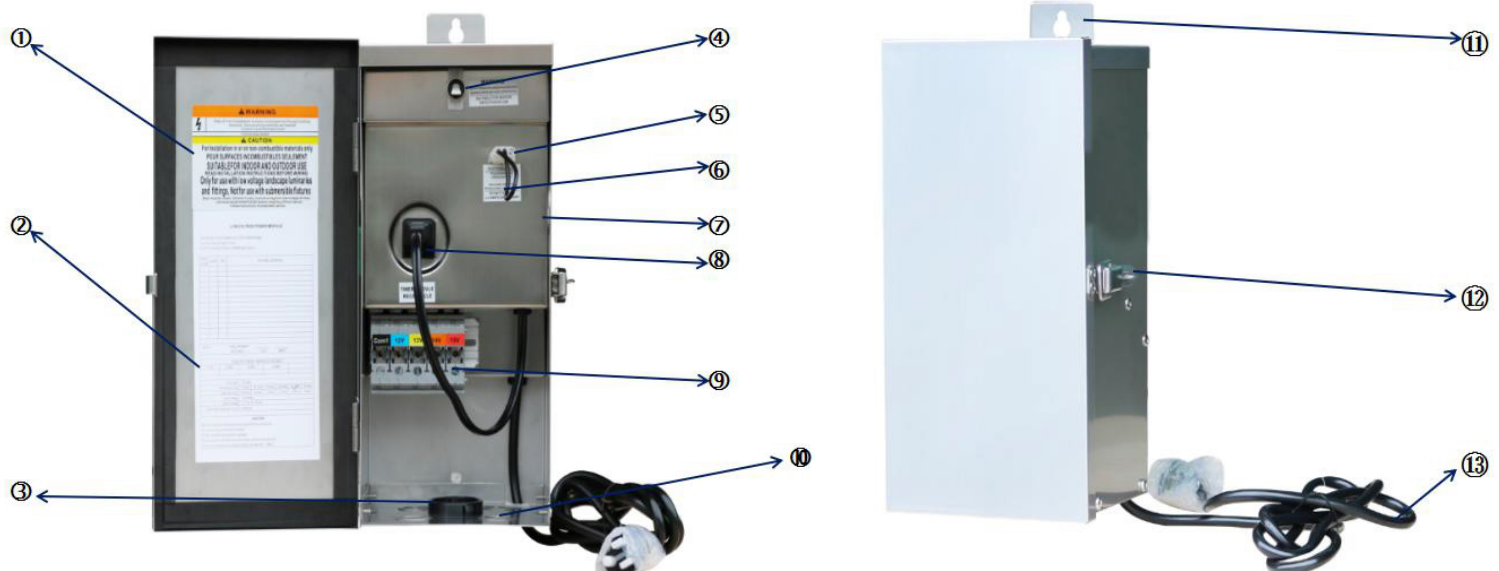
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Features and Controls 75W:



- | | | | |
|---------------------|-----------------------------|-------------------|------------------------|
| 1. Warning Label | 5. Testing Loop | 8. Terminal Block | 11. Mounting Tab |
| 2. Operating Record | 6. Photocell Plug | 9. Knockout | 12. Power Cord |
| 3. Locking Hole | 7. Overload Circuit Breaker | 10. Conduit Cover | 13. Photocell Knockout |
| 4. Mechanical Timer | | | |

Features and Controls 150W, 300W, 600W:



- | | | | |
|-----------------------------|-----------------------|---------------------|--------------------|
| 1. Warning Label | 5. Photocell Plug | 8. Timer Receptacle | 11. Mounting Tab |
| 2. Operating Record | 6. Testing Loop | 9. Terminal Block | 12. Lockable Latch |
| 3. Conduit Cover | 7. Photocell Knockout | 10. Conduit Cover | 13. Power Cord |
| 4. Overload Circuit Breaker | | | |

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Photocell Installation 75W

Disconnect power source to transformer before installing photocell. Remove inner knockout located on side of transformer. Do not remove outer portion of knockout or photocell will not fit properly.

To remove inner portion, use a screwdriver to bend tabs forward. Once both tabs are bent forward, use a set of pliers to twist and bend tabs until inner knockout breaks loose.



1. Remove nut from photocell.



2. Unplug photocell plug from transformer.



3. Insert the wire and connector of photocell through hole in side of transformer. Place nut around wire and screw onto photocell, holding unit in position.



4. Plug photocell into now empty socket connection.

Photocell Installation 150W, 300W, 600W

Disconnect power source to transformer before installing photocell. Remove inner knockout located on side of transformer. Do not remove outer portion of knockout or photocell will not fit properly.

To remove inner portion, use a screwdriver to bend tabs forward. Once both tabs are bent forward, use a set of pliers to twist and bend tabs until inner knockout breaks loose.



1. Remove nut from photocell.



2. Unplug photocell plug from transformer.



3. Insert the wire and connector of photocell through hole in side of transformer. Place nut around wire and screw onto photocell, holding unit in position.



4. Plug photocell into now empty socket connection.