



LOW VOLTAGE TRANSFORMER INSTALLATION GUIDE

THIS INSTRUCTIONS APPLY TO MODELS:

TS-TSST-75

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 the 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 GUCCI-protected receptacle. If the receptacle is outdoors then it must be protected by an in-used weather-proof cover.
- All transformers are indoor and outdoor rated, but we recommend the 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 the bottom plate at least 1 feet from ground.
- It is normal for the 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.

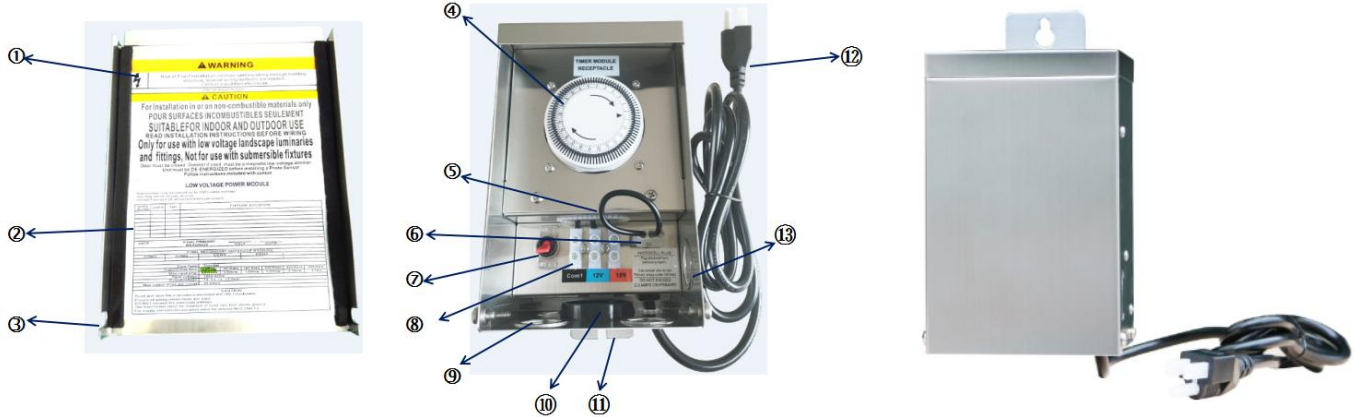
CIRCUIT BREAKER:

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

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

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FEATURES AND CONTROLS:



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

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 feet above ground.

TRANSFORMER SIZING:

The total lamp VA (load) of all fixture connected to one transformer must not exceed 70% of the VA capacity of the transformer. Therefore, the 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.

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SELECT YOUR WIRE:

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

The 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

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

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

INSTALLING A PHOTOCELL:

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

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

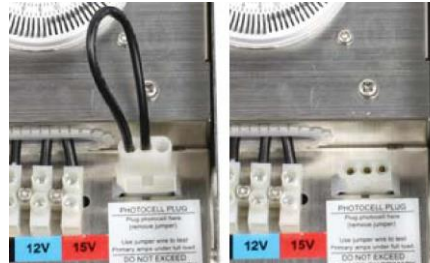


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Remove the nut from the photo cell.



Unplug the jumper connection from the transformer.



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



Plug the photo cell into the now empty socket connection.



Timer

Operating the Timer



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Rotate the outer portion of the timer until the arrow on the right-side points to the current time (24 hour time). Then, slide the dark gray tabs towards the center for the allotted time you want the lights to be on. Follow the instructions for the timer to set the clock and on and off times or manually turn on/off your system.

CHECK THE SYSTEM:

After installing the entire low voltage system, operate the system for five minutes. On the low voltage side, all electrical connections spots should be cool to touch. If a connection is hot to the touch, re tighten the connection and check to ensure that the temperature decreases.

Place the transformer cover back and tighten all four provide screws on both sides.

For Questions & Support, please email or call Tru-Scapes at 1-800-878-1240 contact@tru-scapes.com