

## !! ATTENTION !!

Please read and understand thoroughly this installation guide to ensure safe and efficient operation of this Power Module.



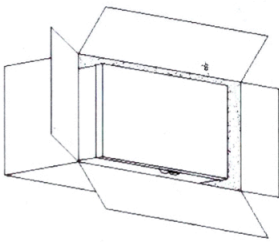
1

Open shipping carton, and carefully remove the transformer.

Open the side flap inside of shipping carton and remove the Bottom Plate and Bottom Plate hardware bag if supplied with unit.

Inspect shipping carton contents for any damage that may have been incurred during shipment.

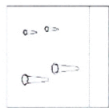
The Bottom Plate has plugged holes for adapting to standard conduit sizes, as well as a 1-3/4" diameter access hole to allow for a larger centrally located 1-1/2" conduit for a cleaner, more professional looking installation.



Example:  
Bottom Plate



Example:  
Bottom Plate Hardware Bag

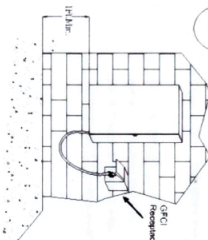


2

## MOUNTING THE UNIT.

Mount the Transformer to a solid surface using keyhole slots in the mounting bracket. (NOTE: The transformer must be mounted at least one foot above ground level, with the wire terminals facing down.)

Secure the Transformer using the appropriate wall anchors for the wall surface used.



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## DETERMINE THE LOAD.

These transformers are equipped with secondary circuit breakers that are connected to the COM. Each circuit can be loaded up to a maximum of 300 watts.

A) Add up your fixture's wattage. Divide your load into 300W max. per wire run. DO NOT EXCEED 300W PER RUN!! (Example: 5x60W or 3x100W)

B) Measure the approx. distance from the transformer to the last fixture on each run. Refer to Chart 1 to pick the correct tap for each run. You may use one, two, three or all taps at once.

Voltage	TAP 1 12V		TAP 2 13V		TAP 3 14V		TAP 4 15V	
	AWG	AWG	AWG	AWG	AWG	AWG	AWG	AWG
Watt	12	10	12	10	12	10	12	10
100 - 149	38	60	76	120	113	180	151	240
150 - 199	25	40	50	80	76	120	101	160
200 - 249	19	30	38	60	57	90	76	120
250 - 300	N/A	24	N/A	48	N/A	72	N/A	96

CHART 1 (WIRE RUNS IN FEET)

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## CONNECTING THE CABLES.

Loosen the screws that hold the unit bottom cover side in place, and turn the bottom cover out and remove plug hole.

Run lighting cables through knockouts in Bottom Plate.

Connect the low voltage cables to the COMs and low voltage taps labeled on the Terminal blocks.

Make sure that all connecting screws are secure and tight.

Using Minimum 12AWG(or suitable) for connection, the cable may be used Type SPT-3. (To order additional wire contact an electrical supply company)

The cable is intended for shallow burial - less than 6 inches(152mm)

REMEMBER!! Maximum 300W per circuit!!

Turn off ALL the circuit breakers in the transformer unit.

Plug the 120V line cord into a grounded 120V outlet. Turn on one breaker at a time to ensure that your low voltage cable runs are connected per Chart 1, and to ensure that there are not any short circuits.

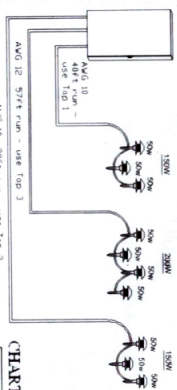
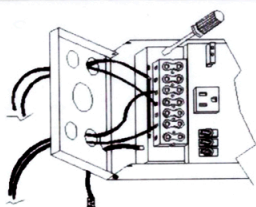


CHART 2 (VOLTAGE LOSSES PER FOOT)

AWG	100W	150W	200W	300W
12	0.210	0.461	0.855	N/A
10	0.131	0.293	0.537	1.2

Once you find the correct tap for each run, use Chart 2 to calculate the cable losses.

Cable loss = (loss per foot X distance)  
 = (0.293 X 40ft) + (0.855 X 80ft)  
 = (11.72) + (68.435) + (23.44)  
 = 83.595 watt losses total.

D) Determining Maximum Lamp Load:  
 All of our Transformers are designed to provide up to maximum wattage rating. However, you must take into account the cable losses.

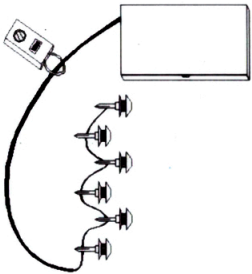
Example:  
 Maximum Lamp Load = (Transformer rating minus (cable losses)).  
 = (600W) - (83.595)  
 = approximately 516W Lamp Load.

\*\* Your maximum lamp load should not exceed approximately 516W. \*\*

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## CHECKING THE OUTPUT AMPS.

Once you have checked all the runs for correct voltages, use a clamp-on Amp Meter and check the output current on the low-voltage cable at the transformer.  
 REMEMBER!! Maximum 25Amp per circuit!!

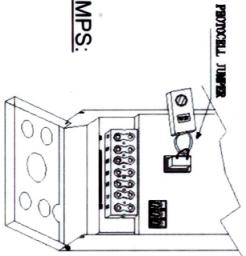


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## CHECKING THE INPUT AMPS.

Your Transformer is provided with a long loop that you may utilize to measure the input current. Simply apply the clamp on the Amp Meter around the loop and measure the current. (See Chart 3)

REMEMBER!! Do not exceed the maximum input current!! The Transformer is marked with a label showing the maximum input current.

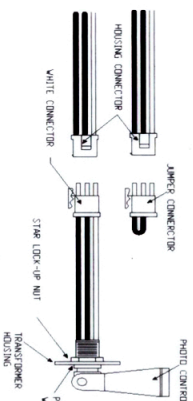


## Added Features Installation Instructions

### Installing the Photo-control:

1. Make sure power is off and transformer is not plugged into an electrical outlet. NOTE: No splice or wiring is required if transformer is equipped with jumper connector.
2. Turn out the clip of transformer case and open front cover and remove one (1) of the 7/8" plug hole on the side of the enclosure.
3. Locate and disconnect the white jumper connector inside the housing. Save the jumper connector with

4. Remove the photo-control star lock-up nut and push the photo-control while connector through the plug hole. Replace the star lock-up nut.
5. Plug photo-control while connector into the inside panel connector. Ensure that the side latch locks the connector in place. Arrange wires carefully inside the housing. Push the front cover back and replace clip into position and secured. Turn on the power.
6. Locate transformer and position photo-control so that no artificial light will cause the photo-control to cycle on and off. In the unlikely event that the photo-control should fail, the lighting fixtures will remain on. Even in the daytime, if this should happen, follow these instructions and remove the defective photo-control and place the jumper connector in its place. Contact your local Distributor to order replacement photo-control.



### Installing the 24 Hour Time Clock:

1. Open the front cover of the transformer housing.
2. Unplug the cord from the receptacle.
3. Plug the cord into the 24 Hour Time Clock.
4. Plug the 24 Hour Time Clock into the transformer receptacle.
5. Set the time on the 24 Hour Time Clock per the instructions provided with the Time Clock.

### IMPORTANT SAFETY INSTRUCTIONS:

When using electrical products, basic precautions should always be practiced including the following:

1. Read and follow all safety instructions.
2. Read and follow all instructions that are on the product or provided with the product.
3. This product can be installed either indoor or outdoor use.
4. For use with low voltage landscape lighting systems only.
5. The load connected to each circuit can be loaded up to a maximum of 300 watts.
6. WARNING - Risk of Electric Shock. Install power unit 5 feet (1.5 m) or more from a pool, spa, or fountain. Where the power unit is installed (a) indoors within 10 feet (3.0 m) of a pool, spa, or fountain or (b) outdoors, connect power unit to a receptacle protected by a GFCI.
- For Outdoors - the power unit shall be connected to a GFCI protected hooded flush type cover plate receptacle marked "Wet Location" while in use.
7. Do not use with an extension cord.
8. Always plug the transformer into a grounded 120 volt GFCI receptacle.