

# TS200 TRANSFORMER



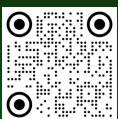
## INSTALLATION GUIDE

ABBA LIGHTING USA

# TS200 TRANSFORMER



Thank you for choosing our high-quality product. To ensure the best possible experience, please take a moment to carefully read and follow all instructions before assembly, installation, and use. Doing so will not only guarantee proper function and safety but also help you maximize the full potential of this exceptional product. We truly appreciate your business and are honored to be your trusted provider of top-notch products!



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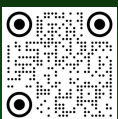


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# WARNING

## TO REDUCE THE RISK OF FIRE OR INJURY TO PERSONS:

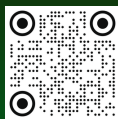
- ✓ For safety reasons, we recommend that only a qualified professional install this electrical product.
- ✓ Before attempting to install this unit, ensure all power connections are off for your own safety.
- ✓ Fixture(s) must be installed in accordance with all local codes and ordinances.
- ✓ Do not instal within 10 feet of a pool, spa or fountain
- ✓ **DO NOT DISASSEMBLE**
- ✓ To ensure proper functionality and safety, it is important to refrain from connecting two or more transformers in parallel. It is advised to maintain individual electrical circuits for each transformer rather than attempting to combine their outputs. By adhering to this guideline, you can prevent potential complications and optimize the performance of each transformer.
- ✓ For optimal performance and safety, it is recommended not to utilize this device in conjunction with a dimmer switch. Avoid connecting the device to any dimming mechanism as it may lead to undesirable consequences or malfunctioning. It is advisable to operate the device without the use of a dimmer to ensure its intended functionality and prevent any potential risks.
- ✓ To ensure the highest level of safety, it is recommended to directly plug the transformer into a Ground Fault Circuit Interrupter (GFCI) outlet. By utilizing a GFCI outlet, you enhance protection against electrical shocks and minimize the risk of electrical hazards.
- ✓ To maintain optimal performance and safety, it is strongly advised against using an extension cord with this device. It is recommended to directly connect the device to a properly grounded power outlet. Using an extension cord may introduce electrical inefficiencies, increase the risk of overheating, or compromise the device's functionality. It is best to avoid extension cords and ensure a direct and secure power connection for the device.



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# WARNING

## TO REDUCE THE RISK OF FIRE OR INJURY TO PERSONS:



It is important to note that the maximum output capacity of this transformer is 100 Watts. To ensure safe and optimal operation, it is crucial to avoid exceeding this specified limit. Overloading the transformer by drawing power beyond its maximum capacity can lead to overheating, reduced efficiency, and potential damage to the device. It is highly advised to carefully monitor the power requirements of your equipment and ensure they fall within the specified limits of the transformer to maintain its performance and longevity.

# WARRANTY

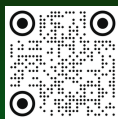
- We stand behind the quality of our product and offer a 3 Year warranty. Kindly ensure that you keep the proof of purchase as it will be required for any warranty claims.
- Warranty will be void if there is any damage due to improper usage or modification to the fixture.
- Failure to comply with the instruction in this manual may increase the risk of damage or injury and will void warranty.



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**DO NOT INSTALL WITHIN 10 FEET OF A POOL, SPA OR FOUNTAIN**

## PRODUCT OVERVIEW

### TS200 – 200W Digital Plastic Transformer

The TS200 200W Digital Plastic Transformer is a robust and efficient power supply solution designed for outdoor low-voltage lighting systems. Constructed with heavy-duty commercial-grade plastic, this transformer ensures durability and reliable performance in various environmental conditions.

#### VOLTAGE OUTPUT (12V):

Offers 12V output providing flexibility to accommodate different lighting fixtures and cable lengths.

#### BUILT-IN PHOTOCELL SENSOR:

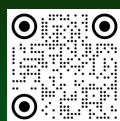
Automatically turns lights on at dusk and off at dawn, enhancing energy efficiency and convenience.

#### INTEGRATED DIGITAL TIMER:

Features a programmable 1-9 hour timer, allowing for precise control over lighting operation times.

#### HEAVY-DUTY PLASTIC HOUSING:

Crafted from commercial-grade plastic, this transformer is built to withstand outdoor elements while maintaining a clean, professional appearance.



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## EASY PLUG-AND-PLAY SETUP:

Includes a 6-foot, 3-prong plug-in cord, making installation fast and flexible for indoor or outdoor use.

Specification	Detail
<b>Model</b>	TS200
<b>Power Capacity</b>	200W
<b>Input Voltage</b>	120V AC
<b>Output Voltage</b>	12V AC
<b>Housing Material</b>	Heavy-Duty Commercial-Grade Plastic
<b>Photocell Sensor</b>	Yes
<b>Digital Timer</b>	1-9 Hour Programmable
<b>Plug Type</b>	6' 3-Prong Plug-in Cord
<b>Certifications</b>	ETL Listed
<b>Indoor/Outdoor Use</b>	Yes
<b>Dimensions (L x W x H)</b>	3.75" x 4.25" x 6.25"



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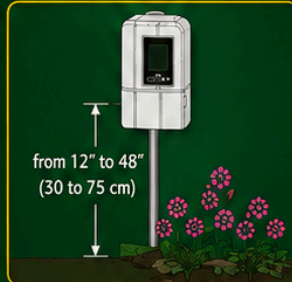
**FIXTURE(S) MUST BE INSTALLED IN ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES.**

**DO NOT INSTALL WITHIN 10 FEET OF A POOL, SPA OR FOUNTAIN**

## 1. FIND A LOCATION FOR THE TRANSFORMER



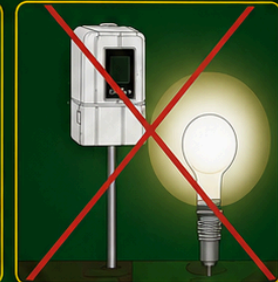
1.1 Outdoor use, weather proof.



1.2 Install the transformer at a level where the controls are visible and accessible.

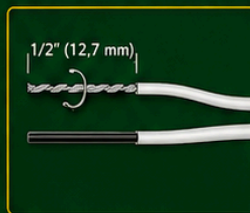
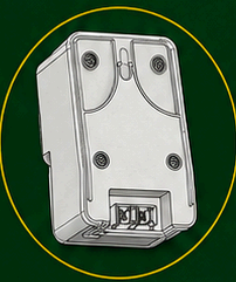


1.3 Do not install behind shrubs. It will affect photocell.

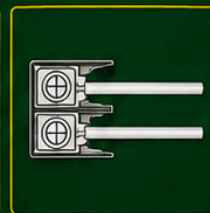


1.4 Photocell will not operate properly if installed too close to a nighttime light source.

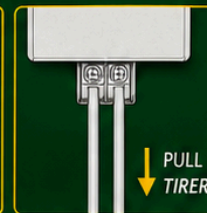
## 2. CONNECT CABLE TO TRANSFORMER



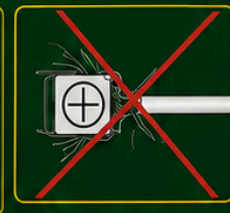
3.1 Remove the landscape wire insulation 1/2" from both wires and twist ends.



3.2 Insert wires under each terminal plate and tighten screws.



3.3 Gently pull on the landscape wire to verify if the connection is strong.



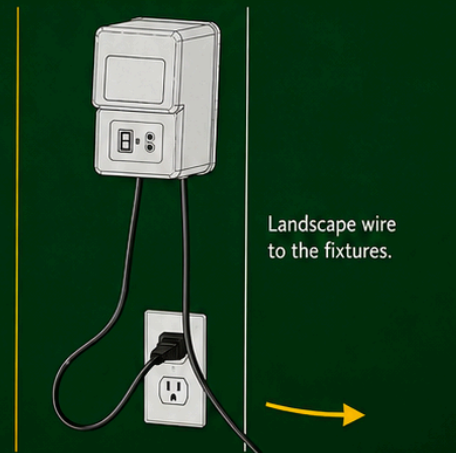
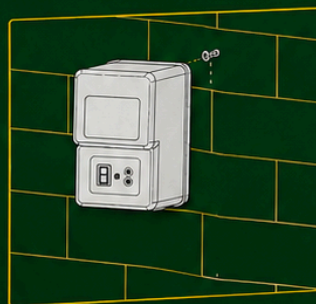
3.4 Verify that there are no loose cable strands.

**⚠ WARNING!**  
Must be evenly and tightly fixed to avoid getting melted connecting

## 3. MOUNT THE TRANSFORMER

Insert a screw in a wall near an electrical outlet and mount the transformer.

**Note:** Use an outdoor, weather resistant screw suitable to the material that you are mounting the transformer onto (mortar screws into cement or brick, wood screws for wood siding). The size of the screw should be at least SAE #4 (Metric M3) to support the weight of the transformer.



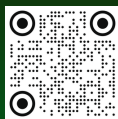
Landscape wire to the fixtures.



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## 4. Run the Landscape Wire (Not Included)

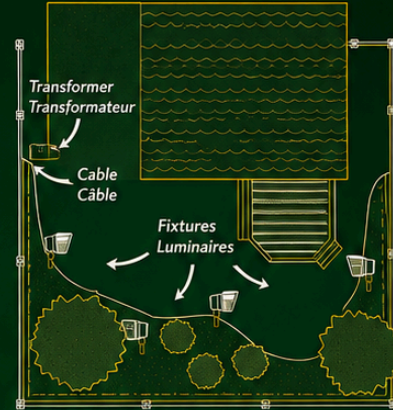
The landscape wire should run from the transformer to each light without being cut. Do not run the landscape wire within 10 feet (3m) of a pool, spa or fountain. If the landscape wire is too long, cut it with a cable cutter.

The landscape wire should be protected by routing it close to proximity of the light fixture or next to a building, deck or fence. Use cable suitable for low voltage landscape lighting.

See chart below for recommended cable gauges.

*\*Suitable cable should be sized in accordance to the cable, should be Type SPT-2W.*

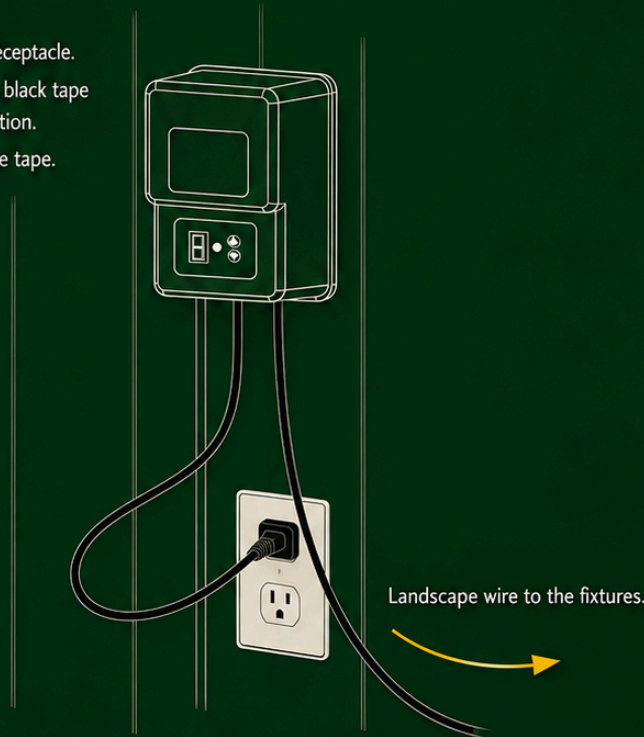
Combined wattage of all fixtures on line (in Watts)	Wire Gage (0-75')	Wire Gage (75'-150')	Wire Gage (150'-250')
0-60	16	16	14
60-120	16	14	12
120-180	14	12	12
180-240	12	12	Not recommended
240-300	12	Not recommended	Not recommended



\* Illustration of fixtures is for example only.

## 5. Power up the transformer

- Plug the transformer into a GFCI electrical receptacle.
- To test the fixtures, cover the photocell with black tape and turn the control switch to the ON position.
- After the installation is complete, remove the tape.



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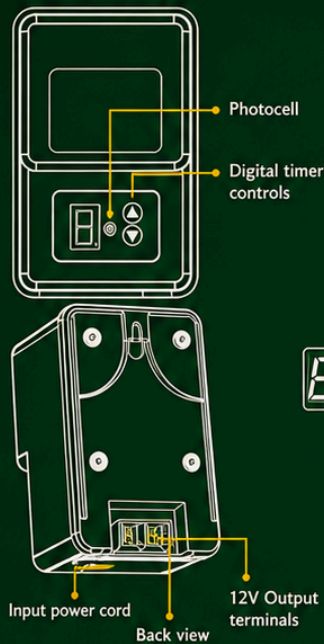
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# INSTALLATION GUIDE FOR TS200

## 6. How to operate the transformer controls



### Photocell

This component reacts to light conditions. It should not have direct contact with any other light sources. A 30 second delay may be experienced when light conditions change.

To test the system during day time, simply cover the photocell with black tape.



### Digital Timer Controls

Use the UP ▲ and DOWN ▼ control buttons to select from the following settings:

- **Power:** Whenever the is present, there is power on the low voltage side of the transformer.
  - Constant power ON:** This switches the system on 24 hours a day.
- **A AUTO:** This switches the system on at dusk and off at dawn, automatically.
- **M AUTO TIMER:** This switches the system on at dusk and off after the selected number of hours.
- **L Minor Overloads:** The actual lights working current /load on the transformer exceeds it's capacity. Reduce the load by removing fixtures from the low voltage line. Failure to do so will reduce the lifetime of the transformer.

### Display off - Major Overload or short circuit

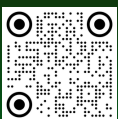
If the display is off and that the utility voltage is still present the transformer is majorly overloaded. The major overload feature will shut off the low voltage output of the power unit, if the circuit is overloaded with too many fixtures. This will result when the total wattage of all lights of the system exceeds 200 Watts. The major overload shut off will also happen if there is a short circuit in your garden lighting system. A short circuit can occur if the secondary cable connecting the fixtures to the power supply is cut or if the exposed ends touch a metal post or water. After you have determined and solved the problem, you can restart the operation by pressing the button. If the display is off and that the utility voltage is still present the transformer is majorly overloaded.

## 7. Troubleshooting

All of the lights fail to work	<ul style="list-style-type: none"> <li>• Check that the transformer power is on.</li> <li>• Check if there is a loose connection at the transformer screw terminal.</li> <li>• Check that the power switch is not in the OFF setting.</li> </ul>
Only some lights work	<ul style="list-style-type: none"> <li>• The problem here is with the fixture's connector or light bulb.</li> <li>• Check the connector to make sure the wire stabs have pierced the landscape wire and the fixture wire.</li> <li>• To check a light bulb, exchange it with one from a fixture that is working (remember to be careful, as the bulbs can get very hot – also touch bulbs with a soft cloth only).</li> </ul>
The lights are "ON" during the day	<ul style="list-style-type: none"> <li>• The power unit is in a dark area which triggers the photocell to turn ON the lights.</li> </ul>
The lights do not switch "ON" at dusk	<ul style="list-style-type: none"> <li>• The power unit is in a area where there is too much light at night.</li> </ul>

## 8. Maintenance

- To clean, wash with a damp soft cloth.



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## HOW TO CHOOSE THE RIGHT LOW VOLTAGE WIRE:

Feet	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
Watts																					
40	16	16	16	16	16	16	16	14	14	12	12	12	12	12	12	12	12	12	10	10	
60	16	16	16	16	16	16	14	14	14	12	12	12	12	12	12	12	12	10	10	8	
80	16	16	16	16	14	14	14	14	14	12	12	12	12	10	10	10	10	10	10	8	8
100	16	16	14	14	14	14	14	12	12	12	10	10	10	10	10	10	10	8	8	8	8
120	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10	8	8	8	8	8	8
140	12	12	12	12	12	12	12	12	10	10	10	10	10	8	8	8	8	8	8	8	8
160	12	12	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8	8			
180	12	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8					
200	12	12	12	12	12	12	10	10	10	8	8	8	8	8	8						
220	12	12	12	12	12	10	10	10	8	8	8	8	8								
240	12	12	12	12	10	10	10	8	8	8	8	8									
260	12	12	12	12	10	10	10	8	8	8	8										
280	12	12	12	10	10	10	8	8	8	8											
300	12	12	12	10	10	10	8	8	8	8											
320	12	12	10	10	10	8	8	8	8												
340	12	12	10	10	10	8	8	8	8												
360	12	10	10	10	8	8	8	8													

**1. LOWER GAUGE WIRES ARE THICKER AND CONTAIN MORE COPPER. THEY HAVE A GREATER CURRENT CARRYING CAPACITY FOR LONG RUNS**

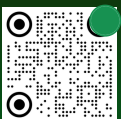
**2. ITS BEST TO NOT EXCEED MORE THAN 80% OF YOUR LANDSCAPE WIRE CURRENT CAPACITY TO ENSURE THERE IS NO VOLTAGE DROP**

**EXAMPLE: IF YOUR TOTAL WATTAGE OF YOUR LANDSCAPE LIGHTS IS 40 WATTS, THEN YOU CAN RUN 200 FEET OF 12 GAUGE WIRE WITHOUT VOLTAGE DROP.**

To test the fixtures please follow these instructions:

- Take the plug of the transformer and insert it into the GFCI plug. Make sure it is fully inserted and securely connected.
- Once the transformer is plugged into the GFCI plug, you can proceed with testing the fixtures. Turn on the power to the transformer.
- Set the mode switch to the "ON" position. This will activate the fixtures and provide a continuous power supply.

Observe the connected fixtures to verify that they are illuminated and functioning correctly. Check for any signs of flickering, dimness, or malfunctions.



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# TS200

## TRANSFORMER



LOW VOLTAGE TRANSFORMER / TRANSFORMATEUR DE BAS VOLTAGE / TRANSFORMADOR DE BAJO VOLTAJE  
MODEL: TSP200  
INPUT / ENTREE / ENTRADA: 120V AC 60HZ 2A  
OUTPUT / SORTIE / SALIDA: 12V AC 200VA 2A  
LISTED UNDER ETL INTERNATIONAL'S ETL LISTING PROGRAM FOR TRANSFORMERS IN CHINA  
CERTIFIED TO IEC60335-1 AND IEC60335-2-13  
CAN ICES-00397 / NMB-005 (B)  
INSTANTIK  
ETL  
us

The display will turn off after 3 seconds of inactivity, other than the output voltage indicator. If a short or overload occurs, diagnose and fix the issue, then press ▲.

La pantalla se apagará después de 3 segundos de inactividad, aparte del indicador de voltaje de salida. Si ocurre un cortocircuito o una sobrecarga, diagnostique y solucione el problema, luego presione ▲.

8.8

▲  
▼

ON/OFF/TIMER SETTINGS  
ENERGIA/APAGADO  
AJUSTE DEL TEMPORIZADOR