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› Brilliantool 300W Low Voltage Transformer Kit with Photocell Sensor User Manual

Brilliantool MTM0300-15-SS-KIT

Brilliantool 300W Low Voltage Transformer Kit User Manual

Model: MTM0300-15-SS-KIT

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Brilliantool 300W Low Voltage Transformer Kit. This kit is designed for outdoor landscape lighting applications, converting standard 120V AC household current to a safe low voltage (12V/13V/14V/15V) for landscape lights. It includes a built-in photocell sensor for automatic dusk-to-dawn operation.

2. SAFETY INFORMATION

WARNING: Risk of Fire or Electrical Shock. Read all instructions before installation and use.

- Installation must be performed by a qualified electrician in accordance with all local and national electrical codes.
- Do not immerse the transformer in water.
- Ensure the power supply is disconnected before performing any installation, maintenance, or troubleshooting.
- This transformer is suitable for both indoor and outdoor use.
- Only use with low voltage landscape lighting fixtures and submersible luminaires or submersible pumps.
- Do not overload the transformer. The total wattage of connected fixtures must not exceed 300W.
- The transformer features a built-in automatic circuit breaker for overload and short circuit protection.

over long wire runs.

- **Photocell Sensor:** Automatically turns lights on at dusk and off at dawn.
- **Durable Construction:** 304 stainless steel housing protects against harsh weather conditions.
- **Safety Features:** Built-in automatic circuit breaker for overload and short circuit protection.
- **Easy Installation:** Features 3 knockout holes (1/2", 3/4", 1.5") for convenient wiring.
- **Long Power Cord:** 6-foot 18AWG SJTW heavy-duty three-conductor power cord.



Image Description: This image shows the Brilliantool 300W Low Voltage Transformer from the front-side angle. The stainless steel casing is visible, along with the attached photocell sensor on the side and the power cord extending from the bottom right.

5. SETUP AND INSTALLATION

5.1 Mounting the Transformer

1. Choose a suitable location for mounting the transformer. It should be near a 120V GFCI-protected outdoor outlet and in a location that allows the photocell sensor to receive ambient light without obstruction.
2. Use the provided mounting plate and screws to securely attach the transformer to a wall or sturdy post. Ensure the transformer is mounted vertically with the wiring compartment facing downwards to prevent water ingress.



Image Description: This image depicts a person using a screwdriver to mount the Brilliantool low voltage transformer onto the exterior siding of a house. The transformer is positioned at a convenient height for installation.



Image Description: This image shows the Brilliantool low voltage transformer securely installed on the exterior wall of a building, blending into the surrounding landscape with plants and outdoor elements.

5.2 Connecting the Photocell Sensor

1. The photocell sensor is typically pre-installed or easily plugs into the designated receptacle inside the transformer.
2. Ensure the photocell sensor is positioned to detect ambient light accurately. It should not be blocked by shadows or directly exposed to artificial light sources (e.g., porch lights) that could interfere with its operation.
3. The photocell sensor is 180-degree adjustable to optimize light detection.



Image Description: A detailed close-up of the photocell sensor, highlighting its connection to the transformer casing. The sensor's cylindrical body and mounting mechanism are clearly visible.

180° Adjustable

Towards the better direction as you want



Image Description: This diagram visually explains the 180-degree adjustability feature of the photocell sensor. It shows the sensor in three different rotational positions, indicating its flexibility for aiming towards the best light source.

5.3 Wiring Landscape Lights

1. Open the transformer's front cover to access the wiring terminals.
2. Determine the appropriate voltage tap (12V, 13V, 14V, or 15V) based on your lighting system's requirements and cable length to minimize voltage drop. For shorter runs or fewer lights, 12V may suffice. For longer runs or more lights, higher voltage taps can compensate for voltage loss.
3. Route your low voltage landscape lighting cables through one of the knockout holes at the bottom of the transformer.
4. Connect the common wire from your landscape lighting system to the 'COMMON' terminal.
5. Connect the positive wire from your landscape lighting system to the chosen voltage tap terminal (e.g., '12V', '13V', '14V', or '15V').
6. Ensure all connections are secure and wires are properly insulated.
7. Close and secure the transformer's front cover.

5.4 Power Connection

1. Plug the transformer's 6-foot power cord into a 120V GFCI-protected outdoor electrical outlet.
2. Verify that the outlet is functioning correctly.



Image Description: This diagram illustrates the power connection of the Brilliantool transformer. It shows the transformer unit on the left, connected by a 6-foot SJTW 18AWG power cord to a standard wall outlet on the right.

6. OPERATING INSTRUCTIONS

6.1 Automatic Operation (Photocell Sensor)

Once powered on, the photocell sensor will automatically detect ambient light levels:

- At dusk, when light levels fall below a certain threshold, the transformer will activate, turning on your landscape lights.
- At dawn, when light levels rise, the transformer will deactivate, turning off your landscape lights.

6.2 Manual Override

The transformer may include a manual ON/OFF switch for temporary control, overriding the photocell sensor. Refer to the specific model for switch location and functionality.



Image Description: This close-up image shows the manual ON/OFF switch located on the exterior of the Brilliantool transformer. The switch is a rotary type with clear 'ON' and 'OFF' markings.

7. MAINTENANCE

- **Cleaning:** Periodically clean the exterior of the transformer and the photocell sensor with a soft, damp cloth to remove dirt and debris. Ensure the photocell lens is clear for optimal performance.

- **Inspection:** Regularly inspect the power cord, low voltage cables, and connections for any signs of damage, wear, or corrosion. Replace damaged components immediately.
- **Photocell Placement:** Ensure the photocell remains unobstructed by new foliage or objects that could block light.

8. TROUBLESHOOTING

- **Lights Not Turning On:**
 - Check if the transformer is plugged into a working GFCI outlet.
 - Ensure the photocell sensor is clean and not obstructed by light or shadows.
 - Verify all low voltage wiring connections are secure.
 - Check for tripped circuit breaker inside the transformer. Reset if necessary.
 - Confirm the total wattage of connected lights does not exceed 300W.
- **Lights Not Turning Off:**
 - Ensure the photocell sensor is not exposed to artificial light sources (e.g., porch lights, streetlights) at night.
 - Clean the photocell sensor lens.
- **Dim Lights:**
 - Check for voltage drop. Consider using a higher voltage tap (13V, 14V, or 15V) if available and appropriate for your fixtures.
 - Ensure wire gauge is sufficient for the length of the run and total wattage.

9. SPECIFICATIONS

Feature	Specification
Model Number	MTM0300-15-SS-KIT
Wattage	300 Watts
Input Voltage	120V AC
Output Voltage	12V/13V/14V/15V AC
Current Rating	18 Amps
Power Source	Corded Electric
Housing Material	304 Stainless Steel
Photocell Sensor	Included, 180° Adjustable
Power Cord	6-foot 18AWG SJTW
Mounting Type	Wall Mount
Product Dimensions	13"D x 14"W x 29"H (approximate)
Certifications	ETL Certified

10. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the contact details provided with your purchase documentation or visit the Brilliantool official website. Keep your purchase receipt as proof of purchase.

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