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› Kichler 15PR100SS Pro Series Transformer 100W Instruction Manual

Kichler 15PR100SS

Kichler 15PR100SS Pro Series Transformer 100W Instruction Manual

Model: 15PR100SS

1. INTRODUCTION

The Kichler 15PR100SS Pro Series 100-Watt Transformer is designed for low voltage landscape lighting applications. It provides a reliable output voltage range suitable for most landscape lighting needs. This manual provides essential information for safe installation, operation, and maintenance of your transformer.



Figure 1: Kichler 15PR100SS Pro Series 100W Transformer, Stainless Steel.

2. SAFETY INFORMATION

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

This fixture is UL rated for wet locations. Do not use with swimming pool or spa fixtures. Always adhere to local electrical codes and the National Electric Code (NEC) and ANSI/NFPA 70 requirements. If used indoors, the cable must be routed through conduit.

3. FEATURES

- **Commercial Grade Toroid Core and Coil:** Saves energy and is 10% more efficient than EI-type cores, resulting in cooler, quieter, and smoother operation with reduced vibration.
- **Dedicated Wire Loop:** Provides quick access for testing the primary load.
- **Convenient Access Panel:** Drop-down bottom panel features four pre-punched field knockouts (sized for 1/2-Inch or 3/4-Inch conduit) and one large 1.75-Inch center inlet.

- **Easy-Access Flip Top Door:** Features a magnetic fastener and is lockable for security, requiring no tools to open.
- **In-Line Secondary Magnetic Breaker:** Protects against short circuits.
- **Optimized Terminal Board:** 30-degree tilted taps mounted on a 125-amp terminal board provide more space and greater visibility for easier cable insertion.
- **Enhanced Reliability:** Features epoxy encapsulation, secondary protection, and auto-reset circuit breakers.
- **Durable Construction:** Constructed of Stainless Steel, suitable for wet locations.
- **Compact Dimensions:** Measures 5.5 inches (H) x 5.75 inches (W) x 19 inches (L).



Figure 2: Internal view highlighting the toroid core.

4. INSTALLATION

Installation should be performed by a qualified electrician and must comply with all local and national electrical codes.

1. **Mounting:** Securely mount the transformer in a suitable wet-location rated area. Ensure the mounting surface can support the unit's weight.
2. **Wiring Access:** Utilize the pre-punched field knockouts on the drop-down bottom panel for cable entry. There are four knockouts for 1/2-Inch or 3/4-Inch conduit, and one large 1.75-Inch center inlet.
3. **Cable Connection:** Connect your low voltage landscape lighting cables to the 30-degree tilted taps on the 125-amp terminal board. The tilted design provides ample space and visibility for easier cable insertion.
4. **Primary Load Testing:** Use the dedicated wire loop for quick access testing of the primary load to ensure proper electrical connection.
5. **Indoor Use Considerations:** If installing indoors, ensure all cables are routed through appropriate conduit as required by local electrical codes.

- Security:** Close the flip-top door and engage the magnetic fastener. The door is lockable for added security (lock not included).

12V TRANSFORMERS

RELIABLE

- Runs feature one common transformer per circuit. ANSI/UL 1638 requirements limit each circuit to 300-W and 15V.
- Secondary circuit breakers offer short-circuit protection as a standard feature.
- Magnetic circuit breakers provide a faster response to a fault in the system.
- An in-line primary thermostat protects against thermal over-load. These built-in thermostats are auto-resetting, eliminating the need for replacement or maintenance.
- Because compliance and safety are important long after the installation is complete all Kichler® Landscape Lighting low voltage transformers are listed or certified by UL, ETL, and/or CSA to the appropriate ANSI/UL 1638 standard for both the United States and Canada.
- Internal wiring is rated for 150°C (302°F), which exceeds safety standard requirements and provides longer life.

POWERFUL

- Various wattage options are available including: 60, 75, 100, 120, 200, 300, 600, 900, and 1200 in many options.
- Available in premium or economy options – convenient for larger, more complicated jobs or where smaller profile, lower-wattage units can be used.

DURABLE

- Full enclosure of the housing protects components from weather, sprinkling systems and debris.
- Professional Series housings are made of stainless steel grade 304 designed to run cooler and resist corrosion and last longer in outdoor environments.
- Multi-tap transformers allow greater flexibility in managing multiple wire runs by moving cables up and down the multi-range. This assures that the correct voltage is applied to a lamp – creating a consistent light output and maximizing lamp life.

DEPENDABLE

- Every tap is tested on the assembly line to ensure that output is consistently accurate.
- Installation is simplified, thanks to 30°-titled taps routed on the 125-Amp terminal board. This provides more space and greater visibility while inserting cables into taps.
- Units can be loaded up to the full maximum watts, including cable length, fixtures and cable loss. For ease in calculating runs, Kichler provides a Voltage Drop Tool that features pull-down menus and professional printouts for recordkeeping.

OTHER IMPORTANT INSTALLATION CONSIDERATIONS:

- National Electric Code and Underwriters Laboratories (UL) require that wiring, where concealed or extended through a building wall, must be enclosed in conduit.
- All Kichler transformers are rated for use with ANSI/UL 1638 listed fixtures including those for underwater use. Kichler transformers are NOT rated for use with fixtures for pools, spas, or bodies of water intended for immersion of humans.

TIP ON PRIMARY POWER:
Since 120-Volts can vary depending on time of day and local utility fluctuations, always measure the voltage on the primary side before and during job installation. Transformers reduce primary input in a ratio of 10:1 – Ex: 120 Volts: 12 Volts.


WARRANTY

- Limited lifetime warranty offered on Stainless Steel (SS) transformer models.
- A limited 10-Year Warranty on powder-coated Textured Architectural Bronze™ (AZT) transformer models.


CORE AND COIL CONSTRUCTION
All core and coil types used in Kichler transformers, except economy series, feature epoxy encapsulation. This provides commercial-grade benefits such as:

- PROTECTION:** Core, wire leads and inner parts are set inside epoxy to prevent exposure to moisture to resist corrosion and maintain a permanent seal.
- QUIET:** Humming noises are eliminated, as well as vibration, keeping connections from loosening.
- COOL:** Epoxy also keeps unit running cooler. Running cooler at full load is safer and conserves energy.

High Efficient E.I. core and coil configuration is standard on most Kichler models.



15P1715SS, 15P1800SS, 15P11300SS, 15P170AZT and 15P1300AZT feature high efficiency, toroidal core and coil configuration.



12V TRANSFORMERS

	PROFESSIONAL					PLUS					MANUAL		ECO				
	15P1715 SS	15P1800 SS	15P1900 SS	15P2000 SS	15P2000 SS 10-1	15P1800 SS	15P1900 SS	15P1100 AZT	15P1300 AZT	15P1300 AZT	15P1600 AZT	15M100 AZT	15M200 AZT	15M000 AZT	15E00 BK	15E120 BK	
Wattage (W)	75	100	200	300	600	600	900	75	100	200	300	600	600	600	60	120	
Dimensions (H x W x D)	16.5" x 5.5" x 3.75"	19" x 5.5" x 5.75"	19" x 5.5" x 5.75"	19" x 5.5" x 5.75"	21.25" x 6.75" x 5.75"	19" x 6.75" x 5.75"	19" x 6.75" x 6"	17.5" x 8" x 7"	16.5" x 5.5" x 5.75"	16.5" x 5.5" x 5.75"	19" x 6.75" x 5.75"	9" x 3.25" x 3"	13.25" x 3.5" x 4"	13.25" x 4.5" x 4"	6.75" x 3.75" x 3.75"	6.75" x 3.75" x 3.75"	
Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	
Features	• Multi-Tap Connection (12V, 12V, 12V, 15V)	• Multi-Tap Connection (12V, 12V, 15V, 15V)	• Single Tap Connection (12V)	• Thermal Cut-Off on Primary Side	• Thermal Reset Keeper on Secondary Side	• Magnetic Breaker on Secondary Side	• Easy Connect Terminal Blocks	• E: 3-Wire #14-GA 5.07W Gnd	• E: 3-Wire #16-3.07W Gnd	• E: 3-Wire #18-2.07W Gnd	• E: 2-Wire #18-2.07W Gnd	• Includes Mounting Pads for Indoor Use	• Textured Architectural Bronze or Powder Coat	• A304 Grade Stainless Steel	• Corrosion Resistant Housing	• 10-Year Limited Warranty	• Lifetime Warranty
High Efficiency E.I. Core and Coil Configuration	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	

• = Included
• = Optional

15P1715SS, 15P1800SS, 15P11300SS, 15P170AZT and 15P1300AZT feature high efficiency, toroidal core and coil configuration.

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Figure 3: Transformer with cover open, illustrating the terminal board and internal components.

5. OPERATION

The transformer provides an output voltage range suitable for landscape lighting. Proper operation involves managing voltage drop to ensure consistent light output across all fixtures.

Voltage Drop Management

Voltage drop occurs as electricity travels through wires, causing lamps farther from the transformer to decrease in brightness. To minimize voltage drop and maximize light output, keep wire runs as short as possible.

Calculating Voltage Drop

Use the following equation to estimate voltage drop for a specific wire run:

$$A \text{ (length of wire in feet)} \times B \text{ (total watts for all lamps on that wire run)} = C \text{ (cable constant)}$$

Refer to the cable constants below based on wire gauge:

- 10 gauge wire:** Cable Constant = 11920
- 12 gauge wire:** Cable Constant = 7500 (maximum 250 watts or 200 feet)
- 14 gauge wire:** Cable Constant = 3500 (maximum 200 watts or 150 feet)
- 16 gauge wire:** Cable Constant = 2200 (maximum 150 watts or 100 feet)
- 18 gauge wire:** Cable Constant = 1380

Circuit Protection

The in-line secondary magnetic breaker protects the system against short circuits. If a short circuit occurs, the breaker will trip, interrupting power to prevent damage. Reset the breaker after identifying and resolving the cause of the short circuit.

6. MAINTENANCE

The Kichler Pro Series Transformer is designed for durability and minimal maintenance due to its robust construction and protective features.

- **Regular Inspection:** Periodically inspect the transformer and all associated wiring for any signs of damage, corrosion, or wear.
- **Cleaning:** Keep the exterior of the transformer clean and free from dirt, debris, and moisture. Use a soft, damp cloth for cleaning; avoid abrasive cleaners.
- **Circuit Breakers:** The unit features auto-reset circuit breakers. No manual resetting is typically required unless a persistent fault is present.

7. TROUBLESHOOTING

If your landscape lighting system is not functioning correctly, consider the following troubleshooting steps:

- **No Power to Lights:**
 - Check the primary power supply to the transformer. Ensure it is plugged in and receiving power.
 - Verify that the in-line secondary magnetic breaker has not tripped. If tripped, reset it after identifying and resolving any short circuits in the low voltage wiring.
- **Dim Lights:**
 - Excessive voltage drop is a common cause. Review your wire lengths and total wattage per run using the voltage drop calculation provided in the 'Operation' section. Consider using heavier gauge wire or shorter runs to reduce voltage drop.
 - Ensure the total wattage of connected lamps does not exceed the transformer's 100W capacity.
- **Flickering Lights:**
 - Check all wire connections for secure contact at the transformer and at each fixture. Loose connections can cause flickering.
 - Confirm that the total wattage is within the transformer's limits.
- **Physical Damage:**
 - Visually inspect the transformer casing and all wiring for any visible damage. If damage is found, disconnect power immediately and contact a qualified electrician for repair or replacement.

8. SPECIFICATIONS

Specification	Detail
Brand	Kichler

Specification	Detail
Model	15PR100SS
Power Source	Corded Electric
Product Dimensions (D x W x H)	5.75" x 19" x 5.5"
Mounting Type	Ceiling Mount (Note: Typically mounted on a wall or post for landscape lighting)
Specification Met	UL
UPC	783927294386
Manufacturer	Kichler Lighting
Included Components	Instruction Manual
Unit Count	1.0 Count
Item Weight	12.2 Pounds

9. WARRANTY INFORMATION

Kichler warrants that the Products it provides will be free from defects in material and workmanship for **1 (one) year** following the date of shipment from Seller, with specific exceptions:

- **Landscape Products:** (except as noted below and clarified in landscape catalogs) for **five years**.
- **Black and/or Textured Architectural Bronze Finish Transformers:** for **10 years**.
- **Stainless Steel Transformers** and the exterior finish on LifeBrite outdoor lanterns: for normal use for as long as the original purchaser owns the Product.
- **Design Pro Series LED Cabinet Light Models:** 12301BRZ, 12301NI, 12301WH, 12303BRZ, 12303NI, 12303WH, 12305BRZ, 12305NI, and 12305WH for normal use for as long as the original purchaser owns the Product.
- **Ceiling Fan Motors:** for as long as the original purchaser owns the Product. (A certain amount of "wobble" is normal in Fans and should not be considered a problem).
- **Energy Star Products:** for **two years**.

Normal Use Definition: Residential non-commercial use for no more than 6 hours per day in an environment that does not exceed 25 degrees Celsius (approximately 77 degrees Fahrenheit).

Exclusions: There are no warranties on light bulbs or the finish on outdoor polished brass Products. If any warranted Products are found by Seller to be defective, such Products will, at Seller's sole option and cost, be replaced, repaired, or refunded less an amount directly attributable to consumer's prior use of the Product. The Buyer's sole and exclusive remedy against the Seller shall be for the repair, replacement, or refund of defective Products as provided herein. This warranty is not transferable (whether to heirs, subsequent owners, or otherwise) and does not cover labor or other costs or expenses to remove or install any defective, repaired, or replaced Product.

10. CUSTOMER SUPPORT

For technical assistance, warranty claims, or further inquiries regarding your Kichler 15PR100SS Pro Series Transformer, please visit the official Kichler website or contact Kichler customer support directly. Ensure you have your model number (15PR100SS) and purchase information available when contacting support.