

Important: Read all instructions prior to installation.

Low Voltage Landscape Transformers

Safety and Notes



LVT-B0150-OW-211

- Product should be installed and serviced in accordance with applicable national, state, and local building and electrical codes.
- Risk of fire or electrical shock. Install transformer at least 10 ft (3.05 m) from pools, spas, or fountains.
- Outdoor, above ground installation only. For use with low voltage landscape lighting only.
- Transformer has a built-in circuit breaker which can be reset by removing and then restoring power.
- Transformer must be connected to GFCI-protected receptacle marked suitable for wet locations. Receptacle must be protected by a weatherproof cover.
- Do not submerge the transformer or use it to power submersible lights or lights mounted in or near pools, spas, or fountains.
- If cleaning is necessary, use a damp cloth to wipe down case. Do not spray transformer with pressurized water or steam.
- Do not use with dimmer or extension cord or wire in parallel with other transformers.
- Do not exceed 70% of the maximum wattage of the transformer when connecting lights.
- Transformer must be mounted in a vertical orientation, with the bottom at least 1 ft from the ground.
- Ensure all mounts are securely attached and will support the transformer's weight. Failure to properly support transformer may result in damage or injury, for which the manufacturer does not assume responsibility.
- Do not attempt to disassemble or modify transformer.
- Ensure wiring to lights is correct gauge for the run and total power of the intended circuit and is intended for use with outdoor landscape applications.

Specifications

Check product label for specific electrical specifications related to installation. Improper installation will void warranty.

Model LVT-	075W-A-HS-111	150W-B-OS-211	300W-B-OS-311	600W-B-OS-412
Output Voltage	12 or 15 VAC	12, 13, 14, or 15 VAC	12, 13, 14, or 15 VAC	12, 13, 14, or 15 VAC
Operating Temperature	-4°–113° F (-20°–45° C)			
IP Rating	IP54			
Weight	6.9 lb (3.1 kg)	12.8 lb (5.8 kg)	16.75 lb (7.6 kg)	25.5 lb (11.6 kg)

Transformer Sizing

Total load (watts or volt-amperes) of all fixtures connected to one transformer must not exceed 70% of the W or VA capacity of the transformer. Use the below equation to calculate the most suitable transformer.

$$\text{total fixture load (W or VA)} \div 0.7 = \text{minimum transformer capacity}$$

Transformer Mounting

Mount transformer to solid surface using stainless hardware capable of supporting the weight of the transformer. Hardware is not included. Once screw(s) are properly mounted, slide transformer over screw heads and tighten screw(s) to lock in place once the transformer is level.

System Check

After installing entire system, apply supply power. After five minutes of operation, remove supply power. Check all low voltage electrical connections, which should be cool to the touch. If any connection is warm to the touch, check and re-tighten the connection and repeat the process until all connection problems are resolved.

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Wire and Voltage Selection

12 AWG landscape wire is generally recommended. For optimal results, lights should be distributed evenly along the cable run, with higher power lights being closest to the transformer. Higher voltage terminals can be used with longer runs to make up for slight voltage drops. The below equation and table can be used to select the appropriate wire gauge for an application.

Note: When connecting wiring to transformer, do not loosen top terminals on 75 W models as they are for internal wiring only.

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
#18/2	1,380
#16/2	2,200
#14/2	3,500
#12/2	7,500
#10/2	11,920

Optional Photocell Installation

1. Begin by unplugging transformer to remove supply power.
2. Use a screwdriver and carefully remove the inside section of the knockout located on the right side of the transformer. Do not remove outer portion of knockout, as this will prevent the photocell from mounting properly.



3. Install photocell into case and tighten in place.



4. Remove the jumper wire from the photocell connector and connect the photocell.



5. Adjust the angle of the sensor so it can accurately detect ambient lighting and apply power. Check for proper operation and adjust sensor angle as needed.

Built-in Timer Operation (75 W only)

With all grey tabs set at the inner position, the timer will not affect function and the connected lights will stay on unless power is switched off.

1. To set up the timer, begin by rotating the timer dial until the arrow on the right points to the current time (this system uses a 24-hour clock).
2. Next, slide dark grey tabs outward at times when system should be powered off.

Note: The system can be manually turned off using the main power switch as well.

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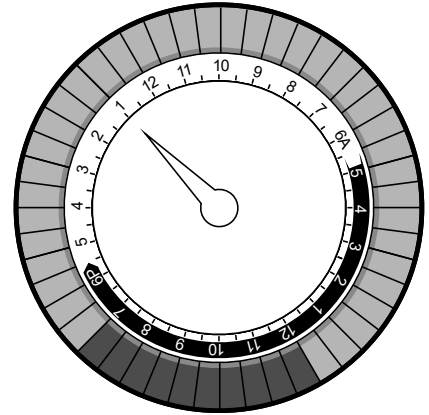
Optional Timer Operation (150–600 W models)

Mechanical Timer (BND-60/U92)

With all grey tabs set at the pushed-in position, timer will not affect function and connected lights will stay on unless power is switched off.

To set up the timer, begin by making sure the sliding switch on top is set to the timer setting. Next, rotate the timer dial until the arrow points to the current time (1 PM in our example). Finally, pull grey tabs outward at times when the light system should be powered off (7 PM to 12 AM in our example). Times where the grey tabs are pushed in (dark grey in the image) will be the only times the system will be switched on.

Additionally, the system can be manually turned off using the main power switch, or manually turned to always on with the slide switch on top of the timer.

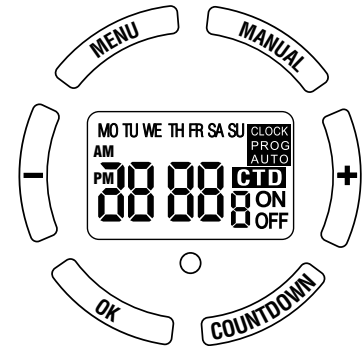


Digital Timer (BND-60/SU92)

Before beginning to adjust settings, plug the timer in and press the reset button to ensure the timer is at factory default settings before use. Timer will return to main menu if no input is made for one minute at any time during programming or if the MENU button is held down for 2 or more seconds.

Setting Date/Time

1. With supply power on, press the MENU button once. CLOCK should be illuminated in the top right corner of the screen.
2. Next, press the OK button to enter day of the week selection. Use the +/- buttons to select the correct date. Press OK to confirm selection.
3. The hour should now be flashing. Use the +/- buttons to adjust to the correct hour (cycle through to go from AM to PM). Press OK to confirm, then repeat for minutes.



Setting Programs

Timer can store information for up to 9 programs, with independent ON and OFF settings for each program.

1. With supply power on, press the MENU key until you reach the desired ON or OFF setting. Each pair of ON and OFF settings (e.g. 1ON and 1OFF) will need to be set to work together for proper operation.
2. Press the OK button to enter programming for the selected setting.
3. Use the +/- buttons to cycle through day settings and press OK when the desired setting is displayed.

Day Settings:

- MO, TU, WE, TH, FR, SA, and SU (full week)
- MO, TU, WE, TH, FR, SA, or SU (individual days)
- MO, TU, WE, TH, and FR (weekdays only)
- SA and SU (weekend only)

4. Select the hour (cycle through to go from AM to PM) using the +/- buttons, then press OK.
5. Select the minute using the +/- buttons, then press OK to finish programming the setting.
6. Press the MANUAL button so that AUTO is displayed on the screen to activate the programmed settings.

Operating Modes

Press the MANUAL button to cycle between operating modes.

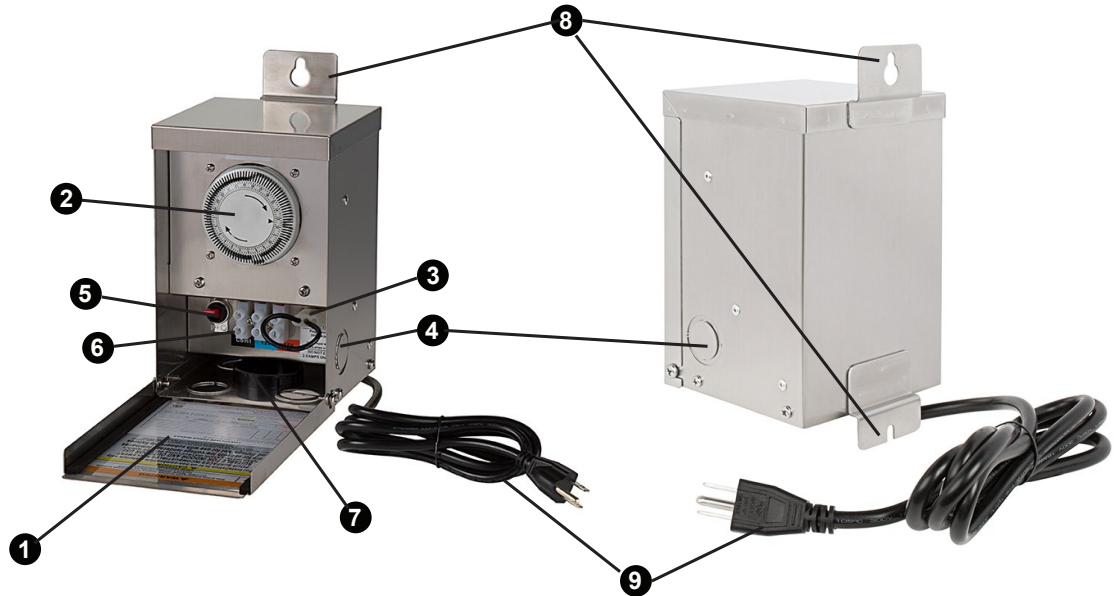
- OFF - Lights will remain off and set programs will not be activated.
- ON - Lights will remain on constantly and set programs will not be activated.
- AUTO/ON - Lights are currently on and set programs will be activated.
- AUTO/OFF - Lights are currently off and set programs will be activated.

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Features (75 W model)

1. Operating Record, Warnings, and Specifications
2. Mechanical Timer
3. Photocell Jumper Wire
4. Photocell Knockout
5. On/Off Switch and Circuit Breaker Reset
6. Terminal Block
7. Conduit Cover
8. Mounting Tab
9. Power Cord



Features (150–600 W models)

1. Operating Record, Warnings, and Specifications
2. Timer Plug
3. Photocell Jumper Wire
4. Photocell Knockout
5. On/Off Switch and Circuit Breaker Reset
6. Terminal Block
7. Conduit Cover
8. Mounting Tab
9. Power Cord

