

LED / CFL / MAGNETIC LOW VOLTAGE / INCANDESCENT TOGGLE DIMMER

Single Pole or 3-Way

Cat. No. TSM1Ø – LED/CFL 400W (3.33A), MLV 1000VA, Incandescent 1000W
120VAC, 60Hz



DI-000-TSM10-02A

INSTALLATION INSTRUCTIONS

WARNINGS AND CAUTIONS

- **TO AVOID FIRE, SHOCK, OR DEATH: TURN OFF POWER** at circuit breaker or fuse and test that power is off before wiring or servicing fixture!
- **TO AVOID FIRE, SHOCK, OR DEATH:** use with compatible **dimnable** LED and CFL bulbs, magnetic low-voltage transformers, incandescent or 120V halogen fixtures only. For a complete list of compatible LED and CFL bulbs refer to www.leviton.com/universal.
- To be installed and/or used in accordance with appropriate electrical codes and regulations.
- If you are unsure about any part of these instructions, consult an electrician.

WARNINGS AND CAUTIONS

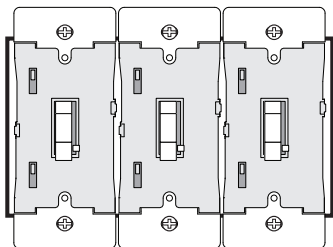
- When multiple bulbs are used with one dimmer **DO NOT** mix bulb types. All bulbs shall be either LED; CFL or incandescent. Using the same make/model of each bulb will enhance performance.
- Use only one (1) dimmer in a 3 or 4-way circuit. The switch(es) will turn the light on at the brightness level selected at the dimmer.
- To avoid overheating and possible damage to this device and other equipment, **DO NOT** install to control a receptacle, a motor or a transformer-operated appliance, or any other lighting sources than those specified.
- Use this device **with copper or copper clad wire only**.

Tools needed to install your Dimmer

Slotted/Philips Screwdriver Electrical Tape Ruler
Pliers Pencil Cutters

Installing Dimmer by itself or with other devices

In incandescent multi-dimmer installations, the reduction of the dimmer's capacity is required. Refer to the chart for maximum load per dimmer. No derating is required for use in dimmable CFL or dimmable LED multi-dimmer installations.



MAXIMUM LOAD PER DIMMER FOR MULTI-DEVICE

Cat. No.	Load	Single	Two Devices	More than 2 Devices
TSM1Ø	INC	1000W	800W	700W
	MLV	1000VA	800VA	700VA
	LED/CFL	400W (3.33A)	400W (3.33A)	400W (3.33A)

MAXIMUM BULB WATTAGE

Low-voltage dimmers are rated in Volt-Amps (VA). The maximum bulb wattage is determined by the efficiency of the transformer in the low-voltage lighting system. Transformer efficiencies will vary from different manufacturers; consider 80% efficient as average. Use the chart to determine maximum bulb wattage for typical transformer efficiency ratings.

MAXIMUM BULB WATTAGE AT 80% EFFICIENCY

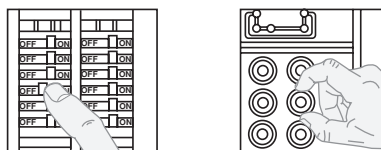
Rating	Single	Two Gang	More than 2 Gang
1000VA	800W	640W	560W

Installing your Dimmer

NOTE: Use check boxes when Steps are completed.

Step 1

WARNING: TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER at circuit breaker or fuse and test that power is off before wiring or servicing fixture!

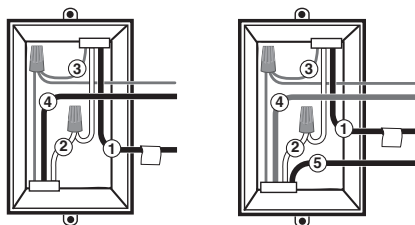


Step 2

Identifying your wiring application (most common):



NOTE: If the wiring in the wall box does not resemble any of these configurations, consult an electrician.



Single Pole

1. Line (Hot)
2. Neutral
3. Ground
4. Load

3-Way

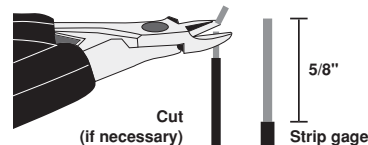
1. Line or Load (See note below)
2. Neutral
3. Ground
4. First Traveler – note color
5. Second Traveler – note color

Step 3

Preparing and connecting wires:

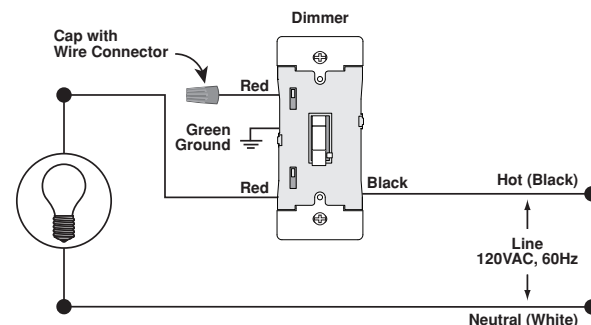
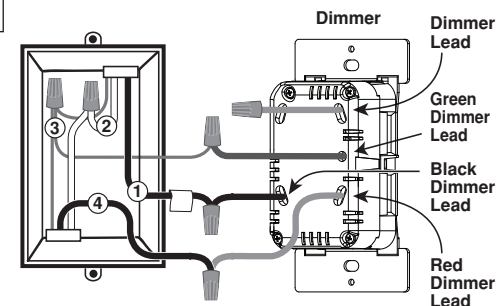


- Make sure that the ends of the wires from the wall box are straight (**cut if necessary**).
- Remove 5/8" (1.6 cm) of insulation from each wire in the wall box.
- **For Single-Pole Application, go to Step 4a.**
- **For 3-Way Application, go to Step 4b.**



Step 4a

Single-Pole Wiring Application:

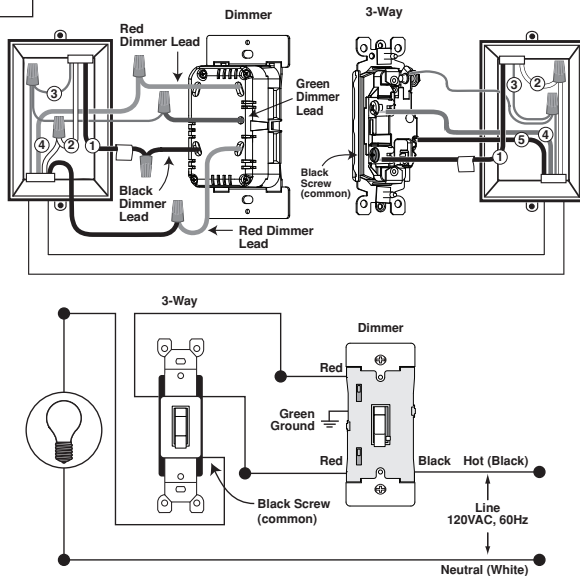


Connect wires per WIRING DIAGRAM as follows:

- Green or bare copper wall box wire to **GREEN** dimmer lead.
 - Line Hot wall box wire to **BLACK** dimmer lead.
 - Load wall box wire to **RED** dimmer lead.
 - Remaining **RED** dimmer lead should have a label affixed. **DO NOT REMOVE** this label in a single pole application. **NOTE:** If the insulating label is not affixed to the second **RED** lead use electrical tape or a wire connector to cover.
- Proceed to Step 5.**

WEB VERSION

Step 4b 3-Way Wiring Application:



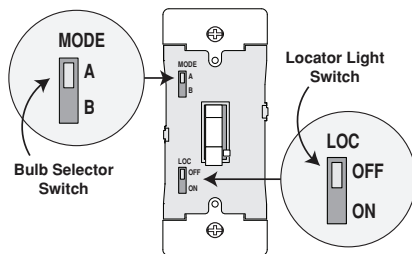
Connect wires per **WIRING DIAGRAM** as follows:

- Green or bare copper wall box wire to **GREEN** dimmer lead.
 - Common (Line hot or Load) wire to **BLACK** dimmer lead.
 - Remove insulating label and connect the first traveler wire to the **RED** dimmer lead.
 - Connect the second traveler wire to the remaining **RED** dimmer lead.
- Proceed to **Step 5**.

Step 5 Dimmer Bulb Selector Switch:

Cat. No. TSM10 is pre-set at the factory with the bulb selector switch set to **Mode A** (LED/MLV/Incandescent). For CFL bulb applications the switch should be moved to **Mode B** (CFL). The lamp selector slide switch also allows the user to adjust the minimum light level when dimming. Information on this feature is found under **PROGRAMMING**.

NOTE: See illustration for location of bulb selector switch.

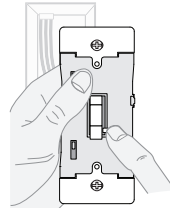


LED/Incandescent (Mode A): The selector switch is pre-set at the factory to this mode. Use this mode for dimmable LED bulbs and incandescent/halogen bulbs. To avoid flickering at the low end of the dimming range you can pre-set the minimum light level. See **PROGRAMMING** to manually program the minimum light level.

CFL (Mode B): To be used for dimmable CFL bulbs only. In this mode the dimmer provides a pre-set kick-start to aid the lamp in starting. To avoid flickering at the low end of the dimming range you can pre-set the minimum light level. See **PROGRAMMING** to manually program the minimum light level.

Locator Light Switch (LOC): The LED Locator Light will illuminate when the load is OFF. To disable the Locator Light move the Locator Light Switch to the OFF position.

Step 6 Testing your Dimmer prior to mounting in the wall box:

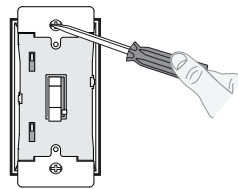


- Restore power at circuit breaker or fuse.
- Carefully holding dimmer, move slider control lever to highest position and move toggle handle up. Lights should turn ON to brightest level.

If lights does not turn ON, refer to the **TROUBLESHOOTING** section.

Step 7 Dimmer Mounting:

TURN OFF POWER AT CIRCUIT BREAKER OR FUSE.



Installation may now be completed by carefully positioning all wires to provide room in wall box for dimmer. Mount dimmer into box with mounting screws supplied. Attach wallplate.

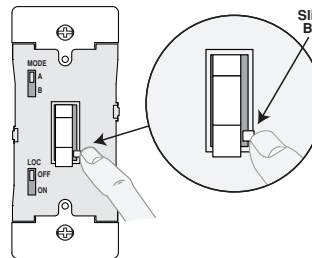
Step 8 Restore Power:

Restore power at circuit breaker or fuse. **Installation is complete.**

Programming

Setting Minimum Light Level

1. Move toggle handle down to turn the dimmer OFF and move the slide bar to the bottom.
 2. Set the bulb selector switch to the LED/Incandescent position (Mode A).
 3. Move toggle handle up to turn the load ON.
 4. Set the bulb selector switch to the CFL position (Mode B).
 5. Raise or lower the slide control level to achieve the desired minimum light level.
 6. Set the bulb selector switch back to LED/Incandescent position (Mode A).
 7. A momentary flash of the bulb will occur confirming the new setting.
 8. Move toggle handle down to turn the load OFF.
- NOTE:** For dimmable CFL lamps you must return the bulb selector to the CFL position (Mode B).



Operation

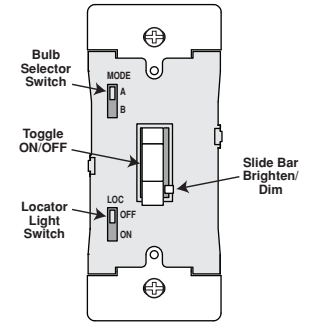
ON/OFF:

Move toggle handle up
- Lights will turn ON.

Move toggle handle down
- Lights will turn OFF.

BRIGHTEN & DIM:

Move slide bar
- Lights will BRIGHTEN or DIM.



Troubleshooting

- **Lights flickering**
 - Lamp has bad connection.
 - Wires not secured firmly with wire connectors.
- **CFL and LED flickers at low end of dimming range**
 - Increase the low end of the dimming range. **Programming Section** - setting minimum light level
- **CFL or LED bulb flickers throughout dimming range**
 - Ensure the bulbs are marked dimmable.
 - Please refer to recommended dimmable LED and CFL bulbs at www.leviton.com/universal.
- **Light does not turn ON**
 - Circuit breaker or fuse has tripped.
 - Lamp is burned out.

NOTE: If further information is needed in identifying the HOT wire in a 3-Way application, go to Leviton's website at www.leviton.com.

For Technical Assistance Call: 1-800-824-3005 (U.S.A. Only)
www.leviton.com

This product is covered by U.S. Patent No. 8,664,886.

FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, it can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

IC STATEMENT

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

FOR CANADA ONLY

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at **Leviton Manufacturing of Canada Ltd to the attention of the Quality Assurance Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9** or by telephone at 1 800 405-5320.

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LIMITED 5 YEAR WARRANTY AND EXCLUSIONS

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal and proper use for five years from the purchase date. Leviton's only obligation is to correct such defects by repair or replacement, at its option. For details visit www.leviton.com or call 1-800-824-3005. This warranty excludes and there is disclaimed liability for labor for removal of this product or reinstallation. This warranty is void if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. There are no other or implied warranties of any kind, including merchantability and fitness for a particular purpose, but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warranty, including merchantability and fitness for a particular purpose, is limited to five years. Leviton is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, lost sales or profits or delay or failure to perform this warranty obligation. The remedies provided herein are the exclusive remedies under this warranty, whether based on contract, tort or otherwise.