# USER MANUAL

Super Slim Dimmer Switch for LED / Compact Fluorescent / Incandescent

Single Pole / 3-Way Applications

Model Number: USP-DS09M

BESTTEN®

Power for Today, Ideas for Tomorrow

Intertek

## WARNINGS AND CAUTIONS

- Use only with compatible Dimmable LED / Dimmable CFL / Incandescent Bulbs or 120V Halogen Fixtures.
- Use only ONE dimmer per 3-way circuit.
- DO NOT MIX BULB, TYPES, BRANDS, OR MODELS when multiple bulbs are used.
- DO NOT use dimmer to control a receptacle, fan, or other motor operated appliance, transformer-supplied appliance, or any lighting fixtures other than those specified.
- To be installed and/or used in accordance with all applicable electrical codes and regulations.
- No neutral wire required.
- If you are unsure about any part of these instructions, please consult a qualified electrician.

## SPECIFICATIONS

| | |
|---|---|
| Voltage | 120VAC 60Hz |
| Maximum Wattage | Dimmable LED / Dimmable CFL 300W |
| | Incandescent / Halogen 600W |
| Switch Type | Single Pole and 3-Way |
| Operation Temperature Range | 32°F (0°C) - 104°F (40°C) |
| Certifications | ETL/cETL Listed |

## BULB COMPATIBILITY

BESTTEN DS09M Dimmer is compatible with most Dimmable LED, Dimmable CFL and Incandescent Bulbs or 120V Halogen Fixtures.

**USE ONLY HIGH QUALITY** Dimmable LED, Dimmable CFL, or Incandescent Bulbs.

Although the BESTTEN DS09M Dimmer has one of the widest ranges of compatibility with Dimmable LED, Dimmable CFL, and Incandescent lights on the market, there are a small number of lights sold that are incompatible with this dimmer. These are usually of low quality.

Major brands from the most popular big box stores have proven to have the most reliable compatibility.

## INSTALLATION INSTRUCTIONS

### STEP 1

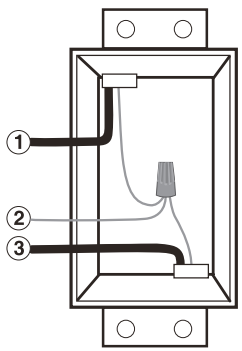
Turn off power at breaker or fuse, ensuring power is off at the wall box before starting work.




### STEP 2 Identify Your Wiring Application (Most Common)

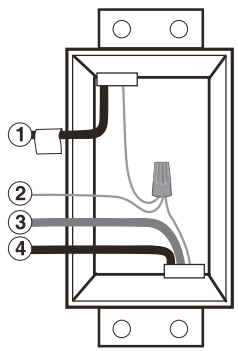
**NOTE**: If the wiring in the wall box does not resemble any of these configurations, please consult an electrician.

**Single Pole**




**Single Pole**
1. Line (Hot)
2. Ground
3. Load

**3-Way**




**3-Way**
1. Line or Load Common
(See important instructions below)
2. Ground
3. First Traveler
4. Second Traveler

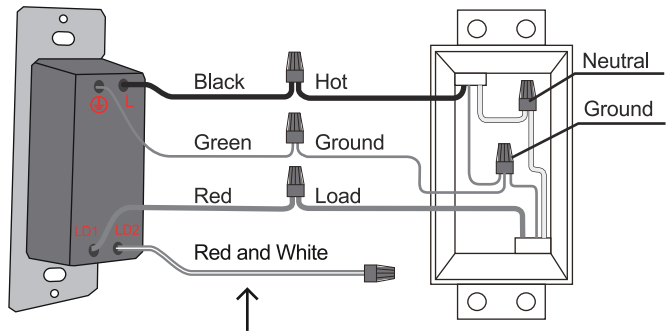
### IMPORTANT FOR 3-WAY APPLICATIONS

REPLACE ONLY ONE 3-WAY SWITCH AT A TIME, test after each installation.

Take a picture of the wires before disconnecting the old switch.

Please note that for 3-way applications, on the existing switches, there are 3 terminals apart from the grounding terminal. One of the terminals on each switch will be a different color than the other 2. This terminal will be connected to the line or load wire and this wire can be marked Line/Load. The other 2 terminals are connected to the traveler wires.

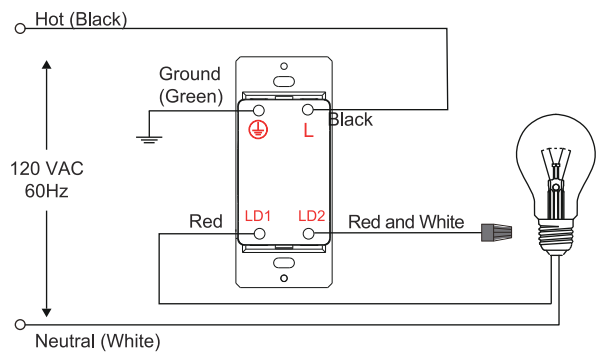
## STEP 3A Single Pole Wiring Application



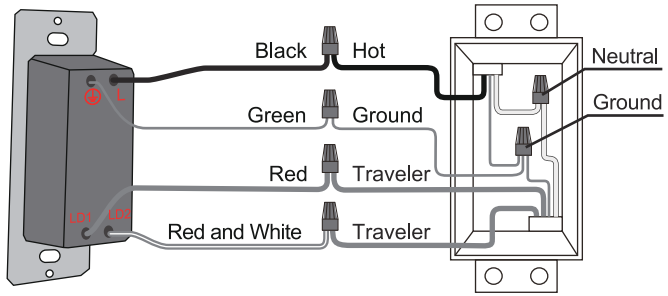

This wire is used in 3-way installations only.
For single pole installations cover with wire nut.

- Black wire (L) on the dimmer connects to the Line or Hot wire (Live wire coming from the breaker or fuse panel).
- Red wire (LD1) on the dimmer connects to the Load wire (The wire that goes to the light).
- Green wire (⏚) on the dimmer connects to ground. This is usually a bare copper or green wire in the wall box.
- The Red and White wire (LD2) is not used in a single pole application. Insulate this wire with a wire nut.
- No neutral wire required, suits houses of all ages.

With each connection twist the wires together and secure with a wire nut. Check to ensure each connection is tight and secure and there are no bare wires visible.



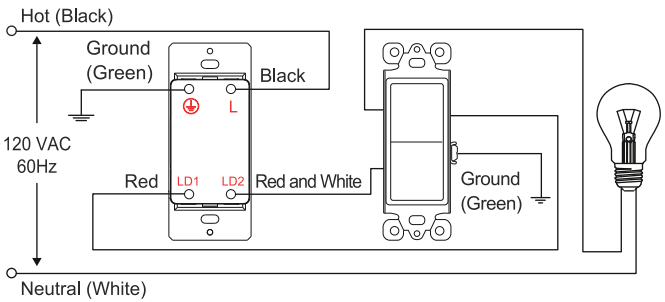
## STEP 3B 3-Way Wiring Application



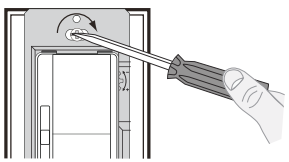

IMPORTANT: In a 3-way circuit, only one dimmer can be used

- Black wire (L) on the dimmer connects to the Common (Line or Load) wire.
- The Red (LD1), and Red and White wires (LD2) on the dimmer connect to the Traveler wires. These two wires are interchangeable in this application.
- Green wire (⏚) on the dimmer connects to ground. This is usually a bare copper or green wire in the wall box.
- No neutral wire required, suits houses of all ages.

With each connection twist the wires together and secure with a wire nut. Check to ensure each connection is tight and secure and there are no bare wires visible.



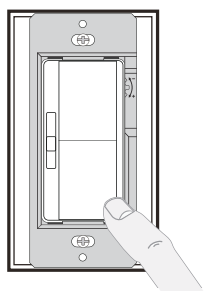

## STEP 4 Mounting Dimmer



Carefully position the wires in the wall box to make room for the dimmer. BESTTEN DS09M dimmers are of a slim design to make this step easier. Using the provided mounting screws, secure the dimmer to the wall box.

## STEP 5 Test Dimmer

- Turn on power at the breaker or fuse panel.
- With the dimmer slide in the brightest (all the way up) position check the ON/OFF function of the rocker switch.
- Check the function of the dimmer by slowly moving the dimmer slide up and down, noting how the lights dim.
- If you are satisfied with the operation of the dimmer. Finish the dimmer installation by installing a wall plate.



**If lights experience any of the following, proceed to STEP 6**

Lights flicker at low settings.
Lights do not come on until dimmer is at high setting.
Lights turn off when being dimmed.
Lights do not turn on at the lowest setting.
Lights are too bright at lowest setting.

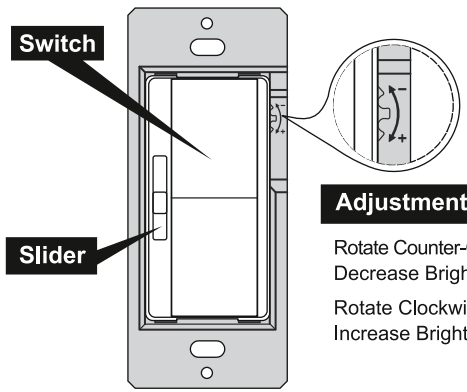
## STEP 6 Adjust Dimming Range

To adjust the dimming range you can rotate the Adjustment Wheel to raise or lower the minimum brightness of your lights. The Adjustment Wheel can also be used to eliminate flickering at the lowest setting.

- Turn ON the rocker switch and move the dimmer slide to the lowest (all the way down) position.
- Rotate the Adjustment Wheel clockwise all the way down to the highest position.

NOTE: If the wheel stops in either direction, do not continue to rotate it.

- Rotate the Adjustment Wheel counter-clockwise up slowly until the lowest desired light level is achieved and the lights are not flickering.
- With the dimmer slide in the lowest (all the way down) position, check to make sure the lights turn on and do not flicker. If not, rotate the Adjustment Wheel clockwise slightly and check again.
- Once you are satisfied with the operation of the dimmer. Finish the dimmer installation by installing a wall plate.




## TROUBLESHOOTING

**Please carefully read any troubleshooting steps that apply.**

**Problem 1** Lights flicker at low settings

Refer to STEP 6 Rotate Adjustment Wheel to raise starting voltage to eliminate flickering at low settings.

**Problem 2** Lights flicker at all settings

1. Ensure all lights are marked as the dimmable type, are the same brand and model and wattage.
2. Change brand or model of bulb ensuring they are dimmable to check compatibility.
3. Ensure only one dimmer is installed in a 3-way circuit.
4. Ensure the maximum wattage is not exceeded for type of light (300W for LED and CFL. 600W for Incandescent).
5. Ensure all electrical connections are secure on both dimmer and lights.

**Problem 3** A: Lights turn off when being dimmed / B: Lights do not come on until dimmer is at high setting

1. Refer to STEP 6 Rotate Adjustment Wheel to raise starting voltage to ensure lights turn on at lowest setting.
2. Ensure all lights are marked as the dimmable type, are the same brand and model and wattage.
3. Change brand or model of bulb ensuring they are dimmable to check compatibility.

**Problem 4** Bulbs dim at different rates or act differently at settings

Ensure all lights are of the same brand, wattage and model. It helps if all bulbs are even from the same batch as variances in light manufacturing can cause bulbs to act differently at lowest setting levels.

**Problem 5** Dimmer is not working in 3-way position

1. Ensure only one dimmer is installed in a 3 way circuit.
2. Refer to Diagram in STEP 3B. Check all wiring of dimmer and 3-way switch ensuring Line, Load and traveler wires have all been identified and connected correctly, to both the dimmer and the switch. There is no standard for wire color in a 3 way circuit, consult an electrician if help is needed to identify the wires.

**Problem 6** Audible buzzing or humming from dimmer

1. Ensure only one dimmer is installed in a 3 way circuit.
2. Ensure all lights are marked as the dimmable type, are the same brand, wattage and model or change brand of bulb.
3. Ensure the maximum wattage is not exceeded for type of light (300W for LED and CFL. 600W for Incandescent).

**Problem 7** Lights are too bright at lowest setting

1. Refer to STEP 6 Rotate Adjustment Wheel to lower starting voltage to ensure lights are adequately dimmed at lowest setting.
2. Ensure all lights are marked as the dimmable type, are the same brand and model or change brand or model of bulb.

**If all troubleshooting steps have been carefully followed and the problem continues, please contact a qualified electrician or customer support for more information.**

## WARRANTY

BESTTEN warrants to the original customer that this product is free of defects in materials and workmanship for one year from the purchase date. Within this period, simply contact BESTTEN CARE with proof of purchase and reason of claim. We will replace the product for free.

Any product which is subject to misuse or accidental damage is excluded from this warranty.

**support@ibestten.com**

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