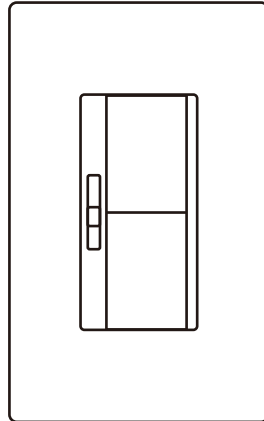


Installation Instructions

0-10V Dimmer

Suitable for 0-10V dimming power supply or lamps



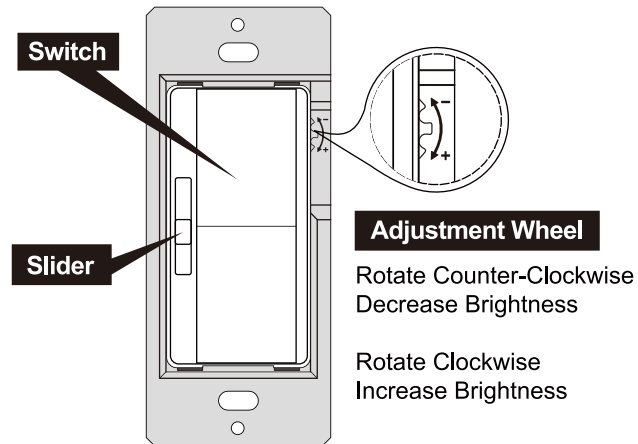
Model No.	USP-DS09L		
Rated Voltage	120-277VAC		
Rated Frequency	60Hz		
Maximum Wattage	1385VA		
Rated Wattage	Load type	120VAC	277VAC
	Electronic ballast or LED driver	10A	5A
Dimming Method	0-10V Dimming		
Working Environment	Humidity: 10% RH - 90% RH		
Model Size	105 mm×44 mm×31mm (L×W×H)		

Warnings and Cautions

- Risk of fire and electrical shock, products should be installed in accordance with appropriate electrical codes and regulations.
- The product shall be used together with an upstream air-gap switch.
- Turn power off at circuit breaker or fuse and test that power is off before installing.
- After installed the dimmer, it is recommended to set the minimum brightness level to make bulbs turn on immediately and the dimmer with maximum dimming range.

- If you are unsure about any part of these instructions, consult a licensed electrician.
- To reduce the risk of overheating and possible damage to other equipment, do not install to control a receptacle, a motor-operated appliance, or a transformer-supplied appliance.
- This product can only be used with a matching 0-10V dimming power supply or fixture.
- When one dimmer is connected to multiple 0-10V dimming power supplies or lamps, do not mix different models of 0-10V dimming power supplies or lamps. Using the same model of 0-10V dimming power supplies or lamps will improve the dimming performance of the system.

Functional Specifications



Dimming Slider

- The dimming slider is adjusted upward to increase the brightness.
- The dimming slider is adjusted downward to decrease the brightness.

Rocker Switch

- Press the rocker switch to turn power ON/OFF.

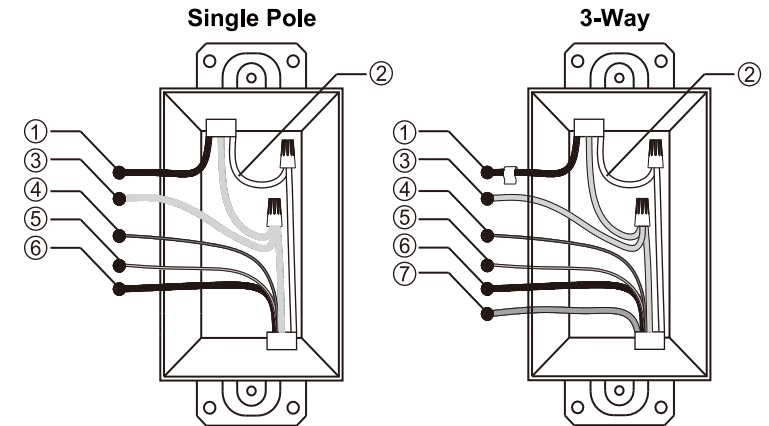
Adjustment Wheel

- Turn the adjustment wheel clockwise to increase the minimum brightness.
- Turn the adjustment wheel counter-clockwise to reduce the minimum brightness.
- The adjustment wheel can adjust and set the minimum brightness so that the bulb can be turned on immediately, and also increase the dimmer effective adjustment stroke. For details, see step 4.

Installation

Step 1 Identify the Wiring Type

Notes: If the wiring in the junction box is different from the following layouts, please consult an electrician.



Single Pole

- ① Line (Hot)
- ② Neutral
- ③ Ground
- ④ 0-10V D(+)
- ⑤ 0-10V D(-)
- ⑥ Load

3-Way

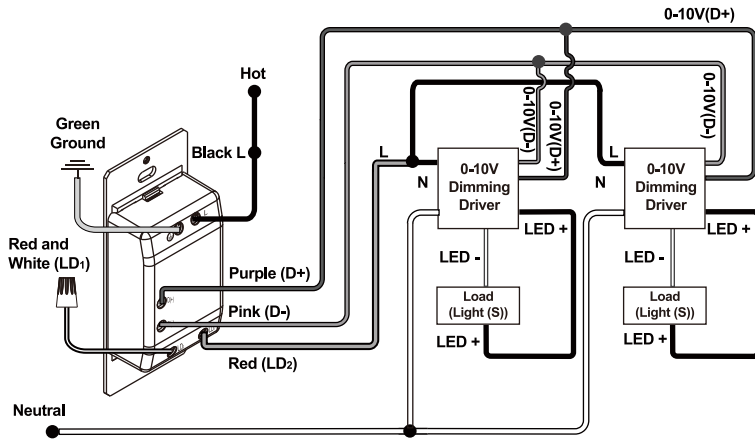
- ① Line or Load (See note below)
- ② Neutral
- ③ Ground
- ④ 0-10V D(+)
- ⑤ 0-10V D(-)
- ⑥ Traveler 1
- ⑦ Traveler 2

IMPORTANT FOR 3-WAY APPLICATIONS

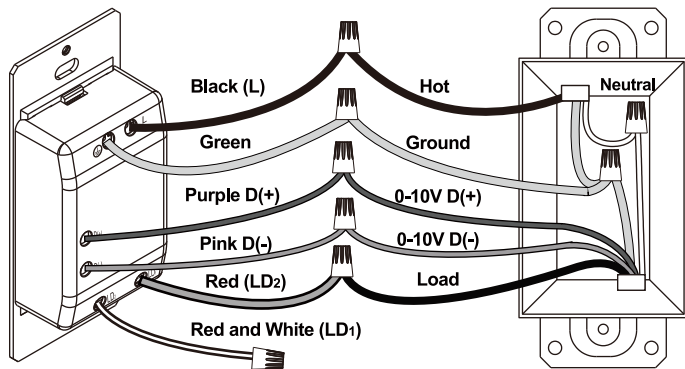
REPLACE ONLY ONE 3-WAY SWITCH AT A TIME, test after each installation. Take a picture of the wires before disconnecting the old switch. Please note that for 3-way applications, on the existing switches, there are 3 terminals apart from the grounding terminal. One of the terminals on each switch will 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 2 Typical Wiring Application

Single Pole Application



The red and white wire is only used for 3-way control connections. Use P4 wire nuts to protect these wires in single pole applications.

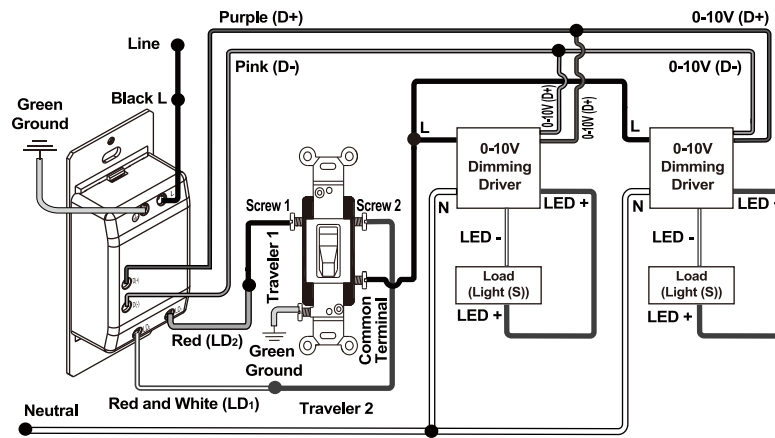


This wire is used in 3-way installations only
For single pole installations, twist with wire nut.

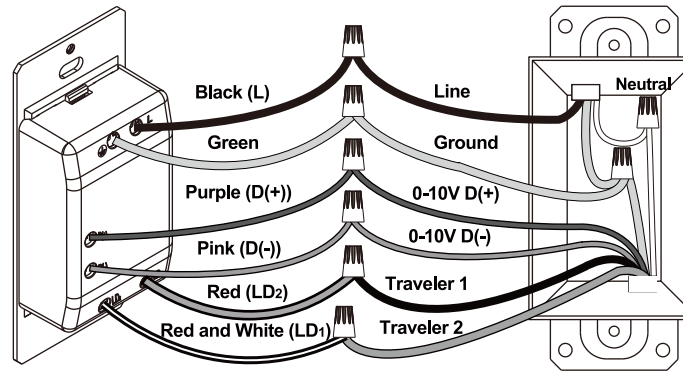
NOTE: The low-voltage wiring (Pink and Purple connections at the dimmer) must be run to the wallbox that will house the Dimmer.

- Connect the green wire on the dimmer with the green or bare copper ground wire on the junction box, and secure with a P4 wire nut.
- Connect the black wire on the dimmer to the input wire removed from the switch, namely the line wire, and secure with a P4 wire nut.
- Connect the red wire on the dimmer with the load wire removed from the switch and secure with a P4 wire nut.
- Connect the purple wire on the dimmer with 0-10V D(+) on the junction box, and secure the P2 wire nut.
- Connect the pink wire on the dimmer with 0-10V D(-) on the junction box, and secure the P2 wire nut.
- Screw the remaining red and white wire on the dimmer with P4 wiring nut to protect it.

3-Way Application



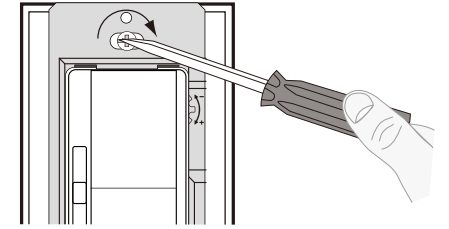
Only use one dimmer in a 3-way application.



NOTE: The low-voltage wiring (Pink and Purple connections at the dimmer) must be run to the wallbox that will house the Dimmer.

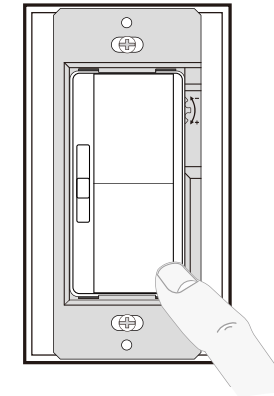
- Connect the green wire on the dimmer with the green or bare copper ground wire on the junction box, and secure with a P4 wire nut.
- Connect the black wire on the dimmer to the input wire removed from the switch, namely the line wire, and secure with a P4 wire nut.
- Connect the red wire on the dimmer with the traveler 1 and red and white wire on the dimmer with the traveler 2, secure them with a P4 wire nut.
- Connect the purple wire on the dimmer with 0-10V D(+) on the junction box, and secure the P2 wire nut.
- Connect the pink wire on the dimmer with 0-10V D(-) on the junction box, and secure the P2 wire nut.
- Connect the pink wire on the dimmer with 0-10V D(-) on the junction box, and secure the P2 wire nut.

Step 3 Mounting Dimmer



Carefully position the wires in the wall box to make room for the dimmer. BESTTEN DS09L dimmers are of a slim design to make this step easier. Using the provided mounting screws, secure the dimmer to the wall box.

Step 4 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.

Troubleshooting

Problems	Possible Cause	Solution
Lights flickering	Bad connection	Reconnect and fix the wires
Lights flickers at low end of dimming range	Load compatibility is not good	Turn up lamp minimum brightness properly
Short effective adjustment stroke		
Lights can't be turned on	Circuit breaker has tripped	Turn power on
	Fuse burned out	Change fuse
	Lamp burned out	Change lamp
	Lamp neutral connection is not wired	Reconnect the lamp neutral