

### ASSEMBLY AND INSTALLATION

**WARNING:** Disconnect main power at the source prior to installation! *Only qualified electricians should install Alcon Lighting products. Ensure the unit has input, output voltage, and output wattage proper for your application.*

**Lamp Type:** Use this product with halogen and incandescent lamps **only**—120V 60Hz. **Do not** connect to low-voltage lamps or any appliance.

**Caution:** To avoid overheating and possible damage to other equipment, do not install to control receptacles, fluorescent lighting fixtures, motor-operated appliances, or transformer supplied appliances.

**Short Circuit Check:** Check new installation for short circuits prior to installation of Dimmer by using a single pole switch and connecting the appropriate terminals to the hot wire and the lamp with power OFF. Turn power on. If lights do not work, or breaker trips, a short is present. Correct the wiring and check circuit again. Install Dimmer only when short is no longer present.

**Wire Connectors:** Wire connectors provided can be used to join one 10 to 18 AWG (2.5 to 0.75 mm<sup>2</sup>) wire with one or two 12 or 14 AWG (2.5 or 1.5 mm<sup>2</sup>) wires. Use them with copper wire **only**.

**Multigang Installations:** In multigang installations several Dimmers or controls are grouped horizontally in one ganging Wallbox or in a series of connected wallboxes. A multigang faceplate is available to simplify and improve the appearance of your installation. A multigang mounting frame is provided with each standard multigang faceplate to ensure proper alignment of the Dimmers, easy application of the faceplate, and a flat surface for the installation. Refer to instruction sheet supplied with multigang faceplates.

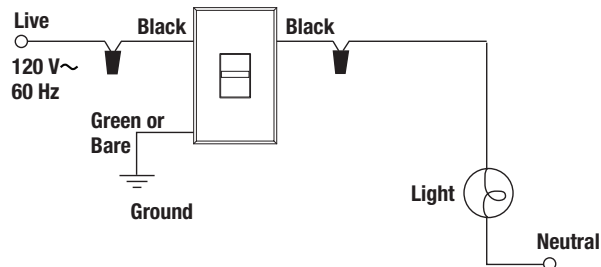
#### Single Unit Installation

1. TURN POWER OFF. Control must only be installed when power is turned OFF. Remove fuse or turn circuit breaker OFF. Damage to product caused by wiring with power on voids warranty.
2. Remove faceplate from Dimmer to access mounting holes. Pull out at top and bottom edges, plate will snap off.
3. Strip insulation from Dimmer wires and from wires in wallbox as follows:
  - 1/2 in (13 mm) for 10 to 14 AWG (2.5 to 1.5 mm<sup>2</sup>) wire
  - 5/8 in (16 mm) for 16 or 18 AWG (1.0 or 0.75 mm<sup>2</sup>) wire



4. Using the wire connectors provided:
  - Connect the green or bare ground wire on the Dimmer to the green or bare copper ground wire in the wallbox.
 

**Note:** When no "grounding means" exist within the wallbox, then the NEC® 2008, Article 404.9 allows a Dimmer without a grounding connection to be installed as a replacement, as long as a plastic, noncombustible wallplate is used. For this type of installation, twist a wire connector onto the green ground wire or remove the green ground wire on the Dimmer and use a wallplate. If a green or bare copper ground wire is not in the wallbox, contact a licensed electrician.
  - Connect one of the black wires on the Dimmer to either one of the wires removed from the switch. Be sure no bare wire is exposed.
  - Connect the other black wire on the Dimmer to the remaining wire removed from the switch. Be sure no bare wire is exposed.



5. Push wires into wallbox, allowing room for Dimmer backbox to be inserted.
6. Mount Dimmer to wallbox using 2 screws provided and center mounting screw holes. Unit **must** be mounted vertically.
7. Snap faceplate on Dimmer.
8. Turn power ON. Push slider up to increase light and down to decrease light. Full "down" position will turn light off.

#### Multigang Installation-

##### No Side Sections Removed (No Derating Required)

Installation of Dimmers without removing side sections allows operation at full capacity (no derating). Follow instructions below. For retrofit installations side sections can be removed to fit existing wallboxes. This requires derating and is described in **Multigang Installation - Side Sections Removed** on reverse.

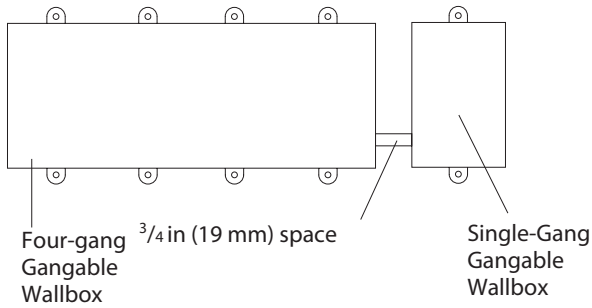
1. Determine the number of wallboxes necessary by using the Wallbox Requirement Chart (Table A). When ganging any combination of small Dimmers and large Dimmers, keep all small together at one end of the gang and all large Dimmers together at the other end of the gang.

**Table A. Wallbox Requirement Chart**  
No Side Sections Removed

	Number of Small Controls						
	0	1	2	3	4	5	6
	Number of Wallboxes Required						
	0	1	1+1*	4	4+1*	7	7+1*
Number of Large Controls	1	3	5	6	8	9	11
	2	4	6	7	9	10	13
	3	6	8	10	11	13	16
	4	9	11	12	14	15	18

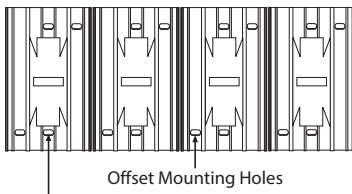
\*See item #2

2. When ganging an even number of small controls use gangable wallboxes with tapped ears. Do not use plaster rings or gangbox covers. One wallbox in addition to the total number of controls is required in order to provide space for faceplates (e.g. 4 Dimmers require 5 wallboxes). Place additional wallboxes 3/4 in (19 mm) apart from other wallbox(es) to provide space for faceplate(s).

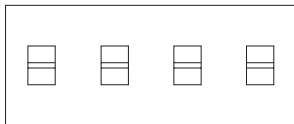


**3.** Turn power OFF. Wire each Dimmer according to steps 3 and 4 in **Single Unit Installation**.

**4.** Install controls in wallbox(es). Use center mounting holes for first unit, then use offset mounting holes as required for proper alignment. Allow  $\frac{1}{32}$  in (0.79 mm) between controls for ease in attaching faceplates.



**5.** Snap on multigang faceplate (or multiple single faceplates) and adjust up or down for snug fit. Multigang faceplates (with mounting frames and instructions) are available in a variety of colors and sizes to simplify and beautify your installation.



**Multigang Installation-- Side Sections Removed (Derating Required)**

**1.** Derating is necessary when side sections are removed. Use Derating Chart (Table B) to determine maximum wattage of lamps safely dimmed when side sections are removed. Match the Dimmer model number and the number of side sections removed to determine the maximum load that can be controlled.

**2.** Determine the number of wallboxes necessary by using the Wallbox Requirement Chart (Table C). When ganging any combination of small Dimmers, place all small Dimmers together at one end of the gang and all large Dimmers at the other end of the gang.

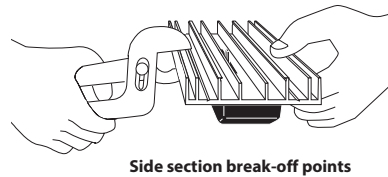
**Table B. Derating Chart - Maximum Wattage**

Model	Control Size	No Sides Removed	1 Side Removed	2 Sides Removed
Villa	S	600 W	600 W	500 W

**Table C. Wallbox Requirement Chart Side Sections Removed**

		Number of Small Controls						
		0	1	2	3	4	5	6
Number of Large Controls	0	0	1	2	3	4	5	6
	1	1	3	4	5	6	7	8
	2	3	5	6	7	8	9	10
	3	5	7	8	9	10	11	12
	4	7	9	10	11	12	13	14

**3.** Remove only inner side sections. Using pliers, bend side sections as far as you can and then back to their original positions. Repeat several times until side sections break off. **Note:** Do not remove outer side sections of the two Dimmers which are on the ends of the gang.



**4.** Turn power OFF. Wire each Dimmer according to steps 3 and 4 in **Single Unit Installation**.

**5.** See step 4 **Multigang Installation-No Side Sections Removed (No Derating Required)**

**6.** See step 5 **Multigang Installation-No Side Sections Removed (No Derating Required)**