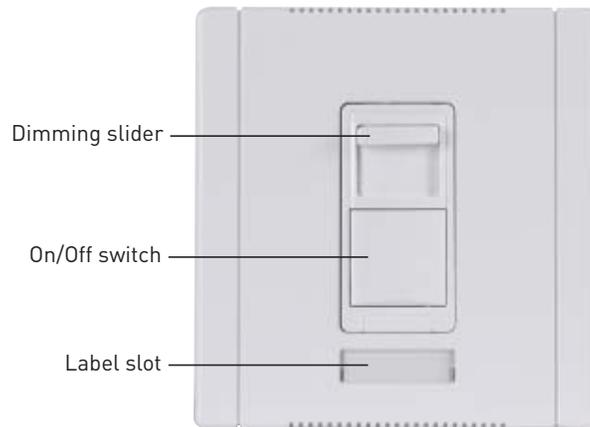


ADMLV-1603

Magnetic Low Voltage Multi-way Architectural Dimmer



SPECIFICATIONS

Voltage	120VAC, 60Hz
Maximum Load Rating	1600VA
Minimum Load Rating.....	40VA
Wide Dimmer	
Load (Multi-way)	Magnetic low voltage
Environment.....	Indoor use only
Operating temperature	0-25°C (32-77°F)
Humidity.....	93% RH, non-condensing
Electrical Supply Wire Requirement	
Minimum temperature rating.....	75°C (167°F)
Tools Needed.....	Insulated screwdriver, wire strippers

WattStopper®

Santa Clara, CA 95050

Installation Instructions

DESCRIPTION AND OPERATION

The ADMLV-1603 Magnetic Low Voltage Architectural Dimmer is designed to replace a standard light switch or dimmer. It will control magnetic low voltage loads only. To dim the connected load move the slider down; to brighten the connected load move the slider up. Press the top of the ON/OFF button to turn the connected load ON. Press the bottom until it clicks to turn OFF. The load will turn back ON to the preset light level.

Caution: To reduce the risk of overheating and possible damage to other equipment, do not install to control a receptacle, a fluorescent light or a motor-operated appliance.

Important Notes

1. Only one dimmer can be used in a 3-way circuit.
2. It is normal for the dimmer to feel warm to the touch during operation.
3. Protect the dimmer from dust and dirt when painting or spackling.
4. Check new installations for short circuits prior to installing the dimmer.
 - Disconnect power to the circuit by removing the fuse or turning the circuit breakers OFF.
 - Install a switch instead of the dimmer. Turn the switch to the ON position.
 - Restore power to the circuit.. If the circuit breaker trips, a short is present.
 - Operate the switch. If the light fails to turn ON and OFF with the switch, the wiring may be incorrect.
 - Correct wiring if necessary and retest.
 - Install the dimmer only after the light operates properly with the switch.

Dimmer Catalog #	Maximum Load	Multi-Gang De-Rating			
		Fins are NOT removed		Fins ARE removed	
ADMLV-1603 (Wide Dimmer)	1600VA	2 Gang Installation	3 Gang Installation	2 Gang Installation	3 Gang Installation
		1600VA	1600VA	1600VA	1550VA

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Derating

Break-off fins are found on both sides of the dimmer's strap under the plastic end caps. In some multi-gang applications some of these fins may need to be removed to accommodate the size of the wallbox. In some multi-gang cases due to load requirements derating is not an option therefore the fins must remain attached and the dimmers will be installed in a larger wallbox. As shown in figure 10, when necessary to remove fins use pliers to bend each section up and down until it breaks off.

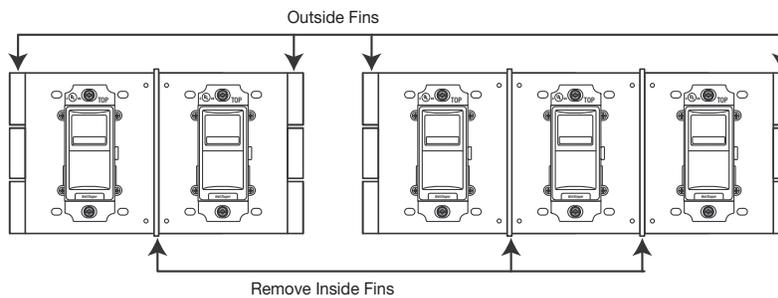


Fig. 1: Multi-Gang Installation

INSTALLATION AND WIRING



WARNING

Disconnect power to the wall switch box by turning OFF the circuit breaker or removing the fuse from the circuit before installing the ADMLV-1603, replacing lamps, or doing any electrical work.



1. Prepare the switch box
After power is turned OFF at the circuit breaker box, remove the existing wall plate and mounting screws. Pull the old switch out from the wall box.
2. Identify the type of circuit
You may connect the ADMLV-1603 to a single pole or multi-way circuit. If you are unable to clearly identify some or all of the wires mentioned in this manual, you should consult with a qualified electrician.

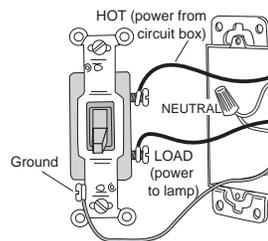


Fig 2: Typical Single Pole Switch Wiring

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In a 3-way circuit (Fig. 3) two traveler wires connect to both switches. Another wire provides power from the circuit box to one of the switches. A wire connects from one switch to the load. A ground wire may also be connected to a ground terminal on the old switches.

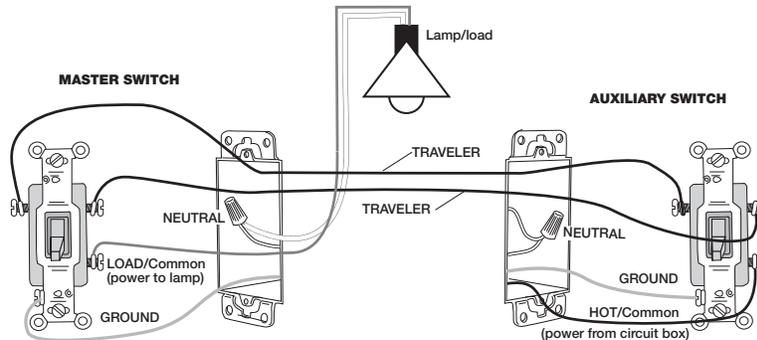


Fig.3: Typical 3-Way Switch Wiring

Caution – For your safety: Connecting a proper ground wire to the dimmer provides protection against electrical shock in the event of certain fault conditions. If a proper ground is not available, consult with a qualified electrician before continuing installation.

3. Prepare the Wires

Tag the wires currently connected to the existing switch so that they can be identified later. Disconnect the wires. Make sure the insulation is stripped off of the wires to expose their copper cores to the length indicated by the "Strip Gage" in Fig. 4 (approx. ½ inch)

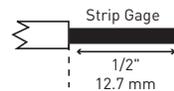


Fig. 4: #12 or #14 AWG

4. Wire the dimmer

Connect the wires to the flying leads on the ADMLV-1603 dimmer(s) as indicated in either step 4a or 4b.

4a. Single Pole Circuit: Wiring one ADMLV-1603 (Fig. 5)

- Connect the green or non-insulated (copper) GROUND wire from the circuit to the green wire on the dimmer.
- Connect the power wire from the circuit (HOT) to the black wire on the dimmer.
- Connect the lamp power (LOAD) to the appropriate red wire on the dimmer (See Fig. 5).
- The remaining red wire is not used in a single pole circuit.

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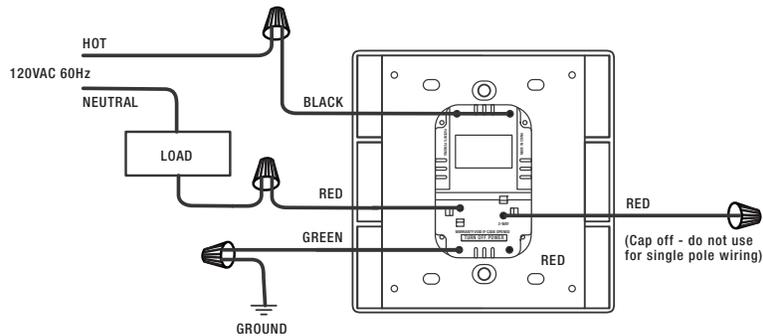


Fig. 5: Single Pole Wiring

4b. 3-way wiring (Fig. 6)

- Note: Only one dimmer can be used on a 3-way circuit.
- Connect the green or non-insulated (copper) GROUND wire from the circuit to the green wire on the dimmer
- Connect the power wire from the circuit (HOT) to the black wire on the dimmer
- Connect one of the red wires on the dimmer to one of the wires removed from the switch
- Connect the remaining red wire to the remaining wire removed from the switch

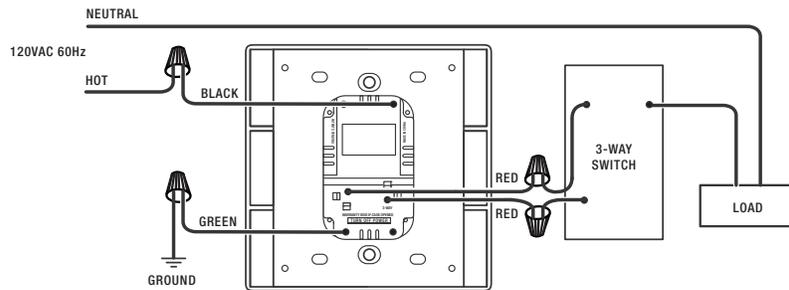


Fig. 6: Multi-way Wiring

5. Remove the center part of the wallplate by placing a small flat head screwdriver into one of the four slots located at the top and bottom of the wallplate. Gently twist a half turn until the plate pops off

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6. **For single gang installations**, put all the new switches into their wall boxes. Position the dimmer with the slider above the ON/OFF button. Use the captive screws on the mounting strap to secure the switches to their wall boxes. Continue to step 7.

For multi-gang installations, select the appropriate mounting configuration and install into the wallbox as explained in the multi-gang installation sections.
7. Restore power to the circuit. Turn ON the breaker or replace the fuse.
8. Attach the wallplates.

MULTI-GANG INSTALLATION – FINS ARE NOT REMOVED

Multiple controls can be installed in a common wallbox or a series of interconnected wallboxes. When ganging any combination of narrow and wide controls, place all narrow controls on one end and all wide controls on the other end.

Note: A 3-gang installation of WIDE dimmers is shown in Fig. 9. Follow the same steps for any combination of narrow and wide dimmers.

1. Select the correct wall box size from the Table below.

	Narrow Dimmers							Model #	
	0	1	2	3	4	5	6		
Wide Dimmers	0	0	1	1+1*	4	4+1*	7	7+1*	Narrow ADMLV-703 AD-1103 ADFM-8A ADFE-16A ADFE277-10A ADF120277 ADFC-6A
	1	1	3	5	6	8	9	11	
	2	4	5	7	8	10	11	13	
	3	6	8	9	11	12	14	15	
	4	9	10	12	13	15	16	—	
	5	11	13	14	16	—	—	—	
	6	14	15	—	—	—	—	—	
								Wide ADMLV-1603 AD-2003 ADFM-16A ADFM277-10A	

* Wall box requirements for ganging an even number of narrow dimmers.

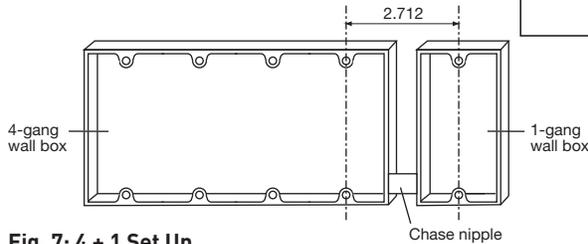


Fig. 7: 4 + 1 Set Up

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- Remove End Caps between adjacent dimmers (2 screws for each End Cap). Keep these screws.

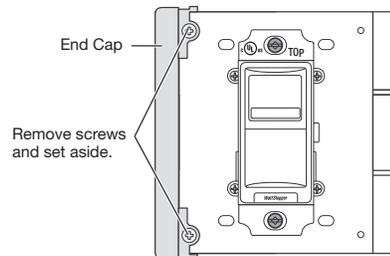


Fig. 8: Remove End Cap

- With the slider positioned above the ON/OFF button, install the dimmer in the wall box using the captive screws attached to the strap.
- Attach the large couplers between the dimmers with the screws that were removed in step 2.
- Tighten the captive screws, insert the label per instructions in the Wallplate Labeling section, attach the wallplate, and restore power to the circuit.

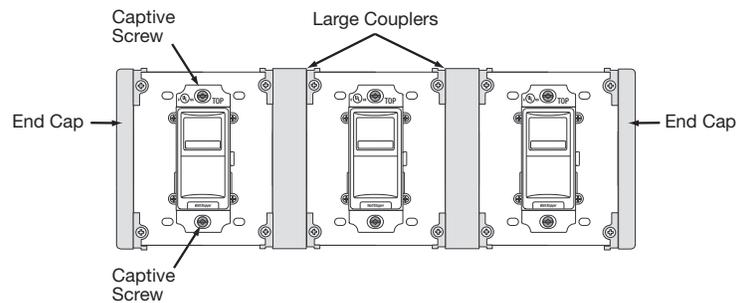


Fig.9: Install Dimmers and Attach Couplers

MULTI-GANG INSTALLATION - FINS ARE REMOVED

Multiple controls can be installed in a common wallbox or a series of interconnected wallboxes. When ganging any combination of narrow and wide controls, place all narrow controls on one end and all wide controls on the other end.

Note: A 3-gang installation of wide dimmers is shown in Fig.11. Follow the same steps for any combination of narrow and wide dimmers. Before removing fins take into consideration derating requirements.

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1. Select the correct box size from the table below.

Wide Dimmers	Narrow Dimmers						
	0	1	2	3	4	5	6
0	0	1	2	3	4	5	6
1	1	3	4	5	6	7	8
2	3	4	5	6	7	8	9
3	5	6	7	8	9	10	11
4	7	8	9	10	11	12	13
5	9	10	11	12	13	14	15
6	11	12	13	14	15	16	17

2. Remove the end cap (2 screws for each end cap) and break the fins between adjacent dimmers.
3. With the slider positioned above the ON/OFF button, install the dimmer in the wallbox using the captive screws attached to the strap.

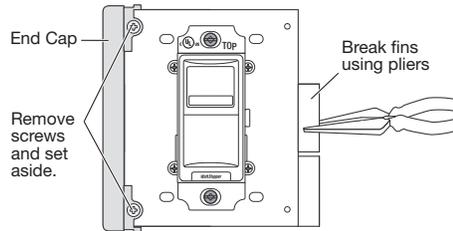


Fig. 10: Remove End Cap and fins

4. Attach the small couplers between the dimmers with the screws that were removed in step 2.
5. Tighten the captive screws, insert the label per instructions in the Wallplate Labeling section, attach the wallplate, and restore power to the circuit.

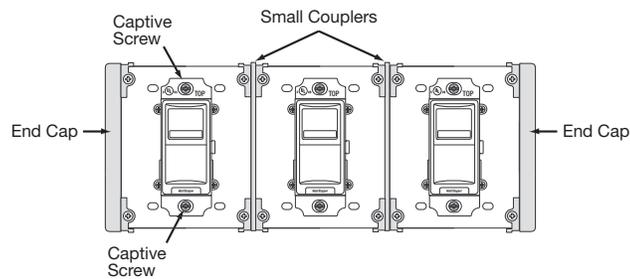


Fig. 11: Install Dimmers and Attach Small Couplers

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WALLPLATE LABELING

The wallplates contain a label holding slot. A 0.33" x 1.5" label can be printed from an Avery® standard template: Divider tab inserts 8-Tabs or equivalent.

Install the label following these steps:

1. Disconnect power to the circuit by removing the fuse or turning the circuit breakers OFF.
2. Remove the wallplate by placing a small flat head screwdriver into one of the four slots located at the top and bottom of the wallplate. Gently twist a half turn until the plate pops off.
3. Slide the label in from the back side of the wallplate.

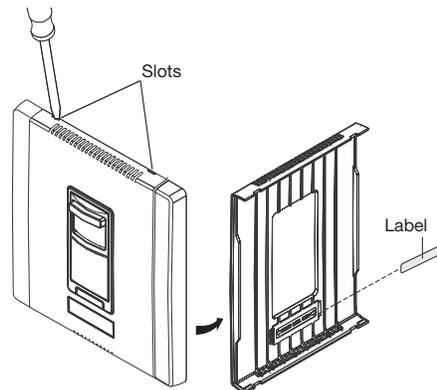


Fig. 12: Insert Label

SETUP

The dimmer may calibration to accommodate low end trim requirements in certain magnetic low voltage transformers. When the slider is set to the lowest dimming level (all the way to the bottom) if the connected load either turns OFF or appears to be too bright for the user's preference, you can calibrate the dimmer. Follow these steps:

1. Disconnect power from the circuit
2. Remove the wallplate
3. Use a small, insulated flat-tipped screwdriver to adjust the calibration dial located on the right side of the dimmer.
4. If the load turns OFF when the slider is at the minimum setting turn the calibration dial up to increase the brightness.
5. Replace the wallplate
6. Turn the power back ON.

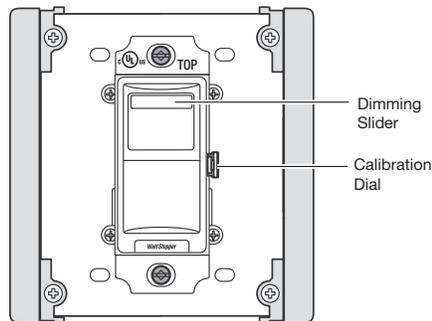


Fig. 13: Dimmer Calibration

Repeat the above steps as necessary.

TROUBLESHOOTING

Lights are flickering

- Lamp has a bad connection.
- Check wire connection to make sure they are secured firmly.
- There may be a circuit wiring issue. You should always use a separate neutral wire for the circuit connected to the dimmer. If two 120V hots from the breaker box share the same neutral and one of them has a very large load, it could cause a voltage drop on the other hot. This can cause flickering.

Light does not turn ON

- Check to see if the circuit breaker or fuse has tripped.
- Check to see if the lamp is burned out.

WARRANTY INFORMATION

WattStopper warrants its products to be free of defects in materials and workmanship for a period of five (5) years. There are no obligations or liabilities on the part of WattStopper for consequential damages arising out of, or in connection with, the use or performance of this product or other indirect damages with respect to loss of property, revenue or profit, or cost of removal, installation or reinstallation.

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