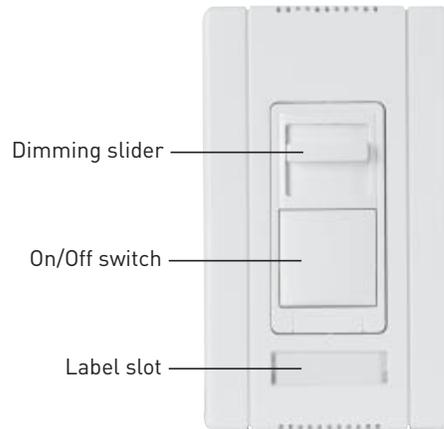


ADFE-16A

Three-Wire Fluorescent Multi-way Architectural Dimmer



Installation Instructions

SPECIFICATIONS

Voltage	120VAC, 60Hz
Maximum Load Rating	16A
Minimum Load Rating	0.33A
Narrow Dimmer:	
Load (Multi-way)	Fluorescent
For use with specific Lutron Hi-Lume, Hi-Lume 3D, Compact SE, and Eco-10 dimming ballasts	
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

DESCRIPTION AND OPERATION

The ADFE-16A Fluorescent Architectural Dimmer is designed to replace a standard light switch or dimmer. 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:

- Use only with dimming ballasts shown on the "List of Compatible Ballasts" on the other side of this page.
- 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.

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.
5. To ensure full lamp life and optimum dimmer performance, the lamp must be operated at full intensity for 100 hours prior to dimming. Refer to individual lamp manufacturers for more information.

Derating

No derating is required for multigang installations.

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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 ADFE-16A, replacing lamps, or doing any electrical work.

1. Prepare the switch box

After the 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 ADFE-16A 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.

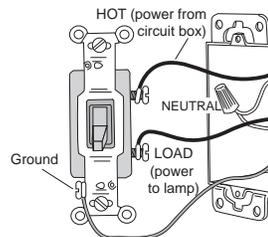


Fig 1: Typical Single Pole Switch Wiring

In a 3-way circuit (Fig. 2) 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.

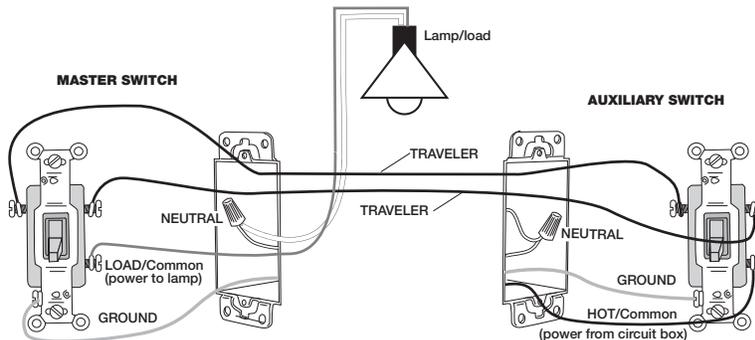


Fig. 2: Typical 3-Way Switch Wiring

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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. 3 (approx. 1/2 inch).

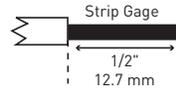


Fig. 3 : #12 or #14 AWG

4. Wire the dimmer

Connect the wires to the flying leads on the ADFE-16A dimmer(s) as indicated in either step 4a or 4b.

4a. Single Pole Circuit: Wiring one ADFE-16A (Fig. 4)

- 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 blue wire on the dimmer.
- Connect the neutral wire to the white wire on the dimmer.
- Connect the black wire on the ballast to the red wire on the dimmer.
- Connect the orange wire (dimmed hot) on the ballast to the yellow wire on the dimmer.
- The remaining blue wire is not used in a single pole circuit.

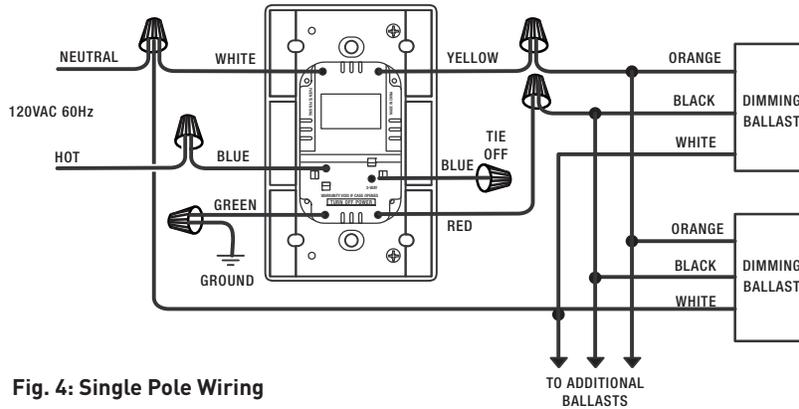


Fig. 4: Single Pole Wiring

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4b. 3-way wiring (Fig. 5)

- Note: Only one dimmer can be used in a 3-way circuit.
- Note: The dimmer must be wired on the load side. The 3-way switch must be wired on the line side.

Warning: If the dimmer is wired in any other configuration, the air gap will be lost and risk of shock or electrocution will exist when servicing the lamp.

- Connect the green or non-insulated (copper) GROUND wire from the circuit to the green wire on the dimmer.
- Connect one of the blue wires on the dimmer to the switch.
- Connect the remaining blue wire to the switch.
- Connect the neutral wire to the white wire on the dimmer.
- Connect the black wire on the ballast to the red wire on the dimmer.
- Connect the orange wire (dimmed hot) on the ballast to the yellow wire on the dimmer.

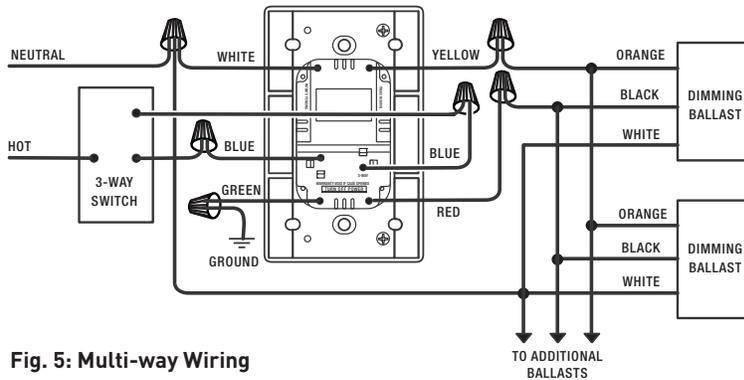


Fig. 5: Multi-way Wiring

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.
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.

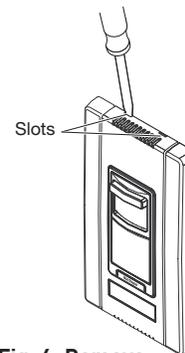


Fig. 6: Remove Wallplate

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7. Restore power to the circuit. Turn ON the breaker or replace the fuse.
8. Attach the cover plates.

MULTI-GANG INSTALLATION – FINS ARE NOT REMOVED

Multiple controls can be installed in a common wallbox or a series of inter-connected 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 narrow 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.

Wide Dimmers	Narrow Dimmers							Model #
	0	1	2	3	4	5	6	
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.

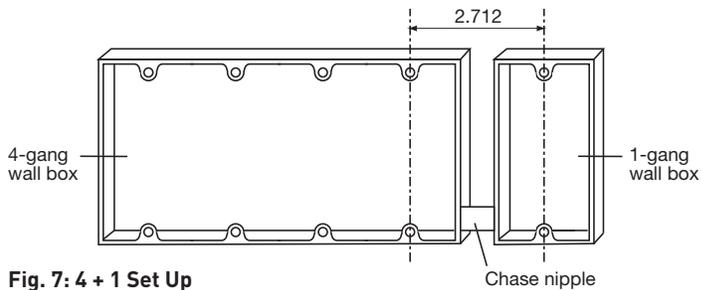


Fig. 7: 4 + 1 Set Up

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2. Remove End Caps between adjacent dimmers (2 screws for each End Cap). Keep these screws.
3. With the slider positioned above the ON/OFF button, install the dimmer in the wall box using the captive screws that are attached to the strap.
4. Attach the large 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.

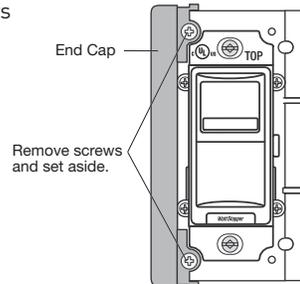


Fig. 8: Remove End Cap

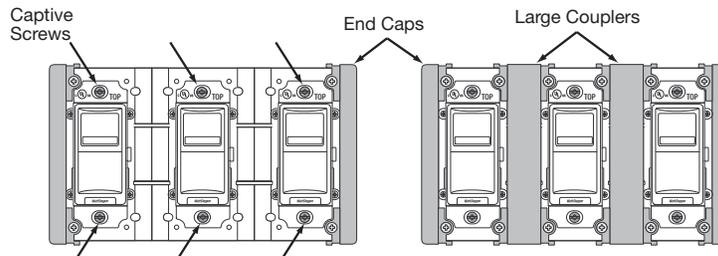


Fig. 9: Install Dimmers and Attach Couplers

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 narrow 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.

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.
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.

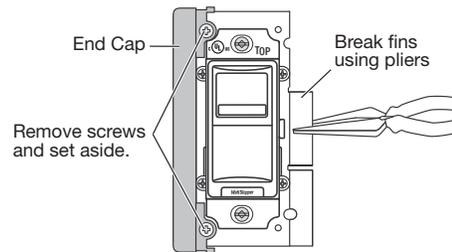


Fig. 10: Remove End Cap and fins

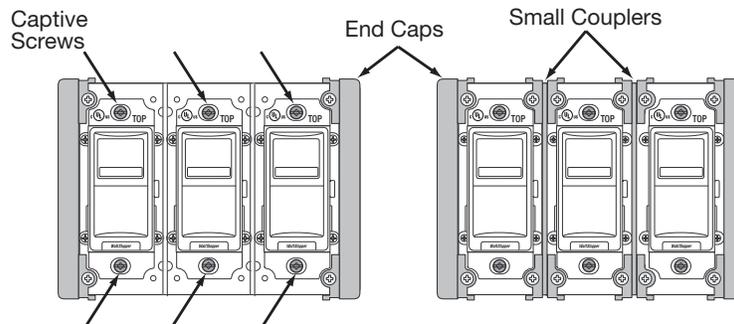


Fig. 11: Install Dimmers and Attach Small Couplers

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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.

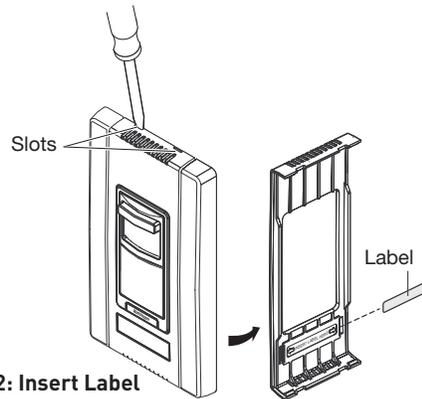


Fig. 12: Insert Label

SETUP

No adjustments are required. The minimum light level is calibrated at the factory and does not normally require adjustment. If the lamp drops out or flickers at the minimum dimming level, there may be an installation error.

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 hot wires 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.

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List of Compatible Ballasts Ballast Manufacturer: Luton	
1% - Hi-Lume, Hi-Lume 3D	10% - Eco-10
HL3-T426-120-1-S, HL3-T432-120-1-S FDB-T524-120-1, FDB-T524-120-2, FDB-T539-120-1, FDB-T539-120-2, FDB-T554-120-1, FDB-T554-120-2, FDB-2427-120-1, FDB-2427-120-2, FDB-2427-120-3, FDB-3627-120-1, FDB-3627-120-2, FDB-3627-120-3. FDB-4827-120-1, FDB-4827-120-2, FDB-4827-120-3, FDB-6027-120-1, FDB-6027-120-2, FDB-7280-120-1, FDB-8480-120-1, FDB-9680-120-1, H3DT832CUNV110, H3DT832CUNV117, H3DT832CUNV210, H3DT832CUNV217	E3-T514C-120-1, E3-T514C-120-2, E3-T521C-120-1, E3-T521C-120-2, ECO-T528-120-1, ECO-T528-120-2, ECO-T524-120-1, ECO-T524-120-2, ECO-T5H39-120-1, ECO-T5H39-120-2, ECO-T554-120-1, ECO-T554-120-2, ECO-T539-120-1, ECO-T539-120-2, ECO-T539-120-3, ECO-T540-120-1, ECO-T540-120-2, ECO-T540-120-3, ECO-T550-120-1, ECO-T550-120-2, ECO-T817-120-1, ECO-T817-120-2, ECO-T817-120-3, ECO-T825-120-1, ECO-T825-120-2, ECO-T832-120-1-L, ECO-T832-120-1-T, ECO-T832-120-2-L, ECO-T832-120-2-T, ECO-T832-120-3
5% - Compact SE	
FDB-T418-120-1-S, FDB-T418-120-2-S, FDB-T426-120-1-S, FDB-T426-120-2-S, FDB-T432-120-1-S, FDB-T432-120-2-S, FDB-T442-120-1-S, FDB-T442-120-2-S, FDB-1643-120-1, FDB-1643-120-2, FDB-1643-120-3, FDB-2227-120-1, FDB-2227-120-2, FDB-2227-120-3, FDB-2243-120-3, FDB-2243-120-2	

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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