

# Single Pole (One location) or 3-Way (Multi-location)

### Scene Capable Magnetic Low-Voltage Dimmer

Cat. No. RZM10-1L. 1000VA (Lighted) 120VAC, 60Hz

# Compatible with **(Z) wave** enabled products!



### **INSTALLATION INSTRUCTIONS**

### WARNINGS AND CAUTIONS:

- To be installed and/or used in accordance with appropriate electrical codes and regulations.
- If you are unsure about any part of these instructions, consult a qualified electrician.
- . To avoid overheating and possible damage to this device and other equipment, do not install to control a receptacle, fluorescent lighting, a motor- or a transformer
- Use with magnetic low-voltage transformers, incandescent, or 120V halogen fixtures only. Use a Leviton electronic low-voltage dimmer to control electronic (solid state) low-voltage transformers.
- . When magnetic low-voltage circuits are operated at a dim level, with all lamps inoperative, excess current may flow through the transformer. To avoid possible transformer failure due to overcurrent, use a transformer that incorporates thermal protection or a fuse at the primary windings.
- Vizia™ RF dimmers are not compatible with standard 3-way or 4-way switches. They must be used with compatible Vizia™ RF controllers for multi-location dimming.

### WARNINGS AND CAUTIONS:

- Use only one (1) Vizia™ RF dimmer in a multi-location circuit with up to 9 coordinating Vizia™ remotes without LEDs or Vizia™ RF remotes for multi-location. The remote(s) will turn the light on at the brightness level selected at the dimmer.
- · Total minimum load must exceed 40W.
- · Dimmer may feel warm to the touch during normal operation.
- · Recommended minimum wall box depth is 2-1/2".
- . Maximum wire length from dimmer to all installed remotes cannot exceed 300 ft
- · Disconnect power at circuit breaker or fuse when servicing, installing or removing fixture.
- · Use this device only with copper or copper clad wire. With aluminum wire use only devices marked CO/ALR or CU/AL.

### **Tools needed to install your Dimmer:**

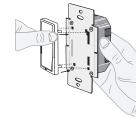
Slotted/Phillips Screwdriver Cutters

Electrical Tape Pencil Ruler

### Changing the color of your Dimmer:

Your Dimmer includes three color options. The Dimmer ships with the White frame attached. To change color of frame, proceed as follows:





Push in side at tab to release

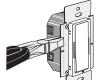
Line up tabs and press in side to attach

## Installing Dimmer by itself or with other devices:

If installing Dimmer in a single device application, proceed with the INSTALLING YOUR DIMMER section. If installing Dimmer in a multidevice application, proceed as follows:

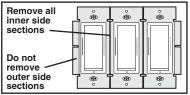
### **MULTI-DEVICE APPLICATION**

In multi-dimmer installations, the reduction of the dimmer's capacity is required. Refer to the chart for maximum load per dimmer.





section



# MAXIMUM LOAD PER DIMMER FOR MULTI-DEVICE

Load	Single	Two Devices	More than 2 Devices	
Incand	1000W	800W	650W	
Mag LV	1000VA	800VA	650VA	

### **MAXIMUM BULB WATTAGE**

Low-voltage dimmers are rated in Volt-Amps (VA). The maximum bulb wattage is determined by the efficiency of the transformer in the lowvoltage lighting system. Transformer efficiencies will vary from different manufacturers; consider 80% efficient as average. Use the chart to determine maximum bulb wattage for typical transformer efficiency ratings.

MAXIMUM BULB WATTAGE AT 75% EFFICIENCY					
Rating	Rating Single		More than 2 Gang		
1000VA	800W	640W	520W		

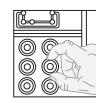
### **INSTALLING YOUR DIMMER**

NOTE: Use check boxes when Steps are completed.



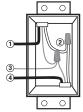
WARNING: TO AVOID FIRE SHOCK OR DEATH; TURN OFF POWER at circuit breaker or fuse and test that power is off before wiring!

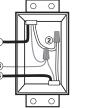




### Identifying your wiring application (most common):

NOTE: If the wiring in your wall box does not resemble any of these configurations, consult a qualified electrician.





### Single Pole

- 1. Line (Hot)
- Neutral 3. Ground Load
- 1. Line or Load (see important instruction) 2. Neutral
  - 3. Ground
  - 4. First Traveler note color
  - 5. Second Traveler note color

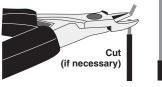
### Step 2 cont'd

IMPORTANT: For 3-Way applications, note that one of the screw terminals from the old switch being removed will usually be a different color (Black) or labeled Common. Tag that wire with electrical tape and identify as the common (Line or Load) in both the dimmer wall box and remote wall box.

# Step 3

### Preparing and connecting wires:

Pull off pre-cut insulation from dimmer leads. Make sure that the ends of the wires from the wall box are straight (cut if necessary). Remove insulation from each wire in the wall box as shown:





Strip Gage (measure bare wire here)

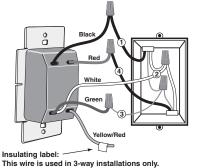
## · Pull off pre-cut insulation from dimmer leads.

- Make sure that the ends of the wires from the wall box are straight (cut if necessary).
- . Remove insulation from each wire in the wall box as shown.
- . For Single-Pole Application, go to Step 4a.
- . For 3-Way Coordinating Remote (no LEDs) Application, go to

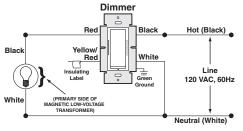
For non-standard wiring applications, refer to Wire Nut and Connector Size Chart

### WIRE CONNECTOR / # OF COND. COMBINATION CHART 1 - #12 w/ 1 to 3 #14, #16 or #18 2 - #12 w/ 1 or 2 #16 or #18 1 - #14 w/ 1 to 4 #16 or #18 2 - #14 w/ 1 to 3 #16 or #18

## **Single Pole Wiring Application:**



This wire is used in 3-way installations only. For single pole installations, do not remove this insulating label.



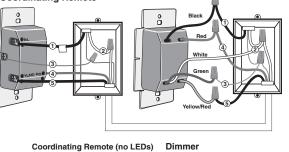
### WIRING DIMMER:

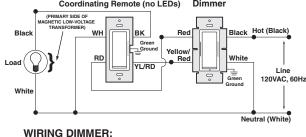
### Connect wires per WIRING DIAGRAM as follows:

WARNING: CONNECT A MAGNETIC LOW-VOLTAGE DIMMER ONLY TO THE PRIMARY (HIGH-VOLTAGE) SIDE OF A MAGNETIC LOW-VOLTAGE TRANSFORMER

- · Green or bare copper wire in wall box to Green dimmer lead.
- Line Hot wall box wire to Black dimmer lead.
- Load wall box wire to Red dimmer lead.
- . Line Neutral wall box wire to White dimmer lead.
- · Yellow/Red dimmer lead should have Red insulation label affixed. NOTE: If insulating label is not affixed to Yellow/Red dimmer lead, use electrical tape to cover.
- · Proceed to Step 5.

# 3-Way Wiring with Coordinating Dimming or Switching Remote (no LEDs) Application: Coordinating Remote





### Connect wires per WIRING DIAGRAM as follows:

WARNING: FOR MAGNETIC LOW-VOLTAGE APPLICATIONS. CONNECT DIMMER ONLY TO THE PRIMARY (HIGH-VOLTAGE) SIDE OF A MAGNETIC LOW-VOLTAGE TRANSFORMER.

NOTE: When using the coordinating remote without LEDs, the dimmer can be installed on either the Line or Load side of the 3-way **NOTE:** Maximum wire length from dimmer to all installed remotes

cannot exceed 300 ft.

- Green or bare copper wire in wall box to Green dimmer lead.
- Line Hot (common) wall box wire identified (tagged) when removing old switch to Black dimmer lead.
- First Traveler wall box wire to Red dimmer lead (note wire color). This traveler from the dimmer must go to the terminal screw on the remote marked "RD".
- · Remove Red insulating label from Yellow/Red dimmer lead.
- Second Traveler wall box wire to Yellow/Red dimmer lead (note wire color). This traveler from the dimmer must go to the terminal screw on the remote marked "YL/RD".
- · Line Neutral wall box wire to White dimmer lead.

Step 4b cont'd 3-Way Wiring with Coordinating Dimming or Switching Remote (no LEDs) Application:

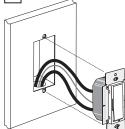
### **WIRING COORDINATING REMOTE:**

### Connect wires per WIRING DIAGRAM as follows:

NOTE: Maximum wire length from dimmer to last remote is 300 ft.

- Green or bare copper wire in wall box to Green terminal screw.
- Load wall box wire identified (tagged) when removing old switch to terminal screw marked "BK".
- First Traveler wall box wire (note color as above) to terminal screw marked "RD". This traveler from the remote must go to the
- Second Traveler wall box wire (note color as above) to terminal screw marked "YL/RD". This traveler from the remote must go to the Yellow/Red dimmer lead.
- · Line Neutral wall box wire to terminal screw marked "WH".
- Proceed to Step 5.

### Step 5 Testing your Dimmer prior to mounting in wall box:



 Position all wires to provide room in outlet wall box for device.

- Ensure that the word "TOP" is facing up on device strap.
- Partially screw in mounting screws in wall box mounting holes.

NOTE: Dress wires with a bend as shown in diagram in order to relieve stress when mounting device.



· Press pad until locator light is OFF. Lights should turn ON. If lights do not turn ON, press the upper half of the DIM/BRIGHT

If lights still do not turn ON, refer to the TROUBLESHOOTING section.

# · Restore power at circuit breaker or fuse Bar until the lights brighten.

### Including Dimmer into Z-Wave™ Network: Step 6





2 on OFF

3 ON OFF

4 on off

- · If using a non-Leviton Programmer/ Controller refer to the Programmer/ Controller instruction sheet for Including a device.
- A) If using a Leviton Z-Wave™ Programmer/ Controller, Cat. No. RZCPG, press the Menu button and scroll down to System Setup. Press the center button to select System Setup Menu. Press the center button to select Network.

Menu Button

Center Button

### Step 6 cont'd

- B) While standing close to the dimmer (approximately 2-5 ft.), press the center button to <Include> device in the network. NOTE: Only one device may be included at a time. DO NOT put multiple devices into the Inclusion mode at any time.
- C) While the Programmer/Controller is in the Inclusion mode and the Locator LED is ON on the Dimmer, press the push pad to turn on the Dimmer. The Programmer/Controller will verify inclusion and the Locator LED will turn OFF.

If the Dimmer is flashing Amber while in the Inclusion mode, the Programmer/Controller is still trying to communicate with the Dimmer. Wait until the device stops flashing, then press the

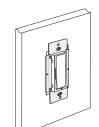
NOTE: If the Locator LED on the Dimmer turns solid Red while including, there has been a communication error. Refer to Troubleshooting section.

D) The Primary Programmer/Controller will assign a node ID number (Name) for this device.

NOTE: This ID number (Name) will be stored in the controller to be used for future reference.

**NOTE:** You may name or edit the node of this device at this time. E) The Dimmer is now installed in the network.

**NOTE:** If the Dimmer has been successfully Included in the network and the user tries to Include it again without first excluding it from the network, the dimmer will retain the first node ID it had received and ignore the second.



Programmer/Controller Cat. No. RZCPG



NOTE: Programmer/Controller must be in close proximity to dimmer when including in the network.

# Step 7

### **Excluding Dimmer from Z-Wave™ Network:**

**NOTE:** It is very important to accurately Exclude devices from the network when moving or removing a device from a Z-Wave™ network. This ensures that all information has been removed from your Primary Programmer/Controller's information table and is not counted on to be part of the mesh network.

- **A)** If using a Leviton Z-Wave<sup>™</sup> Programmer/Controller, Cat. No. RZCPG, press the Menu button and scroll down to System Setup. Press the center button to select System Setup Menu. Press the center button to select Network.
- B) While standing close to the dimmer (approximately 2-5 ft.), press the center button to <Exclude> device from the network.
- C) While the Programmer/Controller is in the Exclusion mode and the locator LED is ON on the Dimmer, press the push pad to turn on the Dimmer. The Programmer/Controller will verify Exclusion and the locator LED will turn OFF.

If the Dimmer is flashing Amber while in the Exclusion mode, the Programmer/Controller is still trying to communicate with the Dimmer. Wait until the device stops flashing, then press the push pad.

### **Factory Default:**

If your dimmer is not responding, or you are unable to control it after you have tried to Include/Exclude it multiple times, it may be necessary to reset the dimmer to its original factory settings. To accomplish this, proceed as follows:

 On the dimmer, engage the air-gap switch (refer to Operation section) and wait 5 seconds. Press the push pad back into the frame and hold push pad until the locator LED flashes Amber and turns solid Red. The dimmer is now reset. Once the dimmer is reset, it will be necessary to Re-Include it to a network before it can be used.

**CAUTION:** SETTING A DEVICE TO A FACTORY DEFAULT DOES NOT EXCLUDE THAT DEVICE FROM A NETWORK. THE EXCLUSION PROCEDURE MUST STILL BE FOLLOWED TO REMOVE THE DEVICE FROM THE PRIMARY CONTROLLER'S INFORMATION TABLE. FAILURE TO DO SO MAY RESULT IN SYSTEM THAT IS SLOW TO RESPOND, OR MAY FAIL TO RESPOND TO SOME DEVICES.



### **Dimmer Mounting:** TURN OFF POWER AT CIRCUIT BREAKER OR FUSE.



Installation may now be completed by tightening mounting screws into wall box. Attach wallplate.



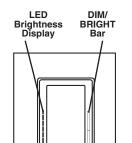
### **Restore Power:**

Restore power at circuit breaker or fuse. Installation is complete.

### **OPERATION**

NOTE: The locator light will illuminate when the load is in the OFF position to facilitate access in the dark.

NOTE: If using the dimmer in a 3-way application, the lights will turn ON at brightness set on dimmer's DIM/BRIGHT bar. The lighting can be controlled from either the dimmer or the remote location.



Locator

Push

Pad

### Push Pad (Default settings) Turn ON from OFF position:

Tap - Lights turn ON to preset level. Press and Hold – Lights turn ON to full bright

### Turn OFF from ON position: Tap - Lights turn OFF.

Press and Hold until lights DIM to lowest level and LED in LED Brightness Display starts to blink – Lights remain ON for 10 seconds and then turn OFF.

### **DIM/BRIGHT Bar**

BRIGHTEN: Press the upper half of the DIM/BRIGHT Bar – Lights brighten to desired level.

DIM: Press the lower half of the DIM/BRIGHT

Bar - Lights dim to desired level. If you continue to hold, the lights will DIM to minimum level and then turn OFF.

NOTE: When lights are OFF you can change the light level that the lights will turn ON to using the DIM/BRIGHT Bar. If there is a power outage, when the power is restored, the lights will return to the last setting before the power interruption.

Air-Gap Switch: On the dimmer only, engage the air-gap switch by gently pulling the bottom of the push pad until it lifts completely out of the frame and a click is heard. Refer to figure. This will cut power to the fixture to replace the bulb. After servicing is complete, push the push pad back for normal operation.

Cleaning: Clean with a damp cloth. DO NOT use chemical cleaners.

> Gently lift bottom of push pad out

### **ADVANCED PROGRAMMING FEATURES**

Mode 1 - Set Minimum Brightness: Set the minimum brightness level that the lights can dim to prior to turning full OFF.

Mode 2 - Set Dim-Lock: Set the brightness level that the lights will turn on to regardless of the previous light level at which they were turned

Mode 3 - Set Fade Rate: Set the amount of time (in seconds) that the lights will have to turn ON or OFF. Fade rates can be set to one of seven different settings.

Advanced Features Summary							
Mode	Description	Range	Default				
1	Set Min. Brightness	1 - 50 %	25 %				
2	Set Dim-Lock Level	0 - 100 %, 0 = no lock	0				
3	Select Fade Rate	1, 2, 3, 4, 5, 6 or 7	Preset #1				

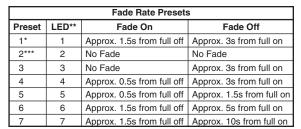
### To Program:

NOTE: Have a flashlight handy if this dimmer controls the only light source in the room.

- 1. On the dimmer only, engage the air-gap switch by gently pulling the bottom of the push pad until it lifts completely out of the frame and a click is heard. Refer to figure.
- 2. Press push pad back into frame and hold the push pad for 7 seconds until the locator light and the top LED (LED 1) start blinking.
- 3. Upon releasing the push pad, the locator light will continue to blink
- once per second indicating the dimmer is in Mode 1, Set Minimum Brightness mode. To change the minimum Brightness level from 1-50%, use the DIM/BRIGHT Bar. This setting will automatically be
- 4. Tap the push pad to change to Mode 2, Set Dim-Lock Level mode. The locator LED will blink twice per second. To change the current Dim-Lock level from 0-100%, use the DIM/BRIGHT Bar. If this feature is not desired, press and hold the lower half of the DIM/BRIGHT Bar until no LED is lit. This setting will automatically be
- 5. Tap the push pad to change to Mode 3, Set Fade Rate mode. The locator LED will blink 3 times per second. To change the current Fade Rate, use the DIM/BRIGHT Bar to move the LED to the desired preset level. The setting will automatically be saved by tapping the push pad to exit programming mode.

The LED Brightness Display is separated into 7 segments. Each LED represents a preset level with LED 1 (Preset 1) located at the top and LED 7 (Preset 7) located at the bottom. Refer to chart for settings and

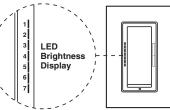
NOTE: The dimmer will exit program mode after 3 minutes of inactivity.



default

LED #1 is located at the top

The press and hold feature for the 10 second delayed off is disabled in this mode.



### **TROUBLESHOOTING**

- **Lights Flickering**
- Lamp has a bad connection.
- Wires not secured firmly with wire connectors of dimmer or terminal screws of remote
- Light does not turn ON and Locator LED does not turn ON
- Circuit breaker or fuse has tripped.
- Lamp is burned out.

network.

- Neutral not wired to Dimmer (White wire).
- Confirm that the device is being supplied from a 120V, 60 Hz AC
- Confirm that unit is programmed properly. Repeat "TO INSTALL" section to verify that it has been included in the Z-Wave™
- Intermittent dimmer operation
- Minimum load is under 40W.
- Confirm that the Load being controlled does not exceed the 600W dimmer limit.
- Remote does not operate lights
- Ensure that total wire length does not exceed 300 ft.
- Ensure wiring is correct.

For additional information, contact Leviton's Techline at 1-800-824-3005 or visit Leviton's website at www.leviton.com

> U.S. & Foreign Patents Pending Copyright@ 2006 Leviton Manufacturing Co., Inc. All Rights Including Trade Dress Rights Reserved

### FCC COMPLIANCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

· Reorient or relocate the receiving Antenna.

- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/tv technician for help.

**LIMITED 5 YEAR WARRANTY AND EXCLUSIONS** 

Leviton warrants to the original consumer purchaser and not for the benefit of anvone else that this product at the time of its sale by Leviton is free of defects by repair or replacement, at its option, if within such five year period the product is returned prepaid, with proof of purchase date, and a description of the problem to Leviton Manufacturing Co., Inc., Att: Quality Assurance Department, 59-25 Little Neck, New York 11362-2591. This warranty is void if this product is installed improperly or in an improper environment, overloaded, misused opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. There are no other or implied warranty is required by the applicable jurisdiction, the duration of any such implied warranty, including merchantability and fitness for a particular purpose, is limited to five years. Leviton is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, lost sales or profits or delay or failure to perform this warranty obligation. The remedies provided herein are the exclusive remedies under this warranty, whether based on contract, tort or otherwise.

# LEVITON INSTRUCTION SHEET/MANUAL SPECIFICATIONS

•	Artwork	No/Rev	Level:	DI-000-RZM10-00A-X2

• Color(s): Black over\_

.

3.

• Font Families: Helvetica

Material

Type: 40 Lb. offset

Coating: □ \_

• Paper size:

Overall size: 16.5" X 9.0"

Final fold size: 2.75" X 3.0"

## **DOCUMENTATION**

•ECO No.: N/A

• Artist: <u>H2D</u> Date: <u>3/14/06</u>

The information in this document is the exclusive PROPRIETARY property of LEVITON MANUFACTURING COMPANY, INC. It is disclosed with the understanding that acceptance or review by the recipient constitutes an undertaking by the recipient. (1) to hold this information in strict confidence, and (2) not to disclose, duplicate, copy, modify, or use the information for any purpose other than that for which disclosed.

Copyright © 1997 Leviton Mfg. Co. Inc. Unpublished, All Rights Reserved

