vizia rf +™



Single Pole (One location) or 3-Way (Multi-location) Scene Capable Magnetic Low Voltage Dimmer

Cat. No. VRM10-1L. 1000VA (Lighted)

120VAC, 60Hz

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 operated appliance. 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 +TM dimmers are not compatible with standard 3-way or 4-way switches. They must be used with compatible Vizia +TM or Vizia RF +TM controllers for multi-location dimming.

INTRODUCTION

Leviton's Vizia RF +[™] components are designed to communicate with each other via Radio Frequency (RF) to provide remote control of your lighting. Using RF technology allows Leviton to provide the greatest signal integrity possible. Each module in Leviton's Vizia RF +[™] component line is a Z-Wave[®] enabled device. In a Z-Wave® network, each device is designed to act as a router. These routers will re-transmit the RF signal from one device to another until the intended device is reached. This ensures that the signal is received by its intended device by routing the signal around obstacles and radio dead spots. The Scene Capable Magnetic Low Voltage Dimmer is compatible with any Z-Wave® enabled network, regardless of the manufacturer and can also be used with other devices displaying the Z-Wave® logo.

CAUTION:

Remember to exercise good common sense when using the Timer features of your remote, especially when scheduling unattended devices. There can be some unexpected consequences if not used with care. For example, an empty coffee pot can be remotely turned on. If that should happen, your coffee pot could be damaged from overheating. If an electric heater is turned on by remote control while clothing is draped over it, a fire could result. DO NOT USE the remote for the control of high power heating appliances such as portable heaters. This device will not control lighting that is used with electronic low-voltage and high frequency power supply transformers, nor high pressure discharge lamps (HID lighting). This includes mercury-vapor, sodium vapor and metal halide lamps.

FEATURES

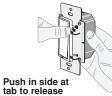
- Soft fade ON/OFF
- Scene capable
- ON/OFF LED and Brightness level LED
- Two way communication
- RF reliability
- Ease of installation No new wiring
- Compatible with other Z-Wave® enabled devices

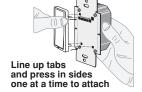
Tools needed to install your Dimmer:

Slotted/Phillips Screwdriver	Electrical Tape
Pencil	Cutters

Changing the color of your Dimmer:

Your device may include color options. To change color of the face proceed as follows:





Pliers

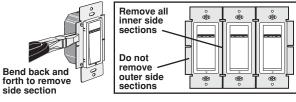
Ruler

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 multi-device application, proceed as follows:



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



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
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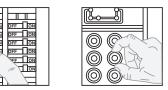
Rating	Single	Two Gang	More than 2 Gang
1000VA	800W	640W	520W

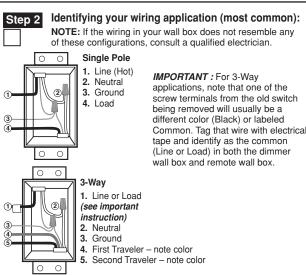
INSTALLING YOUR DIMMER

OFF ON

NOTE: Use check boxes \checkmark when Steps are completed.







Preparing and connecting wires: Step 3

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:

5/8" Strip Gage (1.6 cm) Cut wire here) (if necessary)

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.

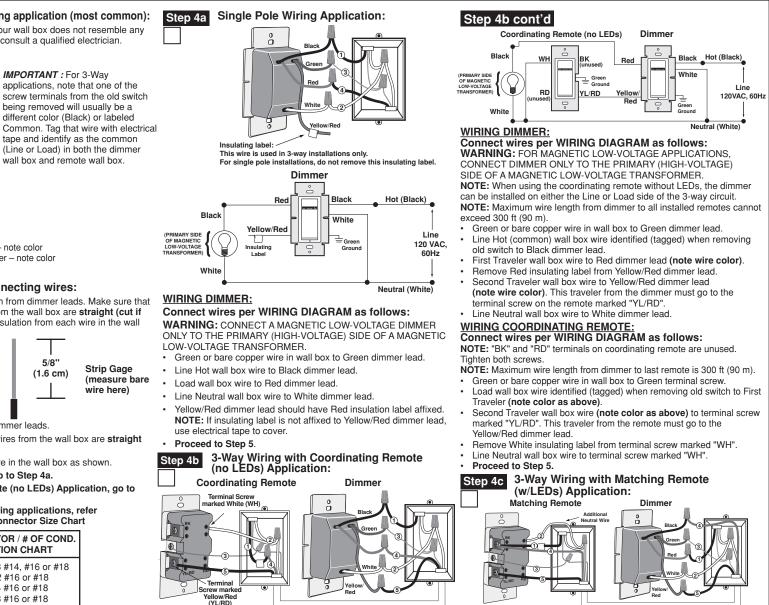
 For 3-Way Coordinating Remote (no LEDs) Application, go to Step 4b.

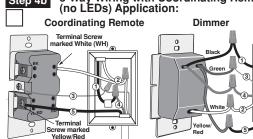
For non-standard wiring applications, refer to Wire Nut and Connector Size Chart

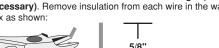
> WIRE CONNECTOR / # OF COND. COMBINATION CHART 1 - #12 w/ 1 to 3 #14, #16 or #18 2 - #12 w/ 1 or 2 #16 or #18 1 - #14 w/ 1 to 4 #16 or #18 2 - #14 w/ 1 to 3 #16 or #18

WARNINGS AND CAUTIONS.

- Use only one (1) Vizia RF +™ Magnetic Low Voltage Dimmer in a multi-location circuit with up to 9 coordinating remotes (without LEDs) or up to 4 matching remotes (with LEDs). The remote(s) will turn the load on ("at the level selected" for dimmers only) at the control.
- 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.



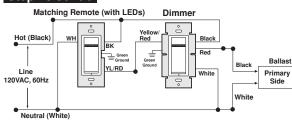






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Step 4c cont'd



NOTE: The dimmer **must** be installed in a wall box that has a Load connection. The matching remote must be installed in a wall box with a Line Hot connection and a Neutral connection. A Neutral wire to the matching remote needs to be added as shown.

If you are unsure about any part of these instructions, consult a qualified electrician.

NOTE: Maximum wire length from dimmer to all installed remotes cannot exceed 300 ft (90 m).

WIRING MATCHING REMOTE (wall box with line hot connection):

Connect wires per WIRING DIAGRAM as follows:

- Green or bare copper wire in wall box to Green terminal screw. Line Hot (common) wall box wire identified (tagged) when removing old switch and First Traveler to Remote terminal marked BK.
- Second Traveler wall box wire from dimmer to remote terminal screw marked "YL/RD" (note wire color). This traveler from the remote must go to Yellow/Red dimmer lead.
- Line Neutral wall box to remote terminal screw marked "WH". WIRING DIMMER (wall box with load connection):

Connect wires per WIRING DIAGRAM as follows: Green or bare copper wire in wall box to Green dimmer lead.

- Load wall box wire identified (tagged) when removing old switch to Red dimmer lead.
- First Traveler Line Hot to Black dimmer lead.
- Remove Red insulating label from Yellow/Red dimmer lead.
- Second Traveler wall box wire (note color as above) to Yellow/Red dimmer lead. 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.
- Proceed to Step 5.

Testing your Dimmer prior to mounting in Step 5 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

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

- Restore power at circuit breaker or fuse.
- Press pad until locator light is OFF. Lights should turn ON. If lights do not turn ON, press the right half of the DIM/BRIGHT Bar until the lights brighten

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



TURN OFF POWER AT CIRCUIT BREAKER OR FUSE.

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



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

Step 8 Including Scene Capable Magnetic Low Voltage Dimmer into Z-Wave® Network:

NOTES:

- If using a non-Leviton Programmer/Controller, refer to the Programmer/Controller instruction sheet for Including a device. If using VRCPG's install checklist go directly to step B.
- A) If using a Leviton Z-Wave® Programmer/Controlle Programmer/Controller, Cat. No. VRCPG, Cat. No. VRCPG press the Menu button and scroll down to System

Setup. Press the center button to select System Setup Menu. Choose Advanced Setting. Press the center button to select Network. Menu Button

- B) While standing close to the Center Button dimmer (approximately 1 foot), 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. 2 ON OFF **C)** While the Programmer/Controller is in the Inclusion 3 ON OFF
 - mode and the Locator LED is ON on the dimmer. 4 on off 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 push pad. **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 edit the device name 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 Programmer/Controller had received and ignore the second.

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

Step 9 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® Programmer/Controller, Cat. No. VRCPG press the Menu button and scroll down to System Setup. Press the center button to select System Setup Menu. Choose Advanced
- Setting. Press the center button to select Network. While standing close to the dimmer (approximately 1 foot), press the
- center button to <Exclude> device from the network. While the Programmer/Controller is in the Exclusion mode and the C)
- 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 vou 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 turns Amber and then turns 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 DIM/BRIGHT Bar (^) for 5 seconds until the Locator LED and leftmost 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. LED Brightness

Display

Bar

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OPERATION

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1 on off

Cat. No. VRCPG

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-wayapplication, 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.

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.

DIM/BRIGHT Bar BRIGHTEN

Press the right half of the DIM/BRIGHT Bar - Lights Push brighten to desired level. Pad

DIM:

Press the left half of the DIM/BRIGHT Bar - Lights dim to desired level. If you continue to hold, the lights will DIM to Gently press top of minimum level and then turn OFF. push pad

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 airgap switch by gently pressing the top of the push pad until the bottom lifts completely out of the frame and a click is heard (refer to Figure). LED's will turn OFF. This will stop power to the fixture to replace the bulb. After servicing is complete, press the push pad back into place for normal operation.

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

ADVANCED PROGRAMMING FEATURES

Definition of A Modes

- A-1) Energy Save: Sets the maximum brightness level for energy savings.
- A-2) Minimum Brightness Level: Sets the minimum dimming level.
- A-3) Preset ON Level: Sets the turn on brightness level regardless of the previous set light level (formerly Dim Lock).

Definition of B Modes

- B-1) ON Fade Rate: Sets the amount of time in seconds it takes the lights to turn ON to maximum brightness.
- B-2) OFF Fade Rate: Sets the amount of time in seconds it takes the lights to turn OFF from maximum brightness.
- B-3) LED Options: Sets the time period in seconds the Locator LED and Brightness display will stay on before extinguishing.

Definition of LEDs

Leftmost LED = LED 1 Rightmost LED = LED 7 NOTES:

- The device will exit programming mode after 3 minutes of inactivity.
- Pressing the push pad at any time during programming will advance the device to the next programming mode.

Program Mode A

To enter Program Mode A:

Press and hold the Push Pad and then the *right* half of the LED (LED 1) begin to blink.

A-1) Upon releasing the Push Pad and the right half of the DIM/BRIGHT Bar (^), the Locator LED will continue to blink once per second and the rightmost LED will illuminate to display the device is in Program Mode A-1. Energy Save. The default energy save mode is 100% i.e. full bright. To change the Energy Save level, use the DIM/BRIGHT DIM/BRIGHT Bar to move the corresponding LED to the desired discrete preset level according to Chart A. By tapping the Push Pad this setting will automatically be saved and the device will advance to the next programming mode, A-2.

Chart A

LED	MAX. BRIGHTNESS	ENERGY SA
LED 1	75%	34% savir
LED 2	80%	29% savir
LED 3	85%	24% savir
LED 4	90%	16% savir
LED 5	95%	8% savin
LED 6	97%	5% savin
LED 7 (Default)	100% (Full Bright)	0% savin
	LED 1 LED 2 LED 3 LED 4 LED 5 LED 6	LED 1 75% LED 2 80% LED 3 85% LED 4 90% LED 5 95% LED 6 97%

is in Program Mode A-2. Minimum Brightness Level. The default Minimum Brightness Level is LED 2. To change the Minimum Brightness Level from 1-50%, use the DIM/BRIGHT Bar. The light output will reflect the minimum brightness level selected. By tapping the Push Pad this setting will automatically be saved and the device will advance to the next programming mode, A-3. A-3) The Locator LED will blink 3 times per second to indicate Program Mode A-3, Preset ON Level. To change the current Preset ON Level from 1-100%, use the DIM/BRIGHT Bar. If this feature is not desired, press and hold the *left* half of the DIM/BRIGHT Bar (V) until no LED is lit (default setting). By tapping the Push Pad this setting will automatically be saved and the device will exit Programming Mode A.

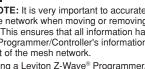
Program Mode B To enter Program Mode B:

Press and hold the Push Pad and then the left half of the DIM/BRIGHT Bar (V) for 5 seconds until the Locator LED and rightmost LED (LED 7) begin to blink.

- B-1) Upon releasing the Push Pad and the left half of the DIM/BRIGHT Bar (\mathbf{v}), the Locator LED will continue to blink once per second indicating the dimmer is in Program Mode B-1, ON Fade Rate. To change the ON Fade Rate, use the DIM/BRIGHT Bar to move the LED to the desired preset level according to Chart B. By tapping the Push Pad this setting will automatically be saved and the device will advance to the next programming mode, B-2.
- B-2) The Locator LED will blink 2 times per second to indicate Program Mode B-2, OFF Fade Rate. To change the OFF Fade Rate, use the DIM/BRIGHT Bar to move the LED to the desired preset level according to Chart B. By tapping the Push Pad this setting will automatically be saved and the device will advance to the next programming mode, B-3.

LIMITED 5 YEAR WARRANTY AND EXCLUSIONS

Leviton warrants to the oricinal consumer purchaser and not for the benefit of anvone else that this product as the time of its sale by Leviton's only obligation is to correct such defects by repair or replacement, at its option, if within such five years 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 or reinstallation. This warranty is void if this product or reinstallation. This warranty is void if this product or reinstallation. This warranty is void if this product or reinstallation. This warranty is void if this product or reinstallation. 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 is required by the applicable jurisdiction. 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.



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A-2) The Locator LED will blink 2 times per second to indicate the device

Chart B		
LED	FADE ON	FADE OFF
LED 1	0 seconds (instant)	0 seconds (instant)
LED 2 (Default)	0.5 seconds	0.5 seconds
LED 3	1.5 seconds	1.5 seconds
LED 4	3.0 seconds	3.0 seconds
LED 5	6.0 seconds	6.0 seconds
LED 6	10 seconds	10 seconds
LED 7	25 seconds	25 seconds

B-3) The Locator LED will blink 3 times per second to indicate Program Mode B-3, LED Options. To change the LED Options settings, use the DIM/BRIGHT Bar to move the LED to the desired preset setting according to the Chart B-3. By tapping the Push Pad this setting will automatically be saved and the device will exit Programming Mode B.

Chart B-3

LED	LOCATOR LED TIMEOUT	LED BRIGHTNESS DISPLAY OPTIONS
LED 1	Active	Active
LED 2	Active	Turns off 5 sec. after use
LED 3	Turns off 5 sec. after use	Active
LED 4	Turns off 5 sec. after use	Turns off 5 sec. after use
LED 5	Active	LED Bar active
LED 6	Active	LED Bar turns off 5 sec. after use
LED 7	Turns off 5 sec. after use	LED Bar turns off 5 sec. after use

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.
- Neutral not wired to Dimmer (White wire).
- Confirm that the device is being supplied from a 120V, 60 Hz AC source ONLY
- Confirm that unit is programmed properly. Repeat "TO INSTALL" section to verify that it has been included in the Z-Wave® network.

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.ViziaRF+.com

Protected under U.S. Patent Number 6,388,399 and patents pending and licensed under U.S. Patents Numbers 5,905,442, and 5,982,103

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.

FOLD SCHEME 16.5"

SPECIFICATIONS • Artwork No/Rev Level: DI-000-VRM10-02A-X0 • Color(s): <u>1</u> over <u>1</u> 1. <u>Black</u> 2. 3._____ 4. _____ Font Families: <u>Helvetica</u> Material Type: 40 Lb. offset Coating: • Paper size: Overall size: <u>16.5" X 9.0"</u> Final fold size: 2.75" X 3.0" DOCUMENTATION

LEVITON INSTRUCTION SHEET/MANUAL

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• Artist: HSZ

Date: 02/12/08

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