Home Automation Systems

Systèmes domotiques

Private
Locally Managed
Secure

Privé
Géré localement
Sécurisé

VirageDimmer

Installation and Setup Manual
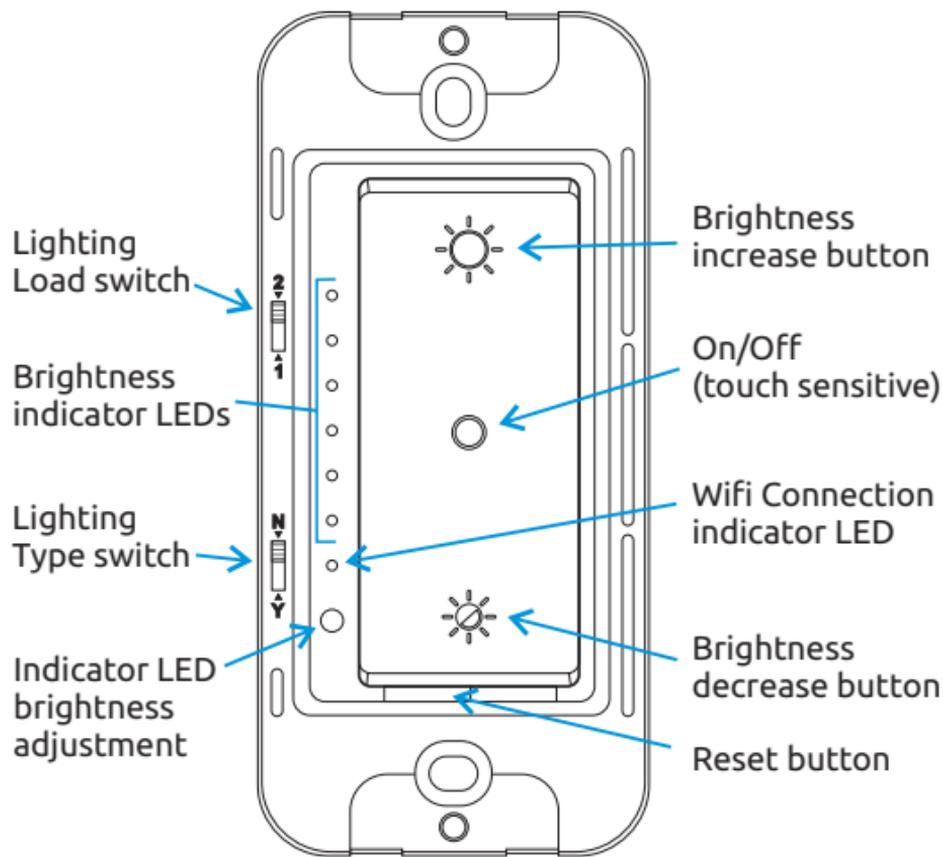
Model KS-7012 FW v3.2 HW2

virage laboratories inc.

⚠ WARNING - ATTENTION

Risk of electric shock or fire if installed improperly.
If you are unsure how to safely install this device
please consult a licensed electrician.

Before you install, some things to check:

1. This device requires a neutral (white) wire to function.
2. Ensure your lighting is able to be dimmed. All
   incandescent lighting can be dimmed, some LED lights
   can be dimmed. Most CFL lights cannot be dimmed.
3. This device replaces a single-pole switch only. It cannot
   be used with standard 3-way switch wiring. To create
   a virtual 3-way switch, please consult our online FAQ.
4. The total wattage controlled by this device cannot
   exceed 500 watts (incandescent) or 150 watts (LED).
5. A 2.4 GHz 802.11b/g wireless network is required to
   connect the device. It is **not** compatible with 5 Ghz
   802.11 a wifi systems.
6. As with all wireless and wired networks, please ensure
   your wifi connection uses at least WPA2 PSK level
   wireless security, a strong wifi password, and ensure
   there is a firewall on your internet connection.
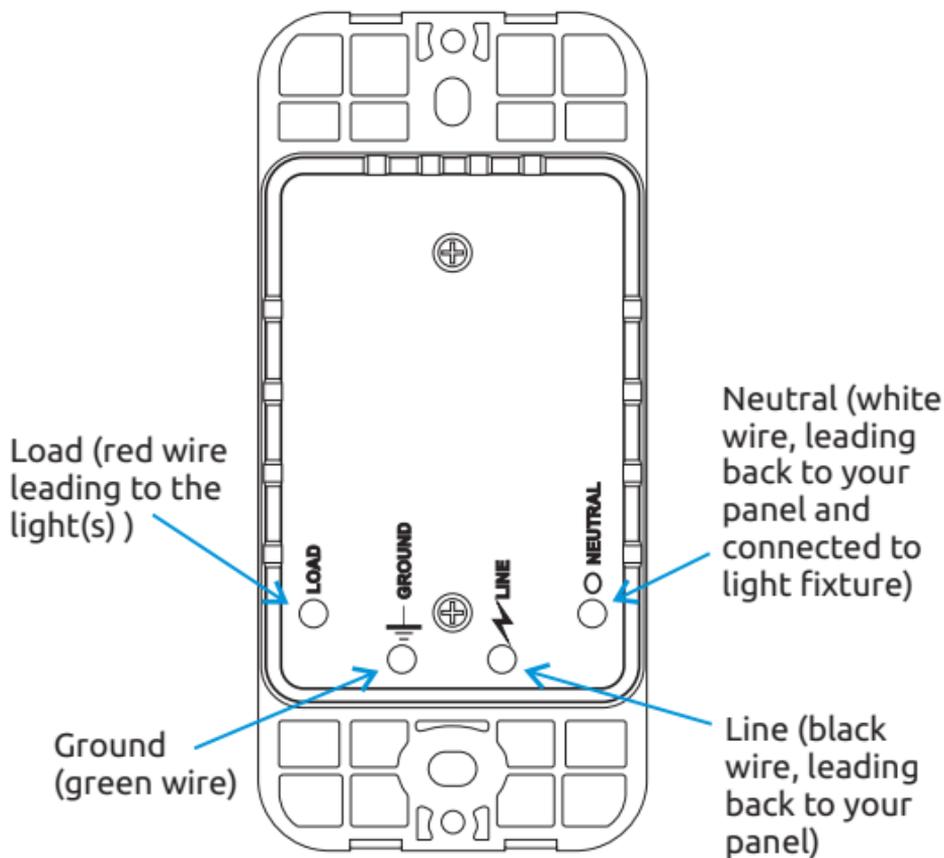
Get to know your new dimmer

Lighting Load switch

Brightness indicator LEDs

Lighting Type switch

Indicator LED brightness adjustment

Brightness increase button

On/Off (touch sensitive)

Wifi Connection indicator LED

Brightness decrease button

Reset button

LED	State	Meaning
WiFi Connection	Flashing Blue	Not connected to WiFi
	Solid Blue	Connected to WiFi
On / Off	Red	Light is on
	Green	Light is off
Brightness	1 - 6 LEDs lit	Degree of brightness

Wiring

(note that wires are attached to the device but have been omitted for clarity).

Wire colors may vary with the age of your home and who did the wiring. Please verify the function of each wire before connecting the device and energizing the circuit.

Load (red wire leading to the light(s))

Neutral (white wire, leading back to your panel and connected to light fixture)

Ground (green wire)

Line (black wire, leading back to your panel)

Installation

It is recommended that installation be completed by a licensed electrician.

1. Locate and turn off the circuit breaker for the light you want to control with the dimmer.

2. Check that the wires in the device box where you are installing the dimmer are de-energized. Note: some wires may be connected to different circuit breakers.

3. Identify the wires in the device box leading to the dimmer you want to replace (see diagram).

To Light ↑

NEUTRAL GROUND LOAD

LINE

From Panel ↑
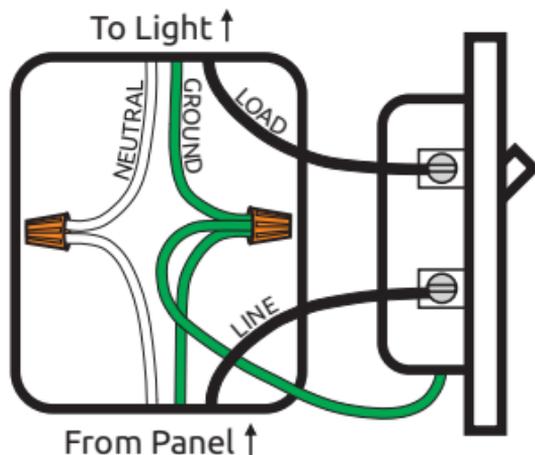
Typical wiring - note that not all wiring will look like this. Ground wires are often bare copper, but are shown as green here for clarity.

Installation Continued

It is recommended that installation be completed by a licensed electrician.

4. Disconnect the wires from the existing dimmer, making sure to remember which wire is which (labeling the wires with tape before disconnecting them can be useful).

5. Using the existing and/or supplied wire nuts, connect the wires of your new dimmer as appropriate to your wiring configuration (see diagram).

To Light ↑

From Panel ↑
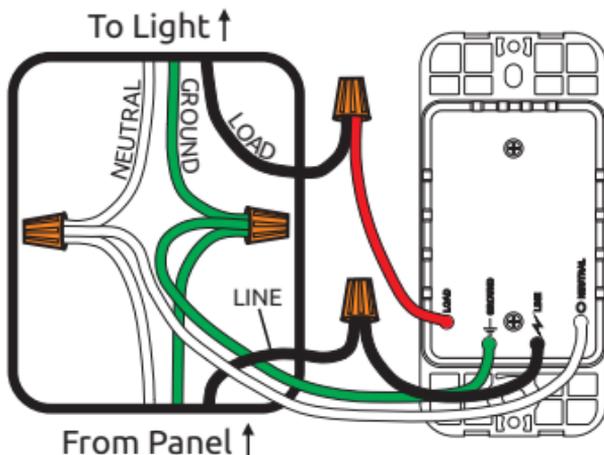
Typical wiring - note that not all wiring will look like this.

6. Bend the wires into the device box, taking care to not loosen the wire nuts. Push the dimmer into the box and attach it using the screws provided.

Installation Continued

It is recommended that installation be completed by a licensed electrician.

7. Based on the type of light(s) you will be using the dimmer to control, set the Lighting Load and Lighting Type switches accordingly, based on the table below:

Lighting Type		Lighting Load	
Switch Setting	Light Type	Switch Setting	Details
Y*	Bulb is dimmable	1*	Minimum brightness Low
		2	Minimum brightness High
N	Non-dimmable bulb (dimmer function disabled)	1*	N/A
		2	N/A

* Factory default setting.

8. Turn the breaker back on and check that the WiFi Connection LED on the dimmer is flashing blue.

Installation Continued

9. On your smart phone or computer, open the WiFi connection list. You should see a connection called ViragDimmer_XXXXXXXX (the Xs are the unique ID of your dimmer). Connect to this access point. If you receive a warning that the connection has no internet access, please ignore it as this is normal.

10. Once you have connected to the ViragDimmer access point, your web browser should automatically open the device configuration page. If this does not happen, please navigate to http://192.168.4.1 (**not** https://). You will be prompted to enter a username and password. The default is:

    username: admin
    password: admin

    It is recommended you change the password during the configuration process.

11. You should now see the Network Settings page for your dimmer. Click *Scan for wifi networks* to see available WiFi connections and select the WiFi connection you normally use. Enter the corresponding WiFi password in the space provided (check the box to use plain text entry).

12. Change the Web Admin password (check the box to enable plain text entry).

Installation Continued

13. If you will be using a hub to control your dimmer, ensure that the Hub Address is correct and that the Hub Support and mDNS checkboxes are enabled.

14. If you are configuring multiple dimmers at the same time, click *Identify Device*, and the dimmer will turn on and off five times allowing you to easily locate it.

15. Give your dimmer a unique Device Name.

16. Click *Save*. The dimmer will restart and connect to your WiFi network. The WiFi Connection will be lit solid green once connected.

17. The built-in web page of your dimmer should now be accessible at: http://device_name.local (spaces in the Device Name are replaced with underscores (_) and capital letters changed to lower case).

18. Configure your home automation hub to connect to the dimmer using MQTT (your hub provider should offer instructions, or refer to the Virage website).

19. You can modify the MQTT settings on your dimmer from the Configuration menu on the web interface. The default MQTT username and password are:

    username: mqttuser
    password: mqttpass

Using your VirageDimmer

The dimmer can be controlled using the physical buttons on the dimmer, or remotely using either it's built-in web interface or one of several home automation hubs.

Direct Control

Using the buttons on the dimmer, press the touch switch in the center of the rocker to turn the light(s) on and off.

Push the top of the rocker to make the lights brighter, the bottom to make them dimmer.

Press the LED brightness adjustment button while the light is off to change the brightness of the LEDs on the dimmer face.

Remote Control

Using a web browser, navigate to the URL for your dimmer (see Step 17). Click *Toggle* to turn the light(s) on or off, and slide the slider left or right to change the brightness.

If you are using a home automation hub, please follow the instructions from the hub provider for information on how to control your dimmer from the hub. You may also refer to the Virage website for information on setting up Virage products with selected home automation hubs.

Troubleshooting

Issue	Solution
No white (neutral) wire	Ask an electrician if a neutral wire can be installed, otherwise the device cannot be used in that location.
No ground wire	It is not recommended to operate any electrical device without proper grounding, however a ground wire is not necessary for operation.
WiFi Connection LED does not flash after installation or light does not work	Ensure there is power getting to the device. Double check that the correct breaker is turned on and that the wiring was connected correctly.
WiFi Connection LED continues to flash after configuration	Reconnect to the device access point (Step 9), repeat steps 10 through 16 and ensure the WiFi connection (SSId) and password are correct. Note that if the Device Name has been configured, the name of the WiFi connection will change to device_name.
Lights flicker or do not dim properly	See the configuration table in Step 7. If you cannot resolve the issue, try a different model or brand of light or bulb. Not all lights function properly with dimmers, regardless of whether they claim to be dimmable.
Device is connected to WiFi, but http://device_name.local URL is not accessible	Check that multicast, mDNS or similar options are enabled on your network. Not all routers and/or access points support LAN name resolution. Look in the DHCP table on your router to identify the IP address assigned to your device and connect to it at http://ip_address (e.g. http://192.168.1.123) if name resolution fails.
Dimmer physical switch is not responding	Push the reset button, wait for the device to restart if this doesn't solve the issue, cycle the breaker once to reboot the device.
Lost web admin password	Perform a factory reset: first, turn the breaker off for 30 seconds, then turn on and off at ~5 second intervals for 6 cycles, leaving the breaker on for the 7th cycle. Repeat steps 9 - 16.
Lost Network Name, or to erase configuration and start over	Perform a factory reset as detailed above.

Specifications

Model: KS-7012 FW 3.2
Rated Voltage: 110 - 125V AC, 50-60 Hz
Rated Power Capacity: 500W Incandescent, 150W LED
Wireless Compatibility: IEEE 802.11 b/g/n
Wireless Frequency: 2.4 Ghz
FCC ID: 2AHRE-KS7011
Certifications: ETL 5010526 (conforms to UL 60730-1 & 1472,
                CSA E60730-1 & C22.2 No. 184.1)
Country of Origin: Hardware manufactured in China,
                    Firmware designed in Canada based on
                    open-source code.
Firmware License: The firmware on this product is licensed
                  under GPL v3.0. The source code may be
                  downloaded free of charge from:
                  https://www.viragelabs.com/source-code

Note: To reduce the risk of overheating and/or possible
      damage to this or other equipment, do not install
      this device to control a receptacle, a motor or
      motor-operated appliance, or a transformer-supplied
      appliance.

FCC Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications could void the user's authority to operate the equipment.

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 receiver.
- Connect the equipment to 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.

To maintain compliance with the FCC RF exposure guidelines, this device should be installed and operated with a minimum separation distance of 20 cm (8 inches) between the equipment and a person's body.