

**INSTALLATION**

**English**

**WARNINGS AND CAUTIONS:**

- **TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER** at circuit breaker or fuse and test that power is off before wiring!
- 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 an electrician.
- This product is intended only for use indoors and in dry locations.

**NOTES:**

- For use with Leviton® LevNet RF™ 902 MHz products.
- It may be more convenient to link the transmitters to controllers prior to final installation.

**DESCRIPTION**

Use the Relay Controller to control full circuit loads with the 20A Relay Receiver in an incredibly small form factor. The controller may be linked to self-powered wireless switches, wireless sensors, and/or central controllers to facilitate energy savings and automation with no new wires.

**FEATURES**

- **Power consumption** - save 70% over other wireless technologies.
- **Long range** - with a 50-150' range, LevNet RF provides the longest reliable range in the industry.
- **Easy-to-use** - programs in seconds; run zero switch-leg or traveler wires.
- **Increased memory** - each unit stores up to 25 transmitter IDs; error checking ensures the receiver only responds to appropriate transmitters on all packet transfers.
- **Save energy** - teach the receiver to respond to a LevNet RF sensor or teach all lights to respond to a single master switch.
- **Control the way you want it** - control the receiver with a variety of devices - wireless self-powered switches, sensors and more.
- **Simple wireless controls** - single-pole, 3-way, and 4-way switches; architectural lighting control; motor control; and Manual-ON/OFF and Auto-OFF controls.
- **Built-in repeater** - repeats wireless signals received for extended range, flexibility and reliability.

**COMPATIBLE DEVICES:**

WSC12-M9N  
WSD20-9Dx  
WSS0S-x9x  
WSTLT-9Dx  
WSWDR-H9W

**EEPS:**

A5-38-08 - non timed commands only  
F6-02-01, F6-02-02, F6-03-01, F6-03-02, F6-04-01  
A5-07-01, A5-07-02, A5-07-03  
D5-00-01, A5-30-01  
A5-06-02, A5-06-03

SPECIFICATIONS	
Frequency	902 MHz
Range	50-150 feet (typical)
Power Input	100-277 VAC 50/60 Hz
Output	(1) 20A Latching Form A Relay w/Arc Suppression
Maximum Load	General Duty, Tungsten (Incand.), Fluorescent Ballast: 5A, Motor Load: 1 HP
Operating Temp	32° to +122°F (0° to +50°C)
Storage Temp	-4° to +176°F (-20° to +80°C)
Humidity	10-90% non-condensing

**EQUIPMENT NEEDED FOR INSTALLATION**

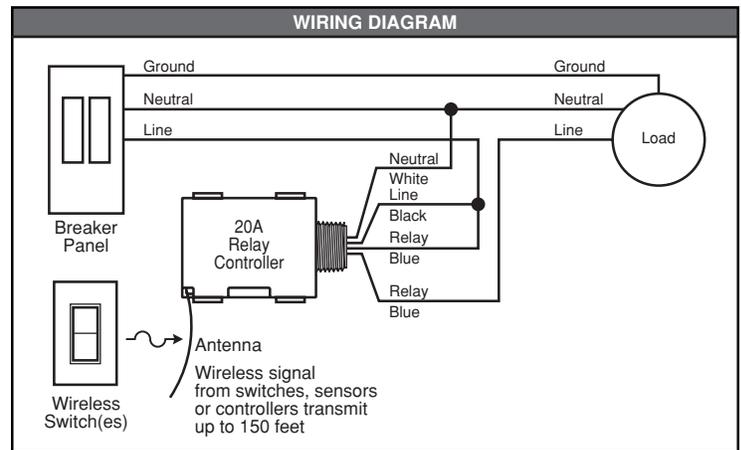
- Slotted/Phillips Screwdriver
- Wire Connectors
- Electrical Tape

**CHOOSE THE OPTIMAL MOUNTING LOCATION**

- The long term reliability and wireless performance of the Relay is strongly influenced by the mounting location. Choose a mounting location carefully. For best radio performance:
- Straighten antenna out and away from metal.
  - Create separation distance away from interfering electronics such as fluorescent tube ends, electronic transformers/power supplies, motors, etc.
  - Avoid mounting inside metal enclosures.
  - Obstructions of metal, concrete, and dense building materials will reduce the range. Mount higher and away from obstructions to maximize the range.
  - Installation above a hot fixture may result in overheating or melting. Confirm operating environment does not exceed temperature or humidity specs.
  - Site survey tools are available to help fine tune wireless communications.

**INSTALLATION**

1. **WARNING: TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER** at circuit breaker or fuse and test that power is off before wiring!
2. **PLAN** - Identify best mounting locations for receiver and transmitter. Perform range test to confirm operation prior to installation.
3. **CONNECT** - Make connections to the Controller following wiring diagram and local electrical codes. Restore power.
4. **TEST** - Press SELECT button to toggle output.
5. **LINK** Transmitters and Receivers following Linking Instructions below.



**LINKING INSTRUCTIONS**

The Controller must be powered on while linking. After linking, the Controller retains all settings in the event of power loss. Link up to 25 devices.

**SIMPLE LINKING**

Use Simple Link Mode for common applications:

1. **HOLD** the MENU button until the relay clicks (about 5 seconds), then release. The receiver will toggle a steady pattern indicating Simple Link Mode is active: — — — —
2. **TRANSMIT** the Link Signal by triple pressing the top button on switches or single pressing the Link (or teach) button on sensors. Relay pauses in ON position for 3 seconds when the link is created, then toggling resumes. Link additional transmitters (up to 25) as needed. (Relay pauses in OFF position for 3 seconds when the link is deleted.)
3. **WAIT** 30 seconds for Link Mode to exit automatically (toggling stops).

**SIMPLE LINK MODE OPERATING BEHAVIOR**

- **Manual Switch Control** (top button ON / bottom button OFF, hold to dim) : Link any switch.
- **Motion Sense Auto ON / Auto OFF**: Link only Occupancy sensors.
- **Manual Switch ON / Motion Sense Auto OFF**: Link both Occ Sensors & Switches.
- **Window/Door Sensor**: Closed ON / Open OFF.
- **Key Card Control**: Card in ON, Card out OFF.
- **Control Transmitter**: ON and OFF.
- **Master Dimming Control**: Link an Area Controller with 0-10V input as master.
- **Other Functionality**: See instructions on page 2.

**ADDITIONAL FUNCTIONS**

**TEST FUNCTION**

Press and release the SELECT button to toggle Relay ON and OFF.

**SENSOR LINK TEST MODE**

After linking, press the Link button on a sensor 6 times to activate the Link Test Mode. Subsequent presses from any linked sensor will cause the relay to toggle confirming the sensor is linked and testing the reliability of wireless communications. Link Test Mode will time out after 60 seconds of no activity.

**CLEAR ALL LINKS**

1. Activate Simple Link Mode by holding the MENU button until the Controller starts toggling.
2. Hold the SELECT button for 10 seconds to Clear All Links from the Controller.

**SELECTIVE LINK DELETION**

To remove one Link from Controller and leave others unaffected:

1. **HOLD** the MENU button to activate Link Mode. The toggling output confirms Link Mode is active.
2. **TRANSMIT** the Link Signal by triple pressing the top button on switches or single pressing the Link (or teach) button on sensors. Relay pauses in OFF position for 3 seconds when the link is deleted, then toggling resumes.
3. **WAIT** 30 seconds for Link Mode to exit automatically (toggling stops).

**REPEATER MODE**

Repeater function is DISABLED by default and may be enabled on specific controllers to extend the range by retransmitting all packets 1 or 2 times. Repeater mode may be changed using Advanced Setup instructions.  
Transmit - - -> Repeater 1x - - -> Repeater 2x - - -> Receive

## ADVANCED SETUP

Advanced Setup uses the Status LED to navigate a hierarchy of menus with blink patterns in one of 3 colors: Amber, Green, and Red. The relay output does not toggle while using Advanced Setup. Navigation overview:

1. **Hold MENU button 15 seconds** until Status LED blinks Amber pattern.
2. **Press SELECT button** to cycle through blink count options.
3. **Press MENU button** to enter/save menu item.
4. **Hold MENU for 5 seconds** to exit menu level.

### 1 - ACTIVATE ADVANCED SETUP

- A. **Press SELECT button** to cycle blink count and choose a Link Mode. Different devices may be linked in different modes.
- B. **Transmit Link Signal** with fast triple press of switch button or single press of Link button on sensors. Status LED will pause Green when link is added. If Link Signal is transmitted a second time, Status LED will pause Red indicating link is removed.
- C. **Optional - Press MENU button** to see Green blinks indicating number of devices linked in the active mode. Red blink means no devices linked. Hold MENU button 5 seconds to return to Amber Menu.
- D. **Wait 60 seconds** or hold MENU button for 5 seconds to return to Operating Mode.

### 2 - LINK MODE: AMBER MENU BLINKS 1-5

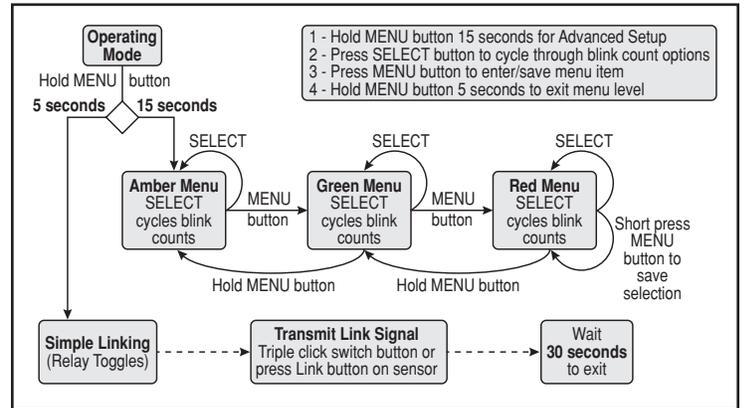
- A. **Press SELECT button** to cycle to Config (6 Amber blinks) options.
- B. **Press MENU button** to activate Green Menu.
- C. **Press SELECT button** to cycle through Green blink options.
- D. **Press MENU button** to activate Red Menu.
- E. **Press SELECT button** to cycle through Red blink options or hold SELECT button to adjust level if applicable.
- F. **Press MENU button** to save selection.
- G. **Hold MENU button for 5 seconds** to return to Green Menu.
- H. **Hold MENU button for 5 seconds** to return to Amber Menu.
- I. **Hold MENU button for 5 seconds** to exit to Operating Mode or power cycle or wait 60 seconds to exit.

Table 1 - Amber Menu

Amber Blink count	Options	Hold MENU button 15 seconds until Status LED blinks Amber pattern. Press SELECT button to cycle through Amber blink patterns. See Diagram.
1	Link Mode 1 Equal to Simple Link Mode	Switches: Rocker Mode (top button ON / bottom button OFF) triple press to link. Occ sensor: Manual ON / Auto OFF w/ switch linked, Auto ON/Auto OFF with no switch, 15 min default timeout. Window/Door Sensor: Closed ON / Open OFF. Control Transmitter: synchronize state. Central Command: synchronize state.
2	Link Mode 2	Switches: Momentary button, triple press to link. Keycard: In ON / Out OFF, triple insertion to link. Occ Sensor: Auto ON / Auto OFF, 15 min default timeout. Window/Door Sensor: HVAC Mode, 5 min Off Delay, 5 min Minimum Off Time
3	Link Mode 3	Switches: Toggle button, triple press to link. Occ Sensor: Auto ON / OFF, 5 min timeout.
4	Link Mode 4	Switches: Scene button (recall specific dim level, adjust level with SELECT button), triple press to link/save.
5	Clear Mode	Selective Clear: Triple press switch button or transmit Link Signal from sensor to selectively delete from all modes. Clear Links: Hold SELECT button for 5 seconds to clear all links. Clear All: Hold SELECT button for 15 seconds to restore factory defaults, solid red for 10 seconds confirms clear all success.
6	Config Options	See Table 2 "Config Options Green Menu."

Table 2 - Config Options Green Menu (6 Amber Blinks)

Green Blink count	Config Options	Activate 6 blink Amber Menu, Press MENU to enter. Press SELECT button to cycle through Green blink counts. See Diagram.
1	Auto-OFF timeout	1: Disabled (default), 2: 5 min, 3: 10 min, 4: 15 min (Occ default), 5: 20m, 6: 25m, 7: 30m, 8: 60m, 10: Other
2	Repeater	1: 1x repeating, 2: 2x repeating, 3: OFF (default).
3	Power up state	1: Auto (default), 2: State Memory, 3: Normally Closed, 4: Normally Open.
4	Status reporting	1: A5-38-08 (default), 2: A5-11-01, 3: disabled (when enabled transmits on change and every 2 +/-minutes by default).
5	Invert relay	1: Relay asserted Closed (default). 2: Relay asserted Open: inverted logic.
6	Load type	1: AC loads only (default): arc suppression enabled. 2: DC loads: arc suppression disabled.
7	Set Daylighting Threshold	Set the Daylighting Threshold between 10% and 90%. Hold SELECT button to adjust. LED blinks indicate Daylight Threshold setting: RED 1-9x.



CERTIFICATIONS: ETL: UL 60730 (U.S.), CSAC22.2#1405 (CANADA), UL 2043 (PLENUM)  
FCC: SZV-STM300U (UNITED STATES)

CE: IEC 60730, IEC6100045 (SURGE)  
IC: 5713A-STM300U (CANADA)

### FCC COMPLIANCE STATEMENT

Contains: SZV-STM300U

The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (i.) This device may not cause harmful interference
- (ii.) This device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by Leviton could void the user's authority to operate this 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 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.

### FOR CANADA ONLY

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at Leviton Manufacturing of Canada Ltd to the attention of the Quality Assurance Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9 or by telephone at 1 800 405-5320.

### IC COMPLIANCE STATEMENT

Contains: 5713A-STM300U

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

IMPORTANT! Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This Class B digital apparatus complies with Canadian ICES-003.

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### LIMITED 5 YEAR WARRANTY AND EXCLUSIONS

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal and proper use for five years from the purchase date. Leviton's only obligation is to correct such defects by repair or replacement, at its option. For details visit [www.leviton.com](http://www.leviton.com) or call 1-800-824-3005. This warranty excludes and there is disclaimed liability for labor for removal of this product or re-installation. 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 warranties of any kind, including merchantability and fitness for a particular purpose, but if any 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.