

INSTALLATION

WARNINGS AND CAUTIONS:

- TO BE INSTALLED AND/OR USED IN ACCORDANCE WITH APPROPRIATE ELECTRICAL CODES AND REGULATIONS.
- IF YOU ARE NOT SURE ABOUT ANY PART OF THESE INSTRUCTIONS, CONSULT AN ELECTRICIAN.
- DEPENDING ON CIRCUMSTANCES, IT MAY BE CONVENIENT TO PRE-PROGRAM THE RECEIVER PRIOR TO FINAL INSTALLATION
- RELAY RECEIVERS ARE INTENDED ONLY FOR USE INDOORS, IN DRY LOCATIONS, AND WITH PERMANENTLY INSTALLED FIXTURES.
- RELAY RECEIVERS SHOULD NOT BE INSTALLED IN A LOCATION WHERE THE UNIT WILL BE IN CLOSE PROXIMITY TO THE LIGHT BULB(S) OR OTHER SOURCES OF HEAT, SUCH AS ABOVE A CEILING HUGGER FIXTURE, PARTICULARLY WITH HIGHER WATTAGE LOADS. (SEE "OPERATING TEMPERATURE" ON SPECIFICATIONS TABLE).
- EXCEEDING THE VOLTAGE OR CURRENT RATINGS OF THE LVRX-4 / 8 WILL VOID THE WARRANTY AND MAY DAMAGE THE UNIT.
- FOR OPTIMAL RADIO PERFORMANCE DO NOT MOUNT OR PLACE RECEIVERS CLOSE TO THE FLOOR OR INSIDE A METAL HOUSING.

DESCRIPTION:

The Low Voltage Relay Receiver connects wireless light switches and sensors to new or existing control systems. The low voltage receiver responds to up to 80 different transmitters and provides 4 or 8 output channels (dry contact or 8-30V for relay and contactor applications). The outputs can be programmed as either momentary or maintained contacts.

COMPATIBLE DEVICES:

- Single Rocker Self-powered Wireless Light Switch
- Dual Rocker Self-powered Wireless Light Switch
- Dual Rocker Handheld Remote
- Key Card Access Switch
- More transmitters available

TOOLS NEEDED FOR INSTALLATION:

- Non-conductive probe (pencil or ballpoint pen)

TO INSTALL:

To install the Low Voltage Relay Receiver, select your application from the options below. Follow the instructions for that application. For transmitter installation instructions, see appropriate installation guide(s).

1. Read the **WARNINGS AND CAUTIONS** section before beginning these installation options. Read all steps for this option before taking any action to install receiver.
2. Connect the AC or DC power supply to the power terminals of the Low Voltage Relay Receiver. Polarity does not matter. DC positive can be connected to either terminal.
3. Connect the appropriate wire(s) to the desired Common terminal(s). C1 relates to Relay 1, C2 relates to Relay 2, etc.
4. Connect either Normally Open or Normally Closed for other wires.

NOTE: 8 Channel Low Voltage Relay Receiver only supports the Normally Open option.

PROGRAMMING:

The receiver must be powered when programming. After programming, settings are retained when power is disconnected. The receiver sensitivity is reduced when in Learn Mode to prevent unintentionally associating unwanted transmitters with the receiver. Transmitters should be within 15 feet (5 meters) of the receiver when programming. Program the receiver in any of the modes below.

Each Low Voltage Relay Receiver unit can be paired with up to 80 transmitters. Each of these associations can be with one or more of the relay channels.

Rocker Mode (default): In Rocker Mode the receiver responds only on a transmitter press and not on the release. For example, one side of the rocker on a wireless light switch will activate the relay (turn the light ON) when pressed and the opposite side of the same rocker will deactivate the relay (turn the light OFF) when pressed.

Momentary Mode: In Momentary Mode, each end of the rocker on a wireless light switch acts as a separate button. Each end of the rocker programs separately to 1 or more receivers. When a rocker is pressed the output on the receiver will activate (turning the electrical load ON). When the rocker is released the output will deactivate (turning the electrical load OFF).

Follow the instructions below for the desired programming mode:

Rocker Mode (default) Programming Instructions

1. Read all Rocker Mode programming steps before taking any action to program receiver.
2. Activate Rocker Learn Mode by pressing and holding the LRN button for 1 second (**See Figure A**). The LED for Channel 1 will begin turning ON and OFF in a slow pattern. The receiver is now in Rocker Learn Mode.
3. When associating a wireless light switch with the receiver, press one end of a switch rocker (**See Figure B**). The LED will stay ON for about 3 seconds indicating that the receiver has stored the transmitter's unique ID in its memory.
4. To associate a second transmitter with this receiver, wait until toggling of the LED resumes. Repeat the instructions in Step 3 and Step 4 until the unique IDs of all desired transmitters are stored in the memory of the receiver.
5. Briefly press the LRN button again to advance to Channel 2 then repeat Step 4. Repeat these steps for each Channel and appropriate receivers on the Relay Receiver.
6. To exit Learn Mode, press the LRN button again for about 2 seconds or just wait; the receiver automatically exits Program Mode after 30 seconds

Momentary Mode Programming Instructions

1. Read all Rocker Mode programming steps before taking any action to program receiver in Momentary Mode.
2. While the receiver is in Rocker Learn Mode, press the LRN button to cycle through each of the 4 or 8 channels and back to Channel 1 (**See Figure A**). The LED for Channel 1 will begin turning ON and OFF in a fast pattern. The receiver is now in Momentary Learn Mode.
3. Follow steps 3-6 of "**Rocker Mode Programming Instructions**."

Selective Deleting: Follow the Program Mode steps above to delete a transmitter from a receiver's memory. Upon pressing the LRN button on a transmitter (**See Rocker Mode Programming Instructions, Step 3**) which has previously been associated with the receiver, the LED for that Channel will stay OFF for about 3 seconds indicating that the receiver has removed the transmitter's unique ID.

Clear One Channel: Follow the Program Mode steps above to select the desired Channel. Press and hold the CLR button for about 2 seconds (**See Figure C**), the memory of only that channel will be deleted.

Clear All: If the CLR button is pressed and held for about 4 seconds (**See Figure C**), the entire memory of the receiver will be deleted. The receiver will instantly enter the default programming mode (Rocker Mode) indicated by the LED for channel 1 will begin turning ON and OFF.

| SPECIFICATIONS | | |
|-----------------------|--|-----------|
| | WSPAS-LV4 | WSPAS-LV8 |
| Range | 50-150 feet (typical) | |
| Frequency | 315 MHz | |
| Relay Output | 0-30 VAC or 0-30 VDC 2A | |
| Power Supply | 8-28 VAC or 8-30 VDC 250 mA | |
| Output Channels | 4 | 8 |
| Memory | Stores up to 80 switch IDs | |
| Dimensions | 5.12 x 3.21 x 1.1 inches (10.7 x 7.2 x 2.9 cm) | |
| Operating Temperature | -13° to +140°F (-25° to +60°C) | |
| Storage Temperature | -40° to +140°F (-40° to +60°C) | |
| Radio Certification | FCC (United States): SZV-TCM2XXC IC (Canada): 5713A-TCM2XXC | |

Figure A

Enter Learn Mode

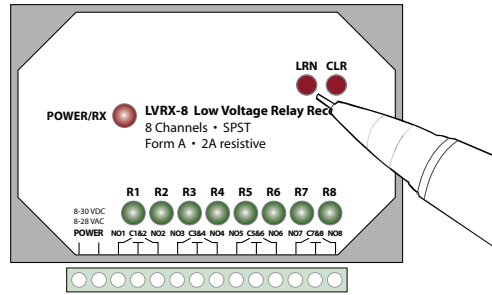


Figure B

Press Transmitter

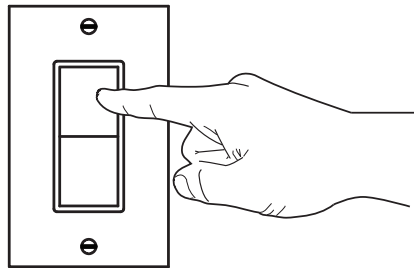


Figure C

Clear All

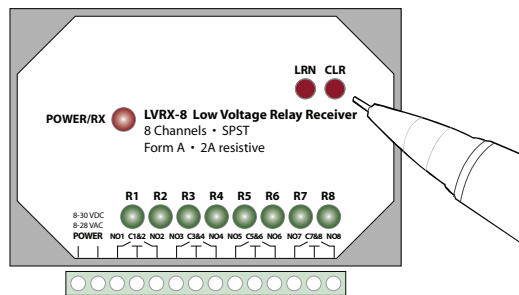
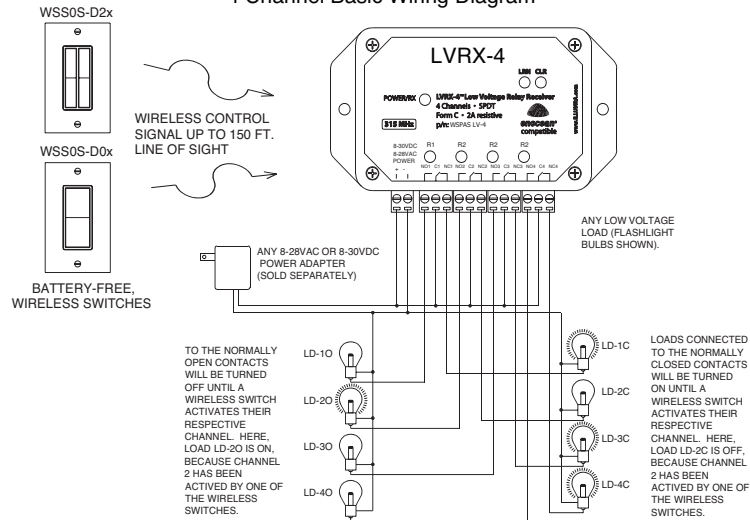


Figure D

4 Channel Basic Wiring Diagram

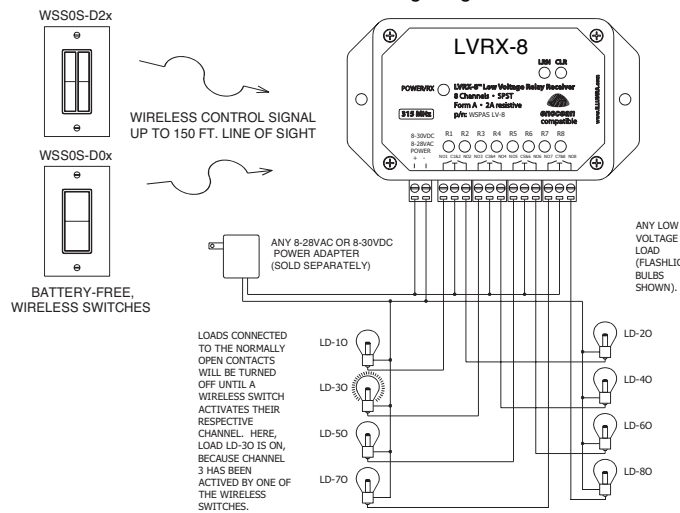


FORM-C RELAYS: THERE ARE FOUR RELAYS IN THE DEVICE. EACH RELAY HAS THREE TERMINALS AVAILABLE FOR EXTERNAL CONNECTIONS: COMMON, NORMALLY OPEN, AND NORMALLY CLOSED.

RELAY COMMON TERMINALS: EACH OF THE FOUR RELAYS HAS A COMMON TERMINAL. THE COMMON TERMINALS ARE NOT CONNECTED TO EACH OTHER INSIDE THE DEVICE. IN THE EXAMPLE SHOWN, THE COMMON TERMINALS ARE EXTERNALLY CONNECTED TO THE POSITIVE SUPPLY VOLTAGE. HOWEVER, THE COMMON TERMINALS CAN BE CONNECTED TO ANY VOLTAGE WITHIN THE SPECIFICATIONS OF THE RELAY TERMINALS. SEE DATASHEET.

Figure E

8 Channel Basic Wiring Diagram

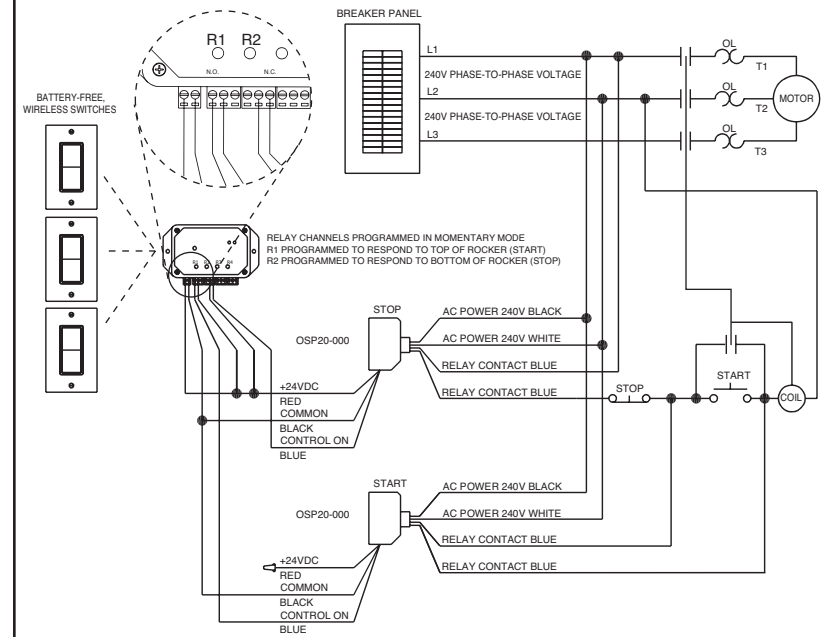


FORM-A RELAYS: THERE ARE EIGHT RELAYS IN THE DEVICE. EACH RELAY HAS TWO TERMINALS AVAILABLE FOR EXTERNAL CONNECTIONS: COMMON AND NORMALLY OPEN.

RELAY COMMON TERMINALS: EACH OF THE EIGHT RELAYS HAS A COMMON TERMINAL. THE COMMON TERMINALS OF FOUR PAIRS OF RELAYS ARE TIED TOGETHER, INTERNALLY, AS SHOWN ON THE WIRING TERMINAL LABEL. IN THE EXAMPLE SHOWN, THE COMMON TERMINALS ARE EXTERNALLY CONNECTED TO THE POSITIVE SUPPLY VOLTAGE. HOWEVER, THE COMMON TERMINALS CAN BE CONNECTED TO ANY VOLTAGE WITHIN THE SPECIFICATIONS OF THE RELAY TERMINALS. SEE DATASHEET.

Figure F

Wireless Control of Existing Motor Start Switch



MOTOR STARTS BY PRESSING START SWITCH OR BY PRESSING THE TOP HALF OF ROCKER ON ANY WIRELESS SWITCH. MOTOR STOPS BY PRESSING STOP SWITCH OR BY PRESSING THE BOTTOM HALF OF ROCKER ON ANY WIRELESS SWITCH.

CAUTION! IT IS POSSIBLE FOR WIRELESS LINK TO FAIL DUE TO INTERFERENCE OR OTHER REASONS. DO NOT RELY ON WIRELESS LINK FOR EMERGENCY START/STOP APPLICATIONS OR WHEN THE RISK OF PERSONAL INJURY, OR DEATH MAY RESULT DUE TO WIRELESS LINK FAILURE.

FCC COMPLIANCE STATEMENT: Contains FCC ID: SZV-TCM2XXC. Contains IC: 5713A-TCM2XXC. 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 and (ii.) this device must accept any interference received, including interference that may cause undesired operation.

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LIMITED 2 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 two years from the purchase date. Leviton's only obligation is to correct such defects by repair or replacement, at its option, if within such two year period the product is returned prepaid, with proof of purchase date, and a description of the problem to Leviton Manufacturing Co., Inc., Attn: Quality Assurance Department, 201 North Service Road, Melville, New York 11747. This warranty excludes and there is disclaimed liability for labor for removal of this product or reinstallation. 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 two 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.

For Technical Assistance Call: 1-800-824-3005 (U.S.A. Only) www.leviton.com