LEVNET RF SELF-POWERED WIRELESS SOLUTIONS

SELF-POWERED + RADIO FREQUENCY = TRUE WIRELESS

Energy harvesting LevNet RF transmitters operate indefinitely without external power or batteries. For a true zero-maintenance wireless device, the transmitter receives power from the motion of a switch actuation, light on a solar cell or temperature differentials in the environment. Transmitters communicate with LevNet RF receivers via radio frequency. Operating in the 315MHz band provides minimal competing traffic and greater transmission range than other wireless technologies.

GREEN SOLUTIONS

Energy Savings

- Lowest power consumption on wireless receivers at less than one Watt per device
- Place virtually anywhere and control any compatible wireless device within range
- Self-powered and self-charging, uses zero external power consumption to operate

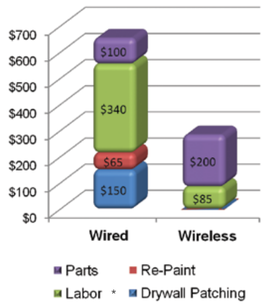
Material Savings

- Reduce materials and time spent on installation with no new wires to run
- Reduce monthly testing and maintenance costs with no batteries or external power required

* Leviton is part of the EnOcean Alliance. LevNet RF Solutions are compatible with other EnOcean Alliance wireless devices.

enocean alliance
No Wires. No Batteries. No Limits.

WIRED VS. WIRELESS COSTS



* Installation time per device: 45-50 minutes for hardwire vs. 10-15 minutes for wireless devices

PUTTING TOGETHER A LEVNET RF SYSTEM

Step 1: Determine what **LOADS** you want to control - lighting, HVAC, lamp, TV, etc.
Step 2: Pick the appropriate **RF RECEIVER** and/or **TRANSCEIVER**
Step 3: Pick the appropriate self-powered wireless **RF TRANSMITTER** (sensor or switch)
Step 4: **PAIR** the devices to communicate with each other

LevNET RF Self-Powered Wireless Solutions	
Frequency	315MHz
Range	50-150 feet
Listings	FCC Certified for Wireless Communication (U.S.), I.C. Certified (Canada)*
Warranty	Limited 5-year

*Excludes WSD02-020.
NAFTA and Made in USA models available - visit www.leviton.com/NAFTA or www.leviton.com/USA.

RECEIVERS AND TRANSCEIVERS

WALL SWITCH RECEIVERS

	BASIC WALL SWITCH RECEIVERS with Color Change Kit WSS10-0DZ | WSS10-GDZ Use for single loads and 3-way switching. Condensed pairing for WSC and WSSoS-P only.	ADVANCED WALL SWITCH RECEIVERS with Color Change Kit WSS10-0UZ | WSS10-GUZ Use for larger rooms with multiple loads. Advance pairing for rocker, momentary and toggle.
Input Voltage	120-230-277VAC	
Power Consumption	120V < 1/2 Watt; 277V < 3/4 Watt	
Memory	Stores up to 10 Transmitter IDs	
Button Pairing Modes	WSSoS-P, WSCxx	Rocker, Momentary and Toggle
Vacancy Confirmation	30 seconds	
Mode	Presentation	
Time Delay	2 min (test), 10, 20, 30 min	
Load Rating	**Incandescent:** 800W @ 120V, 2000W @ 277V **Fluorescent Ballasts:** 1200VA @ 120V, 2700VA @ 277V **Motor:** 1/4 HP Load @ 120V **For non-neutral models:** 25W minimum load required (reduce range by 15')	
Additional Listings	ETL/C-ETL: UL508, Title 24 Compliant	

All WSS10 models ship with a Color Change Kit which includes a White, Ivory and Light Almond faceplate.
Gray and Ebony faceplates available in quantities of 25.

RELAY RECEIVER MODULES

	3-WIRE RELAY RECEIVERS WSP05-010 | WST05-010 WSP05-020 | WST05-020 WSP05-080 | WST05-080	5-WIRE RELAY RECEIVERS WSP12-010 | WST12-010 WSP12-020 | WST12-020 WSP12-080 | WST12-080 WSP02-R10 | WST02-R10 Utilizes isolated relay
Memory	Stores up to 30 Transmitter IDs	
Power Supply Input	**WSx05-010:** 120VAC, 50/60Hz **WSx05-020:** 277VAC, 50/60Hz **WSx05-080:** 240VAC, 50/60Hz	**WSx12-010:** 120VAC, 50/60Hz **WSx12-020:** 277VAC, 50/60Hz **WSx12-080:** 240VAC, 50/60Hz **WSx02-R10:** 24VAC, 50/60Hz
Max Loads/Contact Ratings	**Tungsten/Incandescent:** **WSx05-010:** 500W **WSx05-020:** 1150W **WSx05-080:** 1000W **Fluorescent Ballast:** 3A **General Duty:** 6A **A300 Pilot Duty:** **WSx05-010:** 120VA **WSx05-020:** 277VA **WSx05-080:** 240VA	**Tungsten/Incandescent:** 1500W @ 120VAC / 500W @ 120VAC; 3000W @ 240VAC / 1000W @ 240VAC; 3400W @ 277VAC / 1100W @ 277VAC **Fluorescent Ballast:** 8A (N.O. Contacts); 2A (N.C. Contacts) **General Duty:** 16A (N.O. Contacts); 5A (N.C Contacts) **A300 Pilot Duty:** 72VA @ 24VAC, 360VA @ 120VAC, 720VA @ 240VAC, 830VA @ 277VAC **Motor Load:** 60 LRA, 10 FLA, 1/2HP @ 120VAC, 1HP @ 240VAC, 1HP @ 277VAC **Other Devices:** 16A
Output Channels	1 FORM A Relay	1 FORM C Relay COM, N.O., N.C.
Time Delay	15 min	
Additional Listings	ETL: UL244A and UL2043, C-ETL: CSAc22.2#14-05 **For WSx02-R10:** ETL: UL244A (pending), C-ETL: CSAc22.2#156 (pending)	

WSTxx models: include ¼" threaded nipple and external antenna
WST12 models: include repeater function

PLUG-IN RECEIVERS

	PLUG-IN DIMMER RECEIVER WSGoS-D1T Dimming control of devices	PLUG-IN ON/OFF RELAY RECEIVER WSGoS-S1T Relay (on/off) control of devices
Memory	Stores up to 30 unique Transmitter IDs	
Power Supply Input	120VAC, 60Hz	
Dimmer Output	120VAC, 300W max (resistive) incandescent or other dimmable loads only – no motor loads	-
Output Channels	1 dimming or ON/OFF output	-
Output Rating	-	**General:** 6A **Ballast:** 3A **Tungsten:** 500W **Motor:** no motor loads
Time Delay	15 min	
Additional Listings	ETL: UL244A (pending), C-ETL: CSAc22.2#156 (pending)	

ROOM CONTROLLERS AND RELAY RECEIVERS

	2, 3, AND 4-CHANNEL ROOM CONTROLLER WSoRC-200 WSoRC-300 WSoRC-400 Unified control of lights with power packs and low voltage sensors	2-CHANNEL SHADE CONTROLLER WSoRC-S00 Enables manual and automated control of window shades and blinds	4- AND 8-CHANNEL RELAY RECEIVER WSPAS-LV4 WSPAS-LV8 Connects wireless switches and sensors to new or existing industrial systems
Channels	**WSoRC-200:** 2-in/2-out **WSoRC-300:** 1-in/3-out **WSoRC-400:** 0-in/4-out	-	-
Output Channels	-	1 = up/down 2 = up/down	**WSPAS-LV4:** 4, Form C – N.O. and N.C. Dry Contacts **WSPAS-LV8**: 8, Form A – N.O. Dry Contacts
Power Supply Input	8-30VDC, 40mA	8-30VDC, 40mA	8-28VAC or 8-30VDC, 250mA max
Output Rating	0-30VDC, 130mA max	0-30VDC, 130mA max	2A @ 30VAC/VDC
Relay Driver	30VDC max, 100mA max	30VDC max, 100mA max	-
Repeater	Field configurable	-	-
Time Delay	15 min		

Power supply not included.

DIMMER MODULES

	RF CONSTANT VOLTAGE LED DIMMER WSD02-010	CONSTANT VOLTAGE LED DIMMER WSD02-020	0-10V RF DIMMER WITH ON/OFF CONTROL AND SENSOR INPUT WSD01-001
Memory	Stores up to 30 Transmitter IDs	-	Stores up to 30 Transmitter IDs
Power Supply Input Rating	8-28VDC, 40mA (not incl. load current)		12-28V, 40mA
Sensor Input Rating	0-28VDC, <1V is low, >3V is high		
Output Rating	Constant Voltage 0-28VDC, 5A max		4mA, 0-10V Output
Output Rating, Switched Output	-	-	5A DC, Isolated, 30VDC max
Input Channels	1 Motion Detector/Sensor Input; 1 Wired Control Switch		1 Motion Detector/ Sensor Input
Output Channels	1 Output PWM Dimming	1 Output 0-10V, 1 Switch Output	
Time Delay	15 minutes		

Power supply not included.

TRANSMITTERS

SENSORS

	OCCUPANCY SENSORS WSC04-IRW | WSC15-IRW WSC04-I0W	LIGHT SENSORS WSCPC-00W
Power Consumption	Zero	
Photocell	-	0-94.8FC (0-1020 LUX)
Transmission Interval	60 seconds (+/- 10 sec)	Upon >20FC (200 LUX) changes
Minimum Light Required	4FC (40 LUX)	
Minimum Charge Time to Begin Operation	1 minute @ 20FC (200 LUX)	
Maintain Charge Time	3 hours per 24 hours @ 20FC (200 LUX)	
Operating Life at Full Charge	48 hours	
Additional Listings	Title 24 Compliant	

REMOTE SWITCHES Controls virtually any on/off device

	REMOTE SINGLE PUSH ON/OFF DECORA™ SWITCH* WSSoS-Pox	SINGLE/DUAL ROCKER DECORA™ SWITCH* WSSoS-Dox WSSoS-D2x	HANDHELD 4-BUTTON REMOTE WSSoS-RoW	HOTEL KEY CARD SWITCH WSSoS-HoW	3 X 3 SINGLE/ DUAL ROCKER SWITCH WSSoS-E0W WSSoS-E0B WSSoS-E2W WSSoS-E2B
Buttons	1 Button	**WSSoS-D:** 2 Buttons (1 Rocker) **WSSoS-D2:** 4 Buttons (2 Rockers)	4 Buttons (2 Rockers)	-	**WSSoS-E:** 2 Buttons (1 Rocker) **WSSoS-E2:** 4 Buttons (2 Rockers)
Card Slot	-	-	-	1 (card IN, card OUT)	-
Output Channels	Only limited by number of Receivers in range				
Addressing	Factory set unique ID (1 of 4 billion)				

* Available in white (-W), Ivory (-I), Light Almond (-T), Gray (-G) and Ebony (-E).

	THERMOSTAT WSoTH -S00 Adjusts temperature based on "occupied" and "unoccupied" signals
Input Voltage	24VAC
Load Rating	1.5A/circuit
Temperature Monitor Range	32°F to 99.9°F (0°C to 37.7°C)
Temperature Set Point Range	60°F to 85°F (15.5°C to 29.5°C)
Sampling Rule	Every 5 seconds
Fan Control	Selectable: Auto Cycle, Low, Medium, High, Economy, Off
Time Delay	5 sec to 15 min
Memory	Stores up to 30 Switch IDs
Heat/Cool Control	1 Heat and 1 Cool circuit

SLT TRANSMITTERS

	SWITCH LEG TRANSMITTER WSSLT-010 | WSTLT-010 WSSLT-R10 Replaces wires between an electrical load and a switch with an RF control signal to control loads	4-CHANNEL SLT TRANSMITTER WSSLT-GPo Connects 4 GPIO signals from the HVAC controller to control lighting
Power Supply Input	**WSxLT-010:** 120VAC, 50/60Hz **WSSLT-R10:** 24VAC, 50/60Hz	8-28VDC, 40mA
Addressing	Factory set unique ID (1 of 4 billion)	
Additional Listings	ETL: UL244A, C-ETL: CSAc22.2#14-05	-

ACCESSORIES

	RS-232 SERIAL BOX DATA INTERFACE WSoRF-300 Connects to any system that uses an RS-232 serial port	SIGNAL STRENGTH METER WSMET-010 Verifies whether the installation of LevNet RF products are possible at the positions planned
Power Supply Input	8-28VAC or 8-30VDC	-
Current	25mA @ 12VDC, 15mA @ 24VDC	-
Power Supply	Not included	9VDC battery
Receiver Sensitivity	-	-95dBm
Channel Bandwidth	-	280kHz
RF Data Rate	-	120kbps

PRODUCT COMPATIBILITY MATRIX

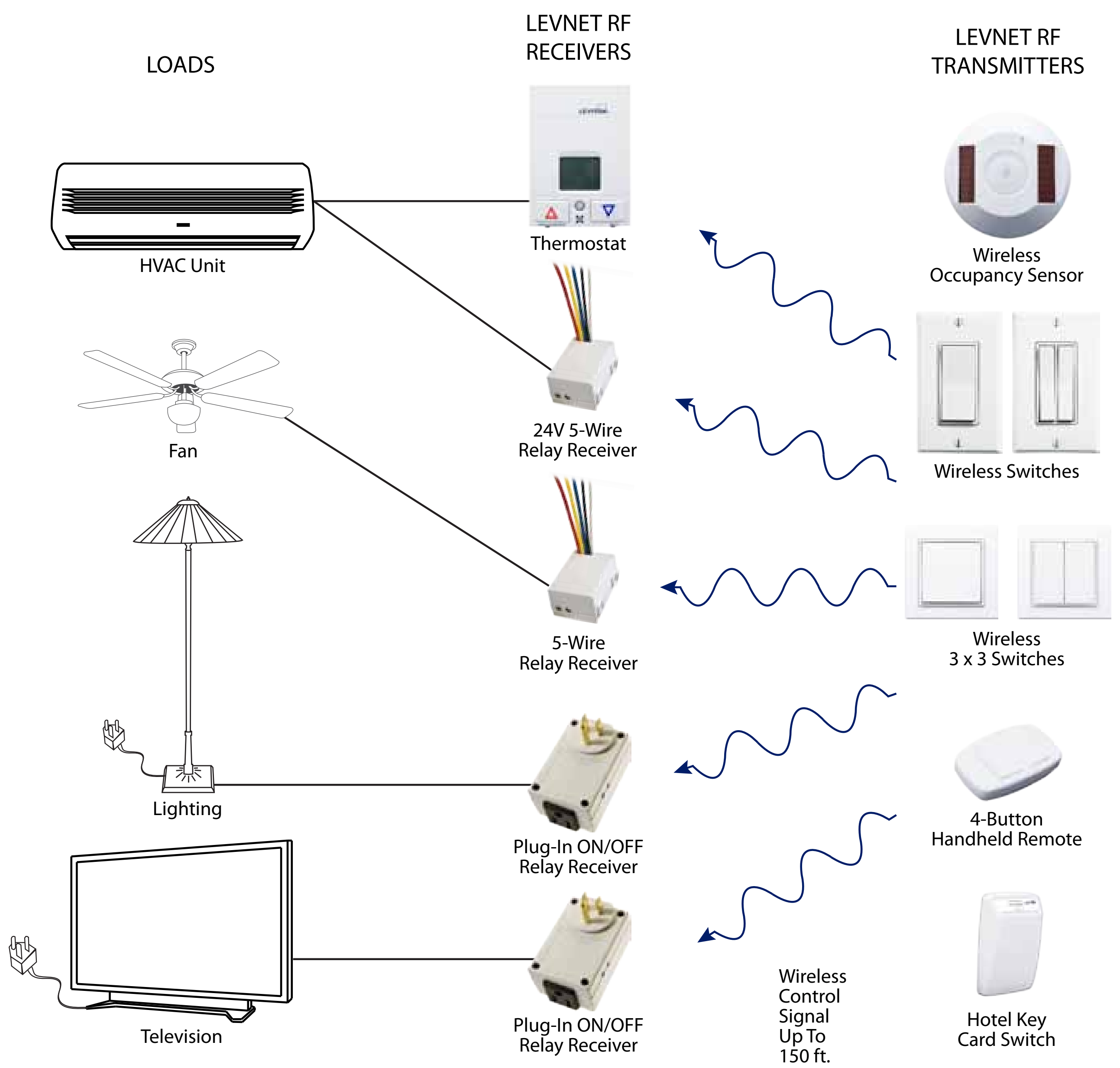
	LOW VOLTAGE RECEIVERS		SENSORS				SWITCHES							TRANSMITTERS			ACCESSORIES
	WSoRC-200	WSoRC-300	WSC04-IRW	WSC15-IRW	WSC04-IRW	WSCPC-00W	WSSoS-P	WSSoS-D	WSSoS-D2	WSSoS-R	WSSoS-H	WSSoS-E	WSSoS-E2	WSSLT-010	WSSLT-R10	WSSLT-GPo	WSoRF-300
Basic Wall Switch Receivers	-	-	x	x	x	A	x	-	-	-	-	-	-	-	-	-	x
Advanced Wall Switch Receivers	x	x	x	x	x	A	x	x	x	x	x	x	x	P	P	P	x
Line Voltage Receivers	x	x	x	x	x	A	x	x	x	x	x	x	x	x	x	x	x

X - Indicates compatibility P - Indicates partial support (PTM mode only) A - Indicates product is compatible only with WSTxx With Leviton v1.19 or newer firmware

LEVNET RF QUICK SELECTION AND APPLICATION GUIDE

HOW TO PUT IT ALL TOGETHER

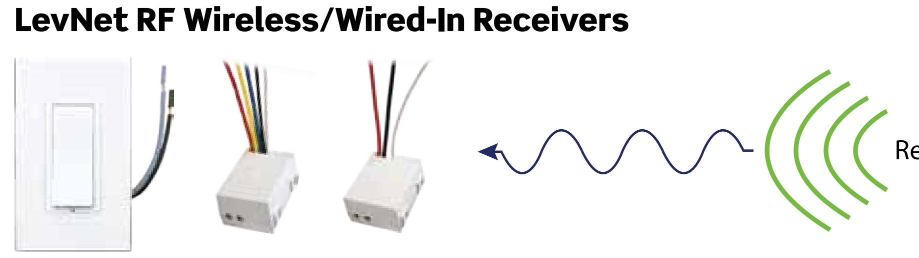
TIP: A good way to visualize your wireless system is to imagine that the "wires" connecting each device are invisible wires or "unique addresses."



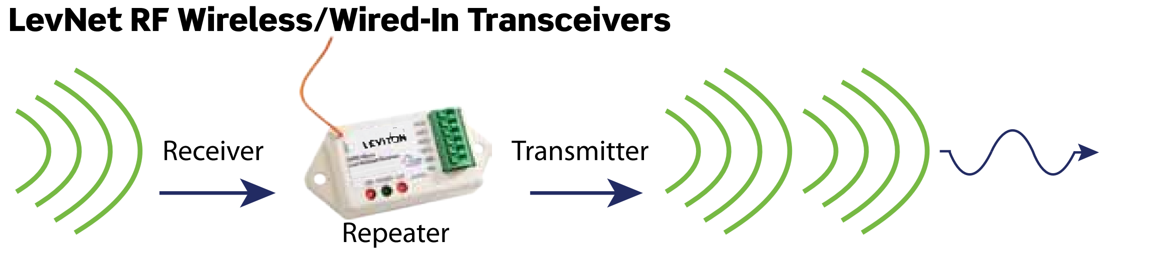
STEP 1 Determine what LOADS you want to control — lighting, HVAC, lamp, TV, etc.

STEP 2 Pick the appropriate RF RECEIVER and/or TRANSCEIVER

LevNet RF Wireless/Wired-In Receivers

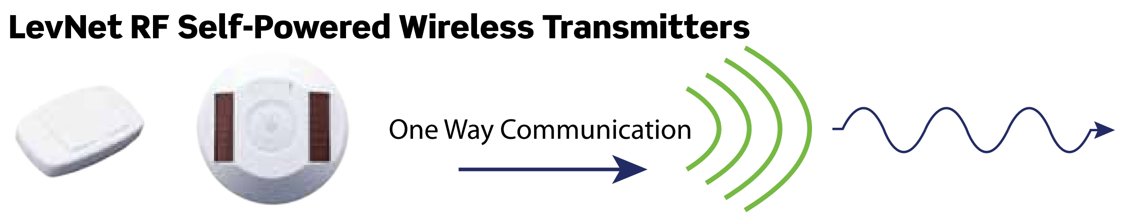


LevNet RF Wireless/Wired-In Transceivers



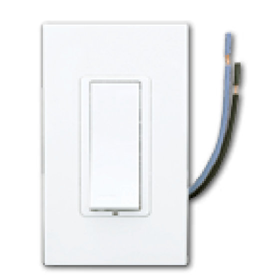
STEP 3 Pick the appropriate Self-Powered Wireless RF TRANSMITTER (sensor or switch)

LevNet RF Self-Powered Wireless Transmitters



STEP 4 PAIR the devices to communicate with each other

BASIC WALL SWITCH RECEIVER PAIRING



Step 1: Enter Pairing
- Press & hold button for 15 seconds
- LED will change to flashing amber

Step 2: Select Pairing or Clear Mode

For Basic WSS10 Models
- Amber LED (1 flash = Pairing; 2 flashes = Clear)
- No devices can be paired on flashing amber, continue to step 3 unless you need to CLEAR

For Advanced WSS10 Models
- Amber LED (1 flash = Rocker; 2 flashes = Momentary, 3 flashes = Toggle, 4 flashes = Scene, 5 flashes = Clear)
- Select pairing mode by tapping button to advance flashes
- No devices can be paired on flashing amber, continue to step 3 unless you need to CLEAR

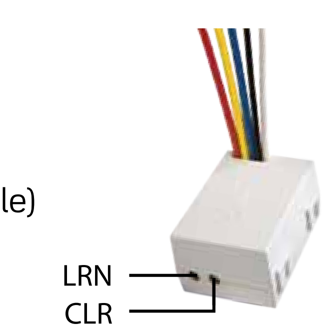
Step 3: Enter the Pairing Mode
- Press & hold button for 5 seconds
- LED will change to red (no devices paired) or green (number of flashes indicates number of devices paired)

For Advanced WSS10 Models
- Tap button to return to mode selection (amber LED)

Step 4: Pair Transmitter Button
- Tap the button you wish to pair
- LED will hold amber & then flash green acknowledging successful pairing

Step 5: Exit Pairing
- Auto exit will occur in 20 seconds

RELAY RECEIVERS WITH 2-BUTTON PAIRING



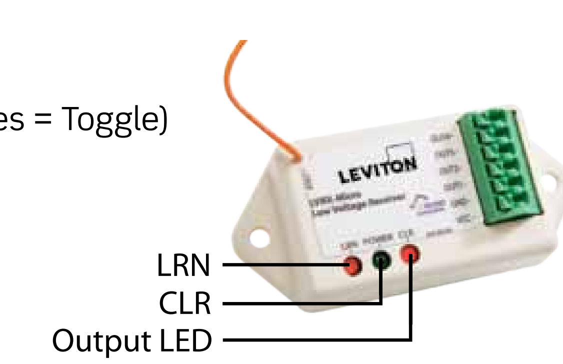
Step 1: Enter Pairing
- Press & hold LRN until load flashes

Step 2: Select Pairing Mode
- Press & hold LRN button again to advance modes (1 flash = Rocker; 2 flashes = Momentary; 3 flashes = Toggle)
- Load will flash faster to acknowledge

Step 3: Pair Transmitter Button
- Press & release the button you wish to pair
- Load will hold ON for successful pairing, hold OFF for unpairing

Step 4: Exit Pairing
- Auto exit will occur in 30 seconds, or
- Press LRN for 2 seconds and release

ROOM CONTROLLER TRANSCEIVER PAIRING



Step 1: Enter Pairing (Output 1)
- Press & hold LRN until load 1 starts flashing

Step 2: Select Pairing Mode
- Press & hold LRN button again to advance modes (1 flash = Rocker; 2 flashes = Momentary; 3 flashes = Toggle)
- Load will flash faster to acknowledge next mode

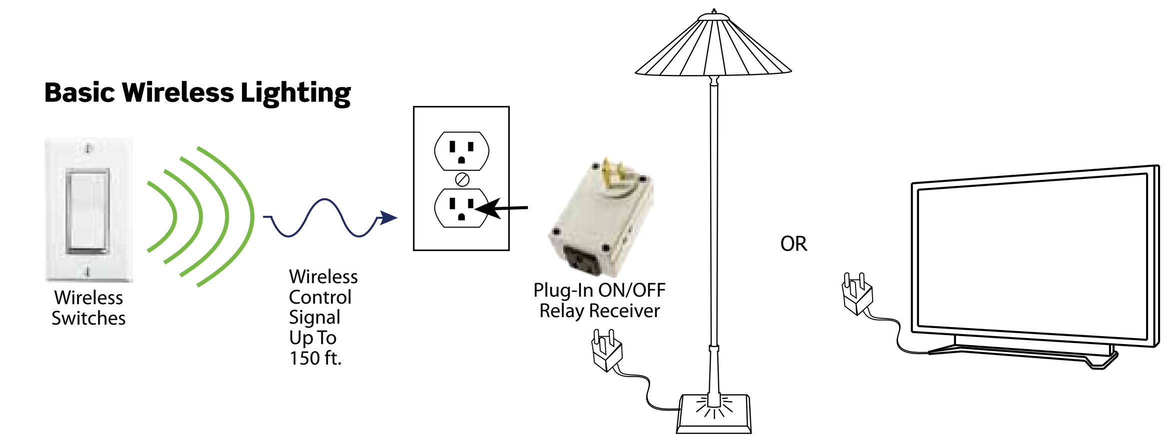
Step 3: Pair Transmitter Button
- Press & release the button you wish to pair
- Load will hold ON for successful pairing, hold OFF for unpairing

Step 4: Enter Pairing (Additional Outputs)
- Press/release the LRN button
- LED will flash 2x for output 2, 3x for output 3
- Repeat steps 2 & 3 for each output

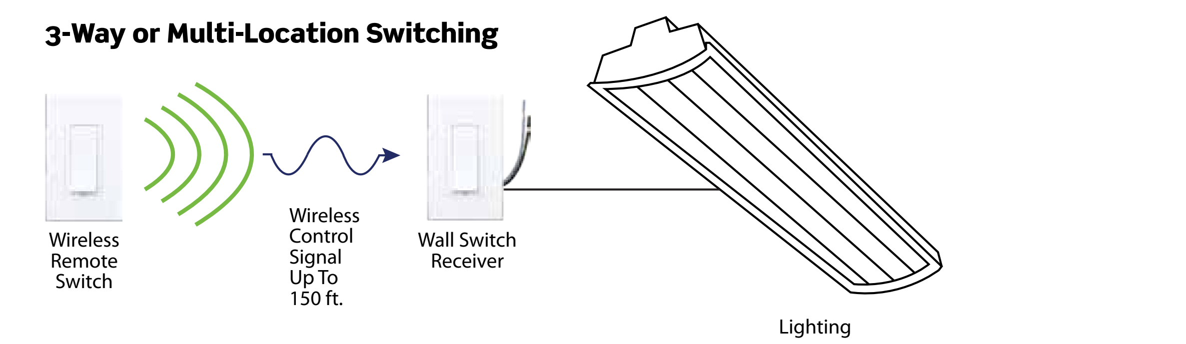
Step 5: Exit Pairing
- Wait 30 seconds
- Press LRN for 2 seconds and release

BASIC LEVNET RF SOLUTIONS

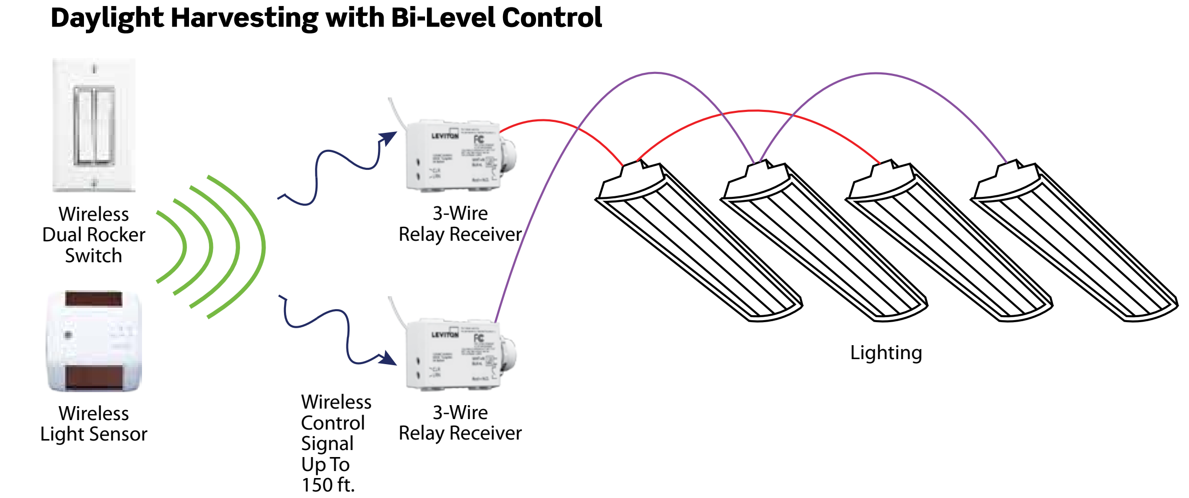
Basic Wireless Lighting



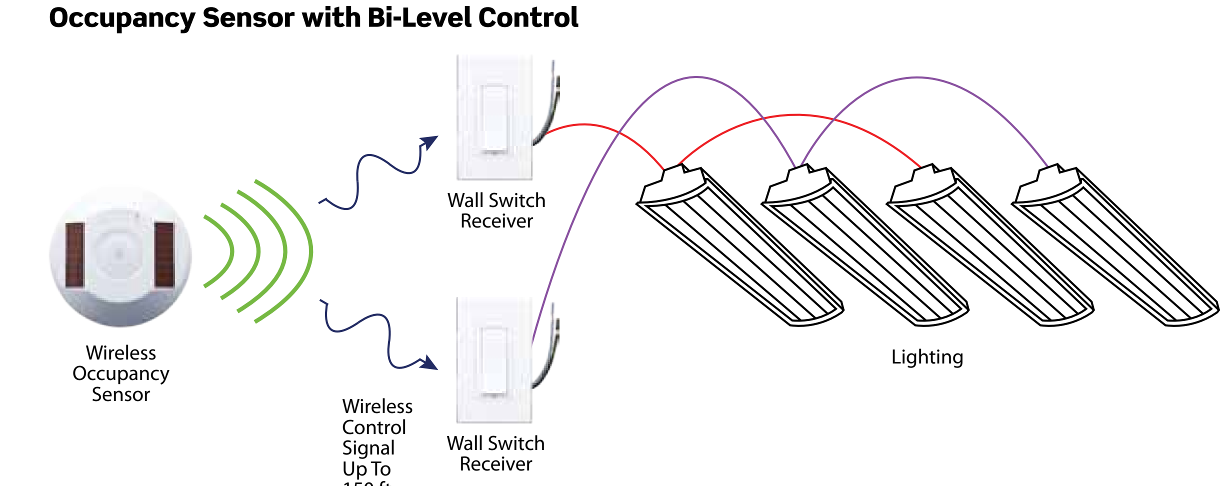
3-Way or Multi-Location Switching



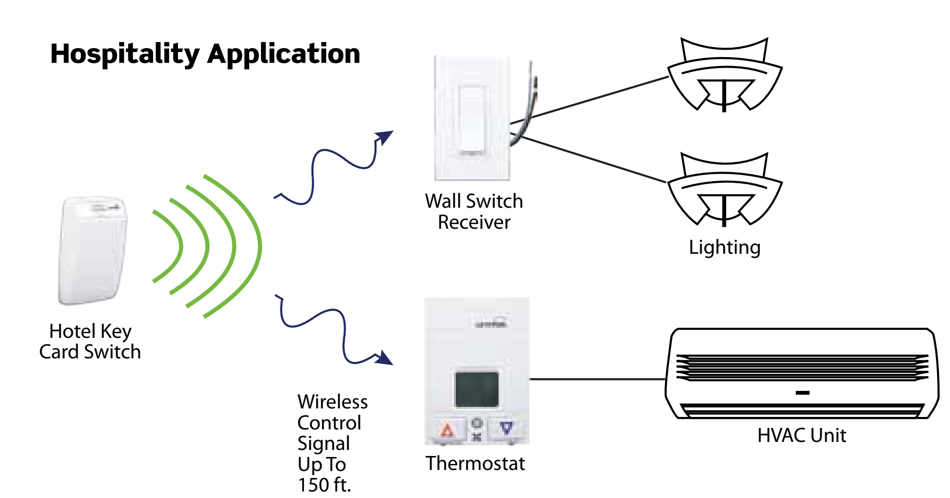
Daylight Harvesting with Bi-Level Control



Occupancy Sensor with Bi-Level Control



Hospitality Application



Contact your Leviton representative for additional smart energy saving solutions to expand and upgrade your system.

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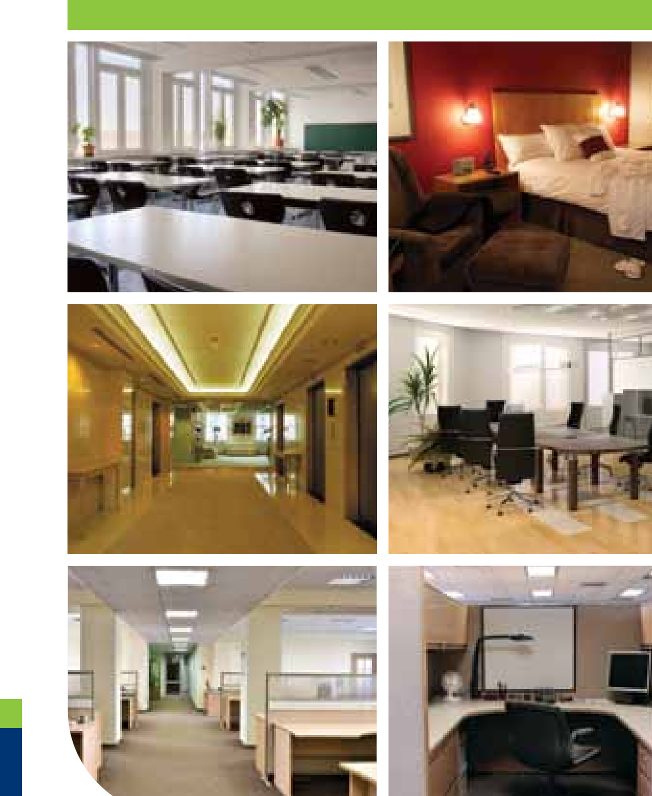
LevNet RF Self-Powered Wireless Solutions Product Guide



SERVICE AND SUPPORT DURING EVERY STEP OF THE PROCESS. Only Leviton has the service and support to help you create a lighting control system that does exactly what you want it to do while saving electricity, meeting codes and standards, and even garnering rebates.

EXCLUSIVE WEALTH OF RESOURCES:
- **Occupancy sensor layout services** – have a team of experts create occupancy sensor layouts at no cost to you directly on your CAD drawings, complete with a List of Equipment within an average turnaround time of 3 business days* – go to portal.leviton.com
- **Dollars & Sensors** – get an accurate estimate of your energy-savings potential with this exclusive payback analysis tool
- **ez-Learn** – get sensor smart in just 90 minutes from the comfort of your home or office with this exclusive 24/7 online training
- **Lighting control specialists** at your disposal
- **Field service engineers** for top-level support
- **Factory commissioning service**
- **Dedicated technical support** via phone at 800-824-3005

* Average turnaround time based on projects for up to 200 sensors per system.

LEVITON

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