Relay Switchpack with 0-10V

IMPORTANT: Read carefully before installing product. Retain for future reference.

⚠ WARNING

Risk of Fire, Electrical Shock, Cuts or other Casualty Hazards- Installation and maintenance of this product must be performed by a qualified electrician. This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and hazards involved.

Before installing or performing any service, the power MUST be turned OFF at the branch circuit breaker. According to NEC 240-83(d), if the branch is used as the main switch for a fluorescent lighting circuit, the circuit breaker should be marked with "SWD". All installations should be in compliance with the National Electric Code and all state and local codes.

Risk of Fire and Electric Shock- Make certain power is OFF before starting installation or attempting any maintenance. Disconnect power at fuse or circuit breaker.

Risk of Burn- Disconnect power and allow fixture to cool before handling or servicing.

Risk of Personal Injury- Due to sharp edges, handle with care.

Failure to comply with these instructions may result in serious injury (including death) and property damage.

DISCLAIMER OF LIABILITY: Cooper Lighting Solutions assumes no liability for damages or losses of any kind that may arise from the improper, careless, or negligent installation, handling or use of this product.

NOTICE: Product/component may become damaged and/or unstable if not installed properly.

Note: Specifications and dimensions subject to change without notice.

ATTENTION Receiving Department: Note actual fixture description of any shortage or noticeable damage on delivery receipt. File claim for common carrier (LTL) directly with carrier. Claims for concealed damage must be filed within 15 days of delivery. All damaged material, complete with original packing must be retained.

NOTICE: All new wiring must be fully verified before applying power.

NOTICE: Designed for indoor installation and use only. Dry location rated.

COOPER Lighting Solutions

General Information

Overview

The Wireless Relay Switchpack with 0-10V (WSP-MV-010) control is an integral part of the WaveLinx Pro connected lighting (WCL) system and offers 120-277VAC 20 amp zero crossing relay control and continuous 0-10V dimming control of LED and non LED loads. The wireless relay Switchpack with 0-10V control also supports 20 amp plug load control. The WSP-MV-010 is powered by the 120-277VAC circuit it is controlling and provides simple junction box mounting through 1/2" knockout. The wireless relay Switchpack with 0-10V control operates on a wireless mesh network based on IEEE 802.15.4 standards.

The intended use of the WaveLinx Pro Relay Switchpack with 0-10V output is for commercial lighting and control integration. Listed below are a few operating notes related to the switch pack.

- The basic WaveLinx Pro system uses some number of WaveLinx Pro Relay Switchpacks with 0-10V output. Each is powered by AC line voltage 120-277VAC (+/- 10%) input power supply with Line, and neutral terminals.
- The WaveLinx Pro Relay Switchpack also includes a 0-10 V output to allow the entire system to be controlled by a single 0-10 V control device.
- The WaveLinx Pro Relay Switchpack will support up to 120mA current sink at the 0-10V output and it can switch up to 20 amps plug loads.

Plenum Rating

Most of the components in this system are intended to be mounted above the ceiling tiles, in an area that could be intended for air handling. For this reason, all of the WaveLinx Pro Relay Switchpack cabling is plenum rated.

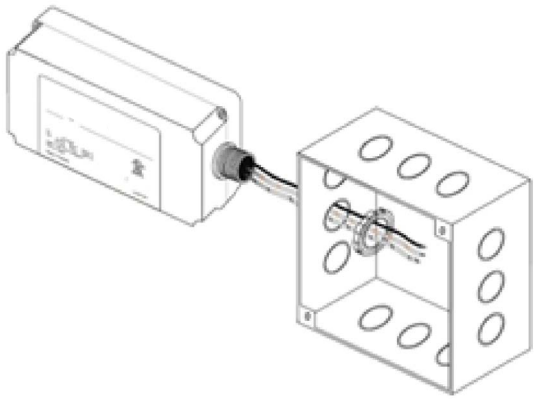
Note: The components do not meet the plenum rating standards for Chicago without additional measures.

Junction Box Mounting

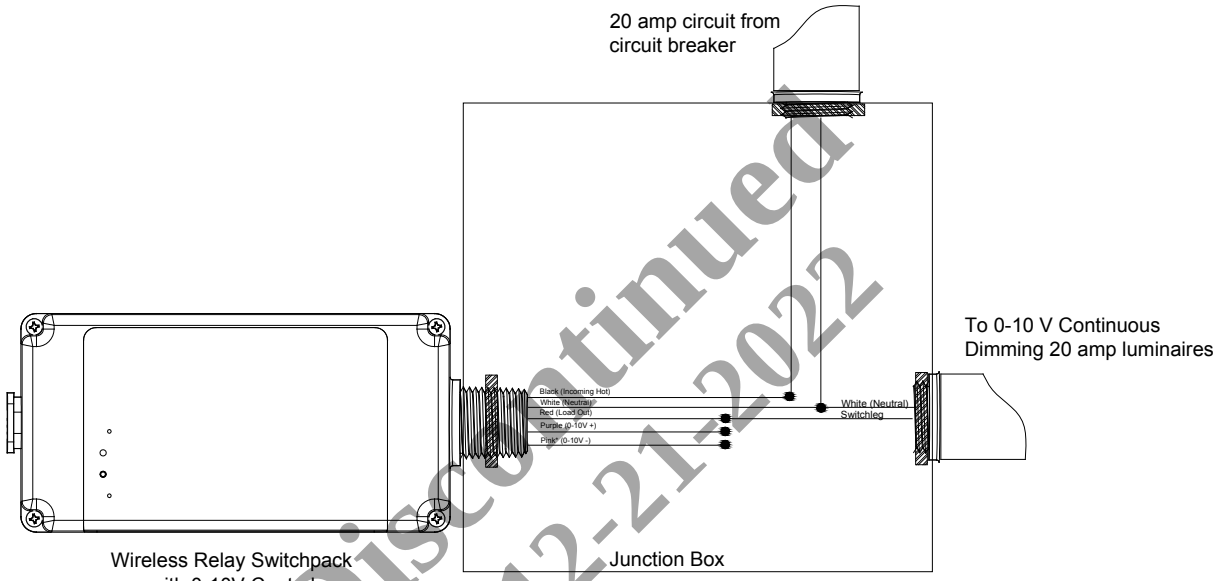
The WaveLinx Pro Relay Switchpack with 0-10V output is designed to be mounted to a solid surface (horizontal or vertical) and attached to a Junction Box.

Installation instructions are included for connecting the leads to the fixtures.

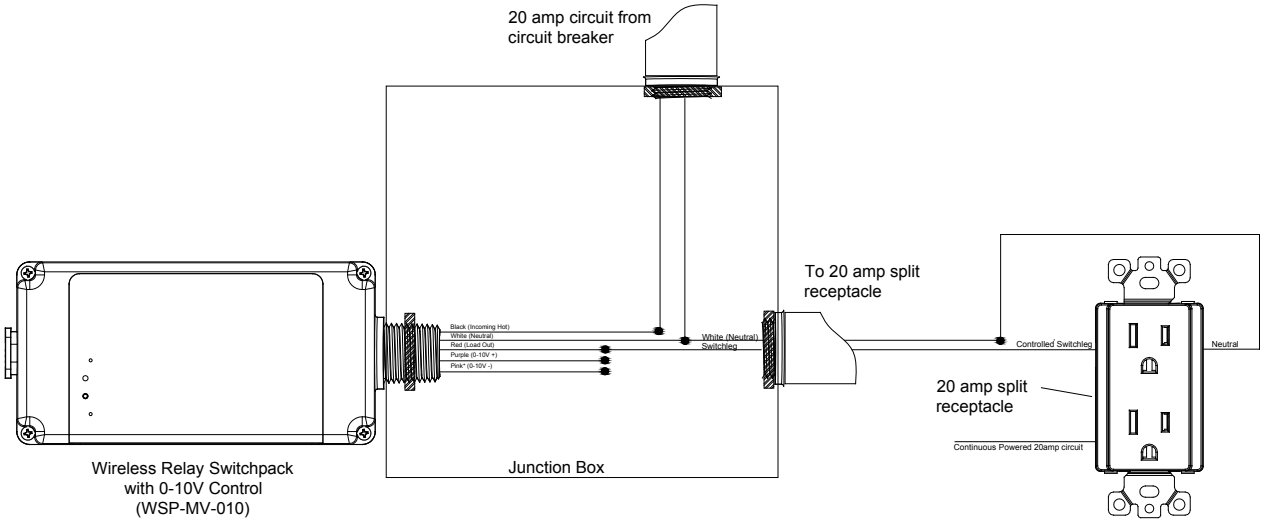
** Constructions built before Jan 2022 may have gray wire for 0-10 dimming control present. In these cases, the installer will label the gray building wire as a 0-10 dimming wire and connect to our product's pink 0-10V dimming control wire. Reference NFPA70 (2020 NEC), section 410.69.*



10V Wiring Detail



Plug Load Wiring Detail

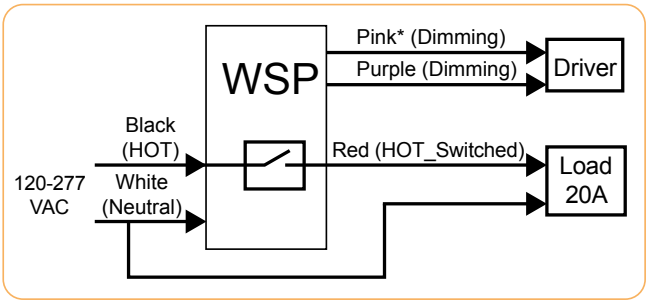


Relay Switchpack Installation

1. Ensure power is off to all circuits you will be working with.
2. Secure the WaveLinx Pro Relay Switchpack to the Junction Box.
3. Make all power connections:
   a. The input black wire (HOT) of the Relay Switchpack has HOT Switched output (red wire) to connect to the load that will be powered through the Relay Switchpack.
   b. The input white wire (Neutral) of the Relay Switchpack is also connected to the load directly.
4. Make all low voltage connections:
   a. The Relay Switchpack also includes a 0-10 V output to allow control of a single 0-10 V control device.
   b. The positive (dim) lead of the luminaires are connected to the purple wire.
   c. The negative (return) lead is connected to the pink* terminal.
   d. Use 20 – 24 AWG solid or stranded copper.
5. Check all electrical and mechanical connections.
6. Close up the junction Box.
7. Apply power to the circuit.

** Constructions built before Jan 2022 may have gray wire for 0-10 dimming control present. In these cases, the installer will label the gray building wire as a 0-10 dimming wire and connect to our product's pink 0-10V dimming control wire. Reference NFPA70 (2020 NEC), section 410.69.*

Wiring Diagram



Out of the Box functionality

- Upon Power up, the Relay Switchpack will be ON (closed) until paired with Wireless Area Controller (WAC). Output of 0-10V set to 75% light output.
- Commissioning button will toggle Relay state when button is pressed and released in less than 4 seconds.
- LED will indicate Relay state; if Relay is closed then the LED is ON.
- When the Commissioning button is pressed for more than 4 seconds, the Relay Switchpack will search for a WaveLinx Pro wireless network. The LED will blink at 0.5Hz Slow blink) 50% duty cycle while searching.

Wireless setup

1. Upon power up, the Relay Switchpack will look for a WaveLinx Pro wireless network.
2. When the Relay Switchpack joins a WaveLinx Pro wireless network, the Relay turns Off for 5 minutes.
   - This is used to visually inspect which fixtures received the join beacon from the WAC.
   - The installing contractor can document which fixtures did not turn Off. Those fixtures will stay at 75% or full bright light level.
3. When connected to the WaveLinx Pro wireless network the Relay Switchpack returns to full ON light level.
4. When the pairing is complete all relays are part of the default area and the dimmable zone.

Note: Please refer to WaveLinx Pro Mobile App manual to complete configuration.

LED's Definitions

There are two major LED patterns for the Relay Switchpack:

- When the commissioning button is pressed for more than 4 seconds, the LED blinks at 0.5Hz (Slow Blink) 50% duty cycle for 10 seconds; indicating that the Wallstation is searching for a Network.
- When the commissioning button is pressed for less than 4 seconds, the Relay State will toggle and the LED will indicate its state.
  - LED ON = Relay Close.
  - LED OFF = Relay Open.
- At any given time the Relay state can be identified via the LED.
  - LED ON = Relay Close.
  - LED OFF = Relay Open.

Troubleshooting

Issue	Possible Causes	Suggestions
LED will not toggle ON when button is pressed	Power Interruption	Check incoming voltage and/or wiring.
Relay Switchpack cannot join a WaveLinx Pro network and/or not reliable	Communication Issue	Check that the Relay Switchpack is within range of WAC without obstacles and can establish reliable communications with the Wireless Area Controller. Check the Wireless Area Controller for additional details.
0-10V doesn't function correctly	0-10V connection Issue	Check wiring connection for purple and pink* wires.
Relay doesn't function correctly	Communication Issue	Check that the Relay Switchpack is within range of WAC without obstacles and can establish reliable communications with the Wireless Area Controller. Check the Wireless Area Controller for additional details.
	Relay not toggling	If communication is established, check for a 'clicking' sound of the relay indicating that it's opening and closing.
	Wiring Issues	Check to see if power and load wires are wired correctly according to the wiring section.
If still having trouble, call Technical Services at 1-800-553-3879		

Specifications

Technology: WaveLinx Pro Relay Switchpack for lighting control based on IEEE 802.15.4.

Compatible only with WaveLinx Pro Wireless Lighting Control system.

Power	Input power: 120-277VAC. Connections: Black (Incoming HOT), White (Neutral), Red (Switched Out), Purple (0-10V +), Pink* (0-10V -)
Indicators	LED functionality • Indication of wireless network join request • Indication of wireless network connection • Scene indication of operations • Relay (ON/OFF) status
Installation	Standard junction box or fixture mounting via 1/2” knockout.
Size	4.75”H x 3.25”W x 1.25”D.
Software Specifications	Automatically controlled by WaveLinx Pro Occupancy Sensors and WaveLinx Pro Wallstation when added to the same area using the WaveLinx Pro Mobile Application. Energy calculations available through Trellix.
Environmental Specifications	Operating Temperature Range: 32°F to 104°F (0°C to 40°C). Storage Temperature Range: 32°F to 167°F (0°C to 75°C). Relative Humidity: 5% to 95% non-condensing, for indoor use only.
Standards	Listings: cULus Certified, FCC. Meets latest ASHRAE Standard 90.1 requirements. Meets latest IECC requirements. Meets latest CEC Title 24 requirements.
Wireless Specifications	Radio 2.4GHz. Standard IEEE 802.15.4. Transmitter Power + 7dBm. Configuration type Router, End Point. Range: 150ft (50m) LOS through 2 interior walls of standard construction. Max # of Devices 150 per Wireless Area Controller (best practice 100 devices).

FCC 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.

(2) This device must accept any interference received, including interference that may cause undesired operation.

Note: The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

Note: The 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 an 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.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons.

Declaración de la FCC

• Este dispositivo cumple con la Parte 15 de las Normas de la FCC. Su funcionamiento está sujeto a las siguientes dos condiciones:

(1) Este dispositivo no debe causar interferencia dañina.

(2) Este dispositivo debe aceptar cualquier interferencia recibida, incluidas las interferencias que puedan causar un funcionamiento no deseado.

Nota: El concesionario no es responsable por los cambios o modificaciones que no estén expresamente aprobados por la parte responsable de su cumplimiento. Tales modificaciones podrían anular la autoridad del usuario para operar el equipo.

Nota: El equipo ha sido probado y cumple con los límites para un dispositivo digital de Clase B, de conformidad con la parte 15 de las Normas de la FCC. Estos límites están diseñados para proporcionar una protección razonable contra las interferencias dañinas en una instalación residencial. Este equipo genera usos y puede emitir energía de radiofrecuencia y si no se instala y utiliza de acuerdo con las instrucciones, puede causar interferencia dañina en las comunicaciones de radio. Sin embargo, no se puede garantizar que dicha interferencia no ocurra en una instalación determinada. Si este equipo causa interferencia dañina en la recepción de radio o televisión, lo que puede determinarse apagando y encendiendo el equipo, se recomienda al usuario que intente corregir la interferencia mediante una o más de las siguientes medidas:

- Reorientar o reubicar la antena receptora.
- Aumentar la separación entre el equipo y el receptor.
- Conectar el equipo a una toma de corriente en un circuito diferente al que está conectado el receptor
- Consultar con el distribuidor o con un técnico de radio/TV experimentado para obtener ayuda.

Este equipo cumple con los límites de exposición a la radiación de la FCC establecidos para un entorno no controlado. Este equipo debe instalarse y operarse de acuerdo con las instrucciones proporcionadas y la(s) antena(s) utilizada(s) para este transmisor deben instalarse para proporcionar una distancia de separación de al menos 20 cm de todas las personas.

ISED RSS

This device complies with Industry Canada's licence-exempt RSSs. 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.

ISED RSS

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1) l'appareil ne doit pas produire de brouillage;

2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Warranties and Limitation of Liability

Please refer to **www.cooperlighting.com** for our terms and conditions.

Garanties et limitation de responsabilité

Veuillez consulter le site **www.cooperlighting.com** pour obtenir les conditions générales.

Garantías y Limitación de Responsabilidad

Visite **www.cooperlighting.com** para conocer nuestros términos y condiciones.

COOPER Lighting Solutions

Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com
For service or technical assistance:
1-800-553-3879

Canada Sales
5925 McLaughlin Road
Mississauga, Ontario L5R 1B8
P: 905-501-3000
F: 905-501-3172