WaveLinx Pro

Relay Switchpack with 0-10V

Relay switchpack with 0-10V control

Typical Applications
Office • Education • Healthcare • Hospitality • Retail
Industrial • Manufacturing

Product Certification

- Meets latest ASHRAE Standard 90.1 requirements
- Meets latest IECC requirements
- Meets latest CEC Title 24 requirements
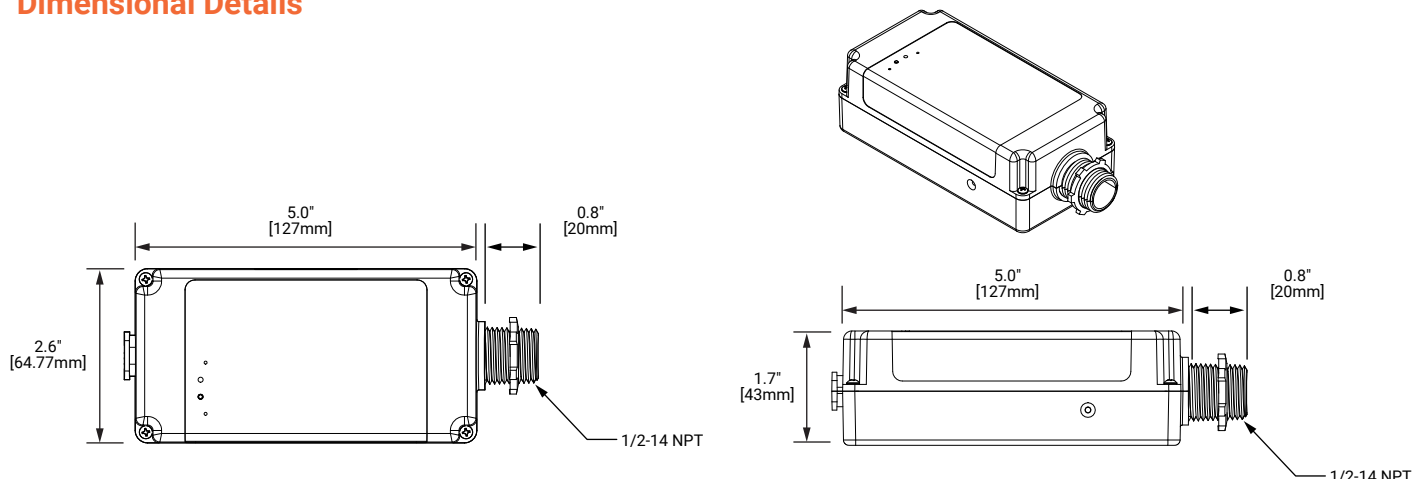- Manufactured in an ISO 9001 certified factory

Part 15/ICES-003

Product Features

IEEE 802.15.4 • Device Security • Customer Security • Receptacle Control

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Top Product Features

- Output control loads up to 20amps or 1.5 HP and 0-10V dimming control
- Plenum rated design with easy junction box mounting
- Universal voltage input (120V-277V)
- Fails safe to 100% if communications are lost
- Energy calculations available through Trellix

Dimensional Details

5.0"
[127mm]

0.8"
[20mm]

2.6"
[64.77mm]

1/2-14 NPT

5.0"
[127mm]

0.8"
[20mm]

1.7"
[43mm]

1/2-14 NPT

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Lighting Solutions

Order Information

The WaveLinx Pro Dimming Switchpack is an accessory to the WaveLinx Pro connected lighting (WCL) system and requires a Wireless Area Controller (WAC) for full functionality.

The wireless relay is used to control plug loads or luminaires that do not include the wireless integrated sensor.

Catalog Number

Catalog Number	Description
WSP-MV-010	Wireless Relay Switchpack with 0-10V

Required Accessories

All WaveLinx Pro connected lighting (WCL) system accessories require at least one WaveLinx Pro Wireless Area Controller (WAC) for communications.
Ensure the bill of material includes one of the following components.

Catalog Number

Catalog Number	Description
WAC-POE	Wireless Area Controller, POE powered

Optional Accessories

For connection to 120VAC outlets.

Catalog Number

Catalog Number	Description
WPOE-120	120VAC to PoE Injector

Product Specifications

Key Features
- Output control for the following
  - 0-10V continuous dimmable luminaries
  - LED loads up to 20A
  - Receptacle loads up to 20A
  - Motor loads to 1.5 HP
- Plenum rated design with easy junction box mounting
- Device identification LED
- Universal voltage input (120V-277V)
- Designed with safety in mind, at loss of communications with Wireless Area Controller, the wireless relay switchpack will turn ON and set dimmer to 70% light level
- Energy calculations available through Trellix

Mechanical
Size: 1.7"H x 2.6"W x 6.1"L (43mm x 66mm x 155mm)
Environment:
- **Operating temperature:** 32°F to 104°F (0°C to 40°C)
- **Storage temperature:** 32°F to 158°F (0°C to 70°C)
- **Relative humidity operating:** 10% to 90% RH (non-condensing)
- For indoor use only

Mounting: Mounts to the side of a 4" (102mm) square box via ½" (13mm) knockout
Color: Matte White
Housing: Medium impact injection molded housing. ABS resin with 5VA flame rating. Plenum rated for external junction box mounting with Teflon coated leads.

Electrical
Power:
- 120-277VAC (+/- 10%) 50/60Hz
- 5mA (120V) / 10mA (277V)

Output Information:
- 20amp 120/277VAC General Purpose
- 16amp 120/277VAC electronic ballast (LED load)
- Single class 2 0-10V dimming output (IEC 60929 Annex E) sinks up to 120mA per (40 µA max per circuit leakage to line)
- 0-10V output supports up to 60 ballasts/drivers that draw a standard 2mA each

Wireless Specifications
Radio: 2.4GHz
Standard: IEEE 802.15.4
Transmitter Power: + 7dBm
Range: 150ft (46m) LOS
50ft (15m) through standard walls when mounted outside junction box
# of Walls: 2 interior walls standard construction

System Performance
Maximum number of Devices: 150 per Wireless Area Controller (best practice 100 devices)
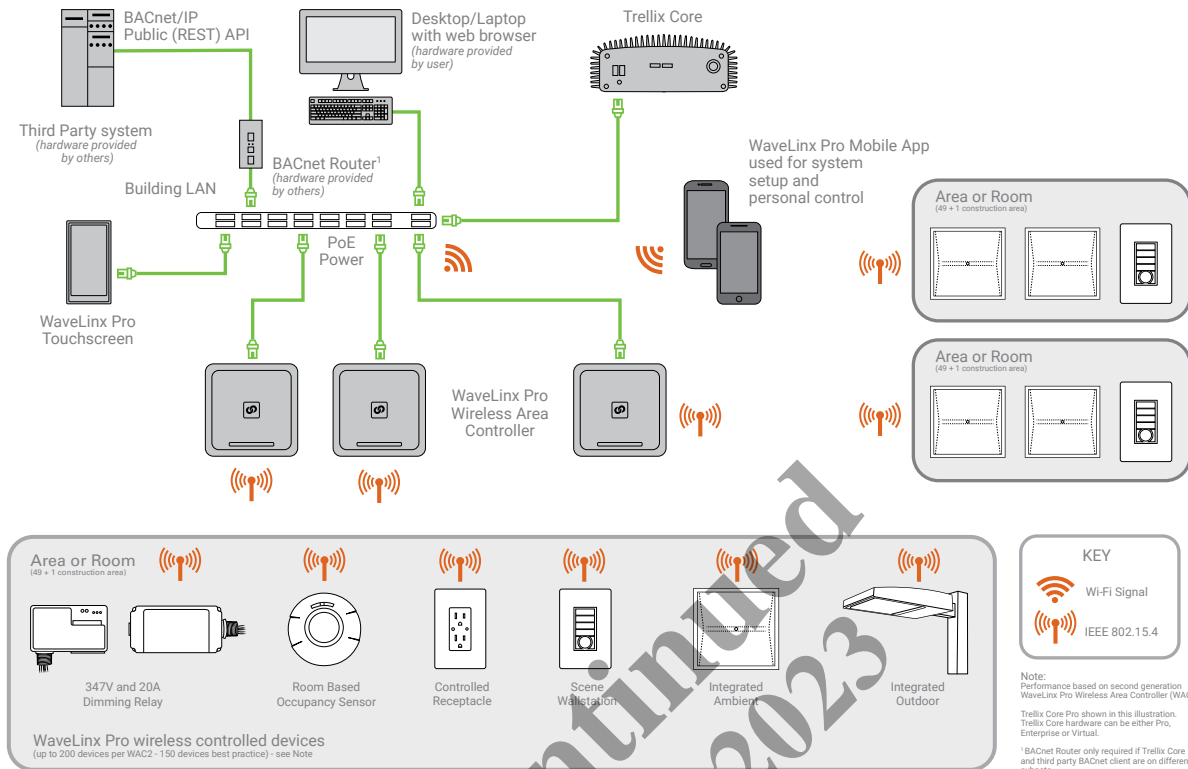
Standards/Ratings
- cULus Listed - Energy Management Equipment (UL916)
- Manufactured in an ISO 9001 certified factory
- Meets latest ASHRAE Standard 90.1 requirements
- Meets latest IECC requirements
- Meets latest CEC Title 24 requirements

Warranty
Five year warranty standard

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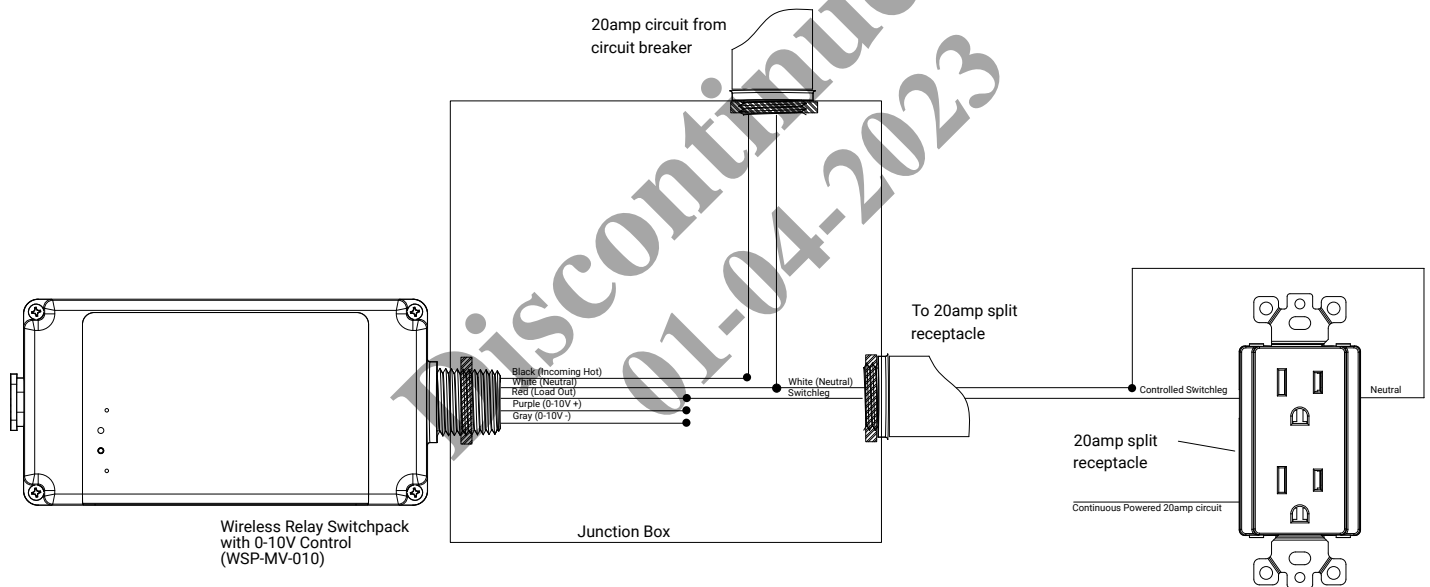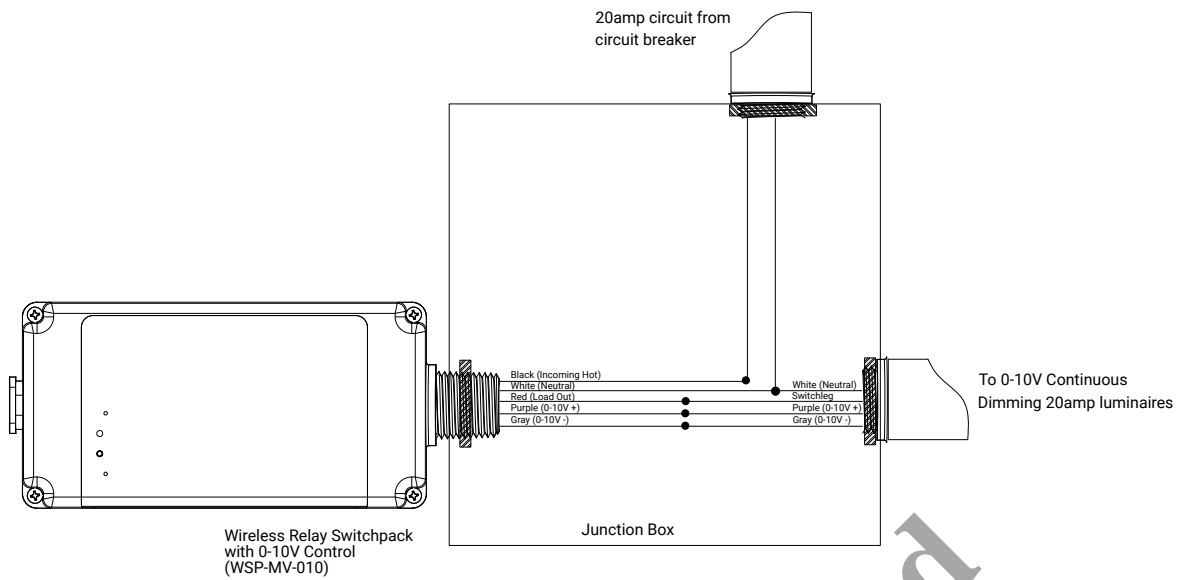
System Architecture

This diagram shows the main components of the WaveLinx Pro connected lighting (WCL) system. The WCL system communicates using wireless mesh technology based on the 802.15.4 standard. A POE LAN connection for each Wireless Area Controller (WAC) is required for power and data access to the building wireless network. System setup is achieved through a simple mobile application via wireless communication to the system.

BACnet/IP Public (REST) API

Desktop/Laptop with web browser
(hardware provided by user)

Trellix Core

Third Party system
(hardware provided by others)

BACnet Router[1]
(hardware provided by others)

Building LAN

WaveLinx Pro Mobile App used for system setup and personal control

Area or Room
(49 + 1 construction area)

PoE Power

WaveLinx Pro Touchscreen

WaveLinx Pro Wireless Area Controller

Area or Room
(49 + 1 construction area)

Area or Room
(49 + 1 construction area)

347V and 20A Dimming Relay

Room Based Occupancy Sensor

Controlled Receptacle

Scene Wallstation

Integrated Ambient

Integrated Outdoor

WaveLinx Pro wireless controlled devices
(up to 200 devices per WAC2 - 150 devices best practice) - see Note

KEY

Wi-Fi Signal

IEEE 802.15.4

Note:
Performance based on second generation WaveLinx Pro Wireless Area Controller (WAC2)

Trellix Core Pro shown in this illustration. Trellix Core hardware can be either Pro, Enterprise or Virtual.

[1] BACnet Router only required if Trellix Core and third party BACnet client are on different subnets.

Overview

The WaveLinx Pro 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 20amp zero crossing relay control and continuous 0-10V dimming control of LED and non LED loads. The relay switchpack with 0-10V control also supports 20amp plug load control. The WSP-MV-010 is powered by the 120-277VAC circuit it is controlling and provides simple 1/2" knockout mounting. The relay switchpack with 0-10V control operates on a wireless mesh network based on IEEE 802.15.4 standards.

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Mounting

20amp circuit from circuit breaker

Black (Incoming Hot)
White (Neutral)
Red (Load Out)
Purple (0-10V +)
Gray (0-10V -)

White (Neutral)
Switchleg
Purple (0-10V +)
Gray (0-10V -)

To 0-10V Continuous Dimming 20amp luminaires

Wireless Relay Switchpack with 0-10V Control (WSP-MV-010)

Junction Box

20amp circuit from circuit breaker

Black (Incoming Hot)
White (Neutral)
Red (Load Out)
Purple (0-10V +)
Gray (0-10V -)

White (Neutral)
Switchleg

To 20amp split receptacle

Controlled Switchleg

Neutral

20amp split receptacle

Continuous Powered 20amp circuit

Wireless Relay Switchpack with 0-10V Control (WSP-MV-010)

Junction Box

Connected Systems

• Trellix

Better Data. Better Decisions.

Trellix combined with our WaveLinx Pro connected lighting system is a distributed network of LED lighting fixtures with integrated sensing and beacon technology that captures real-time data; making your facility smarter so you can make smarter decisions.

Trellix provides an open IoT platform and infrastructure that connects intelligent sensors leveraging the real-estate of the physical light fixture to solve higher complexity problems in a commercial building to deliver actionable insights through the aggregation of valuable data.

WaveLinx Pro enabled LED Lighting Fixtures

WaveLinx Pro Wireless Area Controller
gateway for smart building eco-system

Trellix Core
on-premise enterprise management software

Trellix Applications

Info & Tracking

Space / Occupancy — people, space
Tracking — badge, asset, bracelet
Environment — humidity, temperature, daylight

API
Trellix Exchange
3rd party integration

Trellix Admin
Trellix Lighting
Trellix Locate

data **COLLECTED** | data **CONNECTED** | data **EXCHANGED** and stored | data **INSIGHT**

Discontinued 01-04-2023