Project		Catalog #		Type	
Prepared by		Notes		Date	

WaveLinx Wireless

Universal Dimming Switchpack with Dry Contact Input

Wireless 0-10V dimming switchpack for 120-347V lighting applications - includes low-voltage sensor / contact closure input

Typical Applications

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

Interactive Menu

- Order Information page 2
- Additional Resources page 3
- Wiring Diagrams page 4
- Connected Systems page 8
- Product Warranty

Product Certification

Part 15/ICES-003

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

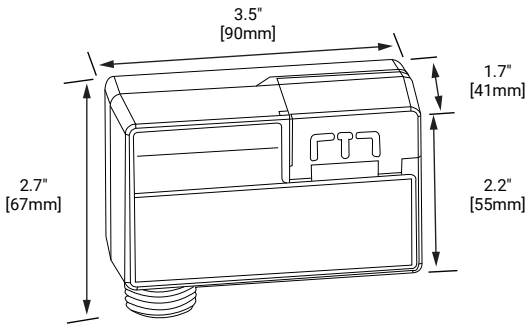
Product Features

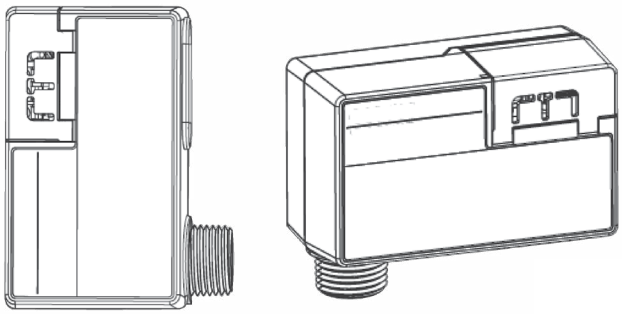
IEEE 802.15.4 | Device Security | Customer Security | Receptacle Control

Top Product Features

- Relay control of loads up to 20amps (including receptacles)
- 0-10V dimming control of up to 15 typical ballasts / LED drivers
- Plenum rated
- Fails safe to 100% if communications are lost
- Energy calculations available through Trellix based on max load input
- Greengate low-voltage sensor integration or contact closure input

Dimensional Details





Order Information

The WaveLinx Universal Dimming Switchpack with Dry Contact Input is an accessory to the WaveLinx 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 WaveLinx integrated controls. Greengate low-voltage occupancy (PIR or Dual Tech) sensor integration or contact closure input is also available for a control area.

Catalog Number

Catalog Number	Description
WSP-CA-010	WaveLinx Universal Dimming Switchpack with Dry Contact Input

Required Accessories

All WaveLinx Connected Lighting (WCL) system accessories require at least one 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
- Plenum rated design with easy junction box mounting
- Recommended branch circuit connection for 347VAC (120-347VAC)
- 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
- Fails safe if communications is lost
- Greengate low-voltage sensor integration OR maintained contact closure input (not an ALERT override for alarm input)

Mechanical

Size: 3.5"L x 2.7"W x 1.6"H (90mm x 68mm x 40mm)

Weight: 6.3 oz (178 g)

Environment:

- **Operating temperature:** 20A: -40°F to 131°F (-40°C to 55°C) 10A: -40°F to 149°F (-40°C to 65°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: Black

Housing: Injection molded housing, ABS resin with V-0 flame rating. Plenum rated for external junction box mounting.

Electrical

Power:

- 120-347VAC (+/- 10%) 50/60Hz
- 10A (347VAC)

Output Information:

- 20amp 120-347VAC General Purpose
- 16amp 120-347VAC electronic ballast (LED load)
- Single class 2 0-10V dimming output (IEC 60929 Annex E) capable of sinking up to 30mA
- 0-10V output supports up to 15 typical ballasts / LED drivers (assuming 2mA per typical ballast / driver)

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

System Performance

Maximum number of Devices: 150 per Wireless Area Controller (best practice 100 devices)

Standards/Ratings

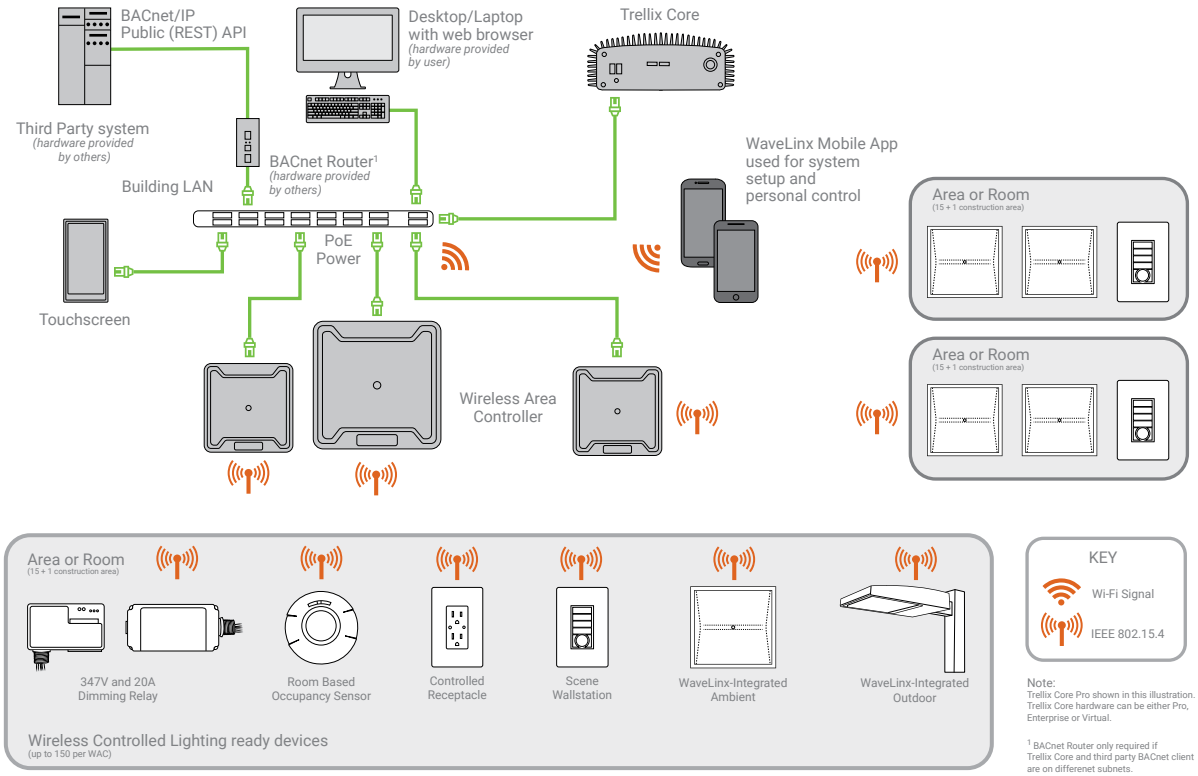
- cULus Listed - Energy Management Equipment (UL916)
- RoHS Compliant
- Manufactured in an ISO 9001 certified factory
- Meets latest ASHRAE Standard 90.1 requirements
- Meets latest IECC requirements
- Meets latest CEC Title 24 requirements

Warranty

Five year warranty standard

System architecture

This diagram shows the main components of the WaveLinx Connected Lighting (WCL) system. The WaveLinx system communicates using wireless mesh technology based on the IEEE 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.



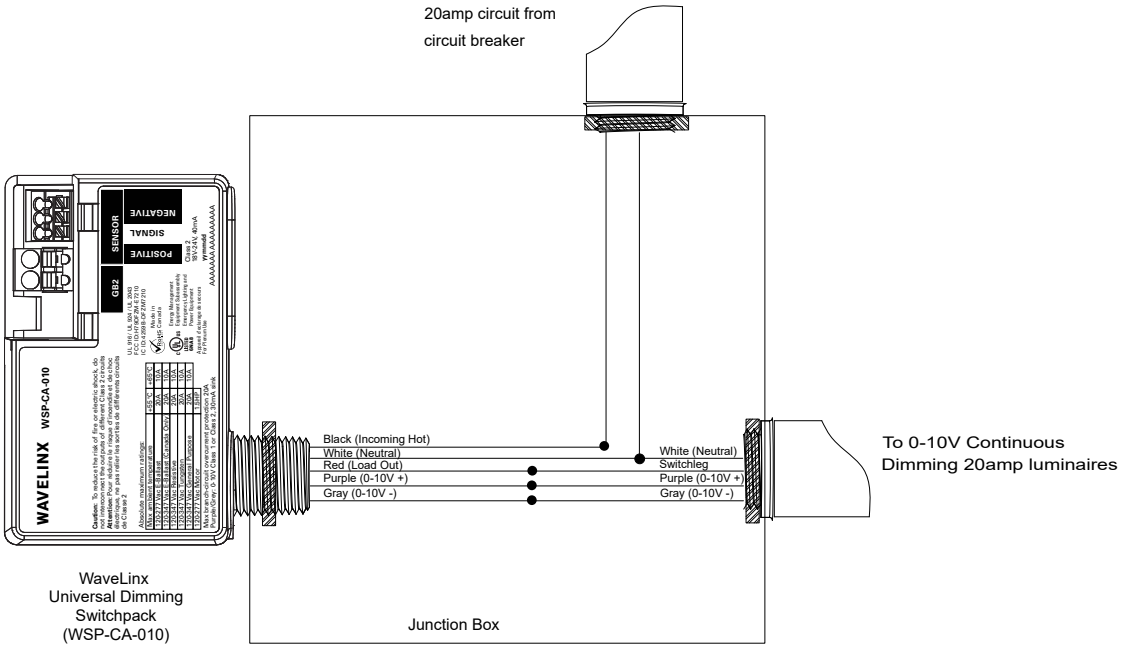
Overview

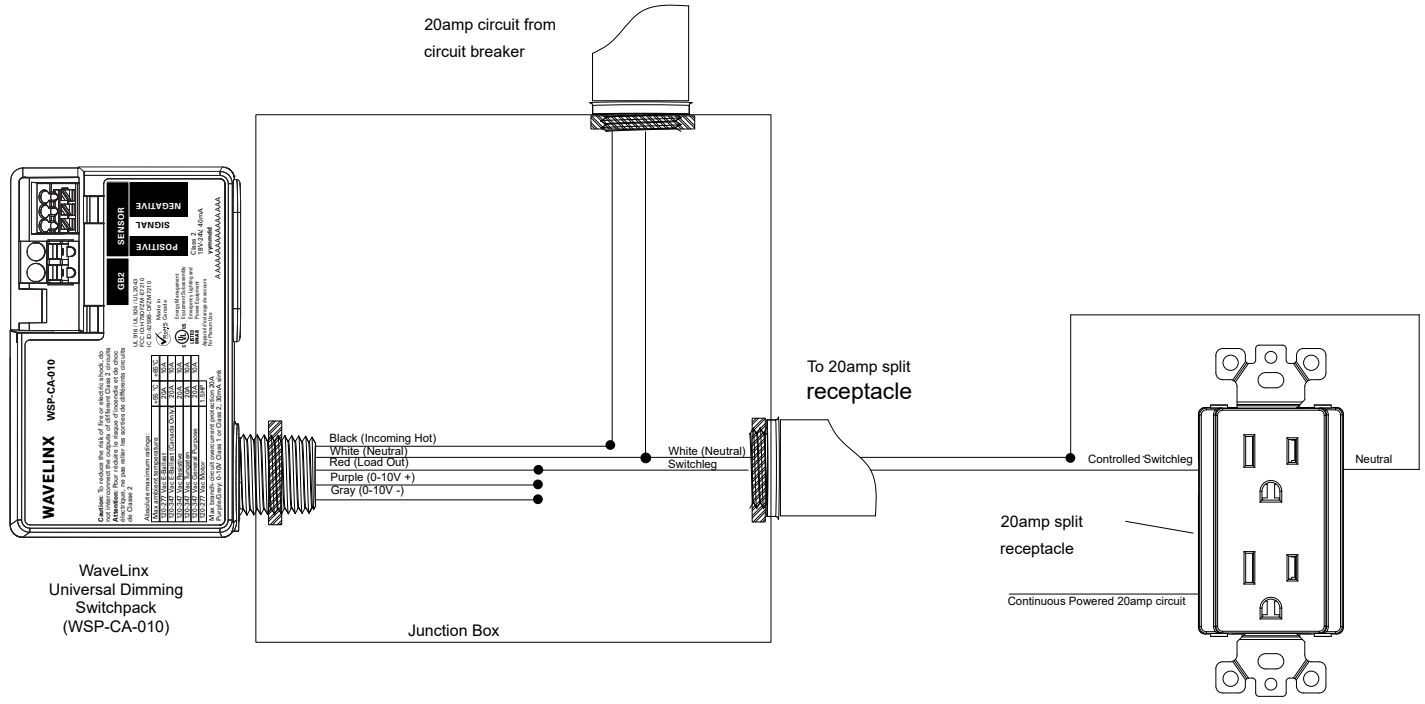
The Wavelinx Universal Dimming Switchpack with Dry Contact Input (WSP-CA-010) control is an integral part of the WaveLinx Connected Lighting (WCL) system and offers 120-347VAC 20amp zero crossing relay control and continuous 0-10V dimming control of LED and non-LED loads. The 347V Dimming Switchpack also supports 20amp plug load control. The WSP-CA-010 is powered by the 120-347VAC circuit it is controlling and provides simple 1/2" knockout mounting. The Universal Dimming Switchpack operates on a wireless mesh network based on IEEE 802.15.4 standards.

The WaveLinx Universal Dimming Switchpack with Dry Contact Input may also be used to integrate Greengate low-voltage occupancy (PIR or Dual Tech) sensors or contact closure input for a control area.

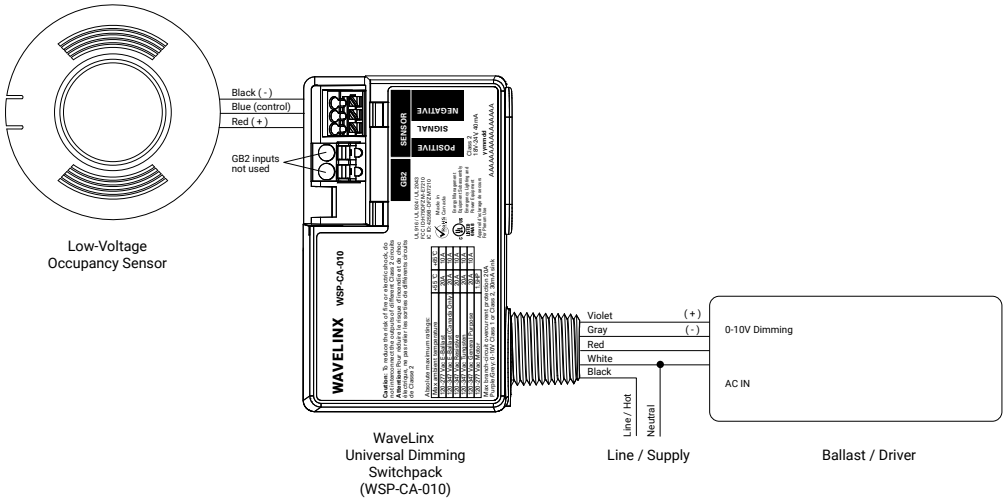
WaveLinx Mobile Application is used to commission contact closure behavior either as a sensor input or a contact closure. When used as a contact closure, the closure action may be used to drive one of up to 16 defined scenes.

Mounting

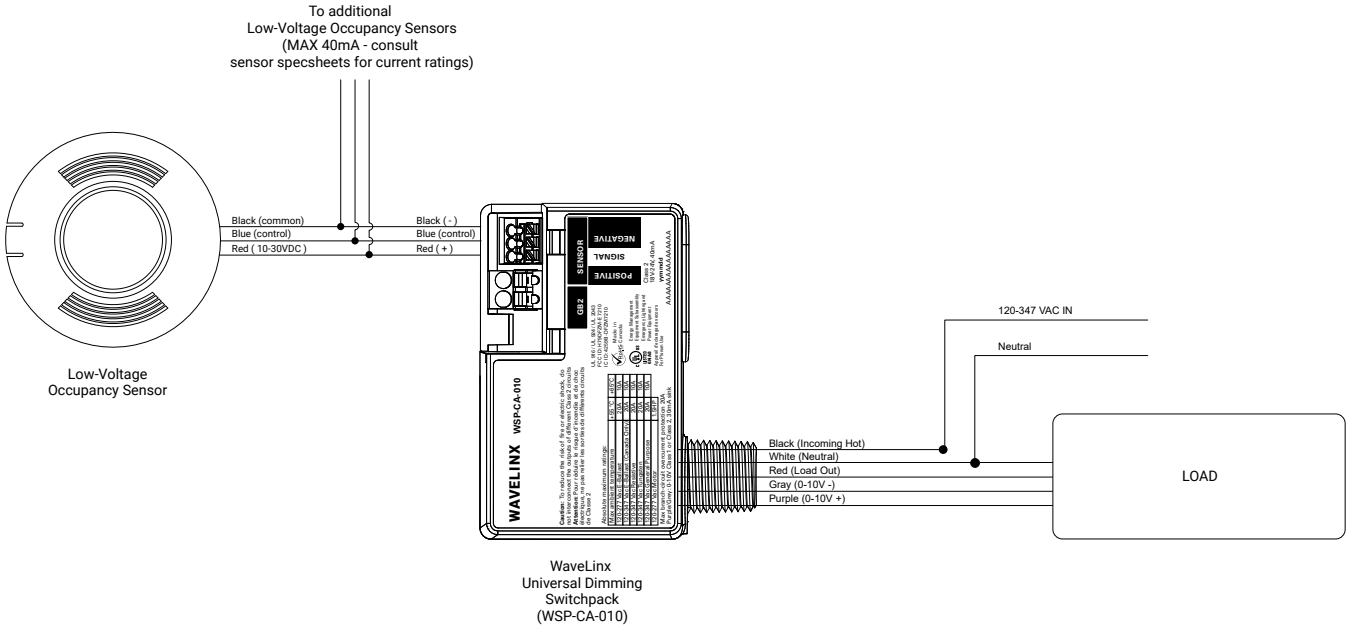

20amp circuit from
circuit breaker
WAVELINX WSP-CA-010
SENSOR
NEGATIVE
SIGNAL
POSITIVE
GB2
Black (Incoming Hot)
White (Neutral)
Red (Load Out)
Purple (0-10V +)
Gray (0-10V -)
White (Neutral)
Switchleg
Purple (0-10V +)
Gray (0-10V -)
To 0-10V Continuous
Dimming 20amp luminaires
WaveLinx
Universal Dimming
Switchpack
(WSP-CA-010)
Junction Box


20amp circuit from
circuit breaker
WAVELINX WSP-CA-010
SENSOR
NEGATIVE
SIGNAL
POSITIVE
GB2
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
WaveLinx
Universal Dimming
Switchpack
(WSP-CA-010)
Junction Box

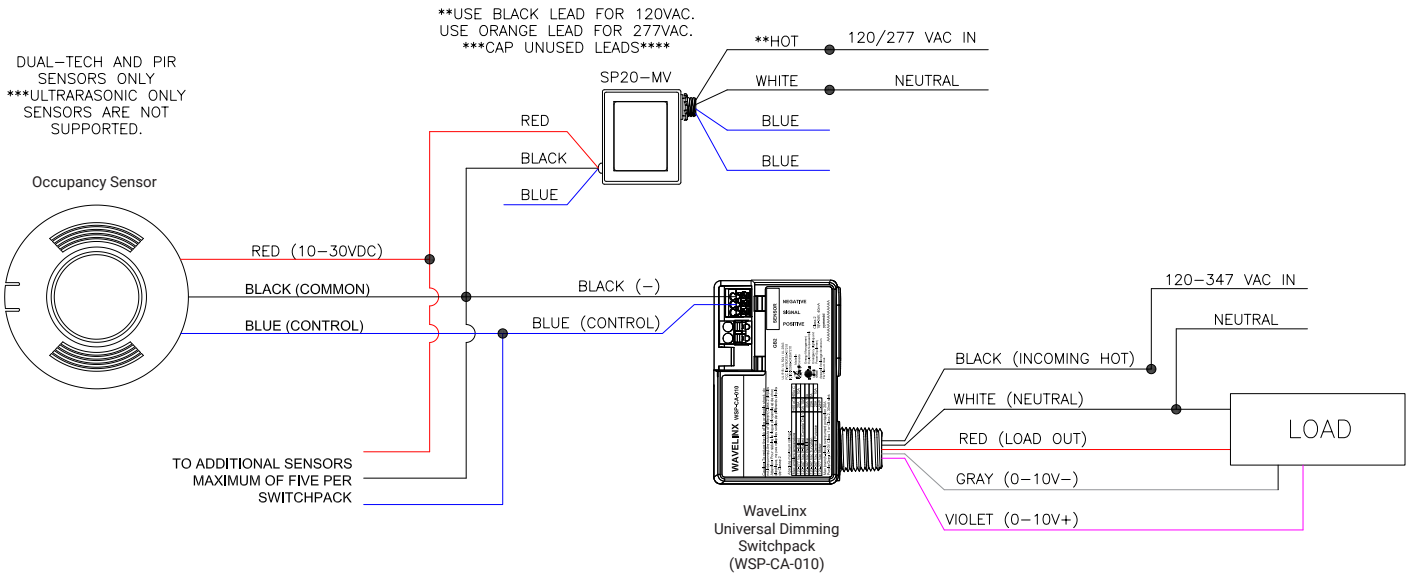
Contact Closure - Single Sensor



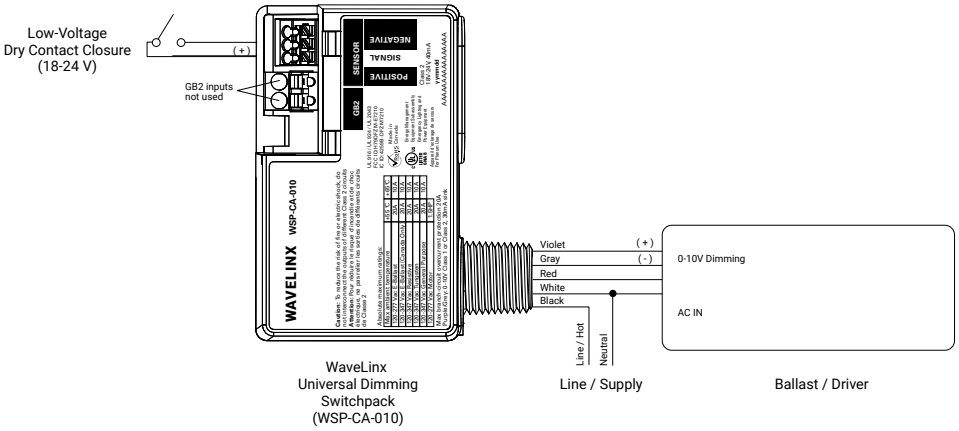
Contact Closure - Multiple Sensors



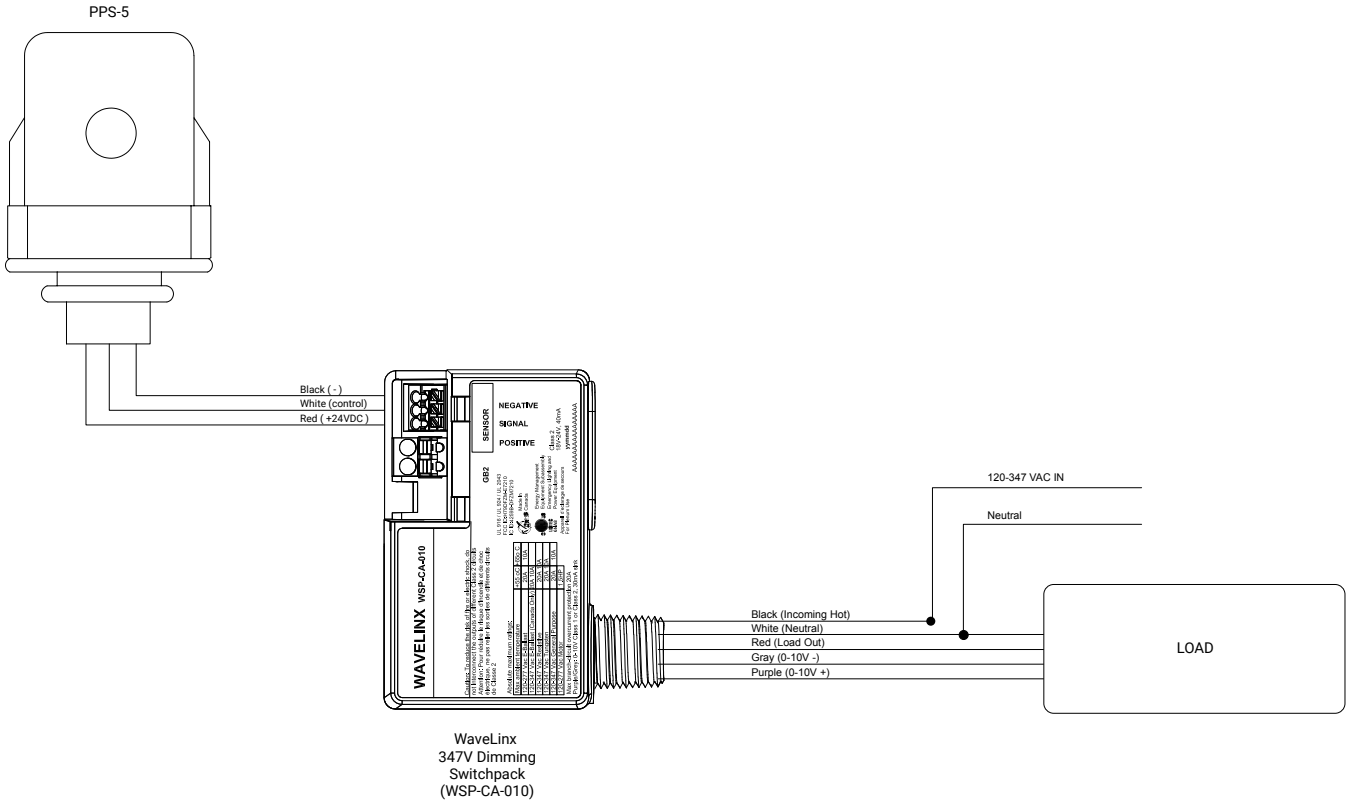
Contact Closure - Sensors Externally Powered



Low-Voltage Dry Contact Closure



Greengate PPS-5 Outdoor Contact Input Photosensor used to drive scene



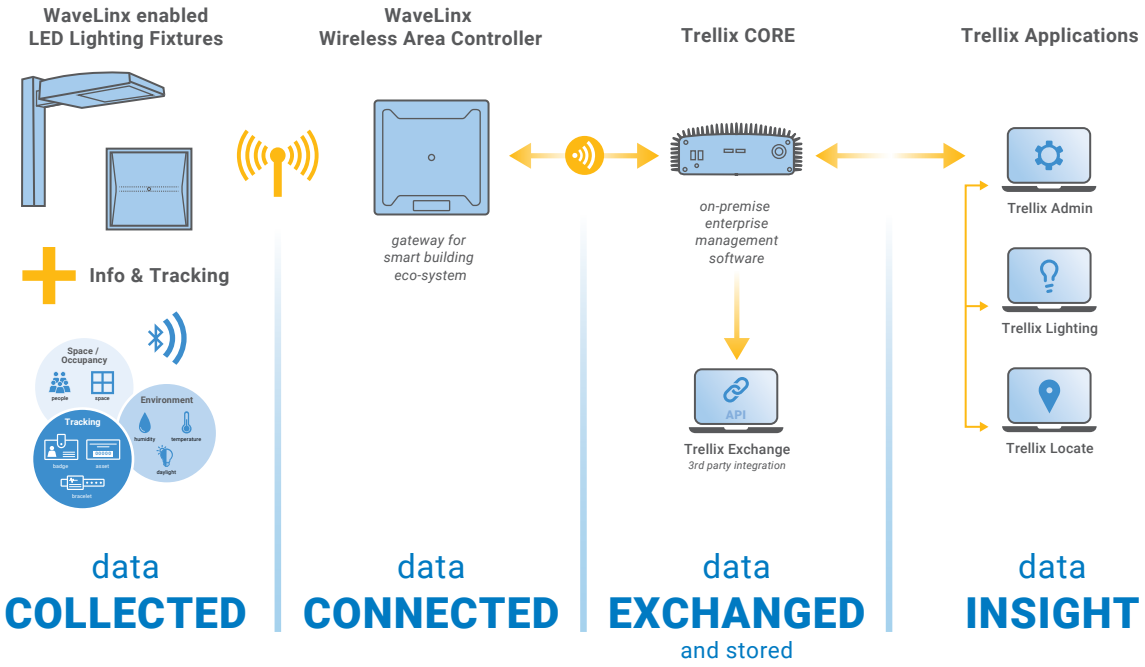
Connected Systems

- Trellix

Better Data. Better Decisions.

Trellix combined with our WaveLinx 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.



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Specifications and dimensions subject to change without notice.