Project		Catalog #		Type	
Prepared by		Notes		Date	

WaveLinx

PRO Ambient Integrated Sensor (OEM-WAA, OEM-WAA-D)

Motion and Closed Loop Daylighting

Typical Applications
Office • Education • Healthcare • Retail

Interactive Menu

Part 15/ECES-003

- Meets latest ASHRAE Standard 90.1 requirements
- Meets latest IECC requirements
- Meets latest CEC Title 24 requirements

Product Features

WaveLinx Mobile App
IEEE 802.15.4
Device Security
Customer Security
Daylighting Control
Occupancy Sensor

Compatibility

WaveLinx PRO

Overview

The WaveLinx PRO integrated sensor is an integral part of the WaveLinx connected lighting system and offers passive infrared (PIR) occupancy and a photocell for closed loop daylighting. WaveLinx PRO ambient integrated sensors offer installation heights 8 to 15 feet and have coverage patterns up to 500 square feet. When part of WaveLinx PRO, the sensor operates on a wireless mesh network based on IEEE 802.15.4 standards.

WaveLinx PRO integrated sensors receive power from the driver or control module with no batteries to replace. The sensor in combination with the WaveLinx Mobile application allows you to gain considerable energy savings from occupancy and daylight sensing lighting control. The WaveLinx Mobile application allows you to map the sensor to any area or control zone, select occupancy or vacancy, occupied and unoccupied light levels and set the hold time.

Product Features & Benefits

- Easily enables 0-10V luminaires to become WaveLinx PRO enabled
- Passive InfraRed (PIR) motion sensor with coverage up to 500 sq-ft
- Integrated photocell for closed loop daylight harvesting
- Software configurable settings with WaveLinx PRO application
- Luminaire junction box or driver compartment connections
- Provides wireless bi-directional communications with WaveLinx PRO system
- Multi-colored LEDs for sensor status and diagnostics

Order Information

WaveLinx PRO Ambient Integrated Sensors enable ambient luminaire to be a part of the WaveLinx connected lighting system and requires a WaveLinx Area Controller (WAC) for full functionality.

WaveLinx PRO Ambient Integrated Sensors are used to provide occupancy and daylight dimming to spaces from the ambient light fixture. For energy code compliance, additional sensors may not be required.

Catalog Number

Catalog #	Description
OEM-WAA	WaveLinx PRO Ambient Integrated Sensor, 8-15ft (2.4-4.6m)*
OEM-WAA-D	WaveLinx PRO Ambient Direct Connection Sensor, 8-15ft (2.4-4.6m)**
Notes For use with indoor ambient light fixtures.	**Notes** When used as a component in the WaveLinx connected lighting system, WaveLinx PRO system design best practices (including WaveLinx Area Controller placement, line of sight distances, number of hops, etc.) must be followed. * OEM-WAA sensor requires **OEM-MSP3IVMVDC1EP** control module and **OEM-WLX-CABLE-054** cable for integration into fixtures. **Requires integration using 0-10v driver with dim-to-off and Aux

Required Integration Components

Catalog Number Catalog Number

Catalog Number	Description
OEM-MSP3IVMVDC1EP	WaveLinx PRO Ambient Control Module
OEM-WLX-CABLE-054	OEM WaveLinx PRO Integrated Sensor Cable 54"

Product Specifications

Key Features

The Integrated Sensor system is an integrated control system that provides occupancy and daylight dimming controls. Daylight dimming is implemented as a closed loop control. The system is a low-cost, out-of-the-box solution to lighting code compliance with the added benefit of personal control after commissioning.

- Occupancy detection
- Continuous daylight dimming
- 0-10 V dimming
- Occupancy sensitivity
- Fresnel lens | coverage

Mechanical

Environment:

- **Operating temperature:** 32°F to 131°F (0°C to 55°C)
- **Storage temperature:** 14°F to 158°F (-10°C to 70°C)
- **Relative humidity operating:** 5% to 95% non-condensing
- For indoor use only

Mounting: Fixture Mount
Mounting Height: 8-15 ft (2.4m - 4.5m)
Color: Matte White facing customer with Black enclosure
Sensor Housing: UV stabilized plastic

Electrical

OEM-WAA Sensor Input Requirements:

- Range input voltage: 12-15 VDC
- Rated input current: 100mA Max
- Rated input frequency: DC

OEM-WAA-D Sensor Input Requirements:

- Range input voltage: 12-24 VDC
- Rated input current: 100mA Max
- Rated input frequency: DC

Control Module Requirements:

- 120/277VAC incoming and switched power
- 10mA 0-10V sink
  (refer to driver specifications to calculate quantity supported)
- 3A LED loads

Sensor Hardware Specifications

OEM-WAA Processor: EFR32MG12P132F1024GM48
OEM-WAA-D Processor: EFR32MG12P132F1024GM48-C
Peripheral Connectivity:UART (2-wire)

Status Indicators:

- Per WaveLinx PRO - see manual
- LED blinks when motion is detected
- White blink means sensor is communicating with a WaveLinx Area Controller
- Green blink may mean one of two things:
  - Sensor is in "out-of-the-box" mode
    (never connected to a WaveLinx Area Controller)
  - Sensor is in "disconnected" mode (cannot find its WaveLinx Area Controller)

Wireless Specifications

Radio: 2.4GHz
Standard: IEEE 802.15.4
Transmitter Power: + 10dBm
Configuration type: Router, End Point
Range: 75ft (25m) LOS
# of Walls: 2 interior walls standard construction

System Performance

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

Standards/Ratings*

- OEM-MSP3IVMVDC1EP - cULus Listed - Energy Management Equipment (UL916)
- FCC Part 15/ECES-003
- Manufactured in an ISO 9001 certified factory
- Meets ASHRAE Standard 90.1 requirements
- Meets IECC 2018 requirements
- Meets CEC Title 24 requirements
- Meets latest ISED OR IC requirements

Product Safety:

- IEC 60950-1
- UL 60950-1
- EN 60950-1
- CAN/CSA-C22.2 No. 60950-1

Environmental Regulations:

- WEEE Directive 2012/19/EU

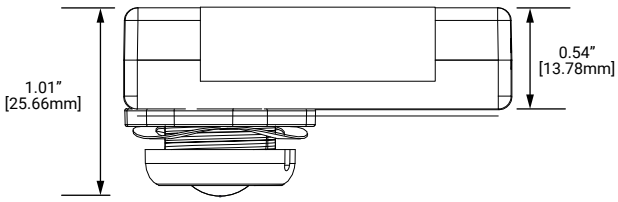
Warranty

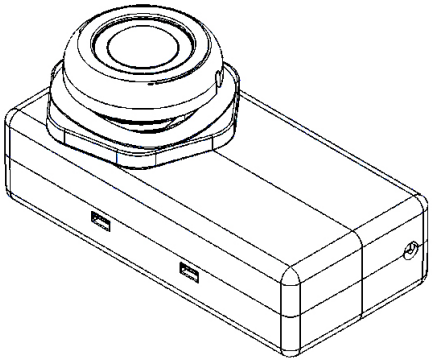
Five year warranty standard

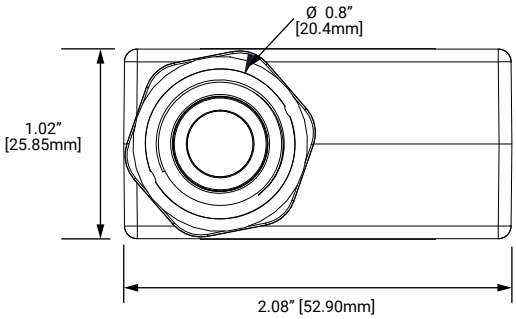
Download the WaveLinx Mobile App from either the Google Play or Apple Store®

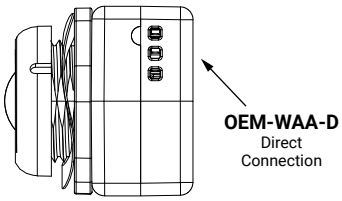
Dimensional Details

OEM-WAA and OEM-WAA-D

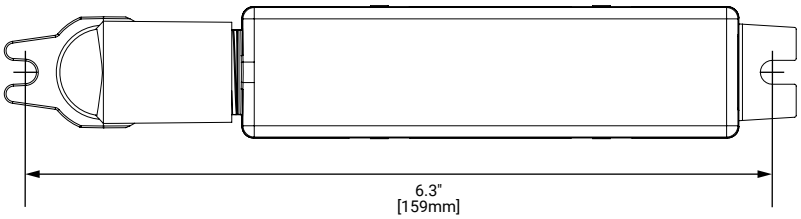


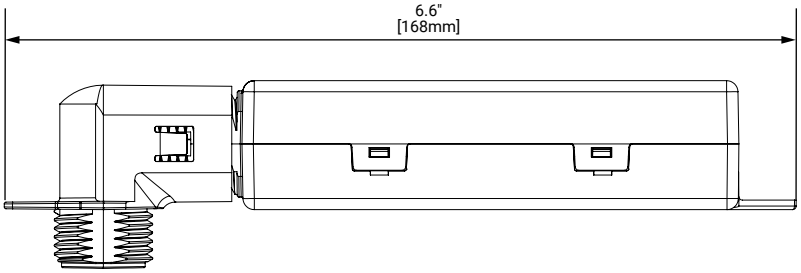


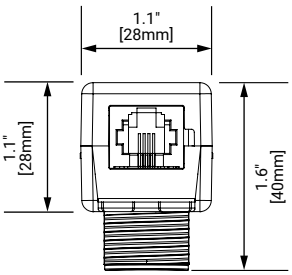




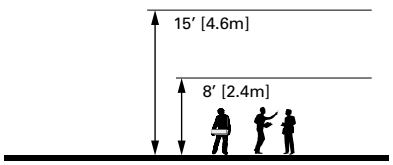
OEM-MSP3IVMVDC1EP







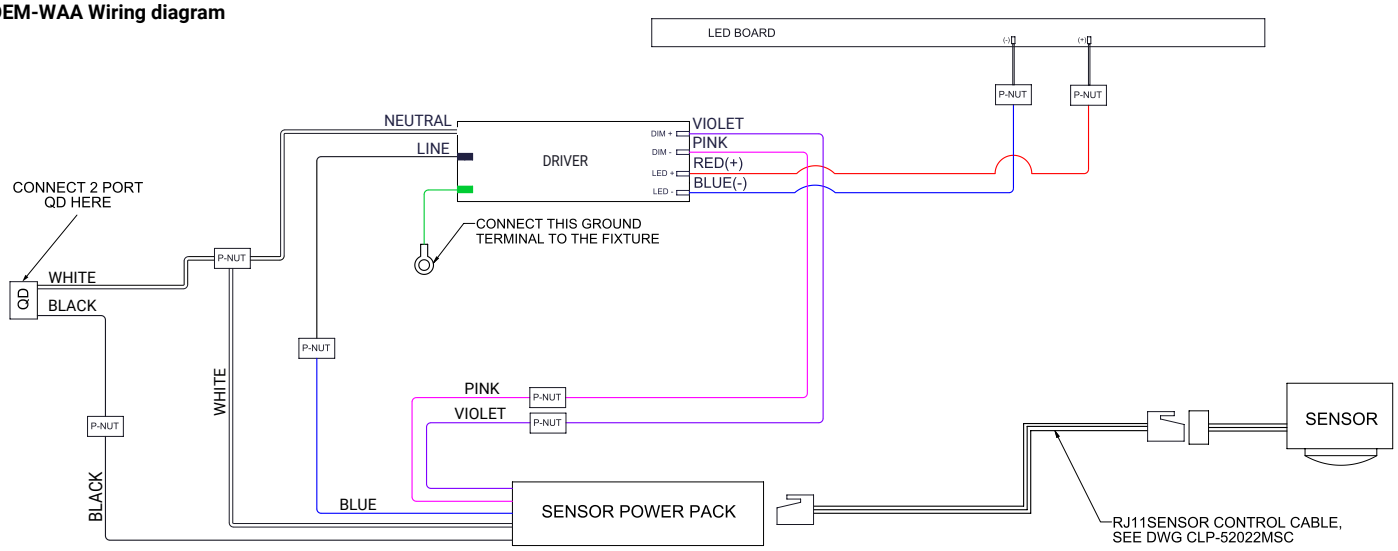
Mounting Height



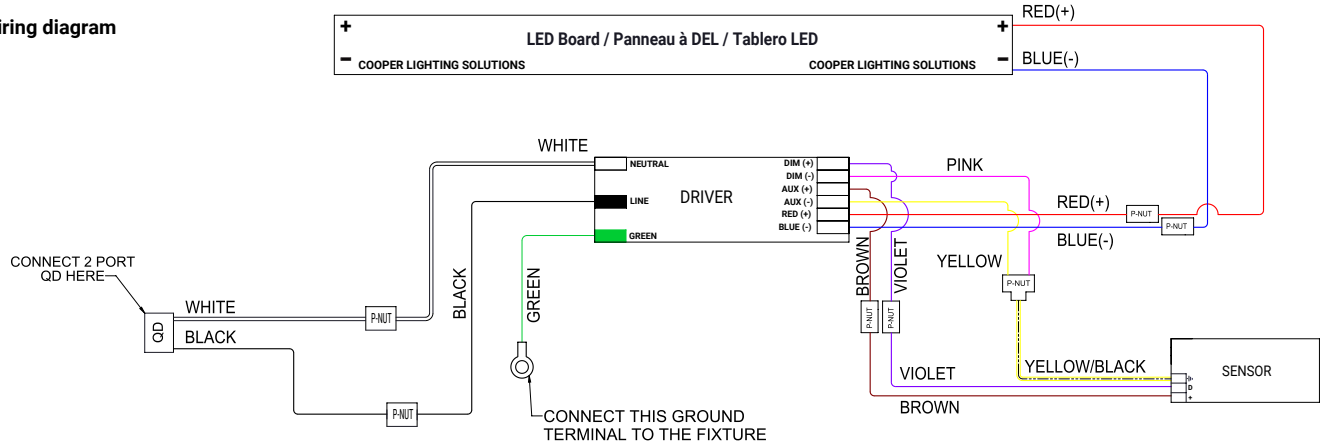
For wiring / installation details:

Wiring Diagram

OEM-WAA Wiring diagram

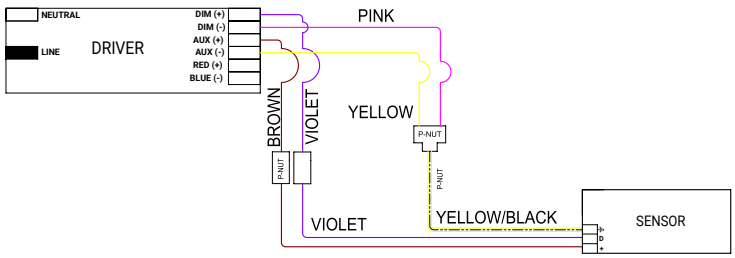


OEM-WAA-D Wiring diagram



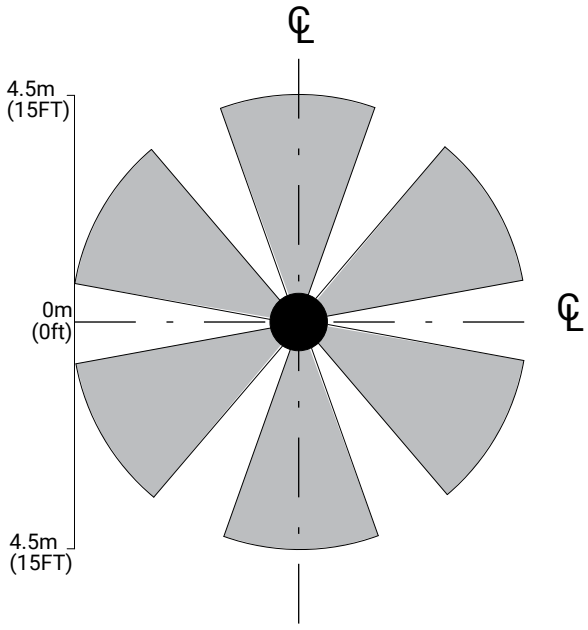
DRIVER TO SENSOR WIRE CONNECTION

DRIVER	SENSOR	WIRE COLOR
DIM +	D	VIOLET
DIM -	GROUND	PINK
AUX -		YELLOW
AUX +	+	BROWN



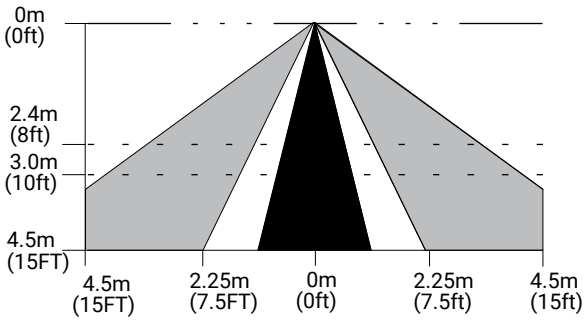
Field of View

TOP VIEW:



Note: The "beam" pattern obtained depends strongly on the detector used with this array. The pattern shown is intended solely as a general guide and is not to scale.

SIDE VIEW:



System Diagram:

This diagram shows the main components of the WaveLinx connected lighting system with WaveLinx DALI, CAT and PRO devices.

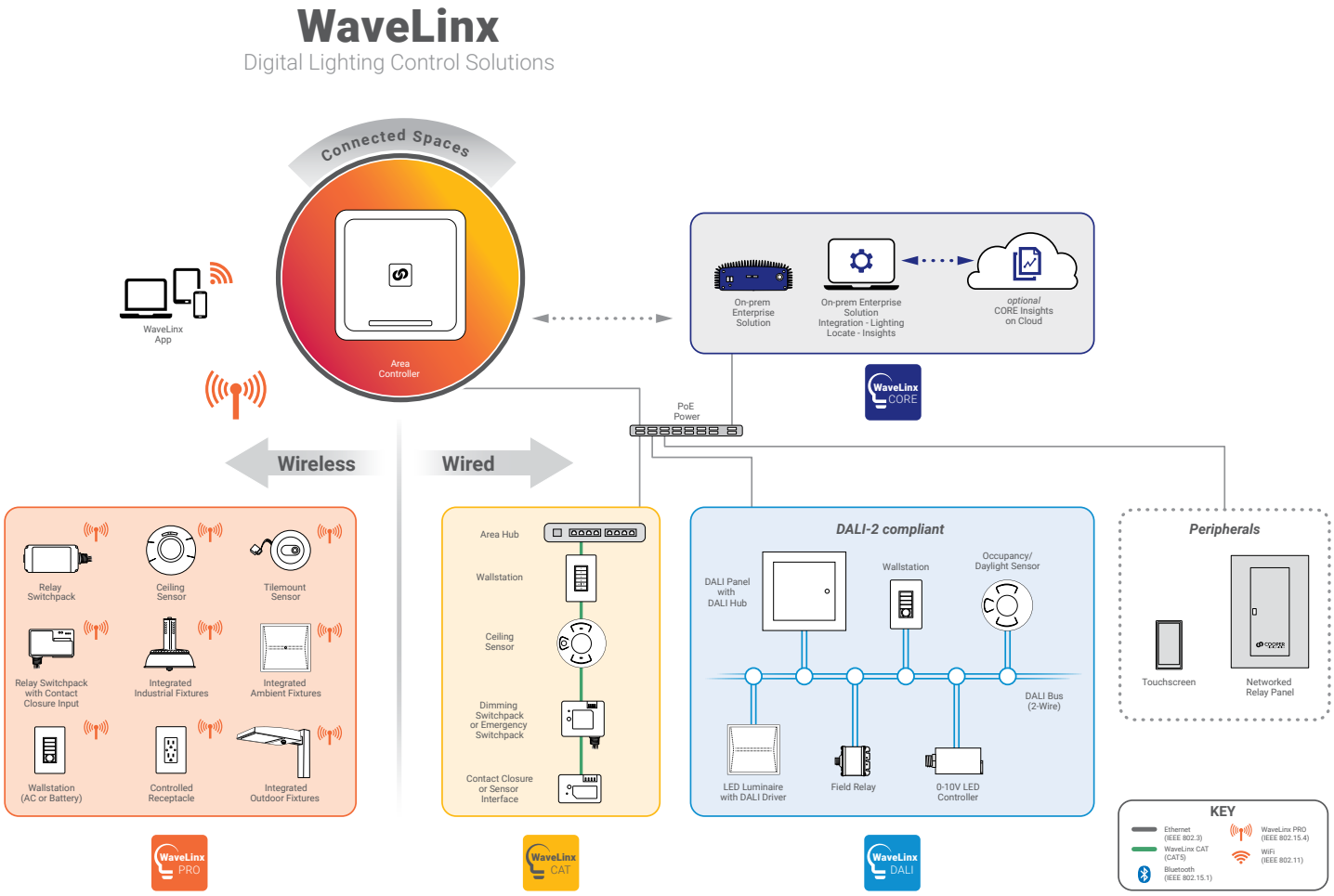
The PRO devices communicate using wireless mesh technology based on the IEEE 802.15.4 standard. A PoE LAN connection for each WaveLinx Area Controller (WAC) is required for power and data access to the building lighting network.

The CAT devices communicate over the category 5 based communication bus and control the light fixtures using a relay (on/off) and 0-10V output (dim/raise).

WaveLinx DALI devices communicate via a DALI bus (2 wires), which connects various components including DALI fixtures, a DALI DAC (DALI to 0-10V converter), DALI field relays, DALI wallstations, and DALI occupancy sensors.

WaveLinx Area Controllers (WAC) communicate with WaveLinx CORE Apps over the Ethernet network.

View WaveLinx Network and IT Guidance Technical Guide



Control Systems

- WaveLinx

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Specifications and dimensions subject to change without notice.