Bluetooth Wireless Lighting Control Solutions

Keilton App

App Store

Google Play

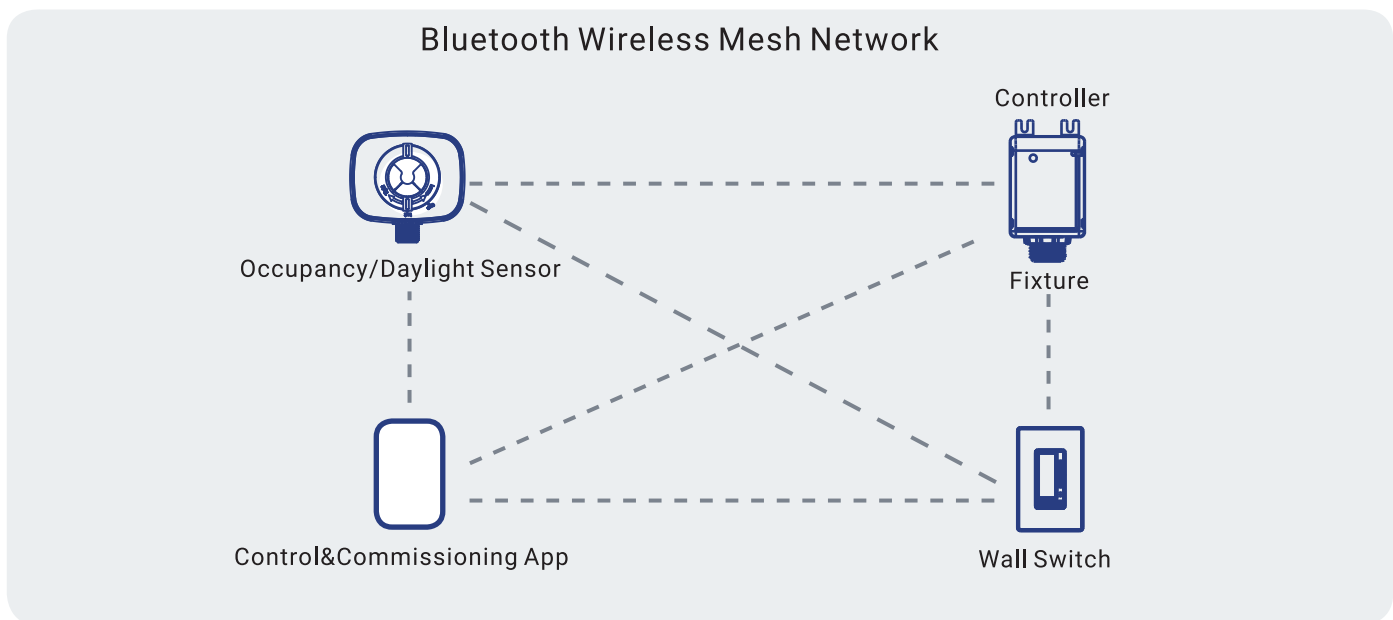Bluetooth®

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Lighting Solutions

Wireless Control Solutions

Bluetooth Mesh Commercial Grade Lighting Control Systems

Affari Lighitng Solutions offers a complete stand-alone wireless system to control lights in a wide variety of applications. The system includes wireless fixture controllers, switches, and occupancy/daylight harvesting sensors all using Bluetooth® wireless technology.In addition to the system devices we also offer a fixture mounted controller and sensor with Bluetooth technology providing wireless communication and occupancy/daylight harvesting control in one device.

Each Bluetooth enabled device is its own wireless node for sending, receiving and sharing control commands through a wireless mesh network. Expandability is easy with each device passing information to the next thus expanding the reach and control throughout the network.

Architecture-Bluetooth Wireless Network

Bluetooth Wireless Mesh Network

Controller

Occupancy/Daylight Sensor

Fixture

Control&Commissioning App

Wall Switch

Simplicity

- Bluetooth wireless technology provides reliability, redundancy, and easy expandability
- Devices communicate over a secure Bluetooth wireless network
- Smartphones with Bluetooth antenna can configure and control lights with the complimentary Keilton App
- Network bridges and onsite internet are not required
- Bluetooth Controller and Sensors are line powered for long term reliability and performance.

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System Functionality

- Networking of luminaires
- Individual Addressability
- Occupancy sensing
- Daylight Harvesting/Photocell Control
- High-end Trimming
- Flexible Zoning
- Continuous Dimming

Devices

Affari Lighting Solutions Lighting Controls Commissioning & Controls App by Keilton

- For Bluetooth enabled iOS or Android smartphone
- Commissioning: Switch on-off, Dimming,
- Colour tunning / Circadian Rhythms (Must work with corresponding drivers and led fixtures)
- Flexible zoning / Scenarios setting / Scheduling
- Wireless wall switch linkage setting
- Occupancy sensor setting, Daylight harvesting, Photocell control
- Admin control authority sharing with QR code

Bluetooth Controller

PPA102S   FA102   WPPA102

- Converts fixtures into wirelessly controlled luminaires
- Provides individual or multi-fixture control
- ON/OFF (relay) and 0-10v dimming control of the fixture(s)
  through a Bluetooth Switch or App

Models	Input	Technique	Installation
PPA102S	120-277V AC / 3Amps	Single / Dual Channel	External
FA102	12V DC	Single Channel	Internal
WPPA102	12V DC	Single Channel	External

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Devices

Bluetooth Wall Switches

WP1025

- Fingertip control over lights in defined zones
- Linkable with One / Multiple zones, 5-buttons
- Switch on-off, Dimming
- Support switching prestored three scenarios
- Faceplates included

Models	Input
WP1025	Wireless, powered by 2pcs CR2032 battery

Bluetooth-mesh Motion & Daylight Harvesting Sensor External Installation

EFS104   EFS107   IFS105

- Provides automated individual and group control of light fixtures
- Occupancy (PIR) and daylight harvesting sensor
- ON/OFF/0-10V dimming
- 40' coverage radius on 40' ceiling

Models	Input	Application	Installation
EFS104	120-277V AC / 5Amps	High bay sensor	External
EFS107	Powered by 12-24V DC or PPA103S	Ceiling mount	External
IFS105	Must Powerd by PPA102S, zone control	Ceiling mount	External

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Devices

EFS106   IFS108   IFS105S/SE   IFS105E   MWS105

**Prefered Fixture
Integrated Bluetooth
Controller & Sensor**

• Achieve all functionalities as EFS104/EFS107

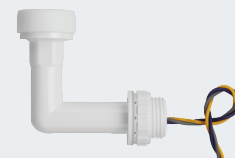| Models	Input	Technique	Application
EFS106	12V DC / 3.5mm Audio Plug-in	Bluetooth mesh, PIR&Daylight harvesting	Linear, UFO highbay, wall pack area light
IFS108	12V DC / integrated	Bluetooth mesh, PIR&Daylight harvesting	Panel, troffer, super thin fixtuers
IFS105S /SE	12V DC / integrated	Bluetooth mesh, PIR&Daylight harvesting	Mini size, fit into various luminaires
IFS105E	Must Powerd by FA102	PIR&Daylight harvesting	Mini size, fit into various luminaires
MWS105	Must Powerd by Fa102	Microwave&Daylight harvesting	Mini size, fit into various luminaires

Accessories

PPA103S	RC01	SC01	SC02
12V Power Pack EFS107	**ACCESSORIES EFS07/EFS107**	**RECEPTACLE FOR EFS06R/EFS106 1/2" KO**	**EXTENDER EFS06R/EFS106**

Bluetooth

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Applications

- Office
- Retail
- Industrial
- Healthcare
- Education
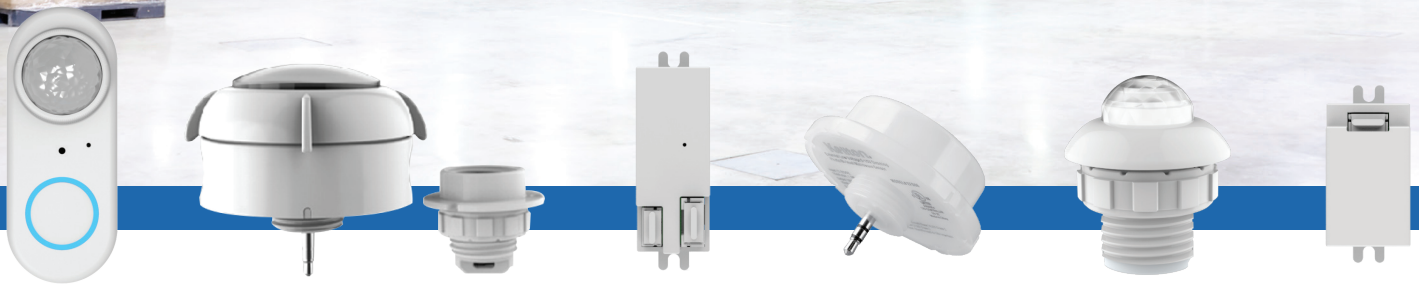
Fixture integrated IoT sensor and controller OEM Guide

Luminaire level lighting controls

Add functionality and Iot readiness to your luminaires with an easy to install system

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Maximize lighting performance, increase occupant satisfaction

Luminaire level sensor and controller are designed to be integrated directly into luminaires. These Luminaire Level Lighting Controls can be deployed as independent occupancy and daylight fixture sensors, or easily networked with controllers using the Keilton App for room, area, or floor lighting controls. The devices are part of Affari Lighitng BLE family of networked lighting controls solutions. This allows them to communicate with other wireless switches, sensors, and load controllers and our wired Dialog system for building-wide advanced lighting controls strategies.

IFS108   EFS106

ASHRAE 90.1 Compliant

By incorporating the same technology in both small and large systems, Affari Lighitng Solutions products specially designed to support small individual offices or to easily scale up to large commercial spaces, delivering compatibility, reliability, and commonality to the entire facility.

IFS108 installed in the standard troffer

Features
- Sensor and sensor-less models for cost effective scalability
- Two 0-10V channels to support standard and tunable white LED drivers
- DIM-to-OFF for effective dimming and energy efficient functionality
- UL2043 capabilities without any additional wiring
- Small form factor to fit into standard ½ inch electrical knockouts
- Bluetooth wireless technology for security and reliability
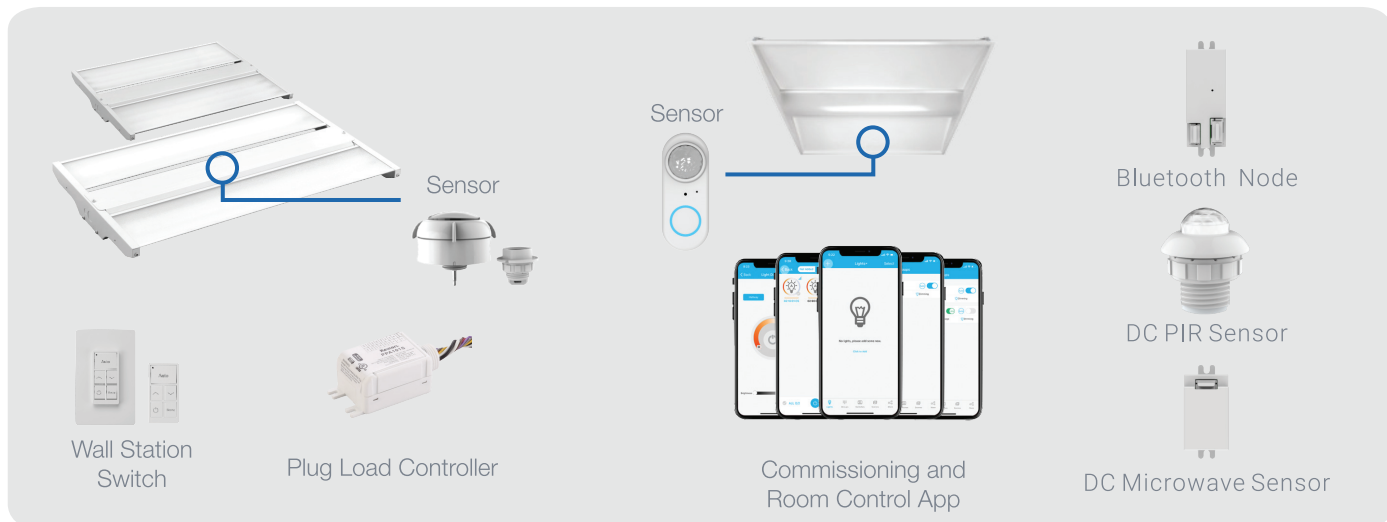- Bluetooth beacons for IoT and location services strategies
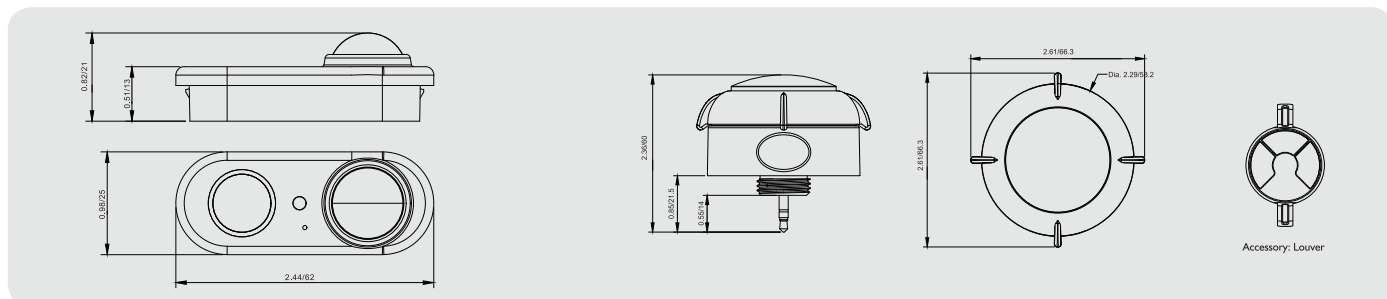
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Overview

Affari Lighitng Solutions fixture sensor and controller support single and dual channel 0-10V dimming LED drivers and are powered by the driver's 12VDC auxiliary power output. They are designed to fit directly into standard ½" electrical knockouts and are networked using Bluetooth WirelessTechnology. The system is commissioned and configured via a free app on the iTunes App Store and Google Play Store (Keilton). This app uses the on-board Bluetooth Technology on the ¡OS product to configure and commission the devices and system. 1FS108 and EFS106 are also part of our wireless lighting control ecosystem which includes load controllers, occupancy/daylight sensors, and wall switches, each using Bluetooth communication technology. The Keilton Bluetooth system ¡is Title 24 compliant. It can provide all the necessary control schemes for Occupancy (Occupancy, Vacancy, Partial ON, Partial OFF), Primary £Secondary Daylight Harvesting, and Demand Response.

Bluetooth Lighting Control Ecosystem

Sensor

Sensor

Bluetooth Node
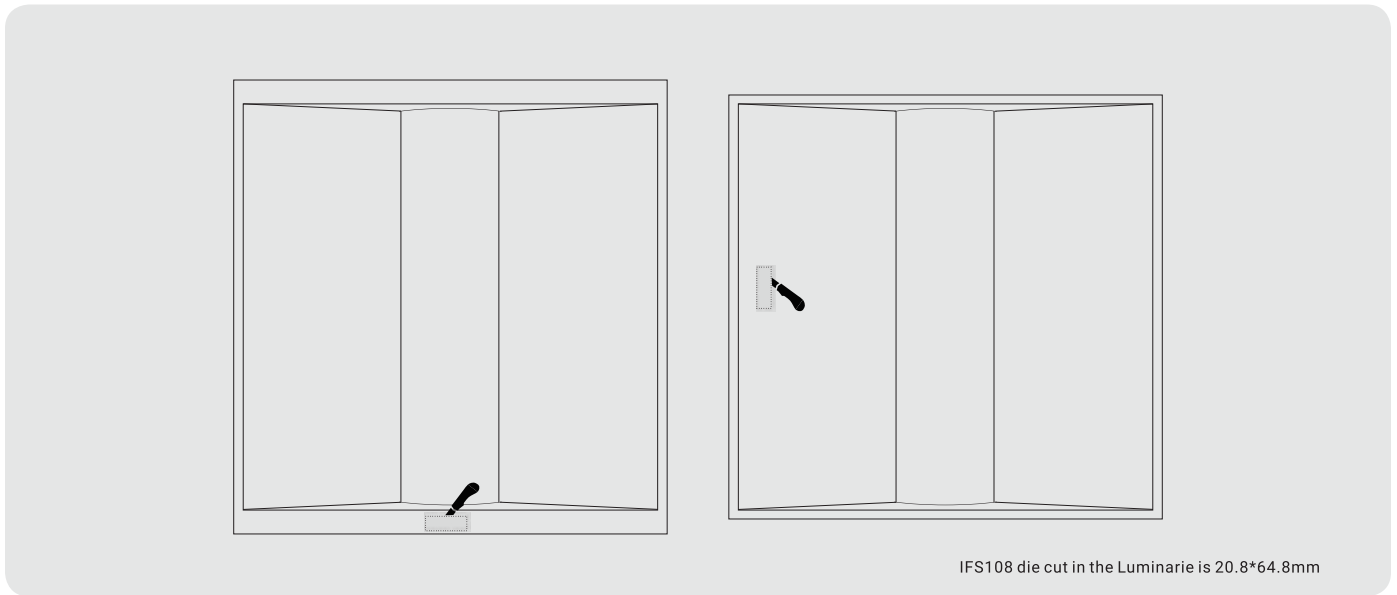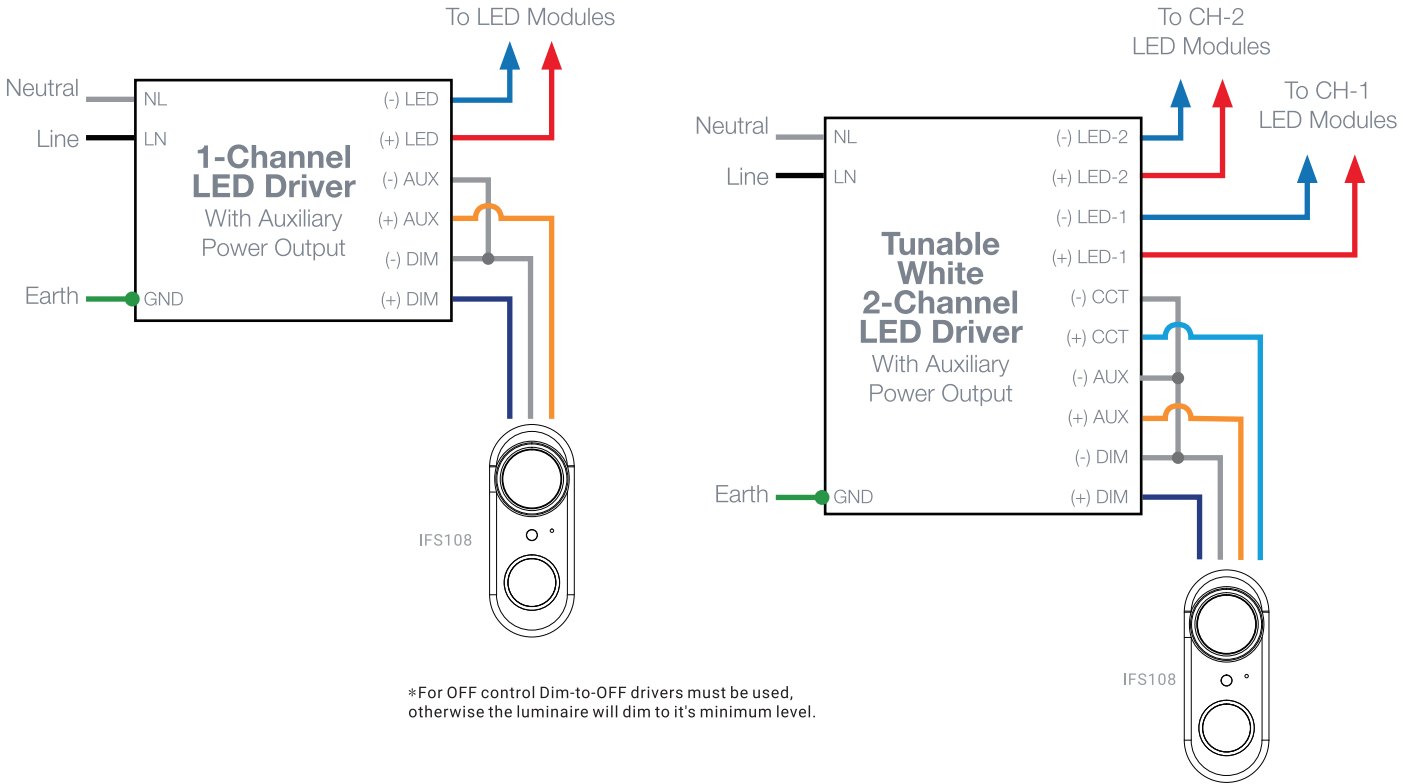
DC PIR Sensor

Wall Station Switch

Plug Load Controller

Commissioning and Room Control App

DC Microwave Sensor

Design, Dimensions, Specifications

Accessory: Louver

FIXTURE INTEGRATED BLUETOOTH CONTROLLER & SENSOR			
Models	**Input**	**Technique**	**Application**
EFS106	12V DC / 3.5mm Audio Plug-in	Bluetooth mesh, PIR&Daylight harvesting	Linear, UFO highbay, wall pack, area light
IFS108	12V DC / integrated	Bluetooth mesh, PIR&Daylight harvesting	Panel, troffer, super thin fixtuers
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KEILTON LIGHTING CONTROLS DC 12V BLUETOOTH NODE			
Models	**Input**	**Technique**	**Application**
FA102	12V DC	Bluetooth Node, power IFS105E / MWS105	Mini size, fit into various luminaires
WPPA102	12V DC / 3.5mm Audio Plug-in	Bluetooth Node, linkable with EFS106	Linear, UFO highbay, wall pack, area light
WIRELESS RANGE	• 100ft clear line of sight • Distances may vary based on location and environment • Additional devices may be required at time of commissioning to ensure Bluetooth network integrity		
ENVIRONMENT	• Indoor stationary, non-vibrating, non-corrosive atmosphere, and non-condensing humidity • Operation temperature 32°F to 131°F（0°C to 55°C) • Storage temperature -40°F to 140°F（-40°C to 60°C)		
DIMMING	• Two 0-10 Dimming channels, each capable of sinking up to 30mA • Typical use is with single channel 0-10V LED driver providing aux output power and dim-to-off capability • May also be used with dual-channel, tunable white LED drivers providing aux output power and dim-to-off capability		
CERTIFICATIONS	• Ul2043 (Plenum), UL FLTJ rated • May be installed through a knockout in the luminaire wiring enclosure or installed external to the enclosure and power with Class 2 circuit using Class 2 wiring method		
WARRANTY	• Standard 5-year warranty		

Wiring

Devices are positioned in luminaires and wired directly to LED drivers for power and control commands (see our Design-in Guide for installation information).

To LED Modules

Neutral — NL	(-) LED
Line — LN	(+) LED
1-Channel LED Driver With Auxiliary Power Output	(-) AUX
	(+) AUX
	(-) DIM
Earth — GND	(+) DIM

IFS108

*For OFF control Dim-to-OFF drivers must be used, otherwise the luminaire will dim to it's minimum level.

To CH-2 LED Modules

To CH-1 LED Modules

Neutral — NL	(-) LED-2
Line — LN	(+) LED-2
	(-) LED-1
Tunable White 2-Channel LED Driver With Auxiliary Power Output	(+) LED-1
	(-) CCT
	(+) CCT
	(-) AUX
	(+) AUX
	(-) DIM
Earth — GND	(+) DIM

IFS108

IFS108 die cut in the Luminarie is 20.8*64.8mm

Die Cut for IFS108 in troffer.

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Lighting Solutions

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