Surface Mount Sensor

enlighted

The Enlighted Surface Mount Sensor is designed for indoor applications with high ceilings such as warehouses, atriums, and manufacturing facilities. Integrated sensors capture data that is both processed locally and transmitted over the Enlighted network, enabling a full suite of applications. In addition, the sensor supports Bluetooth® Low Energy communication with tags and other BLE devices.

OVERVIEW

The Surface Mount Sensor is a complete sensing and lighting control node powered from its attached light fixture. Sensor information combined with a configurable behavior profile makes the Surface Mount Sensor an integral component of an intelligent lighting control and sensing solution. With integrated wireless communications for data transmission and remote configuration as well as autonomous fixture-level control, this sensor brings advanced lighting automation to a whole new level.

FEATURES AND BENEFITS

Enlighted Sensor Interface (ESI): IoT Ready™ LED drivers and Enlighted Control Units communicate with the sensor directly via a serial interface. The ESI provides access to device information, energy consumption, and digital lighting control.

Localized Lighting Control: Light-level schedules, preferences, and behavior profiles for each fixture are wirelessly communicated during system setup and locally stored to ensure continuous operation.

Edge Sensing: Local processing capability supports advanced sensing and detection algorithms, providing optimization of existing features and enabling future applications.

Bluetooth Low Energy: An embedded BLE radio allows the sensor to receive and transmit beacons as well as support communication with lighting control devices and other sensors.

Occupancy and Thermal Sensing: A digital Passive Infrared (PIR) sensor combined with separate ambient and temperature sensing support precise motion identification while minimizing false detection events.

Tunable White: Dual channel control supports tunable white fixtures, enabling color transitions based on time of day or user control.

Daylight Harvesting: Captured ambient light information is locally processed to raise and lower light levels based on available daylight.

Room and Zone Control: Pairs with room control switches for code-compliant manual-on or auto-off capability. Sensors can be grouped into zones that share occupancy sensing data and coordinate light control based on detected motion.

IoT Sensing Node: When configured as an IoT Node, the sensor streams comprehensive live data for use with Enlighted's real-time location and analytics software applications. This option is available directly from the factory or as a remote upgrade.

Standards-Based Networking and Security: The Enlighted 802.15.4 wireless network with AES-128 encryption delivers secure, reliable communication that coexists with Wi-Fi networks by sensing low-traffic channels and transmitting in bursts.

Driver Compatibility: Dimming and on/off control signaling for standard 0-10V ballasts and drivers in LED and fluorescent fixtures.

The Enlighted Surface Mount Sensor

L	3.46"	88 mm
W	3.46"	88 mm
H	1.18"	30 mm

ENLIGHTED SPECIFICATION SUBMITTAL

Job Name:

Job Number:

Product Codes:

- ☐ SU-5S-H-IoT
- ☐ SU-5S-H-CL
- ☐ SU-CL-IoT-UPG
- ☐ CPL-RJ45
- ☐ CBL-RJ45-RJ45-7F
- ☐ BTTN-SU-2-00
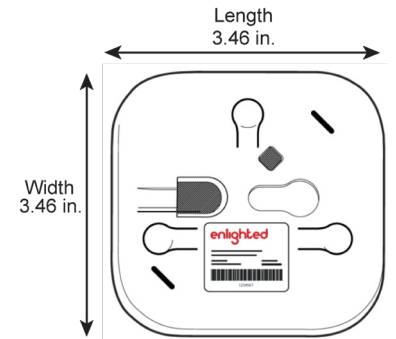- ☐ BRKT-SU-2-00

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MOUNTING

The Surface Mount Sensor comes with a nylon threaded screw for mounting in acoustical tile or drywall ceilings. Pendant button mount and flat metal bracket mount options are available separately.
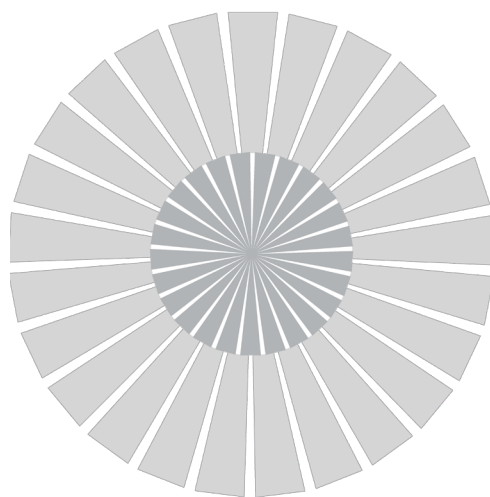
SENSOR COVERAGE PATTERNS

The Enlighted Surface Mount Sensor incorporates an optical Fresnel lens that works with the digital Passive Infrared (PIR) sensor to detect occupancy and motion. The multifaceted lens focuses light onto the PIR to produce an all-encompassing field of view through aggregation of many narrow fields of view. When the Surface Mount Sensor is deployed as recommended, the area covered by each sensor overlaps, reinforcing coverage and accuracy across the entire floor plan.
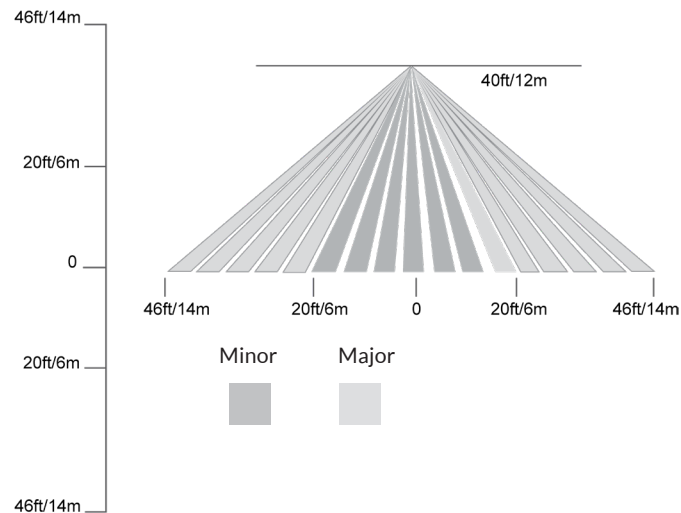
Length 3.46 in.
Width 3.46 in.

Ceiling Height	Minor Motion (Radius)	Major Motion (Radius)
20 ft/6 m	10 ft/3 m	23 ft/7 m
40 ft/12 m	20 ft/6 m	46 ft/14 m

Top View

Side View

Minor Major

TECHNICAL SPECIFICATIONS

Motion Sensing: Digital Passive IR

Photosensor: Light Pipe/Photosensor Array

Enclosure: Recyclable ABS

Type: Closed Loop Light Sensor

Operating Temp: 32° to 122° F/0° to 50° C

Radio Frequency: 2400–2483.5 MHz

Wireless Protocol: IEEE 802.15.4

Wireless Range: 150 ft. (46 m) radius open range

Encryption: AES-128

Max. Install Height: 50 ft/15.25 m

Bluetooth 4.0 Low Energy (BLE):
Operating Frequency: 2400–2483.5 MHz
IEEE Standard: 802.15.1

ORDERING INFORMATION

SU-5S-H-IoT	Surface Mount IoT Sensor
SU-5S-H-CL	Surface Mount Connected Lighting Sensor
SU-CL-IoT-UPG	Connected Lighting to IoT Sensor Upgrade
CPL-RJ45	Female RJ45 Coupler
CBL-RJ45-RJ45-7F	7 foot Sensor Cable for CU-4 and IoT Ready™ drivers
BTTN-SU-2-00	Pendant Button Mount
BRKT-SU-2-00	Bracket Mount

COMPLIANCE

Europe CE RoHS REACH

United States FC UL LISTED

Canada c UL LISTED

Warranty: 5 years
View www.enlightedinc.com/limited-warranty-terms for complete terms and conditions