

Ruggedized Sensor

SPECIFICATION

The Enlighted Ruggedized Sensor is designed for outdoor applications, parking structures, and damp or wet locations that require a sensor with an IP65 rating. 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 Ruggedized Sensor is a complete sensing and lighting control node powered from its attached light fixture. Sensor information combined with a configurable behavior profile make the sensor an integral component of an intelligent lighting control and sensing solution. With integrated wireless communications for data transmission and remote configuration along with 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, transmit beacons and 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.

Data Privacy: The sensor captures occupancy data in the sensor coverage area. The sensor cannot directly reference or identify any natural person.

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



The Enlighted Ruggedized Sensor

Dia.	3.54"	90.0 mm
H	1.16"	29.5 mm

ENLIGHTED SPECIFICATION SUBMITTAL

Job Name:

Job Number:

Product Codes:

SU-5S-HRW-IoT

SU-5S-HRB-IoT

SU-5S-LRW-IoT

SU-5S-LRB-IoT

SU-5S-HRW-CL

SU-5S-HRB-CL

SU-5S-LRW-CL

SU-5S-LRB-CL

SU-CL-IoT-UPG

CPL-RJ45

CBL-RJ45-RJ45-7F

Ruggedized Sensor

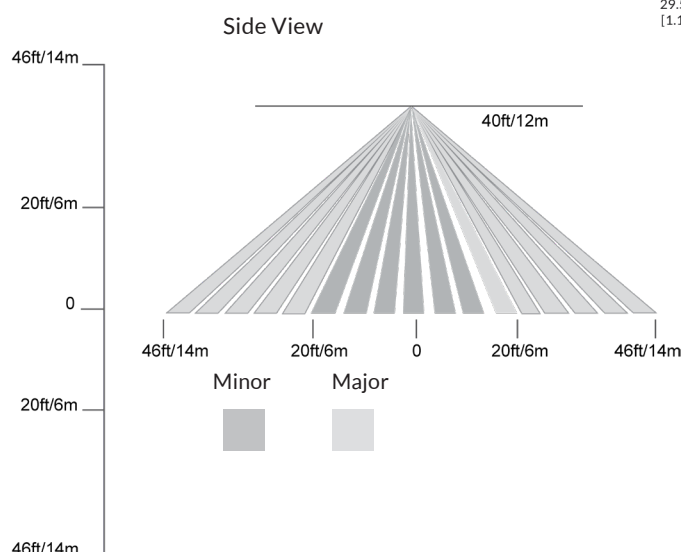
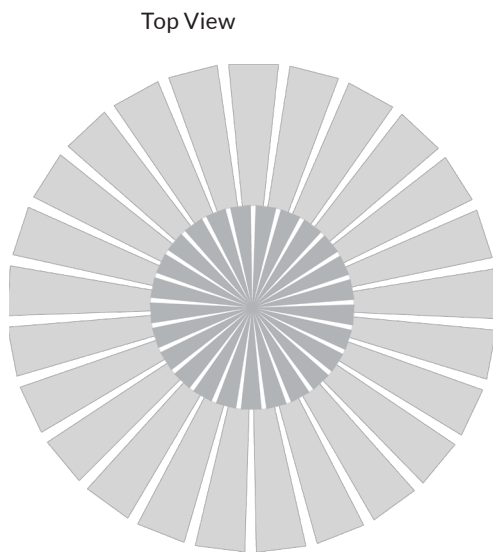
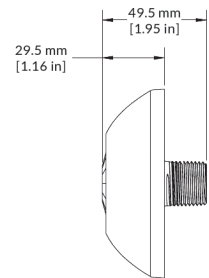
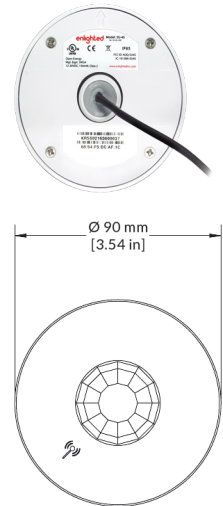
MOUNTING

The Ruggedized Sensor installs into a standard 1/2 inch fixture knockout. A permanently attached 22 inch cable with an RJ-45 connector must be fed through the opening before the sensor is secured via a threaded locknut provided with the sensor.

SENSOR COVERAGE PATTERNS

The Enlighted Ruggedized 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. Two lens options are offered to cover standard (<18 ft.) and high-bay (up to 50 ft.) ceilings. When the Ruggedized Sensor is deployed as recommended, the area covered by each sensor overlaps, reinforcing coverage and accuracy across the entire floor plan.

Ceiling Height	Minor Motion (Radius)	Major Motion (Radius)
12 ft/3.5 m	8 ft/2.5 m	20 ft/6 m
40 ft/12 m	20 ft/6 m	46 ft/14 m



TECHNICAL SPECIFICATIONS

Motion Sensing: Digital Passive IR
Photosensor: Light Pipe/Photosensor Array
Enclosure: UV Stabilized Polycarbonate
Type: Closed Loop Light Sensor
Operating Temp: -31° to 185° F / -35° to 85° C
Radio Frequency: 2400–2483.5 MHz
Wireless Protocol: IEEE 802.15.4
Wireless Range: 150 ft. radius (46 m) radius open-range
Encryption: AES-128
Cable: 22" (559 mm) RJ-45 connector
Max. Install Height: High Bay 50 ft/15.25 m
 Standard 18 ft/5.4 m

Bluetooth 4.0 Low Energy (BLE):

Operating Frequency: 2400–2483.5 MHz
 IEEE Standard: 802.15.1

ORDERING INFORMATION

SU-5S-HRW-IoT	High Bay IoT Sensor (White)
SU-5S-HRB-IoT	High Bay IoT Sensor (Bronze)
SU-5S-LRW-IoT	Standard IoT Sensor (White)
SU-5S-LRB-IoT	Standard IoT Sensor (Bronze)
SU-5S-HRW-CL	High Bay Connected Lighting Sensor (White)
SU-5S-HRB-CL	High Bay Connected Lighting Sensor (Bronze)
SU-5S-LRW-CL	Standard Connected Lighting Sensor (White)
SU-5S-LRB-CL	Standard Connected Lighting Sensor (White)
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

COMPLIANCE

Europe
 United States
 Canada

WARRANTY: 5 years
www.enlightedinc.com/limited-warranty-terms
 provides complete terms and conditions.