

# Ruggedized Sensor

8-pin

## SPECIFICATION

The Ruggedized Sensor, 8-pin, 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. The sensor supports Bluetooth<sup>®</sup> Low Energy communication with tags and other BLE devices.

### OVERVIEW

The Ruggedized Sensor, 8-pin, 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<sup>™</sup> 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 using linear dimming curve for in LED and fluorescent light fixtures.



Ruggedized Sensor, 8-pin

Dia.	3.54"	90.0 mm
H	1.16"	29.5 mm

### ENLIGHTED SPECIFICATION SUBMITTAL

Job Name:	<input type="text"/>
Job Number:	<input type="text"/>
Product Codes:	<input type="checkbox"/> SU-5S-HRW-[IoT/CL/IL]
	<input type="checkbox"/> SU-5S-HRB-[IoT/CL/IL]
	<input type="checkbox"/> SU-5S-LRW-[IoT/CL/IL]
	<input type="checkbox"/> SU-5S-LRB-[IoT/CL/IL]
	<input type="checkbox"/> HCMC-SU-5E
	<input type="checkbox"/> SU-CL-IoT-UPG
	<input type="checkbox"/> SU-IL-IoT-UPG
	<input type="checkbox"/> CPL-RJ45
	<input type="checkbox"/> CBL-RJ45-RJ45-7F
	<input type="checkbox"/> CBL-RJ45-5W-7F
	<input type="checkbox"/>

# Ruggedized Sensor

## 8-pin

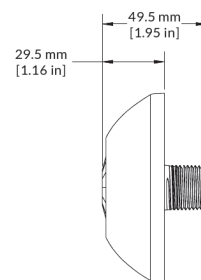
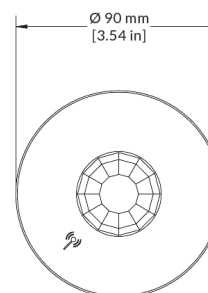
### MOUNTING

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.

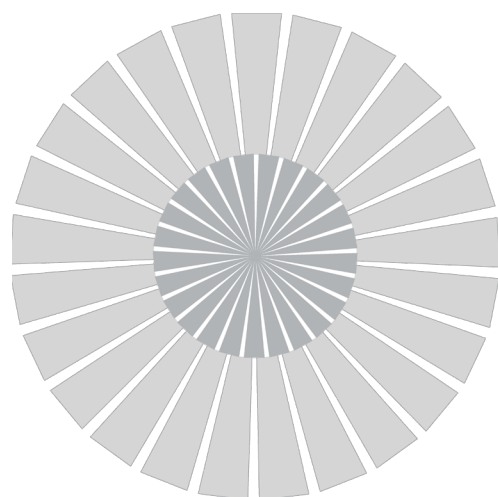
### SENSOR COVERAGE PATTERNS

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.

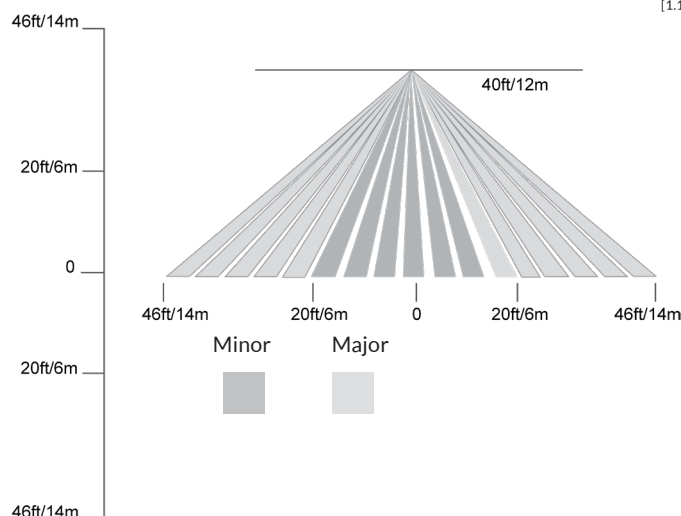
Ceiling Height	Minor Motion (Radius)	Major Motion (Radius)
12 ft/3.5 m	8 ft/2.5 m	20 ft/6 m
40 ft/12 m	20 ft/6 m	46 ft/14 m



Top View



Side View



### 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  
**Power Consumption:** 200 mW Max, 12-30 V  
**Cable:** 22" (559 mm) RJ-45 connector  
**Max. Install Height:** High Bay 50 ft/15.25 m  
 Standard 18 ft/5.4 m  
**Wireless Standards:** IEEE 802.15.4  
 Bluetooth 4.0 Low Energy (BLE)  
 Radio Frequency: 2400-2483.5 MHz  
 Wireless Range: 150 ft. (46 m) radius open range  
 Encryption: AES-128  
**Two Dimming Outputs:** 10mA source/sink each

### ORDERING INFORMATION

SU-5S-HRW-xxx\* Ruggedized High Bay, 8-pin, White  
 SU-5S-HRB-xxx\* Ruggedized High Bay, 8-pin, Bronze  
 SU-5S-LRW-xxx\* Ruggedized Standard, 8-pin, White  
 SU-5S-LRB-xxx\* Ruggedized Standard, 8-pin, Bronze  
 (\*see Product codes)  
 HCMC-SU-5E Hard Ceiling Mount Carrier  
 SU-CL-IoT-UPG Connected Lighting to IoT Sensor Upgrade  
 SU-IL-IoT-UPG Independent 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  
 CBL-RJ45-5W-7F 7 foot Profile 0 Driver Cable

### COMPLIANCE

Europe   
 United States   
 Canada

**WARRANTY:** 5 years  
[www.enlightedinc.com/limited-warranty-terms](http://www.enlightedinc.com/limited-warranty-terms)  
 provides complete terms and conditions.

**\*Product Codes:** xxx  
 IoT= IoT Node  
 CL= Connected Lighting  
 IL= Independent Lighting/Enlighted One

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