Ruggedized Sensor, 2-wire
SU-5S-2W-xRx

€ Enlighted

The Enlighted Ruggedized Sensor, 2-wire, supports direct connection to 2-wire compatible drivers. The 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, 2-wire, 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

2-Wire Driver Compatibility: The sensor is easily connected to compatible LED drivers, simplifying installation, reducing wiring errors, and providing plug-and-play capabilities. Compatible LED drivers include DALI drivers with an external or integrated Power Supply Unit (PSU).

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: Compatible with DALI Type 8 dual-channel drivers to support tunable white fixtures, enabling color temperature 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.

Ruggedized Sensor, 2-wire

Dia.	3.54"	90.0 mm
H	1.16"	29.5 mm

ENLIGHTED SPECIFICATION SUBMITTAL

Job Name:

Job Number:

Product Codes:

☐ SU-5S-2W-HRW-[IoT/CL]

☐ SU-5S-2W-LRW-[IoT/CL]

☐ SU-5S-2W-HRW-FL

☐ SU-5S-2W-LRW-FL

☐ SU-CL-IoT-UPG

☐ HCMC-SU-5E

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Ruggedized Sensor, 2-wire
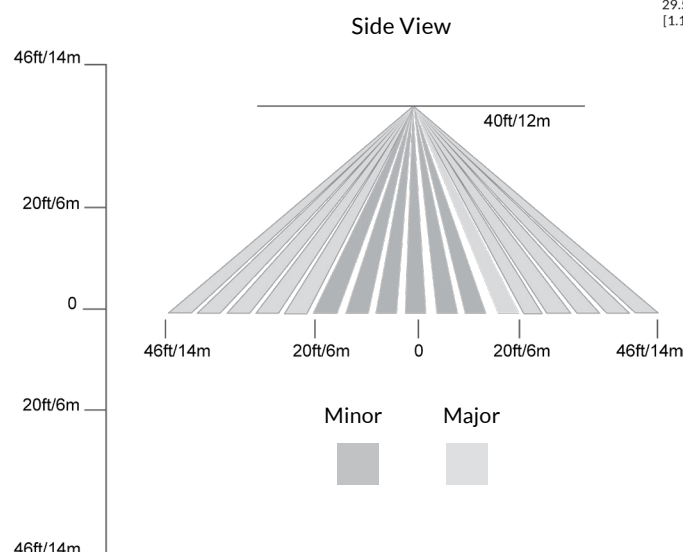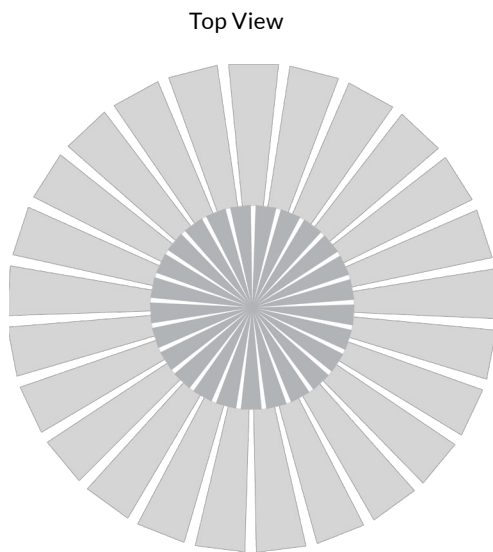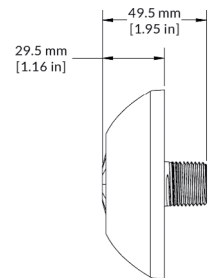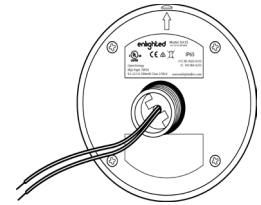## SU-5S-2W-xRx

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MOUNTING

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

SENSOR COVERAGE PATTERNS

The 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 2-Wire Ruggedized Sensor is deployed as recommended, the area covered by each sensor overlaps, reinforcing coverage and accuracy across the entire floor plan.

Ø 90 mm
[3.54 in]

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

49.5 mm [1.95 in]

29.5 mm [1.16 in]

Top View

Side View

46ft/14m

20ft/6m

0

20ft/6m

46ft/14m

40ft/12m

46ft/14m   20ft/6m   0   20ft/6m   46ft/14m

Minor   Major

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
Operating Humidity: 0 to 100% RH
Cable: 22" (559 mm) two-wire cable
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

ORDERING INFORMATION

SU-5S-2W-HRW-xxx*	Ruggedized High Bay, 2-wire, White
SU-5S-2W-LRW-xxx*	Ruggedized Low Bay, 2-wire, White
SU-5S-2W-HRW-FL	Ruggedized High Bay, 2-wire, White, Fixtureless
SU-5S-2W-LRW-FL	Ruggedized Low Bay, 2-wire, White, Fixtureless
SU-CL-IoT-UPG	Connected Lighting to IoT Sensor Upgrade
HCMC-SU-5E	Hard Ceiling Mount Carrier

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COMPLIANCE

Europe

United States

Canada

CE REACH

FC UL LISTED

c UL LISTED

DLC QPL LISTED

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

* Product codes: xxx
CL = Connected Lighting
IoT = IoT Node
Learn more about Connected Lighting and IoT options.