

Two-wire Compact Sensor (CS-D2)

SPECIFICATION

The Enlighted Two-wire Compact Sensor's small form factor and flush mount design enables the sensor to blend into its surroundings while it monitors occupancy, daylight, and temperature. The sensor incorporates digital PIR occupancy, ambient light sensing, daylight harvesting, and environment monitoring. The sensor also includes a Bluetooth 4.0 BLE radio for beaconing. Data is transmitted wirelessly to the Enlighted network management system.



OVERVIEW

Designed for indoor lighting applications, the Enlighted Two-wire Compact Sensor features onboard intelligence. The device can be mounted inside a fixture or into the ceiling, leaving only the sensor face visible, making it an ideal choice for maintaining aesthetics. The 18 AWG solid copper wiring between the sensor and a compatible LED driver simplifies installation and provides plug and play capabilities. With a durable wireless antenna, digital motion, photocell, and temperature sensing, the sensor enables autonomous fixture-level control, bringing advanced lighting controls to a whole new scale.

FEATURES AND BENEFITS

Localized Control: Local microprocessor and memory in each sensor enable a sequence of operations at the fixture, eliminating dependence on any other network component once system setup is completed. Fixtures can operate without an active Gateway or Energy Manager ensuring no single point of failure.

Software-Driven: Light-level schedules, preferences and behavior settings definable for each fixture are saved in the sensor's local memory as a software profile. Profiles are wirelessly communicated to sensors during system setup and can be easily modified when desired.

Occupancy Sensing: Digital PIR detection is supplemented with data from the ambient light sensor for precise detection of changes in the coverage area and minimized false tripping.

Bluetooth 4.0 Low Energy (BLE): Incorporates a BLE radio and broadcasts beacons. Beacons can be turned on or off using the Enlighted Energy Manager.

Manual-on/Vacancy Sensing: When paired with the wireless Enlighted Room Control (WS-2-00), the sensor acts as a vacancy sensor providing code-compliant manual-on/auto-off capability.

Daylight Harvesting: An ambient light sensor captures light level data from the coverage area. The sensor then interprets this data and transmits code-compliant control commands to the LED driver to raise and lower light levels based on available daylight.

Thermal Sensing: Reports the ambient temperature at the sensor location.

Zone Control: Sensors can be grouped into zones, thereby allowing multiple fixtures to share occupancy sensing data and respond simultaneously to occupant motion patterns in specific building areas.

Full Reporting Functions: Local occupancy, power consumption, light levels, and temperature data collection compatible with Enlighted's control network enable deep, insightful reporting and analytics.

Standards-Based Networking and Security: Adhering to the 802.15.4 wireless protocol, transmitting in bursts and appropriately selecting low-traffic channels, the Enlighted wireless network reliably coexists with Wi-Fi networks. AES-128 encryption provides robust data security.

Simple and Low-Cost Installation: Single wiring connection in fixture only with no other above ceiling wiring required. One sensor-per-fixture approach simplifies the installation process.

The Enlighted Two-wire Compact Sensor

Body	L	2.24"	56.8mm
	Dia.	.82"	20.8mm
Bezel	Dia.	1.26"	32.0mm

ENLIGHTED SPECIFICATION SUBMITTAL

Job Name:

Job Number:

Product Code:

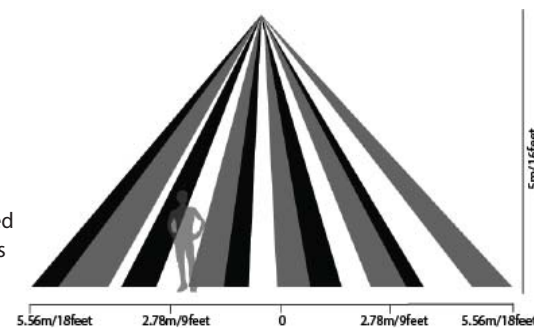
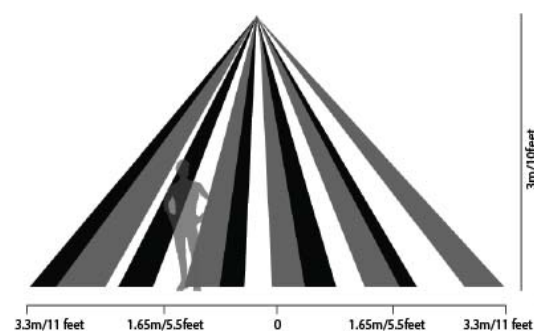
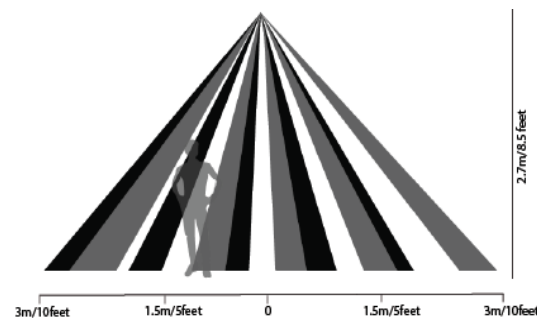
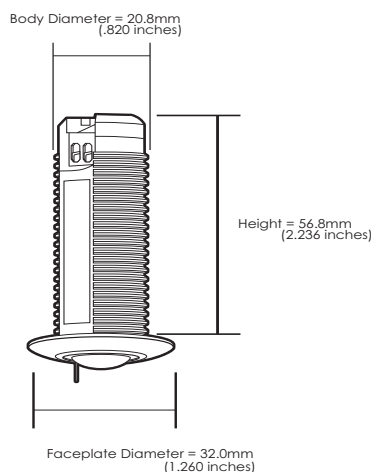
CS-D2

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MOUNTING

The Enlighted Two-wire Compact Sensor is designed to be easily mounted into lighting fixtures or ceiling tiles so that only the discrete paintable white faceplate is visible.

To mount the sensor in a lighting fixture, just insert the sensor through a 1/2 inch trade size knockout or 8.75 inches (22mm) hole. Thread the Enlighted spring arms (not pictured) around the back of the sensor to fasten it in place inside the fixture. To mount the sensor through a ceiling tile, thread the spring arms around the sensor and insert the sensor through a 15/16th inch hole in the tile. The spring arms hold the sensor in place—no access to the back of the tile is required.



SENSOR COVERAGE PATTERNS

The Enlighted Two-wire Compact Sensor uses infrared technology to detect occupancy. The human body emits heat as infrared light. The sensor incorporates a multifaceted lens to focus this light on to a passive infrared detector (PIR). Using patented algorithms, the Enlighted Compact Sensor analyzes the PIR's output and determines if a person is present.

The Enlighted Two-wire Compact Sensor produces an all-encompassing Field of View (FOV) by aggregating many repeated narrow FOVs. For the typical 8.5 feet ceiling, motion can be detected at about a 10 feet radius. For a 10 feet ceiling, motion can be detected at about an 11 feet radius and for a typical 16 feet ceiling, motion can be detected at about 18 feet radius.

TECHNICAL SPECIFICATIONS

- Motion Sensing: Digital Passive IR
- Photosensor: Light Pipe/Photosensor Array
- Enclosure: ABS/Polycarbonate blend
- Type: Closed Loop Light Sensor
- Enclosure: ABS/Polycarbonate blend
- Operating: 32° to 122° F / 0° to 50° C
- Radio Frequency: 2400–2483.5 MHz
- Bluetooth 4.0 Low Energy (BLE):
 - Operating Frequency: 2400–2483.5 MHz
 - IEEE Standard: 802.15.1
 - Broadcasting Interval: Configurable
- Wireless Protocol: IEEE 802.15.4
- Wireless Range: 150 ft. (46m) radius in free space field

ORDERING INFORMATION

CS-D2 Enlighted Two-wire Compact Sensor

COMPLIANCE

- Europe CE RoHS REACH
- United States FCC LISTED
- Canada cUL LISTED

Warranty: 3 years

Bluetooth® is a registered trademark of Bluetooth SIG, Inc.