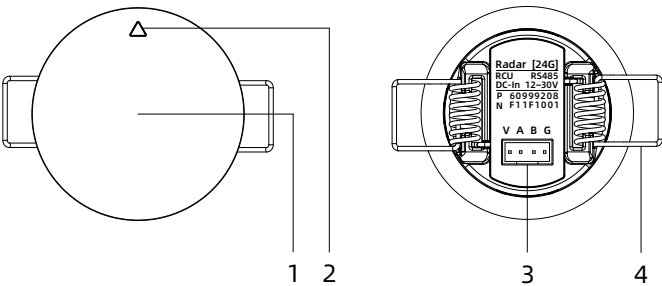


ECO-24G-485

The ECO-24G-485 is a professional-grade 24GHz mmWave presence sensor specifically engineered for high-precision occupancy management in smart hotel environments. Utilizing advanced FMCW (Frequency Modulated Continuous Wave) radar technology, the device detects subtle human presence—including micro-motions and breathing—eliminating the limitations of traditional PIR sensors. As a core component of the hotel "3+1" energy-saving solution, it facilitates stable, wired communication via an industrial RS485 bus to provide real-time occupancy data, optimizing both guest comfort and operational efficiency.



Interface



1. Radar Sensing Surface
2. Orientation Marker
3. Wiring Terminal (PH 2.0 mm 4-Pin)
4. Spring Clip

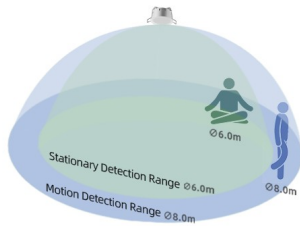
Features

- Accurately identifies motion, micro-motion, and Presence.
- Sensitivity and detection distance can be adjusted independently.
- Supports parameter configuration and status readout via IR remote control.
- Indicator LED indicator defaults to OFF; configurable to Breathing or Night Light modes.
- Powered by a proprietary module with advanced signal processing algorithms.

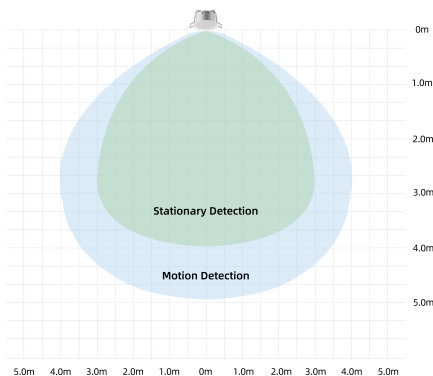
Specifications

Communication Type	RS485
Input Voltage	DC 12 to 30 V
Power Consumption	0.5 W (Max)
Indicator Light	LED
Detection Mode	24GHz FMCW Radar
Operating Frequency	24.00 to 24.25 GHz
Transmit Power	≤ 10 dBm
Installation Method	Recessed Ceiling Mount
Mounting Height	2.0 to 4.0 m
Detection Angle	360°
Detection Coverage	Installation at 3.0 m Height: ① Motion & Micro-motion: Detection diameter at least 8.0 m ② Stationary Presence: Detection diameter at least 6.0 m
Detection Range	1.5 to 8.0 m (sensor to target)
Sensitivity	0 to 100%
Delay Time	1 to 3,600 seconds
Product Size	Φ43 mm × 25 mm
Cutout Size	Φ35 mm
Product Weight	18 g
Cable Assembly	UL1007 22AWG Cable Length: 150 mm
Operating Temperature	Indoor -20 to 45°C
Operating Humidity	< 95% RH (Non-condensing)
Storage Temperature	-40 to 85°C
Protection Level	IP20
Housing Material	PC

Detection Range

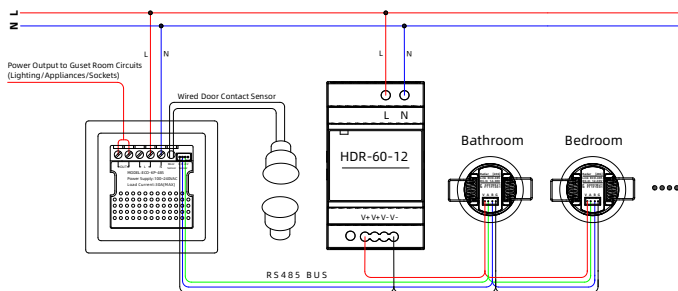


Front View



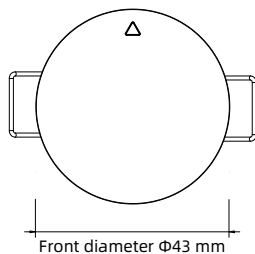
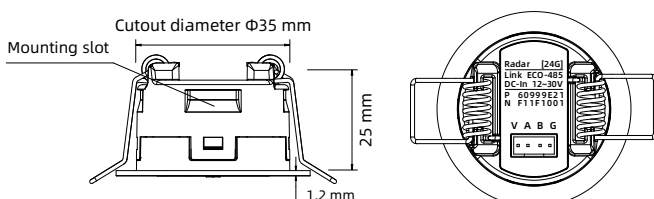
Side View

Wiring Diagram



Dimensions

The product features an outer diameter of 43 mm and a depth of 25 mm, requiring a 35 mm cutout. Designed for recessed installation, it is also compatible with optional kits for surface mounting, wall mounting, or external installation via a universal bracket.

Front diameter $\Phi 43$ mm

Installation Notes

Interference Avoidance: Avoid installing near constantly moving objects (e.g., curtains, plants) or large reflective surfaces (e.g., metal ducts, mirrors) to minimize false alarms or unintended triggering.

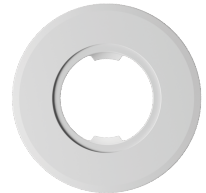
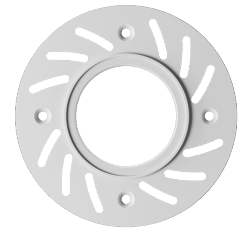
Device Spacing: Maintain a minimum distance of 4 m between multiple sensors to prevent mutual interference.

Mounting: Ensure the installation surface is vibration-free. Note that radar signals can penetrate non-metallic surfaces; avoid moving objects directly behind the installation wall/ceiling.

Wiring Safety: Disconnect power before wiring. Use certified cables and ensure the circuit includes appropriate short-circuit and overload protection.

Disclaimer: Product specifications are subject to change without prior notice for improvement purposes. Please follow all wiring diagrams strictly. The manufacturer is not liable for issues caused by improper installation.

Available Accessories

Remote Controller
(60.99.00C1)Cover Ring
(60.99.0A55)In-wall Mounting 86 Panel Frame
(60.99.0A86)Borderless Embedded Parts
(60.99.0A40)Surface Mounting Socket
(60.99.0A50)Surface Mounting Universal Bracket
(60.99.A360)

Ordering Information

P/N	Short Name	Model	Remarks
60.99.9E21	ECO-24G-485	CTL-SEN-Mini/9E21	White (Default)
60.9B.9E21	ECO-24G-485/B	CTL-SEN-Mini/9E21B	Black
60.99.00C1	RC1	RC1	Accessory
60.99.0A55	Mini-ASSY-55	A55	Accessory
60.99.0A86	Mini-ASSY-86	A86	Accessory
60.99.0A40	Mini-ASSY-BL	A40	Accessory
60.99.0A50	Mini-ASSY-CYL	A50	Accessory
60.99.A360	Mini-ASSY-360	A360	Accessory