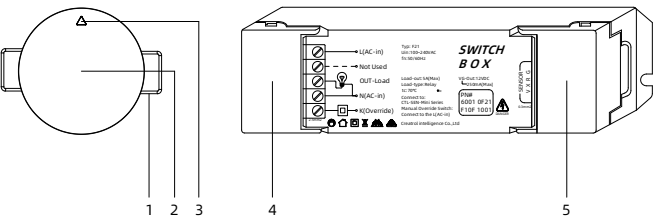


Mini-24G-TYZ/S1+

The CTL-SEN-Mini/2216.F21 is a compact, high-precision presence sensor powered by advanced 24GHz FMCW mmWave technology. Designed for discreet, premium applications, it features a miniature form factor (Φ35 mm cutout) while offering a detection diameter of up to 8.0 m. It integrates a high-precision lux sensor (0–32,000 Lux) for advanced lighting automation.



Interface



1. Spring Clip
2. Radar Sensing Surface
3. Orientation Marker
4. Power Connection Port (AC 100 to 240 V)
5. Sensor Wiring Terminal (PH 2.0 mm 4-Pin)

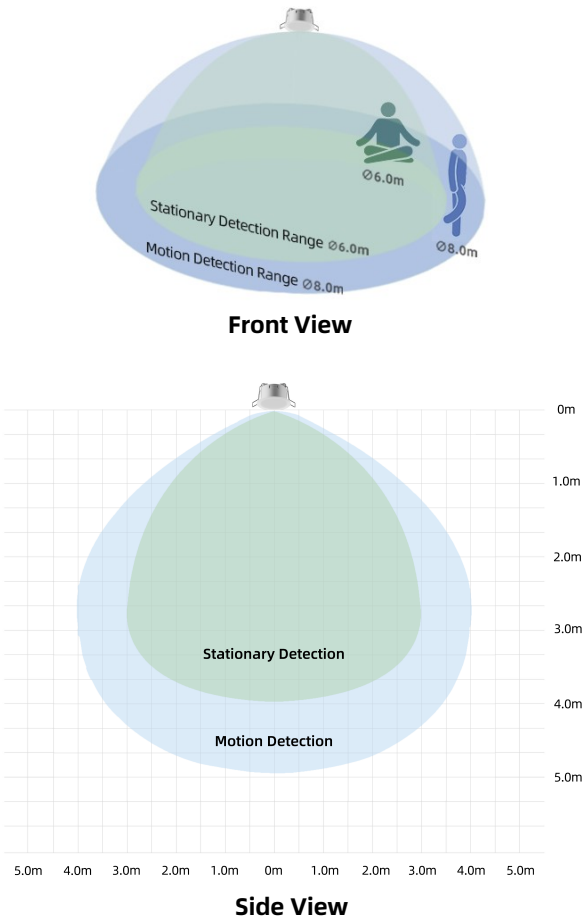
Features

- Accurately identifies motion, micro-motion, and Presence.
- Sensitivity and detection distance can be adjusted independently.
- Integrated high-precision sensor for accurate indoor illuminance monitoring.
- Features 1 relay output
- Adjustable lighting threshold.
- Supports parameter configuration and status readout via IR remote control.
- Indicator LED brightness automatically adjusts to ambient light levels.
- Powered by a proprietary module with advanced signal processing algorithms.

Specifications

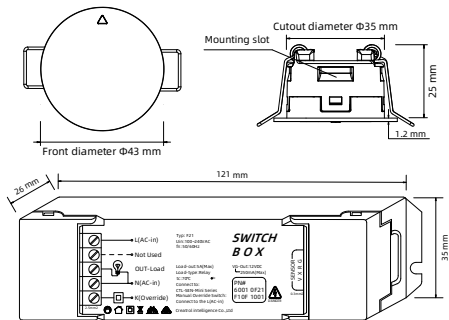
Communication Type	TY-ZigBee
BOX Input Voltage	AC 100 to 240 V
BOX Output Voltage	DC 12 V (< 500 mA)
Sensor Input Voltage	DC 12 V
Power Consumption	0.5 W (Max)
Relay Output	Normally Open Mode Normally Closed Mode
Relay Load	AC 100 to 240 V, ≤ 5 A
Indicator Light	LED
Detection Mode	24GHz FMCW Radar
Operating 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%
Illuminance Monitoring	0 to 32,000 Lux (Accuracy ±4%)
Delay Time	1 to 3,600 seconds
Product Size	Φ43 mm × 25 mm
Cutout Size	Φ35 mm
Product Weight	17.5 g
BOX Size	121 mm × 35 mm × 26 mm
BOX Weight	88 g
Cable Assembly	UL2468 22AWG Cable Length: 200 mm
Operating Environment	Indoor -20 to 45°C Humidity < 95% RH (Non-condensing)
Storage Temperature	-40 to 85°C
Protection Level	IP20
Housing Material	PC

Detection Range



Dimensions

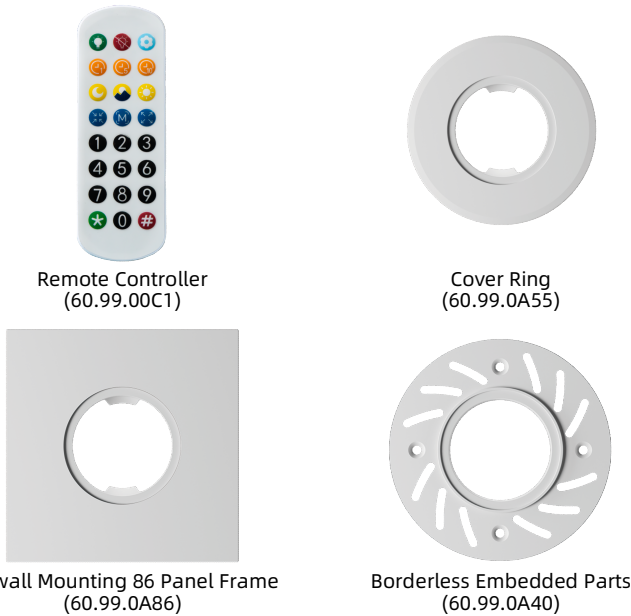
Measuring 43 mm wide and 25 mm deep, this recessed unit fits a 35 mm cutout and requires a minimum ceiling depth of 13 cm.



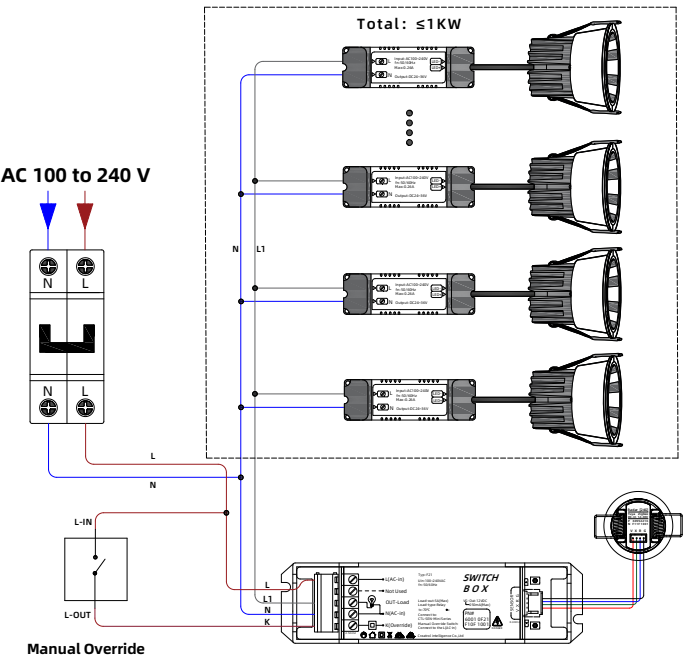
Installation Notes

Interference Avoidance: Keep away from moving objects (e.g., curtains, plants) and large metal/reflective surfaces.
Device Spacing: Maintain at least 4m between sensors.
Mounting: Install on a stable, vibration-free surface. Ensure no moving objects are behind the wall (signals penetrate non-metals).
Wiring Safety: Turn off power before wiring. Use certified cables and proper circuit protection.
Disclaimer: Follow wiring diagrams strictly. Manufacturer is not liable for improper installation. Specifications subject to change.

Available Accessories



Wiring Diagram



Manual Override: Connects to an external switch to force lights ON, bypassing sensor detection. Ideal for maintenance or constant illumination.

Ordering Information

P/N	Short Name	Model	Remarks
60.99.2216.F21	Mini-24G-TYZ/S1+	CTL-SEN-Mini/2216.F21	White (Default)
60.9B.2216.F21	Mini-24G-TYZ/S1+/B	CTL-SEN-Mini/2216B.F21	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