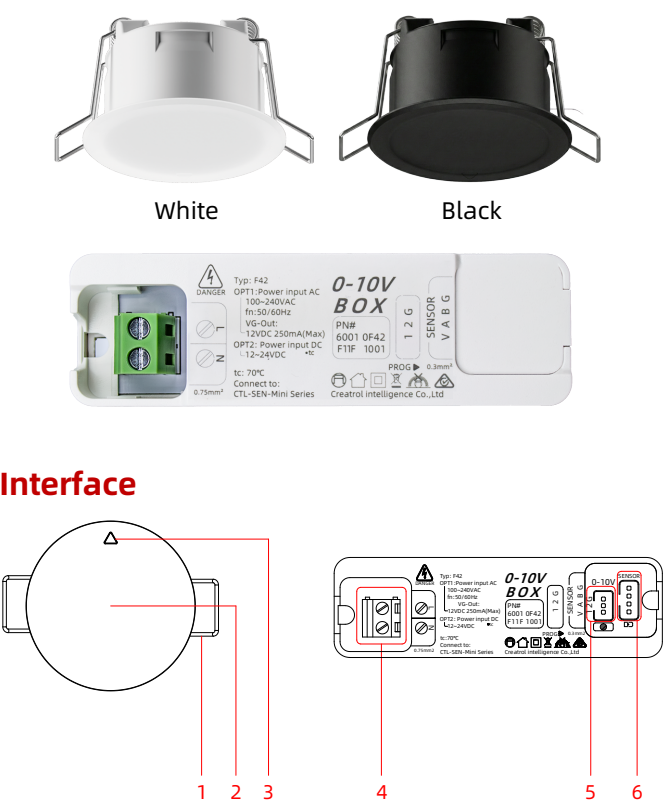


Mini-24G-10V

The CTL-SEN-Mini/2104.F42 is a professional-grade, ultra-compact presence sensor powered by advanced 24GHz FMCW (Frequency Modulated Continuous Wave) millimeter-wave radar technology. Designed for sophisticated architectural lighting, it identifies subtle human presence—including stationary individuals through breathing patterns—to enable high-precision automation via a 0-10V / 1-10V analog dimming protocol. Its miniature form factor (Φ35 mm cutout) allows for seamless, discreet installation in premium environments such as smart offices, healthcare facilities, and high-end residential spaces.



1. Spring Clip
2. Radar Sensing Surface
3. Orientation Marker
4. Power Connection Port (AC 100 to 240 V)
5. DALI Bus Connector (DC 16 V)
6. Sensor Wiring Terminal (PH 2.0 mm 4-Pin)

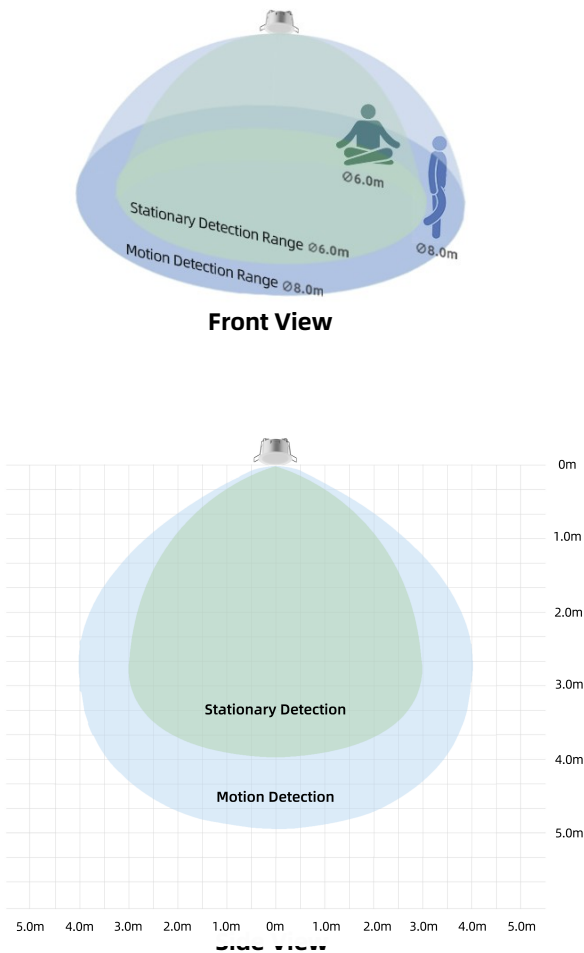
Features

- Accurately identifies motion, micro-motion, and Presence.
- Sensitivity and detection distance can be adjusted independently.
- Integrated high-precision sensor for accurate indoor illuminance monitoring.
- Supports 5-stage dimming and constant illuminance.
- Supports parameter configuration, status monitoring, and multi-sensor Host/Slave networking via the Tuya platform.
- Supports parameter configuration and status readout via IR remote control.

Specifications

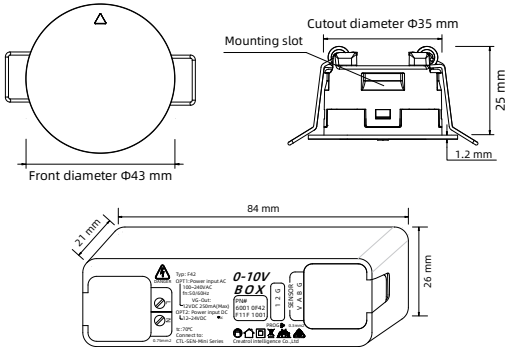
Control Interface	0 to 10 V / 1 to 10 V Analog Dimming
BOX Input Voltage	AC 100 to 240 V or DC 12 to 30 V
Max Fixtures	≤ 12 units
BOX Output Voltage	DC 12 V (< 500 mA)
Sensor Input Voltage	DC 12 V
Power Consumption	0.5 W (Max)
Indicator Light	LED
Detection Mode	24GHz FMCW Radar
Operating Frequency	24.00 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%
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	24 g
BOX Size	84 mm × 26 mm × 21 mm
BOX Weight	37 g
Cable Assembly	UL2468 22AWG Cable Length: 200 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



Dimensions

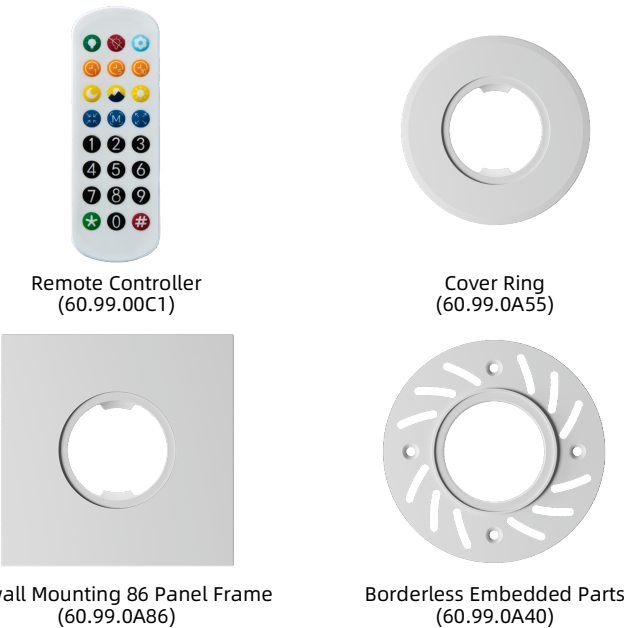
Measuring 43 mm wide and 25 mm deep, this recessed unit fits a 35 mm cutout and requires a minimum ceiling depth of 100 mm.



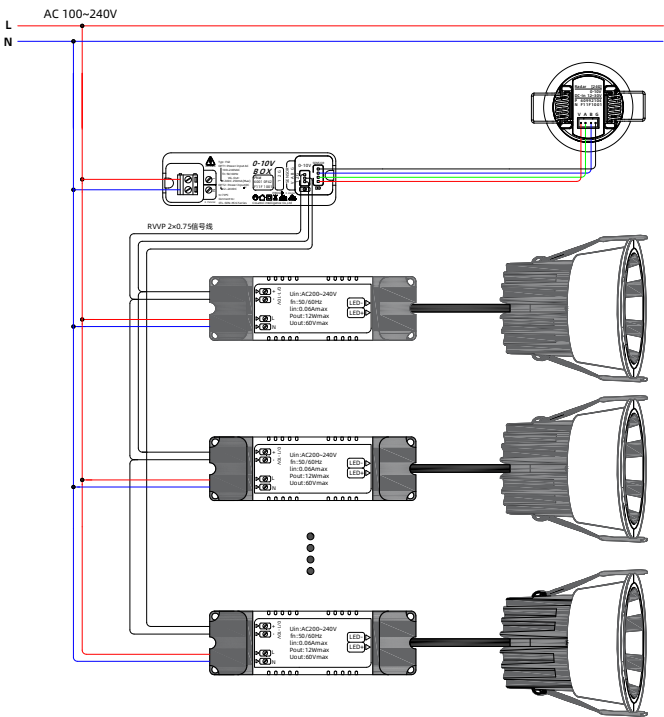
Installation Notes

- 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



Ordering Information

P/N	Short Name	Model	Remarks
60.99.2104.F42	Mini-24G-10V	CTL-SEN-Mini/2104.F42	White (Default)
60.9B.2104.F42	Mini-24G-10V/B	CTL-SEN-Mini/2104B.F42	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