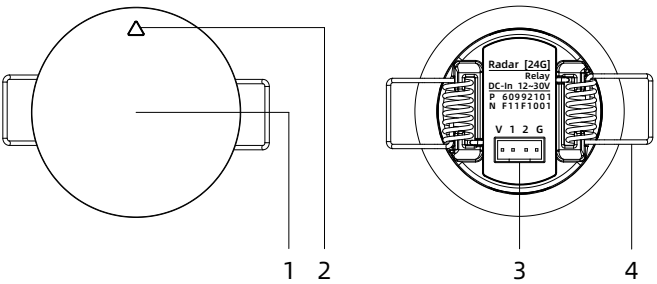


Mini-24G-REL

The CTL-SEN-Mini/2101 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. Radar Sensing Surface
2. Orientation Marker
3. Wiring Terminal (PH 2.0 mm 4-Pin)
4. Spring Clip

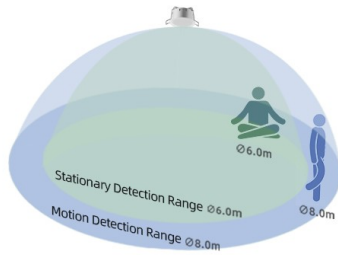
Features

- Accurately identifies motion, micro-motion, and Presence.
- Sensitivity and detection distance can be adjusted independently.
- Integrated high-precision sensor for accurate indoor illuminance monitoring.
- 4 output modes (normally open, normally closed, normally open pulse, normally closed pulse).
- 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.

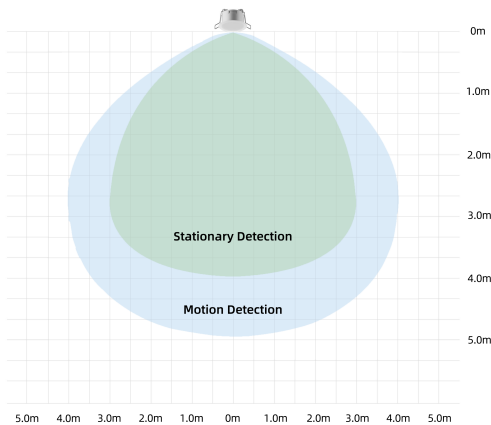
Specifications

Communication Type	Dry Contact
Input Voltage	DC 12 to 30 V
Power Consumption	0.5 W (Max)
Dry Contact Output	Normally Open Mode, Normally Closed Mode, Normally Open Pulse, Normally Closed Pulse
Dry Contact Load	≤ 30 V, ≤ 50 mA
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
Cable Assembly	UL1007 22AWG Cable Length: 150 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

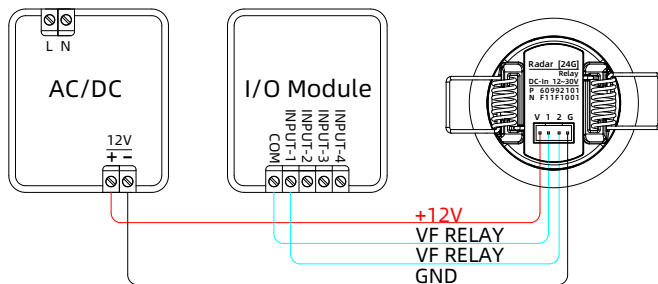


Front View



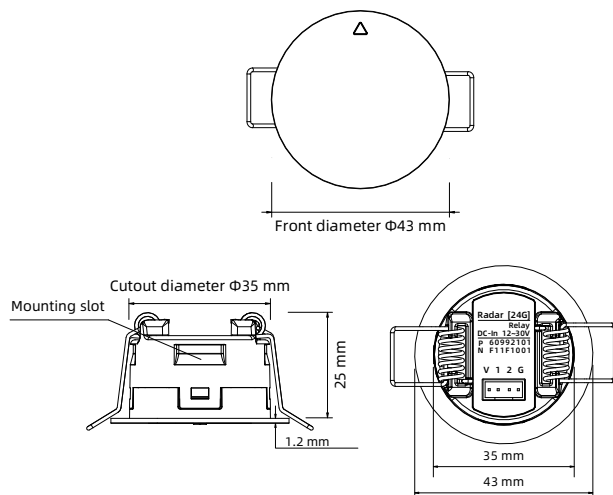
Side View

Wiring Diagram



Dimensions

Measuring 43 mm in diameter and 25 mm in depth, this recessed unit fits a 35 mm cutout. Optional kits allow for surface, wall, or universal bracket mounting.



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.

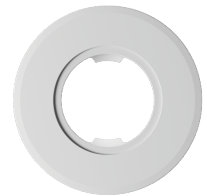
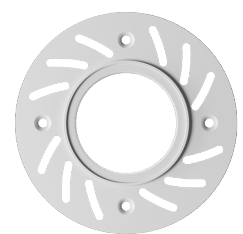
Device Spacing: Maintain a minimum distance of 4 m between multiple sensors to prevent mutual interference.

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
60.99.2101	Mini-24G-REL	CTL-SEN-Mini/2101	White (Default)
60.9B.2101	Mini-24G-REL/B	CTL-SEN-Mini/2101B	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