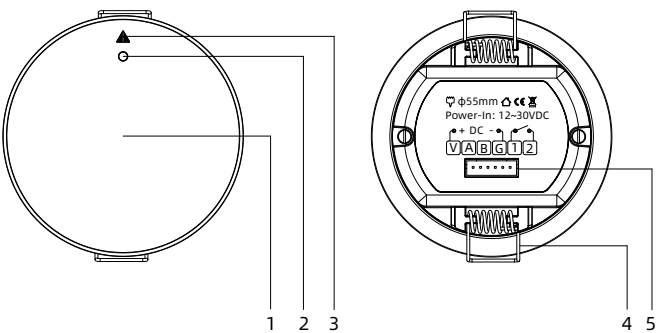


R5-24G-REL

The CTL-SEN-R5/2501 is a high-precision human presence sensor powered by advanced 24GHz mmWave radar technology. Featuring proprietary signal processing algorithms, it detects micro-motion (such as breathing) to detect stationary presence while effectively filtering non-human interference. With a detection range of up to 10 meters and an integrated high-precision illuminance sensor (0 to 32,000 Lux), it is engineered for advanced smart building applications.



Interface



1. Radar Sensing Surface
2. Multifunction Window (LED / Illuminance Sensor / IR)
3. Orientation Marker
4. Spring Clip
5. Wiring Terminal (PH2.0 mm × 6 P)

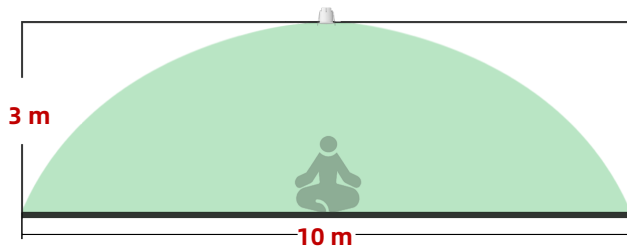
Features

- Supports motion, micro-motion, and stationary presence detection.
- 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.

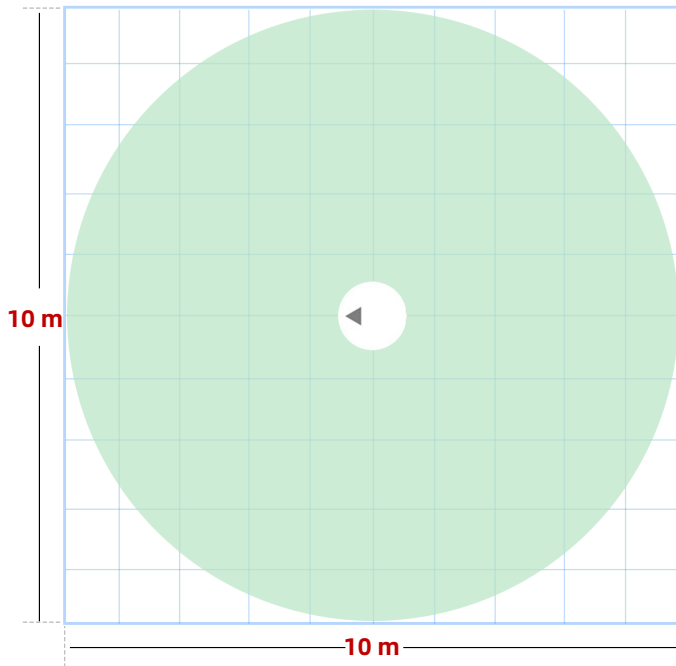
Specifications

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	AC or DC ≤ 30 V, ≤ 200 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	Max. Floor Coverage Diameter ≥ 10 m (at 3.0 m height)
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	Φ65 mm × 60 mm
Cutout Size	Φ55 mm
Product Weight	61.5 g
Cable Assembly	UL1007 20AWG 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

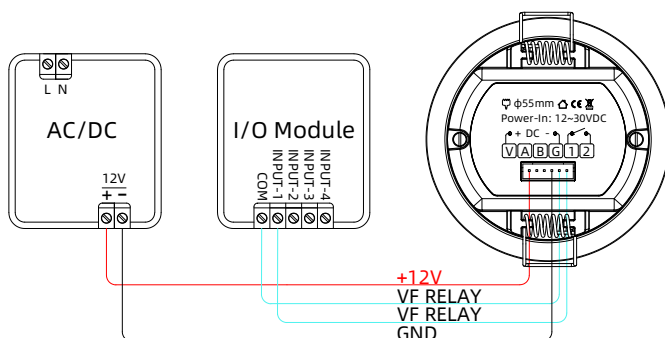


Side View



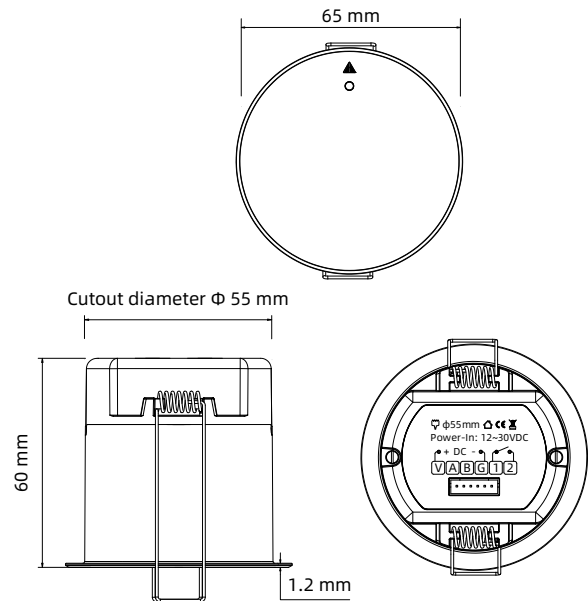
Top View

Wiring Diagram



Dimensions

Recessed mount, product outer diameter 65 mm, product depth 60 mm, cutout diameter 55 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 prevent false triggering.

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

Mounting: Ensure the installation surface is vibration-free. Note that radar signals can penetrate 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: Specifications are subject to change without notice. Please follow all wiring diagrams strictly. The manufacturer is not liable for issues caused by improper installation.

Available Accessories



Remote Control (60.99.00C1)

Ordering Information

P/N	Short Name	Model	Remarks
60.50.2501	R5-24G-REL	CTL-SEN-R5/2501	Main Unit
60.99.00C1	RC1	RC1	Accessory