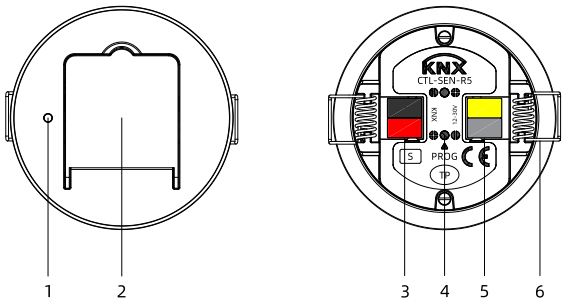


R5-Rang-KNX

The CTL-SEN-R5/2303 is a high-precision 24GHz millimeter-wave radar sensor designed for advanced occupancy detection. It features an adjustable range of 1.5 to 7m with centimeter-level accuracy and a flexible 0° to 60° tilt design for versatile installation. Beyond detecting movement, its "micro-motion" technology can identify static presence (like breathing), while customizable sensing zones and an integrated ambient light sensor enable intelligent automation for smart homes, offices, and healthcare, ensuring efficient energy management based on real-time human displacement.



Interface



1. Multifunction Window (LED / Illuminance Sensor / IR)
2. Radar Sensing Surface (0 to 60° adjustable)
3. KNX Bus Port (DC 21 to 30 V)
4. Programming Button
5. Auxiliary Voltage (DC 12 to 30 V)
6. Spring Clip

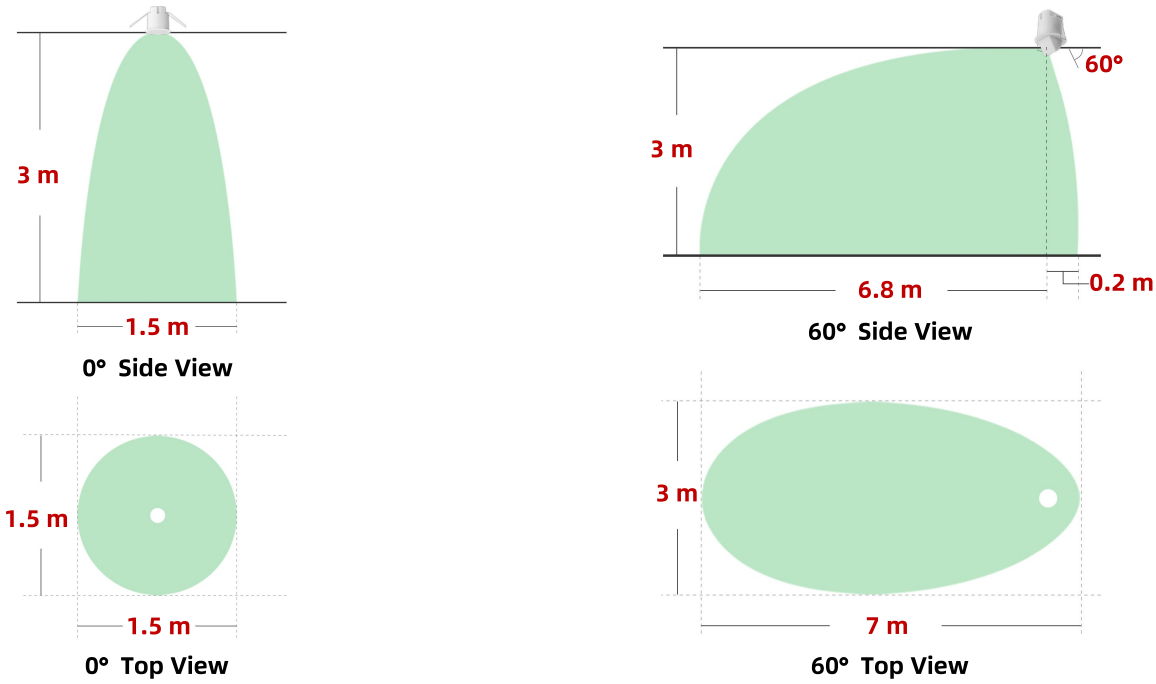
Features

- Features customizable multi-zone sensing (Segments A/B/C) and configurable proximity/recession distance thresholds.
- Integrated high-precision sensor for accurate indoor illuminance monitoring.
- Supports 4 independent channels for lighting control.
- Supports multiple operating modes, including Fully Automatic, Semi-Automatic, Master/Slave, and Day/Night.
- Supports parameter configuration and status readout via IR remote control.
- Built-in logic functions with support for manual mode and independent event outputs.
- Supports external inputs to dynamically modify parameter characteristics.
- Offers selectable Easy (quick start) and Advanced (multi-channel output) modes.

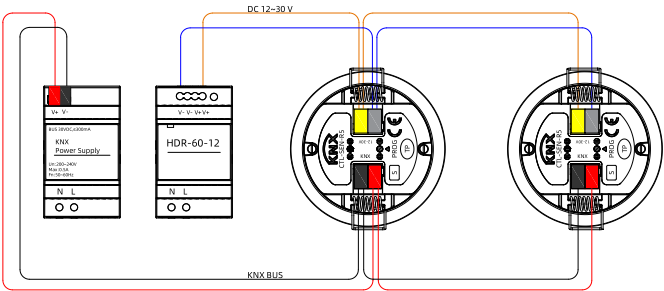
Specifications

|                        |                                                                                               |
|------------------------|-----------------------------------------------------------------------------------------------|
| Communication Type     | KNX TP                                                                                        |
| Input Voltage          | DC 21 to 30 V                                                                                 |
| Operating Current      | ≤ 6 mA                                                                                        |
| Auxiliary Voltage      | DC 12 to 30 V (< 3 W)                                                                         |
| Indicator Light        | RGB 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     | Mounting Height: 3 m<br>At 0°: Φ 1.5 m detection range<br>At 60°: 3.0 × 7.0 m detection range |
| Detection Range        | 1.5 to 7.0 m (sensor to target)                                                               |
| 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         | 67.5 g                                                                                        |
| Bus Terminal           | Red / Black                                                                                   |
| Power Terminal         | Yellow / white                                                                                |
| Programming button     | Physical Address Assignment                                                                   |
| Bus Connection         | Φ0.6 to 0.8 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                                                                                            |

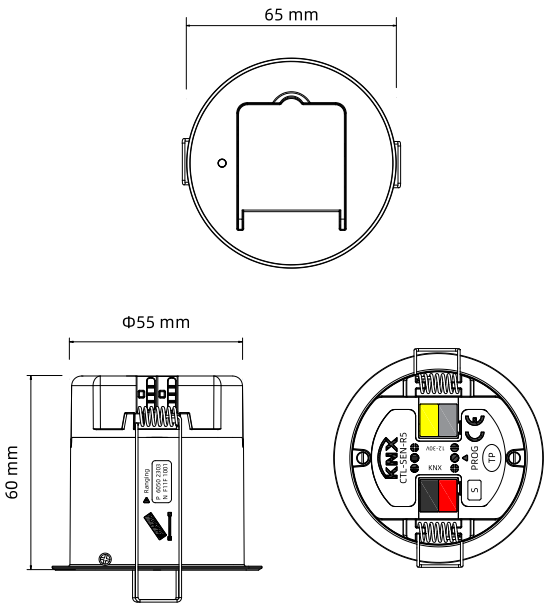
Detection Range



Wiring Diagram



Dimensions



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   |
|------------|-------------|-----------------|-----------|
| 60.50.2303 | R5-Rang-KNX | CTL-SEN-R5/2303 | Main Unit |
| 60.99.00C1 | RC1         | RC1             | Accessory |