

ECO-KP-WL

The ECO-KP-WL is a professional-grade wireless gateway engineered for advanced occupancy management in smart hotels. Serving as the system’s central hub, it utilizes LoRa technology across global license-free ISM bands to facilitate stable, long-range communication with up to seven wireless devices. Deeply integrated with the Tuya protocol and featuring an RS485 interface, the device ensures seamless synchronization with cloud platforms and third-party systems. With an integrated 30A high-power relay, the gateway intelligently automates guest room power circuits based on real-time occupancy data, significantly enhancing operational efficiency while maximizing energy utilization to achieve substantial energy-saving objectives. Designed for standard 86-type wall box installation with ultra-low standby power consumption ($\leq 0.5\text{ W}$), it provides an internationalized, high-performance solution that balances green-building standards with a sophisticated guest experience.



Features

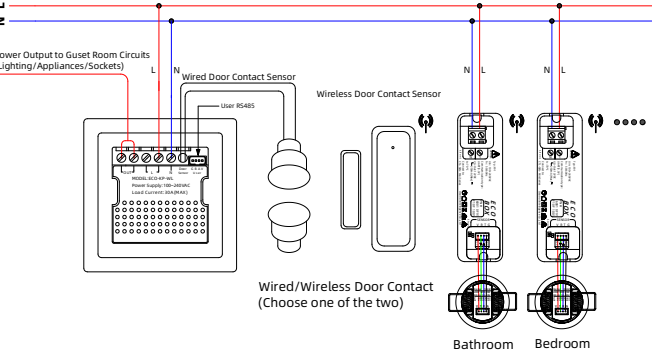
- Fully integrated with the Tuya (Smart Living) protocol, allowing for unified device management and seamless cloud-based synchronization.
- Intelligently automates guest room power based on real-time occupancy data, significantly reducing unnecessary energy consumption during vacancy periods.
- When paired with presence sensors and door contacts, the gateway accurately determines room status (Occupied/Unoccupied) to optimize power delivery and guest comfort.
- Features a built-in 30A relay output, capable of directly managing guest room power circuits for lighting, appliances, and sockets.
- Supports the simultaneous wireless connection of up to 7 devices, including presence sensors and door contacts.
- Utilizes license-free ISM LoRa bands (470-928MHz) to ensure stable, long-range wireless connectivity across various global regions.
- Supports configurable modes including Sensor Auto-Linkage for automated efficiency, and Manual Force ON/OFF for specialized maintenance requirements.
- Users can set an unoccupied power-off delay ranging from 1 to 120 minutes, balancing energy saving with guest convenience.
- Specifically designed for installation in standard

- 86-type wall boxes, ensuring compatibility with international electrical infrastructure.
- Engineered for high efficiency with a static power consumption of $\leq 0.5\text{ W}$, minimizing the device's own carbon footprint.
- Supports a wide-range power input from AC 100 to 240 V (50/60Hz), suitable for worldwide deployment.

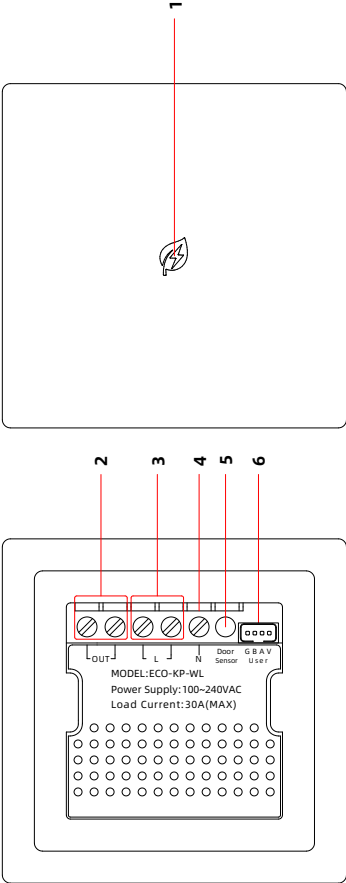
Specifications

Sensor Communication	Wireless (LoRa Technology)
Wireless Frequency	470-510MHz (CN), 902-928MHz (US), 863-870MHz (EU), etc.
Client Interface	RS485
Cloud Ecosystem	Tuya-WiFi
Max. Connected Devices	Up to 7 wireless sensors
Operating Modes	Manual Force ON, Manual Force OFF, Sensor Auto-Linkage
Vacancy Delay Range	1 to 120 minutes
Power Input	AC 100 to 240 V (50/60 Hz)
Power Consumption	$\leq 0.5\text{ W}$
Max. Output Current	$\leq 30\text{ A}$
Dimensions	86 mm * 86 mm * 35 mm
Installation Method	Standard 86-type Wall Box
Installation Depth	25 mm
Mounting Height	1.0 to 1.4 meters
Product Weight	140 g
Operating Temperature	-20°C to 45°C
Operating Humidity	< 95% (Non-condensing)
Storage Temperature	-40°C to 85°C
Visual Feedback	RGB Sequence: System Initialization Solid Green: Occupancy Detected Solid Red: Vacancy Detected Flashing Green (1 Hz): Vacancy Delay Flashing Yellow (1 Hz): Wireless Door Sensor Low Battery (< 20%) (Duration: 1 min) Flashing Yellow (3 Hz): Wireless Door Sensor Critical Battery (< 15%) (Duration: 1 min) Flashing Yellow (4 Hz): Wireless Door Sensor Urgent Battery (< 10%) (Duration: 1 min) Solid Yellow: System Fault or Offline

Wiring Diagram

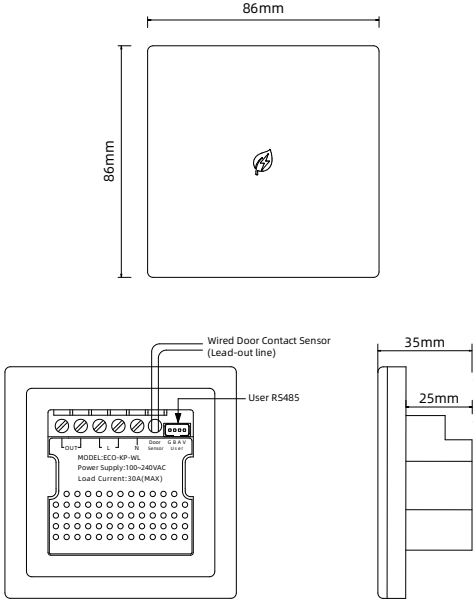


Interface



1. LED Indicator: A visual feedback system providing real-time status updates for system power, occupancy states, and diagnostic alerts.
2. Load Output (L-OUT) Interface: An integrated 16A relay interface designed for the automated control of guest room power circuits, including lighting and appliances.
3. Live Wire (L) Input Interface: The primary input interface for the AC 100-240V power supply live line.
4. Neutral Wire (N) Input Interface: The dedicated connection interface for the device's neutral power supply line.
5. Wired Door Sensor Interface: A specialized input interface for direct connection to the lead-out lines of physical door contact sensors.
6. User RS485 Interface: A professional-grade communication interface (G B A V) utilized for client-side system integration and local data exchange.

Dimensions



Installation Notes

- Electrical Safety**
- Ensure the power supply is disconnected before wiring.
 - Strictly follow the wiring diagram and requirements during installation.
 - All line voltages and main cables must use nationally certified or professionally tested cables.

Product Specifications & Changes
Product design specifications are subject to change without prior notice. The actual product may differ slightly from the illustrations.

Disclaimer
Please strictly observe the installation guidelines above. The company assumes no responsibility for any interference or equipment performance issues caused by improper installation. Ensure all installation steps and environmental requirements are properly executed to guarantee optimal equipment performance and accuracy. If you have questions or encounter problems during installation, please contact us for assistance.

Available Accessories



Remote Control (60.99.00C1)

Ordering Information

P/N	Short Name	Model	Remarks
60.99.9E51	ECO-KP-WL	CTL-SEN-Mini/9E51	Main Unit
60.99.00C1	RC1	RC1	Accessory