

ECO-KP-485

The ECO-KP-485 is a professional-grade wired master control switch designed for advanced occupancy management in smart hotels. Serving as the system’s central hub, it utilizes an industrial RS485 bus to facilitate stable, wired communication with up to seven presence sensors. Equipped with a dedicated client-side RS485 interface, the device ensures seamless synchronization and integration with professional third-party systems. With an integrated 30A high-power relay, the gateway intelligently automates guest room power circuits based on real-time occupancy data captured via presence sensors, 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 a high-performance solution that balances green-building standards with a sophisticated guest experience.



Features

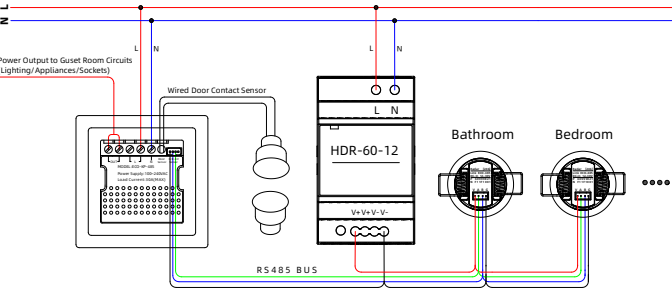
- Intelligently automates guest room power based on real-time occupancy data, significantly reducing unnecessary energy consumption during vacancy periods.
- When paired with presence sensors and door contacts, the gateway accurately determines room status (Occupied/Unoccupied) via advanced breathing-pattern detection to optimize power delivery.
- Features a built-in 30A high-power relay, capable of directly managing guest room power circuits for lighting, appliances, and high-load sockets.
- Supports the simultaneous wired connection of up to 7 devices, including presence sensors and door contacts via a stable bus architecture.
- Utilizes an industrial-grade RS485 interface to ensure high-reliability, interference-resistant communication for professional system integration.
- The integrated RS485 port enables seamless local data exchange and synchronization with professional third-party management systems.
- 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, allowing a flexible balance between energy saving and guest convenience.
- Specifically designed for installation in standard 86-type wall boxes, ensuring full 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.

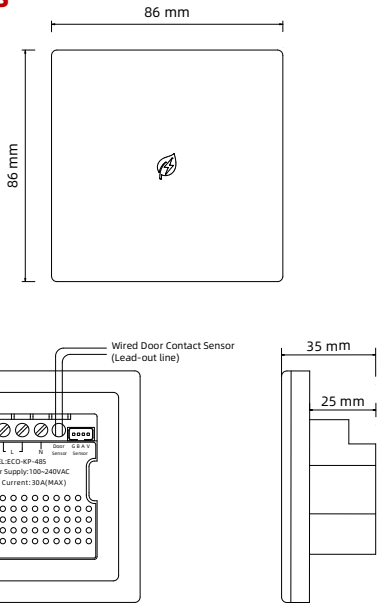
Specifications

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sensor Communication   | RS485                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 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 Environment  | Indoor -20 to 45°C<br>Humidity < 95% RH (Non-condensing)                                                                                                                                                                                                                                                                                                                                                                                                         |
| Storage Temperature    | -40°C to 85°C                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Visual Feedback        | RGB Sequence: System Initialization<br>Solid Green: Occupancy Detected<br>Solid Red: Vacancy Detected<br>Flashing Green (1 Hz): Vacancy Delay<br>Flashing Yellow (1 Hz): Wireless Door Sensor Low Battery (< 20%) (Duration: 1 min)<br>Flashing Yellow (3 Hz): Wireless Door Sensor Critical Battery (< 15%) (Duration: 1 min)<br>Flashing Yellow (4 Hz): Wireless Door Sensor Urgent Battery (< 10%) (Duration: 1 min)<br>Solid Yellow: System Fault or Offline |

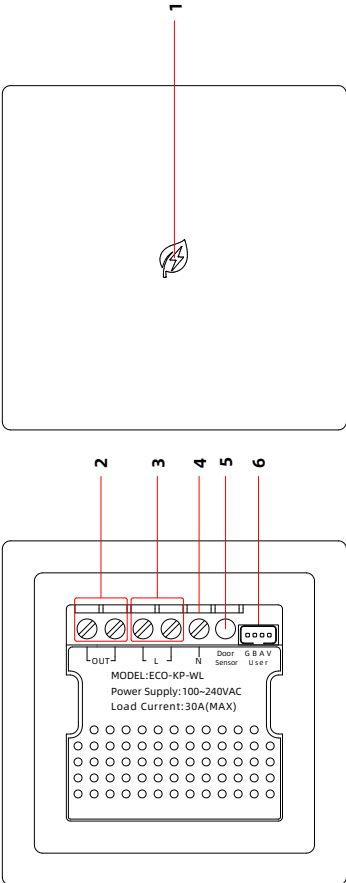
Wiring Diagram



Dimensions



Interface



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   |
|------------|------------|-------------------|-----------|
| 60.99.9E11 | ECO-KP-485 | CTL-SEN-Mini/9E11 | Main Unit |
| 60.99.00C1 | RC1        | RC1               | Accessory |