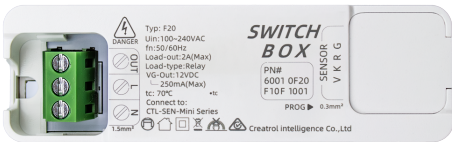


BOX-AC-S1

The BOX-AC-S1 (Model: CTL-SEN-BOX/F20) is a versatile integrated controller designed for both power conversion and load switching. Specifically engineered for the Mini series sensors, it converts AC power to a stable DC 12V output while providing a high-voltage relay channel for direct lighting or equipment control. Its ultra-compact design enables standalone operation without a central gateway, making it ideal for concealed architectural installations.



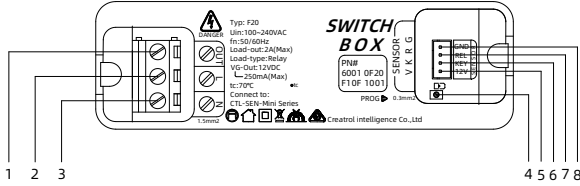
Features

- Integrated Power & Control: Combines a DC 12V power supply for sensors with a 300W relay switch in a single module.
- Standalone Operation: Facilitates direct sensor-to-load switching, eliminating the need for complex network hubs.
- Ultra-Compact Footprint: Measuring only 84 mm × 21 mm × 26 mm, it is designed to fit into tight spaces.
- Smart Sync: Features a physical button for rapid network pairing with wireless sensor models.

Specifications

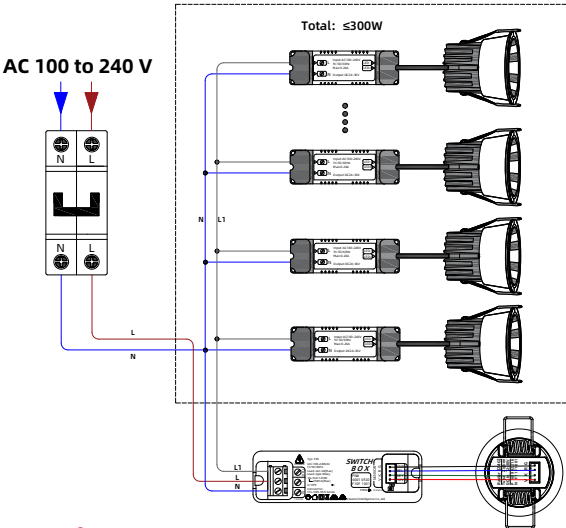
Input Voltage	AC 100 to 240 V (50/60 Hz)
Output Voltage	DC 12 V (Max 250 mA)
Relay Load	Max 300 W / 2 A
Dimensions	84 mm × 21 mm × 26 mm
Weight	43 g
Terminal Capacity	0.5 to 2.5 mm ²
Housing Material	Flame-retardant PC (UL94 V-0)
Operating Temperature	-20 to 45°C (Indoor)
Storage Temperature	-40 to 85°C
IP Rating	IP20
Color	White

Interface

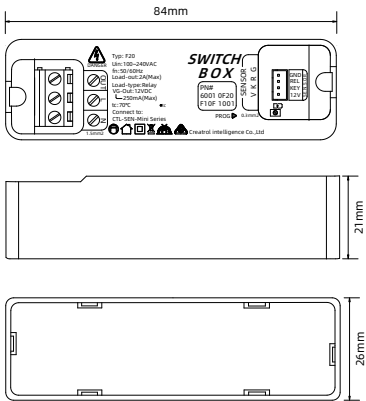


1. OUT: AC 100 to 240 V relay output (Max 300 W).
2. L: AC 100 to 240 V Live wire input.
3. N: AC 100 to 240 V Neutral wire input.
4. PROG: Used to test relay output, relay closes when pressed, opens when released.
5. 12V: DC 12 V positive output for sensor power.
6. KEY: Mechanical button signal terminal.
7. REL: Signal terminal (High level = OUT active; Low level = OUT inactive).
8. GND: DC Output Ground.

Wiring Diagram



Dimensions



Safety

1. Disconnect main power before wiring.
2. Use safety-certified cables and strictly follow the wiring diagram.
3. Ensure input voltage is within range and do not exceed the rated load.
4. Periodically inspect terminal blocks for secure connections.