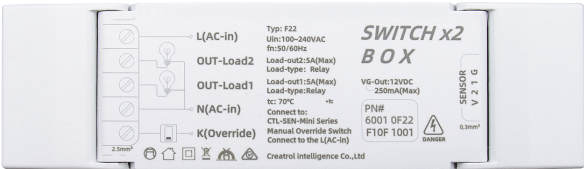


BOX-AC-S2

The BOX-AC-S2 (Model: CTL-SEN-BOX/F22) is a high-performance integrated controller designed for the Mini series sensor ecosystem. This module serves as both a precision power converter—transforming AC 100–240V into a stable DC 12V output for sensors—and a dual-channel switch actuator. Its compact, slim design is specifically engineered for concealed installation in ceiling voids or wall boxes, enabling standalone sensor-controlled lighting without a central gateway.



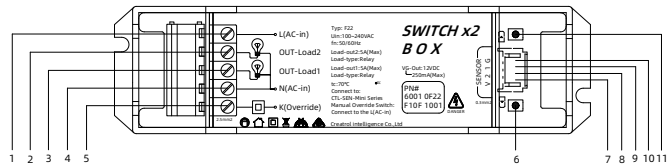
Features

- Dual-Channel Control: Features two independent mains-voltage relay outputs, each capable of handling loads up to 1 kW.
- Integrated Power Supply: Provides a dedicated DC 12V ( $\leq 250$  mA) output to power connected sensors directly from the AC mains.
- Manual Override Support: Includes a terminal for external switch panels, allowing for manual override of both relay channels.
- On-Device Relay Testing: Equipped with two physical test buttons to verify wiring and relay operation (relay closes when pressed, opens when released).

Specifications

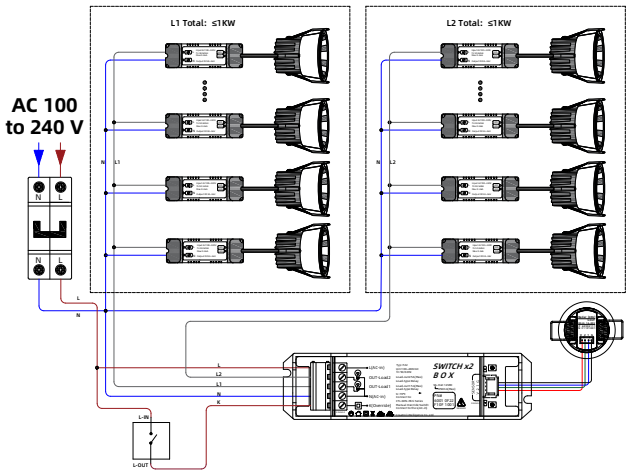
|                       |                                      |
|-----------------------|--------------------------------------|
| Input Voltage         | AC 100 to 240 V (50/60 Hz)           |
| Output Voltage        | DC 12 V (Max 250 mA)                 |
| Relay Load            | $\leq 5$ A (Max 1 kW per channel)    |
| Dimensions            | 121 mm $\times$ 26 mm $\times$ 35 mm |
| Weight                | 88 g                                 |
| Terminal Capacity     | 0.5 to 2.5 mm <sup>2</sup>           |
| Operating Temperature | -20 to 45°C (Indoor)                 |
| Storage Temperature   | -40 to 85°C                          |
| Housing Material      | Flame-retardant PC (UL94 V-0)        |
| IP Rating             | IP20                                 |
| Color                 | White                                |

Interface

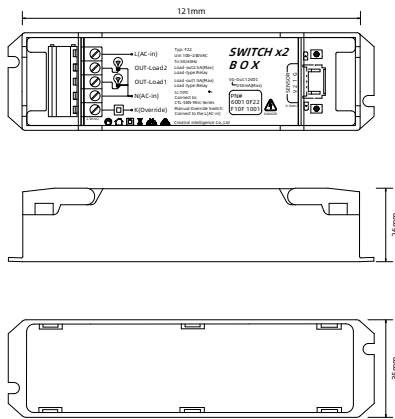


1. L: AC 100 to 240 V Live wire input.
2. OUT-Load 2: AC 100 to 240 V output for Load 2 ( $\leq 1$  kW).
3. OUT-Load 1: AC 100 to 240 V output for Load 1 ( $\leq 1$  kW).
4. N: AC 100 to 240 V Neutral wire input.
5. K (Override): Terminal for external manual switch panel to control relay states.
6. Test Button: Manually tests Out-Load 2 output.
7. V: DC 12 V Positive output.
8. 2: Signal terminal for Out-Load 2 (High = ON; Low = OFF).
9. 1: Signal terminal for Out-Load 1 (High = ON; Low = OFF).
10. G: DC Output Ground (GND).
11. Test Button: Manually tests Out-Load 1 output.

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.