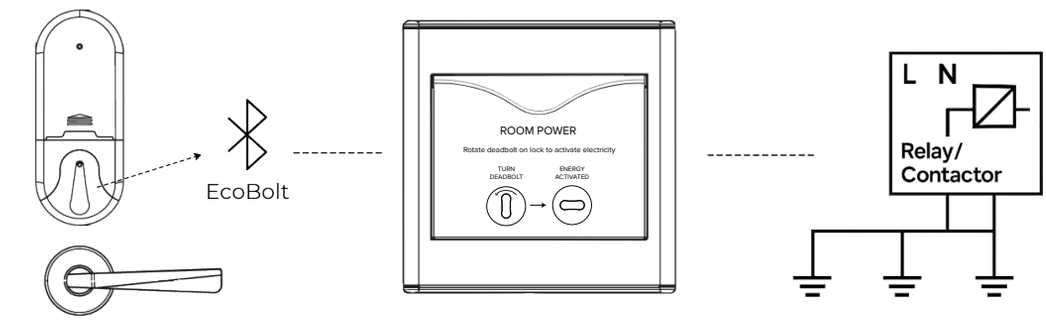
EcoBolt Energy Saving Device

Technical Data Sheet



TLJ Electronic Lock | Energy Saving Switch | Room Electricity

Application:

Guest-room power control in Student accommodation and hospitality (hotel, serviced apartment) where room electricity is activated only when occupant is present/inside. In this variant, instead of a card inserted in a wall slot, the system uses the thumb-turn deadbolt of the TLJ electronic lock to trigger the supply via Bluetooth.

System Overview

- The Resident enters the room and locks (or unlocks) the door using the thumb-turn deadbolt on the TLJ electronic lock.
- The TLJ lock detects the “room occupied / locked from inside” event and sends a wireless Bluetooth (or equivalent) signal to the TLJ Eco Energy Saver module inside the room.
- Upon receipt of the “occupied” signal, the Eco Energy Saver energises the room’s power circuits (lighting, socket outlets, HVAC/motorised curtains etc).
- When the guest unlocks the deadbolt and leaves, the Eco Energy Saver receives a “room vacated” signal (or absence of occupancy after a delay) and cuts the room power after a configurable delay (e.g., 10-30 seconds) to allow safe exit.
- From the wiring viewpoint the Eco Energy Saver is installed in the same way as standard hotel “card-holder” energy-saver wall switch: it intercepts the live feed to the guest room loads and controls a relay or contactor to switch the supply.

**The Ecobolt is compatible with all TLJ electronic locks.*

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TLJ access control
Your Digital Doorway

EcoBolt Energy Saving Device

Technical Data Sheet

Voltage Input	AC190V - 240V AC, 50/60 Hz
Max Switch Current	16 A x 2 (or up to 30 A with contactor)
Relay Life	>100k operations
Time Delay	10 seconds - 45 minutes (configurable)
Load Output Current	Dual output - 2x 16Amps
Operating Temp	-10°C to 60°C
Operating Humidity	10 to - 96% RH
Standby Consumption	<1 W
Wall Box Size	86 × 86 mm (flushed) typical
Materials	Fire-retardant polycarbonate enclosure

Testing

- EN IEC 61000-6-3:2021
- EN IEC 61000-6-1:2019
- ETSI EN 301 489-1 V2.2.3 (2019-11)
- ETSI EN 301 489-17 V3.2.4 (2020-09)
- ETSI EN 301 489-3 V2.3.2 (2023-01)
- EN IEC 61000-3-2:2019+A1:2021
- EN 61000-3-3:2013+A1:2019+A2:2021
- ETSI EN 300 328 V2.2.2 (2019-07)
- ETSI EN 300 330 V2.1.1 (2017-02)
- EN 62479:2010

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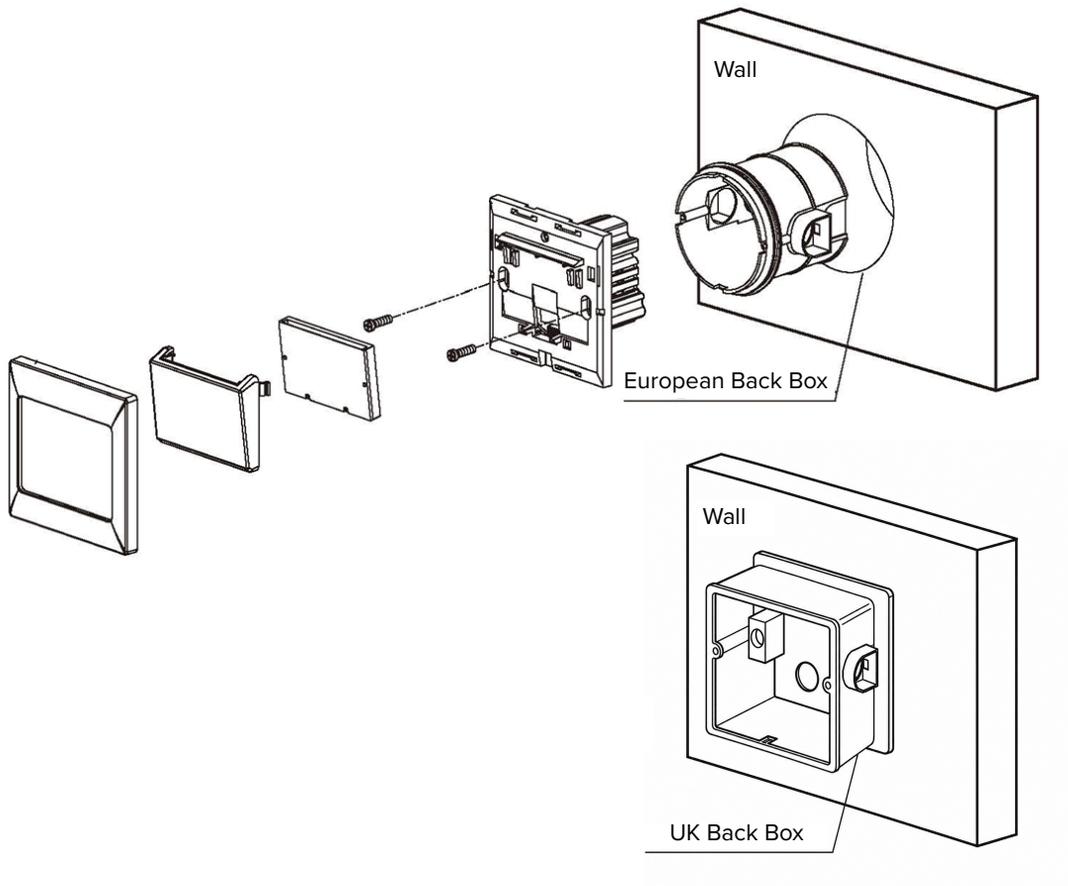
TLJ

Installation



The TLJ wall-mounted energy saving unit should be installed by a qualified electrician in accordance with local wiring regulations. The unit fits into a standard single gang back box with a **minimum depth of 35mm** and connects directly to the room's power circuit.

Important Notes:

- Ensure cables are rated for at least 16A per output.
- The total load must not exceed the rated capacity of 2 × 16A.
- Do not install in areas exposed to moisture or excessive heat.
- For cluster or multi-room configurations, timer and relay behaviour can be configured via TLJ engineer setup.

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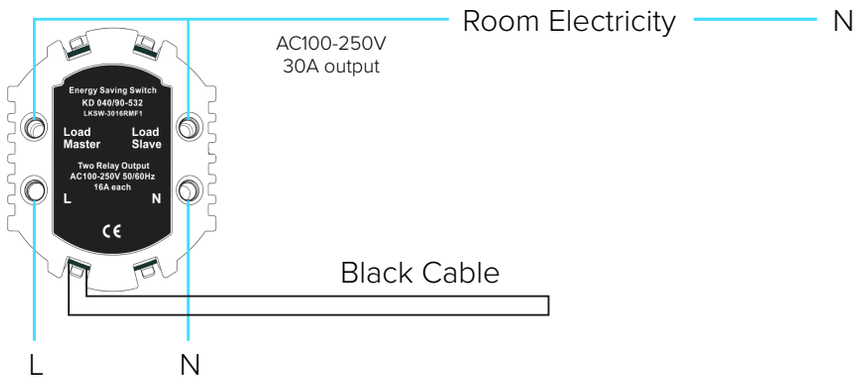
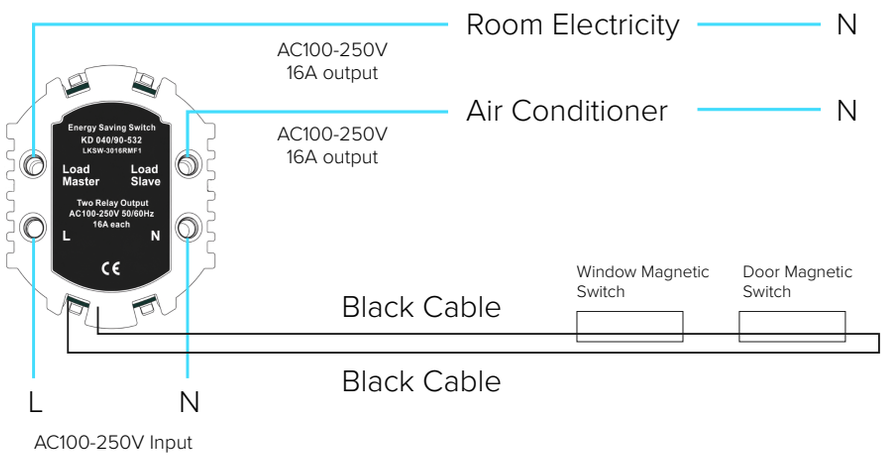
Installation

Without Air Conditioning/Thermostat



With Air Conditioning/Thermostat



Installation Steps

1. Power Isolation: Ensure the mains supply is turned off before installation.
2. Wiring: Connect live and neutral inputs to the L and N terminals, and load circuits to OUT1 and OUT2 as shown in the wiring diagram.
3. Mounting: Fix the holder into the wall's European base box, then connect and secure the power switch module into the holder.
4. Assembly: Attach the cover frame and ensure all connections are firmly seated.
5. Testing: Once installed, restore power and verify proper operation of both output channels and indicator LED.

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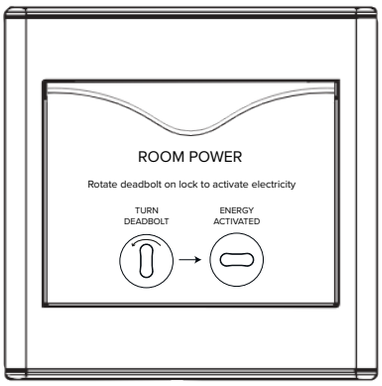
Wall Mounted Energy Saver Options



Option 1

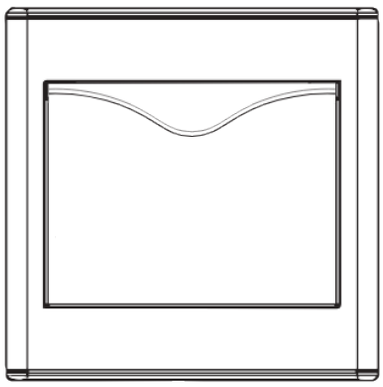
Energy Saver with Credential Slots & User Instructions

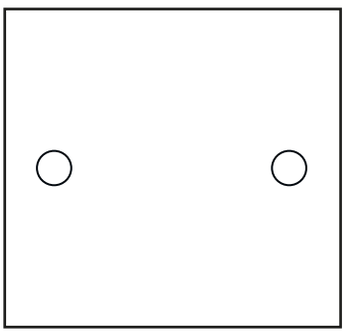
Includes a credential slot that accepts both keycards and fobs, with printed instructions to guide users on how to activate room power.

Option 2

Customisable Energy Saver with Credential Slot

Includes a credential slot compatible with both key-cards and fobs for room power activation, with a customisable insert that can display your own brand-ing, messaging, or guest information.





Option 3

Plain Back Plate

A clean, minimalist back plate with no credential slot or printed graphics. Ideal for installations where a physical credential override is not required.

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Installation Checklist	Check
Verify the live feed (L) and neutral (N) supply to the room can be routed via the EcoBolt module before branching to loads.	☐
Confirm load current does not exceed module rating; if >16 A, specify external contactor.	☐
Mount module in wall-box at near room entrance (for ease of access).	☐
Ensure installation is done by qualified electrician; isolate supply before wiring.	☐
Commission the TLJ electronic lock and verify Bluetooth link to Eco Saver.	☐
Test full occupancy sequence: lock inside, loads activated; unlock & exit, loads cut-off.	☐
Label the wiring diagram in room electrical panel.	☐
Provide occupant/maintenance controls (override switch if required by local code).	☐
Record installation in building's electrical log book; note if system is part of BMS or RMS.	☐

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