


Energy Saving Device (ESD) Datasheet



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 **WARNING**
This product uses 240V AC power. This product must only be installed, removed or modified by a licensed electrical contractor.

Introduction

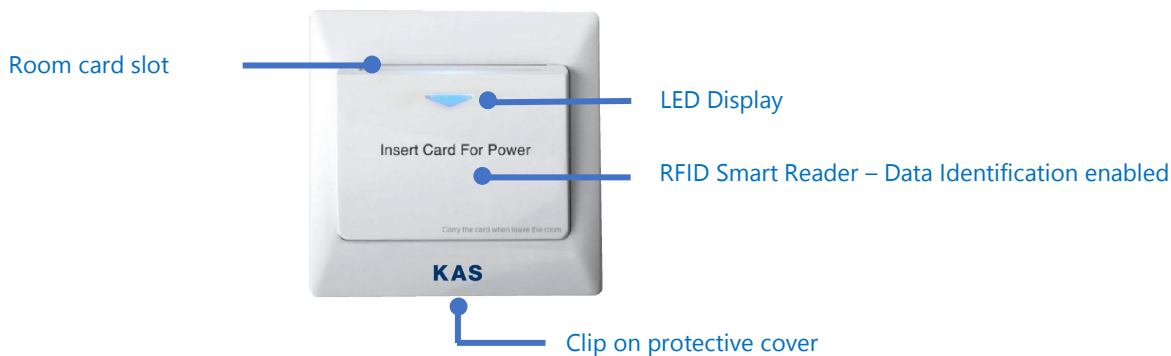
Energy Saving Devices (ESD) are located inside the room to activate room lighting, power and air conditioning (A/C) circuits. ESDs are activated by inserting the room key card into the ESD socket.

KAS Energy Saving Devices have two main features. These features are becoming an industry requirement in new buildings to significantly reduce power consumption.

Supports the latest technologies including:

- RFID MIFARE technology

Images



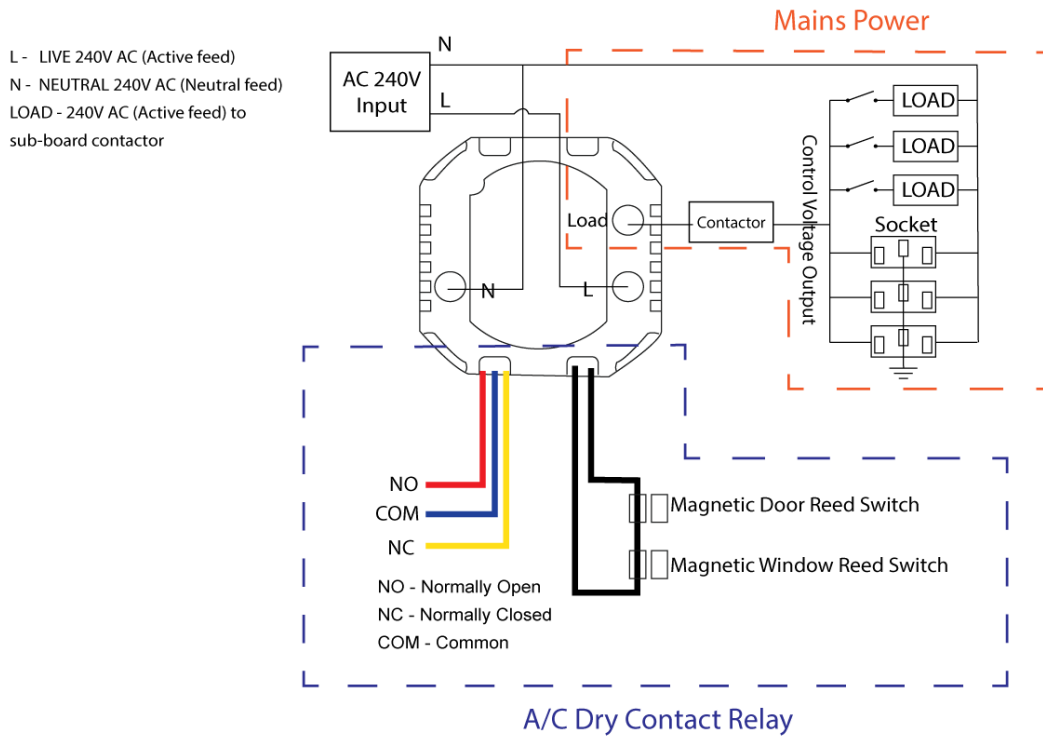
Technical Specifications

Voltage	220-240V AC 50Hz
Number of Switching Relays	2 [Mains Power, A/C Air Conditioner]
Mains Power Switching Relay	Rated to 16A
A/C Switching Relay	Dry contact (3 coloured wires)
Reed Switch	Dry contact (2 black wires)
Working Temp	-10C to 60C
Working Humidity	10% - 95% RH
Dimensions	W86mm x H86mm x D46mm (Bounding box)
Card Read Time	<0.8s
LED Display	ON when no card is present, OFF when card is present
User interface	1 x Blue LED
Data Identification enabled	Yes (Mifare Sector 1)
Colour	White
Installation fitment	Mounting C-Clip supplied
Default egress time delay	15 seconds (Adjustable to optional 30 seconds)
Australian SAA certified	Yes

Independent Dry Contact Relay for A/C Control

Independently control the room A/C Air Conditioner using the second onboard dry contact relay. This A/C relay is independent of the room power and is switched by a Reed Switch circuit. It is suitable for independently switching the room A/C on or off if a window or door has been opened.

In the below diagram, Mains Power is controlled by the 'LOAD' pole (note you must use a contactor) and the A/C power is controlled by the A/C Dry Contact Relay circuit. Please see Wiring Diagram section below for complete wiring specifications.



Data Identification

Data Identification (DI) allows the room key to activate the ESD only. The room keys are encrypted when shipped from KAS. Data Identification is Standard for all ESD models.

Cards to activate ESD:

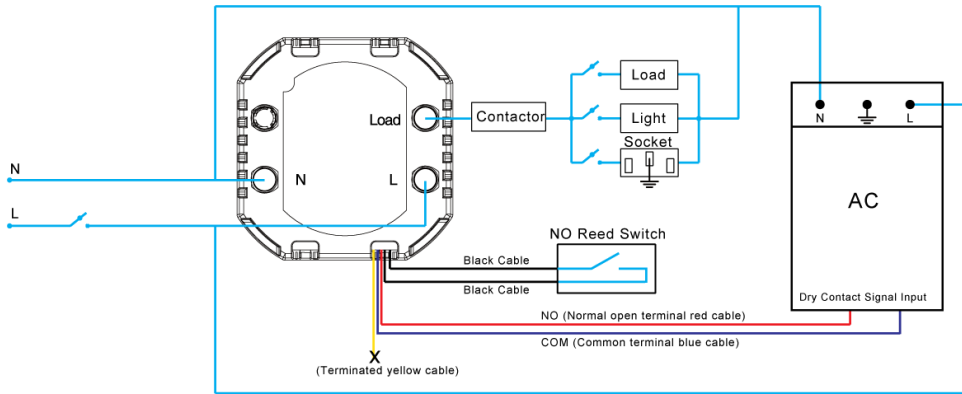
- KAS key cards ONLY

Cards that does NOT activate ESD:

- Business cards
- Plastic cards
- Blank Mifare cards
- Mifare cards programmed to other lock systems

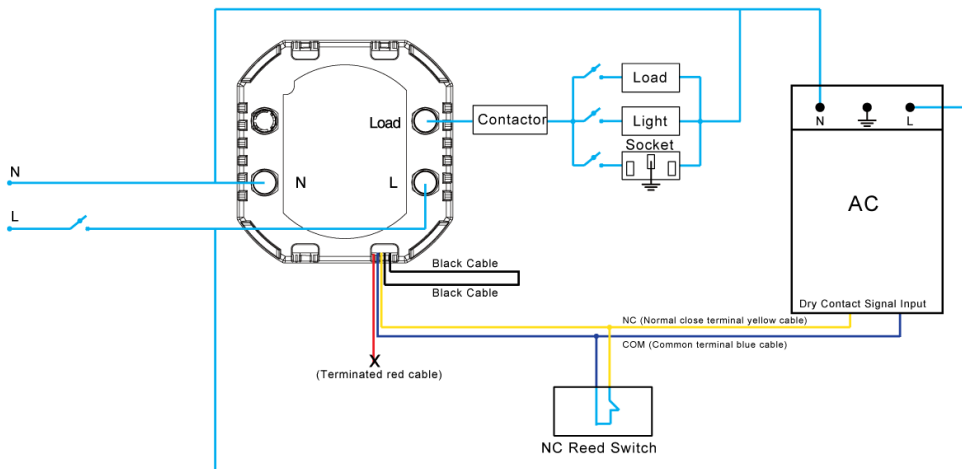
Wiring Diagram

For AC systems with NO circuit switch



1. Open door/window, then reed switch off; close door/window, then reed switch on.
2. Dry contact connected, then AC turn on; dry contact disconnected, then AC turn off.

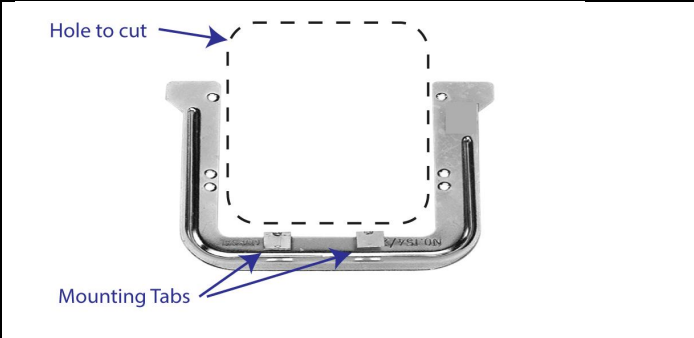
For AC systems with NC circuit switch



1. Open door/window, then reed switch on; close door/window, then reed switch off.
2. Dry contact connected, then AC turn off; dry contact disconnected, then AC turn on.

Note: If not using a Reed Switch, installer must join the black wires together to close the circuit.

Installation Fixture

	<p>Application: To securely mount the Energy Saving Device to a Gyprock or Plaster board wall.</p> <p>Hole Dimensions: 54 mm x 54 mm</p> <p>Suitable Wall Board Thickness: 10 mm-13 mm thickness</p>
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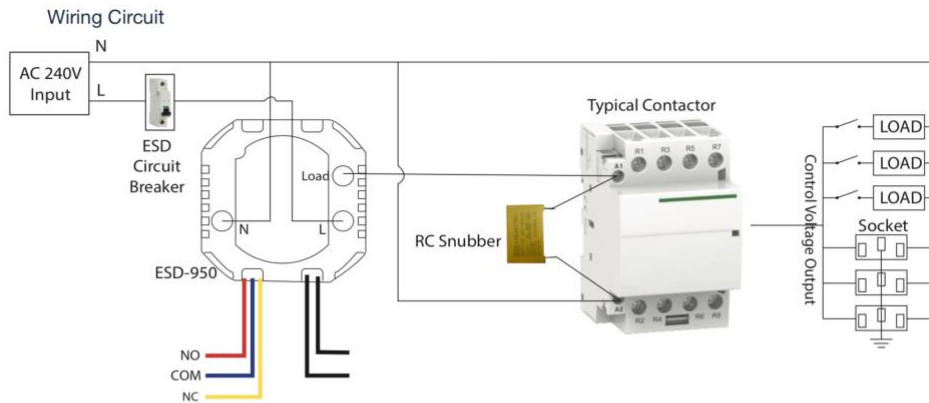
Instructions:

- 1) Locate the required position normally inside the entrance door.
- 2) Trace internal C-Clip shape on the wall and mark screw holes
- 3) Turn C-Clip upside down, line up the screw holes and trace the internal C-Clip shape again to form a square
- 4) Cut out the square with a gyprock saw - and cut out slots for the screw holes.
- 5) Insert C-Clip through the hole holding onto the 2 tabs that are coming off the bottom of the C-Clip facing the installer and fix the mounting tabs onto the plaster/gyprock wall.
- 6) Wire the ESD, and use screws fix onto the plaster wall using the screw holes on the C-Clip.

RC Snubber ****IMPORTANT REQUIREMENT****

It is recommended that ESDs are installed with an RC Snubber across the switching contact. Please see ESD-Addendum-RC Snubber technical note for more information.

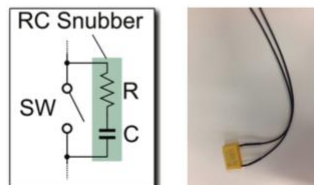
RC Snubber component is provided with each ESD.



Example Installation Diagram



RC Snubber



Pre-Wiring Requirements

The following items are the pre-wiring requirements for each room. Please supply this information to your electrical contractor during the wiring planning phase and well prior to the electrical installation phase.

For any additional information please contact KAS Technical Support.

1. 240V AC power supply cable to power the ESD. The normal location for the ESD is normally just inside the main entrance door close to the light switches.
2. 1 x Twin 240V electrical cable from the ESD location to the sub-board contactor (relay) for lights/power control.
3. 1 x Twin cable running from the ESD location to the A/C unit (Cat-5 cable suitable).
4. 1 x Twin figure 8 speaker wire running from ESD location to desired reed switch locations (connected in series)

Electrician to Supply

- 240V Contactor(s) (relays) to sub-board for power and lighting control
- Any additional dry contact activated relays that may be required at the A/C unit
- Cabling to all locations

KAS Supply

- Energy Saving Device
- RC Snubber (Yellow) for each ESD
- Mounting C-Clips
- Fixing Screws
- Reed switches (as per quotation)
- Optional: Data Identification Programming Card (as per quotation)