

# Self-Powered Wireless Key Card Switch

## Mx-EKCS



### Product Description

The Key Card Switch saves energy by signaling HVAC, lighting, and electrical loads that a room is unoccupied. It communicates wirelessly with compatible devices in a guest room when a key card is inserted or removed from the slot.

The Key Card Switch can be mounted on most surfaces using the mounting plate or over an existing wall box.

### Features Include:

- Determines occupancy based on guest room key card being inserted or removed
- Harvests kinetic energy from the card action - no batteries
- Installs easily in new or existing rooms - no wiring
- Transmits room occupancy status wirelessly to other energy saving devices in the room
- Enables other devices to minimize energy use whenever the room is unoccupied

### Specifications

Part numbers (frequency dependent)	M9-EKCS (902 MHz - North America) M8-EKCS (868 MHz - Europe and China) MJ-EKCS (928 MHz - Japan)
Power Supply	Mechanical energy harvesting (power is generated by the motion of key card moving in and out)
Inputs / Outputs	<ul style="list-style-type: none"><li>• Slot for standard hotel key card (2.125" W x 3.375" H x 0.034" D) (54 mm W x 86mm H x 0.9mm D)</li><li>• Radio Frequency (RF) transmitter</li></ul>
Transmission Range	80 ft. (25 m)
EEP (EnOcean Equipment Profile)	F6-04-01
Card Slot Size (Hotel Standard)	4.72" H x 3.8" W x 0.43" D (at edge) (120mm x 97mm x 11mm)
Dimensions	4.72" H x 3.81" W x 0.43" D (at edge) (120mm x 97mm x 11mm)
Weight	3.5 oz. (99 g)
Environment	<ul style="list-style-type: none"><li>• Indoor use only</li><li>• 32° to 131° F (0° to 55°C)</li><li>• 5% to 95% relative humidity (non-condensing)</li></ul>
Agency Compliance	FCC, IC

### Package Contents

- Key Card Switch
- Trim Plate
- 2 screws, 2 wall anchors

### Tools Required

- Power drill, 3/16" bit
- Screwdriver
- Leveling tool

# Self-Powered Wireless Key Card Switch

## Mx-EKCS



### Planning

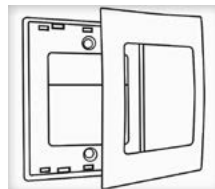
Take a moment to prepare and ensure optimal communications with other system components, and for user convenience.

- Pick a location near the door where occupants enter and exit using the key card. A common location is on the wall opposite the door hinges, 3 ft (92 cm) from the door jamb
- Consider the construction materials in the space and obstacles that may interfere with RF signals

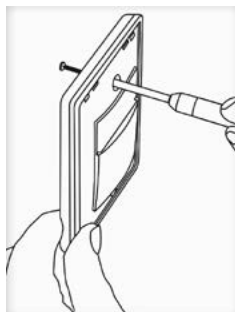
### Installing

1. Decide where you want to mount the key card switch. (The ideal height is in line with wall switches (49" or 125 cm on center) for comfortable access.

NOTE: If installing over an existing wall box make sure any bare electrical wires are capped



2. Remove the trim plate from the key card assembly.
3. Using a level and a pencil, lightly mark two small dots to align the upper edge of the key card switch.
4. Mount the key card switch securely to the wall using the provided screws and wall anchors
  - A. Using the pencil marks to ensure it's level, mark the two mounting screws drill points
  - B. Drill two holes for the wall anchors with a 3/16" drill bit and insert the wall anchors.
  - C. Insert the top screw loosely and level the Key Card Switch.
  - D. Insert the bottom screw, and then hand tighten the top screw.



5. Insert the trim plate tabs into the bottom slots of the key card switch, and then lightly flex the trim plate to insert the top tabs.

TIP: To remove the trim plate without marking it, press down with a fingernail in the top groove to ease the tabs out of the slots.



6. Insert a key card to test the mechanism.

TIP: There should be an audible click each time the key card is inserted or removed.



### Linking

Two or more compatible devices can be linked and configured to provide the desired control. There are two basic types of devices in the system; transmitters and transceivers.

**Transmit-only:** Transmitters are simple energy-harvesting devices that send RF messages to communicate a condition, level, or state. Transmitters can only be linked to transceivers. Examples > Self-powered Light Switches, Occupancy Sensors

**Transmit & Receive:** Transceivers are controlling devices that send as well as receive RF messages. They also process relevant control logic, and actuate the appropriate outputs (switching a light on or off for example). Transceivers can be linked with transmitters as well as other transceivers. A transceiver can have up to 30 devices linked to it. Examples > Relays, Gateways

### The Key Card Switch is a Transmit-Only Device.

To link the Key Card Switch to a transceiver; the transceiver must first be powered, within wireless range of the sensor, and set to accept links.

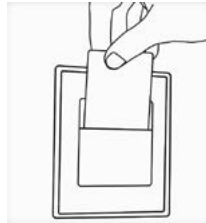
# Self-Powered Wireless Key Card Switch

## Mx-EKCS



### To Link or Unlink a Key Card Switch

1. Set the desired transceiver to the desired link/unlink mode. (refer to receiving device's installation guide).
2. Insert and remove a key card three times quickly - there should be an audible click each time.  
-> The Key Card Switch is now linked.



Refer to the "Linking" section of the transceiver/controller installation guides to verify the linking process.

### Typical Interactions

The key card interaction depends on the type of transceiver it is linked to, for example:

#### Linked to a Thermostat or HVAC Controller

- Insert key card: normal mode is activated.
- Remove key card: setback mode is activated.

#### Linked to a Load Controller

- Insert key card: a wireless message is sent to close the circuits and turn on all linked loads, according to user-defined program settings.
- Remove key card: a wireless message is sent to open the circuits and turn off all linked loads.

NOTE: For multiple installations, e.g. front and back doors, all key cards must be removed to send a message.

### Troubleshooting

Problem	Solution Checklist
The key card switch does not generate a message	<ul style="list-style-type: none"><li>• Verify there is an audible click when card is inserted or removed</li><li>• Verify slot is clear of foreign material or debris. Use forced air to clean.</li></ul>
The linked device does not respond to wireless messages	<ul style="list-style-type: none"><li>• Check for environment or range issues</li><li>• Verify the device is linked</li><li>• Check the transceiver connection and the wiring for errors</li><li>• Check if appropriate devices are linked according to good system planning</li></ul>



Contains:  
FCC: SZV-PTM330U  
IC: 5713A-PTM330U

This device complies with part 15 of the FCC rules and Industry Canada ICES-003. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT! Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IMPORTANT! Tous les changements ou modifications pas expressément approuvés par la partie responsable de la conformité ont pu vider l'autorité de l'utilisateur pour actionner cet équipement.

