

Package Contents

- Plug-In Relay Module

Tools Required

- None

Product Description

The Plug-In Relay Module provides an easy way to save energy and control lighting and appliance loads based on room occupancy.

The module simply plugs into any standard wall receptacle and receives wireless signals from EnOcean-based products that tell it when to power on or off.

Features Include:

- Provides switching of plug-in electrical loads
- Communicates with other devices to enable energy savings
- Plugs into any standard outlet, no wiring required (optional mounting plate provided)
- Easily links with wireless rocker pads or sensors

Specifications

| | |
|--------------------|---|
| Power Supply | 120V VAC, 50/60 Hz |
| Maximum Load | General Purpose: 15A @ 120VAC Resistive: 15A @ 120VAC Motor: 1/2 HP @ 120VAC Tungsten: 960W @ 120VAC Ballast: 600W @ 120VAC |
| Power Consumption | 1.1W full load, 500mW quiescent |
| RF Communications | EnOcean 902 MHz |
| Transmission Range | 80 ft. (25 m) |

Interoperable Products / EEPs (EnOcean Equipment Profiles)

Rocker Pad Switch (F6-02-02)
Key Card Switch (F6-04-01)
Window handle (F6-10-00)
1BS Single Input Contact (D5-00-01)
Light Sensor, 0-1020 lux (A5-06-02)
Occupancy Sensor (A5-07-01)
Contact, single input (A5-30-01)
Central Gateway (A5-38-08)

Dimensions

4.09" L x 1.85" W x 1.26" D
(104 mm x 47 mm x 32 mm)

Weight

12.3 oz. (348 g)

Cord Lengths

Plug cord: 3 ft. (91.4 cm)
Outlet cord: 1 ft. (30.5 cm)

Agency Compliance

ETL, FCC, IC

1) Planning

Take a moment to plan for the module's successful operation and optimal communication with other system components.

- Consider where the device will be plugged in, what it will control, and how power cords can be kept out of the way
- Consider the construction materials in the space and obstacles that may interfere with RF signals

2) Installing

estimated time: 20 minutes




Read and understand instructions completely before starting.



ELECTRICAL SHOCK HAZARD

High Voltage. This device must be installed by a qualified installer or electrician. Follow all applicable electrical codes for installation.

- Turn the electrical load on (for example, a lamp) and unplug the cord from the wall outlet.
- Plug the cord of the electrical load, for example a lamp, into the outlet cord of the module.
- Plug the module into a standard wall outlet.
- Test the connection by actuating the load using the Set (I) button () on the module

NOTE: The plug and outlet are polarized, and not intended to be mated with non-polarized devices.

Optional Mounting

The Plug-In Relay Module provides a fixed mounting option to prevent damage and theft. Using the included mounting plate, mount the device high enough off the floor to avoid spills and impact with cleaning equipment.

- Using a level and a pencil, lightly mark two small dots to align the upper edge of the module on the wall where you want to mount it.

TIP: For easy housekeeping, provide sufficient clearance for vacuum cleaners.

- Slide the mounting plate off the back of the module.

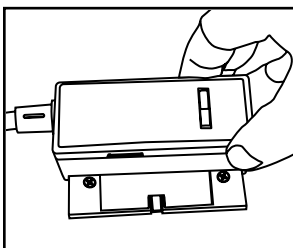
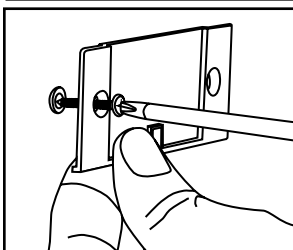
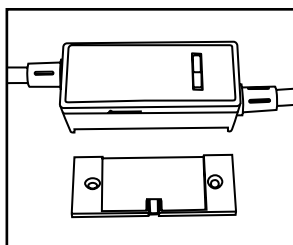
- With the tab lock side down, mount the plate securely to the wall.

A. Using the pencil marks to ensure it's level, mark the two mounting points.

B. Drill two holes for the wall anchors and insert the wall anchors.

C. Insert the first screw loosely and level the module.

D. Insert the second screw, and then hand tighten the first screw.



- Slide module onto the mounting plate until it clicks in place.

NOTE: Any EnOcean-based switch can be linked to the module.

3) 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 Plug-in Relay Module is a Transceiver (transmits & receives)

To link the Plug-in Module to a transmitter, the Plug-in Switch must first be powered, within wireless range of the transmitter it is to be linked to, and set to accept links.

Next, a transmitter, or another transceiver, is triggered, sending a special link message. The awaiting transceiver receives and stores the link permanently so the devices can interact, providing a variety of intelligent control options.

About the Setup Interface

The setup interface has two buttons, Menu (O) and Set, that each have a corresponding 3-color LED (green, amber, red). This simple interface is used to link and configure devices.

The buttons and LEDs are used to navigate and select linking and setup options through a 3-tier menu system consisting of different Modes > Menus > Options.

To use the interface, hold the module so both thumbs can click the buttons without obscuring the LEDs. The illustration and legend below describe how the buttons are used and the meaning of the LED responses.

To exit from anywhere in a menu, hold both buttons at the same time for 2 seconds.

| | |
|--|---|
| <p>Menu (O) button Used to select a menu in a mode by clicking a number of times. Hold the Menu and Set buttons together to access a mode.</p> | <p>Set (I) button Used to select an option in a menu by clicking a number of times. Hold the Set and Menu buttons together to access a mode.</p> |
| <p>Menu (O) LED → </p> <p>Displays the active mode: green for Basic Setup, amber for Advanced Setup, and none for Normal Operation. Displays a selected menu by the number of blinks.</p> | <p>Set (I) LED ← </p> <p>Displays the selected menu option by the number of blinks. Active settings are green, and pending settings are amber.</p> |

- The Menu (O) LED or Set (I) LED display solid for a number of seconds in a certain color to indicate mode or confirmation.
- The Menu (O) LED blinks a number of times in a color to indicate a selected menu.
- The Set (I) LED blinks a number of times in a color to indicate an option.
- A number in a white box indicates the number of times to click the Menu (O) button or Set (I) button.
- A number in a black box indicates the number of seconds to hold down the Menu (O) button or Set (I) button.

To link a transmitter to a transceiver

- Access Basic Setup mode.

NOTE: By default, the Accept Link option in the Linking menu is selected. Once activated, this option stays active for two minutes to provide time to link multiple devices.

Ready to accept links.

- For the transmitter to be linked, do one of the following according to the type of device:

- Sensor: click the designated link button.
- Key Card Switch: insert/remove the card 3 times quickly.
- Rocker Pad: click the top button 3 times quickly.

Device linked successfully.
Set (I) LED displays solid green for 3 seconds.

Ready to accept new links.

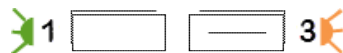
- To exit mode and return to normal operation, press and hold both buttons for 2 seconds.

To unlink a device

Follow the same steps as described in the “To link...” section above with the following deviations:

- After step 1 in the “To link...” section above, click the “Set” (right) button 3 times to enable the “Remove Link” option.

Ready to remove links.



- Follow the same instructions as shown in Step 2 of the “To link...” section. The Set (I) LED will turn red briefly to indicate the link was successfully removed.

To restore factory defaults

Follow these steps to clear all linked devices and restore the Plug-in Relay Module to its factory default settings.

- Press and hold both buttons for 15 seconds
>> Hold buttons until the Menu (O) LED is solid RED and the Set (I) LED is solid Amber (Both LEDs turn various colors as the module cycles through the resetting process).
- Press and hold the Set (I) button for 3 seconds to confirm factory reset.
- Device will reboot and initiate start up LED sequence.

4) Configuring

The default settings on the module support common control scenarios. However, some occupancy settings can be adjusted on the module using the setup interface, if required.

| Setting | Default | Application |
|-------------------|--------------------------|---|
| Auto-On | Automatically Determined | If linked to an occupancy sensor, the default is Enabled. If linked to a switch, the default is Disabled for manual control. |
| Vacancy Check | 5 minutes | If linked to a occupancy sensor and a door sensor. |
| Switched Auto-Off | Disabled | If linked to a rocker pad or key card switch. |
| Motion Auto-Off | 15 minutes | If linked to occupancy sensor. |
| Door/Window Ajar | 2 minutes | If linked to a window sensor or patio door. |
| Egress | 30 seconds | If linked to a key card switch. |

Auto-On

The default Auto-On option is automatically determined based on the type of device that is linked. Auto-On is Disabled if the first linked device is a switch, or Enabled if the device is an occupancy sensor.

From the Auto-On menu, the active option is indicated by the number of green blinks on the “Set” LED; amber blinks indicate an unsaved change. Click the “Set” button an appropriate number of times to select an option.

| Option | Clicks | Blinks |
|--------------------------|--------|--------|
| Disabled | 1 | 1 |
| Enabled | 2 | 2 |
| Automatically determined | 3 | 3 |

To change the auto-on option:

This example shows changing the option from Automatically Determined to Disabled.

- Access Basic Setup mode.
- Select the Switched Auto-On menu.
- Select an option.
- Save the selection.

Auto-Off

There are two auto-off menus, one for occupancy sensors, and one for rocker switches. For linked occupancy sensors, the default is 15 minutes. For linked rocker pads and key card switches, the default is Disabled to allow manual control.

From the auto-off timer menu, the active option is indicated by the number of green blinks on the “Set” LED; amber blinks indicate an unsaved change. Click the Set (I) button an appropriate number of times to select an option.

| Option | Clicks | Blinks |
|------------|--------|--------|
| Disabled | 1 | 1 |
| 5 minutes | 2 | 2 |
| 15 minutes | 3 | 3 |
| 30 minutes | 4 | 4 |
| 60 minutes | 5 | 5 |

To change the switched auto-off option:

This example shows changing the option from Disabled to 5 minutes.

- Access Basic Setup mode.
- Select the Switched Auto-Off menu.
- Select an option.
- Save the selection.

To change the motion auto-off option:






This example shows changing the option from 15 to 5 minutes.

- Access Basic Setup mode.
- Select the Motion Auto-Off menu.
- Select an option.
- Save the selection.

Vacancy Check















Vacancy check is a time delay activated when a door sensor opens and closes. Linked loads will turn off if any motion sensor(s) does not confirm occupancy within the time delay.

From the Vacancy Check menu, the active option is indicated by the number of green blinks on the Set (I) LED; amber blinks indicate an unsaved change. Click the Set (I) button an appropriate number of times to select an option.

| Option | Clicks | Blinks |
|--------------------|--------|---|
| 5 minutes | 1 | 1  |
| 15 mins. (default) | 2 | 2  |
| 30 minutes | 3 | 3  |
| 60 minutes | 4 | 4  |
| 120 minutes | 5 | 5  |

To change the vacancy check option:




This example shows changing the option from 5 to 15 minutes.

1. Access Basic Setup mode.    
2. Select the Vacancy Check menu.  3   1 
3. Select an option.  3  2 
4. Save the selection.  3  2 

To enable the device as a repeater

In some situations, enabling the transceiver device as a repeater can help optimize the wireless range between devices.

1. Access Advanced Setup by holding both buttons down for 5 seconds and releasing them when both LEDs turn amber.
2. Click the Set (I) button an appropriate number of times to select an option. >> By default, the first menu option in advanced setup is to Enable Repeater.

| Option | Clicks | Blinks |
|--------------------|--------|---|
| Disabled (default) | 1 | 1  |
| 1 Hop | 2 | 2  |
| 2 Hops | 3 | 3  |

Example: Setting a device to operate as a repeater.

1. Access the Advanced setup (hold down both buttons for 5 seconds - until both LEDs turn amber).
2. Select "option 2" by clicking the Set (I) button two times. (Set (I) button LED will blink 2x (amber) to confirm)
3. Save selection by holding Set (I) button for 2 seconds.
4. Exit Menu (hold both buttons for 2 seconds.)
5. Re-boot module by either power cycling or pressing and holding both buttons for 10 seconds (release when Left

LED=Red, Right LED=Green).

Troubleshooting

| Problem | Solution Checklist |
|---|--|
| The device does not power up | <ul style="list-style-type: none"> Check the wiring for errors Check the circuit breaker Use a voltage meter to confirm power |
| The device does not control linked load | <ul style="list-style-type: none"> Click the Set (I) button to open/close the relay manually Turn off the power and then restore it |
| Cannot link other devices | <ul style="list-style-type: none"> Check if Accept Link option can be accessed Move closer to the device; it may be out of range Try linking a different device Check for environmental conditions that interfere with RF signals Verify the maximum number of devices (10) has not been exceeded |
| Cannot change settings on the device | <ul style="list-style-type: none"> Check if menu item can be accessed Check if changes can be saved |
| The device does not respond to wireless messages or selected settings | <ul style="list-style-type: none"> Check for environment or range issues Verify the device is linked Check if appropriate devices are linked according to good system planning Extend the antenna to amplify the range: remove it from the groove in the module, straighten it and slide it into the white antenna sleeve provided |



902 MHz: Contains:
FCC: SZV-STM300U
IC: 5713A-STM300U

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.