

Power Switch Metering (PSM-29ZW)

February 13th, 2015

The Power Switches are capable of receiving wireless signals from the Z-Wave network Gateway or Control Panel to toggle On/Off of appliances that are attached to it.

The Power Switch utilizes Z-Wave technology for wireless signal transmission. A Z-Wave network consists of various devices interconnected by a wireless communication protocol. Based on the Z-Wave standard, the device can work together seamlessly with Z-Wave Gateways, Control Panels and devices from different vendors.

The Power Switch is a mains powered device that has the ability to act as a Z-Wave repeater and forwards data packets between nodes not able to communicate directly over the air. This extends the range of a Z-Wave network and improves stability.

● **Identifying the Parts**

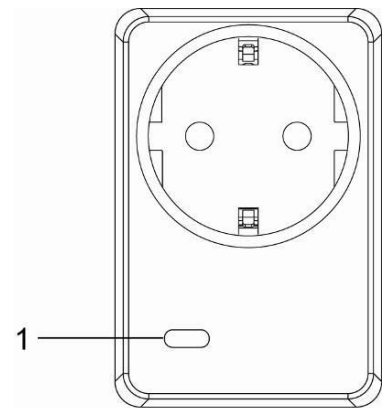
1. Red LED / Switch Button

- Press the switch button to switch on/off the Power Switch.
- Press the button 3 times within 1.5 seconds to send learning code.
- Press and hold for 12 seconds to factory reset.

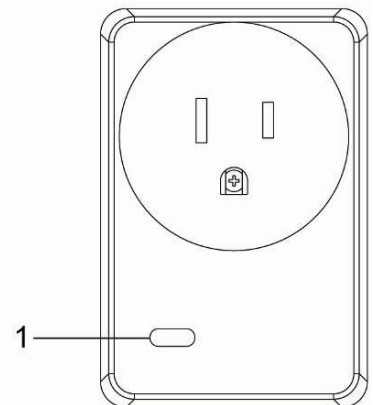
● **LED Indicator**

- On: power on
- Off: power off
- Red light flashes twice: 1. The Power Switch has just been powered on, *or*
2. The Power Switch has just been factory reset.

Case A



Case B



● **Adding Device (Inclusion)**

- After installation, turn the main power on.
- Put the Z-wave gateway or control panel into **Inclusion mode** (please refer to the Z-wave gateway or control panel manual).
- Within 1.5 seconds, press the Switch Button 3 times.
- Refer to the operation manual of the Z-wave gateway or control panel to complete the adding process.
- If the device has already been added (included) into another Z-wave Gateway/Control Panel, or if the device is unable to be added into the current Z-wave Gateway/Control Panel, try removing it first (see **Removing Device**).

● **Removing Device (Exclusion)**

The device must be removed from existing Z-wave network before being added into another.

Exclusion Mode

- Put the Z-wave gateway or control panel into **Exclusion mode** (please refer to the Z-wave gateway or control panel manual).
- Within 1.5 seconds, press the Switch Button 3 times and the device will be removed from the Z-wave network.

Factory Reset

Factory resetting the device will restore it to factory default settings (i.e. not included into any Z-wave network). Please only use this procedure if the Z-Wave gateway or control panel is lost or otherwise inoperable.

- Press and hold the Switch Button of the device for 12 seconds to factory reset.

<NOTE>

- ☞ Factory resetting the device will also clear all accumulated power data.

● **Operation**

- After being added into a Z-wave gateway or control panel, plug a home appliance into the Power Switch. This home appliance's power and energy usage data will be transmitted to the Control Panel.
- Pressing the switch button on the Power Switch can also toggle on/off the Power Switch.
- Remotely turn on/off the electric appliance through the Control Panel (please refer the manual of your Control Panel).
- If the power output is below 1kW, PSM-29 will transmit a signal to Z-wave gateway/panel when the power deviates by +/- 2W to update PSM-29's power information.
If the power output is above 1kW, PSM-29 will transmit a signal to Z-wave gateway/panel when the power deviates by +/- 5W to update PSM-29's power information.
- PSM-29 transmits a signal with power data to Z-wave gateway/panel every 10 minutes starting from the last time a signal is transmitted.
- The Power Switch transmits a signal with power data to Z-wave gateway/panel whenever power usage increases by 0.1kW/hr.
- If Power Switch is removed from power outlet, after replugging the Power Switch, the previous on/off status of Power Switch will be resumed immediately.
- When the power is below 20W, measurement error is more likely to occur.
- If the load of the home appliance is causing PSM-29 to overheat, the Power Switch will automatically cut off. The user must replug the Power Switch in order to resume using the Power Switch.

● **Power Specification**

- For **110V**: the maximum operation load is 1760W and 16A. Warning: please do not exceed the maximum load.
- For **230V**: the maximum operation load is 3680W and 16A. Warning: please do not exceed the maximum load.

● **Z-Wave Information**

Device Type: On/Off Power Switch

Role Type: Always On Slave (AOS)

Command Class Support/Control

Mandatory CC Support: Association CC, v2 or newer
Association Group Information CC
Meter CC, v2
Basic CC
Binary Switch CC
Device Reset Locally CC
Manufacturer Specific CC
Powerlevel CC
Version CC, v2 or newer
Z-Wave Plus Info CC

Recommended CC Support: Firmware Update Metadata CC

● **Z-Wave's Groups (Association Command Class Version 2)**

The Switch can be set to send reports to associated Z-Wave devices. It supports one association group with five node support for Grouping 1. For grouping 1, the Switch will report its latest status to Z-Wave Gateway/Panel.

Grouping 1 includes:

Binary Switch CC (SWITCH_BINARY_REPORT)

Meter CC, v2 (METER_REPORT_COMMAND)

Device Reset Locally CC (COMMAND_CLASS_DEVICE_RESET_LOCALLY)

- Auto report to Grouping 1 (Maximum Node 5)
- On/Off Event Report

When toggling between On/Off, it will send Binary Switch Report to the nodes of Grouping 1.