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Making your world smarter and greener

Quick Start Guide - ZOE® - MP1 Model # 5010P
Smart Energy Wireless Metering Smart Plug

ZigBee® Certified product

Product Brief

The ZOE-MP1 enables remote control and monitoring of lamps and appliances, making them part of a Home Area Network (HAN.)

The device responds to Load Control and Price events sent by an electric utility or ON/OFF commands from an Energy Service Portal (ESP), usually a smart meter, or other controllers in the network.

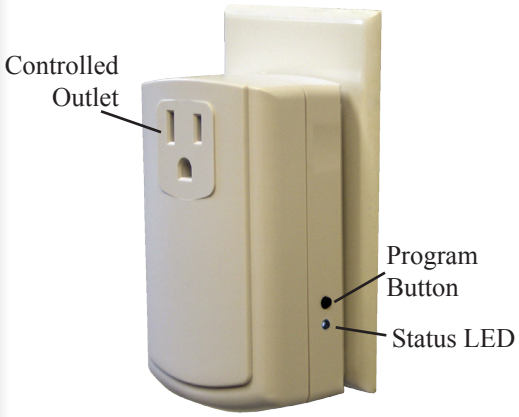
This smart plug also measures the power delivered, enabling the intelligent management of lighting and other appliances to maximize energy conservation while taking advantage of the lowest rates offered by electric utilities. Use of the ZigBee® Smart Energy (SE) Profile ensures compatibility with the emerging standards for smart homes/buildings being deployed around the world.

Installation

The ZOE-MP1 must be installed indoors or in a weather proof enclosure

1. Register ZOE-MP1 with Utility
   - Register the device with your electric utility using the included installation code and the instructions provided by the utility. Each code is unique to a particular controller, so please ensure the provided numbers are entered correctly.
2. Reset to Factory Defaults
   - Press and hold the Program Button while plugging the ZOE-MP1 into a 120V* AC receptacle and release after 1-2 seconds.
   - The Status LED will blink rapidly indicating the ZOE-MP1 has been reset and is searching for an open SE network to join.

   (*240VAC input is acceptable, but the unit is equipped for North American receptacles)
3. Plug desired lamp or appliance into the Controlled Outlet.
   (Do not exceed 450W of incandescent lighting or 15A of resistive load**)**



Set-up

Attaching device to the Home Area Network (HAN)

The ZOE-MP1 must be joined to the HAN so it can communicate with the electric utility to receive load events and price information. Ensure the device is powered and that the HAN coordinator or a router is open for joining. Then proceed as follows:

1. Once the ZOE-MP1 is plugged in and reset, it will begin searching for a an open network. LED is flashing rapidly.
2. After the device completes the joining process (typically within 30 seconds), the LED will be lit solid unless asked by the coordinator (ESP or Smart Meter) to open join. While joining, the Status LED's flashing rate will slow to indicate joining in in progress. The LED will remain flashing fast if the device is unable to join the HAN. (Refer to LED pattern on next page)

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Operation

Utility demand response events are handled automatically to shut off the load when the device is opted in to participate in the DR event. The Program Button can be **double tapped** to toggle between "**opt-out**" status to decline participation in a demand response event and "**opt-in**" status to participate. Event participation is **enabled** (opted in) **by default**. During an event, the status of event participation is indicated by the flashing pattern of the Status LED (refer to chart below for pattern indication).

Price events are handled automatically to shut off the load when the energy criticality level reaches the "High" usage threshold. Price event participation is **disabled by default** but can be toggled between enabled and disabled by tapping the Program Button **4 times**.

Manual (local) load control is done by tapping the Program Button once when the device is not in a demand response event. Tapping the Program Button toggles the load between ON and OFF. The Status LED will glow *green* when the load is ON and *red* when the load is OFF. When a demand response event is in progress, local control is disabled if the device is opted in for the event. To enable local control during an event, the device must be opted out of participation in demand response events.

Rejoining Network

If the ZOE-MP1 loses power or needs to be moved to a new location, the device will rejoin the HAN automatically once power has been restored. The Status LED will flash fast until the device re-establishes communication with the network. After the device completes the re-joining process, it will enter Open Permit Join mode for 4 minutes. The Status LED flashing rate will slow to once per second while Open Permit Join mode is active.

Program Button Additional Operation

Desired Operation	Action on Pushbutton	Device Behavior
Permit Join (available after device has joined HAN)	Press for 6 seconds (Press and hold till LED stops blinking to close join)	Status LED flashes once per second.
Get DRLC Events	Tap 3 times	Device communicates with utility to check for DRLC events
Update Price Tables	Tap 5 times	Device communicates with utility and updates price table
Request New Firmware via OTA	Tap 6 times	Device will request for an update if an OTA server with the proper update is available. LED short blinks will upgrade is in progress.
Soft Reset	Tap 10 times	Both LEDs will go out for about a second and then device will rejoin network
Leave Current Network	Press and hold for 15+ seconds	LED will start blinking fast as it searching for a new network to join

Status LED Indication

Color	Indication
Green LED	Load is ON
Red LED	Load is OFF
Pattern	**Indication**
Fastest flashing	Searching for HAN
Fast flashing	Joining/Rejoining HAN
Flash Once per Second	Permit Join is open
Solid	HAN joined, no DR or Price event in progress.
Short blink	Opted-out for DR event or Disabled for Price Events. OTA Upgrade in progress.
Long blink	Opted-in for DR event or Enabled for Price Events
Two blips per second	Device cannot find "Parent Device" and/or network it was joined to

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