EASYSAVER
Save the Power!. Save the Earth!

SPES-02 Smart Plug

EASYSAVER Co., LTD

Slave Device : Inclusion / Exclusion

Add to the Network

1. Put your Z-Wave controller into inclusion mode.
2. Plug the SmatPlug into the power outlet.
3. Press and hold on/off button about 5 seconds.
4. Orange LED will be flashing about 2 seconds, then inclusion process will be start.
5. Wait until inclusion will be done.

Remove From the Network

1. Put your Z-Wave controller into exclusion mode
2. Plug the SmatPlug into the power outlet.
3. Press and hold on/off button about 5 seconds.
4. Orange LED will be flashing about 2 seconds, then exclusion process will be start.
5. Wait until exclusion will be done.

Factory Reset

Please use this procedure only when the network primary controller is missing or otherwise inoperable.

1. Plug the SmatPlug into the power outlet.
2. Press and hold on/off button about 10 seconds.
3. Orange LED will be flashing about 2 seconds, then factory reset process will be start.

Devices from multiple manufactures in one network

SPES-02 is a wireless smartplug, based on Z-Wave Plus technology.

Z-Wave Plus enabled devices displaying the Z-Wave Plus logo can also be used with it regardless of the manufacturer,

and can also be used in other manufacturer's Z-Wave enabled networks.

Remote On/Off control of the connected load is possible with other manufacturer's wireless Controller.

Each switch is designed to act as a repeater.

Repeaters will re-transmit the RF signal to ensure that the signal is received by its intended destination

by routing the signal around obstacles and radio dead spots.

Association Command Class

Association Command

1. SPES-02 is an always listening Z-Wave device, so associations may be added or removed by a controller at any time.
   Or If your controller requires to have the SPES-02 send a 'node information frame' or NIF for associations, then press and hold the On/Off button about 5 seconds will cause the SPES-02 to send its NIF.

2. There is only one group for the SPES-02.

3. Association Group 1 supports lifeline. (Notification Report, Meter Report, Device Reset Locally Report)

4. Maximum 1 device that can be added to the group

Notification

Unsolicited Report	NOTIFICATION_REPORT	Notification Type : 0x08 Relay ON : 0x03 Relay OFF : 0x02	The device reports current state of relay when it changes its state. (For example, when user press button or user plug in the smart plug)
		Notification Type : 0x08 Over Current : 0x06	When over-current occurs, the device shuts off the relay. The device reports the over-current.
		Notification Type : 0x08 Over Load : 0x08	When measured watt is over 3000 Watt, the device reports this notification every 10 minute.
		Notification Type : 0x08 Under Load : 0x05	After Overload notification, the measured watt is under 2900 Watt, the device reports this notification.
		Notification Type : 0x09 Hardware Fail : 0x01	Device must report when it is not the normal operation as an internal malfunction.
	MeterV3_REPORT	Rate Type: METER_REPORT_RATE_TYPE_IMPORT_V4(0x01) Meter Type : METER_REPORT_METER_TYPE_ELECTRIC_METER_V3(0x01) Delta Time : Transmission Period(min unit), Previous Meter Value : Previous Value	
		Scale:0x00	Report the KWh(4byte) value. - In addition to reporting regularly even when plugged in to a power source and the first report at a time.

Configuration Command Class

Parameter Number : 1 Size : 4 Default : 0 Possible Values : 0, 0x0003E801	First 3 Bytes : Standby Power Setting Value Last 1 Byte : Standby Power Enable/Disable If the value is set by 1000, standby power equals 10.00w (0x0003E8) and standby power enable is 1. total 0x0003E801
Parameter Number : 2 Size : 1 Default : 1 Possible Values : 0, 1	Value : 1 Periodic Measurement Value Transmission Enable Value : 0 Periodic Measurement Value Transmission disable
Parameter Number : 3 Size : 1 Default : 1 Possible Values : 0, 1	Value : 0 Power Accumulation Stop Value : 1 Power Accumulation Start
Parameter Number : 4 Size : 1 Default : 0 Possible Values : 0, 1	Value : 0 Connected Device Not Use Value : 1 Connected Device Use - Before setting the standby power it does not report.
Parameter Number : 5 Size : 1 Default : 6 Possible Values : 0 ~ 72	Periodic Measurement Value Transmission Interval Minimum time interval : 10minutes Value : 1 (10minutes * 1) = 10minutes interval Value : 2 (10minutes * 2) = 20minutes interval ..... Value : 72(10min * 72) = 12 hours interval =>MAX

Basic Command

COMMAND_CLASS_BASIC	BASIC_GET	BASIC_REPORT	Report Relay Status 0x00 : Relay OFF 0xFF : Relay ON
	BASIC_SET	0xFF 0x00	0xFF : Relay ON 0x00 : Relay OFF

When contoller send BASIC_SET with 0x00 data, SPES-02 will turn off the relay in order to cut down the AC power.

And SPES-02 will send ACK notification with POWER_MANAGEMENT type (0x08) and AC_MAINS_DISCONNECTED (0x02).

When contoller send BASIC_SET with 0xFF data, SPES-02 will turn on the relay in order to connect the AC power.

And SPES-02 will send ACK notification with POWER_MANAGEMENT type (0x08) and AC_MAINS_RECONNECTED (0x03).

These ACK notifications will be sent as well when user press Power button.

Basic Set Command maps to Binary Switch Set Command.

Basic Get Command maps to Binary Switch Get Command.

Basic Report maps to Binary Switch Report.

Meter Command

<table>
<tr><td rowspan="4">COMMAND_CLASS_METER_V3</td><td rowspan="3">When the device requests a METER_GET reports the value set in the Scale.</td><td colspan="2">METER_REPORT</td></tr>
<tr><td colspan="2">Rate Type: METER_REPORT_RATE_TYPE_IMPORT_V4(0x01)
Meter Type : METER_REPORT_METER_TYPE_ELECTRIC_METER_V3(0x01)
Delta Time : Transmission Period(in minutes), Previous Meter Value : Previous Value</td></tr>
<tr><td>Scale:0x00</td><td>Report the KWh(4 byte) value</td></tr>
<tr><td>METER_RESET
METER_SUPPORTED_GET</td><td>Scale:0x02</td><td>Report the Watt(4byte) value
The hex data of device must be divided by 100 because this data is 1/100 Watt unit.
initialize the KWh value</td></tr>
<tr><td>METER_SUPPORTED_REPORT</td><td>Scale: 0 or 2</td><td>Meter Type:0x01, Scale Supported:0x05</td></tr>
</table>

Security Command Class is implemented

SPES-02 is security enabled Z-Wave plus product.

Security Enabled Z-Wave Controller must be used in order to fully utilize this product.

LED indication

Relay On : GREEN LED On

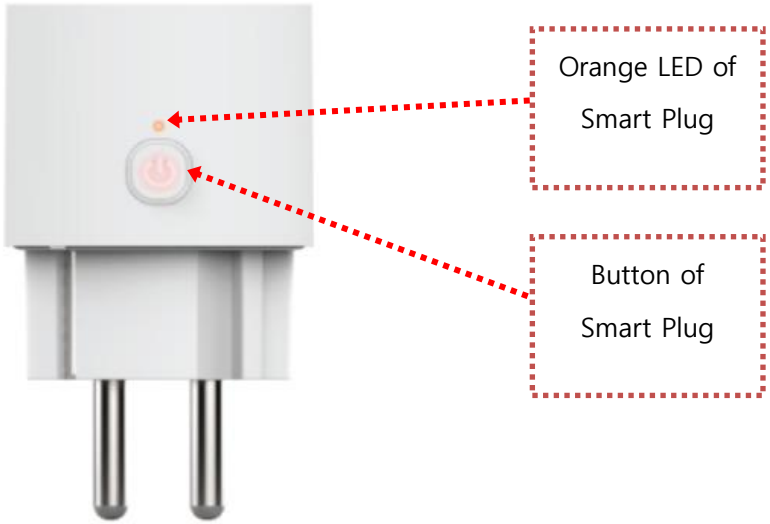
Relay Off : RED LED On

Overcurrent Detected : Orange LED blinking about 60 seconds

Firmware Upgrading : Orange LED blinking until Firmware Upgrading is finished.

Inclusion / Exclusion : Orange LED blinking fastly about 3 seconds.

Factory Reset : Orange LED blinking fastly about 3 seconds.


Orange LED of
Smart Plug
Button of
Smart Plug