Philio Slim Multisensor PST02-A Manual

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Philio

Slim Multisensor

SKU: PST02-A


Z-WAVE
PLUS
SECURE

Quickstart

This is a
secure
Alarm Sensor
for
Australia, NZL, Brasil, etc..

Please make sure the internal battery is fully charged.

To add this device to your network execute the following action:
There are two tamper keys in the device, one is in the back side, another is in the front side.Both of themcan add,remove, reset or association from Z-Wave network.To add into a Z-Wave network: 1. Have Z-WaveController entered inclusion mode.2. Pressing tamper key three times within 1.5 seconds to enter the inclusion mode.3. After add successful, the device will wake to receive the setting command from Z-Wave Controller about 20 seconds.

Please refer to the
Manufacturers Manual for more information.

Important safety information

Please read this manual carefully. Failure to follow the recommendations in this manual may be dangerous or may violate the law.
The manufacturer, importer, distributor and seller shall not be liable for any loss or damage resulting from failure to comply with the instructions in this manual or any other material.
Use this equipment only for its intended purpose. Follow the disposal instructions.

Do not dispose of electronic equipment or batteries in a fire or near open heat sources.

What is Z-Wave?

Z-Wave is the international wireless protocol for communication in the Smart Home. This device is suited for use in the region mentioned in the Quickstart section.

Z-Wave ensures a reliable communication by reconfirming every message (**two-way communication**) and every mains powered node can act as a repeater for other nodes (**meshed network**) in case the receiver is not in direct wireless range of the transmitter.

This device and every other certified Z-Wave device can be **used together with any other certified Z-Wave device regardless of brand and origin** as long as both are suited for the same frequency range.

If a device supports **secure communication** it will communicate with other devices secure as long as this device provides the same or a higher level of security. Otherwise it will automatically turn into a lower level of security to maintain backward compatibility.

For more information about Z-Wave technology, devices, white papers etc. please refer to www.z-wave.info.

Product Description

The slim multisensor PST02 has PIR, door/window, temperature and illumination, 4 sensors function in one,based on Z-Wave technology.

Prepare for Installation / Reset

Please read the user manual before installing the product.

In order to include (add) a Z-Wave device to a network it **must be in factory default state.** Please make sure to reset the device into factory default. You can do this by performing an Exclusion operation as described below in the manual. Every Z-Wave controller is able to perform this operation however it is recommended to use the primary controller of the previous network to make sure the very device is excluded properly from this network.

Reset to factory default

This device also allows to be reset without any involvement of a Z-Wave controller. This procedure should only be used when the primary controller is inoperable.

There are two tamper keys in the device, one is in the back side, another is in the front side.Both of themcan add,remove, reset or association from Z-Wave network.To reset the device: Notice: Use this procedure only in the event that the primary controller is lost or otherwise inoperable.1. Pressing tamper key four times within 1.5 seconds and do not release the tamper key in the 4thpressed, and the LED will light ON.2. After 3 seconds the

LED will turn OFF, after that within 2 seconds, release the tamper key. If successful, the LED will light ON one second. Otherwise, the LED will flash once.3. IDs are excluded and all settings will reset to factory default.

Inclusion/Exclusion

On factory default the device does not belong to any Z-Wave network. The device needs to be **added to an existing wireless network** to communicate with the devices of this network. This process is called **Inclusion**.

Devices can also be removed from a network. This process is called **Exclusion**. Both processes are initiated by the primary controller of the Z-Wave network. This controller is turned into exclusion respective inclusion mode. Inclusion and Exclusion is then performed doing a special manual action right on the device.

Inclusion

There are two tamper keys in the device, one is in the back side, another is in the front side.Both of themcan add,remove, reset or association from Z-Wave network.To add into a Z-Wave network: 1. Have Z-WaveController entered inclusion mode.2. Pressing tamper key three times within 1.5 seconds to enter the inclusion mode.3. After add successful, the device will wake to receive the setting command from Z-Wave Controller about 20 seconds.

Exclusion

There are two tamper keys in the device, one is in the back side, another is in the front side.Both of themcan add,remove, reset or association from Z-Wave network.To remove the device from a Z-Wave network: 1. Have Z-WaveController entered exclusion mode.2. Pressing tamper key three times within 1.5 seconds to enter the exclusion mode.Node ID has been excluded.

Communication to a Sleeping device (Wakeup)

This device is battery operated and turned into deep sleep state most of the time to save battery life time. Communication with the device is limited. In order to communicate with the device, a static controller **C** is needed in the network. This controller will maintain a mailbox for the battery operated devices and store commands that can not be received during deep sleep state. Without such a controller, communication may become impossible and/or the battery life time is significantly decreased.

This device will wakeup regularly and announce the wakeup state by sending out a so called Wakeup Notification. The controller can then empty the mailbox. Therefore, the device needs to be configured with the desired wakeup interval and the node ID of the controller. If the device was included by a static controller this controller will usually perform all necessary configurations. The wakeup interval is a tradeoff between maximal battery life time and the desired responses of the device. To wakeup the device please perform the following action:

There are two tamper keys in the device, one is in the back side, another is in the front side.Both of themcan add,remove, reset or association from Z-Wave network.Press any key once, the device will awake 10 seconds.

Quick trouble shooting

Here are a few hints for network installation if things dont work as expected.

1. Make sure a device is in factory reset state before including. In doubt exclude before include.
2. If inclusion still fails, check if both devices use the same frequency.
3. Remove all dead devices from associations. Otherwise you will see severe delays.
4. Never use sleeping battery devices without a central controller.

5. Dont poll FLIRS devices.
6. Make sure to have enough mains powered device to benefit from the meshing

Association – one device controls an other device

Z-Wave devices control other Z-Wave devices. The relationship between one device controlling another device is called association. In order to control a different device, the controlling device needs to maintain a list of devices that will receive controlling commands. These lists are called association groups and they are always related to certain events (e.g. button pressed, sensor triggers, …). In case the event happens all devices stored in the respective association group will receive the same wireless command wireless command, typically a ‘Basic Set’ Command.

Association Groups:

Group NumberMaximum NodesDescription

1	8	Z-Wave Plus Lifeline
2	8	Group name is u0022ON/OFF Lightu0022. It is light control, the device will send the Basic Set command to this group.

Configuration Parameters

Z-Wave products are supposed to work out of the box after inclusion, however certain configuration can adapt the function better to user needs or unlock further enhanced features.

IMPORTANT: Controllers may only allow configuring signed values. In order to set values in the range 128 … 255 the value sent in the application shall be the desired value minus 256. For example: To set a parameter to 200â€ˆit may be needed to set a value of 200 minus 256 = minus 56. In case of a two byte value the same logic applies: Values greater than 32768 may needed to be given as negative values too.

Parameter 10: AutoReportBatteryTime

The interval time for auto report the battery level. 0 means turn off auto report battery.The default value is 12. The tick time can setting by the configuration No.20.
Size: 1 Byte, Default Value: 12

SettingDescription

0 – 127	The default value is 12. The tick time can setting by the configuration No.20.

Parameter 11: Auto Report Door/Windo w State

The interval time for auto report the door/window state. 0 means turn off auto report door/window state.The default value is 12. The tick time can setting by the configuration No.20.
Size: 1 Byte, Default Value: 12

SettingDescription

0 – 127	The default value is 12. The tick time can setting by the configuration No.20.

Parameter 12: Auto Report Illumination Time

The interval time for auto report the illumination. 0 means turn off auto report illumination.The default value is 12. The tick time can setting by the configuration No.20.
Size: 1 Byte, Default Value: 12

SettingDescription

0 – 127	The default value is 12. The tick time can setting by the configuration No.20.

Parameter 13: Auto Report Temperature Time

The interval time for auto report the temperature. 0 means turn off auto report temperature.The default value is 12. The tick time can setting by the configuration No.20.
Size: 1 Byte, Default Value: 12

SettingDescription

0 – 127	The default value is 12. The tick time can setting by the configuration No.20.

Parameter 2: Basic SetLevel

Setting the BASIC command value to turn on the light. The 0xFF(-1) means turn on the light. For dimmer equipment 1 to 100 means the light strength.0 means turn off the light.Caution: The value is unsigned byte, the range is from 0x00 ~ 0xFF.
Size: 1 Byte, Default Value: 127

SettingDescription

0 – 127	equipment 1 to 100 means the lightstrength. 0 means turn off the light
0	turn off the light

Parameter 20: Auto Report TickInterval

The interval time for auto report each tick. Setting this configuration will effect configuration No.10, No.11, No.12 and No.13.The unit is 1 minute.Caution1: Setting to 0 means turn off all auto report function.Caution2: The value is unsigned byte, the range is from 0x00 ~ 0xFF.
Size: 1 Byte, Default Value: 30

SettingDescription

0 – 127	The unit is 1 minute,Setting this configuration willeffect configuration No.10, No.11,No.12 and No.13.

Parameter 21: TemperatureDifferentialReport

The temperature differential to report.0 means turn off this function. The unit is Fahrenheit.Enable this function the device will detect every minutes. And when the temperature is over 140 degree Fahrenheit, it will continue report.
Size: 1 Byte, Default Value: 1

SettingDescription

1 – 127	Enable this function the device will detect every minutes. And when the temperature is over 140 degree Fahrenheit, it will continue report.

Parameter 22: Illumination DifferentialReport

The illumination differential to report.0 means turn off this function. The unit is percentage.Enable this function the device will detect every minutes. Enable this functionality will cause some issue please see the detail in the

Illumination Report section.
Size: 1 Byte, Default Value: 0

SettingDescription

0 – 99	Enable this function the device willdetect every minutes.

Parameter 3: PIRSensitivity

PIR sensitivity settings.0 means disable the PIR motion.1 means the lowest sensitivity,99 means the highest sensitivity.High sensitivity means can detected long distance, but if there is more noise signal in the environment, it will re-trigger too frequency.
Size: 1 Byte, Default Value: 80

SettingDescription

0 – 99	PIR sensitivity settings
0	disable the PIR motion
1	the lowest sensitivity
99	the highest sensitivity

Parameter 4: LightThreshold

Setting the illumination threshold to turn on the light. When the event triggered and the environment illumination lower then the threshold, the device will turn on the light.0 means turn off illumination detected function. And never turn on the light.1 means darkest.99 means brightest.100 means turn off illumination detected function. And always turn on the lightNotice: In none test mode, only the value in 1 to 99 will enable the illumination detected function and update the illumination value.
Size: 1 Byte, Default Value: 99

SettingDescription

0 – 100	Setting the illumination threshold toturn on the light
1	1 means darkest
99	99 means brightest
100	100 means turn off illumination

Parameter 5: Operation Mode

Operation mode. Using bit to control.Caution: The value is unsigned byte, the range is from 0x00 ~ 0xFF.Bit0: Reserve.Bit1: 1 means test mode, 0 means normal mode.Bit2: Disable the door/window function.(1:Disable, 0:Enable)Bit3: Setting the temperature scale.0: Fahrenheit, 1:CelsiusBit4: Disable the illumination report after event triggered.(1:Disable, 0:Enable)Bit5: Disable the temperature report after event triggered.(1:Disable, 0:Enable)Bit6: Reserve.Bit7: Disable the back key release into test mode.(1:Disable, 0:Enable)
Size: 1 Byte, Default Value: 0

SettingDescription

0 – 127	Setting Operation mode.
2	Bit1: 1 means test mode, 0 means normal mode.
4	Bit2: Disable the door/windowfunction.(1:Disable, 0:Enable)
8	Bit3: Setting the temperature scale. 0: Fahrenheit, 1:Celsius
10	Bit4: Disable the illumination report after event triggered.(1:Disable, 0:Enable)
20	Bit5: Disable the temperature report after event triggered.(1:Disable, 0:Enable)
40	Bit6: Reserve.
80	Bit7: Disable the back key release into test mode. (1:Disable, 0:Enable)
1	Bit0: Reserve.

Parameter 6: Mult- SensorFunctionSwitch

Multisensor function switch. Using bit to control.Caution: The value is unsigned byte, the range is from 0x00 ~ 0xFF.Bit0: Disable magnetic integrate illumination to turn ON the lighting nodes in the association group 2. (1:Disable, 0:Enable)Bit1: Disable PIR integrate Illumination to turn ON the lighting nodes in the association group 2. (1:Disable, 0:Enable)Bit2: Disable magnetic integrate PIRto turn ON the lighting nodes in the association group 2.(1:Disable, 0:Enable) (Default is Disable)Bit3: When Bit2 is 0 (Enable), Are the device and the lighting in the same room? 0: In the same room(Default),1: In the different room.Bit4: Disable delay 5 seconds to turn off the light, when door/window closed.(1:Disable, 0:Enable)Bit5: Disable auto turn off the light, after door/window opened to turn on the light.(1:Disable, 0:Enable)Bit6: Reserve.Bit7: Reserve.
Size: 1 Byte, Default Value: 4

SettingDescription

0 – 127	Multisensor function switch
1	Bit0: Disable magnetic integrate illumination to turn ON the lighting nodes in the association group 2. (1:Disable, 0:Enable)
2	Bit1: Disable PIR integrate Illumination to turn ON the lighting nodes in the association group 2. (1:Disable, 0:Enable)
4	Bit2: Disable magnetic integrate PIR
8	Bit3: When Bit2 is 0 (Enable), Are the device and the lighting in the same room? 0: In the same room(Default),1: In the different room
10	Bit4: Disable delay 5 seconds to turn off the light, when door/window closed.(1:Disable, 0:Enable)
20	Bit5: Disable auto turn off the light, after door/window opened to turn on the light.(1:Disable, 0:Enable)
40	Bit6: Reserve.
80	Bit7: Reserve.

Parameter 7: Customer Function

Customer function switch, using bit control.Caution: The value is unsigned byte, the range is from 0x00 ~ 0xFF.Bit0: Reserve.Bit1: Enable sending motion OFF report.(0:Disable, 1:Enable)Bit2: Enable PIR super sensitivity mode. (0:Disable, 1:Enable)Bit3: Disable send out BASIC OFF after door closed. (1:Disable, 0:Enable)Bit4: Notification Type, 0: Using Notification Report. 1: Using Sensor Binary Report.Bit5: Disable Multi CC in auto report. (1:Disable, 0:Enable)Bit6: Disable to report battery state when the device triggered.(1:Disable,

0:Enable)Bit7: Reserve.
Size: 1 Byte, Default Value: 4

SettingDescription

0 – 127	Customer function switch
1	Bit0: Reserve.
2	Bit1: Enable sending motion OFF report.(0:Disable, 1:Enable)
4	Bit2: Enable PIR super sensitivity mode. (0:Disable, 1:Enable)
8	Bit3: Disable send out BASIC OFF after door closed. (1:Disable,0:Enable)
10	Bit4: Notification Type, 0: Using Notification Report. 1: Using Sensor Binary Report.
20	Bit5: Disable Multi CC in auto report. (1:Disable, 0:Enable)
40	Bit6: Disable to report battery state when the device triggered.(1:Disable, 0:Enable)
80	Bit7: Reserve.

Parameter 8: PIR Re- DetectIntervalTime

In the normal mode, after the PIR motion detected, setting the re-detect time. 8 seconds per tick, default tick is 3 (24 seconds).Setting the suitable value to prevent received the trigger signal too frequently. Also can save the battery energy.
Size: 1 Byte, Default Value: 3

SettingDescription

1 – 127	default tick is3 (24 seconds).

Parameter 9: Turn OffLightTime

After turn on the lighting, setting the delay time to turn off the lighting when the PIR motion is not detected. 8 seconds per tick, default tick is 4 (32seconds).0 means never send turn off light command.
Size: 1 Byte, Default Value: 4

SettingDescription

0 – 127	default tick is 4 (32seconds).

Technical Data

Hardware Platform	SD3502
Device Type	Notification Sensor
Network Operation	Reporting Sleeping Slave
Firmware Version	HW: 1 FW: 1.29:01.22
Z-Wave Version	6.51.09
Certification ID	ZC10-17095769
Z-Wave Product Id	0x013C.0x0002.0x000C
Sensors	
Supported Notification Types	
Color	
Frequency	XXfrequency
Maximum transmission power	XXantenna

Supported Command Classes

- Association Grp Info
- Association V2
- Battery
- Configuration
- Device Reset Locally
- Firmware Update Md V2
- Manufacturer Specific V2
- Multi Cmd
- Notification V4
- Powerlevel
- Security
- Sensor Binary V2
- Sensor Multilevel V5
- Version V2
- Wake Up V2
- Zwaveplus Info V2

Controlled Command Classes

- Basic

Explanation of Z-Wave specific terms

- **Controller** — is a Z-Wave device with capabilities to manage the network.
  Controllers are typically Gateways,Remote Controls or battery operated wall controllers.
- **Slave** — is a Z-Wave device without capabilities to manage the network.
  Slaves can be sensors, actuators and even remote controls.

- **Primary Controller** — is the central organizer of the network. It must be a controller. There can be only one primary controller in a Z-Wave network.
- **Inclusion** — is the process of adding new Z-Wave devices into a network.
- **Exclusion** — is the process of removing Z-Wave devices from the network.
- **Association** — is a control relationship between a controlling device and a controlled device.
- **Wakeup Notification** — is a special wireless message issued by a Z-Wave device to announces that is able to communicate.
- **Node Information Frame** — is a special wireless message issued by a Z-Wave device to announce its capabilities and functions.