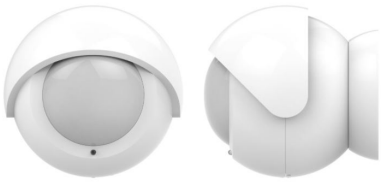

Philio PHIEPSP05-D Single Function PIR Sensor User Guide

Philio PHIEPSP05-D Single Function

PIR Sensor User Guide

Philio Tech

Single Function PIR Sensor PHIEPSP05-B, PHIEPSP05-C, PHIEPSP05-D

SKU: PHIEPSP05-D

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Quick start

This is a **secure Alarm Sensor** for **Europe**. Please make sure the internal battery is fully charged. There is a button on PSP05.

1. Have Z-Wave Controller entered inclusion mode.
2. Pressing button once 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.

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 ZWave 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

This device is a Security Enabled Z-Wave Plus Product. Z-WaveTM is a wireless communication protocol designed for home automation, specifically to remotely control applications in residential and light commercial environments. The technology uses a low-power RF radio embedded or retrofitted into home electronics devices and systems, such as lighting, home access control, entertainment systems and household appliances. This product can be included and operated in any Z-WaveTM network with other Z-WaveTM certified devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

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.

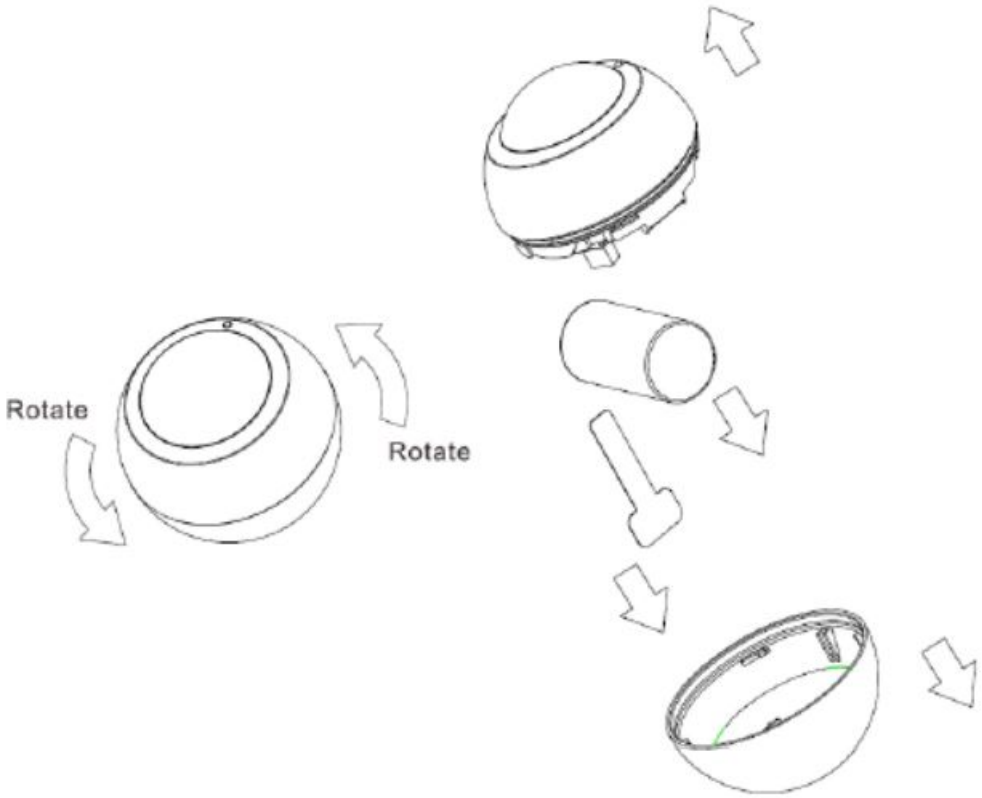
Reset to factory default

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.

1. Pressing button for about 5 seconds.
2. IDs are excluded and all settings will reset to factory default.

Notice: Use this procedure only in the event that the primary controller is lost or otherwise inoperable.

Installation



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
Pressing button once to enter the inclusion mode.

Exclusion
Pressing button once to enter the exclusion mode.

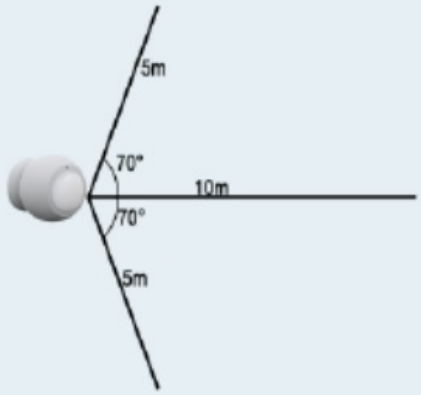
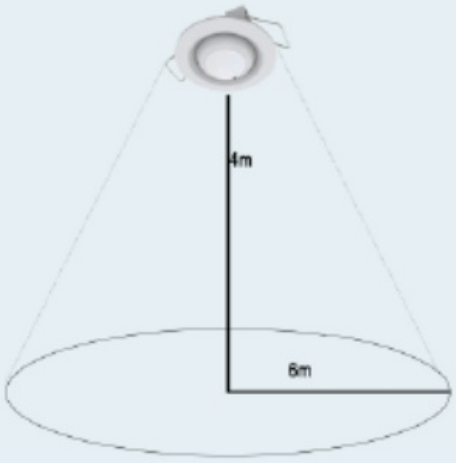
Product Usage

Operation Mode

There are two modes “Test” and “Normal”. “Test Mode” is for the user test the sensor function when installation.“Normal Mode” is for the normal operation. Operation Mode can be switched by pressing tamper key three times. LED can indicate which mode it is. Lighting on one second means entering test mode, flashing once means entering normal mode. When the event triggered, normally the LED won”t indicated, unless the battery is in the low level, the LED will flash once. But in the “Test Mode” the LED also will light ON one second. When the event triggered, the device will report the messages to the nodes in the group 1. The messages also include the battery level. The user can switch the report by setting the configuration NO. 7 bit6 (battery). When the event triggered, the device will emit the signal to turn ON the lighting equipment, those nodes are in the group 2. And delay a while to turn OFF the lighting equipment. The delay time
is setting by the configuration NO. 9. The PIR motion re-detected interval, in the “Test Mode” fixed to 6 seconds. In the “Normal Mode”, it according to the setting of the configuration NO. 8.

Choosing a Suitable Location

1. The recommended mounting height is 160cm
2. Don”t let the device facing the window or the sunlight.
3. Don”t let the device facing the source of heat. For instance the heater or the air-condition.

Wall Mount: Distance	10M 
Ceiling Mount: Mounting Height Radius Distance	4M 6M 

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 is a button on PSP05. Press the button once, the device will awake 10 seconds.

Quick trouble shooting

Here are a few hints for network installation if things don't 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. Don't 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 Number	Maximum Nodes	Description
1	8	Z-Wave Plus Lifeline
2	8	light control

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 200 it 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 2: Basic Set Level

Setting the BASIC command value to turn on the light.
Size: 1 Byte, Default Value: -1

Setting	Description
-128 - 127	Basic command value to turn on the light.

Parameter 3: PIR Sensitivity

PIR sensitivity setting.0 means disable the PIR motion. 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

Setting	Description
0 - 99	PIR sensitivity setting.

Parameter 6: Multi-Sensor Function Switch

Multisensor function switch.
Size: 1 Byte, Default Value: 5

Setting	Description
8	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.
16	Disable delay 5 seconds to turn off the light,when door/window closed.(1:Disable, 0:Enable)
32	Disable auto turn off the light,after door/window opened to turn on the light.(1:Disable, 0:Enable)

Parameter 7: Customer Function

Size: 1 Byte, Default Value: 4

Setting	Description
2	Enable sending motion OFF report.(0:Disable, 1:Enable)
4	Enable PIR suoer sensitivity mode.
16	Notification Type,0:Using Notification Report. 1: Using Sensor Binary Report.
32	Disable Multi CC in auto report.(1:Disable, 0:Enable)
64	Disable to report battery state when the device triggered.(1:Disable, 0:Enable)

Parameter 8: PIR Re-Detect Interval Time

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

Setting	Description
1 - 127	Re-detect time

Parameter 9: Turn Off Light Time

After turn on the light,setting the delay time to turn off the lighting when the PIR motion to turn off the lighting when the PIR motion is not detected.8 seconds per tick,default tick is 4(32 seconds).
Size: 1 Byte, Default Value: 4

Setting	Description
0 - 127	Delay time to turn off the lighting when the PIR motion is not detected.

Parameter 10: Auto Report Battery Time

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

Setting	Description
0 - 127	The interval time for auto report the battery level.

Parameter 20: Auto Report Tick Interval

The interval time for auto report each tick.Setting this configuration will effect configuration NO.1
Size: 1 Byte, Default Value: 30

Setting	Description
-128 - 127	The interval time for auto report each tick.

Technical Data

Dimensions	0.0480000x0.0830000x0.0680000 mm
Weight	70 gr
Hardware Platform	SD3502
EAN	4713698573508
IP Class	IP 43
Voltage	3V
Device Type	Notification Sensor
Network Operation	Reporting Sleeping Slave
Z-Wave Version	6.51.09
Certification ID	ZC10-16105258
Z-Wave Product Id	0x013C.0x0002.0x0050
Frequency	Europe - 868,4 Mhz
Maximum transmission power	5 mW

Supported Command Classes

- Association Grp Info
- Association V2
- Battery
- Configuration
- Device Reset Locally
- Manufacturer Specific V2
- Multi Cmd
- Notification V4
- Powerlevel

- Security
- Sensor Binary V2
- 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.

Documents / Resources

	**Philio PHIEPSP05-D Single Function PIR Sensor** [pdf] User Guide PHIEPSP05-B, PHIEPSP05-C, PHIEPSP05-D, PHIEPSP05-D Single Function PIR Sensor, Single Function PIR Sensor, PIR Sensor

References

- manual.zwave.eu/backend/make.php?lang=en&sku=PHIEPSP05-D
- Z-Wave Europe - The leading european distributor for Smart Home products.
- Z-Wave Europe - The leading european distributor for Smart Home products.