

AXIS T8341 PIR Motion Sensor

User Manual

AXIS T8341 PIR Motion Sensor

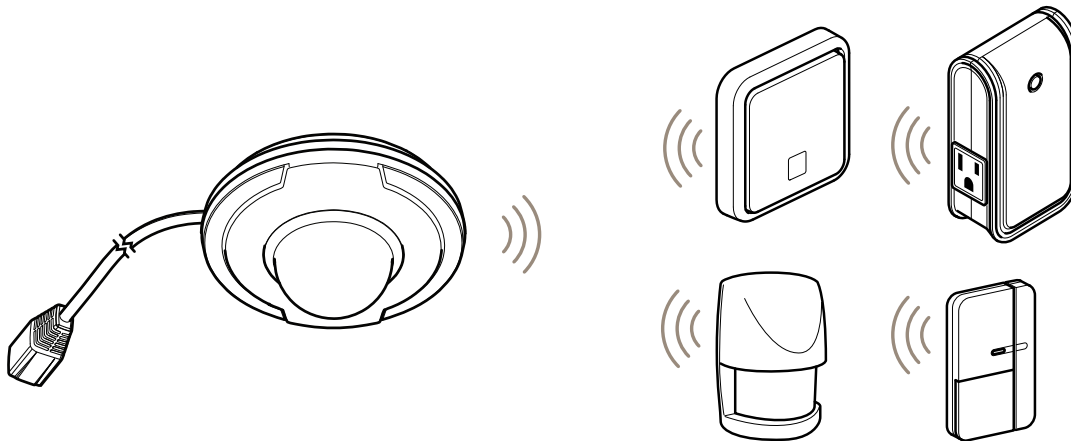
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Solution overview

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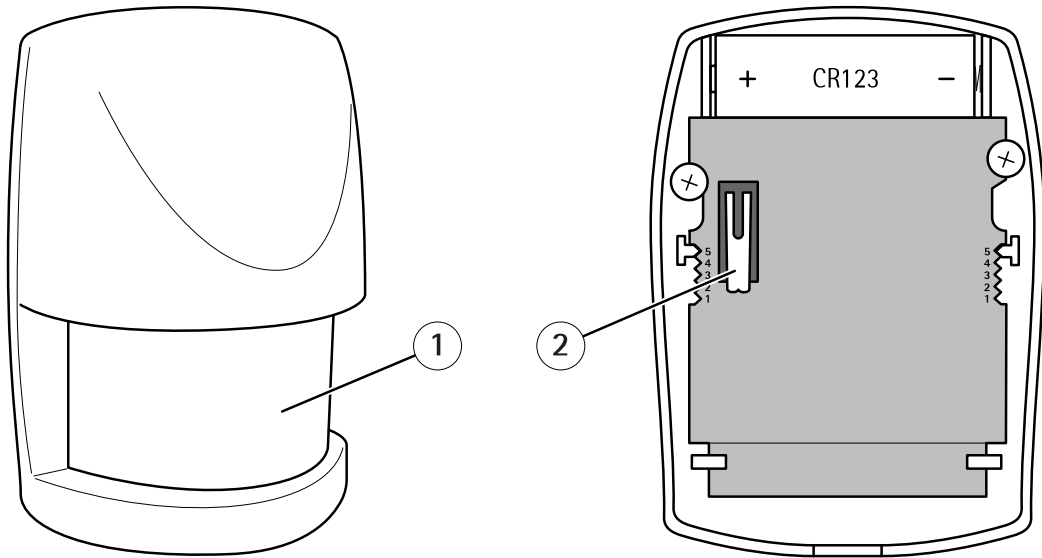


The device is Z-Wave® enabled and fully compatible with any Z-Wave enabled network. The device can be set up in a Z-Wave network to communicate directly with other end-devices such as lighting controllers, or to report directly to a Z-Wave controller, such as AXIS M5065 PTZ Network Camera.

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Product overview

Product overview



- PIR sensor window (LED indicator inside)
- Tamper switch

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How to add a device to a Z-Wave Network

How to add a device to a Z-Wave Network

Auto-inclusion

The motion sensor supports the auto-inclusion feature, where it will automatically enter Inclusion mode when first powered up. This will also apply when powered up after a factory reset.

1. Use a screwdriver to detach the battery cover.
2. Put the AXIS M5065 camera (or other Z-Wave controller) into inclusion mode.
3. Insert 1 CR123 3V batteries into the battery compartment, observing the correct polarity. The LED on the device should turn ON.
4. Enter the PIN number into the Z-Wave controller. See the installation guide for where to find the PIN number on the device.
5. The inclusion process should be complete when the LED stops blinking.
6. Perform a test before you refit the battery cover. See [How to test the Z-Wave Device](#).

Manual inclusion

You can also choose to manually add the Z-Wave device to a control device. Follow the steps below.

Note

For best results, exclude the device before starting the inclusion process. For more details see the installation guide.

1. Use a screwdriver to detach the battery cover.
2. Put the AXIS M5065 camera (or other Z-Wave controller) into inclusion mode.
3. Insert 1 CR123 3V batteries into the battery compartment, observing the correct polarity. The LED on the device should turn ON.
4. Press the tamper switch 3 times within 1.5 seconds to put the unit into learning (inclusion/exclusion) mode.
5. Enter the PIN number into the Z-Wave controller. See the installation guide for where to find the PIN number on the device.
6. The inclusion process should be complete when the LED stops blinking.
7. Perform a test before you refit the battery cover. See [How to test the Z-Wave Device](#).

Manual exclusion

1. Use a screwdriver to detach the battery cover.
2. Press the tamper switch 3 times within 1.5 seconds to put the unit into learning (inclusion/exclusion) mode.
3. The exclusion process should be complete when the LED stops blinking.
4. Refit the battery cover.

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How to test the Z-Wave device

How to test the Z-Wave device

Warm-up

It will take the motion sensor approximately 2 minutes to warm up after the battery is inserted. During this period the LED behind the lens will turn on. When the red LED turns off, the warm-up procedure is complete and the device is ready to detect.

- This will not affect the Inclusion/Exclusion process.
- After you remove the battery, wait 5 seconds before you refit it.

Quick test

1. If the tamper switch is not pressed after inclusion, the device will enter "Test mode", to allow you to test the device before it is mounted on the wall.
2. If movement is detected during "Test mode", the LED on the motion sensor will light up once, indicating that the unit is working properly. The re-trigger time is about 5 seconds.
3. To exit "Test mode" and enter normal mode, press the tamper switch for more than 10 seconds.
4. When the PIR is triggered during normal mode, the red LED will not light up, and re-trigger time is based on a set value.

Note

Important! Make sure you create a Z-Wave controller event that is linked to the battery status signal. In this way you will get a notification or a LED indication when a device starts to experience low battery power.

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How to program the Z-Wave device

How to program the Z-Wave device

Note

Programming Z-Wave devices using a Z-Wave controller is recommended for experienced users only.

Z-Wave Group

The device supports two different Z-Wave Association Groups:

- Group 1: Association with 1 Controller node.
- Group 2: Association with 4 nodes (i.e. end-devices such as smart plugs and other lighting controllers). This allows the device to send commands directly to other devices without the participation of the controller. This has the effect that when the device triggers, all other associated devices will also be operated.

Note

Association group support can vary among Z-Wave Controllers. The AXIS M5065 supports Z-Wave Association Group 1.

Group 1 commands:

- When the device is powered up and is already a part of a Z-Wave network, it will send a Notification Report to the node in Group 1.
- When the detector senses movement, the unit will send a Notification Report to the nodes in Group 1. When movement stops, a Notification Report will be sent again to Group 1.
- When the detector's status changes, the device will simultaneously check its battery status. If the battery level drops to an unacceptable level, the device will send a battery report to the nodes in Group 1.
- When you perform a factory reset, the unit will send Device Reset Locally Notification to the node in Group 1.

Group 2 commands:

- When the detector is triggered, the unit will send BASIC_SET command, containing a value, to the nodes in Group 2.

Z-Wave Plus[®] info

Role type	Node type	Installer Icon	User Icon
Secondary Sleeping report	Z-Wave Plus node	Sensor Notification Device Type (Home Security)	Sensor Notification Device Type (Home Security)

Version

Protocol library	3
Protocol version	4.3D (6.71.01)

Manufacturer

Manufacturer ID	Product Type	Product ID
0x0364	0x0002	0x0001

AGI (Association Group Information) table

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Group	Profile	Command Class & Command (List) N bytes	Group Name (UTF-8)
1	General	Battery Report Notification Report Device Reset Locally Notification	Lifeline
2	Control	Basic Set	PIR Control

Notification

Event	Type	Event	Event Parameters Length	Event Parameters
Power is applied for the first time	0x08	0x01	Null	
PIR Trigger ON	0x07	0x08	Null	
PIR Trigger OFF	0x07	0x00	0x01	0x08
Tamper switch pressed more than 10 seconds	0x07	0x00	0x01	0x03
Tamper switch pressed more than 10 seconds and released	0x07	0x03	Null	

Battery

Battery Report (value)	Description
20 ~ 100	Battery Level (%)
0xFF	Low Battery

Command classes

This product supports the following command classes:

- COMMAND_CLASS_ZWAVEPLUS_INFO_V2
- COMMAND_CLASS_ASSOCIATION_V2
- COMMAND_CLASS_ASSOCIATION_GRP_INFO
- COMMAND_CLASS_TRANSPORT_SERVICE_V2
- COMMAND_CLASS_VERSION_V2
- COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2
- COMMAND_CLASS_DEVICE_RESET_LOCALLY
- COMMAND_CLASS_POWERLEVEL
- COMMAND_CLASS_SECURITY
- COMMAND_CLASS_SECURITY_2
- COMMAND_CLASS_SUPERVISION
- COMMAND_CLASS_FIRMWARE_UPDATE_MD_V4
- COMMAND_CLASS_BATTERY
- COMMAND_CLASS_WAKE_UP_V2

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How to program the Z-Wave device

- COMMAND_CLASS_NOTIFICATION_V4
- COMMAND_CLASS_CONFIGURATION

Wake-up command class

After the detector has been included in a Z-Wave network it will go to sleep, but will periodically send a wake-up notification command to the controller at a preset period. The device will stay awake for at least 10 seconds and then go back to sleep, to conserve battery life.

The time interval between wake-up notification commands can be set in the wake-up command class, based on the range values below:

Minimum wake-up interval	600s (10 minutes)
Maximum wake-up interval	86400s (1 day)
Default wake-up interval	14400s (4 hours)
Wake-up interval step seconds	600s (10 minutes)

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Z-Wave configuration

Z-Wave configuration

The following information is for persons with experience of setting up a Z-Wave system, or for someone that has computer software running a Z-Wave controller. Please familiarize yourself with the Z-Wave controller's software before getting started.

To minimize battery power consumption, RF on the device is switched off by default. In order to start the setup process, press the tamper switch once to turn on the RF power for 30 seconds. You will then see the LED start to blink once a second. If setup is not completed within 30 seconds, press the tamper switch once more to continue.

- **Basic set level**
When a Basic Set Command is sent and contains a value, the receiver will process it. For example, a lamp module would receive a Basic Set command that determines the dim level.
Example:

1-99: ON (Binary Switch Device)
Dim Level (Multilevel Switch Device)

Function	Parameter number	Size	Range	Default
Basic Set level	1	1	1~99	99

- **Sensitivity level (PIR sensor only)**

For optimal efficiency, it is recommended to test the detector's response to movements at the farthest reach of the coverage area when you use it for the first time. If movements cannot be detected accurately, simply adjust the sensitivity level with the Configuration Parameter #3. This parameter can be configured from 1 to 10, where 1 is low sensitivity and 10 is the highest sensitivity.

Function	Parameter number	Size	Range	Default
Sensitivity level	3	1	1~10	6

- **Re-trigger interval setting (PIR sensor only)**

The configuration parameter used to adjust the re-trigger interval after the detector has been triggered as configuration parameter #4. No response will be made during this interval if movement is detected. The time interval can be set from 5 to 3600 seconds.

Function	Parameter number	Size	Range	Default
Re-trigger interval	4	2	5~3600(sec)	180

- **Lux level**

You can set a percentage for the lux level, which determines when the light sensor will be activated. If the ambient illumination drops below the set percentage, and a person moves across or within the protected area, the detector will send a Z-Wave ON command (i.e. Basic Set command (Value = Basic Set Level)) to the controller and activate connected modules and lighting. The percentage can be set from 1% to 100%.

Function	Parameter number	Size	Range	Default
Lux level	5	1	1~100%	20

On-off duration

The on-off duration setting can be useful if the detector is connected to a module or lighting. The duration determines how long the module/lighting should stay ON. For example, a lamp module turns off 100 seconds after it has been turned on. The duration can be configured to last 5 to 3600 seconds.

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Z-Wave configuration

Function	Parameter number	Size	Range	Default
On-Off Duration	6	2	5~3600(sec)	15

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Troubleshooting

Troubleshooting

If you can't find what you're looking for here, try the troubleshooting section at axis.com/support.

The table below explains the status in the Z-Wave controller as well as the LED indication on the device.

Action/Status	Description	LED indication
No node ID	The Z-Wave controller could not find the device and did not provide a node ID.	2 seconds on, 2 seconds off, for 2 minutes.
Factory Reset (This should only be used when the controller is not responding.)	1. Press the tamper switch 3 times within 1.5 seconds to put the device into exclusion mode.	
	2. Within 1 second of step 1, press the tamper switch again and hold until the LED is off (about 5 seconds).	
	3. Node ID is excluded. The device reverts to factory default state and will be in auto-inclusion mode for 4 minutes.	2 seconds on, 2 seconds off, for 2 minutes.
Failure or success in including/excluding the ID can be viewed on a Z-Wave controller.		

The table below lists some typical problems encountered:

Symptom	Possible cause	Recommendation
Cannot perform inclusion and association.	<ol style="list-style-type: none"> The device is still connected, or has accidentally been included in a previous network. The entered PIN code is incorrect. The battery has run out of power. Battery polarity is reversed. 	<ol style="list-style-type: none"> Exclude the device before including it again. Make sure you have entered the correct PIN code Replace the battery. Refit the battery with the correct polarity.
Cannot control the connected modules.	<ol style="list-style-type: none"> The device is still connected, or has accidentally been included in a previous network. The battery has run out of power. 	<ol style="list-style-type: none"> Exclude the device before including it again. Replace the battery.
The detector is not functioning properly.	<ol style="list-style-type: none"> The device is still connected, or has accidentally been included in a previous network. The battery has run out of power. The detector is mounted above a radiator or heater. 	<ol style="list-style-type: none"> Exclude the device before including it again. Replace the battery. Remove the source of interference or reposition the detector.
The event list is not working properly.	<ol style="list-style-type: none"> The device is still connected, or has accidentally been included in a previous network. The controller's firmware is outdated. The battery has run out of power. 	<ol style="list-style-type: none"> Exclude the device before including it again. Make sure the controller has the latest firmware. Replace the battery.

Note

For best results, exclude the device before starting the inclusion process. For more details see the installation guide.

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Specifications

Specifications

To find the latest version of the product's datasheet, go to the product page at axis.com and locate **Support & Documentation**.

Specifications

Battery	CR123 3.0V Lithium Battery
Battery life	1 year*
Range	Up to 100m (328 ft) line of sight
Warm-up time	About 2 minutes
PIR detection coverage	Up to 10m (33 ft) x 110° (at 1.8m (5.9 ft) mounting height & 25°C (77°F))
Operating frequency	908.42 MHz (US), 922.5 MHz (JP), 868.42 MHz (EU)
FCC ID	FU5SP817

Specifications are subject to change without notice.

* measured at 10 triggers per day.

