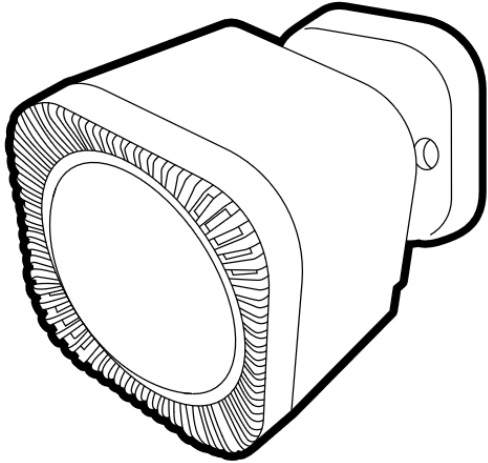# MultiSensor 7 user guide

Modified on: Tue, 11 Jul, 2023 at 4:43 PM

Aeotec MultiSensor 7 was developed to detect ambient values and movement and to transmit them with **Z-Wave Plus** (http://aeotec.com/z-wave-plus). It is powered by Aeotec's **Gen7** (https://aeotec.com/z-wave-home-automation/z-wave-gen7.html) technology. You can find out more about **MultiSensor 7** (https://aeotec.com/z-wave-sensor/) by following that link.

To see whether MultiSensor 7 is known to be compatible with your Z-Wave system or not, please reference our **Z-Wave gateway comparison** (http://aeotec.com/z-wave-gateways) listing. The technical **specifications of MultiSensor 7** (https://aeotec.freshdesk.com/a/solutions/articles/6000246153) can be viewed at that link.
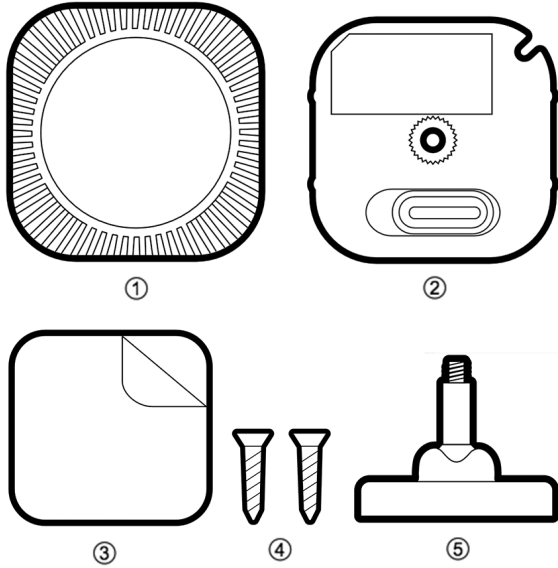
Get to Know your MultiSensor.

Your MultiSensor comes packaged with a number of accessories that will help with its installation and operation.
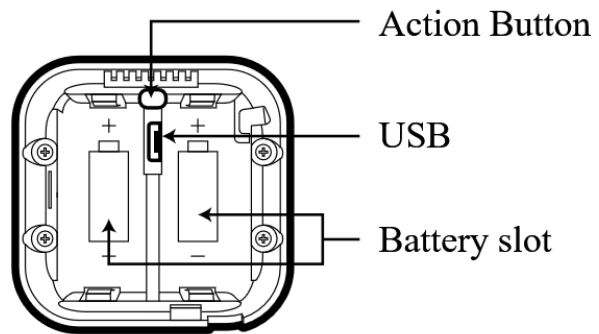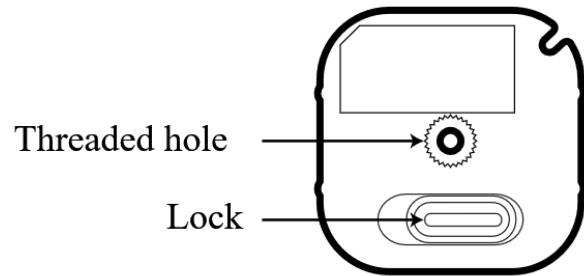
Package Contents:

1. MultiSensor
2. Battery Cover
3. Double-Sided Tape

4. Screws (×2)
5. Back Arm Mount
6. Warranty Card
7. Quick start guide

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MultiSensor 7 diagram:

Action Button

USB

Battery slot

Threaded hole

Lock

Button Functions.

Action button press	LED Status	Function
1x Tap (when factory reset)	Solid Yellow	**Pair Mode** Enters Z-Wave pair mode, flashes white/green 4 times within 2 seconds upon success.
1x Tap (when already paired)	Solid Purple	**Sends NIF / Excludes device** if Z-Wave controller is in unpair mode, starts blue LED fade in/out if unpaired and factory reset successfully.
Press and hold [1, 2 seconds)	No LED	N/A
Press and hold [2, 5 seconds)	Solid Red	**Quick Wakeup** LED will disappear as soon as you release its button. The MultiSensor 7 will send a wakeup report to your Z-Wave Controller to take in any queued z-wave commands waiting in your controller.
Press and hold [5, 9 seconds)	Solid Orange	**Long Wakeup Mode** LED will remain solid Orange upon release of its button for 5 minutes maximum (or until told to sleep by user or z-wave controller). This will allow you to easily configure this device while the sensor is used with battery power assuming your Z-Wave controller does not queue the command.

Press and hold [9, 15 seconds)	Solid Cyan	**Communication Health Test** (Direct gateway communication - does not test through repeaters). This will test your MultiSensor 7 direct communication to your Z-Wave Controller. It will remain Cyan while it is testing. Once finished it will become a solid color for 2 seconds as red, yellow, or green to indicate health: Red = Bad health, can't communicate at all. Yellow = Moderate health, could use improvement, some communcation missed. Green = Great health
Press and hold [15, 20 seconds)	Blinking Red	Release here to cancel Factory Reset.
Press and hold [20+ seconds)	Blue fade in/out for 2 seconds.	Factory Reset.

Important safety information.

Please read this and other device guides carefully. Failure to follow the recommendations set forth by Aeotec Limited may be dangerous or cause a violation of the law. The manufacturer, importer, distributor, and/or reseller will not be held responsible for any loss or damage resulting from not following any instructions in this guide or in other materials.

MultiSensor 7 is intended for use in dry locations only. Do not use in damp, moist, and/or wet locations.

Do not use rechargeable CR123A batteries.

Keep product and batteries away from open flames and extreme heat. Avoid direct sun light or heat exposure. Always remove all batteries from products that are being stored and not used. Batteries may damage the appliance if they leak. Do not use rechargeable batteries. Ensure correct polarity when inserting the batteries. Improper battery use may damage the product.

Contains small parts; keep away from children.

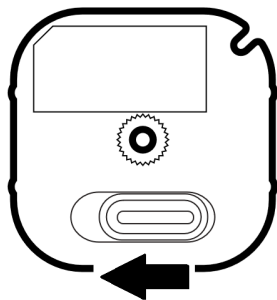# Quick Start.

Determine the power type you want to use.

MultiSensor 7 can be a sleeping battery device or a repeater as a USB-powered device. Make sure you select your preferred power type before you start pairing.

Note - Any time you change the input power type (ie. Battery to USB power), you should re-include as your Z-Wave hub will only understand if it is a sleeping device or a Repeater device upon its first pair into your controller.

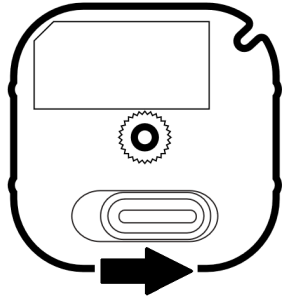**For a USB-powered installation (acts as a repeater when paired on USB power):**

Note: When using USB power, there may be a slight error in the timer and the Sensor may send a no-trigger state 30s earlier than the set time.

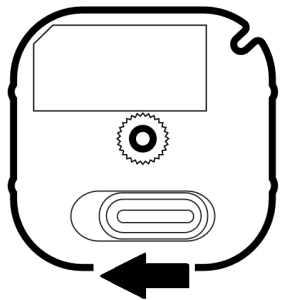1. Remove the battery cover by sliding the Unlock button LEFT, then pull the cover off.

2. Insert the MicroUSB of the provided USB cable into your sensor's MicroUSB port.

3. Insert the larger end of the USB cable into a computer or any 5V adapter which will immediately power your MultiSensor 7.

4. Make sure to seat the Battery Cover back onto the MultiSensor 7 and lock it in by sliding the Unlock button RIGHT.
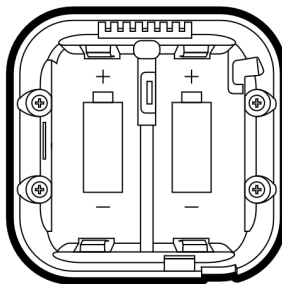
For a battery-powered installation (acts as a sleeping device when paired on battery power):

1. Remove the battery cover by sliding the Unlock button LEFT, then pull the cover off.
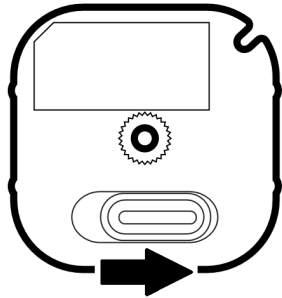
2. Insert two CR123A lithium batteries orientated according to the diagram within your sensor.
Try inserting the batteries flat rather than at an angle.

Note: MultiSensor 7 can be powered by a single CR123A (doesn't matter which port), though batteries will require changing more frequently (half the expected battery life).

WARNING: Not compatible with rechargeable CR123A batteries (3.6V).

3. Make sure to seat the Battery Cover back onto the MultiSensor 7 and lock it in by sliding the Unlock button RIGHT.

Connect MultiSensor 7 to a hub.

This section will go over brief steps to connecting MultiSensor 7, for further details on connecting this product to your hub, click on the hub that you have to access more detailed steps.

1. **Aeotec AutoPilot:** (https://aeotec.freshdesk.com/support/solutions/articles/6000247613-setup-multisensor-7-with-autopilot)
   a. Open up AutoPilot UI
   b. Click on "**DEVICES**"
   c. Click on "**+ Add new**"
   d. Click on "**+**"
   e. Click on "**+ Add**"
   f. Now **tap the Action Button** on your MultiSensor 7 once.

2. **Aeotec Smart Home Hub / SmartThings:** (https://aeotec.freshdesk.com/support/solutions/articles/6000247612-setup-multisensor-7-with-aeotec-smart-home-hub)
   a. Open SmarThings app.
   b. Tap **+** (at the top right corner).
   c. Tap **"Add device"** -> "**By brand**" -> "**Aeotec**"
   d. Tap "**Multipurpose Sensor**" -> **MultiSensor 7**.
   e. Tap **Start**
   f. Now **tap the Action Button** on your MultiSensor 7 once.
   g. Scan the **QR code**, or choose to enter the **DSK code**.

h. If successful, the MultiSensor 7 should appear as an "Aeotec Multipurpose Sensor".

3. **Home Assistant / Z-WaveJS:** (https://aeotec.freshdesk.com/support/solutions/articles/6000247615-setup-multisensor-7-with-home-assistant)
    a. Open up Home Assistant
    b. Click on "**Configuration**" at the bottom left of the page.
    c. Click on "**Integrations**".
    d. Click on "**Configure**".
    e. Click on "**ADD NODE**".
    f. Click on "**START INCLUSION**"
    g. Tap the MultiSensor 7 Action button to pair it.
4. **Hubitat:** (https://aeotec.freshdesk.com/support/solutions/articles/6000247614-setup-multisensor-7-with-hubitat)
    a. Open up your Hubitat interface.
    b. Click on "**Devices**".
    c. Click on "**Discover Devices**".
    d. Click on "**Z-Wave**."
    e. Click on "**Start Z-wave Inclusion.**"
    f. Tap the MultiSensor 7 Action button to pair it.
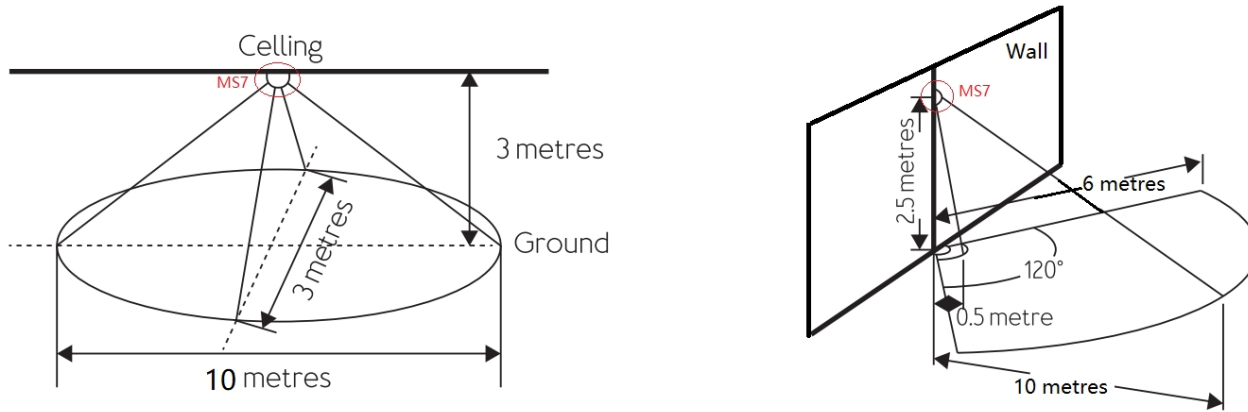
5. **SmartStart QR code scanning:**
    a. If your Z-Wave gateway supports SmartStart, you can scan the QR code on the MultiSensor 7 to automatically pair the sensor if your Z-Wave hub supports this.
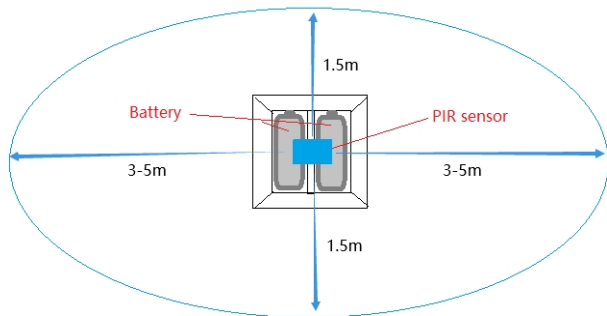
6. **For most other hubs:**
    a. Set your Z-Wave hub to connect new Z-Wave devices.
    b. Tap the MultiSensor 7 action button once.
    c. If prompted, scan the QR code or enter the 5 digit DSK code.

Advanced Functions.

Placement Considerations.

There are some placement considerations when using the Multisensor 7 as a motion sensor. Above are some diagrams that show the distance at which the wall or ceiling installations can perform based on the height they are installed at and at the angle.

The longer detection range of the motion sensor is in the direction of the side of the battery.
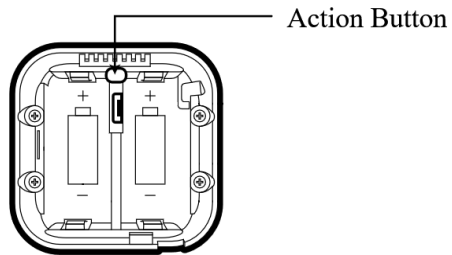
Z-Wave Resetting MultiSensor 7.

Your MultiSensor can be removed from your Z-Wave network at any time. You'll need to use your Z-Wave network's main controller to do this and the following instructions tell you how to do this. If you are using other products as your main Z-Wave controller, please refer to the part of their respective manuals that tells you how to remove devices from your network.

Using an existing gateway:

You may need to refer to your gateway's method of including devices if you do not know how to pair a Z-Wave device. You may use any gateway to perform an unpair/removal on MultiSensor 7 even if they are not paired together to factory reset MultiSensor 7.

1. Set your Z-Wave gateway into Z-Wave unpair (exclusion) mode.

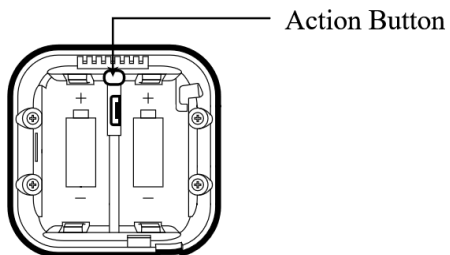2. Tap the action button once; the purple led will light up.

Action Button

3. If removed successfully, the blue led will fade in and out to indicate it is ready to be paired to a new hub.

Manual Hard Resetting MultiSensor 7.

This method is not fully advised unless your gateway has failed, if paired to your network, performing these steps will factory reset your MultiSensor 7.

1. Make sure the device has been powered.

2. Press and hold the button for 20 seconds. When the red led flashes, the device will enter the factory reset mode.

Action Button

3. If reset successful, the blue led will fade in and out to indicate it is ready to be paired to a new hub.

Waking up MultiSensor 7.

In order to configure Multisensor 7, you must either (1) wake up Multisensor 7 using the below button press function, or (2) temporarily put your Multisensor 7 on USB power.

This section will go over the manual wakeup of this sensor in case you don't want to wait for configuration.

Quick Wakeup.

1. Press and hold Multisensor 7 Action button

2. Wait until the LED turns into a Red Color (1 - 2 seconds)

3. Release Multisensor 7 Action Button, the LED should turn off right away. Any queued commands in your Z-Wave Controller will be sent over.

Long Wakeup.

1. Press and hold Multisensor 7 Action button

2. Wait until the LED turns into a solid orange color (2 - 5 seconds)

3. Release Multisensor 7 Action Button, the LED should remain solid orange while it is awake. Send any configurations from your hub (assuming the commands are not queued).

   - If the MultiSensor 7 LED orange LED turns off right away, this would indicate that your hub is putting your device to sleep. Try un-powering your hub temporarily, follow steps 1-3 again, then power up your hub again.

4. Tap the Action Button on Multisensor 7 to put Multisensor 7 back to sleep, or wait 5 minutes. (recommended to manually put it back to sleep to conserve battery life).

Advanced settings of MultiSensor 7.

There are further advanced parameter settings and group association settings not listed in this guide. You can find the attachment of the advanced engineering sheet of the MultiSensor 7 which will give you all possible functions of the MultiSensor 7 that may be missing in this guide.

The PDF guide will feature these missing advanced settings:

- Parameter settings (Configuration Command Class)
- Group Association (Association Command Class)

You may download the engineering sheet below: