

INSOMNIAC® SmartMotion™ Motion Sensor

P/N SMM-PIR-100-01

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Installation Specifics

ITEM	DESCRIPTION	PIR-100-01 FEATURES	PIR-200-01 FEATURES
1	ENSLOSURE	INDOOR, POLYMER	ABS
2	COMMUNICATIONS	WIRELESS (2.4 GHz)	WIRELESS (2.4 GHz)
3	COMMUNICATIONS RANGE	30 METERS / 100 FEET	30 METERS / 100 FEET
4	SECURE COMMUNICATIONS	YES	YES
5	BATTERY VOLTAGE RANGE	3.3v – 3.7v	1.5v
6	BATTERY TYPE	AA LITHIUM THIONYL CHLORIDE	AA ALKALINE
7	BATTERY QUANTITY	2 AA	4 AA
8	BATTERY CAPACITY	4800 mAh	3000+ mAh
9	BATTERY LIFE EXPECTANCY	4+ YEARS IN CLIMATE CONTROLLED FACILITIES	4+ YEARS IN CLIMATE CONTROLLED FACILITIES
10	OPERATING TEMPERATURE RANGE	-40 °F - 185 °F	-40 °F - 185 °F

IMPORTANT

- All installations must conform to local building and electrical codes and shall be in accordance with the National Electric Code, ANSI/NFPA 70.
- When discrepancies exist between local codes and this manual, local code takes precedence.
- Follow recommended UL installation standards. Find the standards catalog here: [Standards Catalog | UL Solutions](#)
- Failure to install and use this product as intended may void any hardware protection plan.



Looking for an authorized installer?

Click the link or QR code to find Authorized Dealers in your area who sell and service OpenTech's INSOMNIAC® self storage solutions

<https://opentechalliance.com/dealers/>

Overview

The OpenTech Alliance, Inc. INSOMNIAC® SmartMotion™ is a motion detection sensor designed to monitor secure areas and provide immediate notification when movement is detected. Each sensor is assigned to specific areas within a facility, ensuring accurate reporting of activity in the designated locations.

SmartMotion™ sensors communicate with the OpenTech Control Center, a centrally managed, internet-accessible platform that serves as the system's source for access permissions, configuration data, and reporting. In the event of an internet outage, the SmartMotion sensor will continue to function by caching motion events locally. These cached events will be delivered once connectivity is restored. During this time, however, configuration updates cannot be applied until the Control Center connection is reestablished.

Each SmartMotion unit contains a main PCB, internal batteries and is intended for indoor use within protected areas. The sensor can integrate with and support broader functions such as access control, lighting automation, and event-based alerts. Final control logic and rules for operation are always managed and configured through the Control Center.

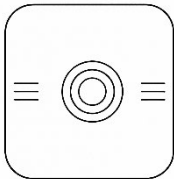
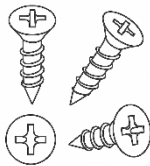
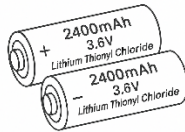
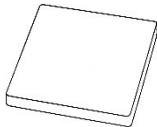
Also refer to related guides and manuals in OpenTech's [Resource Library](#) or [Help Center](#).

How to Contact Us

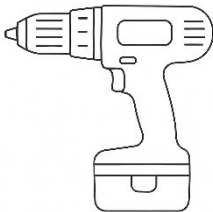
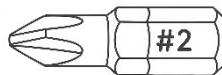
OpenTech Alliance, Inc. Tech Support
(US-based, available 24/6)

Phone (US)	602-773-1700 For installation help, Press 1, then 1 For post-installation help, Press 2, then 1
Phone (Outside US)	Click the Website Support link to find your phone contact
Website	https://opentechalliance.com/support/
Email	support@opentechalliance.com
Resources	OpenTech Alliance Resource Library OpenTech Alliance Help Center

Package Contents

<p>INSOMNIAC Smart Motion Sensor</p>		<p>(2) 3/4 #2 screws</p>	
<p>(4) Alkaline AA Batteries</p>		<p>Magnetic Mount</p>	

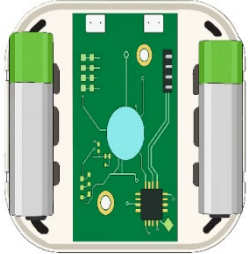
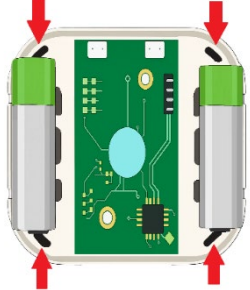
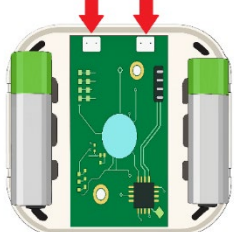
Tools Required for Installation

<p>Driver Drill</p>		<p>#2 Phillips Screw Bit</p>	
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Mounting the SmartMotion™ Sensor SMM-PIR-100-01

For any assistance during installation please contact our onboarding team.

Tel: +1 602 773 1700 | Email: ioeonboarding@opentechalliance.com

<p>Begin by detaching the top casing of the SmartMotion Sensor, typically by using an electronics pry tool. (Figure 1)</p>	 <p>Figure 1</p>
<p>Mount the back plate to the desired mounting location, which must be inside a protected area, using at least 2 of the mounting holes in a star pattern for best compression when mounting. (Figure 2)</p> <p>*Skip this step when using magnetic mounting solutions*</p>	 <p>Figure 2</p>
<p>Connect the battery contacts to the circuit board. Ensure any debris from utilizing the mounting holes is clear from the circuit board. Reattach the top casing onto the enclosure. (Figure 3)</p>	 <p>Figure 3</p>

Verify the SmartMotion sensor operations.

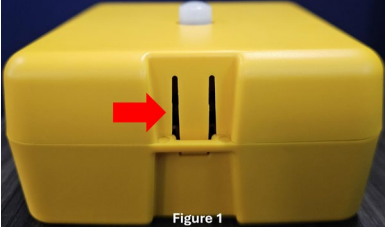

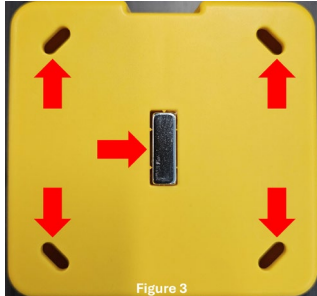
Wave your hand several times in front of the SmartMotion sensor several times 1 meter (3 feet) from sensor.

Detection will be logged into the INSOMNIAC Control Center after pairing has been completed.

Mounting the SmartMotion™ Sensor SMM-PIR-200-01

For any assistance during installation please contact our onboarding team.

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<p>Begin by opening the casing of the SmartMotion Sensor by depressing the secure clip. (Figure 1)</p>	 <p>Figure 1</p>
<p>Pull the tab to connect the battery contacts to the circuit board. Ensure any debris from utilizing the mounting holes is clear from the circuit board (if applicable). (Figure 2)</p>	 <p>Figure 2</p>
<p>Mount the back plate to the desired mounting location, which must be inside a protected area, using at least 2 of the mounting holes in a star pattern for best compression when mounting. (Figure 3) *Skip this step when using magnetic mounting solutions*</p>	 <p>Figure 3</p>

Verify the SmartMotion sensor operations.

Wave your hand several times in front of the SmartMotion sensor several times 1 meter (3 feet) from sensor.

Detection will be logged into the INSOMNIAC Control Center after pairing has been completed.

Wireless Communications

The INSOMNIAC SmartMotion sensors use the Wirepas mesh protocol to create a reliable and energy-efficient wireless network. Each sensor is capable of communicating not only with the Access Point but also with other nearby sensors. By passing messages between devices, the network is able to cover a wide area while keeping individual transmission distances short.

Each SmartMotion sensor has an effective range of approximately 30 meters (100 feet). The Access Points provide a much wider communication range, reaching up to 200 meters (650 feet) in open conditions. In addition, OpenTech Alliance provides other sensor products like INSOMNIAC SmartLock, which adds to this mesh network of devices. Together, these ranges allow sensors to connect to each other and to Access Points without requiring high transmit power, which helps preserve battery life.

At the center of the system is the Access Point, which contains the Wirepas sink node. The sink serves as the collection point for all wireless traffic coming from the sensors. Once data reaches the sink, it is forwarded through the Access Point into the wired OpenNet network, where it can be processed by the Edge Router and made available to applications such as the INSOMNIAC Control Center.

Because the network is built on a self-healing mesh, each sensor automatically finds the most efficient path to reach the sink. If one sensor or Access Point becomes unavailable, nearby devices will reroute traffic through alternative nodes. This redundancy ensures reliability across the facility.

In practice, SmartMotion sensors should be positioned so they are within range of at least one other active sensor or an Access Point. When installed in this way, the mesh continuously balances itself, maintaining connectivity and ensuring that motion events are captured and delivered reliably.

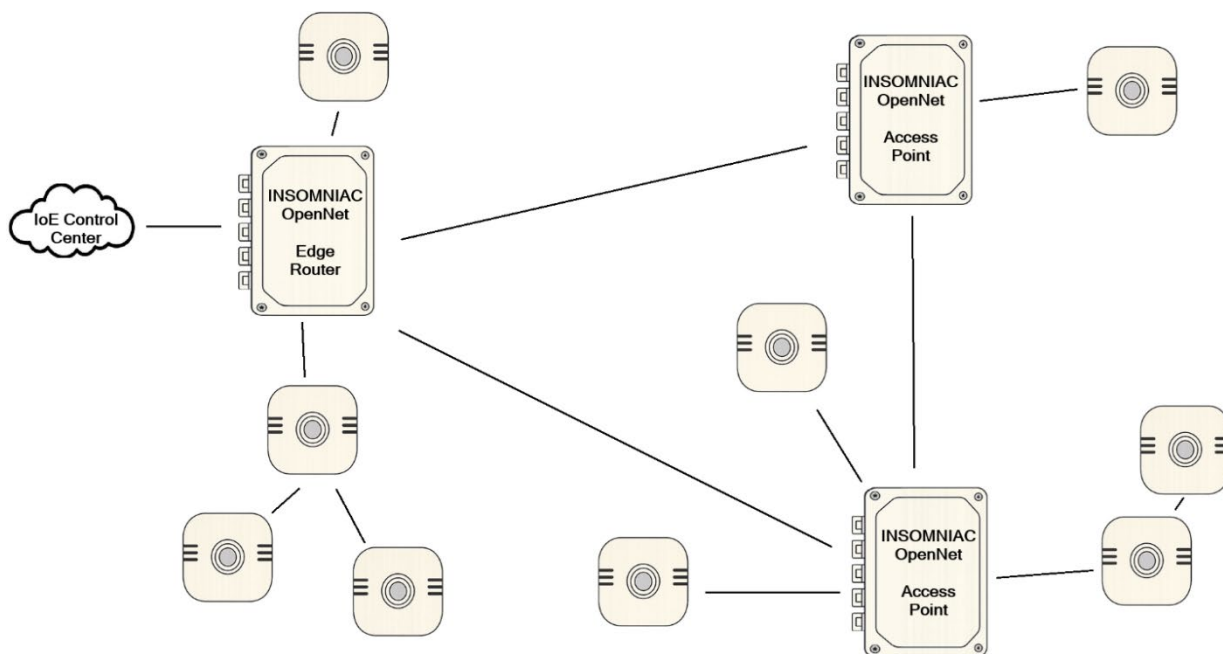


Figure 4

Testing and Troubleshooting

SmartMotion Sensor

Test the sensor by applying power to the INCOMING battery power connections. There is one LED indicator as shown (Figure 5) that flashes on boot and new motion detection. This LED is visible from the front of all SmartMotion sensors. For troubleshooting purposes:

- Check the Power Indicator/ Motion Detection LED.
 - On boot the LED will flash to signify power (PIR-200-01 will beep as well)
 - On new motion detection the LED will flash to signify motion detected.
- Power cycle the sensor by disconnecting the batteries and reinstating the battery connection after 15 seconds.

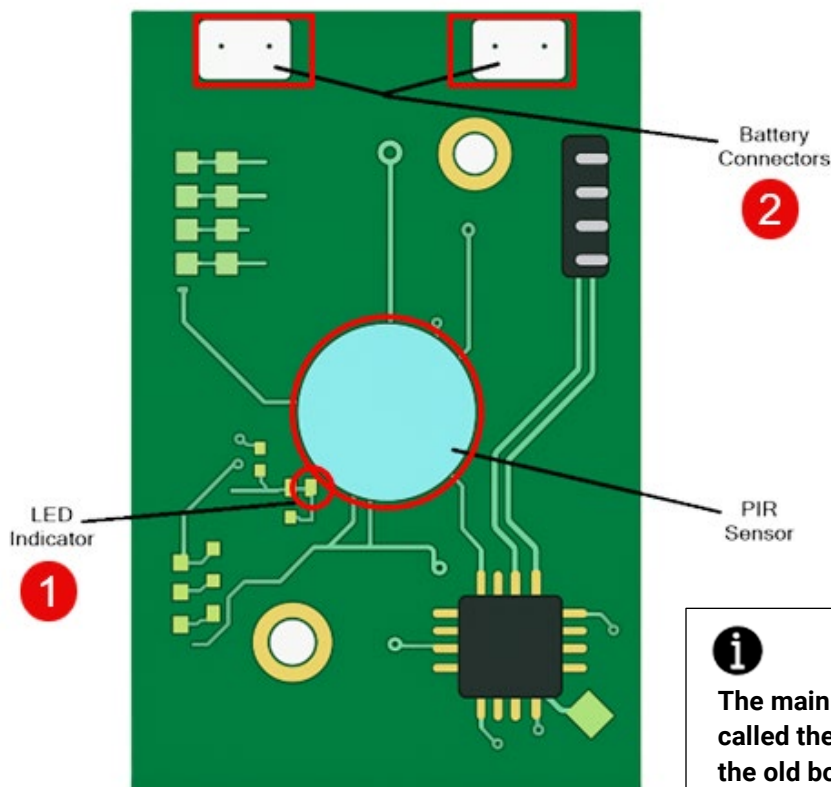


Figure 5



The main PCB carries a Master ID Address called the UID. If this board is changed out, the old board's UID must be replaced with the new one in Control Center, for the new board to function.

Installation Checklist

- Confirm CIA Access Controls Installed
- Confirm OpenNet Wireless Mesh Network Installed
- Sensors Powered On
- Sensors Paired in Control Center
- Sensors Tested
- Motion Confirmed
- Sensors Assigned & Installed to Access Areas
- Sensors Assigned & Installed to Vacant Units (if pre-installing in vacant units*)
 - *If not installed in vacant units as pre-assigned, leave battery pull tabs in place and leave in office for facility manager to install.

Routine Maintenance

SmartMotion Sensor

Follow a simple schedule of routine maintenance to keep the system functional and to preserve the warranty.

Annually

1. Open the SmartMotion Sensor housing and inspect the inside of the housing and circuit board.
2. Use compressed air to remove any dust or debris that has collected on the inside of the housing and the circuit board.
3. Verify integrity of mounting hardware and or solutions.

Batteries

Every four years replace the batteries connected to the PCB, following this process:

1. Open SmartMotion casing.
2. Remove old AA batteries.
3. Replace ALL batteries with fresh new batteries.
4. Close and secure the SmartMotion casing.

Notices and Disclaimers

FCC Part 15 Notice: The referenced equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment can generate and radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

INSTALLER MANUAL

INSOMNIAC® SmartMotion

Liability Disclaimer: While every effort has been made to ensure the accuracy of the information in this document, we assume no liability for any inaccuracies contained herein. We reserve the right to change the information contained herein at any time and without notice.