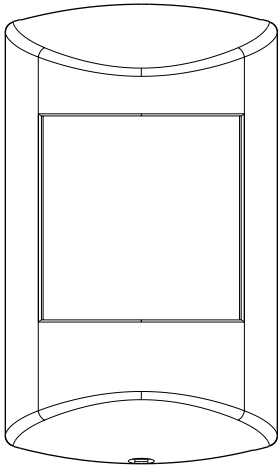




ES PD1A

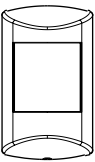
Surface Mount Occupancy Sensor



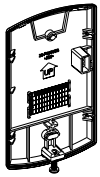
Quick Start Guide

English

IN THE BOX



ES PD1A Surface Mount Occupancy Sensor Body



Sensor Back Cover (with pre-installed security screw)



2 x AAA Alkaline Batteries (non-rechargeable)



4 x Back Cover Screws



4 x Back Cover Wall Anchors

REQUIRED (NOT SUPPLIED):

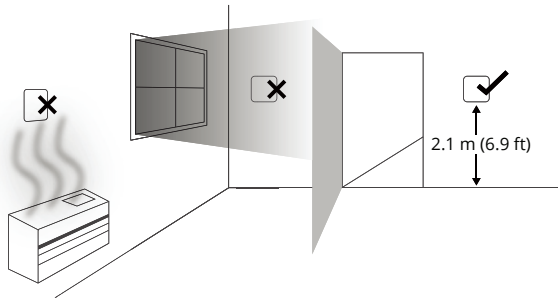
- Screwdriver set
- Drill + drill bits (3/16" for drywall; 7/32" for plaster)
- Pencil
- Level
- Masking tape

IMPORTANT SAFETY INSTRUCTIONS

Always follow basic safety precautions to reduce fire, electric shock, and injury risks:

1. Install only by a **qualified technician**.
2. Read/understand all instructions and follow product-marked warnings.
3. Clean only with a dry, non-abrasive cloth—**do not use liquid/aerosol cleaners**.
4. **Do not expose to liquid** or install in wet areas (bathroom, sink/pool proximity, damp basement) or outdoor locations.
5. Install only on stable, flat surfaces; avoid exterior walls.
6. Keep away from radiators, heat registers, and poorly ventilated areas.
7. Operate only from the power source indicated on the product label.
8. **Do not disassemble**—opening the sensor exposes you to dangerous voltages; incorrect reassembly causes electric shock.
9. Discontinue use and contact an **authorized service facility** if:
 - Liquid spills on the product
 - Product is exposed to rain/water
 - Product malfunctions (adjust only controls in this guide)
 - Physical damage occurs (e.g., being dropped)
 - Performance changes drastically
10. Mount the sensor at the optimal height of **2.1 meters (6.9 feet)**. Vertical wall mount only—do not mount horizontally or on ceilings.
11. Keep small metallic objects (pins, staples) away from the sensor.
12. **Battery Safety (2x AAA Alkaline only):**
 - Supplied batteries are non-rechargeable; do not mix old/new batteries or battery types (alkaline/carbon-zinc/rechargeable).
 - Avoid extreme temperatures (use/storage/transport) and incorrect battery replacements.
 - Do not incinerate, crush, or cut batteries (risk of explosion/flammable leakage); do not leave in extreme heat/low air pressure.
 - Remove batteries before scrapping the sensor; dispose of per local regulations (**not household trash**).
 - Keep batteries away from children—contact a poison control center for ingestion emergencies.

PROHIBITED MOUNTING LOCATIONS



- Directly above/below hot/cold air ducts
- Exterior walls
- Areas with direct sunlight, concealed chimneys/pipes, or obstructed airflow (e.g., behind doors)
- Unstable surfaces or locations with rapid temperature/humidity changes

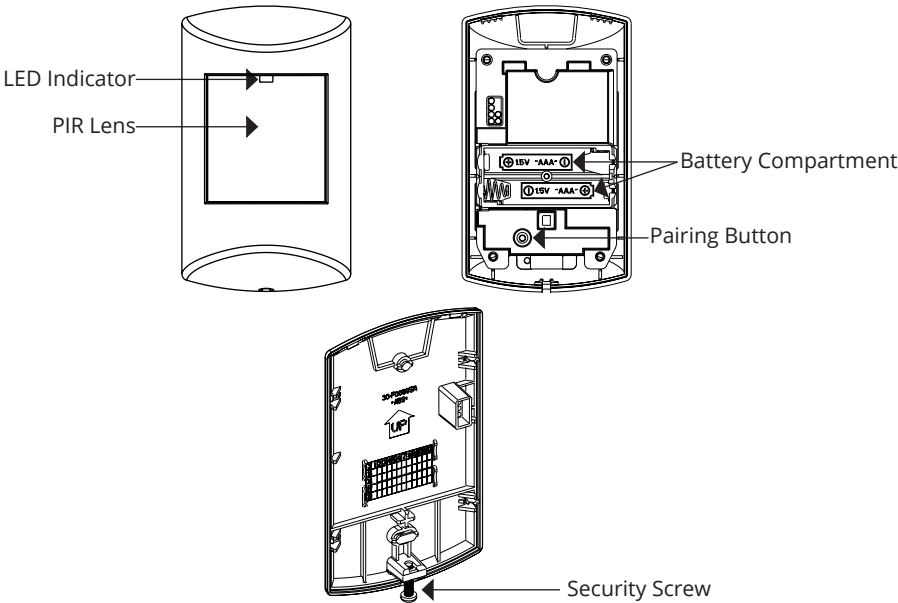
PRODUCT SPECIFICATIONS

Feature	Specification
Product Dimensions	2.47" x 4.17" x 1.6" (62.8 mm x 106 mm x 40.6 mm)
Mounting Type	Surface Mount (vertical wall only)
Power Requirement	2 x AAA Alkaline Batteries (1.5V)
Battery Life	Up to 24 Months
Optimal Installation Height	2.1 m (6.9 ft)
Detection Angle	90° (Fresnel Lens)
Detection Range	Up to 14 m (46 ft)
Physical Controls	1 x Pairing Button
LED Indicator	Wireless Connection/Battery/Signal Status
Weather Resistance	Indoor Use Only
Operating Environment	23°F to 122°F (-5°C to 50°C); ≤95% RH (non-condensing)
Network	Zigbee 3.0 (2.4 GHz frequency band)
Zigbee Range	≥100 m (328 ft) open space; 30.5 m (100 ft) through standard building materials; 61 m (200 ft) unobstructed to controller
IP Rating	IP30

KEY PRE-INSTALLATION NOTES

1. Professional installation by a qualified technician is required.
2. Mount in a **central interior wall** (easily accessible, good air circulation, average temp/humidity).
3. For optimal PIR detection, mount in a **corner** (detects cross-movement better than direct movement toward the sensor).
4. Do not over-tighten mounting screws.
5. Ensure mounting surface is clean/smooth (imperfections prevent secure tape bonding).
6. Use wall anchors if mounting outside a wall stud (tap flush with a hammer).

SENSOR LAYOUT



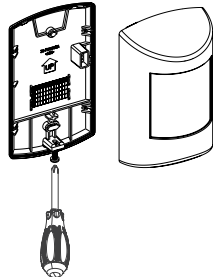
- LED Indicator:** Hidden within the front housing; visible only when illuminated to show system status.
 - **Green:** Good connection or successful pairing.
 - **Red:** Low battery, signal loss, or detection trigger.
 - **Yellow:** Pairing failure or factory reset.
- PIR Lens (PIR Detection Element):** Front-mounted passive infrared element that detects human presence and movement via a 90° Fresnel lens, triggering occupancy events.
- Battery Compartment:** Access is provided via back cover removal.
- Pairing Button:** Enables pairing/unpairing and status checks via specific LED blink patterns (e.g., battery life and signal strength).
- Security Screw:** Locks the sensor body securely to the back cover to prevent tampering.

For Nomadix controller layout/installation, please refer to the **ET AC1A User Documentation**.

INSTALLATION & PAIRING PROCESS

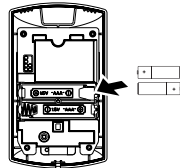
Step 1: Open the Battery Compartment

1. Slide open the screw cover and loosen the **security screw** to separate the sensor body from the back cover.
2. Detach the sensor body to access the internal battery compartment.



Step 2: Install Batteries

1. Insert 2 x AAA Alkaline batteries, **aligning +/- polarities correctly** (use only AAA Alkaline—no other types).
- **Note:** Use only standard **Alkaline (1.5V)** batteries. **Rechargeable (1.2V)** batteries may cause premature low-battery warnings and signal dropouts.



Step 3: Unmount/Unpair an Existing Sensor (If Replacing)

Skip for first-time installation

- **Non-ES PD1A PIR Sensor:** Simply unmount from the wall and remove from the area.
- **ES PD1A Sensor (Paired):** Unpair to avoid connectivity conflicts:
 1. Press and hold the **Pairing Button** for 10 seconds (**green/red LEDs** flash rapidly alternately).
 2. Release the button; wait 1–3 seconds.
 3. **Yellow LED** stays solid for 8 seconds (then turns off)—sensor is factory reset/unpaired.

Step 4: Pair the Sensor to the Controller

Place the unpaired sensor **near the controller** (within range) for pairing

1. On the controller: Press and hold the **Pairing Button** for 3–5 seconds (controller LED flashes **green**). Pairing mode is active for **180 seconds**.
2. On the sensor: If batteries were just inserted, pairing may trigger automatically. If not, press and hold the **Pairing Button** for 3 seconds (front LED flashes **green**; release). **Green LED** flashes for 8 seconds during pairing.
3. Pairing takes up to **120 seconds**:
 - **Success:** Sensor **green LED** stays solid for 8 seconds (then off).
 - **Failure:** Sensor **yellow LED** stays solid for 8 seconds (then off).
 - **Troubleshooting (Pair Failure):** Remove batteries for a few seconds, reinsert, and repeat the 3-second **Pairing Button** hold on the sensor. Unpair/re-pair if needed (Step 3).

Step 5: Pre-mounting Tests

Before permanent installation, perform these tests to ensure optimal performance.

Phase 1: Test Sensor Functionality

Verify that the sensor and controller are communicating correctly.

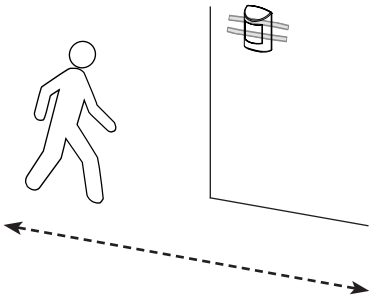
1. **Position the sensor:** Keep the sensor within **3.3 feet (1 meter)** of the controller.
2. **Trigger detection:** Wave your hand or walk across the sensor's 90° field of view.
3. **Confirm alerts:**
 - Sensor LED flashes red **once**.
 - Controller receives a detection alert (refer to controller manual for alert settings).

Note: Sensor has a **1-minute cool-down period**—no new detections/alerts until the period ends.

Phase 2: Test Signal Strength (Temporary Mount)

Ensure the chosen installation site allows for a strong, unobstructed signal.

1. **Temporary Placement:** Use masking tape to temporarily secure the sensor at the desired location (recommended height: 2.1 m / 6.9 ft).
2. **Test the Detection:** Wave your hand or walk across the detection area to trigger the sensor.
3. **Verify Connection:** Confirm that the controller receives the signal from the sensor.
4. **Troubleshoot and Finalize:** If there is no signal, move the controller closer or choose a location with fewer obstructions (thick walls, metal cabinets).

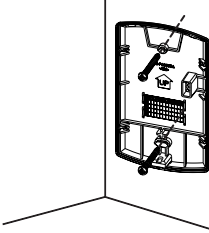


Step 6: Mount the Back Cover to the Wall

1. Hold the back cover at the optimal height of **2.1 m (6.9 ft)** and mark the screw hole positions (2 middle holes for flat walls, or 4 corner holes for **corner mounting—recommended**).
2. Drill holes at the marks and insert the provided wall anchors (tap flush with a hammer).
3. Secure the back cover with the mounting screws (**do not over-tighten**).

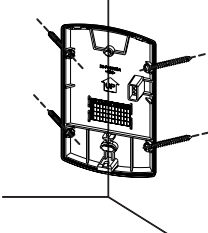
Mounting Option 1:

Flat Wall Mounting



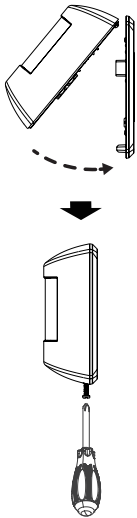
Mounting Option 2:

Corner Mounting (Recommended)



Step 7: Reassemble the Sensor Body onto the Cover

1. Align the sensor body with the back cover (all tabs fit correctly).
2. Press firmly until the body **clicks into place**.
3. Tighten the security screw at the bottom to secure the assembly.



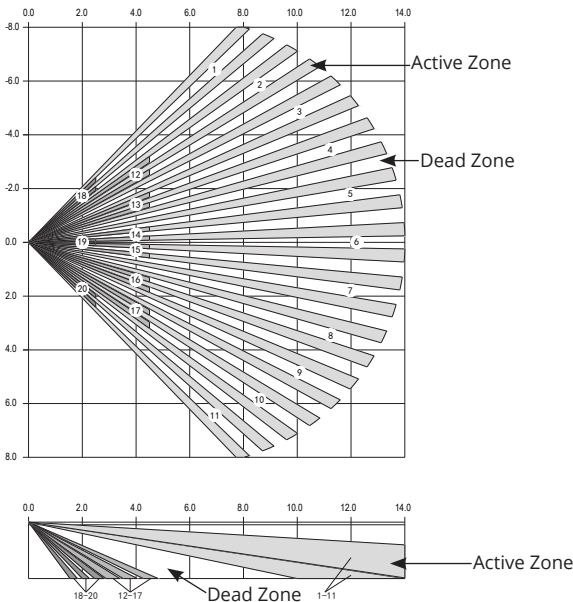
PIR DETECTION DETAILS

- **Detection range:** Up to 14 m (46 ft) at the optimal mounting height of 2.1 m (6.9 ft); actual range varies with height.
- **High-density detection segments:** The 90° lens layout is designed so that any human movement across the field of view will overlap multiple active zones, eliminating any 'blind spots' for intruders.
- **Detection sensitivity:** The sensor is more sensitive to cross-movement (walking past) than direct movement (toward the sensor); corner mounting is recommended for optimal performance.
- **Cool-down period:** To save battery and prevent redundant alerts, the sensor enters a 1-minute cool-down after each detection and will not trigger again until 60 seconds have passed.

Top view

Installation Height: 2.1 m (6.9 ft)

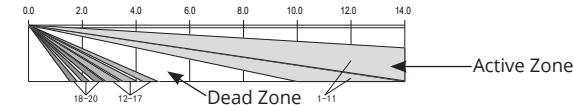
(Top view diagram of detection coverage)



Side view

Installation Height: 2.1 m (6.9 ft)

(Side view diagram of detection coverage)



Note: The gray segments represent the active detection zones within a range of **14 m (46 ft)**. Darker gray indicates **higher** sensor sensitivity. Areas without a gray background are dead zones where presence will not be detected.

GENERAL PRODUCT CARE

To protect electronic components and extend lifespan:

1. **Handle with care:** Avoid rough handling or drops. Retain original packaging for safe transport or storage.
2. **Keep dry:** Moisture can damage internal electronics. Do not handle with wet hands or install near direct water sources (e.g., sinks, bathrooms).
3. **Storm safety:** The battery-powered sensor is safe, but always **unplug or power down the connected controller** during electrical storms to avoid surge damage.
4. **Cleaning:** Wipe the casing and lens with a **dry, non-abrasive, lint-free cloth**. Do not use water, damp cloths, or chemical solvents (e.g., alcohol, thinner) as they may damage the lens coating or deform the plastic.

TROUBLESHOOTING

Issue	Resolution Steps
Pairing fails	1. Ensure the controller is in pairing mode (180-second window). 2. Remove/reinsert sensor batteries and retry pairing. 3. Unpair the old sensor (Step 3) if replacing an ES PD1A. (p. 2) 4. Move the sensor closer to the controller (no obstructions).
Connection lost	1. Move the sensor/controller closer (within Zigbee range). 2. Eliminate obstructions (metal cabinets, thick walls). 3. Check controller power supply.
Sensor does not work at all	1. Check batteries: Ensure correct installation and sufficient charge (replace if critically low). 2. Re-pair the sensor with the controller (follow Step 5). (p. 2) 3. Check range: Move the sensor closer to the controller (eliminate obstructions).
No detection alerts	1. Verify the sensor is mounted at the 2.1 m optimal height (vertical wall only). 2. Check for obstructions in the 90° field of view (including within active zones). (p. 2) 3. Confirm the 1-minute presence cool-down period has ended. (p. 2) 4. Test signal strength (temporary mount—adjust location if needed).
Low battery alert	Replace with 2 x new AAA Alkaline batteries (align polarities correctly).

REGULATORY COMPLIANCE STATEMENTS

FCC Compliance Statement

FCC Caution:

Any changes or modifications not expressly approved by Nomadix could void the user's authority to operate the equipment.

FCC Part 15:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This 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 generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment off and on), the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of **20 cm (8 inches)** between the radiator and your body.

ISED Warning / Avertissement d'ISDE

English:

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Step 8: Post-mounting Tests

Check Connection Status and Battery Level

Short-press the **Pairing Button** or reinsert batteries to verify:

- **Good Connection: Green LED** solid for 8 seconds (then off).
- **Connection Lost: Red LED** flashes slowly (1s on/1s off) for 16 seconds (controller power loss or sensor out of range).
- **Low Battery (2.2V–2.4V): Red LED** flashes quickly for 8 seconds (then off).
- **Critically Low Battery (<2.2V): No LED indication**—replace batteries **immediately**.

Français :

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage.
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RF Exposure Statement / Déclaration d'exposition aux RF

English:

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of **20 cm** between the radiator and your body. Users can obtain Canadian information on RF exposure and compliance at ised-isde.canada.ca.

Français :

Cet équipement est conforme aux limites d'exposition aux rayonnements d'ISDE établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de **20 cm** de distance entre la source de rayonnement et votre corps. Les utilisateurs peuvent obtenir des informations canadiennes sur l'exposition aux RF et la conformité sur le site ised-isde.canada.ca.

DISCLAIMER

This product is intended for **automation and convenience use only**. It is **not designed for security, life-safety, or fire-safety applications** and must not be used as a substitute for dedicated safety/security equipment. Nomadix is not liable for any loss, injury, or damage resulting from the use or failure of this product.

SAVE THESE INSTRUCTIONS

Store this guide in a safe, accessible location for future reference (installation, troubleshooting, maintenance).



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