



Model: GW900

Long Range Dual Band Wireless Gateway Installation Guide

Before you start

Read Instructions: Review all steps in this guide before beginning the installation to avoid issues.

Power Requirements: The gateway is powered via Power over Ethernet (PoE), which can be supplied by a PoE-capable network switch or the included PoE injector. An optional USB-C power adapter may be used as an alternative power source if needed.

Required Networking: The Gateway supports 10/100/1000 Mbps Ethernet switches, auto-negotiates speed, and operates in full duplex. It requires outbound Internet access. By default, it obtains an IP address via DHCP. If a static IP address is needed, please contact Pelican Technical Support.

Need Help?: If you're unsure about any step, pause and contact Pelican Technical Support for assistance.

Gateway Setup Instructions

For New Installations:

Once the gateway is powered on, use a smartphone, tablet, or computer to navigate to www.PelicanWireless.com and select "New Site Setup."

For Existing Sites:

Once the gateway status light is solid blue, log in to the existing Pelican Site Manager. Go to Admin > Site Settings, then click the "+" icon under Gateways to add the new device; see page 14 of the installation guide.

Once the gateway is registered, it will automatically begin broadcasting to nearby Pelican devices and serve as the Pelican cloud server connection point for the entire Pelican wireless mesh network.

To Verify Gateway Status:

Check the gateway status light; see page 13 of the installation guide.

Installation Considerations

DO NOT INSTALL GATEWAY:

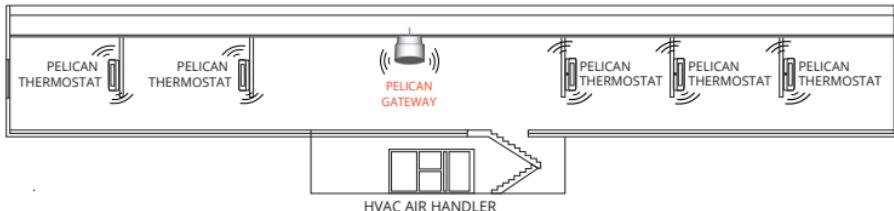
- ✗ Inside networking rooms like IDF or MDF, or inside IT closets. Wireless signal may experience interference.
- ✗ Inside a room with concrete or cinder block walls.
- ✗ In a metal enclosure, on a metal surface, near large metal panels, or in a room with substantial metal fixtures like mirrors. Wireless signals may be obstructed due to metal interference.
- ✗ Near electrical equipment or conduit.
- ✗ Directly on a networking rack or near other network equipment, such as a WiFi router, to prevent potential interference.
- ✗ Sitting on a desk, the floor, or on any other flat surface. This will reduce signal propagation and increase wireless obstruction.
- ✗ On a rooftop or anywhere outside unless advised otherwise by Pelican Technical Support.

DO INSTALL GATEWAY:

- ✓ Central to your Pelican wireless network to ensure a reliable bridge for all devices to quickly reach the Internet.
- ✓ At minimum 6 feet away from any wireless signal emitting devices, such as WiFi routers.
- ✓ At least 6 – 10 feet above the floor or mounted to the ceiling and positioned in a horizontal orientation above all office or electrical equipment to minimize wireless interference.

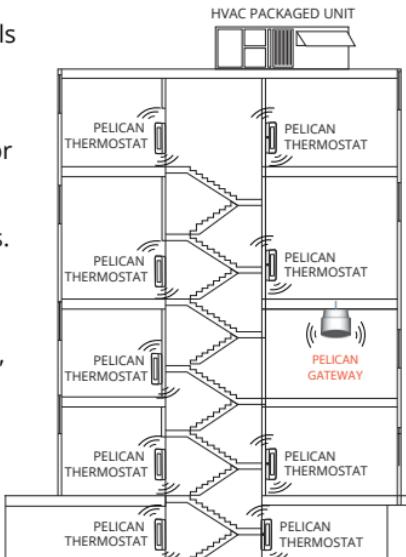
Single-Story Building

In a single-story building, install the Pelican gateway in a central location to ensure strong wireless coverage to all devices. Mount it in an open area such as a hallway or shared space, at least 6 feet off the ground, and avoid placing it inside IT or mechanical rooms, behind closed doors, near large metal objects or electrical panels, or close to restrooms. These steps help maintain a strong, reliable signal. The Pelican wireless mesh network will automatically extend between devices, bridging the entire building to the Pelican Connect web app. Install Pelican repeaters as needed to strengthen coverage in hard-to-reach locations.



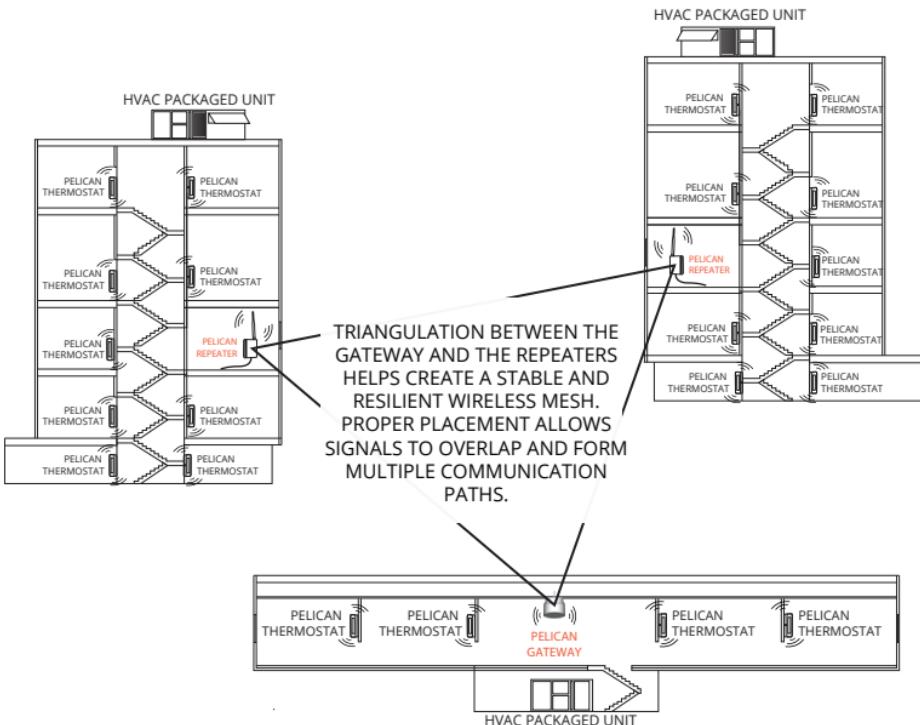
Multi-Story Building

In a multi-story building, install the Pelican gateway on a middle floor in a central location to ensure strong wireless coverage across multiple levels and to many Pelican devices. Mount it in an open area such as a hallway or shared space, at least 6 feet off the ground, and avoid placing it inside IT or mechanical rooms, behind closed doors, near large metal objects or electrical panels, or close to restrooms. This setup helps maintain a reliable signal throughout the building. The Pelican wireless mesh network will automatically extend between devices, bridging all areas to the Pelican Connect web app. Install Pelican repeaters as needed to strengthen coverage in hard-to-reach locations.

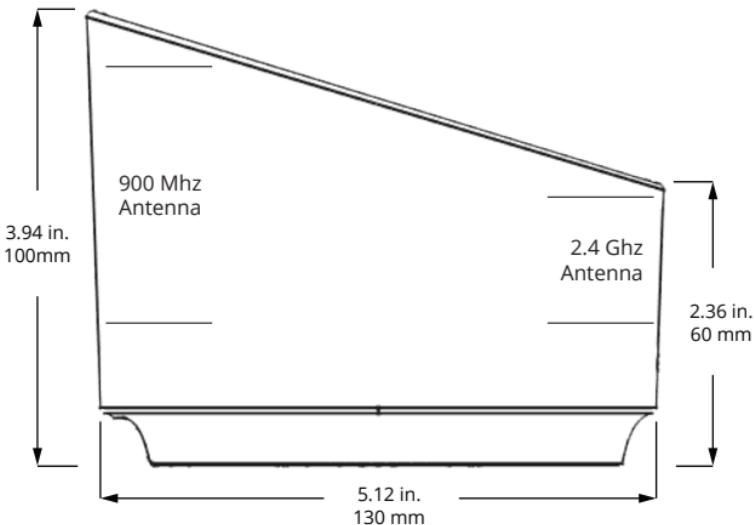


Multiple-Building Sites (Large Campus)

In a large campus with multiple buildings, install a single Pelican gateway in a central building that provides the most balanced wireless reach across the entire site. Mount it in an open area such as a hallway or shared space, at least 6 feet off the ground, and avoid placing it inside IT or mechanical rooms, behind closed doors, near large metal objects or electrical panels, or close to restrooms. This setup helps maximize wireless performance. The Pelican wireless mesh network will automatically extend coverage across the campus by linking devices and repeaters in each building. Repeaters are generally required to bridge wireless communication between buildings and ensure complete system connectivity.



Dimensions



Specifications

- Power-Over-Ethernet (PoE) Type 1: 48V DC, 60 Hz, 0.25A, IEEE 802.3af
- Wireless: 2.4 GHz & 900 MHz, IEEE 802.15.4 Standards
- Compliance: Class B Part 15 of FCC rules
- Data Rate: 10/100/1000 Mbps, Full-Duplex.
- Optional USB-C Power: 5V DC, 2.0A
- Storage: -20°F — 160°F
- PoE Power Adapter:
 - Input Power: 100~240V AC, 50/60Hz
 - Output Power: 48V DC --- 0.55A
 - Protocol: IEEE 802.2af/at
 - Data Rate: 10/100/1000Mbps
 - Compliance: Class B Part 15 of FCC rules
 - Certifications: EMC 2004/108/EC of CE Standards

Included Parts



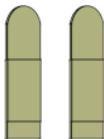
(1) GW900



(1) Wall Bracket



(1) Ceiling Bracket



(2) Pre-Installed Command Strips



(1) T-Bar Mount Bracket



(1) Wing Nut



(2) 10ft Ethernet Cables



(1) Thumb Screw



(1) Washer



(2) Sheet Metal Screws, #6-18 x 1"



(2) Plastic Anchors, #6 x 1"

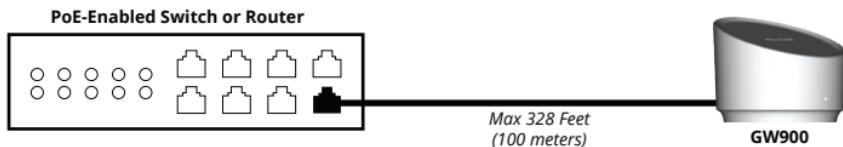


(1) PoE Power Adapter

Power Option 1: Power From Router or Switch (PoE)

The GW900 supports Power over Ethernet (PoE), allowing it to receive power and transmit data through a single Ethernet cable. To power the device directly from a router or switch, ensure the network port is PoE capable.

Connect one end of a Cat 5 or Cat 6 Ethernet cable (provided or equivalent) to the PoE-enabled port on your router or switch. Plug the other end into the GW900's Ethernet port.

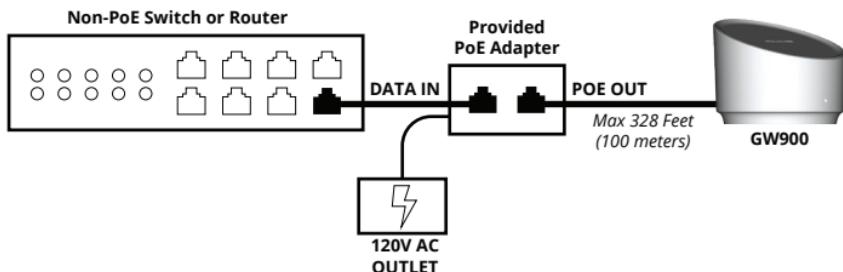


Power Option 2: Power From Provided PoE Adapter

If your router or switch is not PoE capable, use the included PoE adapter to supply power over the Ethernet cable.

1. Connect one end of a Cat 5 or Cat 6 Ethernet cable (provided or equivalent) to the router or switch.
2. Plug the other end into the PoE adapter port labeled **DATA IN**.
3. Use a second Cat 5 or Cat 6 Ethernet cable to connect the **POE OUT** port on the adapter to the Ethernet port on the GW900.
4. Plug the included power supply into the PoE adapter and a standard 120V outlet.

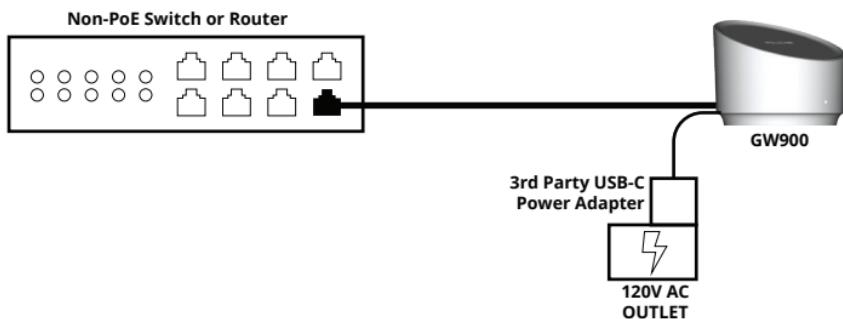
Note: Install the PoE adapter near the router or switch for best cable management. Power from POE OUT is supplied only after successful negotiation with the Gateway, ensuring safe operation.



Power Option 3: Power From USB-C

The GW900 can also receive power through its USB-C port. This option is only needed when PoE is not being used.

1. Connect one end of a Cat 5 or Cat 6 Ethernet cable (provided or equivalent) to a port on your router or switch.
2. Plug the other end into the GW900's Ethernet port.
3. Use a third-party USB-C cable rated for 5V DC, 2.0A output.
4. Connect the USB-C cable to the GW900 and plug the power supply into a standard 120V outlet.



Mounting

The GW900 can be mounted on a wall or ceiling, in either an upright or upside-down orientation. However, it should never be left on a flat surface or on the ground.

Proper mounting is critical for optimal wireless performance. Follow these guidelines:

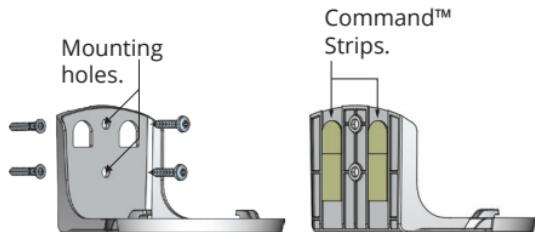
- ✓ Mount the gateway above all nearby electrical equipment, wireless devices, and metal structures.
- ✓ Maintain at least 6 feet of distance from other wireless signal-emitting devices (e.g., WiFi routers or access points).
- ✗ Do not leave the gateway sitting on surfaces such as shelves, tables, or network racks.

Mounting Option 1: Wall Installation

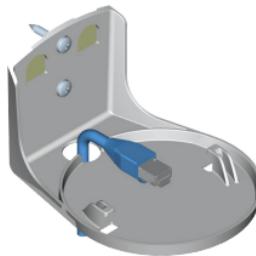
Use the provided wall mount to install the GW900 on a wall. The gateway can be mounted upright or upside down, but must never be mounted horizontal to the ground.

Important: Mount the gateway above all nearby electrical equipment, wireless devices, and metal structures.

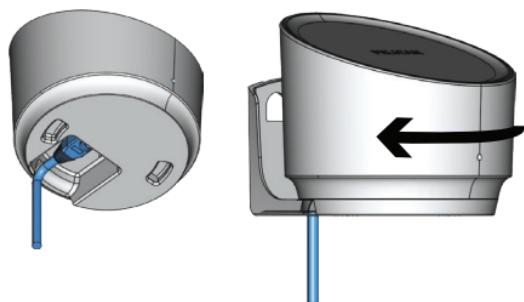
1. Secure the wall mount using either the provided Command™ Strips or two #6 screws with proper wall anchors, as needed for the surface.



2. Feed cable(s) through the hole at the bottom of the wall mount and plug it into the gateway.



3. Attach the gateway by aligning the two sockets on the bottom of the device with the twist-lock feet on the mount. Twist the gateway clockwise with light pressure until you hear or feel it snap into place.



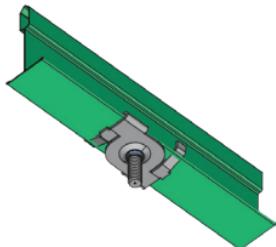
Mounting Option 2: Ceiling Installation

1. The GW900 supports multiple ceiling mounting configurations. Follow the steps below to select the option that ensures the best wireless performance and a secure installation.

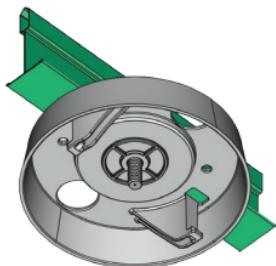
Important: Mount the gateway above all nearby electrical equipment, wireless devices, and metal structures.

(A) T-Bar Clip Installation (Drop Ceilings)

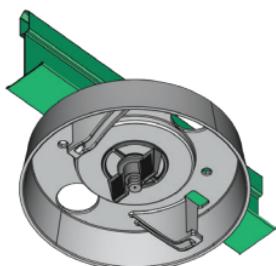
1. Twist the provided T-bar clip until it snaps securely onto the ceiling T-bar.



2. Slide the ceiling bracket onto the exposed screw.



3. Secure the bracket using the provided wing nut.



(B) Thumb Screw Installation (Open Ceiling)

1. Insert the thumb screw through the provided washer.
2. Drill a 1/4" hole at the desired mounting location.
3. Push the screw into the hole, leaving the threaded end exposed.
4. Slide the ceiling bracket onto the exposed screw.
5. Secure the bracket using the provided wing nut.

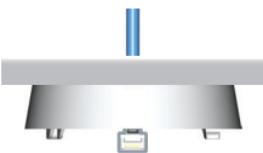
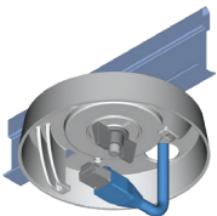


(C) Screw Installation (Solid Ceiling)

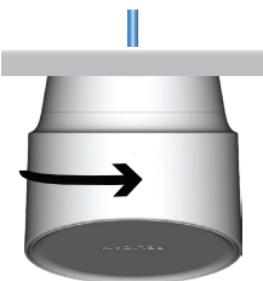
1. Hold the ceiling bracket in place at the desired location.
2. If using the provided #6 sheet metal screws, drill two 3/16" holes and insert the included drywall anchors.
3. Secure the bracket using either the provided screws or screws suited to your ceiling material.



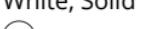
2. Once the ceiling bracket is securely mounted, drill a hole in the ceiling as needed to route cable(s) through the existing opening in the bracket. This ensures a clean installation and proper alignment with the gateway.



3. Attach the gateway by aligning the two sockets on the bottom of the device with the twist-lock feet on the mount. Twist the gateway clockwise with light pressure until you hear or feel it snap into place.



Gateway Status Light

Light	Meaning	Troubleshooting
Blue, 3 Fast Blinks 	Initial power on.	Wait — device will begin network connection process.
Red, Blinking 	Waiting for Ethernet switch connection.	Check network cable and switch port.
Yellow, Blinking 	Waiting for local IP address.	Ensure DHCP is enabled on network.
Green, Blinking 	Locating local LAN router.	Confirm local router/switch is online and properly connected.
Blue, Blinking 	Connecting to Pelican cloud server.	Verify internet access and firewall settings.
Blue, Solid 	Connected to Pelican, waiting for site assignment.	Assign device through Pelican site setup or assign to an existing Pelican site.
White, Blinking 	Connected to site cloud server.	Wait — may take up to 2 minutes
White, Solid 	Fully connected to assigned site.	No action needed — installation complete.
No Light, Off	No power.	Check power source.

Assigning a Gateway to a Pelican Site

New Site Setup

Using an Internet-connected smartphone, tablet, or PC, open a web browser (e.g., Chrome, Firefox, Safari) and go to: www.PelicanWireless.com

1. Click the “New Site Setup” button in the top right corner of the homepage.
2. Enter the gateway’s serial number into the New Site Setup wizard.
3. When prompted, enter the name for the site, the zipcode for the installation location, and your email address.
4. Press enter to complete the creation of a new site.

Assign to an Existing Site

Using an Internet-connected smartphone, tablet, or PC, open a web browser (e.g., Chrome, Firefox, Safari) and navigate to your existing Pelican Site:

Example: [\(nameofsite\).OfficeClimateControl.net](http://(nameofsite).OfficeClimateControl.net)

1. Go to Admin > Site Settings.
2. Select Gateways, then click the + button.
3. Enter the gateway’s serial number.
4. The new gateway will now appear as part of that site.

Deleting a Gateway

To delete a gateway from an existing site:

1. Unplug the gateway from power and Ethernet
2. Select the gateway from the same Gateways area of the Connect web-app as above
3. Select Delete in the upper right corner. A prompt will appear to confirm or cancel the deletion.

Once a gateway is deleted from a site, it can be reused in a new installation.

Firewall and Network Requirements

The Pelican Gateway needs to make a secure outbound connection to Pelican servers over the Internet. By default, it uses DHCP to obtain its IP address. If needed, it can also be configured with a static IP; contact Pelican Technical Support for assistance. At minimum, the gateway requires a local IP address, subnet mask, and default gateway.

The gateway uses the following outbound ports:

- UDP 514 – For diagnostics and troubleshooting data.
- TCP 9742 – Used to verify which Pelican server to connect to.
- TCP 9800–11000 – A single outbound port in this range is dynamically assigned for continuous data communication (Pelican can assign a fixed port upon request).

The gateway does not require a public IP address or any inbound ports to be opened. All communication is outbound and encrypted using AES for security. It can even be placed outside your firewall on a secure, isolated network if needed.

To simplify setup, allow unrestricted outbound traffic for the gateway's MAC address (printed on the side of the device). If your network policies are more restrictive, you can open port 9742 and either the entire 9800–11000 range or the specific assigned port. Once 9742 is open, contact Pelican Support to find out the exact port assigned to your site.

Resetting Gateway to DHCP

Follow these steps if the gateway was previously configured with a static IP address and needs to be reset to DHCP:

1. Unplug the Ethernet cable from the network router or switch, but leave the other end connected to the gateway.
2. With the Ethernet cable still plugged into the gateway, power cycle the gateway by either unplugging and reconnecting the PoE adapter, or—if it's powered directly by a PoE-capable router or switch—use a third-party USB-C power supply to cycle power.
3. Wait about 60 seconds. The status light will begin blinking green, indicating the gateway is ready to accept a DHCP address. You have 8 seconds to complete the next step.
4. Reconnect the Ethernet cable to the router or switch.

The gateway should now obtain a new DHCP IP address.



FCC Compliance Statement

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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 into 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.

Changes or modifications to this product not authorized by Pelican could void the electromagnetic compatibility (EMC) and wireless compliance and negate your authority to operate the product.

The radiated output power of this device meets the limits of FCC/IC radio frequency exposure limits. This device should be operated with a minimum separation distance of 20 cm (8 inches) between the equipment and a person's body.

ISED Canada Compliance Statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS. 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.

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.

"In order to comply with ISED RF Exposure requirements, this device must be installed to provide at least 20 cm separation from the human body at all times.

"Afin de se conformer aux exigences d'exposition RF ISED, cet appareil doit être installé pour fournir au moins 20 cm de séparation du corps humain en tout temps.