



Quality Care Through Innovative Solutions

Model Name: mi Pos2Pendant
FCC ID: 2AZU7-MI POS2PENDNT

miPos2 Pendant Water Resistant Installation and Operation Manual

1 Overview

The miPosition water-resistant pendant is small, light and easy to wear, washable and provides advanced functionality including an accelerometer to establish movement and an algorithm to maximize battery life.

The pendant is available in the following configurations:

Part #	Check-In	Location	Wearable
miPos2 - W	60 minutes	North America	Watch/Neck
miPos2 - C	60 minutes	North America	Watch/Neck

Note: For UL 2560 installations, refer to the *miPosition Gateway Installation Instructions*

1.a miAlert Contact Information



www.mialert.com

Toll Free: 855-382-8999

Email: support@mialert.com

27 Armthorpe Rd, Brampton, L6T 5M4

If you have any problems with this procedure, contact miAlert technical services:

- Email: support@mialert.com
- Toll Free: 855-382-8999

1.b Maximum Number of Repeaters for a UL 2560 Installation

To achieve the 99.99% alarm message reliability required for UL 2560 compliance, system installations must operate within the following limits for end device and repeater counts.

End Devices	Maximum Repeaters
128	256
256	512
512	1028
1028	1028

1.c Pendant Components

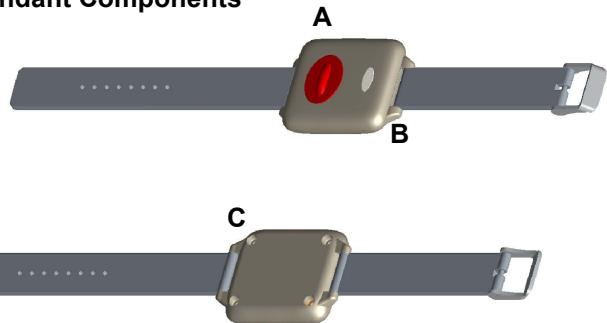


Figure 1 Pendant components (water resistant pendant with watch band shown)

A Activation button

B TX/RX alarm LED and Low Battery LED

C Battery Replace remove back cover 4 screws

2 Installation and Startup

2.a Installation Notes

- These products are designed to be maintained by certified technicians.
- Products are intended for indoor use.
- Pendant is shipped with the coin cell battery installed. But it will be in storage mode which will not affect battery life, to take Pendant out of this mode please hold down the Activation button for 5 seconds.
- All products should be manually tested monthly. "Test the Transmitter/Receiver section".

2.b Coin Cell Battery Installation / Replacement

Turn the Pendant with the back facing up and unscrew the back cover, place the battery in the battery compartment, ensuring that the positive terminal (+) faces up.

2.c Register the Pendant

The Pendant sends a check-in message to the Repeater via the Gateway every 60 minutes for the purposes of supervision. The Pendant must be registered and supervised, the Pendant should be tested after registration to ensure operation. The Repeater will send the Pendant an acknowledgement signal to confirm check-in supervision has been received.

Caution: The Pendant must have a supervision window of no more than 12 hours to avoid not discovering a missing device within 24 hours.

2.d Wear the Pendant

The pendant can be worn in three ways:

- Around the neck with the neck lanyard, which is included with the water resistant pendant with neck lanyard.
- On the arm with the wristband, which comes attached on the water resistant pendant with wristband.
- On the belt, using the optional belt loop attachment kit.

3 Operate the Pendant TX/RX

3.a Send an Alarm

To send an alarm: Press the activation button for at least one second.

- When activated, the pendant LED will be red to indicate Alarm being sent
- The pendant will receive an acknowledgment from Repeater and the LED will flash blue for 0.5 seconds.

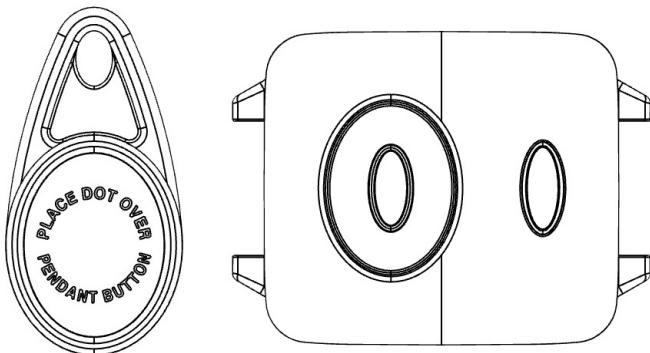
Note: If the pendant does not receive an acknowledgment from the Repeater it will keep trying.

3.b Clear an Alarm

There are two ways to clear an alarm:

Using the Alarm Clearance Tag

- Place the alarm clearance key-chain tag over the activation button, the red transmission LED will cease flashing and the blue alarm clear LED will flash to indicate the alarm has cleared.
- The alarm can be cleared remotely by sending a Clear Alarm signal from server to Repeater via Gateway



Note: The Pendant alarm clearance key-chain tag is an optional accessory sold separately.

3.c Coin Cell Low Battery Alert

When a low battery is detected, the Pendant transmitter will send a low battery alert flag with the check-in supervision, and start a thirty day countdown. The server will report the low battery condition and escalate the alarm to the appropriate party via alarm alert or email on the low battery report.

4 Storage Mode

Storage mode is an ultra low battery state designed to protect the life of the internal battery for 12 months. The pendant is shipped from miAlert in storage mode. The device will also automatically go into storage mode if in an alarm condition or if check-in transmission as not been acknowledged for 12 hours.

Note: When the pendant is in storage mode, it will not transmit alarms or check-in messages.

4.a Extended Storage

If a pendant will not be deployed to an end user for more than 12 months from the date of manufacture that appears on the device or device packaging, you must install the coin cell battery and press the button before the 12 months elapses to ensure proper operation.

If the device has remained idle for more than 6 months, we advise a 72 hour charging period before deploying the pendant to an end user.

If the device will remain unused after installing the coin cell battery, it will operate for approximately three years, assuming no button presses.

4.c Take the Device out of Storage Mode

To remove the device from storage mode:

- Press the Pendant alarm activation button twice.
- Press the activation button for at least one second the second time
 - The red LED will turn on and the pendant to indicate that an alarm has been sent. This serves as confirmation that the pendant is no longer in storage mode.
 - When the button is released, an LED will flash briefly Blue to indicate the acknowledgement from the Repeater was received.

5 Cleaning and Care

5.a Cleaning

Cleaning should be performed by hand using a damp cloth and mild soap, or disinfectant wipes designed for household use.

Do Not Use

The following products should never be used to clean the Pendants:

- Strong cleaning agents such as ammonia, bleach, alcohol or quaternary disinfectant.
- Abrasive or powder cleansers.
- Alcohol-based hand sanitizers.

The following equipment and processes must never be used:

- Dishwasher or washing machine.
- Soaking or suspending the pendant in water or other liquids.

Wearable Recommendations

The pendant transmitter housing is water resistant up to the IP65 standard when the back-plate is properly seated and secured by the 4 screws. The Pendant is designed for incidental/momentary submersion in water, but not for extended submersion. As such, we offer the following recommendations to the end user:

Usage Situation	OK to Use?	Cautions
Shower	Yes*	Do not spray water directly on the Pendant at distances of less than 12 inches; avoid spraying water at extremely high pressure.
Bath	Yes*	Momentary submersion is permissible at water temperatures less than 107°F. Extended submersion of the Pendant is not recommended.
Rain	Yes*	Avoid extended exposure to rain; wear the Pendant under a sleeve, shirt, or jacket.
Water exercise, swimming pool, hot tubs steam rooms and sauna	No	Do not use the Pendant during these activities. Please note that the IP65 rating does not test for exposure to liquids with a chemical content such as chlorine or salt water.

* The pendant is able to successfully transmit an alarm or check-in message when exposed intermittently to water in a shower setting. However, when the pendant is fully submerged, the water absorbs the radio signal such that messages may not be reliably detected by the receiver.

Water Exposure

It has been evaluated that the Pendant meets the water spray and submersion tests required under UL 2560, section 38.

In addition, these pendants meet IP65 certification standards for dust and water ingress protection, ensuring that:

- Ingress of dust particles does not interfere with the satisfactory operation of the device.
- Protected against low pressure jets if water from all directions - limited ingress permitted

6 Device LED Indicators

LED Pattern	Red	Blue	Status
1	Blinks for 20ms duty is set by server	OFF	Heart beat check-in message for location status
2	Blinks for 1s when Pendant button is pressed	OFF	Pendant sending Alarm message to Repeater
3	OFF	Blinks for 20ms after Pendant button is pressed	Pendant has received check-in acknowledgement from Repeater
4	OFF	Blinks for 50ms after Pendant button is pressed	Pendant has received Alarm acknowledgement from Repeater
5	Blinks for 2ms every 3sec when Pendant in Alarm mode	OFF	Pendant is in Alarm mode and waiting for staff to cancel at source
6	Blinks for 2ms duty cycle set by server	Blinks for 2ms duty cycle set by server	Pendant sends Repeater Position Wake status
7	Pendant enters storage mode it will flash Red 1sec - Blue 1sec - Red 1sec		Pendant enters storage mode and is in ultra low battery mode

Note: IP65 certification was performed by an independent laboratory not affiliated with UL.

Note: Users that have achieved certification and will install UL 2560 certified systems are responsible for labeling all fundamental devices with the UL 2560 system certification mark. Use compatible Repeater and appropriate Gateway for UL 2560 installations.

Note: miAlert supports recycling and reuse whenever possible. Please recycle these parts using a certified electronics recycler.

Note: For UL 2560 installations, miAlert repeaters must have 20 minute check-in times. miAlert transmitters must have a minimum of 60 minute check-in times.

Note: In a UL 2560 installation the miAlert Pendants must be used to complete emergency call systems for assisted living and independent living facilities.

For UL 2560 certified system installations, the following miAlert devices are approved for installation within maximum system configuration limits defined in section 1.b of this document:

Battery Handling

If you are installing CR2450 lithium metal coin cell batteries in multiple devices, keep the batteries from coming into contact with each other to prevent discharge.

Pendant Shipping

Both lithium-ion and lithium-metal battery types are subject to transportation regulations such as International Air Transport Association (ATA), International Maritime Dangerous Goods (IMDG), US Department of Transportation (DOT) and UN Recommendation on the Transport of Dangerous Goods.

To prevent accidental alarm activation due to air pressure changes, miAlert recommends that you avoid shipping the devices by air with the CR2450 lithium-metal coin cell battery installed in the device.

When disposing of this electronic device or depleted CR2450 lithium-metal coin cell batteries, please do so in accordance with federal, state and local regulations.

7 Specifications

Dimensions: 36mm x 41mm x 12mm.

Weight: 16g with battery inserted.

Operating temperature: 32 to 140°F (0 to 60°C).

Operating environment: water resistant to IP65 standard.

Estimated battery life: One year (assuming five alarm activations per day and alarm clearance within ten minutes of alarm activation).

Battery type: Panasonic CR2450.

Power requirement: 3VDC, 15µA.

Storage requirement: Ambient conditions of 69 to 73°F (20.5 to 22.8°C).

UL certification for UL 2560

FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.

FCC Part 15 and Industry Canada Compliance

This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Le présent appareil est conforme aux CNR d'Industrie 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, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Note: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

7.a Medical Device Interference

Under FDA and FCC guidelines, the responsibility for verifying continuous and safe operation of medical devices such as pacemakers and implanted defibrillators in the presence of electromagnetic interference (EMI) rests with the manufacturer of the medical device. As such, miAlert does not have the authority or specific device knowledge to conduct or interpret formal tests on their behalf.

miAlert transmitter devices comply with Part 15 of the FCC Rules and Industry Canada license-exempt RSS standards.

If you have any concerns about the use of miAlert transmitter devices in the presence of medical devices used by a particular resident or patient, we recommend that you consult with their physician. Another potential source for answers is the medical device manufacturer, who can provide more information as to their compliance with federal guidelines and how they have addressed EMI risk.

7.b Radiation Exposure Limits

This equipment complies with ISED RSS-102 radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme avec ISED RSS-102 des limites d'exposition aux rayonnements définies pour un environnement non contrôlé. Les utilisateurs finaux doivent suivre le fonctionnement spécifique instructions pour satisfaire la conformité à l'exposition RF. Cet émetteur doit pas être colocalisé ou fonctionner conjointement avec une autre antenne ou émetteur.