## Installation and Setup Guide

The SiXRPTRA is an RF receiver and a transmitter and is intended to extend the indoor range of SiX series devices. The SiXRPTRA receives alarm, status, and control messages from SiX series devices, and forwards these messages to control panel. The control then responds accordingly (arm/disarm the system, initiate an alarm, etc.).

FEATURES

- Transmits its own status, including wall and case tamper, AC loss, low battery and RF Jam.
- Indicates RF Jam, AC/Battery Status, and RSSI (Received Signal Strength Indicator) using LED's.
- RSSI indicates the signal condition between the repeater and the controller.
- Provides a 24-hour backup rechargeable battery.
- ETL listed to meet UL standards.

Controller
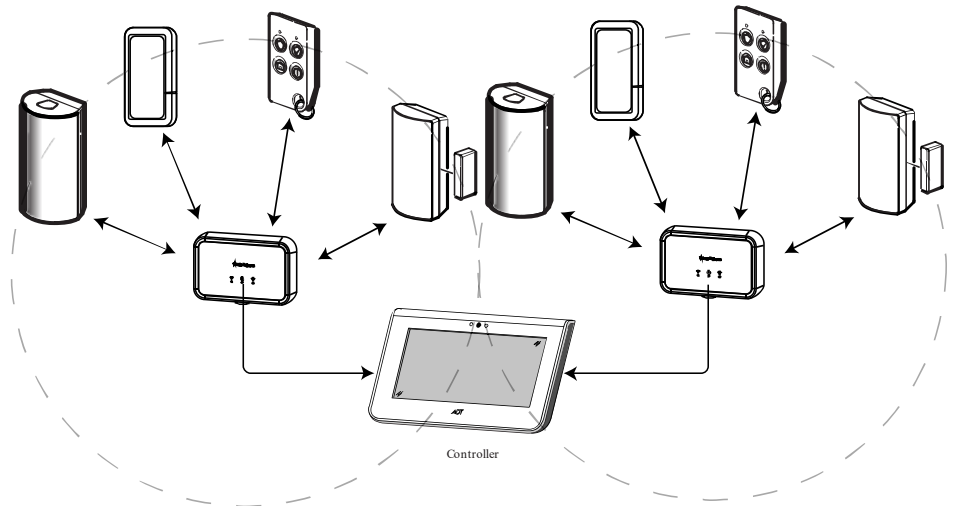
GENERAL GUIDELINES

- The SiXRPTRA module uses a 5VDC power supply to charge the battery.
- If the battery voltage drops to 3.6VDC a low battery occurs.
  NOTE: It is incapable of charging the battery if the voltage is lower than 2.6VDC (it must be replaced.)
- Conduct the SiX Auto System Check (see controller's instructions) to verify adequate signal strength, relocate if necessary.
- SiXRPTRA is designed to operate 200 feet through three walls of wood, aluminum and dry wall construction.

When a single repeater installation is required.

- Range of the controller and sensor is more than 200 ft. line of sight.
- Signal Strength of sensors at using the programming app is worse than -75dBm for one or more sensors.
- Walk Test Failure of any Sensor/Keypad.
- If installation requires more than two floor communication.
- If more obstacles are interfering (more than three walls, high density metal doors, wood doors, multiple concrete walls, etc.) with communication between sensor and controller.
- No response from signal strength query from programming app or controller.

When a second repeater installation is required.
Same as Single Repeater installation except:

- Range of the panel and sensor is more than 500 ft line of site, then install the controller in the middle with repeaters on either direction of the panel.
- If Installation requires more than 3 floor Communication. Install Controller on the middle Floor; then install Repeater based on the steady Amber RSSI (Signal Strength) LED indication as described in LED table below.
  NOTE: Maximum number of the repeater allowed in a system is two. The path of transmission is as follows: transmitter → repeater → controller. NOT transmitter → repeater → repeater → receiver.

COMPATIBILITY (REPEATER READY SYSTEM)

- All sensors (including keyfobs) connected to the controller should have revision Firmware Release #4 or greater. Sensors that are "Repeater Ready" will have a sticker that says, "Firmware Release #4."
- The controller should have a sticker that says, "Firmware Release #4."

NOTES:

- If controller's firmware is less than that described above, then the controller will have to be upgraded. Either by firmware update or full controller replacement.
- If the revision of the sensors is less than 4 (i.e. pre-existing sensors), then the controller must be upgraded to update the firmware in the sensors.
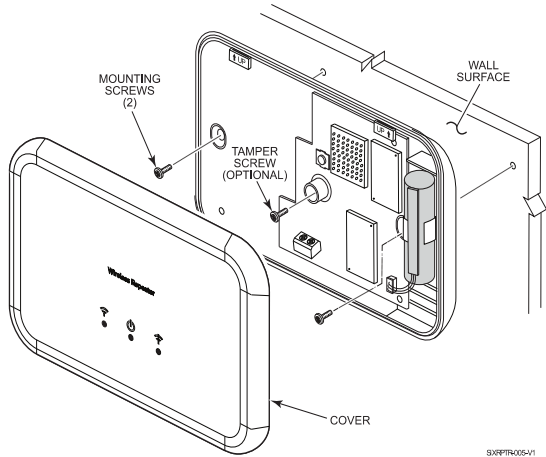
MOUNTING

NOTE: for best results mount the SiXRPTRA as high as possible, keeping it away from metal objects.

1. Select a mounting position for the module.

> **IMPORTANT!**
> - **DO NOT mount on or inside a metal enclosure/object.**
> - **DO NOT install near to WI-FI Routers, Microwave Oven and other interfering devices. Maintain at least 10 feet distance.**

2. Attach to the wall using the supplied screws.
3. Install the center screw to secure the back tamper to the wall.
4. Ensure the wiring is complete. Use cable ties or staples as necessary to secure wiring.
5. Plug the power supply into an un-switched outlet and secure with screw.
6. Attach the backup battery wires.

AC POWER

The repeater is powered by a 5VDC, 1 Amp Plug-in Power Supply (Part #: 300-10342). Refer to the wiring table below for wire gauge and length:

Wire Gauge	Wire Length
#22	Up to 20 feet (6m)
#20	Up to 33 feet (10m)
#18	Up to 50 feet (15m)

MOUNTING SCREWS (2)

TAMPER SCREW (OPTIONAL)

WALL SURFACE

COVER

SiXRPTR005-V1

⚠ Use only the 300-10259 Power Supply. Plug the battery prior to providing power from AC Outlet.

NOTE: For Indoor Use Only.

ENROLLING

You must enroll the device in the controller. SiXRPTRA will attempt to auto enroll upon power up, if it times out you can press and release the tamper to reinitiate the enrollment process or remove and reconnect AC power.

1. Set the Controller in Programming Mode and when prompted:
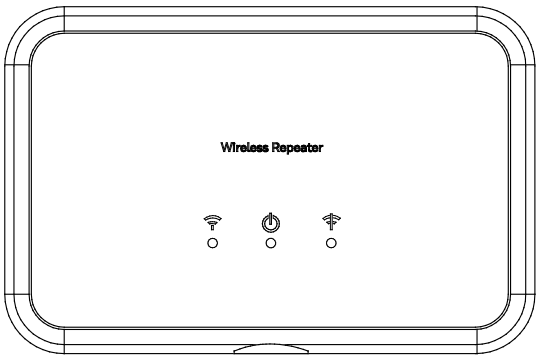2. Power up the SiXRPTRA and refer to the LED Status Table.

NOTES:

- Once enrolled in a system, the SiXRPTRA cannot be used with another controller until it is removed from the current controller. See the Controller's instructions for details.
- Enrollment time varies depending on the signal strength between the device and the controller. When done, Power LED is ON for 3 seconds and the controller beeps to confirm enrollment.
- The SiXRPTRA should be installed before any other sensors.
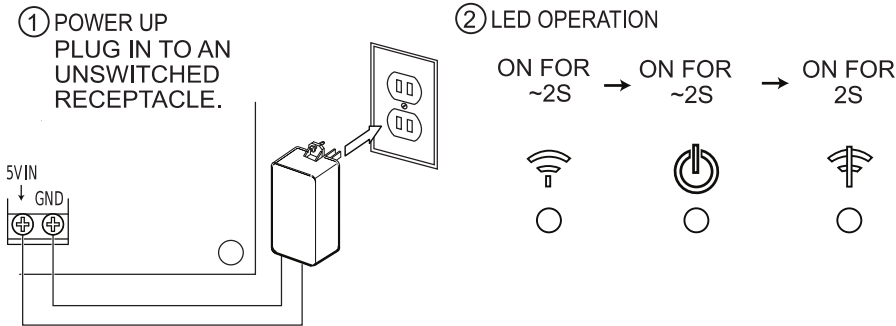
NOTE: Must be installed in accordance with the National Electrical Code, ANSI/NFPA 70

LED STATUS TABLE

	RSSI	Power	RF Jamming
Green	Reliable Signal	AC/Battery OK	OK, No Jamming
Amber	Marginal Signal, relocate	No Battery or Low Battery	N/A
Red	No Signal (Slow Blinking)	No AC, Running on Battery (See note 3,4)	RF Jam Detected
Enrolling (Green LED's Only) (Note 1)	Scrolling	Scrolling	Scrolling
Enrollment Successful (Amber LED's Only)	Scrolling	Scrolling	Scrolling
Enrollment Time Out (Red LED's Only) (Note 2)	Rapid Blink	Rapid Blink	Rapid Blink
Normal Delete (Green LED's Only)	Rapid Blink	Rapid Blink	Rapid Blink
Self-Delete (Green LED's Only)	Rapid Blink	Rapid Blink	Rapid Blink
Programming	LED OFF	X (Green, Red, or Amber)	LED OFF

NOTES:
1. Cycle for scrolling Enrollment LED is 2 sec ON / 4 sec Off.
2. Blinking will continue for 5 seconds and then ALL LED's will go BLANK.
3. RED LED should be slow blinking (ON for 0.5 seconds; OFF for 3 seconds)
4. With the cover installed, the RSSI and RF Jamming LED's will be off after 15 seconds.

INSTALLING A NEW SiXRPTRA WITH AN EXISTING CONTROLLER AND SENSORS

1. Using the "Compatibility Section" above confirm the controller and sensors are at the correct revision level to support the SiXRPTRA.
2. Enroll the SiXRPTRA by keeping near the controller until all three LED's are solid Green. The SiXRPTRA should be enrolled as a peripheral from MobileTech.
3. Walk the SiXRPTRA away from the controller in the direction in which the sensor(s) are not communicating with the controller. **NOTE:** Perform this step without the front cover installed to monitor the RSSI.
4. The SiXRPTRA verifies the signal strength between the controller and SiXRPTRA. The RSSI LED will change from Red to Amber (Green means you are within range) at least 30 seconds. Amber LED tells you this is the furthest from the controller you can mount the SiXRPTRA.
5. Perform "SiX Auto System Check" from MobileTech so the controller requests signal strength from all sensors. Once a sensor has joined the SiXRPTRA the signal strength should be greater than -75dBm. When a sensor is associated with a repeater, the displayed signal strength represents the connection quality between the sensor and the SiXRPTRA.
6. MobileTech or the Controller can tell you which the sensor is connected. On the controller go to zones to determine which it is connected to. Example: P800 represents the controller and R820 to R821 zones represents the SiXRPTRA. If sensors are not connected to the SiXRPTRA and connected to the controller and the signal strength is less than -75dBm, then the sensor has not connected to the repeater or it is still too far away from the controller/SiXRPTRA. If sensor signal strength is too weak then the controller can send a "SiX Network Resync" only to those sensors using MobileTech. This creates the best path between sensor and repeater.
7. Perform a Sensor Walk Test to verify sensors are communicating through the SiXRPTRA or directly to the controller. **NOTE:** Make sure all doors/windows are closed before entering Walk Test.

INSTALLING A NEW SiXRPTRA WITH A NEW CONTROLLER AND SENSORS INSTALLATION

1. Using the "Compatibility Section" above confirm the controller and sensors are at the correct revision level to support the SiXRPTRA.
2. Enroll the SiXRPTRA by keeping near the controller until all three LED's are solid Green. The SiXRPTRA should be enrolled as a peripheral from MobileTech.
3. Walk the SiXRPTRA away from the controller in the direction in which the sensor(s) are not communicating with the controller. **NOTE:** Perform this step without the front cover installed to monitor the RSSI.
4. The SiXRPTRA verifies the signal strength between the controller and SiXRPTRA every five seconds. The RSSI LED will change from Red to Amber (Green means you are within range) after 30 seconds. Amber LED tells you this is the furthest from the controller you can mount the SiXRPTRA.
5. Move the sensors to their predetermined mounting location.
6. Successfully enroll all sensors.
7. Perform "SiX Auto System Check" from MobileTech so the controller requests signal strength from all sensors. Once a sensor has joined the SiXRPTRA the signal strength should be greater than -75dBm. When a sensor is associated with a repeater, the displayed signal strength represents the connection quality between the sensor and the SiXRPTRA.
8. MobileTech or the Controller can tell you which the sensor is connected. On the controller go to zones to determine which it is connected to. Example: P800 represents the controller and R820 to R821 zones represents the SiXRPTRA. If sensors are not connected to the SiXRPTRA and connected to the controller and the signal strength is less than -75dBm, then the sensor has not connected to the repeater or it is still too far away from the controller/SiXRPTRA. If sensor signal strength is too weak then the controller can send a "Sync Network Resync" only to those sensors using MobileTech. This creates the best path between sensor and repeater.
9. Perform a Sensor Walk Test to verify sensors are communicating through the SiXRPTRA or directly to the controller. **NOTE**: Make sure all doors/windows are closed before entering Walk Test.

24-HOUR ENROLLMENT DELETION AND DEFAULT

If the device is enrolled in a controller different than the intended controller, and you are unable to delete it from the unintended controller, default the device to factory default setting:

1. Open the cover and verify device is powered on.
2. Press the tamper for ½ second, release for ½ second and repeat four more times. (for a total of five).
3. All three LED's rapidly flash and the SiXRPTRA defaults, leaving only the Power LED on.

This procedure is available for 24 hours after enrollment with a panel and the device remains powered (battery installed).

NOTE: if all LED's light solid red for 5-seconds, then you are passed the 24-hour window.

TAMPER/LOW BATTERY REPORTING

The SiXRPTRA reports this condition to the Controller. If a low battery or tamper condition exists, a peripheral trouble shows a trouble on the Controller.

NOTE: If an actual low battery condition is reported, it takes up to 12 hours after AC power is restored for the low battery restore message to be sent (requires 12 hours for fully recharged battery).

IMPORTANT!
The first battery test occurs one hour after power up. To quickly verify a good backup battery, unplug and then plug back in the power supply; the system will perform a battery test within one minute. Also, the controller does not annunciate low battery trouble for the first 24 hours to all the battery to charge.

SUPERVISION

The SiXRPTRA reports AC loss and RF jam conditions, which displays a trouble on the Controller's keypad(s). This prevents either condition from causing an alarm when the Controller is armed.

REPLACING THE BATTERY
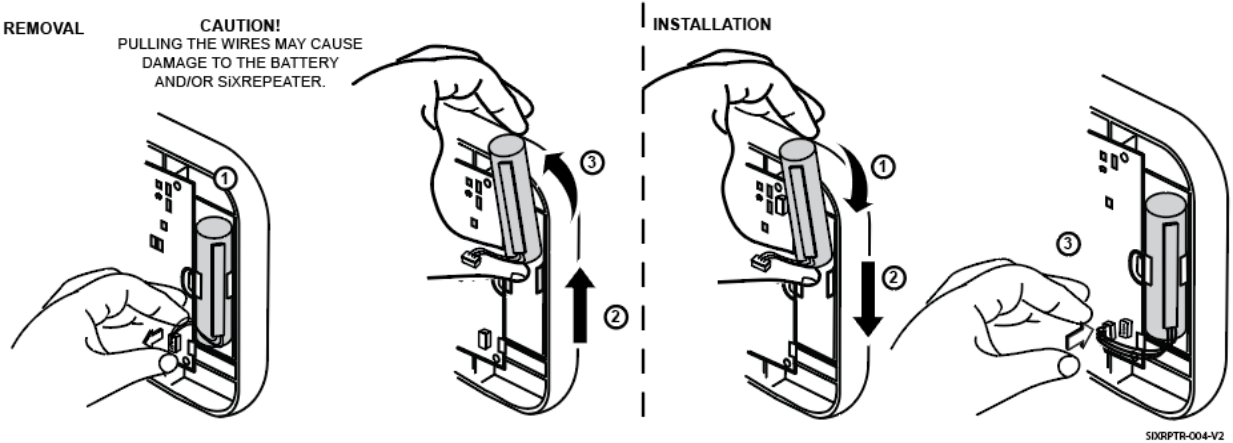
SPECIFICATIONS

Voltage

Transformer Part Number	300-10259
Input Voltage	100 ~ 240VAC, 50 ~60 Hz
Operating Voltage	5VDC (1A)
Maximum Transformer Distance	See Power Supply Table
Battery	300-10342

Environmental

Operating Temp	14 °F (-10°C) to 140°F (60°C)

NOTE: Charging the lithium battery stops when temperature is below 32°F (0°C)

Relative Humidity	95%, Non-condensing / 95%max. sans condensation

Physical

Dimensions	**Length** 6.9 in (175mm) / **Width** 4.4 in (113 mm) / **Depth** 1.2 in (31 mm)
Conduit Insert	1/2 in (12.7mm)
Acceptable Cable Size	18 – 22AWG

TEST SYSTEM WEEKLY
NOTE: System must also be tested with AC power removed.

REFER TO THE INSTALLATION INSTRUCTIONS FOR THE CONTROL WITH WHICH THIS DEVICE IS USED, FOR DETAILS REGARDING LIMITATIONS OF THE ENTIRE ALARM SYSTEM.

RF EXPOSURE

Warning – The antenna(s) used for this device must be installed to provide a separation distance of at least 7.8 inches (20 cm) from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC and ISED multi-transmitter product procedures.

APPROVAL LISTINGS / APPROBATIONS HOMOLOGATIONS

UL 985:2015 Ed.6+R:12Jul2018	ULC S304:2016 Ed.3 +R:10Oct2018
UL 1023:2017 Ed.7	ULC S545:2002 Ed.2
UL 1610:2016 Ed.4	ULC SUBJECT C1023:1974 Ed.1
UL 1637:2017 Ed.5	CSA C22.2#205:2017 Ed.3
UL 2017:2008 Ed.2 +R:17Jan2016	

OTHER STANDARDS

RoHS

System shall be installed in accordance with CAN/ULC-S540, Residential Fire Warning Systems.
System shall be installed in accordance with Chapter 29 of the National Fire Alarm and Signalling Code, ANSI/NFPA 72.
System shall be installed in accordance with CSA C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations; CAN/ULC S302, Standard for the Installation, Inspection and Testing of Intrusion Alarm Systems; and CAN/ULC S301, Standard for Signal Receiving Centre Intrusion Alarm Systems and Operations.

FEDERAL COMMUNICATIONS COMMISSION (FCC) & INDUSTRY CANADA (IC) STATEMENTS

The user shall not make any changes or modifications to the equipment unless authorized by the Installation Instructions or User's Manual. Unauthorized changes or modifications could void the user's authority to operate the equipment.

CLASS B DIGITAL DEVICE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, as defined by FCC Rules Part 15.105. The Class B Digital Device statement can be viewed at: https://customer.resideo.com/en-US/support/residential/codes-and-standards/FCC15105/Pages/default.aspx

FCC / IC STATEMENT

This device complies with Part 15 of the FCC Rules, and Industry Canada's license-exempt RSSs. 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.

Cet appareil est conforme à la partie 15 des règles de la FCC et exempt de licence RSS d'Industrie Canada. Son fonctionnement est soumis aux conditions suivantes: (1) Cet appareil ne doit pas causer d'interférences nuisibles. (2) Cet appareil doit accepter toute interférence reçue y compris les interférences causant une réception indésirable.

Responsible Party / Issuer of Supplier's Declaration of Conformity: Ademco Inc., a subsidiary of Resideo Technologies, Inc., 2 Corporate Center Drive., Melville, NY 11747, Ph: 516-577-2000

The product should not be disposed of with other household waste. Check for the nearest authorized collection centers or authorized recyclers. The correct disposal of end-of-life equipment will help prevent potential negative consequences for the environment and human health.
Any attempt to reverse-engineer this device by decoding proprietary protocols, de-compiling firmware, or any similar actions is strictly prohibited.

WARRANTY INFORMATION
For the latest warranty information, please go to:
www.security.honeywellhome.com/warranty

ADT Security Services
1501 Yamato Rd
Boca Raton, FL 33431

800-24399-1A 4/20 Rev A