# resideo

## PROSIXRPTR-EU Wireless Repeater

#### Installation and Setup Guide

The PROSIXRPTR-EU (hereinafter referred to as the Repeater) is an RF receiver and transmitter and is intended to extend the indoor range of ProSeries sensors reporting to the ProSeries Control Panel. The Repeater receives and re-transmits messages between the Control Panel and the ProSeries sensors. Alarm, status, and control messages from these ProSeries sensors are received by the Repeater, and then repeated to the Control Panel. The Control Panel then responds accordingly (arm/disarm the system, initiate an alarm, etc.).

Note: Installation shall be performed in accordance with local regulations.



#### FEATURES

The Repeater has the following features:

- Transmits its own status, including wall and case tamper, AC power loss, low battery, and RF Jam.
- Indicates RF Jam, AC/battery power status, and RSSI (Received Signal Strength Indicator) using LEDs.
- RSSI indicates the signal condition between the Repeater and the Control Panel.
- Provides a 24-hour backup rechargeable battery.
- The Repeater is powered by a 5VDC, 1 Amp Plug-in Power Supply (R300-12259) that also charges the internal battery.
- A 4.2VDC rechargeable internal backup battery is provided.
- Up to two Repeaters can be used per system.
- Note: Repeater-to-Repeater communication is not available (Repeater 1 does not communicate with Repeater 2).

#### **GENERAL GUIDELINES**

The Repeater has the following general guidelines:

- When the internal battery is no longer capable of being recharged, a low battery status message is sent to the Control Panel, and the battery must be replaced.
  - Note: New batteries may indicate they are low on initial startup; however, they should reach sufficient charge in 1 hour.
- Before mounting permanently, the sensor must be enrolled to verify adequate signal strength at the intended mounting location and relocate if necessary (see Control Panel instructions).

Signal strength information is sent with every communication to the Control Panel and is viewable through the AlarmNet 360<sup>™</sup> cloudbased management platform (AN360).

• The Repeater is designed to operate from a range of 60 m through three walls made of wood, aluminum, or dry wall construction.

#### When a single repeater installation is typically required.

- Range of the Control Panel and sensor is more than 60 m.
- Signal strength of sensor is less than 2 bars for one or more sensors.
- Failure of a Walk Test for any sensor or keypad.

#### If installation requires more than two floor communication.

- When a second repeater installation is typically required.
- Same as Single Repeater installation except:
- Range of the panel and sensor is more than 150 m, then install the Control Panel in the middle with Repeaters on either direction of the panel.
- If Installation requires more than 3 floors of Communication. Install Control Panel on the middle floor; then install the Repeater based on the steady Amber RSSI LED indication as described in LED Status Table.
- Note: The maximum number of Repeaters allowed in a system is two. The path of transmission is as follows: Transmitter → Repeater → Control Panel. (There is no Repeater → Repeater → Control Panel path of transmission).

### ENROLLING

The Repeater must be enrolled in the Control Panel before it can be used. Registration and programming are conducted through the AlarmNet 360<sup>™</sup> cloud-based management platform. The Repeater enrolls as a sensor but does not require a "Device" or "Response" type. To enroll the Repeater, perform the following:

- 1. From AlarmNet 360:
  - Select "SENSORS"
    - Select "ADD SENSOR"
  - Select "LEARN" and wait for the Control Panel to be in learning mode.
- **Note:** The Repeater is shipped without the AC Adapter wires connected and without the battery installed. As a result, the internal battery will not charge sufficiently to perform the enrollment process.
- 2. Remove the front cover [A]:
  - Connect the AC adapter wires **[B]** to the PCB connections **[C]**. Secure the white wire to the positive (+) terminal and the black wire to the negative (-) terminal.
- Install the battery [D] and plug the connector [E] into the PCB terminal block [F].
- 3. Connect the AC adapter plug [G] into an un-switched electrical outlet.
- The Power LED will come on to indicate power is applied to the Repeater.
- 4. The Repeater will automatically attempt to enroll when power is applied.
  - If enrollment is successful, the LEDs will come on as described in LED Status Table.
  - If enrollment is not successful, the LEDs will go out and the Repeater will time out and turn off. Press and release the tamper or disconnect and reconnect the battery connector to restart the enrollment process.

#### Notes:

- Refer to the LED Status Table for the operation of the LEDs during enrollment.
- For detailed programming instructions refer to the Installation Instructions for the Control Panel with which this device is used.
- Enrollment time varies depending on the signal strength between the Repeater and the Control Panel. When successful, the Power LED is ON for 3 seconds and the Control Panel beeps to confirm enrollment. Keep the Repeater near the Control Panel until all three LEDs are on and solid green.
- The Repeater should be installed before any other sensors are installed.



#### **RESTORING FACTORY DEFAULT SETTINGS**

If the Repeater is enrolled in a Control Panel different than the intended Control Panel and you are unable to delete it from the unintended Control Panel, you can restore the Repeater to the factory default settings as follows:

- 1. Open the cover and verify device is powered on.
- 2. Press the tamper for one-half second, release for one-half second.
- 3. Repeat this procedure four more times (for a total of five press-and-release cycles).
- 4. All three LEDs rapidly flash and the Repeater defaults to the factory settings, leaving only the Power LED on.

#### MOUNTING CONSIDERATIONS

Before mounting the Repeater permanently, verify adequate signal strength. Signal strength information is sent with every communication to the Control Panel and is viewable through and is viewable through the AlarmNet 360<sup>™</sup> cloud-based management platform.

- The Repeater must be mounted horizontally on an interior wall.
- For best results, mount the Repeater as high as possible and keep away from metal objects.
- Do not mount in an area where temperature extremes may exist such as in the attic, basement, garage, or outdoors.
- Do not mount on or inside a metal enclosure/object.
- Do not mount near a WIFI router, microwave ovens, or any other WIFI interfering devices. Maintain at least a 3m distance from these devices.
- Ensure access to connect the AC power adapter into an unswitched electrical outlet.
- The Repeater is designed to typically operate from a range of 60 m through walls made of wood, aluminum, or dry wall construction.
- A Repeater may need to be relocated if there is a significant change in the building environment.
- Changes such as new appliances, walls, large mirrors, duct work etc. may block the wireless signals resulting in a communication / supervision failure.

#### MOUNTING

After the Repeater has been enrolled, the sensors associated with that Repeater can be installed. As each sensor is installed, the signal strength between the sensor and the Repeater must be monitored to ensure a strong communication through the Repeater to the Control Panel. If necessary, the Repeater can be relocated to achieve this strong communication.

Prior to mounting, verify all three LEDs are on solid green. If all LEDs are not solid green, with battery power applied and the Repeater cover removed, move the Repeater away from the Control Panel and in the direction towards the sensor that is not communicating with the Control Panel. The Repeater verifies the signal strength to/from the Control Panel every five seconds. The RSSI LED will change from Green to Amber after 30 seconds.

- Green indicates the Repeater is within range of the Control Panel.
- Amber indicates this is the furthest from the Control Panel that the Repeater can be mounted.
- Red LED indicates the Repeater is out of range with the Control Panel.
- When the optimum mounting location is determined, mount the Repeater as follows;
- 1. Select a mounting position for the Repeater (see MOUNTING CONSIDERATIONS).
- 2. Secure the rear mounting plate [A] to the wall with two screws [B].
- Note: Mounting plate must be mounted on a stud, solid wall, or with a robust wall anchor.
- 3. Install the center tamper screw [C]. (Optional)
- 4. Route the wires from the AC power adapter [D] through the opening on the bottom of the Repeater and attach the wires to the terminal connections [E].
- White wire to positive (+) and black to negative (-).
- Use cable ties or staples as necessary to secure the wiring and provide strain relief.
- 5. Install the battery [F] and connect the battery plug to the terminal block [G].
- Note: Battery should be connected prior to plugging in the AC power adapter.
- 6. Plug the AC power adapter into an unswitched electrical outlet.
- 7. Install the front cover [H].



Step	Action
1	Apply Power
0	(Plug into unswitched outlet)
2	LED Operation
2A	On for approximately 2 seconds
2B	On for approximately 2 seconds
2C	On for approximately 2 seconds



#### LED STATUS TABLE



	(Ju	Ċ	To-	
	Signal	Power	RF Jamming	
Green	Reliable Signal	AC/Battery OK	OK, No Jamming detected	
Amber	Marginal Signal, relocate	No Battery or Low Battery	Not applicable	
Red	No Signal (Slow Blinking)	No AC power - Running on battery (Notes 3 and 4)	RF Jam detected	
Enrolling (Green LEDs Only) (Note 1)	Scrolling	Scrolling	Scrolling	
Enrollment Successful (Amber LEDs Only)	Scrolling	On for 3 seconds	Scrolling	
Enrollment Time Out (Red LEDs Only) (Note 2)	Rapid Blink	Rapid Blink	Rapid Blink	
Normal Delete (Green LEDs Only)	Rapid Blink	Rapid Blink	Rapid Blink	
Self-Delete (Green LEDs Only)	Rapid Blink	Rapid Blink	Rapid Blink	
Programming	LED OFF	X (Green, Red, or Amber)	LED OFF	
Notes:				

- 1. Cycle time for scrolling Enrollment LED will be 2 sec ON / 4 sec Off.
- 2. Blinking will continue for 5 seconds and then ALL LEDs will go off.
- 3. Red LED will be slow blinking (ON for 0.5seconds; OFF for 3 seconds)
- 4. The RSSI and RF Jamming LEDs will be off.

#### **POST-INSTALLATION CONSIDERATIONS**

#### **Sensor Communication Strength Verification**

To verify that the Repeater is fully communicating with all of the associated sensors and the Control Panel, perform the following:

- 1. Perform an "Add Sensor" command from AN360.
  - A sensor does not have to actually be added at this time and the command can be canceled.
  - Sending this command forces the Control Panel to request the signal strength from all connected sensors.
  - After a sensor has joined the Repeater, the signal strength should be at least two bars.
- 2. Either AN360 or the Control Panel can indicate which the sensor is connected to the Repeater.
  - If sensor signal strength is too weak (less than two bars) then the Control Panel can send a "Rescan Repeater" command. This is done through the programming tool or the control's Installer/Master Tools screen.
- 3. Perform a Sensor Walk Test to verify all sensors are communicating through the Repeater or directly to the Control Panel.
- Note: Make sure all doors/windows are closed before entering Walk Test.

#### Tamper/Low Battery Reporting

The Repeater has the capability to report a tamper detection or low battery condition to the Control Panel.

- If a low battery or tamper condition exists, a "Zone XX Repeater Trouble or Low Battery" message is displayed on the Control ٠ Panel
- If a low battery condition is reported, it could take 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).
- For the first hour after power is applied, the battery is tested every minute. After the first hour of power applied, the battery is tested every 12 hours. To quickly verify a good backup battery, unplug and then re-plug the power supply and the system will perform a battery test within one minute.

Note: Backup battery only charges at temperatures below 45 °C.

#### Supervision

The Repeater reports AC loss and RF jam conditions, which will display a trouble on the keypads associated with the Control Panel. This prevents either condition from causing an alarm when the Control Panel is armed.

Note: RF jam monitoring is an optional feature and is enabled by default. It must remain enabled in programming for an RF jam condition to be displayed

#### BATTERY REPLACEMENT

An external power source is used to provide electrical operating power to the Repeater (via the AC adapter) and to charge the internal backup battery. When the internal battery is no longer capable of being recharged, a status message is sent to the Control Panel, and the battery must be replaced.

Replace the battery, as follows:

Note: Prior to replacing the battery, disconnect the AC adapter from the power outlet.

- 1. Remove the front cover.
- Note: To prevent damage to battery or Repeater, do not pull on the wires when disconnecting the plug.
- 2. Disconnect the battery wire plug from the terminal block.
- 3. Lift up from the bottom of the battery and remove the battery from the battery clip.
- 4. With wires at the bottom of the battery, insert a new battery into the opening until it fully seats in the battery clip. **Note:** See the Specifications section for recommended replacement batteries.
- 5. Connect the battery wire plug to the terminal block.
- 6. Reinstall the front cover.

#### Notes:

- New batteries may indicate they are low on initial startup; however, they should reach sufficient charge in 1 hour.
- Backup battery only charges at temperatures below 45 °C.

**BATTERY CAUTION**: Risk of fire, explosion, and burns. Do not recharge, disassemble, heat above 55° C, or incinerate. Dispose of used batteries properly. Keep away from children.







PROSIXRPTR-EU-004-V

SPECIFICATIONS

Battery:Resideo P/N 300-10342E<br/>3.6V, Rechargeable LithiumAC Power SupplyResideo P/N R300-12259Tamper:Cover and WallDimensions (mm) / Weight:113 (H) x 175 (W) x 31 (D) / 225 gMaterial:ABS Plastic

Operating Voltage: Current: RF Frequency: Operating Temperature: Relative Humidity: 5.0 VDC 1.0 A 2.4GHz (<20 dBm) -10° to +55° C 95% max. non-condensing



CE



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.

This system must be checked weekly. Note: System must also be tested with AC power removed.

Any attempt to reverse-engineer this device by decoding proprietary protocols, de-compiling firmware, or any similar actions is strictly prohibited.

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

#### SUPPORT & WARRANTY INFORMATION

For the latest documentation, support, and warranty, please go to: www.resideo.com





WARRANTY

DOCUMENTATION



Sécurité Communications SAS (SECOM) 1198, Avenue du Docteur Maurice Donat 06250 Mougins - FRANCE



Ademco 1 Ltd., 200 Berkshire Place Winnersh Triangle, Berkshire, RG41 5RD – UNITED KINGDOM





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