



WNC-125ELRB

The WNC-125ELRB Wireless RFID Room Elopement Locator is a high-security monitoring peripheral engineered for wandering-patient protection, memory care units, and restricted-access clinical environments. Operating as an intelligent perimeter and doorway guard, the device utilizes a low-frequency 125kHz RFID scanning field to continuously monitor designated room thresholds, exit corridors, or doorways.

When a resident wearing a compatible active RFID wristband or ankle transmitter approaches the exit zone, the WNC-125ELRB instantaneously detects the localized tag ID. It immediately transmits an automated, high-priority elopement alert via a 900MHz frequency-hopping spread spectrum network directly to the central wireless nurse call master console, corridor dome lights, and staff pocket pagers. This hardware-driven intervention mitigates elopement risks while preserving an open, dignified environment for residents.

Architects and Engineers Specifications

1.0 RFID Room Elopement Locator Equipment Requirements

A. The contractor shall furnish and install the Wireless RFID Room Elopement Locator, Model WNC-125ELRB, at all restricted boundary doorways, memory care exits, and patient room entries designated on the architectural plan sheets.

B. The locator unit shall combine a 125kHz low-frequency patient proximity sensor field with a supervised 900MHz wireless transceiver network. It must automatically interface with the facility's existing wireless nurse call head-end console without requiring intermediate network middleware or physical data loop wiring.

C. The device must provide an adjustable detection perimeter ranging from 3 to 10 feet from the installation plane, ensuring total coverage of the egress threshold without projecting false-capture zones into parallel thoroughfares or adjacent staff spaces.

D. The unit shall include one (1) fully programmable Form-C auxiliary relay dedicated to controlling door magnetic locks or secondary visual notification hardware. It must also incorporate an internal wall tamper switch that forces an emergency data transmission if the unit is physically compromised.

Product Specifications

- **Manufacturer SKU:** WNC-125ELRB
- **Excitation Frequency:** 125 kHz (Low-Frequency Proximity Field)
- **Network Data Frequency:** 900MHz Frequency-Hopping Spread Spectrum (FHSS)
- **Primary Input Power:** 12V DC to 15V DC (Sourced from local plug-in transformer or system power distribution panel)
- **Current Consumption:** 250mA nominal - 450mA maximum during active relay state
- **On-Board Relay Rating:** Form-C (SPDT) dry contacts rated for 1A @ 24V DC / 0.5A @ 120V AC
- **Operating Temperature Range:** 32°F to 120°F (0°C to 49°C) — Indoor Use Only
- **Enclosure Composition:** Flame-retardant, high-impact ABS medical-white polymer
- **Dimensions (approx.):** 6.5" H × 4.5" W × 1.75" D

Equipment Options

The WNC-125ELRB platform can be configured with multiple peripheral hardware options depending on architectural layouts and wander-management protocols:

- **WNC-125ELRB-M (Master Station):** Base locator unit featuring an integrated RF transceiver, 125kHz exciter antenna, and dry-contact alarm relays.
- **WNC-EX-ANT (External Exciter Antenna):** An auxiliary, low-profile antenna extension used to broaden or shape the excitation field around wider double-doors or elevator vestibules.
- **WNC-RFID-WB (Resident Wristband):** Lightweight, water-resistant, active 125kHz RFID patient tag with a tamper-resistant locking band.
- **WNC-RFID-KT (Keypad Reset Module):** A secondary wall-mounted digital keypad allowing authorized staff to escort monitored residents through the zone without triggering an elopement alarm.

Standard Features

- **Adjustable Detection Proximity Field:** Features an on-board potentiometer allowing technicians to precisely calibrate the localized RFID excitation field from 3 feet to 10 feet from the doorway.
- **Dual-Frequency Architecture:** Employs a low-frequency 125kHz channel for highly accurate, localized patient tag identification combined with a high-frequency 900MHz channel for robust long-range transmission to the central console.
- **Supervised Enclosure Anti-Tamper Switch:** Built-in internal optical tamper switch triggers an instant priority system alarm at the master desk console if the locator cover is unauthorizedly removed or dislodged.
- **Auxiliary Form-C Output Relay:** Features an on-board dry-contact relay **1 A a@ 24 V DC** that can be field-wired to trigger external magnetic door locks, strobe lights, or local physical sirens during an active elopement event.
- **Local LED Status Matrix:** Surface-mounted diagnostic LEDs provide immediate visual confirmation of power status, tag detection, and RF network link integrity.

Compliance and Certification

The WNC-125ELRB is strictly certified and listed to operate within complex life-safety environments and medical facilities:

- **FCC Part 15 Class B Compliant:** Certified to eliminate harmful electromagnetic or radio frequency interference (RFI) with surrounding diagnostic, therapeutic, or life-support clinical instrumentation.
- **UL 1069 Component Matrix Integration:** Engineered and tested to meet structural signaling and durability standards as an auxiliary component within broader UL 1069 listed Wireless Nurse Call systems.
- **RoHS Compliant:** Manufactured completely free of lead, mercury, cadmium, polybrominated biphenyls (PBB), and other hazardous environmental substances.