

ACCUTECH ACT-IR1000

REX PIR Sensor | Centralized Wander Management Infrastructure Hub



PRODUCT OVERVIEW

The Accutech ACT-IR1000 Request to Exit (REX) Passive Infrared (PIR) Sensor serves as a core hardware intelligence component within advanced wandering management and resident safety infrastructures. It is engineered to bridge the gap between physical perimeter sensors deployed at facility exits and localized control monitoring stations. By aggregating and processing localized motion and presence signals from protected entry points, it eliminates the operational complexity of managing individual entry points. This centralized topology ensures that large-scale senior care, nursing home, memory care, and hospital facilities maintain instantaneous, real-time situational awareness.

Deployed directly at high-traffic egress boundaries, nurse monitoring desk lines, and restricted access zones, the ACT-IR1000 module channels hands-free egress and timed bypass telemetry. This proactive routing method eliminates communication bottlenecks and guarantees that complex localized actions—such as authorized staff bypass, secure visitor access, and localized security overrides—are instantly synchronized with perimeter sensors. This active tracking processing ensures absolute protection across expansive hospital wings, long care facility corridors, and high-risk infant protection zones by safeguarding exposed external egress routes from environmental wear and unauthorized passage.

ARCHITECTS AND ENGINEERS (A&E) SPECIFICATION

- **System Infrastructure:** The contractor shall supply, install, and configure the Accutech ACT-IR1000 REX PIR Sensor to act as the primary external security access control and localized override node. The hardware must support direct integration configurations to synchronize active bypass states directly with peripheral zone controllers.
- **Perimeter Infrastructure Protection:** The remote motion tracking assembly shall incorporate a durable, commercial-grade structural design explicitly engineered to sustain continuous clinical exposure, operating reliably across extreme temperature variations, direct moisture impacts, and high-humidity environmental conditions.
- **Access and Control:** The device front interface shall feature a heavy-duty, passive infrared detection grid combined with a dedicated manual command button layout to allow authorized clinical staff, security personnel, and facility supervisors to execute localized door bypass commands and alarm resets directly at the security boundary.

- **Enclosure and Durability:** The electronics assembly shall be protected inside a ruggedized, vandal-resistant commercial-grade housing optimized for flush-mount or surface-mount terminal configurations on ceilings or architectural door frames.
- **System Interoperability:** The request-to-exit motion architecture must feature validated native compatibility for direct low-voltage data connection with Accutech environmental safety platforms, ensuring non-latent signaling and secure credential validation across the facility's dedicated security network.

SYSTEM COMPONENTS

The ACT-IR1000 REX PIR Sensor incorporates several fundamental integrated sub-modules and physical connection layouts:

- **Weather-Sealed Digital Logic PCB:** The primary multi-layer microprocessor control and sensor assembly coated with protective conformal sealing compounds to isolate electronic components from moisture and dust intrusion.
- **Precision Passive Infrared Optical Grid:** Ruggedized, high-durability internal dual-element PIR sensor featuring high-sensitivity fresnel lenses for targeted volumetric motion tracking.
- **Tactile Manual Override Operator:** Integrated mechanical single-button actuator circuit dedicated to executing localized staff bypass commands and instant manual alarm silence responses.
- **Low-Voltage Terminal Backplane:** Multi-position wire terminal blocks or pre-wired lead pigtail pathways designed for clean, reliable power, ground, and relay command communication line termination.
- **Vandal-Resistant Ceiling/Wall Mount Chassis:** Heavy-duty commercial-grade housing providing structural impact protection and an adjustable alignment matrix for precise pattern targeting.

FEATURES AND BENEFITS

- **Centralized Boundary Awareness:** Consolidates passive exit detection and manual perimeter override states down to a single monitoring focal point, greatly simplifying hardware footprints and reducing response times for clinical teams.
- **Calmed Clinical Environment:** Features a precise request-to-exit bypass sequence engineered to reduce unnecessary alarms, promoting a quieter workspace and helping floor staff prioritize immediate patient health objectives.
- **Dual-Mode Free Transit:** Employs an advanced dual-action operation layout allowing clinical teams to achieve free passage via automated passive infrared motion detection or the physical single-button override matrix.
- **Vandal-Resistant Compact Profile:** Built using impact-resistant structural components and a low-profile chassis that safeguard internal electronic processing paths against high-traffic workspace hazards and deliberate tampering.
- **Validated Platform Interoperability:** Engineered for total compatibility out-of-the-box with established Accutech security environments, ensuring a unified approach to facility patient protection.

PRODUCT SPECIFICATION

Manufacturer	Accutech Healthcare Security Solutions
Product Model Name	Request to Exit (REX) PIR Motion Sensor
Part Number / SKU	ACT-IR1000
Detection Technology	Passive Infrared (PIR) Thermal Motion Detection
Enclosure Protection Rating	Wall or Ceiling Mount / Low-Profile Vandal-Resistant Chassis

Operating Input Voltage

12V DC Low-Voltage Input / Managed Control Paths via Parent Controller

Relay Contacts Configuration

Form C Relay Output Contacts (Adjustable Unlock/Bypass Timing Latches)

Interface Link Mechanism

Screw Terminals / Hardwired Lead Pigtails for Power, Ground, and Signal Buses

Manual Control Configuration

Tactile Single-Button Override Contact Matrix

Primary Target Environments

Main Entrances, Staff Egress Corridors, Nursing Homes, Secure Patient Wards

COMPLIANCE AND CERTIFICATION

- **FCC Status:** Designed and certified to meet FCC Part 15 regulations regarding digital device shielding. This guarantees that multi-zone switching, passive infrared tracking grids, and hardwired loop paths do not cause or sustain harmful electromagnetic interference with nearby diagnostic medical devices or critical patient networks.
- **UL Listing:** Engineered and assembled using components compliant with UL safety classifications for low-voltage signal appliances, exterior access control equipment, and healthcare facility alert instrumentation.
- **RoHS Compliance:** Formulated in alignment with environmental protection directives, ensuring that the assembly, internal solder joints, and electronic trace configurations restrict the use of lead, mercury, and other hazardous materials.