

ACCUTECH 500251

12VDC 6.8A Power Supply | Central Security Infrastructure & Regulated Power Conversion Module

PRODUCT OVERVIEW

The Accutech 500251 12VDC 6.8A Power Supply 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 automated security credentials and high-speed data telemetry through a reliable and regulated conversion of AC voltage to 12V DC power across multi-zone infrastructure setups, it eliminates the operational complexity of managing individual entry points. This centralized topology ensures that small to medium-scale senior care, nursing home, memory care, and hospital facilities maintain instantaneous, real-time situational awareness during active power distribution and continuous operation cycles.

Deployed directly between peripheral zone controllers, transmitter wands, door controllers, and central administration frameworks, the 500251 module channels complex serial data traffic. This proactive routing method eliminates communication bottlenecks and guarantees that complex localized actions—such as auxiliary device execution, secure visitor access, and localized security overrides—are instantly synchronized with perimeter sensors. This active tracking processing ensures absolute protection across localized hospital wings, dedicated care facility corridors, and high-risk resident zones by establishing an uncompressed, bidirectional data pipeline for voltage tracking, real-time diagnostics, and unified event logging while driving a visual zone matrix to map multi-door elopement alerts across distinct facility points.

ARCHITECTS AND ENGINEERS (A&E) SPECIFICATION

- **System Infrastructure:** The contractor shall supply, install, and configure the Accutech 500251 12VDC 6.8A Power Supply to act as the primary visual status and monitoring interface bridging the peripheral exit networks and the main nurse workstation location. The hardware must support bidirectional communication to synchronize active bypass states, zone alarms, and real-time controller logs directly with the host computer software.
- **Healthcare Environment Protection:** The multi-zone indicator display assembly shall incorporate a durable, commercial-grade structural design explicitly engineered to sustain continuous clinical exposure, operating reliably across standard high-traffic healthcare IT environments.
- **Access and Control:** The device's physical data interface shall feature automated data direction control paths to allow authorized clinical staff, security personnel, and system administrators to issue network-wide bypass commands, hardware configuration adjustments, and alarm resets from the central software console.
- **Enclosure and Durability:** The graphic indicator assembly shall be protected inside a compact, ruggedized commercial-grade enclosure case optimized for clean surface or flush wall mounting directly within administrative spaces, reception corridors, or command hubs.
- **System Interoperability:** The panel display architecture must feature validated native compatibility for direct connection with Accutech wander management systems, ensuring non-latent zone signaling and localized alarm tracking across the facility's dedicated security network.

SYSTEM COMPONENTS

The 500251 12VDC 6.8A Power Supply incorporates several fundamental integrated sub-modules and physical connection layouts:

- **Industrial-Grade AC-to-DC Regulated Power Transformer:** The primary internal power conversion array engineered to convert alternative current (AC) lines down to stable, ripple-free 12V direct current (DC) distribution paths.
- **Universal AC Voltage Input Terminals:** Secure mechanical wiring interface points designed to accept a global range of alternating current line feeds without hardware resetting.
- **Heavy-Duty Output Screw Terminal Blocks:** Multi-point direct current delivery links built to securely distribute regulated operational amperage out to local devices.
- **Transient Voltage & Signal Isolation Array:** Internal safety circuitry engineered to isolate delicate internal microchip components from data line surges, grounding faults, and electrostatic discharge (ESD).
- **Rugged Heavy-Gauge Ventilation Enclosure:** A robust, industrial-grade protective chassis built to maximize convective cooling while preventing physical damage inside high-traffic utility junctions.

FEATURES AND BENEFITS

- **Centralized Voltage Conversion Management:** Consolidates independent peripheral zone controller channels down to a single visual interface panel connection on the administration server, delivering highly regulated 12VDC power straight to patient monitoring systems.
- **Universal Worldwide AC Input Profile:** Enhances deployment flexibility by operating flawlessly across a global input voltage span from 100V to 240V AC without needing dedicated mechanical transformer switches.
- **Seamless Protocol Conversion:** Automatically translates complex electronic security identifiers and exit triggers into an immediate localized virtual mapping layout without data packet loss or communication delays.
- **At-A-Glance Situational Mapping:** Provides immediate physical verification of active elopement risks or door violations across local wings, allowing teams to route response paths to exact exit boundaries.
- **Triple-Layer Fault Asset Protection:** Maximizes system uptime and safeguards downstream electronics via integrated, automated recovery loops checking for short-circuits, overvoltage shifts, and current overload spikes.
- **Validated Platform Interoperability:** Engineered for native plug-and-play compatibility with Accutech ResidentGuard control networks, hospital beds, and nurse call systems, ensuring a unified approach to facility patient protection.

PRODUCT SPECIFICATION

Manufacturer

Accutech Healthcare Security Solutions

Product Model Name

12VDC 6.8A Power Supply Module

Part Number / SKU

500251

Component Technology Type

Central Multi-Zone Visual Status Monitoring Interface & Mapping Panel

Input Voltage Range

100V – 240V AC Universal Input

Input Frequency Range	47 – 63 Hz
Regulated Output Voltage	12V DC
Maximum Output Current	6.8 Amps (6.8A)
Total Power Capacity Footprint	81.6 Watts (81.6W)
Built-in Circuit Protections	Short Circuit, Overvoltage Protection, Overload Safety Cut-Off
Wander System Compatibility	Accutech ResidentGuard, Hospital Bed Assemblies, and Central Infrastructure Hardware
Chassis Enclosure Type	Surface or Flush-Mount Rugged Architectural Wall Cabinet Assembly
Primary Target Environments	Main Nurse Stations, Reception Areas, Central Security Rooms, Corridor Hubs

COMPLIANCE AND CERTIFICATION

- **FCC Status:** Designed and certified to meet FCC regulations regarding digital device shielding. This guarantees that internal motor microprocessors, switching pathways, and high-speed data translation steps do not introduce or sustain harmful electromagnetic interference across nearby diagnostic clinical devices or patient networks.
- **UL Listing:** Developed and engineered using interior assembly components compliant with UL safety classifications for low-voltage access control locking mechanisms, information technology equipment, and auxiliary healthcare resident safety tools.
- **RoHS Compliance:** Formulated in alignment with environmental protection directives, ensuring that the internal circuit layouts, external terminal components, and housing finishes strictly restrict the use of lead, mercury, polybrominated biphenyls, and other hazardous materials.