UPS SYSTEMS BUYING GUIDE



WHAT DO THEY DO?

AC uninterruptible power supply (UPS) units and related DC UPS system components ensure stable, constant power for critical automation hardware, protecting operations against outages and voltage disruptions.

Topics

- » What Do They Do?
- » Applications
- » How to Choose
- » Identifying Critical Loads
- » DC UPS Components
- » AC UPS Topology
- » Product Category Overview
- » Product Lineup

Key Functions of UPS Systems

- **Power Backup**: Provide immediate power during outages, allowing critical equipment to continue running or shut down safely.
- **Voltage Stabilization**: Smooth out voltage spikes, dips, or brownouts to protect sensitive automation controls.
- **Battery Charging and Control**: Include integrated charging features to maintain batteries and monitor their condition for optimal readiness.
- **Emergency Power Delivery**: Supply regulated AC or DC voltage, ensuring PLCs, controllers, industrial PCs, and instrumentation receive clean, stable power.
- **Power Conditioning**: Filter electrical noise and correct power quality disturbances, helping sensitive automation and control equipment operate reliably.
- **Seamless Switchover**: Rapidly transition between utility and backup power with minimal voltage drop to prevent data or process loss.
- **Load Management**: Allow prioritized support for critical loads so essential operations remain uninterrupted during limited battery runtime.
- **Redundancy Support**: Use redundancy modules to allow parallel operation of power supplies, eliminating single points of failure.
- **Energy Buffering**: Buffer modules supply short-term backup during brief power interruptions, bridging gaps until longer backup sources engage.
- **System Health Monitoring**: Provide status indicators, alarms, or signaling to automation systems for proactive maintenance or controlled shutdowns.
- **Isolation and Circuit Protection**: Provide galvanic isolation and integrated protection against faults, overloads, and short circuits, helping safeguard connected equipment and maintain system integrity.
- **Scalable Runtime Expansion**: Support the addition of external battery modules or battery strings to extend backup duration and accommodate changing operational requirements.
- **Process Continuity**: Prevent unexpected equipment shutdowns that could result in lost data, production errors, or costly restarts.

APPLICATIONS

Automation systems demand uninterrupted power for computers, controllers, instruments, and network devices. A variety of modules and UPS units address different backup needs, from short-term buffering to extended runtime and fault tolerance.

Security Systems: Keeps security systems, such as CCTV cameras and access control systems, operational during power failures.

Manufacturing Equipment Protection: Safeguards production machinery from power disturbances that can cause shutdowns, product defects, or costly restarts.

Process Control Systems: Supports continuous operation of monitoring and control equipment in industries where even momentary power loss can disrupt critical processes.

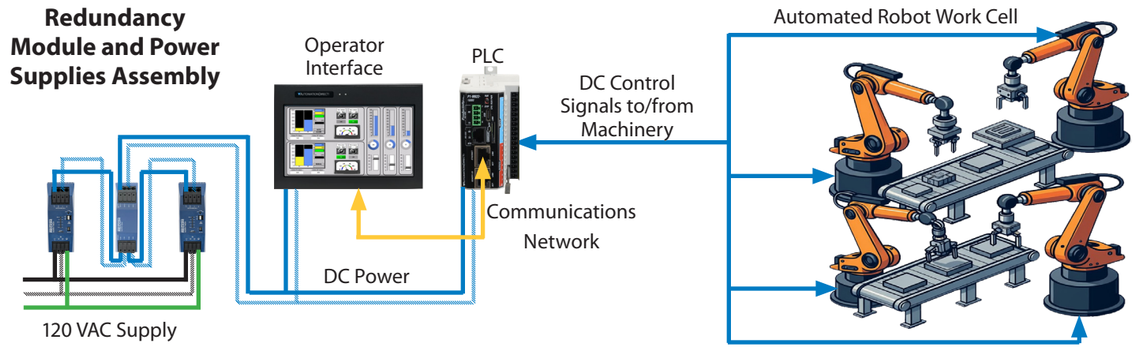
Data and Network Infrastructure: Provides backup power for switches, routers, servers, and edge computing devices to maintain communications and data availability.

Critical Facility Operations: Ensures essential systems in facilities such as water treatment plants, utilities, and transportation infrastructure remain operational during power events.

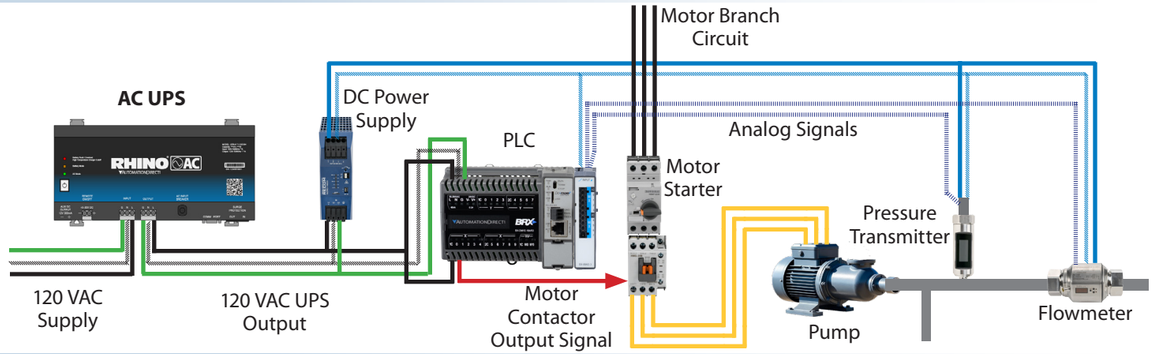
Remote and Unattended Systems: Deliver reliable backup power for distributed control panels, RTUs, telemetry equipment, and other installations where immediate on-site intervention is not available.

APPLICATION EXAMPLES

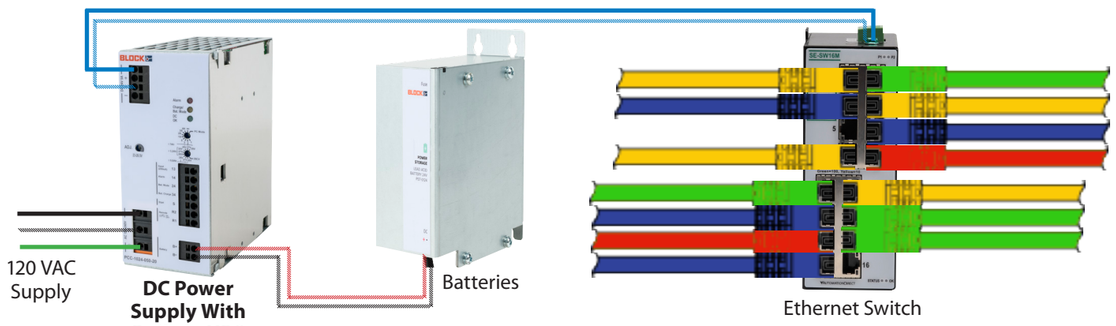
- **Automated Assembly Lines**: DC redundancy systems keep PLCs, HMIs, and control circuits running through a power supply failure. This prevents system downtime and maintains product quality.



- **Remote Process Control**: AC UPS systems can help with equipment uptime and prevent unwanted service calls or gaps in monitoring coverage in remote areas with unreliable power quality. A remote water pump station is an example of this type of process.



- **Industrial Networking Equipment**: Reliable DC power supplies with built-in UPS support ensure switches and routers stay powered, maintaining communication between machines and remote monitoring even during brief power interruptions.



HOW TO CHOOSE

Selecting the right UPS unit or components for your industrial automation system requires careful evaluation of power, runtime, and system-specific requirements. Consider how each subcomponent addresses both operational reliability and application needs for maximum uptime.



1. AC vs. DC Systems: Determine if your loads require AC, DC, or both, and select an appropriate UPS technology accordingly.
2. Power Requirements: Calculate your total load in watts or amps to ensure the UPS or module can support all connected devices.
3. Voltage Compatibility: Match the input and output voltage ratings of the UPS with your system requirements for stable operation.
4. Runtime Needs: Estimate how long your equipment must run during outages to select a UPS with adequate battery backup.
5. Form Factor: Choose between DIN rail or panel mounting based on your installation environment and available space.
6. UPS Architecture: Decide between integrated UPS units for simplicity or modular approaches for flexibility in complex systems.
7. Monitoring and Alarms: Consider units with monitoring, alarms, or remote notification to allow proactive maintenance and situational awareness.
8. Scalability: Plan for system expansion by choosing UPS architectures that allow easy addition of batteries or extra modules.
9. Environment: Select UPS systems rated for temperature, dust, moisture, or vibration if operating in harsh industrial conditions.
10. Serviceability: Prefer units with accessible batteries or tool-less connections to streamline maintenance and replacement tasks.
11. Certification and Compliance: Ensure the UPS or modules meet industry standards and application-specific certifications for safety and reliability.
12. Battery Control Modules: Add battery control modules to DC UPS systems for smart battery management and enhanced charging control.
13. Buffer Modules: Select buffer modules to bridge short power interruptions, reducing the need for full UPS systems in brief outage scenarios.
14. Battery Storage Modules: Use external battery storage modules to protect and enclose batteries.
15. Redundancy Modules: Implement redundancy modules for vital processes that cannot tolerate downtime, enabling mirrored power paths from multiple sources.

IDENTIFYING CRITICAL LOADS

Understanding which loads are critical versus non-critical helps ensure that backup power is delivered where it matters most. Identifying and segregating essential systems is crucial for maximizing protection and maintaining process reliability during outages.



Examples of Critical Loads

1. Control Systems: PLCs and PACs running core automation logic must remain powered to avoid system resets, lost data, or hazardous shutdowns.
2. Data Logging and Historian Servers: Systems that record process data require continuous power to prevent information loss and maintain traceability.
3. Communication Networks: Switches, routers, and gateways connecting automation islands are typically critical, as loss can disrupt plant-wide operations.
4. Remote I/O Modules: Input and output devices responsible for capturing live process variables should be treated as critical to maintain real-time monitoring and control.
5. Critical Instrumentation: Transmitters, analyzers, and sensors essential for closed-loop control and alarms are often mission-critical.
6. Alarm and Notification Systems: Systems responsible for alerting operators to adverse conditions require backup to ensure no events go unnoticed.
7. Motor Controls: Only motor starters or drives for essential processes should be considered for backup. Non-essential or redundant drives often remain non-critical.
8. Valve Actuators: Actuators that control safety valves used to maintain a process in a safe state must be classified as critical.
9. Industrial PCs: Devices running SCADA or crucial batch software often need UPS coverage to prevent process interruption.
10. Network Security Devices: Firewalls and intrusion prevention systems used for industrial networking can help prevent vulnerabilities during a power event.
11. Building Management Controls: Systems controlling HVAC for sensitive equipment rooms may be critical, while those for general comfort are non-critical.
12. Access Control Systems: Door interlocks or security systems that protect inventory and personnel safety should be included in the critical list.
13. Environmental Monitoring: Sensors for hazardous gases or temperature in sensitive storage areas require backup to keep alarm coverage continuous.

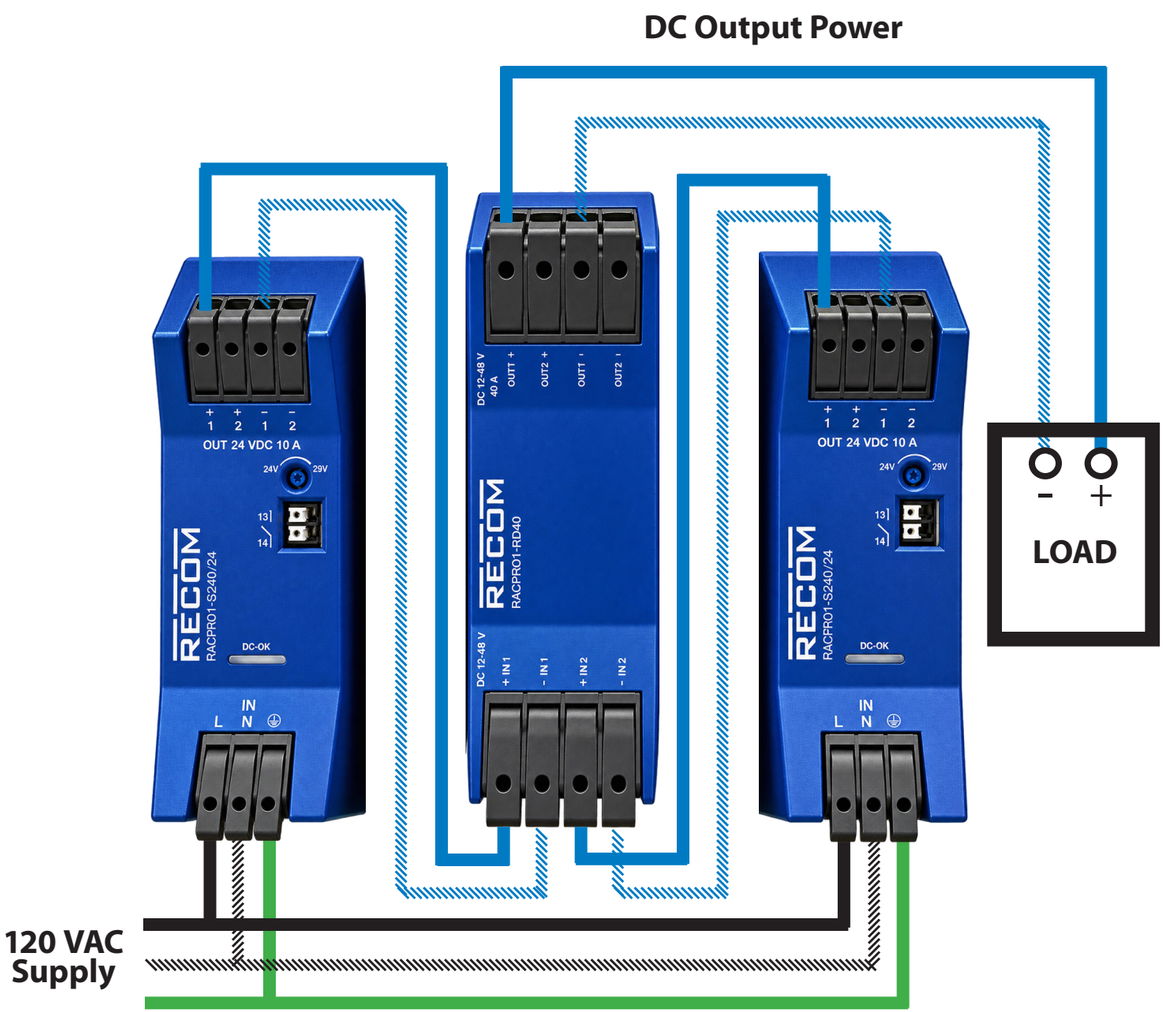


DC UPS COMPONENTS

Industrial DC UPS systems combine power supplies, battery management, buffering, and redundancy technologies to protect critical control systems, reduce downtime, and support safe, reliable industrial operations.

Redundancy Modules

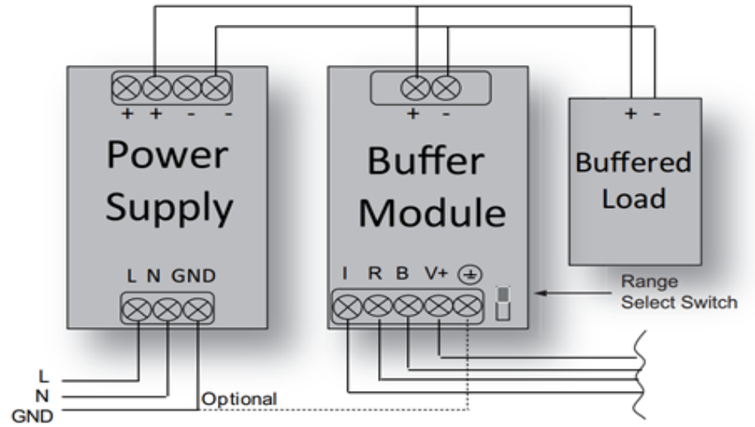
For critical applications, a redundancy module protects against power supply failure by monitoring parallel power supplies and automatically switching to a backup source when needed. However, redundancy alone does not provide protection from a facility-wide power loss or even input power loss to a DC power supply.



RECOM RACPRO1-RD40 series redundancy module connected to two 480W power supplies.

Buffer Modules

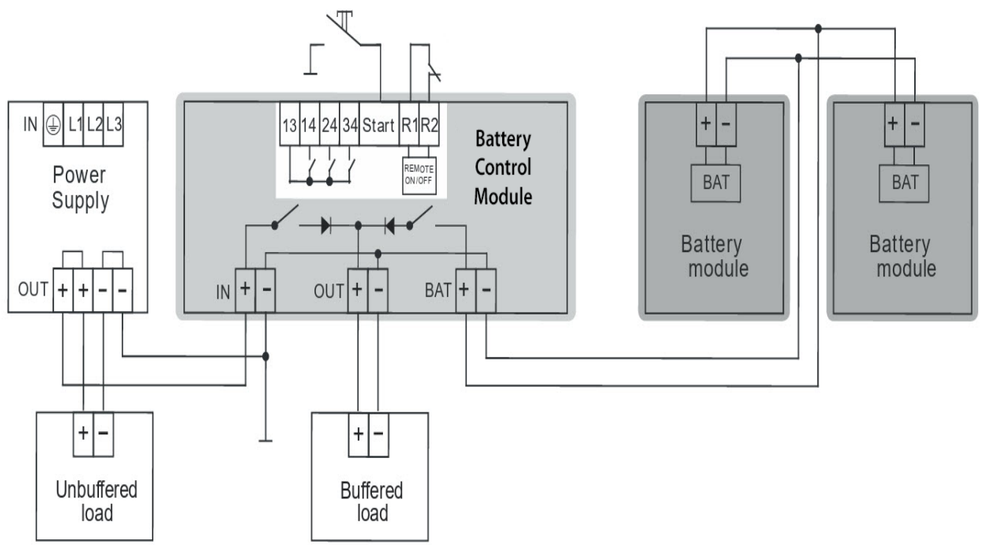
A buffer module helps keep systems operating through voltage dips, brownouts, and brief power interruptions by storing energy in capacitor banks and releasing it when needed. Installed alongside a power supply, it provides short-term backup power with maintenance-free operation and long-lasting energy storage performance.



Wiring diagram for a buffer module connected between a power supply and load

Battery Backup System

A battery backup system delivers the highest level of power protection for facilities experiencing frequent outages or operating in remote locations. By combining a power supply, battery control module (BCM), batteries, and optional monitoring, it seamlessly transitions to battery power during an outage, ensuring continuous operation through a wide range of power disturbances.



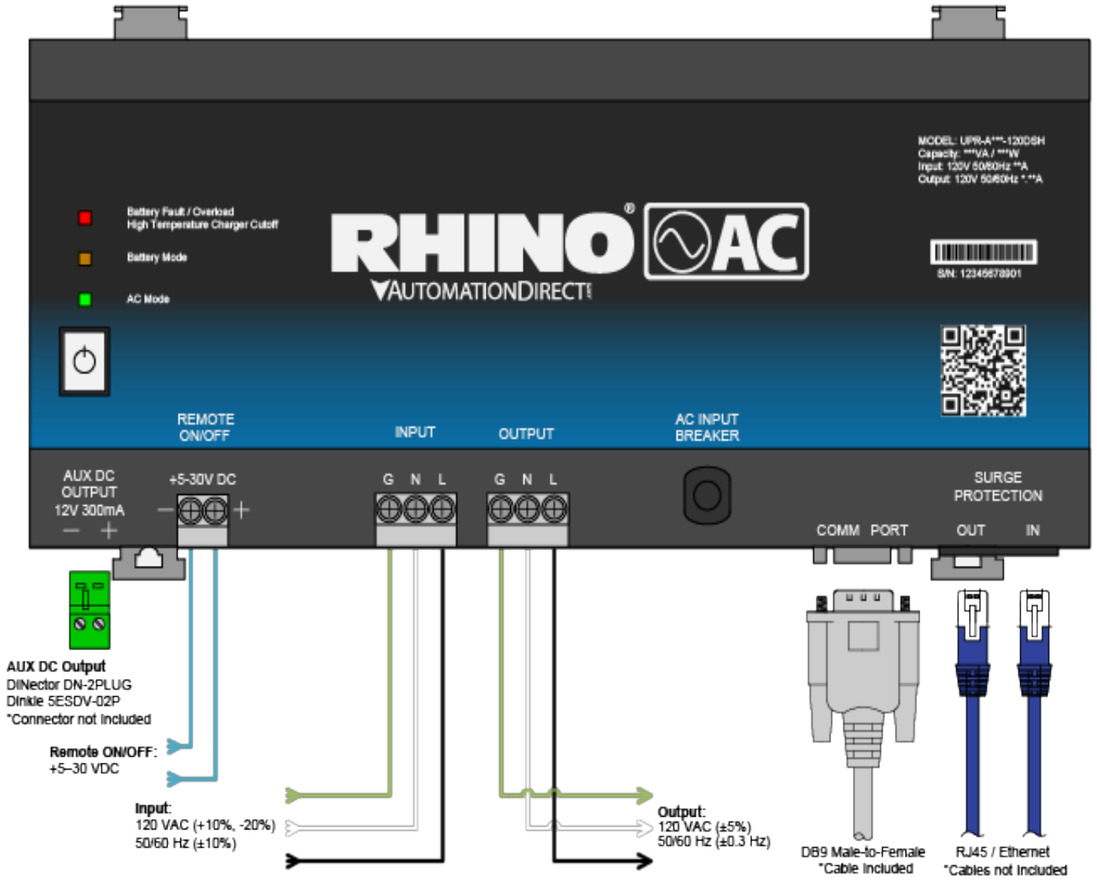
Battery control module wiring diagram

AC UPS TOPOLOGY

Industrial AC UPS systems integrate backup power, battery charging and management, surge protection, and advanced monitoring technologies to safeguard critical equipment, minimize downtime, and support reliable performance in industrial automation, process control, SCADA, communications, and other mission-critical applications.

Standby UPS Systems

A standby AC UPS provides protection against utility power loss, voltage sags, and other power quality disturbances by automatically transferring connected equipment to battery-backed power when input power falls outside acceptable limits. However, while a standby UPS helps maintain operation during power events, it does not eliminate the need for proper system design and protection against equipment faults within the connected load.



RHINO AC UPR-A500-120DSH standby uninterruptible power supply

PRODUCT CATEGORY OVERVIEW

Product Category	What it Does	When to Choose This	Typical Applications	Key Selection Factors
AC UPS Systems	Provides backup AC power and power conditioning for equipment that runs directly from AC line power.	Choose when your equipment requires 120 VAC backup power and cannot operate from a 24 VDC control power system.	Industrial PCs, HMIs, network switches, servers, PLC panels, SCADA systems, security systems	Required runtime, AC load wattage, installation space, environmental approvals
DC Power Supplies with Battery Control	Combines a DC power supply and UPS functionality into a single package for simplified installation.	Choose when building a new system and you need both a power supply and battery backup in one solution.	Control panels, machine automation, communications equipment, access control systems	Output voltage/current, desired backup time, panel space, integrated vs. modular design
Battery Control Modules	Adds UPS functionality to an existing DC power supply using external batteries. Manages charging, monitoring, and backup operation.	Choose when you already have a power supply or want the flexibility to customize battery size and runtime.	PLC systems, industrial controls, remote monitoring equipment, process automation	Existing power supply compatibility, runtime requirements, battery capacity, monitoring needs
Buffer Modules	Uses capacitors instead of batteries to provide short-term ride-through protection during brief power interruptions.	Choose when you only need seconds of backup time to ride through voltage dips, brief outages, or equipment transfer events.	PLCs, motion systems, industrial PCs, automation equipment sensitive to short outages	Required ride-through time, load current, desire for maintenance-free operation, battery-free design
Battery Storage Modules	Provides battery enclosure solutions that work with compatible battery control modules and UPS systems.	Choose when building a complete modular DC UPS system and battery storage is required.	Industrial control panels, automation systems, process equipment	Required runtime, battery capacity, available panel space, compatible UPS controller
Redundancy Modules	Combines two power supplies to create a fault-tolerant system and prevent a single power supply failure from shutting down the load.	Choose when maximizing uptime is more important than backup runtime and continuous operation is critical.	Critical control systems, production lines, process control, communications infrastructure	Required current, power supply compatibility, redundancy level, system availability requirements



PRODUCT LINEUP

From industrial AC UPS units and integrated DC UPS power supplies to battery control modules, buffer modules, battery storage modules, and redundancy modules, these solutions provide reliable backup power, power conditioning, and system monitoring for automation, control, communications, and process applications.

- Supports PLCs, HMIs, industrial PCs, network devices, process equipment, and control systems
- Battery-based and capacitor-based solutions available for short- and long-duration backup requirements
- Integrated power supply and UPS options simplify installation and reduce panel space
- Advanced battery management, charging, monitoring, and diagnostic capabilities
- Ride-through protection helps prevent nuisance shutdowns and production interruptions
- Redundancy modules improve system reliability and eliminate single points of failure
- DIN rail and panel-mount options available for industrial control panel installations
- Ideal for industrial automation, machine building, security, communications, utilities, and critical infrastructure applications

AC UPS SYSTEMS

Series Name	Best For	Key Attributes	Primary Benefit
RHINO AC UPR-A Series	PLC panels, HMIs, industrial PCs, network equipment, and critical AC-powered systems	DIN rail design, battery backup, power conditioning, user-replaceable batteries, industrial approvals	Keeps AC-powered equipment running through outages and power disturbances



RHINO AC UPR-A SERIES

STARTING AT $505.00 (UPR-A300-120DSH)

RHINO AC UPR-A series AC uninterruptible power supply systems provide short-duration backup for 120 VAC single-phase PLCs, industrial computers, SCADA equipment, and process-control loads. Designed for DIN rail or panel installation, the two-model family combines fast transfer, fanless cooling, removable batteries, and hardwired connections for industrial control panels.

- Select the 500VA/300W UPR-A300-120DSH or the 850VA/510W UPR-A500-120DSH; full-load runtime is 4 minutes and 2 minutes, respectively
- Typical 4 to 6 ms transfer time helps bridge voltage dips and momentary power interruptions
- Operating temperatures from 0 to 49°C and natural-convection cooling support fanless control-panel installation
- Sealed, maintenance-free batteries recharge to 90% capacity in 8 hours and are user-replaceable
- UL 1778, UL 508 temperature testing, CSA C22.2 No. 107.3-14, and Class I, Division 2, Groups A–D ratings support industrial and hazardous-location applications

DC POWER SUPPLIES WITH BATTERY CONTROL

Series Name	Best For	Key Attributes	Primary Benefit	Price Tier
BLOCK PCC Series	Industrial automation, critical control panels, and IPCs	Power supply and UPS controller in one unit, configurable runtime, advanced battery management	Complete industrial UPS solution with minimal installation effort	$$$
RHINO SELECT PSS-U Series	Security, access control, communications, and alarm systems	Integrated UPS, monitoring signals, chassis mount, zero transfer time	Reliable backup power with enhanced monitoring	$
RHINO SELECT PSFA Series	Cost-sensitive OEM equipment, control systems, and low-power applications	Open-frame design, integrated UPS function, compact footprint	Lowest-cost path to integrated backup power	$

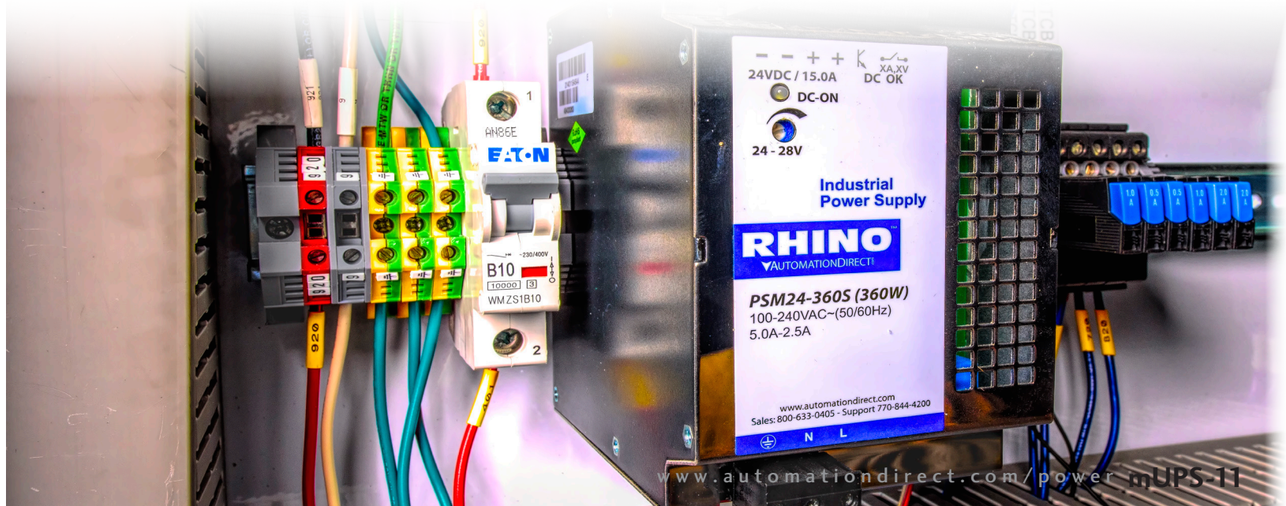
BLOCK PCC SERIES

STARTING AT $255.00 (PCC-1024-050-20)

BLOCK Power Advanced PCC series power supplies combine a 24 VDC switched-mode supply with battery charging, monitoring, and automatic load transfer in one DIN rail unit. They support PLCs, HMIs, communications equipment, and other control loads that must remain powered during outages, with 5A and 10A models for matching the protected load and required backup capacity.



- Select 5A/120W or 10A/240W output to match the protected 24 VDC load
- Adjustable 23–28.5 VDC output and 90–264 VAC input support common industrial control power requirements
- Automatic battery-module detection reduces setup steps and verifies connected battery storage
- Temperature-controlled charging, service-life prediction, and low-life signaling support planned battery maintenance
- Reverse-connection and total-discharge protection safeguard the batteries, while parallel battery connections increase runtime options





RHINO SELECT PSS-U SERIES

STARTING AT $59.00 (PSS24-155-U)

RHINO SELECT PSS-U series enclosed chassis-mount power supplies combine 151W DC conversion with integrated battery control for panels that need uninterrupted 12 or 24 VDC power. They switch to an external battery with zero cut-over time and suit machine controls, communications equipment, and other loads that must remain energized through extended input-power interruptions.

- Select 13.8 VDC at 11A or 27.8 VDC at 5.5A to match the system voltage and load current
- 120/240 VAC nominal single-phase input supports common industrial power systems
- Buffering times up to 2 hours 30 minutes support extended operation when battery capacity and load permit
- Potentiometer-adjustable outputs allow voltage setting for battery charging and connected equipment
- Reverse-polarity, overvoltage, overcurrent, overtemperature, and short-circuit protection safeguard the supply and load

RHINO SELECT PSFA SERIES

STARTING AT $48.00 (PSFA24-060-U)

RHINO SELECT PSFA series open-frame power supplies combine 60W DC output with integrated battery control for compact OEM equipment and enclosed panel assemblies. The 12 and 24 VDC models transfer to an external battery with zero cut-over time, providing a lower-power alternative to the PSS-U series when extended ride-through is required.

- Select 13.8 VDC at 4.3A or 27.8 VDC at 2.1A to match the system voltage and connected load
- 120–240 VAC single-phase input supports installation across common control-panel supply voltages
- Buffering times up to 3 hours support extended operation when matched with the required battery capacity
- Zero cut-over time prevents output interruption when the supply transfers to battery operation
- Open-frame construction conserves enclosure space, while electrical protection covers reverse polarity, overvoltage, overcurrent, overtemperature, and short circuits



BATTERY CONTROL MODULES

Series Name	Best For	Key Attributes	Primary Benefit	Price Tier
BLOCK Battery Control Modules (PCC Series)	Industrial automation systems needing advanced battery management and extended runtime options	Intelligent charging, battery health monitoring, parallel battery support	Maximizes battery life and system availability	$$
RHINO Battery Control Modules (PSL/PSM/PSB/PSH Series)	General-purpose DC UPS systems requiring flexible battery sizing and runtime	Wide model selection, battery monitoring, status outputs, protection features	Flexible and economical way to add battery backup to existing DC systems	$



BLOCK BATTERY CONTROL MODULES (PCC SERIES)

STARTING AT $150.00 (PCC-0524-100-00)

BLOCK PCC series battery control modules add intelligent charging, battery monitoring, and automatic backup transfer to an existing 24 VDC power supply. They suit modular UPS systems that need 10A or 20A load capacity, fast battery recovery, and condition-based maintenance without replacing the primary supply or using an integrated power supply and controller package.

- Select 10A or 20A output capacity to match the maximum protected load
- 18–30 VDC output operation supports 24 VDC control systems and normal charging-voltage variation
- Charging current up to 3A reduces recovery time after the batteries have supplied the load
- Automatic battery detection and low-life status indication simplify commissioning and maintenance planning
- Compatibility with any suitable 24 VDC power supply brand supports UPS additions to existing control systems

RHINO BATTERY CONTROL MODULES (PSL/PSM/PSB/PSH SERIES)

STARTING AT $46.50 (PSL-24-BCM240)

RHINO battery control modules add charging, battery monitoring, and automatic backup transfer to separate DC power supplies. The combined family spans compact 24 VDC systems through higher-current and 48 VDC applications, allowing selection by load current, supply-input arrangement, power supply compatibility, and monitoring needs.

- Select from 10-40A capacities, depending on the model
- PSL, PSM, and PSB models use one supply input, while the PSH model accepts two inputs for redundant source arrangements
- Output ranges available from 47-55 VDC for the PSH models and 23- 28 VDC for all other models
- Protection covers battery overvoltage, overcurrent, overtemperature, deep discharge, reverse connection, and overcharging
- PSM models require compatible PSM24 supplies, while the other series support suitable supplies selected for the module voltage and current



BUFFER MODULES

Series Name	Best For	Key Attributes	Primary Benefit	Price Tier
BLOCK PC Series	Critical control equipment requiring longer ride-through times and advanced capacitive backup	Supercapacitor storage, long service life, high-current capability	Maintenance-free backup without battery replacement concerns	$$$
RHINO PSB Series	Short power interruptions, voltage sags, and nuisance outages	Capacitor-based backup, fast recharge, maintenance-free operation	Battery-free ride-through protection with minimal maintenance	$$



BLOCK PC SERIES

PRICED AT $295.00 (PC-0424-010-00)

The BLOCK PC series buffer module uses EDLC capacitors to bridge short 24 VDC power interruptions without batteries or a separate battery controller. It supports PLCs, controls, and communication devices that need enough time to ride through a dip or complete a controlled shutdown, while avoiding battery replacement and charge-management requirements.

- Supports loads up to 20A for approximately 2.5 seconds to bridge brief interruptions or initiate a safe shutdown
- 18.25–29.75 VDC output range supports normal variation on a 24 VDC control bus
- EDLC capacitor storage eliminates batteries, charging profiles, and periodic battery replacement
- Compatibility with suitable 24 VDC power supplies supports additions to existing control power systems
- Alarm contacts, push-in terminals, and 35mm DIN rail mounting simplify monitoring, wiring, and installation

RHINO PSB SERIES

PRICED AT $173.00 (PSB24-BFM20S)

The RHINO PSB series buffer module maintains a 24 VDC control bus during brownouts, voltage dips, and brief power interruptions. It is intended for industrial panels that need up to several seconds of ride-through without batteries, with adjustable buffering behavior, status signaling, remote control, and parallel connection for longer hold-up time.

- 20A output capacity supports higher-current 24 VDC control and automation loads
- 23–28 VDC operating range matches common adjustable 24 VDC power supplies
- Hold-up time reaches approximately 4 seconds at lighter loads and decreases as load current increases
- Parallel module connection increases stored energy and extends buffering time for the connected load
- Selection-switch adjustment, alarm signaling, remote on/off, and Class I, Division 2 approval support monitored industrial installations



BATTERY STORAGE MODULES

Series Name	Best For	Key Attributes	Primary Benefit
BLOCK PST Series	Modular DC UPS systems requiring custom runtime and battery capacity	Multiple enclosure sizes, prewired design, expandable capacity options	Simplifies battery installation and allows runtime customization



BLOCK PST SERIES

STARTING AT $107.00 (PST-0024-032-10)

BLOCK PST series battery storage modules provide prewired, panel-mounted enclosures for user-supplied batteries in a 24 VDC UPS system. They pair with BLOCK PCC power supplies or controllers and let designers select battery capacity and enclosure orientation to balance required runtime, panel space, wiring access, and serviceability.

- Select models for two 12 VDC batteries rated 3.2, 7, or 12 Ah based on the required backup duration
- Five enclosure configurations provide capacity and orientation choices for different panel layouts
- Prewired 12 or 14 AWG conductors and included fuse components reduce field wiring requirements
- IP20 aluminum housings with keyhole mounting support protected indoor panel installations and battery replacement access



REDUNDANCY MODULES

Series Name	Best For	Key Attributes	Primary Benefit	Price Tier
BLOCK PM Series	Compact redundant power systems with moderate current requirements	High efficiency, compact design, power supply isolation	Prevents downtime caused by a single power supply failure	$$
RECOM RACPRO1 Series	High-current, mission-critical systems requiring maximum reliability	Ultra-low voltage drop, high efficiency, load sharing, power boost capability	Delivers the highest performance and system uptime for demanding applications	$$
RHINO Redundancy Modules (PSB/PSP Series)	Budget-conscious redundancy applications and general industrial control systems	Wide voltage ranges, redundancy and load-sharing capability, status indication	Cost-effective protection against power supply failures	$

BLOCK PM SERIES

PRICED AT $107.00 (PM-0624-100-0)

The BLOCK PM series combines two matched Power Mini supplies into a fault-tolerant 24 VDC source for compact control panels. It isolates the supply outputs so a failed unit cannot load the healthy unit, while status indication and alarm signaling help maintenance personnel identify a lost input before the remaining supply is affected.



- Two 10–36 VDC inputs support matched BLOCK Power Mini supplies in a redundant arrangement
- 10A output capacity supports 24 VDC loads up to the module rating
- Output decoupling prevents a failed or shorted supply from overloading the remaining source
- Efficiency up to 96% limits power loss and heat generation inside the control enclosure
- Dual green status LEDs, an alarm contact, push-in terminals, and DIN rail mounting support monitored compact installations



RECOM RACPRO1 SERIES

PRICED AT $129.00 (RACPRO1-RD40)

The RECOM RACPRO1-RD40 series combines two matched 12, 24, or 48 VDC supplies for higher-current control, communications, and distributed automation loads. The wide input range, 40A output rating, high conversion efficiency, and narrow DIN rail housing make the series suited to systems that need redundancy without consuming excessive panel width.

- 9–56 VDC input range supports matched 12, 24, or 48 VDC power supplies
- 40A output capacity accommodates higher-current redundant power systems
- Efficiency up to 99.5% minimizes voltage loss and enclosure heat
- Output-on LED indication provides local confirmation that power is reaching the load
- Slim polycarbonate and aluminum housing with angled push-in terminals reduces wiring space and supports tool-free installation

RHINO REDUNDANCY MODULES (PSB/PSP SERIES)

STARTING AT $55.00 (PSB60-REM20S)

RHINO PSB and PSP redundancy modules combine two DC power supplies to help keep critical equipment running if one supply fails. By isolating the power supply outputs, these modules prevent a failed source from overloading the remaining supply. Choose from compact 8A PSP redundancy or higher-current PSB models for 24 and 48 VDC applications.



- PSP24-REM240S handles loads up to 8A with two matched 5–60 VDC power supplies; PSB models support 20A or 40A loads in 24 or 48 VDC systems
- PSP modules work with two matched supplies, while PSB models offer flexible configurations for a variety of redundancy needs
- Low voltage drop helps maintain usable load voltage, with PSB models providing greater than 97% typical efficiency
- Built-in LED indication and available monitoring contacts make it easy to identify power or supply status
- Wide operating temperature ranges and industrial approvals make these modules well suited for control panel applications



This buying guide was drafted with AI assistance and edited by the AutomationDirect Technical Marketing Team