

# RP24 Rugged Power Supply & RA24 Battery Module

For Military and Industrial Deployed Power Applications

## DESCRIPTION

The RP24 Rugged Power Supply and RA24 Battery Module form a robust, versatile power solution designed for demanding military and industrial applications. The RP24 delivers 1000W of reliable AC/DC power in a compact, ruggedized package, while the RA24 provides 50Ah of backup battery capacity. Together, they create a portable, uninterruptible power system capable of operating in harsh environments and at high altitudes.



Rugged Power Supply



Rugged Battery Module

## Key Features and Benefits

- Rugged design: Milled from high-grade aluminum, withstands drops from 1.5m, IP67 rated
- Wide input range: 115/230VAC input with reinforced Class II isolation
- Versatile DC capability: 24VDC input/output, battery charging, and UPS functionality
- Modular and scalable: Up to 5 RP24 units (4.5kW) and 10 RA24 modules in parallel
- High reliability: Triple redundant AC/DC converters in RP24
- Operational at altitude: Functions up to 3,500m, transportable to 5,500m
- Extreme temperature range: -35°C to +60°C operation
- Advanced monitoring: Built-in display and remote monitoring via SNMPv3
- Long life: 110,000 hour MTBF (RP24)
- Military-grade EMC performance: Meets MIL-STD-461G standards
- Quick charging: RA24 charges in 4-10 hours

## Key Applications and Use Cases

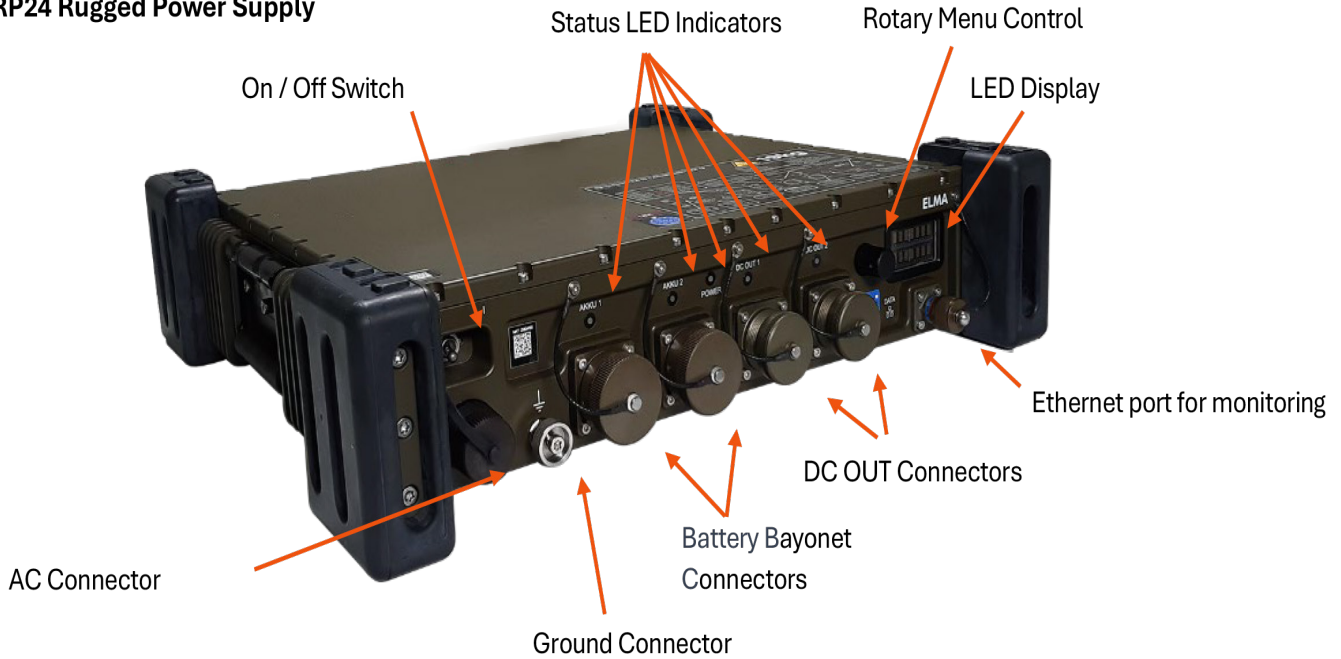
- Field deployed military radios and communications equipment
- Mobile command and control centers
- Auxiliary power for air and ground vehicles
- Portable power for first responders and civil defense
- Remote industrial sites and mining operations
- Backup power for critical infrastructure
- Unmanned vehicle power systems
- High-reliability portable power for harsh environments

# RP24 Rugged Power Supply & RA24 Battery Module

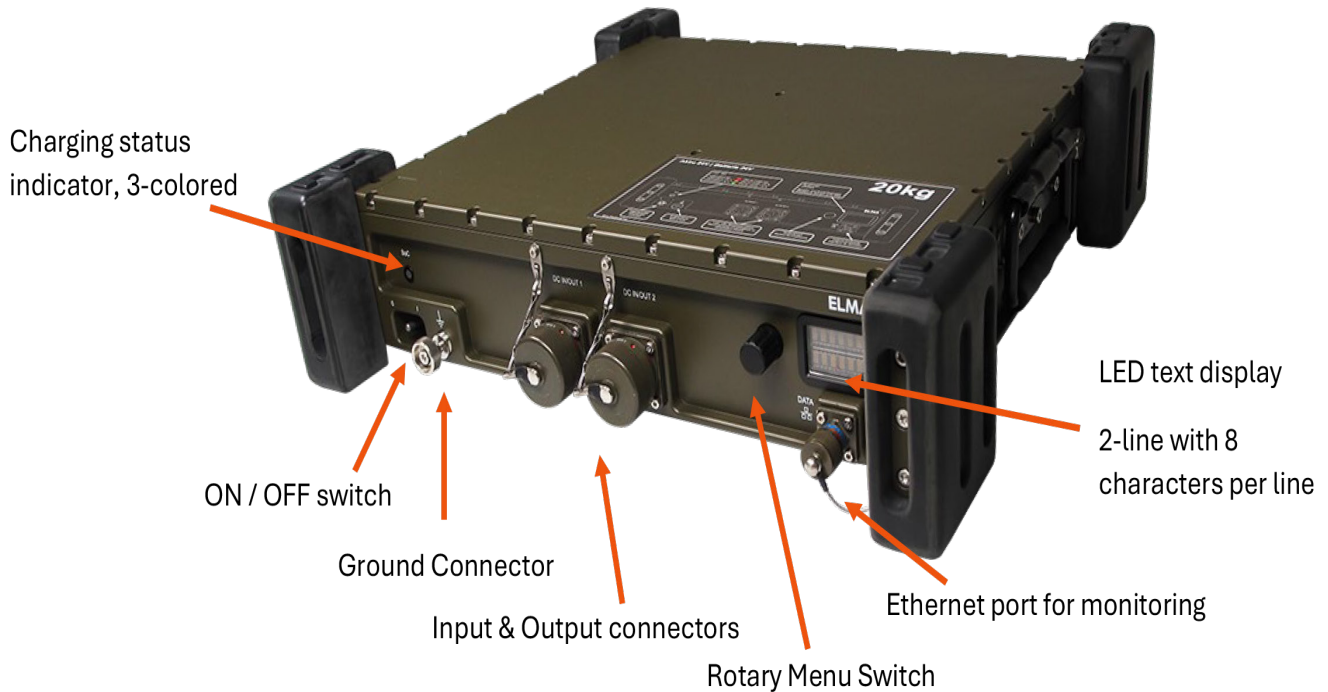
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## SYSTEM DETAILS

### RP24 Rugged Power Supply



### RA24 Rugged Battery Module



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## ELECTRICAL SPECIFICATIONS

### RP24 Rugged Power Supply

#### Input

<b>Input Voltage</b>	115 - 230 VAC
<b>Input Current</b>	6 A @ 230 VAC
<b>Class of Equipmnet</b>	Class II
<b>Isolation</b>	3 kVAC

#### Output

<b>Output Voltage</b>	27 VDC
<b>Output Power</b>	1000 W
<b>Ripple Noise</b>	< 150 mVpp

### RA24 Rugged Battery Module

<b>Battery Technology</b>	Lithium Iron Phosphate (LiFePO4)
<b>Output Voltage</b>	22V min, 25.6V nom, 29V max
<b>Continuous Output current</b>	0.1A min, 40A nom, 44A max
<b>Output Current 30ms</b>	66A nom, 72A max
<b>External Charging Voltage</b>	22V min, 27.3V nom, 32V max
<b>External Charging Current</b>	5A min, 16A max
<b>Charging Power</b>	150W min, 350W max
<b>Charging Time</b>	4 hours min, 10 hours max
<b>Standby Power Consumption (data interface and display off)</b>	Approximately 1W
<b>Standby Power Consumption (data interface and display on)</b>	Approximately 2.5W
<b>Power Consumption (device off)</b>	Less than 1mW
<b>Self-Discharge (device off)</b>	2.7% per month

## NETWORK INTERFACE

### RA24 Rugged Battery Module

Type:	Ethernet
Internet Protocol:	IPv4, IPv6
Data Rate:	10/100Mbps
Protocols:	SNMPv3, HTTP, HTTPS, DHCP, DHCPv6, SLAAC, MLD, LLMNR, mDNS, ICMP, ICMPv6

## OPERATION AND FUNCTIONS

### RP24 Rugged Power Supply

#### User Interface

Main switch:	Toggle switch On/Off
Rotary switch with push-button:	Menu navigation for setup and control
Alphanumeric display:	Indication of operating condition, operating time, energy consumed, error messages and diagnosis

#### Connections

AC-Line:	AC Input
AKKU1 and AKKU2:	Connection for battery (input / output)
LOAD1 and LOAD2:	Connection for the load
Data:	Remote Monitoring (SNMPv3 protocol)
GND:	Lightning protection
LOAD1/2 Connector:	Amphenol MS3102R20-23S (screw threaded connector)
AKKU1/2 Connector:	ITT CANNON CA3102E20-24SB (Bayonet connector)
AC-In Connector:	Binder 09-4227-00-07
Ethernet Connector:	Amphenol TVP00RW-9-9

## DIMENSIONS AND WEIGHT

### RP24 Rugged Power Supply

Dimensions	451 x 473 x 113.1 mm
Weight	< 20 kg

### RP24 Rugged Battery Module

Dimensions	473 x 451 x 121.5 mm
Weight	< 20 kg

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## SYSTEM SPECIFICATIONS

### RP24 Rugged Power Supply

#### Environment

Operating altitude max.:	3'500 m
Transportation altitude max.:	5'500 m
Operating / storage temperature:	-35 °C to +60 °C / -40 °C to +85 °C
Efficiency:	91 %
MTBF:	110'000 h (MIL HDBK217F) @ max. load
Shock:	MIL-STD-810G (Method 516.6-I)
Vibration:	MIL-STD-810G (Method 514.6 Cat 4,7,10,11)
Atmospheric pressure:	MIL-STD-810G (Method 500.5-I and II)
Temperature:	MIL-STD-810G (Method 501.5-I and II, limited to 60°C) MIL-STD-810G (Method 502.5-I and II)
Rain, Humidity, Sand, Dust:	MIL-STD-810G (Method 506.5, 507.5, 510.5), EN60529

#### Safety, EMC and HEMP

Safety:	EN61204, -7 ; EN60950-1 (Class II)
EMC:	EN61000-6-2, EN61000-6-3, EN61204-3, MIL-STD-461G, MIL-STD-461G (RE102, CE102)
Lightning, HEMP	HPE degree of protection II

### RP24 Rugged Battery Module

#### Environment

Operating altitude max	3'500 m
Transportation altitude max.	5'500 m
Operating / storage temperature	-35 °C to +60 °C / -40 °C to +85 °C (to be confirmed)
Shock	MIL-STD-810G (Method 516.6-I)
Vibration	MIL-STD-810G (Method 514.6 Cat 4,7,10,11)
Atmospheric pressure	MIL-STD-810G (Method 500.5-I and II)
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Rain, Humidity, Sand, Dust	MIL-STD-810G (Method 506.5, 507.5, 510.5), EN60529

#### Security, EMC, HEMP

Safety:	EN61204, -7; EN60950-1 (Class II)
EMC:	EN61000-6-2, EN61000-6-3, EN61204-3, MIL-STD-461G MIL-STD-461G (RE102, CE102)
Lightning, HEMP	HPE degree of protection II

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