

Energy Storage System Range Summary

Features & Benefits

System Control

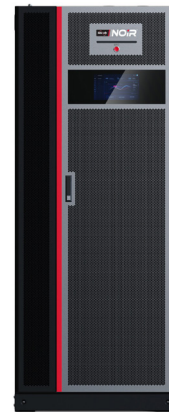
- Predictable system performance under dynamic, high-variability load conditions
- High power density architecture supporting compact megawatt-scale UPS deployments (> 600 kW per cabinet; up to 1.2 MW in two racks)
- Three-level battery management architecture comprising cabinet battery management system (CBMS), group battery management system (GBMS), and battery management unit (BMU)

Deployment Efficiency

- Designed as an integrated UPS energy storage architecture for high-density installations
- Delivered as a complete system to reduce deployment complexity and improve implementation predictability
- UPS integration via CAN/RS485 and dry contacts; RS485 supports Modbus RTU / Modbus TCP

Operational Reliability

- Layered safety architecture with redundant protection mechanisms at cell, module, and system levels
- Active balancing and integrated monitoring functions supporting stable operation over time
- Reduced maintenance and operational overhead through integrated monitoring and remote management capability



DataSafe Noir™ is a high-density lithium energy storage system engineered for modern data center power environments. Designed as a complete system architecture, it delivers predictable performance under dynamic load conditions while supporting compact deployment at megawatt scale.

As data centers increase in density and rely on increasingly variable AI-driven workloads, operators require confidence not only in battery chemistry and runtime, but in how systems behave under real operating conditions, particularly during load fluctuation, integration, commissioning, and validation.

DataSafe Noir™ energy system combines integrated system design, multi-level monitoring and protection architecture, active balancing, and UPS communications support to reduce deployment complexity and improve operational predictability.

Compared with conventional lithium UPS configurations, DataSafe Noir™ energy system delivers significantly higher power density, supporting more compact deployments and improved utilization of data center floor space.

Construction

Architecture

- Lithium iron phosphate (LFP) modular battery system for high-voltage UPS applications
- High-strength IP20 cabinet platform designed for predictable integration and service access
- Active balancing supports module consistency and long-term operational stability

Installation & Operation

- Installation and service should be performed by qualified personnel in accordance with applicable electrical safety practices
- Install indoors on a level, non-flammable surface capable of supporting cabinet weight
- Ensure proper grounding/earthing of the cabinet and follow lock-out/tag-out procedures before service
- Recommended operating temperature range: 15–35°C (59–95°F)

Safety & Protection

- Multi-level management architecture (BMU / CBMS / GBMS) supporting monitoring, protection, and system coordination
- Layered protection design at cell, module, and system levels
- Protection functions include:
 - over/under voltage
 - over/under temperature
 - overcurrent
 - short-circuit protection

Monitoring & Communications

- Integrated sensing provides monitoring of:
 - voltage
 - current
 - temperature
 - state of charge (SOC) and state of health (SOH)
- Communications support via CAN / RS485 and dry contacts
- RS485 supports Modbus RTU / Modbus TCP

Standards & Compliance

- Certification availability and test status may vary by model configuration and regional offering.
- Installation, commissioning, and operation should be performed in accordance with applicable local regulations, codes, and site requirements

General Specifications

ITEM PART NUMBER	DSN-500	DSN-600
ELECTRICAL		
Nominal DC Voltage	512 V	614 V
Nominal Capacity	120 Ah (25°C, 0.5C)	
Max Power	500 kW	600 kW
Max Charge Current	120 A	
Recommended Charge Current	60 A	
Max Discharge Current	1200 A	
Design Life	15 years (@25°C)	
Battery Chemistry	Lithium-ion (LiFePO4 / LFP)	
Cycle life	> 600 cycles @ 100% DOD	
MECHANICAL		
Dimensions (W × D × H)	800 × 750 × 2000 mm (31.5 × 29.5 × 78.7 in)	
Weight	~996 kg (~2196 lb)	~1130 kg (~2491 lb)
Ingress protection level	IP20	
Number of Modules	10	12
ENVIRONMENT		
Recommended Operating Temperature	15–35°C (59–95°F)	
Recommended Storage Temperature	0–45°C (32–113°F)	
Working Temperature	0–45°C (32–113°F)	
Communication	RS485 + CAN; Dry contacts; TCP/IP (monitoring via LAN)	
STANDARDS AND COMPLIANCE		
Compliant with the following standards	UL1973, UL9540A, IEC62619, IEC62477, IEC62620, ICC-ES AC156, EN61000-6-2/-6-4, UN38.3	



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