

Vertiv™ PowerDirect 7100 Energy

4th Generation of -48 VDC Hybrid Solutions



Benefits

At Vertiv, we're committed to sustainable, efficient, and reliable power systems that adapt to your network and energy needs. The Vertiv™ PowerDirect 7100 Energy delivers:

- Hybrid-Ready Design— Supports solar, grid, generator, and battery inputs to reduce reliance on fossil fuels.
- High-Efficiency— Rectifiers and solar converters.
- Load Shifting— Energy Logic helps shift usage to off-peak hours and reduce demand charges.
- Split Charging - enabling excess solar energy to go to battery for later use.
- Renewable Integration - Solar and with the Open DC port, support for wind, fuel cells and more is possible.

Operational Benefits

- Available in peak power configurations of 26kW (500A), 39kW (750A) & 52kW (1000A).
- Flexible Rack Options - Available in 19" and 23" racks.
- Modular & Interchangeable - Rectifiers and converters adapt easily across on-grid and off-grid sites.
- Smart Controls-Remote monitoring, LVD prioritization, and battery management.
- Built for Harsh Sites - Rugged design supports extreme environments.
- Expert Support - Backed by Vertiv services for training, startup, and long-term support.

Ideal for on-grid, bad-grid and no-grid sites, the Vertiv™ PowerDirect 7100 Energy system manages multiple energy sources with ease.

The Vertiv™ PowerDirect 7100 Energy is an integrated -48VDC hybrid power solution designed for on-grid, bad-grid, and off-grid sites. Built around the high-efficiency 4300W Vertiv™ rectifiers and solar converters, PowerDirect 7100 Energy enables seamless energy source switching and control. With the Vertiv™ NetSure™ Control Unit, users can manage fuel tank levels, configure TOU (Time of Use) schedules, support solar integrate with lithium battery systems for optimal performance and much more.

The system includes a flexible distribution panel with support for 2 to 400A circuit breakers, providing protection for both loads and batteries. Its modular design supports up to three load LVDs, allowing prioritization of critical loads without requiring oversized battery banks. Available in multiple rack and cabinet formats, Vertiv PowerDirect 7100 Energy adapts to a wide range of site needs and business objectives.

Application

Designed for hybrid applications, the Vertiv PowerDirect 7100 Energy streamlines management of solar, grid, and generator energy sources—delivering reliable and cost-effective power across challenging environments. Key site benefits include:

- Reducing the cost of expensive electrical utility bills with on-grid solar
- Extending battery life for bad-grid locations
- Managing generator-fuel and battery life in off-grid locations
- Utilizing solar energy when the use of generators is prohibitive



Vertiv™ PowerDirect 7100 Energy
500A - 23" Rack

Available Configurations

The Vertiv™ PowerDirect 7100 Energy is available in multiple rack sizes and system capacities to meet diverse deployment requirements.

Environmental		500 A System	750A System	1000A System
System	Current Capacity	500 A at 55°C, 21 kW at 42 VDC 400 A at 65°C, 16.8 kW at 42 VDC	750 A at 55°C, 31.5 kW at 42 VDC 600 A at 65°C, 25.2 kW at 42 VDC	1000 A at 55°C, 42 kW at 42 VDC 800 A at 65°C, 33.6 kW at 42 VDC
	Maximum Load, Standby	400 A, ~20 kW	600A, ~30kW	700A, ~35kW
	Suggested Maximum Load, CDC +Solar	208A, ~10kW	312A, ~15kW	416A,~ 20kW
	Suggested Maximum Load, Solar Only	80 A, ~3.2 kW	120A, ~ 5.76kW	160A, ~7.68 kW
System Operating Temperature				
Circuit Breakers	Thermal Magnetic	-40°C to 55°C/ -40°F to 131°F		
	Hydraulic Magnetic	-40°C to 65°C/ -40°F to 149°F		
Storage Temperature		-40°C to 75°C / -40°F to 167°F		
Relative Humidity		0% to 95%		
Altitude		3000 m / 9842 ft at full power		
Physical Characteristics				
Mounting Standard	Width	19" rack mounting / 23" rack mounting		23" rack mounting
	Depth	480mm Maximum		
	Hight MFU + R/S shelves	MFU 3U +1U for Cabling + 19" R/S shelves 1U /2U/ 3U or + 23" R/S shelves 1U /2U	MFU 4U +1U for Cabling + 19" R/S shelves 2U /3U/ 4U or + 23" R/S shelves 2U /3U	MFU 4U +1U for Cabling + 23" R/S shelves 2U /4U
	Hight Optional XDU	4U		
	Hight Optional Solar input Protection shelf (max 2pcs)	3U (supporting 5 S48 in 19" & 6 in 23") / 6U (supporting 10 S48 in 19" & 12 in 23")		
Standards Compliance				
Safety			EN62368-1, CE	
EMC			ETSI EN300 386	
Materials			ROHS, REACH	
Ingress Protection			IP20	