

Vertiv™ NetSure™ 7100 Hybrid



4th Generation of -48 VDC Hybrid Solutions



Benefits

At Vertiv we believe that being mindful of product design, development, use, and disposal are important to the longevity of our industry.

Checkout these environmentally conscious features and benefits of the NetSure™ 7100 Hybrid

- Solar/Hybrid Capability – Reduce your dependency on the grid and diesel fuel with the ability to leverage solar panels and other renewable energy sources
- ECO Mode – Optimize power efficiency at any load condition
- High Efficiency – Optimize total cost of ownership with 97% high efficiency eSure™ rectifiers and solar converters
- Energy Logic for On-Grid Solutions – Lower your electric bills by shifting energy use to off peak hours
- Rapidly deploy your equipment in harsh locations
- Leverage a common platform with interchangeable components that easily adapts to the diverse needs of your telecom network
- With universal power plugs, where rectifiers and solar converters are interchangeable, you have one solution that adapt from On-Grid traditional access solutions to Off-Grids with or without rectifiers and solar converters
- With an open Independent DC Port, one can integrated Wind Turbines, Fuel Cells and DC Generators
- Reduce the need for costly site visits with intelligent remote management over standard protocols
- Rest assured your power system will operate as desired. A team of Vertiv service experts is standing by to provide training, documentation, and reliable support.

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

The Vertiv™ NetSure™ 7100 Hybrid system provides an efficient -48 VDC energy solution, featuring industry leading 4300W high-efficiency Vertiv™ eSure™ solar converters and rectifiers from the NetSure™ 7100 family. With Vertiv's™ NetSure™ Control Unit, this system provides always on control to manage your energy resources and investment, such as monitoring your local fuel tank, implementing TOU (Time of Use) consumption schedules and integration with advanced smart batteries, including lithium.

Complimenting this compact solution is a distribution panel accepting circuit breakers up to 300A to protect the load and batteries. Vertiv continues with its best-in-class architecture to connect power to all batteries and support three load LVDs that enable service-load prioritization without investing in large battery arrays. This integrated solution is available in various configurations to suit your application, rack, cabinet and business objectives.

Application

The NetSure™ 7100 Hybrid for hybrid applications offers an approach to managing multiple energy sources, from generators to solar panels. The system is specifically designed to solve a variety of site challenges, including:

- 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™ NetSure™ 7100 Hybrid 500A
19" Rack



Vertiv™ NetSure™ 7100 Hybrid 500A
23" Rack

Technical Specifications

Electrical

500 A System

AC Input	Voltage, Nominal	Single Phase: 200 to 240 VAC / 3-Phase: 350 to 415 VAC (all AC values based on R48-4300E3)
	Voltage Range	Single Phase: 85 to 305 VAC / 3-Phase: 147 to 527 VAC
	Frequency	45 to 65 Hz
	Maximum Current	27 A per rectifier, to a low line voltage of 176 VAC
	Cable Entry	Top Entry, with rear 10mm ² terminal blocks
DC Solar Input	Voltage Range	70 to 420 VDC
	Maximum Input Current	24 A per solar converter
	Cable Entry	Top Entry, with rear 10mm ² terminal blocks
Solar Input Protection	CB and SPD	Optional, 2P CB with IEC 61643 Class II, Type 2 SPD
	Cable and Service Entry	Front, with 10mm ² terminal blocks
Independent DC Port	Voltage	-40 to -58 VDC
	Current	160A Maximum, Shunt with 80 or 200 ADC CB available
DC Output	Voltage, Nominal	-48 VDC
	Voltage Range	-20 to -58.5 VDC for solar / -20 to -58.5 VDC for rectifier
	Maximum Power	4320 W per solar converter / 4320 W per rectifier
	Temperature Performance	100% up to 55°C , derate from 55 to 80°C (solar) / 100% up to 45°C , derate from 45°C to 75°C (rectifier)

Distribution

Space	Primary MFU Space	468 mm for 23", 378 mm for 19"
	Optional XDU Space	468 mm for 23", 378 mm for 19"
	Cable Entry	Top, with front service access
Circuit Breaker	18 mm (per pole) Thermal Magnetic	1 pole: 3 to 63 ADC, 2 pole: 80 to 125 ADC
	13 mm (per pole) Hydraulic	1 pole: 2-63 ADC, 2 pole: 80-125 ADC , 3 pole: 150 ADC, 4 pole: 200 ADC
	Maximum Battery Breaker Count	6
	Optional High Current Battery Breaker	300A
DC Load Options	LVD Options	400A, 400:200A
	with Third Mono-Stable LVD Option	400:200:200A, 200:200:200A
	200A Load Shunt	Optional

Control & Monitoring

Control Module	Module Name	NCU - M830B
	Local Display	Yes
	Protocols	HTTPS, SNMP V2/V3, NTP, Modbus TCP/IP RTU-485 and EEM
Interface Board	IB2	Standard
	Modbus RTU-485	Standard
	Fuel Sensor, 4-20mA	Standard
	EIB	Optional
	IB4	Optional

Environmental

500 A System

System	Current Capacity	500 A at 55C, 21 kW at 42 VDC 400A at 65C, 16.8 kw at 42 VDC
	Maximum Load, Standby	400 A, ~20 kW
	Suggested Maximum Load, CDC +Solar	166 A, ~7 kW
	Suggested Maximum Load, Solar Only	70 A, ~2.9 kW

Environmental

System Operating Temperature	-40°C to 65°C / -40°F to 176°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 in, 23 in
	Depth	470 mm

Standards Compliance

Safety	EN62368-1, CE
EMC	ETSI EN300 386
Materials	ROHS, REACH
Ingress Protection	IP20