NetSure™ 5100 Series

DC Power System for Hybrid Energy Applications

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™ 5100

- 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 96% 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
- Wide Operating Temperature Range – Enable CapEx and OpEx savings on climate systems in outdoor enclosures that function at -40°C to +80°C, up to +65°C without derating.
- Energy Management – Reduce greenhouse gas emissions and operating cost with intelligent monitoring and control of generators, batteries and solar.
- Leverage a common platform with interchangeable components that easily adapts to the diverse needs of your telecom network.
- Rapidly deploy your equipment in harsh locations.
- 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 and predictable installation.

Ideal for on-grid, bad-grid and no-grid sites, the NetSure™ 5100 for hybrid applications manages multiple energy sources with ease.

Vertiv™ NetSure 5100 series for hybrid applications provides a compact -48 VDC power solution, featuring 2000 W high-efficiency eSure™ rectifiers and solar converters, the NetSure™ Control Unit, and a multi-functional battery and distribution unit. The distribution panel accepts circuit breakers up to 300 A to protect the load and batteries. With the support of up to three LVD levels, service-load prioritization minimizes battery investment without compromising the delivery of critical services. The NetSure 5100 series subrack can be equipped with +24 VDC converters with distribution to ease the transition from legacy +24 VDC to -48 VDC equipment. This integrated power solution is available in a number of configurations, and includes support for open port enabling winds and DC generators. Maximum value is achieved by leveraging the advanced energy management capabilities of the NCU, such as generator control, fuel monitoring, solar integration and ECO mode.

Application

The NetSure 5100 Series for hybrid applications offers a unified 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

NetSure™ 5100 24 kW, 23" Rack

NetSure™ 5100 6 kW, 19" Rack

Technical Specifications

AC Input	6 kW	10 kW	20 kW	12 kW	24 kW
Nominal	Single phase: 220 VAC to 240 VAC / 3-phase: 380 VAC to 415 VAC				
Operational	Single phase: 85 VAC to 300 VAC / 3-phase: 147 VAC to 520 VAC				
Frequency	45 Hz to 65 Hz				
Input connections	Terminal strip or circuit breaker				
Surge connections	Optional in configurations with input AC MCB				
DC Input					
Solar array	120 to 420 VDC				
Input connections	10 mm^2 Terminal strip				
Open port for -48V (optional)	—	30 to 160 A			
-48 VDC Output					
Nominal	-48 VDC				
Adjustable range	-42 VDC to -57.6 VDC				
Power	3 x 2 kW	5 x 2 kW	10 x 2 kW	6 x 2 kW	12 x 2 kW
Main unit DIN rail MCB Space for battery, load & AC	304 mm	391 mm		485 mm	
Extension unit DIN rail MCB Space for load & AC	—	436 mm		530 mm	
27 mm Thermal Magnetic MCB's	80 A to 125 A				
18 mm Thermal Magnetic MCB's	3 A to 63 A				
13 mm Hydraulic Magnetic MCB's	2A to 200A	2 A to 300 A			
+24 VDC Output					
Nominal	—			+24 VDC	
Adjustable range	—			+24 VDC to +28	
Power	—			3 x 1.5 kW	3-6 x 1.5 kW
18 mm Thermal Magnetic MCB's	—			3 A to 125 A	
13 mm Hydraulic Magnetic MCB's	—			2 A to 125 A	
Physical Characteristics					
Mounting	Standard 19" rack mounting			Standard 23" rack mounting	
Dimensions (H x W x D)	133.5 mm (3 U) x 482 mm x 330 mm	177.8 mm (4 U) x 482 mm x 367 mm	222.3 mm (5 U) [1] x 482 mm x 367 mm	177.8 mm (4 U) x 578 mm x 367 mm	222.3 mm (5 U) [2] x 578 mm x 367 mm
Weight (basic unit without rectifiers)	7 kg	17 kg	23 kg	19 kg	25 kg
Accessibility	Top cabled with front access				
Top Cover	Optional				
Environmental					
Temperature Operating Window	-40 °C to +80 °C				
Temperature Operation, Non-Derated	-40 °C to +65 °C [3]				
Standards Compliance					
Safety and EMC	EN 60950-1, CE and ETSI EN 300386 class B				
Environment	RoHS 6 and REACH				

Notes

1 To increase solar power delivery to 20 kW, an additional 10 kW, 1RU solar expansion shelf can be added. System power limit remains at 20 kW.
2 To increase solar power delivery to 24 kW, an additional 1RU (12 kW) or 2RU (24 kW) solar expansion shelf can be added. System power limit remains at 24kW.
3 12 kW system: -40 °C to +55 °C with >10 kW load, 24 kW system: -40 °C to +55 °C with >20 kW load.

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DC-00341 (R08/22)