NETSURE™ 5100 SERIES

48V DC Power System – 18 kW to 28.8 kW

VERTIV.

KEY FEATURES

- High Efficiency – 96.2% efficient eSure™ rectifiers ensure optimized total cost of ownership

- Solar/Hybrid Capability – allows for connection of solar panels and facilitates hybrid site solutions to reduce grid dependency

- Wide Operating Temperature Range – rectifiers function at -40 °C to +80 °C, up to +65 °C without de-rating, enabling CapEx and OpEx savings on climate systems in outdoor applications

- Decreases CapEx – supports up to two load disconnect levels (LVD) enabling optimization of battery capacity

- ECO Mode – an innovative function that enables significant energy savings, even at low load operation

- Remote Access – monitoring through web browsers, TCP/IP & SNMP as standard

- Battery Management – automatic battery tests in conjunction with battery midpoint or block voltage monitoring ensures early detection of battery problems

NetSure™ 5100 Series is designed for wireless access and fixed network applications offering unmatched temperature performance and high power density.

Description

The NetSure 5100 Series, a compact -48 volt 600 A DC power solution, features an advanced control unit, up to (29) positions for 2000 W high-efficiency eSure rectifiers or 1500 W -48 V to +24 V converters or 2000 W solar converters, a single or dual row distribution cabinet, and hybrid and solar connectivity panels. The power system supports 19"W and 23"W rack mounting and is available in a number of configurations, designed to work with a wide range of applications. The distribution section supports up to (52) 1 A to 300 A circuit breakers or 1 A to 100 A TPS/TLS fuses. Options for battery disconnect breaker positions and dual voltage (-48 V/+24 V) breaker positions are available. Multiple LVD levels are supported, allowing load prioritization in up to two steps.

Remote monitoring and control is supported through multiple web browsers including IE, Firefox, Chrome and Safari. Standard supported protocols include ModBus, SNMP V2 & V3. Encrypted security is provided by IPv6 and SNMPV3. Local access is provided through the controllers' keypad and TFT display.

NetSure DC Power systems from Vertiv™ offer extremely low failure rates, as well as low total cost of ownership. The 2000 W eSure rectifier delivers peak system efficiency above 96%. Maximum value is achieved by an advanced energy optimization function known as ECO mode, enabling significant energy savings even at low loads.

Application

NetSure 5100 Series DC power systems are designed for deployment in telecom access network applications requiring a reliable and high power density supply up to 600 A at 48 VDC or up to 400 A at +24 VDC. The high operating temperature (+65 °C) in conjunction with high operational efficiency has a positive impact on climate system dimensioning in outdoor enclosure applications. This DC power system is designed for insertion into EQ zone 4 compliant relay racks and cabinets.

NetSure 5100 Series 19.2 kW, 23" Rack (left)
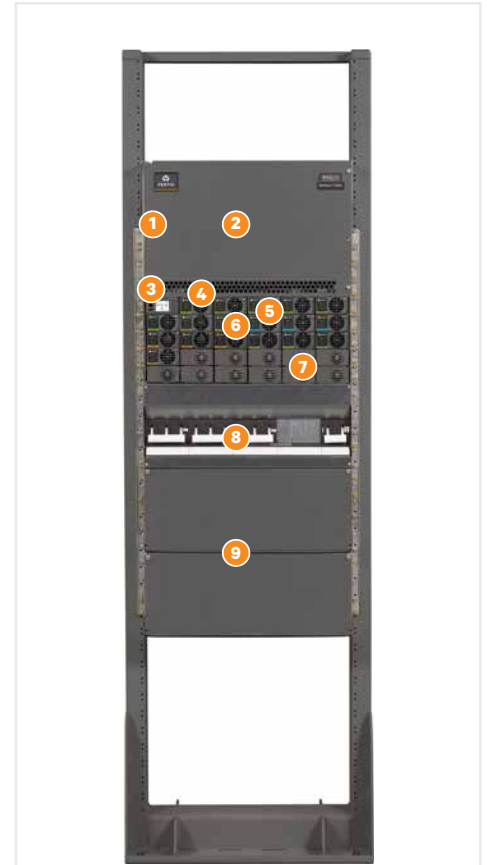*NetSure 5100 Series 18 kW, 19" Rack (right)*

Technical Specifications

INPUT	SINGLE ROW	TWO ROW
Nominal	Rectifier: 120 VAC, 208 VAC, 240 VAC Solar Converter: 140 VDC to 400 VDC	
Operational	Rectifier: (Single Phase) 85 VAC to 300 VAC Solar Converter: 120 VDC to 420 VDC	
Frequency	45 Hz to 65 Hz	
Input Connections	Molex, terminal strip or breaker (solar)	

OUTPUT		
Nominal	-48 VDC	
Adjustable Range	-42 VDC to -58 VDC	
Capacity (at 40 °C)	400 amps at -48 VDC plus redundancy	Up to 600 amps at -48 VDC plus redundancy Up to 400 amps at +24 VDC plus redundancy
Breakers	1A to 300 A E/M or E breakers	
Fuses	3 A to 100 A TPL/TLS and 18/100 A to 15 A GMT	

PHYSICAL CHARACTERISTICS		
Mounting	Standard 19" and 23" rack mounting	
Power System Cabinet Dimensions (H x W x D)	Distribution cabinet: 4U x 19" x 15" Module shelf: 1U x 19" x 15"	Distribution cabinet: 8U x 23" x 15" Module shelf: 1U x 23" x 15"
System Dimensions (H x W x D)	(51.9" up to 7.5') x (19" or 23") x 23.14" (with batteries)	(51.9" to 7.5') x (19" or 23") x 23.14" (with batteries)
AC Accessibility	Rear	
DC Accessibility	Top or rear cabled with front and top access	

ENVIRONMENTAL	
Operating	-40 °C to +65 °C (40 °F to +149 °F)
Storage	-40 °C to +85 °C (-40 °F to +185 °F)

STANDARDS COMPLIANCE	
Safety	UL 1801 Listed (cUL)
EMC	Conforms to FCC rules Part 15, Subpart B, Class B and EN55022 Class B, radiated and conducted
NEBS	Level 3

Ordering Information

CATALOG NUMBER	PART NUMBER	DESCRIPTION
NetSure 5100	582137100*	-48 VDC system, fully configured
R48-2000E3	1R482000E3	Rectifier, 2 kW, high efficiency, refer to separate data sheet
C4824-1500	1C48241500	Converter, 1.5 kW, high efficiency, refer to separate data sheet
S48-2000E3	1S482000E3	Solar converter, 2 kW, high efficiency, refer to separate data sheet
M830B	1M830BNA*	Control unit (NCU), refer to separate data sheet

* Overall base system or controller number

NetSure™ 5100 Series Hybrid, 28.8 kW, 23" Rack with 2 Row Distribution

OVERVIEW

1. Relay Rack
2. Two Row Distribution Panel
3. NetSure Control Unit, M830B
4. eSure Rectifier, R48-2000e3
5. -48 V to +24 V Converter, C4824-1500
6. Solar Converter, S48-2000e3
7. Blank Cover
8. Hybrid Panel
9. Solar Panel