

NetSure™ 7100 Series

DC Power System



Key Features

- Indoor seismic Zone 4 rated enclosure option, 84"H x 28"W x 28"D
- High Efficiency — 96.5% efficient eSure rectifiers ensure optimized total cost of ownership
- Modular Design — simple to install and operate; allows incremental cost-effective system growth
- Advanced Controller — offers battery management, site monitoring and configuration management
- Multiple AC Input Configurations – single or three phase input from 208 to 277/480 VAC
- Remote Access – Supports HTTPS with multiple browsers, network element management via Modbus or SNMP (v2 or v3)
- Dual Port Option – allows permanent Ethernet connection with DHCP and automatically converts the front access port to the default IP user access Ethernet port
- Front Accessible — allows for easy installation, additions and maintenance
- Safety Compliance — NEBS Level 3 certified; UL Listed to UL subject 1801
- New ultra-high density 3500 watt rectifiers provide 438 amps in 1RU of rack space, up to 2500 amps per bay.

Versatile DC power solution with high efficiency eSure™ rectifiers and converters, modular distribution, and advanced control and monitoring accepts single or three-phase input up to 277/480 VAC.

Description

The modular NetSure™ 7100 Series power system with 3500 watt or 2000 watt rectifiers and 1500 watt DC to DC converters provides up to 4000 amps of current for -48 volt systems with up to 520 amps at +24 volts. The basic components of the power system include the NetSure Control Unit (NCU), module mounting shelf assemblies which house the rectifiers and converters, and a modular distribution cabinet.

The NetSure 7100 power system contains a powerful, microprocessor-based control system capable of monitoring and controlling up to 60 rectifiers and converters. The NCU controller provides a full color LCD display, which can be activated at the touch of a keypad.

Each shelf can accommodate up to six plug'n'play rectifiers, which are controlled by the NCU. Additional shelves can be added as load requirements increase. The 2000 watt rectifiers and 1500 watt -48 VDC to +24 VDC converters are housed in shelves that occupy 1 RU. Each shelf accommodates rectifiers in all six positions and converters in three positions.

The NetSure 7100 can be expanded to up to three distribution bays for a total capacity of 4000 amps and up to twelve distribution panels. Each NetSure 7100 distribution cabinet is modular by row and position.



NetSure™ 7100

Four distinct distribution cabinet sizes are available to accommodate from one to four distribution panels. This allows the system to be configured in relay racks of various heights for installation in low-profile sites or atop batteries or other equipment to make more effective use of floor space. Several distribution panels are available offering different combinations of distribution positions, low voltage disconnect and battery disconnect options.

Distribution device options include 1 amp to 300 amp bullet-style circuit breakers, 3 amp to 125 amp TPS-style fuses in plug-in bullet-style holders, 100 amp to 800 amp GJ/218-style circuit breakers, 70 amp to 250 amp TPL-B-style fuses and 70 amp to 600 amp TPH-style fuses. These devices can be configured for both -48 V load and battery disconnect and +24 V load (bullet devices only). A GMT fuse module is also available.

Application

The NetSure 7100 system is ideal for wireless, and wireline applications, including cell sites, MTSOs, small COs, datacenters, co-locations, huts, vaults and enclosures.



High-Efficiency eSure™ Rectifiers
R48-3500e3 (left)
R48-3500e (center) &
R48-2000e3 (right)

Technical Specifications (System)

System Features

System Voltage, Nominal	-48 VDC (-42.0 VDC to -58.0 VDC range)
Output Voltage, Secondary	+24 VDC (+24.0 VDC to +28.0 VDC range)
Input Voltage	Single Phase: 208/240/277 VAC (277 VAC for 3500 W rectifiers only) Three Phase: 208 VAC or 277/480 VAC (277/480 VAC for 3500 W rectifiers only)
Control	Microprocessor (NCU)

Rated Output Capacity

Bay, Rectifier/Converter	2500 amps (48VDC) and 520 amps (24VDC)
Bay, Distribution	2000 amps (48 VDC) and 520 amps (24 VDC)
Rectifier	3500 W (R48-3500e3 or R48-3500) or 2000 W (R48-2000e3)
Shelf	438 amps (3500W rectifiers) or 250 amps (2000W rectifiers)
Distribution Panel	600 amps

Physical Characteristics

Framework Type	Rail-mount (can be mounted in an enclosure or relay rack)
Mounting Width	23 inches
Mounting Depth	20 inches, 9 inch front projection
Access	Front access for installation, operation and maintenance

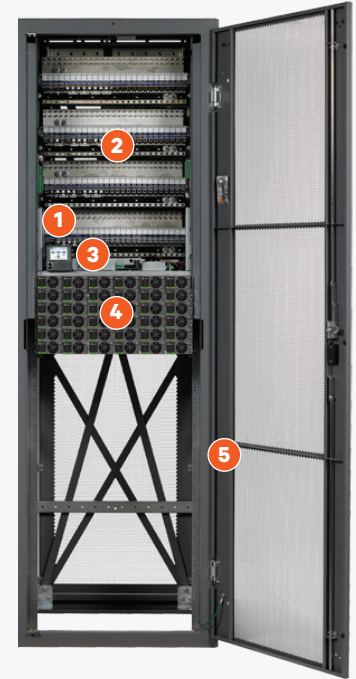
Environmental

Operating Temperature	-40 °F to 104 °F (-40 °C to 40 °C) continuous operation
Storage	-40 °F to 185 °F (-40 °C to 85 °C)
Humidity	0% to 95% relative humidity, non-condensing
Ventilation	Rectifiers and converters are fan-cooled front to rear
EMI/RFI Suppression	Conforms to FCC rules Part 15, Subpart B, Class B and EN55022 Class B, radiated and conducted
Safety Compliance	UL Listed 1801, cUL, NEBS Level 3

Ordering Information

Part Number	Description
582127000	NetSure™ 7100 DC power system
1M830DNA	NCU controller
1R483500E3	3500 W eSure rectifier, 1RU height
588705400	Power shelf for 1RU 3500W rectifiers
1R483500E	3500 W eSure™ rectifier, 3RU height
588705000	Power shelf for 3 RU 3500 W rectifiers
1R482000E3	2000 W eSure rectifier, 1RU height
1C48241500	1500 W -48 VDC to +24 VDC converter
588705300	Power shelf for 1 RU (2000 W) rectifiers and converters

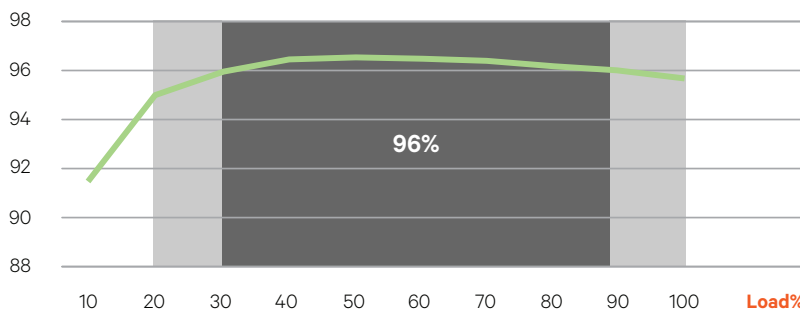
System Elements



-48 VDC NetSure™ 7100

1. AC Connection Panel (both sides)
2. DC Distribution Cabinet
3. NetSure Control Unit
4. Rectifiers/Converters
5. Relay Rack or Enclosure

% Efficiency



R48-3500e3 Efficiency Curve at 230 VAC Nominal