

NetSure™ 4015

30 kW 400V DC Power and Control Sub-Rack



KEY FEATURES

- Up to 30 kW capacity (15 kW N+1)
- Hot-pluggable rectifiers.
- AC input: 380 VAC, 400 VAC or 480 VAC, 3 phase.
- Connections for up to:
 - – (2) load distribution sub-racks.
 - – (5) battery trays.
- 6U high, 19" mounting.
- UL Recognized (US & Canada), CE Marked.

Additional Information

- VertivCo.com/400VDC
- NetSure™ 4015 System Data Sheet
- Load Distribution Sub-Rack Data Sheet
- Battery Tray Data Sheet
- System Application Guide
- NetSure 4015 Pre-Quote Form



A self-contained power conversion assembly that can be deployed in a customer-provided rack or factory installed as part of a complete system.

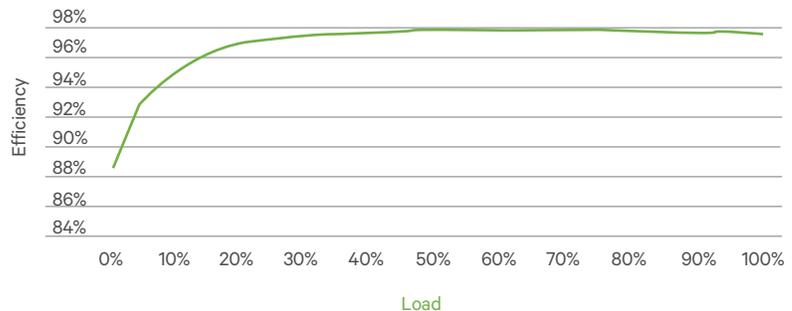
Description

The 400V DC Power and Control Sub-Rack is the foundation of the NetSure 4015 DC power system. A single, 3-phase AC input terminal feeds two rectifier slots, and each phase includes a class II surge protection device (SPD). The sub-rack contains up to (2) 15 kW 400V DC rectifiers with output connected to a common bus, and includes main system control elements for safe and reliable system operation. Two versions of the sub-rack are available depending on the grounding topology selected: a standard high resistance mid-point ground (+/- 200V DC, HRMG) or optional negative pole ground (+400V DC, NPG) arrangement.

The main ACU+ controller provides power system control, local/remote alarm management, data acquisition and advanced battery and energy management. Low voltage disconnect (LVD) functionality is provided to remotely trip battery circuit breakers and protect batteries against over-discharge. If equipped with optional temperature probe(s), the controller can support battery charge temperature compensation. Temperature probe(s) may also be designated to monitor ambient air temperature and/or battery temperature.

The controller has a local LCD display, keypad and Ethernet port for access to the comprehensive web page with SNMP capability for remote system management. If specified for HRMG, the controller section also contains the ground fault monitoring hardware and algorithms to alert users to ground faults in the system.

DC output connections are available for up to two NetSure 4000 Series 400V DC Distribution Sub-Racks or for customer use. Up to five NetSure 4000 Series 400V DC Battery Trays can be connected for backup. Customer provided batteries can also be accommodated. A front-access system shutdown button is provided to quickly isolate the critical bus from all power sources. The Power and Control Sub-Rack takes up only 6U of rack space and fits into a standard 19" IT rack.



eSure R400-15000e Efficiency

Technical Specifications

SYSTEM INPUT	
Nominal Voltage	380 VAC, 400 VAC, 480 VAC; 3 phase, 4 wire
Voltage Range	Operating range: 260 VAC to 530 VAC Full power: 304 VAC to 530 VAC; Derated: 260 VAC to 304 VAC
Frequency	45 Hz to 65 Hz
Power Factor	.99 @ 100% load
Inrush Current	Peak value < 1.5 times peak value of maximum steady state input current
Surge Protection	SPD Class II
Rectifier Circuit Breaker	40 A each
Upstream Breaker	63 A @ 400 VAC, 50 A @ 480 VAC; at 30 kW full power (recommended)

SYSTEM OUTPUT	
Voltage Range	290 VDC to 400 VDC adjustable
Power	30 kW maximum @ Vout > 336 VDC
Voltage Regulation	0.5% for full operating range
Grounding Configurations	<ul style="list-style-type: none"> High resistance mid-point ground (HRMG) with ground fault detection Negative pole ground (NPG)
Efficiency	Peak: 97%

COMMUNICATION	
Interfaces	RS232, RS485, CAN, Ethernet, USB
Protocols	HTTP, TCP/IP, SNMP
Digital Inputs/Outputs	4 / 4
Temperature Probes	2 (analog input)

ENVIRONMENTAL	
Operating Temperature	Full rating: -5 °C to +35 °C
Cooling Method	Front to back forced air
Heat Rejection	900 W (3070 BTU/hr) maximum
Relative Humidity	0% to 95% non condensing
Elevation	Up to 3000 m (10,000') at full power
Audible Noise	< 55 dB(A)
EMI	EN 300 386, Class A and FCC Part 15, Class A
RoHS	RoHS compliant (pending)

MECHANICAL	
Dimensions (H x W x D)	6 RU x 483 mm x 724 mm (6 RU x 19" x 28.5")
Weight	30 kg (65 lbs), no rectifiers
Cabling Details	Top: input AC and output DC; Top or bottom: battery

SAFETY	
Safety Agencies	UL Recognized per UL 60950 (cUR for Canada) CE Marking per low voltage directive (EN 60950) and the EMC directive

Ordering Information

LIST NUMBER	PART NUMBER	DESCRIPTION
	584000300	NetSure™ 4015 DC Power System
11	58400030011	Power and Control Sub-Rack - HRMG (High Resistance Mid-point Ground)
12	58400030012	Power and Control Sub-Rack - NPG (Negative Pole Ground)

Overview

Power and Control Sub Rack Front View

Power and Control Sub Rack Rear View

1. Ethernet port
2. ACU+ controller
3. System shutdown button
4. (2) Rectifier slots
5. (2) Rectifier AC breakers
6. Input AC terminal block
7. SPD, class II
8. (5) Battery termination points
9. (2) DC output termination points