

# NETSURE™ 802 SERIES

DC Power System



## KEY FEATURES

- NEBS Level 3 certified
- Single frame design provides power conversion, distribution, control and monitoring in a small footprint
- Patented, laminated internal bus work improves DC cable routing options
- Modular distribution design includes built-in automatic monitoring for all distribution devices
- Integrated internal DC bus, in combination bays, eliminates eliminates costly overhead busses and eases plant expansion
- Integrated LMS1000 design features a distributed I/O architecture, an internet port and web page to simplify monitoring of internal/external equipment
- Controller backplane accepts plug-in alarm cards and LMS I/O cards
- Optional integrated AC Power Distribution Service Cabinet (PDSC) for protected bulk AC service feeds with 22 or 65 kAIC breakers
- TCP/IP, SNMP, Ethernet, standard modem optional
- Supports distributed and bulk plant architectures

The expanded NetSure™ 802 Series introduces separate, stand-alone power and distribution bays complementing the system's compact combination bays and integrating easily with existing AC infrastructure.



*Combination Power and Distribution Bay*



*Power Bay with Distribution Bay*



*Back of Power Bay*

## Description

The expanded NetSure 802 Series offers solutions to meet the needs of any central office, Mobile Telephone Switching Office (MTSO) or data center deployment. NetSure 802 combination bays still provide reliable, efficient power and distribution in a compact footprint, while new stand-alone power and distribution bays can be used together or in combination with other systems to deliver maximum flexibility. NetSure 802 power bays can be paired with high-efficiency rectifiers and can replace 200 and 400 amp ferro rectifiers—with a single breaker for each rectifier—without disrupting the existing AC infrastructure. All models are backward compatible with existing systems.



NetSure™ 802  
Power Bay



NetSure 802  
Combination Bay



200A Ferro Retrofit  
Power Bay



400A Ferro Retrofit  
Power Bay

### Centralized Architecture: Stand-Alone Power and Distribution Bays

The NetSure 802 system’s new, individual power bays and distribution bays can be paired with high-efficiency eSure™ rectifiers and configured to meet any application requirement, including ferro retrofits. Power bays are available with individual AC feeds or may be bulk fed using an existing power distribution service cabinet (PDSC) by simply rerouting existing cabling and using existing breakers—with a separate breaker for each rectifier. That means shutting down a breaker to service or replace a rectifier impacts only that rectifier. Web pages in the LMS1000 monitoring system have been upgraded to offer new features. There are three power bays to choose from, and the bays can be mixed and matched to suit specific applications. Those three options are:

- Bulk Feed (Main Bay = 58214000004, Sup Bay = 58214000014)
- 400A Ferro Retrofit (Main Bay = 58214000003, Sup Bay = 58214000013)
- 200A Ferro Retrofit (Main Bay = 58214000005, Sup Bay = 58214000015)

### Distributed Architecture: Combination Bays

The proven NetSure 802 combination bays provide power and distribution in the same bay, retaining the internal busses originally introduced in this product line. These bays also may be configured with new high-efficiency eSure rectifiers and are available with individual AC feeds (480V or 208V options) or may be bulk fed using Vertiv™’s side-by-side PDSC. The web interface for the LMS1000 monitoring system has been upgraded for ease of use.

### Ferro Retrofits

Vertiv’s NetSure 802 power bays are set up to allow reuse of existing AC infrastructure for 200 and 400 amp ferro rectifiers—the most popular ferros still in service. These bays, with each rectifier assigned to its own breaker, are useful for deployments with existing PDSCs or when the preference is to have the AC circuit breakers remote from the system. Ferro retrofit applications also allow reuse of existing main battery termination bars.

### Distribution Options

DISTRIBUTION ELEMENT	COMBINATION BAY	DISTRIBUTION BAY
<b>TPS/TLS Fuses or Bullet Circuit Breakers</b>	48	24
<b>100-250A Circuit Breakers</b>	24	48
<b>300-400A Circuit Breakers</b>	12	24
<b>70-600A TPL Fuses</b>	12	24
<b>450-600A Circuit Breakers</b>	8	16
<b>800A TPL Fuses</b>	8	16
<b>800A Circuit Breakers</b>	4*	8*

\*For each 800 Amp circuit breaker deployed there is space on the bus for one two-pole or two single-pole circuit breakers.



*Bulk Feed Bay  
Power Bay*



*eSure™ R48-12000Le (486534003)  
High-Efficiency Rectifier*



*NetSure™ 802 Power Bay Replaces  
Five 400 amp Ferro Rectifiers*

## Power Bays for New Construction

For new applications, the NetSure 802 bulk feed bay keeps AC infrastructure costs to a minimum. Configured with NetSure 802 distribution bays, this will provide power plants up to 16,000 amps—and can be factory-configured up to 26,000 amps.

## Rectifier Options

There are three rectifier options for the NetSure 802, each backward compatible to all NetSure 802 bays as well as the original Lorain® Power Systems (LPS). These are:

- Standard (92.6%) 480V AC, 200 amp rectifier
- eSure high-efficiency (95.7%) 208V AC, 200 amp rectifier
- eSure high-efficiency (96.1%) 480V AC, 200 amp rectifier

## Smaller Footprint, Higher Efficiency

Either NetSure 802 configuration - stand-alone bays or combination bays - reduces the footprint from ferro rectifiers significantly. Vertiv™'s high density power bays are just 24 inches wide, 30 inches deep and 84 inches tall. A single NetSure 802 (58214-000003) power bay replaces five 400 amp ferro rectifiers in the floor space of two legacy ferros, occupying a 60% smaller footprint. That space savings, coupled with the reduced energy consumption achieved with high-efficiency rectifiers and reduced cooling costs, provide tremendous operating cost savings over time.

## Technical Specifications

### SYSTEM FEATURES

<b>Nominal System Voltage</b>	408-528V AC (480 nominal) or 176-264V AC (208 nominal)
<b>Monitoring</b>	MCA controller with optional LMS1000 monitor

### OUTPUT CAPACITY

<b>Per System</b>	16,000A
<b>Power Bay (POB)</b>	2000A (nominal), 2200A (full current limit)
<b>Combination Bay</b>	Power 2000A (nominal), 2200A (full current limit) Distribution 2400A
<b>Distribution Bay (DOB)</b>	6000A

### PHYSICAL CHARACTERISTICS

<b>Dimensions (H x W x D), Weight</b>	Power Bay with Rectifiers:	84" x 24" x 30", 995 lbs.
	Combination Power and Distribution Bay	
	List 1 and List 11	93.5" x 24" x 30", 830 lbs.
	List 2 and List 12	84" x 24" x 30", 830 lbs.
	AC Distribution Bay (PDSC):	84" x 10" x 30", 190 lbs.
	Distribution Bay (DOB):	84" x 30" x 30", 850 lbs.

### ENVIRONMENTAL

<b>Operating Temperature</b>	0°C to +40°C (+32°F to +104°F)
<b>Storage Temperature</b>	-40°C to +85°C (-40°F to +149°F)
<b>Safety Compliance</b>	UL Listed (UL1801), CSA 22.2 (No. 225), c UL, NEBS Level 3

## Ordering Information

### PART NUMBER

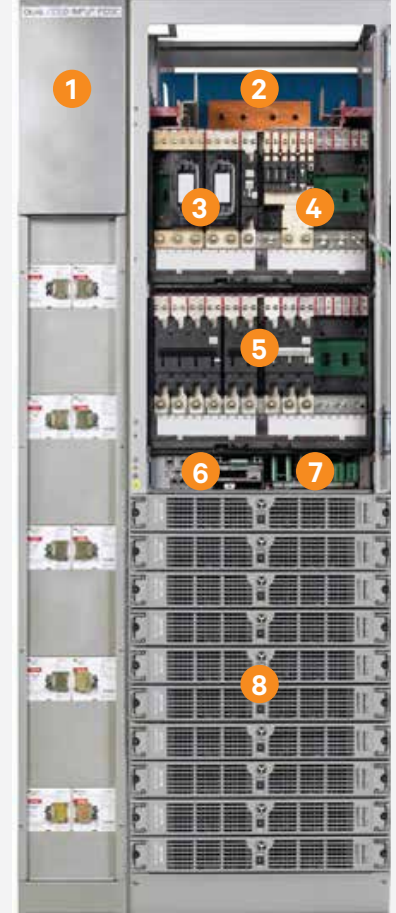
### DESCRIPTION

Main Bay	Sup Bay	Power & Distribution Bays
58214000001	58214000011	<b>Distributed Architecture, Combination Power and Distribution Bay.</b> Individual AC feeds for each rectifier located above the bay for easy access. Has internal bus, does not require overhead Main Battery Term Bars (MBTB) but may be used with them.
58214000002	58214000012	<b>Distributed Architecture, Combination Power and Distribution Bay.</b> Bulk feed, requires a list 30, 31 or 32 PDSC. Has internal bus, does not require overhead Main Battery Term Bars (MBTB) but may be used with them.
58214000003	58214000013	<b>400A Ferro Retrofit Power Bay</b> Accommodates existing AC infrastructure for 400A Ferros (100A @208 or 50A @480). Requires overhead MBTB.
58214000004	58214000014	<b>Bulk Feed Power Bay for New Centralized Applications</b> Requires 2 AC feeds (250A @208 or 100A @480). Requires overhead MBTB.
58214000005	58214000015	<b>200A Ferro Retrofit Power Bay</b> Accommodates existing AC infrastructure for 200A Ferros (60A @208 or 25A @480). Requires overhead MBTB.
	58214000016	<b>Distribution Bay</b> Used for distribution when power bays are deployed or for additional distribution when combination bays are used. Requires overhead MBTB.

### RECTIFIERS

486534003	High efficiency 200 amp eSure™ rectifier R4812000Le (208V AC)
486532603	High efficiency 200 amp eSure rectifier R4812000e (480V AC)
486532602	200 amp rectifier R4811600 (480VAC)

## OVERVIEW



1. PDSC (with individual AC breakers)
2. Distribution
3. TPL Fuse Holders
4. Bullet Breaker/Fuse Holder
5. GJ Breakers
6. LMS1000 Monitoring System
7. I/O Cards
8. eSure Rectifiers (486534003 or 486532603)