Vertiv™ NetSure™ Control Unit (NCU)

M830B, M830D

Benefits

- Easily monitor and adjust system parameters with a simple, graphic user interface accessed through an on-board color display or web pages supported by all major browsers.
- Securely manage your network with HTTPS and SNMPv3 encryption, as well as RADIUS User Authentication.
- Numerous connectivity options that support integration into a wide variety of networks – IPv4, IPv6, Modbus, SNMP, TL1, EEM, YDN23 and dual network port option for permanent and local craft port connections.
- Leverage advanced battery and generator management controls, including soft start, time controls, starter battery check with recharge, bad-grid equalization recovery, current limiting, fuel monitoring with theft alarms and support for multiple battery technologies, including lithium.
- Rapidly turn-up system with easily uploaded/downloaded pre-programmed configuration files.
- Decrease energy costs by effectively managing multiple energy sources such as generators and solar panels.
- Manage strain on the grid by adopting an energy-saving strategy like peak shifting or peak shaving.



M830B (left), M830D (right)

The advanced NetSure™ Control Unit (NCU) from Vertiv™ takes remote monitoring and control to the next level with a user-friendly color interface, secure connectivity, data statistics and multiple communication options.

Description

The NetSure™ Control Unit (NCU) is an advanced controller designed for a wide range of DC power applications, enabling remote monitoring and control of modern communication sites. The factory-installed (standard) or field-added NCU is backward compatible with existing NetSure power systems, controlling all aspects of the power chain, including AC mains, DC power plant, battery backup, diesel generator, and the local site environment. Optional interface boards enable the user to access an even greater set of site parameters.

Battery management features include temperature compensation, thermal runaway management, recharge current limit, reserve time prediction, and optional midpoint monitoring. Battery testing options include scheduled battery testing and short duration battery testing. Thresholds for battery current measurement, detailed alarms, inventory management and three LVD levels can be programmed easily through the controller. Control of rectifiers (24V, 48V and 400V) and converters (24V, 48V, 400V and solar) is possible with this hot pluggable module.

Expanded information and alarm data can be monitored or controlled via password protected and encrypted web browsers, including Apple Safari, Google Chrome, Microsoft Edge, and Mozilla Firefox. HTTPS encryption configurations are available to protect your network infrastructure against security breaches when communicating over the web.

Remote monitoring through the NCU enables cost saving techniques like Peak Shifting and Peak Shaving. When utility pricing is high during a predictable time frame, Peak Shifting allows you to plan a repeating routine to put rectifiers on standby and support the load with batteries or other energy sources instead. Shifting the load is scheduled to save energy and reduce operating costs. Peak Shaving is another energy-saving strategy for unpredictable utility cost fluctuations that allows operators to shift a site load in real time when demand spikes and the cost of electricity goes up.

Network element management support for data communication is available via standard protocols, including RADIUS User Authentication, SNMPv3 and modbus. RADIUS user authentication manages user access from a central server during human-to-machine communication. SNMPv3 encryption helps keep your data safe during machine-to-machine communications. Modbus device integration in industrial applications is also possible with the versatile NCU controller.

Patented Intelligent Load Management from Vertiv enables you to see power usage down to the fuse or circuit breaker level. To prevent site overload, load levels of each rack can be measured in relation to rack capacity. Rack load monitoring requires optional system distribution measurement devices for the fuse or circuit breaker positions.

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Vertiv™ NetSure™ Control Unit (NCU)

Technical Specifications

General	M830B	M830D
Power Supply	19 VDC to 60 VDC	
Power Consumption	18 W maximum, 4W typical	
Environmental		
Operating Temperature	-20°C to +65°C (nominal), -40°C to +75°C (extended conditions) / -4°F to +149°F (nominal), -40°F to +167°F (extended conditions)	
Relative Humidity	0 to 90%	
Standards Compliance		
Safety	IEC 60950-1, EN 60950-1, UL 60950-1	
EMC	EN 300 386, 2001 Class B; FCC Part 15, Class B	
Environment	CE; NEBS Level 3	
Mechanics		
Dimensions (H x W x D)	43.4 x 86 x 208 mm 1.65 x 3.41 x 8.33 inches	86.2 x 87 x 208 mm 3.41 x 3.42 x 8.33 inches
Standard Installation Methods	Hot pluggable in stand-alone or embedded power plants	
Weight	1 kg / 2.2 lbs	
Inputs/Outputs		
Display	128 x 160 Pixels TFT LCD	320 x 240 Pixels TFT LCD
Communication	RS232, RS485, Ethernet, USB (for software upgrades)	
Protocol	IPv4, IPv6, HTTPS, RADIUS User Authentication, SNMPv2, SNMPv3, EEM, SocTpe, Rsoc, Modbus	
Analog Inputs	2 battery currents, 1 load current, 1 bus voltage, 2 battery voltages, 2 temperatures, fuel level sensor and much more with additional interface boards	
Digital Inputs	1 input for status of surge protective device auxiliary contacts, 12 load fuses, 6 battery fuses, bi-stable contactor status	
Outputs	3 LVDs, (2) bi-stable and (1) mono-stable	



NetSure™ Control Unit User Interface



Web Interface Home Page

Ordering Information

Model	Description
M830B	NCU3.0+ controller, 1 x 2 RU
M830D	NCU3.0+ controller, 2 x 2 RU
Optional Interface Board	
EIB	5 relay outputs, 8 DC voltages, 3 DC currents, 2 temperatures
IB1	4 relay outputs, 4 digital inputs
IB2	8 relay outputs, 8 digital inputs, 2 temperatures
IB4	1 additional Ethernet port
Supervision Modules	
SMDU	4 shunts, 1 voltage input, 20 fuse alarms, and 2 LVD controls
SMDU+	25 shunts, and 25 fuse alarms
SMTEMP	Temperature concentrator with up to 8 temperature sensors
SMDUH	20 Hall effect sensors to measure DC distribution load current from 0 A to 100 A

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