

Vertiv™ NetSure™ Solar Converter Shelf



Benefits

- Lower operating costs by supplementing grid or generator power at on-grid, off-grid, or bad-grid sites with Vertiv's solar converter shelf
- Easily integrate with most existing DC power systems while saving rack space
- Maximize efficiency with high-density 4300W Vertiv eSure Solar Converters and MTTP technology, optimized for wide temperature ranges
- Reduce site visits through remote access with the NetSure system controller
- Ensure reliable performance with proven NetSure™ technology and expert Vertiv support

Achieve your environmental goals and reduce operating costs by augmenting your existing DC power system with the exceptional solar power density of a Vertiv™ NetSure™ Solar Converter Shelf utilizing Vertiv's eSure™ 4300W solar converter modules.

The NetSure™ Solar Converter Shelf is a compact -48 VDC solution that can easily be added to an existing telecom DC power plant from any manufacturer. Built on the proven reliability of the Vertiv™ eSure™ Solar Converter, the NetSure Solar Converter Shelf delivers industry-leading system density and full power up to 55°C. It can support one or two 4300W solar converter modules, features front access connections and is available in two versions.

The **Add-on** version of the shelf is for use with an existing *third-party* DC power system and *includes* a mini-NCU M831A controller to manage the solar shelf.

The **Expansion** version of the shelf is for use with an existing *Vertiv* DC power system and *utilizes the existing host* NCU controller to manage the DC power systems and the solar shelf.

For larger applications, multiple **Expansion** shelves can be connected to a single Vertiv™ DC power system. **Expansion** shelves can also be added to an **Add-on** shelf to increase system capacity. Please see the manual for additional information.

Application

With the **rising** cost of energy and the environmental need to minimize carbon emissions, adding the Vertiv™ NetSure™ Solar Converter Shelf to your existing network infrastructure is a cost-effective way to decrease operating costs.

- Reduce energy consumption at on-grid sites
- Minimize battery stress and replacement at bad-grid sites
- Decrease generator run-time, maintenance and fuel costs at off-grid sites



	Specification	Add-On Shelf	Expansion Shelf
Electrical			
DC input	Voltage Range	70 VDC to 420 VDC	70 VDC to 420 VDC
	Maximum Current	48 A (24A per Converter)	48 A (24A per Converter)
DC output	Voltage, Nominal	-48 VDC	-48 VDC
	Voltage Range	-20 VDC to -58.5 VDC	-20 VDC to -58.5 VDC
	Maximum Power	8640 W	8640 W
	Maximum Current	163 A	163 A
	Peak Efficiency	97.3%	97.3%
	Temperature Performance	100% up to 55C , derate from 55C to 80C	100% up to 55C , derate from 55C to 80C
Distribution			
-48 VDC Distribution	Circuit Breaker Type	High density - UL 1077	High density - UL 1077
	Circuit Breaker Positions	2	2
	Circuit Breaker Rating	125 A	125 A
Monitoring			
Control module	Module Name	M831A	-
	Local Display	Yes	-
	Protocols	HTTPS, SNMP V2/V3, Modbus RTU-485 and EEM	-
	Analog Inputs	1	-
	Digital Inputs	5	2
Rated output capacity			
System	Power Capacity	8640 W	8640 W
	Current Capacity	163 A	163 A
Converter	Power Capacity	4320 W	4320 W
	Current Capacity	81.5 A	81.5 A
Environmental			
	Operating Temperature	-40°C to 75°C / -40°F to 167°F	-40°C to 75°C / -40°F to 167°F
	Storage Temperature	-40°C to 80°C / -40°F to 176°F	-40°C to 80°C / -40°F to 176°F
	Relative Humidity	0% to 95%	0% to 95%
	Altitude	3000 m / 9842 ft at full power	3000 m / 9842 ft at full power
Physical characteristics			
	Color	Grey	Grey
	Height	44.45 mm / 1.75 in	44.45 mm / 1.75 in
	Width	482.6 mm / 19 in	482.6 mm / 19 in
	Depth	425 mm / 16.73 in	425 mm / 16.73 in
	Empty Weight (Approximate)	9.5 kg (20.9 lbs)	9.0 kg (19.8 lbs)
	Mounting width	482.6 mm or 584.2 mm / 19 in or 23 in	482.6 mm or 584.2 mm / 19 in or 23 in
	Mounting depth	Flush, 127 mm / 5 in recess or wall	Flush, 127 mm / 5 in recess or wall
	Cable Entry	Front	Front
Standards compliance			
	Safety	IEC/UL 62368	IEC/UL 62368
	EMC	ETSI EN300 386 V1.6.1, EN55022 Class A conducted and Class B radiated, Telcordia GR-1089-CORE issue 6: 2009	ETSI EN300 386 V1.6.1, EN55022 Class A conducted and Class B radiated, Telcordia GR-1089-CORE issue 6: 2009
	Environment	REACH, RoHS, WEEE	REACH, RoHS, WEEE
	Ingress Protection	IP20	IP20

Part number	Description
1S484300E4	Vertiv™ eSure™ 4.3 kW Solar Converter
BMK2257103-002	Vertiv™ NetSure™ 8.6 kW Solar Converter Add-On Shelf with SPD (883500086000)
BMK2257103-004	Vertiv™ NetSure™ 8.6 kW Solar Converter Expansion Shelf with SPD (883500086001)
KET10306/3	Temperature Sensor, 10 m
BMY201457-4	MC4 Red-Black 4 mm2 Power Cables, 5 m
BMY201457-5	MC4 Red-Black 4 mm2 Power Cables, 10 m
BMY201457/2	MC4 Red-Black 6 mm2 Power Cables, 20 m
RAV501230-1	AC Voltage Monitoring Relay
BMG908423-21	IP65 Solar Protection Box, w CB and SPD for 1 S48
BMG908423-22	IP65 Solar Protection Box, w CB and SPD for 2 S48
BMG908423-23	IP65 Solar Protection Box, w CB and SPD for 3 S48
BMY2257103-1S	NCU to Expansion Shelf CAN bus Kit, 3 m
BMY2257103-3S	CAN bus Extension Shelf Kit, 7 cm
BMY2257103-4S	CAN bus Terminator Kit
BMY1100004-8S	DC Cabinet Mounting Kit
BMP903110/1	Replacement: M831 Mini-NCU Controller
NFS854114-125	Replacement: 125A UL-1077 Output Breaker
NGC60122/2	Replacement: Class II SPD
NGC60122/1	Replacement: Class I+II SPD (field upgrade)

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