Vertiv[™] NetSure[™] Inverter System



Stand-Alone AC Power System

Benefits

- Leverage existing DC power infrastructure with easy to add subrack.
- Minimize energy consumption with 95.2% peak efficiency in normal AC-AC mode.
- Maximize site availability thanks to zero transfer time from grid to battery.
- Manage the Netsure inverter system locally or remotely through the Vertiv[™] NetSure[™] Control Unit (NCU).

Service

- Get the job done right by leveraging a professional team.
- Rest assured your inverter system is installed properly and configured optimally.
- Reduce risk of long-term damage and protect your warranty.
- Ensure system settings are optimized and meet your standards.

The stand-alone Vertiv[™] NetSure[™] Inverter System allows you to support AC loads from existing DC power systems and batteries.

Improve reliability and save space

The stand-alone NetSure™ Inverter system delivers outstanding reliability, modularity and scalability. With market leading inverter module density, the system supports your AC loads in a compact footprint. Rectifiers and inverters are connected to the same battery bank which not only facilitates zero second transfer time should commercial AC fail, but also saves space and reduces financial investment.

Grow as you go

System sizes range from 5 kVA to 24 kVA and accommodate modular 1 kVA/1 kW AC inverters that allow you to add inverters as your loads increase. They are available with bulk distribution in 19" wide shelves or NEMA outlets in 19" or 23" wide shelves. NetSure inverter systems can be used in conjunction with any brand or vintage of DC power system that has sufficient capacity to support the additional inverter load.

While primarily designed for field installation with an existing DC power system, these systems can also be ordered from the factory mounted in a variety of relay racks with no cabling.

Minimize energy loss

The Vertiv[™] NetSure[™] Inverter Series is designed for efficient operation at any load condition. All models are supported by high-efficiency Vertiv[™] eSure[™] inverters that deliver up to 95.2% efficiency across a wide operating range. Powering your AC loads with eSure[™] technology helps keep energy loss to a minimum and ensures your network is supported by an extremely reliable backup system.





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Technical Specifications

	5 kVA Bulk Output	6 kVA Bulk Output	10 kVA Bulk Output	12 kVA Bulk Output	15 kVA Bulk Output	20 kVA Bulk Output
	584130100 List 01	584130100 List 01E	584130100 List 03	584130100 List 03E	584130100 List 05	584130100 List 05
AC Input						
Voltage, Nominal	100 VAC to 125 VAC	100 VAC to 125 VAC	100 VAC to 125 VAC	100 VAC to 125 VAC	-	-
Voltage Range	96 VAC to 140 VAC	96 VAC to 140 VAC	96 VAC to 140 VAC	96 VAC to 140 VAC	-	-
Single or Three-Phase	Single Phase	Single Phase	Single Phase	Single Phase	-	-
Frequency	50 Hz or 60 Hz	50 Hz or 60 Hz	50 Hz or 60 Hz	50 Hz or 60 Hz	-	-
Maximum Current	60 A	72A	120 A	144 A	-	
Power Factor	>0.99 @ 100% linear load	>0.99 @ 100% linear load	>0.99 @ 100% linear load	>0.99 @ 100% linear load	-	-
Total Harmonic Distortion	< 5% @ 100% linear load	< 5% @ 100% linear load	< 5% @ 100% linear load	< 5% @ 100% linear load	-	-
DC Input						
Voltage, Nominal			40 to 58.5 VDC,	48 VDC (nominal)		
Voltage Range				o 58.5 VDC		
Maximum Current	115 A	138 A	230 A	276 A	345 A	460 A
AC Output	11071	100 / 1	200 / (27071	0.071	100 / 1
•						
Voltage, Nominal				VAC		
Frequency				or 60 Hz		
Maximum Power	5 kVA/ 5kW	6 kVA/6 kW	10 kVA/10 kW	12 kVA/12 kW	15 kVA/15 kW	20 kVA/20 kW
Maximum Current	42 A	50.4 A	84.5 A	100.8 A	126 A	168 A
Peak Efficiency			95.2% AC/A	C, 92% DC/AC		
Temperature Performance		Full po	ower up to +45 °C (+113 °F) at in	put voltage range of 100 VAC - 12	5 VAC	
Over Capacity (fault clearing)			105%-125% @40-48V (15 s), 12	25%-200% (1 s), >200% (120 ms)		
Load Outputs			Bulk O	output(s)		
AC Load Distribution						
Circuit Breaker Type			Rocke	r Switch		
Circuit Breakers	1	1	2	2	4	4
Circuit Breaker Rating	•	·		0 A	·	·
			,	0 N		
Monitoring						
Module Name			M	330B		
Local Display			128 x 160 Pi	xels TFT LCD		
Communication			RS232, RS485, Ethernet, U	JSB (for software upgrades)		
Protocols		IPv4, IPv6, HTT	PS, RADIUS User Authentication	n, SNMPv2, SNMPv3, EEM, SocTpe	e, Rsoc, Modbus	
Analog Inputs	2 batter	y currents, 1 load current, 1 bus v	oltage, 2 battery voltages, 2 tem	peratures, fuel level sensor and m	uch more with additional interfa	ce boards
Digital Inputs		1 input for status of surge	protective device auxiliary conta	acts, 12 load fuses, 6 battery fuses	, bi-stable contactor status	
Outputs			3 LVDs, (2) bi-stable	e and (1) mono-stable		
Security			HTTPS, SNMPv3 encryption a	nd RADIUS User Authentication		
IB2 Interface Board			8 relay outputs, 8 digit	al inputs, 2 temperatures		
IB4 Interface Board			Additional I	Ethernet port		
SMTEMP Board		C	ptional temperature concentrate	or with up to 8 temperature sensor	rs	
Environmental						
Operating Temperature			-20°C to +65°C/-4°F to +149°F	F (full power up to +45°C/113°F)		
Storage Temperature			-40°C to 70°C	/ -40°F to +158°F		
Relative Humidity	<95%					
Altitude			3000 m, 10000 ft. (2000	0 m, 6562 ft. at full power)		
Physical Characteristics						
Color			G	irey		
Height	3.5" /88.9 mm	5.25"/133.4 mm	7"/177.8 mm	8.75"/222.3 mm	12.25"/311.2 mm	14"/355.6 mm
Width	17.5"/444.5 mm	17.5"/444.5 mm	17.5"/444.5 mm	17.5"/444.5 mm	17.5"/444.5 mm	17.5"/444.5 mm
Depth	16.6"/421.6 mm	16.6"/421.6 mm	16.6"/421.6 mm	17.4"/442.0 mm	17.4"/442.0 mm	17.4"/442.0 mm
Weight (Approximate)	21 lbs	32 lbs	32 lbs	54 lbs	53 lbs	63 lbs
Module Slots	5	10	10	15	15	20
Mounting Width	J	10		19"	10	20
Access				Cabling		
			Rear	Cabinly		
Standards Compliance						
Safety			UL 1778; CUL, C	SA C22.2 NO.107.3		
EMC		IEC/EN 61000-4-2; IEC/EN 610	000-4-5; GR-1089; FCC Part 15 (C	CFR47); Conducted Emission: Class	s A; Radiated Emission: Class B	
Ingress Protection			IF	20		
1 kVA/1 kW Inverter Module						
			1112	0-100		
Part Number						
Part Number Warranty			1112	0-100		

Vertiv[™] NetSure[™] Inverter Series, 19" Stand Alone - NEMA Output



Category	List 07	List 08
AC Input		
Voltage, Nominal	100 V	AC to 125 VAC
Voltage Range	96 VA	C to 140 VAC
Single or Three-Phase	Sir	gle Phase
Frequency	50 H	dz or 60 Hz
Maximum Current	45A	90A
Power Factor	>0.99 @	100% linear load
Total Harmonic Distortion		00% linear load
DC Input		
Voltage, Nominal	40 to 58.5 VC	C, 48 VDC (nominal)
Voltage Range		C to 58.5 VDC
Maximum Current	115 A	230A
AC Output	no A	20071
•		20.140
Voltage, Nominal		20 VAC
Frequency		Iz or 60 Hz
Maximum Power	5 kVA/ 5kW	10 kVA/10 kW
Maximum Current	42 A	84.5 A
Peak Efficiency		/AC, 92% DC/AC
Temperature Performance		input voltage range of 100 VAC - 125 VAC
Over Capacity (fault clearing)		, 125%-200% (1 s), >200% (120 ms)
Load Outputs	NE	MA Outlets
AC Load Distribution		
Circuit Breaker Type	Тор	gle Switch
Circuit Breakers	4	8
Circuit Breaker Rating	15 A	15 A
Monitoring		
Module Name		M830B
Local Display	128 x 160	Pixels TFT LCD
Communication	RS232, RS485, Etherne	t, USB (for software upgrades)
Protocols	"IPv4, IPv6, HTTPS, RADIUS User Authentica	ion, SNMPv2, SNMPv3, EEM, SocTpe, Rsoc, Modbus"
Analog Inputs	2 battery currents, 1 load current, 1 bus voltage, 2 battery voltages, 2 to	emperatures, fuel level sensor and much more with additional interface boards
Digital Inputs	1 input for status of surge protective device auxiliary co	ntacts, 12 load fuses, 6 battery fuses, bi-stable contactor status
Outputs	3 LVDs, (2) bi-sta	ble and (1) mono-stable
Security	HTTPS, SNMPv3 encryptio	n and RADIUS User Authentication
IB2 Interface Board	8 relay outputs, 8 di	gital inputs, 2 temperatures
IB4 Interface Board		al Ethernet port
SMTEMP Board	Optional temperature concentr	ator with up to 8 temperature sensors
Environmental		
Operating Temperature	-20°C to +65°C/-4° E to +14	9°F (full power up to +45°C/113°F)
Storage Temperature		C / -40°F to +158°F
Relative Humidity	40 0 10 70	<95%
Altitude	3000 m 10000 ft (2)	000 m, 6562 ft. at full power)
	3000 11, 10000 12 (2)	700 III, 0502 It. at Iuli powery
Physical Characteristics		
Color	0511/00.0	71 (77) 0
Height	3.5" /88.9 mm	7"/177.8 mm
Width	17.5"/444.5 mm	17.5"/444.5 mm
Depth	16.6"/421.6 mm	16.6"/421.6 mm
Weight (Approximate)	21 lbs	32 lbs
Module Slots	5	10
Mounting Width	19"	19 ^a
Access	Rear Cabl	ing/Front Outlets
Standards Compliance		
Safety	UL 1778; CUL	, CSA C22.2 NO.107.3
EMC	IEC/EN 61000-4-2; IEC/EN 61000-4-5; GR-1089; FCC Part 15	(CFR47); Conducted Emission: Class A; Radiated Emission: Class B
Ingress Protection		IP20
1 kVA/1 kW Inverter Module		
Part Number	1	120-100
Warranty		
Standard Warranty	437	ar Warranty



	6 kVA Outlet Output	6 kVA Outlet Output	12 kVA Outlet Output	12 kVA Outlet Output	18 kVA Outlet Output	24 kVA Outlet Output
	584130100 List 02	584130100 List 02E	584130100 List 04	584130100 List 04E	584130100 List 06	584130100 List 06
AC and DC Input						
Voltage, Nominal			100 VAC	to 125 VAC		
Voltage Range			96 VAC 1	to 140 VAC		
Single or Three-Phase			Single	e Phase		
Frequency			50 Hz	or 60 Hz		
Maximum Current	72 A	72 A	144 A	144 A	216 A	288 A
Power Factor			>0.99 @ 100	0% linear load		
Total Harmonic Distortion			< 5% @ 100	0% linear load		
DC Input						
Voltage, Nominal			40 to 58.5 VDC.	48 VDC (nominal)		
Voltage Range				to 58.5 VDC		
Maximum Current	138 A	138 A	276 A	276 A	414 A	552 A
	10071	10071	27071	27071		30271
AC Output						
Voltage, Nominal) VAC		
Frequency			50 Hz	or 60 Hz		
Maximum Power	5.76 kVA/5.76 kW (per NEC breaker de-rating)	5.76 kVA/5.76 kW (per NEC breaker de-rating)	11.5 kVA/11.5 kW (per NEC breaker de-rating)	11.5 kVA/11.5 kW (per NEC breaker de-rating)	18 kVA/18 kW (per NEC breaker de-rating)	23 kVA/23 kW (per NEC breaker de-rating
Maximum Current	50.4 A	50.4 A	100.8 A	100.8 A	151.2 A	199.2 A
Peak Efficiency			95.2% AC/A	C, 92% DC/AC		
Temperature Performance		Full po	ower up to +45 °C (+113 °F) at in	put voltage range of 100 VAC - 12	5 VAC	
Over Capacity (fault clearing)			105%-125% @40-48V (15 s), 12	25%-200% (1 s), >200% (120 ms)		
Load Outputs			NEMA	A Outlets		
AC Load Distribution						
Circuit Breaker Type			Toggl	e Switch		
Circuit Breakers	4	4	8	8	16	16
Circuit Breaker Rating			1	5 A		
Monitoring						
Module Name			M	830B		
Local Display				ixels TFT LCD		
Communication				JSB (for software upgrades)		
Protocols		IPv4, IPv6, HTT		n, SNMPv2, SNMPv3, EEM, SocTp	e. Rsoc. Modbus	
Analog Inputs	2 batter			peratures, fuel level sensor and m		ce boards
Digital Inputs				acts, 12 load fuses, 6 battery fuses		
Outputs				e and (1) mono-stable		
Security				and RADIUS User Authentication		
IB2 Interface Board			8 relay outputs, 8 digit	al inputs, 2 temperatures		
IB4 Interface Board			Additional	Ethernet port		
SMTEMP Board		0	ptional temperature concentrate	or with up to 8 temperature senso	rs	
Environmental						
			20°C +- +65°C/ / ° 5 +- +1/0°1	F (full power up to +45°C/113°F)		
Operating Temperature Storage Temperature				/ -40°F to +158°F		
Relative Humidity				95%		
Altitude				0 m, 6562 ft. at full power)		
			3000 111, 10000 12. (2000	o III, 0302 It. at Iuli power)		
Physical Characteristics						
Color				Grey		
Height	3.5" /88.9 mm	5.25"/133.4 mm	7"/177.8 mm	8.75"/222.3 mm	12.25"/311.2 mm	14"/355.6 mm
Width -	21.1"/535.9 mm	21.1"/535.9 mm	21.1"/535.9 mm	21.1"/535.9 mm	21.1"/535.9 mm	21.1"/535.9 mm
Depth	16.6"/421.6 mm	16.6"/421.6 mm	16.6"/421.6 mm	18.0"/458.7 mm	18.0"/458.7 mm	18.0"/458.7 mm
Weight (Approximate)	24 lbs	37 lbs	37 lbs	61 lbs	61 lbs	73 lbs
Module Slots	6	12	12	18	18	24
Mounting Width				23"		
Access			Rear Cabling	g/Front Outlets		
Standards Compliance						
Safety			UL 1778; CUL, C	SA C22.2 NO.107.3		
EMC		IEC/EN 61000-4-2; IEC/EN 610	00-4-5; GR-1089; FCC Part 15 (0	CFR47); Conducted Emission: Clas	s A; Radiated Emission: Class B	
Ingress Protection			IF	P20		
1 kVA/1 kW Inverter Module						
Part Number			1112	20-100		
Warranty						
rrai i allity						

Vertiv[™] NetSure[™] Inverter Series, Stand-Alone



Ordering Information

19" Wide Systems with Bulk Distribution Output

58413010001	5 kVA system with 5 inverter slots and one (1) 70A ditribution breakerww
58413010001E	6 kVA system with 10 inverter slots and one (1) 70A distribution breaker
58413010003	10 kVA system with 10 inverter slots and two (2) 70A distribution breakers
58413010003E	12 kVA system with 15 inverter slots and two (2) 70A distribution breakers
58413010005	15 kVA system with 15 inverter slots and four (4) 70A distribution breakers (DC INPUT ONLY)
58413010005E	20 kVA system with 20 inverter slots and four (4) 70A distribution breakers (DC INPUT ONLY)
19" Wide Systems with NEMA Outlet Output	
58413010007	5 kVA system with 5 inverter slots and four (4) NEMA outlets

23" Wide Systems with NEMA Outlet Output

58413010002	6 kVA system with 6 inverter slots and four (4) NEMA outlets
58413010002E	6 kVA system with 12 inverter slots and four (4) NEMA outlets
58413010004	12 kVA system with 12 inverter slots and eight (8) NEMA outlets
58413010004E	12 kVA system with 18 inverter slots and eight (8) NEMA outlets
58413010006	18 kVA system with 18 inverter slots and sixteen (16) NEMA outlets
58413010006E	24 kVA system with 24 inverter slots and sixteen (16) NEMA outlets

Modules

58413010008

11120100	1 kVA/1 kW inverter module
SXA1100035/1	Blank inverter module slot cover
1M830BNA10034162	NCU with software for Stand-Alone inverter systems *

^{*} One required per stand-alone inverter system - does not occupy an inverter slot. If the stand-alone inverter system is being connected to a NetSure DC power system with an NCU, it is recommended that the NCU in the DC power system be a NCU RevB

10 kVA system with 10 inverter slots and eight (8) NEMA outlets

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