

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 inverter system locally or remotely through the 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 Vertiv™ 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 in 19" wide with bulk outputs or 23" wide with NEMA outlets. 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.



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 05E |
| 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 @ 120 VAC | 45 A | 54 A | 90 A | 108 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 | 48 VDC | | | | | |
| Voltage Range | 42 VDC to 58 VDC | | | | | |
| Maximum Current @ -48DC | 115 A | 138 A | 230 A | 276 A | 345 A | 460 A |
| AC Output | | | | | | |
| Voltage, Nominal | 120 VAC | | | | | |
| Frequency | 42 Hz or 58 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/AC, 92% DC/AC | | | | | |
| Temperature Performance | Full power up to +45 °C (+113 °F) at input voltage range of 100 VAC - 125 VAC | | | | | |
| Over Capacity (fault clearing) | 105%-125% @40-48V (15 s), 125%-200% (1 s), >200% (120 ms) | | | | | |
| Load Outputs | Bulk Output(s) | | | | | |
| AC Load Distribution | | | | | | |
| Circuit Breaker Type | Rocker Switch | | | | | |
| Circuit Breakers | 1 | 1 | 2 | 2 | 4 | 4 |
| Circuit Breaker Rating | 70 A | | | | | |
| Monitoring | | | | | | |
| Module Name | M830B | | | | | |
| Local Display | 128 x 160 Pixels TFT LCD | | | | | |
| Communication | RS232, RS485, Ethernet, USB (for software upgrades) | | | | | |
| Protocols | 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 | | | | | |
| Security | HTTPS, SNMPv3 encryption and RADIUS User Authentication | | | | | |
| IB2 Interface Board | 8 relay outputs, 8 digital inputs, 2 temperatures | | | | | |
| IB4 Interface Board | Additional Ethernet port | | | | | |
| SMTEMP Board | Optional temperature concentrator with up to 8 temperature sensors | | | | | |
| Environmental | | | | | | |
| Operating Temperature | -20°C to +65°C/-4 °F to +149 °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 m, 6562 ft. at full 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 | 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 | 19" | | | | | |
| Access | Rear Cabling | | | | | |
| 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 | 11120-100 | | | | | |
| Warranty | | | | | | |
| Standard Warranty | 1 Year 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 06E |
| AC Input | | | | | | |
| Voltage, Nominal | 100 VAC to 125 VAC | | | | | |
| Voltage Range | 96 VAC to 140 VAC | | | | | |
| Single or Three-Phase | Single Phase | | | | | |
| Frequency | 50 Hz or 60 Hz | | | | | |
| Maximum Current @ 120VAC | 54 A | 54 A | 108 A | 108 A | 162 A | 207 A |
| Power Factor | >0.99 @ 100% linear load | | | | | |
| Total Harmonic Distortion | < 5% @ 100% linear load | | | | | |
| DC Input | | | | | | |
| Voltage, Nominal | 40 to 58.5 VDC, 48 VDC (nominal) | | | | | |
| Voltage Range | 50 VDC to 58.5 VDC | | | | | |
| Maximum Current @ -48 VDC | 138 A | 138 A | 276 A | 276 A | 414 A | 529 A |
| AC Output | | | | | | |
| Voltage, Nominal | 120 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/AC, 92% DC/AC | | | | | |
| Temperature Performance | Full power up to +45 °C (+113 °F) at input voltage range of 100 VAC - 125 VAC | | | | | |
| Over Capacity (fault clearing) | 105%-125% @40-48V (15 s), 125%-200% (1 s), >200% (120 ms) | | | | | |
| Load Outputs | NEMA Outlets | | | | | |
| AC Load Distribution | | | | | | |
| Circuit Breaker Type | Toggle Switch | | | | | |
| Circuit Breakers | 4 | 4 | 8 | 8 | 16 | 16 |
| Circuit Breaker Rating | 15 A | | | | | |
| Monitoring | | | | | | |
| Module Name | M830B | | | | | |
| Local Display | 128 x 160 Pixels TFT LCD | | | | | |
| Communication | RS232, RS485, Ethernet, USB (for software upgrades) | | | | | |
| Protocols | 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 | | | | | |
| Security | HTTPS, SNMPv3 encryption and RADIUS User Authentication | | | | | |
| IB2 Interface Board | 8 relay outputs, 8 digital inputs, 2 temperatures | | | | | |
| IB4 Interface Board | Additional Ethernet port | | | | | |
| SMTEMP Board | Optional temperature concentrator with up to 8 temperature sensors | | | | | |
| Environmental | | | | | | |
| Operating Temperature | -20°C to +65°C/-4°F to +149°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 m, 6562 ft. at full 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/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 | 11120-100 | | | | | |
| Warranty | | | | | | |
| Standard Warranty | 1 Year Warranty | | | | | |

Ordering Information

19" Wide Systems with Bulk Distribution Output

| | |
|--------------|---|
| 58413010001 | 5 kVA system with 5 inverter slots and one (1) 70A distribution breaker |
| 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) |

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

| | |
|------------------|--|
| 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