

ONEAC Sinergy™ SE Series UPS (4 kVA - 20 kVA): Protecting key electronic equipment from power disruptions and inconsistencies will have a positive financial impact on your business systems. The Sinergy SE Uninterruptible Power Supply (UPS) provides power conditioned on-line double conversion technology to handle irregularities in the electrical system, to make brief power disruptions harmless, and to provide battery back-up to bridge prolonged power outages.

Advanced technology for superior protection

Many electrical devices and systems respond to power line faults, such as voltage or frequency variations, short interruptions and outages, by malfunctioning. In the case of data processing systems, this often causes processing errors and data loss. Or in extreme cases, permanent software and hardware damage. Any of these situations can be costly to your business.

You can protect your devices and systems effectively against disruptions with ONEAC's Sinergy SE Series Power Conditioned UPS. Compact dimensions, low noise emissions, and superior design ensure the Sinergy SE Series UPS can be easily integrated into most any working environment.



True on-line operation — load is decoupled from the AC power:

- Power failure bridged completely without interruption
- Consistently good quality power to your equipment
- Safe operations of sensitive loads

Power Conditioning provides bullet proof protection to loads

- Uses low impedance isolation transformer on output
- No data loss, no system crashes
- No equipment damage from surges and noise
- Absolutely clean ground reference

Scalable power and runtimes

- 4, 8 and 15 kVA units upgradeable to 6, 10, and 20 kVA
- Runtimes expandable to 8 hours or more

Small, light, low noise emissions, modern office design:

- Problem-free installation
- Unit supplied ready for hardwired connection

Integrated, automatic bypass:

- Prevent dropping the connected load in a short circuit and overload situation

Simple operation:

- No operator control required while running
- Clear indication of status and load by LEDs, as by acoustic alarms if faults occur

Quick setup:

- ONEAC Sinergy SE Series UPSs are ready for action. Just hardwire the UPS to the mains, connect the UPS to the PC or network, and switch it on.

On-line protection for data, PCs and networks:

- Protects data and hardware from voltage fluctuations and power failure.

Computer interface:

- Allows equipment to communicate with the UPS

Optional UPS communications software and accessories for intelligent responses during prolonged power failures:

- MopUPS®PROFESSIONAL
- Integration with SNMP networks using ManageUPS®NET for UPS monitoring
- Integrates UPS and computer into one system
- No data loss, no system crashes
- Configurable computer and multi-server shutdown
- Compatible with all major operating systems

Safety approvals:

- UL1778, cUL

2-year warranty:

- Your best assurance of product quality and reliability.

On-line topology

The Sinergy SE Series UPS operates according to the on-line principle — connected loads are isolated from the irregularities of the AC power supply without interruption and supplied instead by the UPS.

The rectifier, which converts the AC voltage to DC voltage, supplies the inverter with power during normal operations. At the same time, the battery is maintained at full charge or is recharged if needed.

The inverter generates the sine-wave output AC voltage from the DC voltage. The AC voltage level and frequency are extremely stable.

Sinergy's double voltage-conversion decouples the load from the AC power supply and protects it from the following irregularities:

- Voltage variations
- Frequency variations
- Overvoltage/Under-voltage
- Voltage peaks
- Interference voltages
- Distorted voltage waveforms

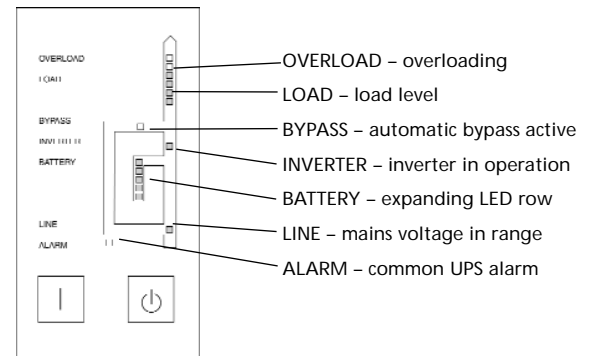
If a short interruption or mains failure occurs, the battery supplies the inverter instantly and without interruption. When power is restored during battery operation, the changeover to normal operation also takes place without interruption.

As no switchover is necessary when power fails or is restored (on-line operation), this UPS ensures even sensitive loads can be operated safely and without problems. If severe or prolonged overloading occurs, the UPS automatically switches to the integrated bypass. The AC power at the UPS input is now available.

Comprehensive indicator and control panel

The comprehensive front panel LEDs provide a visual indication of the units' status at any given time:

All operational and load conditions are indicated by light emitting diodes (LEDs) on the front panel display. The UPS also sends an audible warning signal at 4-second intervals, indicating critical operational conditions. The lower the battery reserve, the shorter the audible alarm interval. Allowing plenty of time to save your precious data.



Indicator and control panel for the Sinergy SE Series UPS

Protecting PCs and networks in a variety of applications

The ONEAC Sinergy SE Series UPS provides reliable support for:

- Workstations
- Servers and networks (LAN, WAN, etc.)
- Data processing equipment and systems
- Telecommunication systems
- Voice over IP
- ISDN systems
- Business system machinery
- Computer centers
- Air-traffic control systems
- Safety systems in power stations
- Broadcasting studios
- Transport systems
- Medical imaging and diagnostic equipment
- Whole Store POS systems
- Retail information systems
- Semiconductor test equipment
- Semiconductor manufacturers
- Process controls
- Control centers/SCADA systems
- Drives in continuous production processes
- Production and automation systems
- And more

Communications interface

All Sinergy SE Series UPSs are equipped with an interface designed for communication with a computer when using ONEAC's optional MopUPS software. If the connected computer is informed of a power failure via the interface, it can shut down its programs and the operating system in a controlled and orderly manner within the battery's back-up time.

The computer/server requires an RS232 interface for communication with the UPS. Optional connectivity accessories include MopUPS software, available for all major operating systems and networks, and ManageUPSNET.

All Sinergy SE Series UPSs are equipped with a combined interface COM port allowing serial communication when used with ONEAC MopUPS communications software. In combination with the additional UPS software, this serial interface enables a host of key monitoring functions.

Sinergy SE Series is generator friendly

The true on-line double conversion topology easily supports as low as 1:1.3 generator applications with a 3:1 crest factor. Frequency and voltage regulation means that even older generator transfer switches can be accommodated without problems.

Frequency auto-detection, coupled with an extremely broad input voltage tolerance window, allow for a wide variety of utility line variances without interfering in the UPS operation and support of your critical loads. Cascading circuit protection means that after an extended overload, the UPS will engage a self-protection sub-routine locking out the inverter & transferring the load to bypass source utilizing the appropriate feeder circuit protective device. Outstanding load and overload tolerances can be endured for minutes and hours, not seconds!

Sinergy SE offers scalable sizing and runtime

All ONEAC Sinergy SE UPS runtimes can be expanded by adding additional battery packs. Back-up times of several hours can be achieved in any load operation by using SBPE cabinets. For even longer support, non-matching cabinets can be used to reach 8 hours or more.

Sinergy SE allows you to build on your original investment. In order to accommodate application growth the 4 kVA model can easily be upgraded to 6 kVA, the 8 kVA to 10 kVA, and the 15 kVA to 20 kVA, without shipping the unit off-site.

Optional Accessories for ONEAC Sinergy SE UPS

Sinergy Isolated Contacts Interface Card:

An auxiliary interface suitable for Nortel PBX applications. It includes an isolated contacts interface card and an eight foot cable to connect the Sinergy SE UPS communications port to the PBX (part number for card and cable IF-ISOBASIC-02).

Emergency Mains Off (EMO) Adapter:

This adapter can accommodate a local EMO switch, a remote location switch or both. It features two independent circuits; one for controlling the EMO Adapter and one for a second EMO circuit. It creates Semi-S2 compliant isolation of all input power sources and complies with Semi-F47 sag requirements. Compatible with 4 - 20 kVA Sinergy SE Series UPS (part number 4-10 kVA: S2EMO-10K1P, 15-20 kVA: S2EMO-20K3P).

Power Distribution Units:

If your application and power distribution needs change in the future, optional Power Distribution Units (PDUs) are also available. The PDUs can easily be swapped on-site by a qualified electrician, offering the highest level of flexibility.

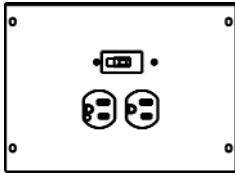
Connectivity:

MopUPSProfessional software enables a variety of responses to faults and other events that affect the UPSs and the equipment they protect:

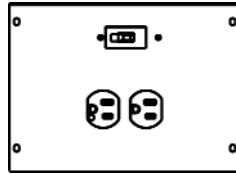
ManageUPSNET adapter provides web and SNMP based UPS monitoring. It can also be used as a server for multiple MopUPS clients in order to facilitate wide area network shutdowns from a single UPS.

Part Number	MopUPS SK-PR0MOP-02	ManageUPSNET AK-MUN2-02
System shutdown	•	
Event messaging via pager, email, network or SNMP traps	•	
Log events	•	
Run a command, script or batch file	•	
Web-based system management		•
Full SNMP client		•
Supports Terminal, Telnet, and FTP access		•

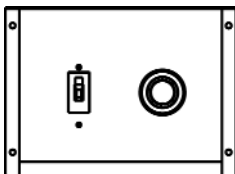
Sinergy SE Series Optional Power Distribution Units*



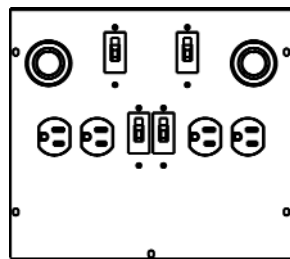
SPDU-0-2
For Sinergy SE Series
4 - 10 kVA Models



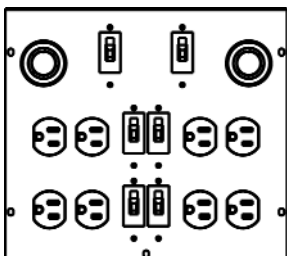
SPDU-2-0
For Sinergy SE Series
4 - 10 kVA Models



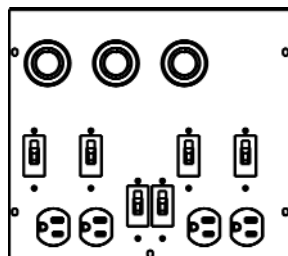
SPDU-1-0
For Sinergy SE Series
4 - 10 kVA Models



SPDU-2-4
For Sinergy SE Series
4 - 10 kVA Models



SPDU-2-8
For Sinergy SE Series
4 - 10 kVA Models



SPDU-3-4
For Sinergy SE Series
4 - 10 kVA Models

* Call factory for 15 and 20 kVA PDU options.

ONEAC SINERGY SE UPS: Common Specifications

Performance Characteristics

Nominal input voltage: 4-10 kVA - 208 V**, 15 & 20 kVA - 208 V

Nominal output voltage: 120, 208/240**

Surge voltage withstand capability: IEEEC62.4/A/B

Surge voltage let-through (max): less than 10 V Normal mode (L-N), less than 0.5 V Common mode (N-G) when subjected to 6kV ANSI/IEEE C62.41 Cat. A

Load power factor range (crest factor): 3:1

Load regulation response time: < 4 mS

Batteries: sealed, maintenance-free lead acid, VRLA

Recharge time to 60% available capacity: 5 - 8 hours

Input frequency tolerance: ± 5%

Cooling: Fan

Principle of operation: On-line, double conversion

Frequency: 50/60 Hz ± 5%, automatic frequency recognition

Frequency tolerance, normal operation: Output frequency synchronized with mains frequency

Frequency tolerance, power failure: ± 0.5% (internal frequency generator)

Distortion coefficient (linear load): <4%

Automatic bypass: integrated (4-20 kVA)

LEDs: UPS status, battery meter, load level

Alarms: Mains power, low battery, overload, on bypass

Admissible ambient temperature (normal operations): (10°C to +40°C)

Recommended operational temperature: (+15°C to +30°C) (for integrated batteries)

Storage temperature: -15°C to +40°C

Relative humidity: 20 to 90%, no condensation

Nominal Load Rating	4 kVA	6 kVA	8 kVA	10 kVA	15 kVA	20 kVA
Input	single phase	single phase	single phase	single phase	three-phase	three-phase
Input Voltage Tolerance (low, high)	208, 240 V**	208, 240 V**	208, 240 V**	208, 240 V**	208 V	208 V
Voltage Range	170- 276 V	170-276 V	176-276 V	176-276 V	170-276 V	177-276 V
Frequency (auto detect)	50/60 Hz ± 5%	50/60 Hz ± 5%	50/60 Hz ± 5%	50/60 Hz ± 5%	50/60 Hz ± 5%	50/60 Hz ± 5%
Nominal Current (amps)	33	33	59	55	38	48
Maximum Current (amps)	35	35	63	63	85	100
Power Factor	0.97	0.97	0.97	0.97	0.95	0.95
AC Output	4 kVA	6 kVA	8 kVA	10 kVA	15 kVA	20 kVA
Output Voltages (single-phase)	120, 208, 240 V	120, 208, 240 V	120, 208, 240 V	120, 208, 240 V	120, 208, 240 V	120, 208, 240 V
Frequency	50/60 Hz ± 0.5%	50/60 Hz ± 0.5%	50/60 Hz ± 0.5%	50/60 Hz ± 0.5%	50/60 Hz ± 0.5%	50/60 Hz ± 0.5%
Voltage Regulation	± 0.3%	± 0.3%	± 0.3%	± 0.3%	± 0.3%	± 0.3%
Voltage THD	< 4%	< 4%	< 4%	< 4%	< 5%	< 5%
Efficiency	> 86%	> 86%	> 90%	> 90%	> 85%	> 85%
Overload - for 1.5 seconds	130%	130%	130%	130%	130%	130%
- for 10 seconds	110%	110%	110%	110%	105%	105%
Mechanical	4 kVA	6 kVA	8 kVA	10 kVA	15 kVA	20 kVA
Maximum Height in Inches (mm)	31.5 (800)	31.5 (800)	38.0 (965)	38.0 (965)	46.5 (1181)	46.5 (1181)
Maximum Width in Inches (mm)	10.25 (260)	10.25 (260)	13.4 (340)	13.4 (340)	16.5 (419)	16.5 (419)
Maximum Depth in Inches (mm)	24.5 (622)	24.5 (622)	27.5 (699)	27.5 (699)	31.75 (806)	31.75 (806)
Net Weight in lbs (kg)	326 (148)	326 (148)	560 (254)	560 (254)	757 (343)	757 (343)
Ship Weight in lbs (kg)	356 (161)	356 (161)	590 (268)	590 (268)	787 (357)	787 (357)
Battery Data	4 kVA	6 kVA	8 kVA	10 kVA	15 kVA	20 kVA
Internal Batteries	Yes	Yes	Yes	Yes	No	No
Volts	240	240	240	240	—	—
Uses Battery Pack Part #	SBPE61	SBPE61	SBPE101	SBPE101	SBPE101	SBPE101
Battery Maximum Height in Inches (mm)	27.8 (705)	27.8 (705)	38.0 (965)	38.0 (965)	38.0 (965)	38.0 (965)
Battery Maximum Width in Inches (mm)	10.6 (270)	10.6 (270)	13.4 (340)	13.4 (340)	13.4 (340)	13.4 (340)
Battery Maximum Depth in Inches (mm)	22.5 (570)	22.5 (570)	26.4 (670)	26.4 (670)	26.4 (670)	26.4 (670)
Battery Net Weight in lbs (kg)	295 (134)	295 (134)	335 (152)	335 (152)	837 (380)	837 (380)
Battery Ship Weight in lbs (kg)	340 (154)	340 (154)	380 (172)	380 (172)	874 (396)	874 (396)

** 230 V or 240 V model available.

ONEAC SINERGY SE UPS: Individual Specifications

Sinergy Part #	kVA	Runtimes (half load/full load)	208 V 1-Phase Input	208 V, 120 V 1-Phase Output
SE41XA-01	4	31/13	HW	HW
SE41XA-01P2	4	31/13	HW	(2) 5-20R ea. w/ breaker
SE41XA-01P4	4	31/13	HW	(1) L6-30R w/breaker
SE41XA-01P5	4	31/13	HW	(2) L6-30R ea. w/breaker, (8) 5-20R ea. w/ breaker
SE41XA-01P6	4	31/13	HW	(2) L6-30R ea. w/breaker, (4) 5-20R ea. w/ breaker
SE41XA-01NT	4	31/13	HW	3) L6-30R ea. w/breaker, (4) 5-20R ea. w/ breaker features isolated contacts interface card and 8' cable to connect UPS to J4 on Nortel PBX
SE61XA-01	6	19/8	HW	HW
SE61XA-01P2	6	19/8	HW	(2) 5-20R ea. w/ breaker
SE61XA-01P4	6	19/8	HW	(1) L6-30R w/breaker
SE61XA-01P5	6	19/8	HW	(2) L6-30R ea. w/breaker, (8) 5-20R ea. w/ breaker
SE61XA-01P6	6	19/8	HW	(2) L6-30R ea. w/breaker, (4) 5-20R ea. w/ breaker
SE61XA-01NT	6	19/8	HW	(3) L6-30R ea. w/breaker, (4) 5-20R ea. w/ breaker features isolated contacts interface card and 8' cable to connect UPS to J4 on Nortel PBX
SE81XA-01	8	29/12	HW	HW
SE81XA-01P3	8	29/12	HW	(2) 5-20R ea. w/ breaker
SE81XA-01P4	8	29/12	HW	(1) L6-30R w/breaker
SE81XA-01P5	8	29/12	HW	(2) L6-30R ea. w/breaker, (8) 5-20R ea. w/ breaker
SE81XA-01P6	8	29/12	HW	(2) L6-30R ea. w/breaker, (4) 5-20R ea. w/ breaker
SE81XA-01NT	8	29/12	HW	(3) L6-30R ea. w/breaker, (4) 5-20R ea. w/ breaker features isolated contacts interface card and 8' cable to connect UPS to J4 on Nortel PBX
SE101XA-01	10	22/9	HW	HW
SE101XA-01P3	10	22/9	HW	(2) 5-20R ea. w/ breaker
SE101XA-01P4	10	22/9	HW	(1) L6-30R w/breaker
SE101XA-01P5	10	22/9	HW	(2) L6-30R ea. w/breaker, (8) 5-20R ea. w/ breaker
SE101XA-01P6	10	22/9	HW	(2) L6-30R ea. w/breaker, (4) 5-20R ea. w/ breaker
SE101XA-01NT	10	22/9	HW	(3) L6-30R ea. w/breaker, (4) 5-20R ea. w/ breaker features isolated contacts interface card and 8' cable to connect UPS to J4 on Nortel PBX

Sinergy Part #	kVA	Runtimes (half load/full load)	208 V 3-Phase Input	208 V, 120 V 1-Phase Output
SE153XA-01	15	NA	HW	HW
SE153XA-01BP	15	55/20	HW	HW
SE203XA-01	20	NA	HW	HW
SE203XA-01BP	20	45/15	HW	HW

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