

**ONEAC Sinergy® SE II Series Parallelable 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 II Uninterruptible Power Supply (UPS) features a power conditioned, online double conversion topology to handle irregularities in the electrical system, make brief power disruptions harmless, and 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 these disruptions with ONEAC's Sinergy SE II power conditioned parallelable UPS. Compact dimensions, low noise emissions, and superior design ensure the Sinergy SE II Series UPS can be easily integrated into most any working environment.



#### **True online operation — load is isolated from the AC power :**

- Bridges power failure completely without interruption
- Provides consistently good quality power to your equipment
- Safe operation of sensitive loads

#### **Low-impedance isolation transformer on output:**

- Provides power conditioned protection to the loads
- Protects equipment from surges and noise
- Clean ground reference

#### **Scalable power and runtimes:**

- 4 and 8 kVA units upgradeable to 6 and 10 kVA, respectively
- Parallel two 6, 8, 10 kVA UPSs to obtain 12, 16, or 20 kVA
- Extendable runtimes to 8 hours or more

#### **Low noise and small footprint :**

- Problem-free installation
- Unit supplied ready for hardwired connection
- Fits unobtrusively into any environment

#### **Integrated manual and automatic bypass:**

- Simplifies maintenance
- Optimizes reliability

#### **Comprehensive front panel control/indicators:**

- LCD screen shows status, runtimes and load conditions
- Audible alarm sounds if fault occurs
- No operator control required while running
- Provides detailed control

#### **Quick setup:**

- Hardwire the mains to the UPS, connect the UPS to the load, and switch it on

#### **Emergency Power Off (EPO):**

- Provides emergency shutdown of UPS.
- Integrates into room-wide EPO

#### **Online protection for data, PCs and networks:**

- Protects data and hardware from voltage transients and power failure

#### **Computer interface:**

- Allows equipment to communicate with the UPS
- Downloadable MopUPS® Express provided

#### **Field replaceable batteries:**

- Minimizes cost and downtime

#### **Optional UPS communications software and accessories:**

- Intelligent responses during prolonged power failures.
- MopUPS<sup>PROFESSIONAL</sup> for network shutdown and remote management
- Integration with SNMP networks using ManageUPS<sup>®</sup>NET for UPS and environmental monitoring
- Integrates UPS and computer into one system
- Configurable computer and multi-server shutdown
- Compatible with all major operating systems

#### **2-year warranty:**

- Your best assurance of product quality and reliability.

### Online topology

The Sinergy SE II Series UPS operates according to the online principle — connected loads are isolated from the irregularities of the AC power supply without interruption and are 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 sine-wave output AC voltage from 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

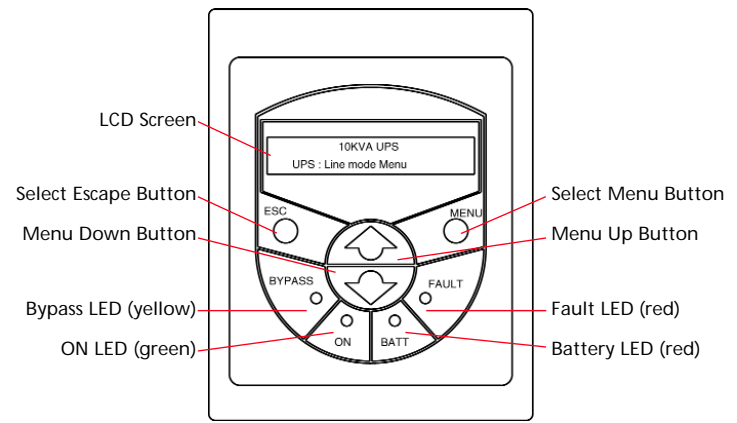
If a short interruption or mains failure occurs, the battery supplies the inverter instantly and without interruption. When power is restored during battery operation, the changeover to normal operation also takes place without interruption.

As no switchover is necessary when power fails or is restored (online operation), this UPS ensures even the most sensitive loads can be operated safely and without problems. If severe or prolonged overloading occurs, the UPS automatically switches to the integrated bypass to support the load.

### Comprehensive indicator and control panel

All operational and load conditions are indicated by the LCD screen. The comprehensive LCD screen shows: status, load, runtime, faults and menu controls. 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.

The comprehensive front panel LEDs provide a visual indication of the unit's status at any given time.



*Indicator and control panel for the Sinergy SE II Series UPS*

## Protecting PCs and networks in a variety of applications

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The ONEAC Sinergy SE II 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
- Whole Store POS systems
- Computer centers
- Air-traffic control systems
- Safety systems in power stations
- Retail information systems
- Transport systems
- Medical imaging and diagnostic equipment
- Business system machinery
- Broadcasting studios
- Semiconductor test equipment
- Semiconductor manufacturers
- Process controls
- Control centers/SCADA systems
- Drives in continuous production processes
- Production and automation systems
- And more

## Generator friendly

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The true online double conversion topology easily supports generator applications. 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 and transferring the load to bypass source utilizing the appropriate feeder circuit protective device. Overloads can be endured for minutes and hours, not seconds!

## Scalable sizing

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

Sinergy SE II 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, and 8 kVA to 10 kVA, without shipping the unit off-site. The 6 kVA, 8 kVA, 10 kVA, models can be paralleled to support 12, 16, and 20 kVA loads, respectively.

## Paralleling

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Up to three Sinergy SE II UPSs can be paralleled for capacity and redundancy, increasing the supported equipment's overall reliability and availability.

## Emergency Power Off (EPO) adapter

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The EPO is standard on all Sinergy SE II Series UPSs. If the EPO contacts are opened, the UPS immediately shuts down.

The EPO circuit may be extended by connecting normally closed switches in series between the EPO connect pins. This activates any of the series switches, causing the UPS to shut off its output.

## Communications interface

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All Sinergy SE II UPSs are equipped with an 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.

MopUPS Express Communications Software (download certificate) and USB cable are standard with the Sinergy SE II for UPS and battery monitoring and management.

All Sinergy SE II Series UPSs are equipped with an interface designed for communication with a computer when using ONEAC's supplied MopUPS Express software. If the connected computer is informed of a power failure via the interface, it can shut down its program 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 PROFESSIONAL software, available for all major operating systems and networks, ManageUPSNET, and environmental monitoring.

# ONEAC SINERGY SE II UPS: Optional Accessories

## 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 II UPS communications port to the PBX (part number for card and cable IF-ISOBASIC-O2). The isolated contacts interface card can also be used with IBM AS/400s.

## Power Distribution Units

The Sinergy SE II Series 4 to 10 kVA UPSs features a number of models with a variety of power distribution options. The PDUs are installed at the factory before delivery.

## Power cords

Optional ten foot power cords are available for the Sinergy SE II 4 kVA UPS (L6-30P) and 6 kVA UPS (6-50P). Call ONEAC for details.

## Connectivity

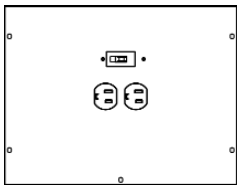
MopUPS Express download certificate is standard with the Sinergy SE II Series UPS. This software is designed for communication with a computer. If the connected computer is informed of a power failure via the interface, it can shut down its programs and the operating system in a controlled and orderly manner within the battery's back-up time. MopUPS Express can be upgraded to MopUPS Professional for network monitoring.

MopUPS Professional software enables a wider variety of responses to faults and other events that affect the UPS and the equipment they protect.

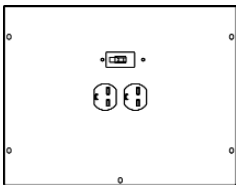
ManageUPSNet adapter provides web and SNMP-based UPS and environmental monitoring. It can also be used as a server for multiple MopUPS clients in order to facilitate wide area network shutdowns from a single UPS.

Part Number	MopUPS SK-PROMOP-02	ManageUPSNet AM-00-0
System shutdown	•	via network
Event messaging	via email, page, network, or SNMP traps	via email or SNMP traps
Log events	•	•
Run a command, script or batch file	•	
Web-based system management		•
Full SNMP server		•
Supports Terminal, Telnet, and FTP access		•
Environmental Monitoring		•

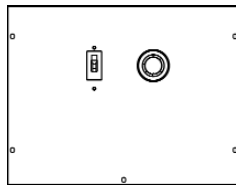
## Optional Power Distribution Units for Sinergy SE II Series (4 - 10 kVA)



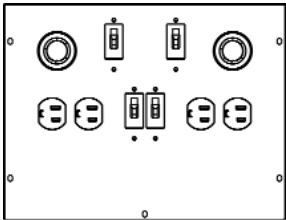
PDU Code	Receptacle
L	(2) 5-20R



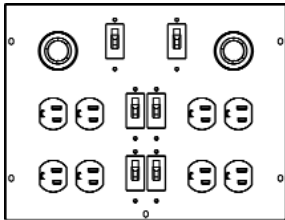
PDU Code	Receptacle
Q	(2) 6-15R



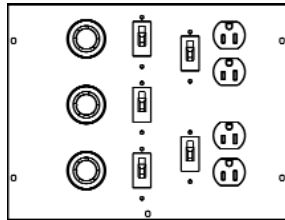
PDU Code	Receptacle
M	(1) L6-30R



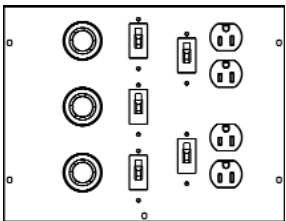
PDU Code	Receptacle
T	(2) L6-30R & (4) 5-20R



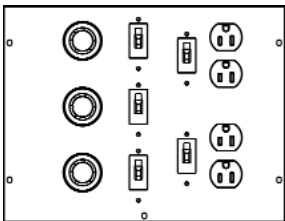
PDU Code	Receptacle
P	(2) L6-30R & (8) 5-20R



PDU Code	Receptacle
N	(3) L6-30R & (4) 5-20R



PDU Code	Receptacle
R	(2) L6-30R & (1) L6-20R & (4) 5-20R



PDU Code	Receptacle
S	(1) L6-30R & (2) 6-20R & (4) 5-20R

# ONEAC SINERGY SE II UPS: Specifications

## Performance Characteristics

- Nominal input voltage:** 200, 208, 220, 230, 240

**Available output voltage:** 120/208/240 models with AT in the part number  
120/208/230/240 models with IT in the part number  
100/200 models with JT in the part number

**Surge voltage withstand capability:** ANSI/IEEE C62.41 Cat. 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 6 kV ANSI/IEEE C62.41 Cat. A

**Crest factor:** 3:1

**Principle of operation:** online, double conversion

**Batteries:** sealed, maintenance-free lead acid, VRLA

**Battery test:** automatic, once per month (adjustable through UPS management software supplied)

**Battery management:** automatic runtime adjustment, protection against deep discharge

**Recharge time to 90% available capacity:** 5 - 8 hours (internal batteries)

**Relative humidity:** 20-90%, no condensation

**Cooling:** fans
- Frequency:** 50/60 Hz, auto-select, input frequency 40-70 Hz, frequency converter

**Frequency tolerance, normal operation:** output frequency synchronized with mains frequency

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

**Total harmonic distortion (linear load):** < 4%

**Automatic bypass:** integrated

**Output Waveform:** sinusoidal

**Internal maintenance bypass:** integrated

**Alarms:** mains power, low battery, overload, on bypass

**Overload capacity:** 104%: warning; 105-125%: 60 seconds: switches to bypass; 126-150%: 10 second, switches to bypass; >150%: 2 seconds: switches to bypass

**Port:** (1) serial standard

**COM slot:** (1) for SNMP/web interface/isolated contact card

**EPO input:** standard

**Operational temperature:** +32°F to +104°F (+50°F to +77°F recommended for optimal battery life)  
+0°C to +40°C (+10°C to +25°C recommended for optimal battery life)

**Storage temperature:** +5°F to +122°F (-15°C to +50°C)

**EMC:** FCC part 15, class A, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4 EN61000-4-5

## Approvals

Sinergy SE II Series UPSs: UL/cUL (UL file 1778) in process, and CE in process.

UPS MODEL	SINGLE UNIT MODELS				PARALLELED UNIT KITS		
	SE041	SE061	SE081	SE101	SE122	SE162	SE202
Part number	SE041XAT SE041XIT SE041XJT	SE061XAT SE061XIT SE061XJT	SE081XAT SE081XIT SE081XJT	SE101XAT SE101XIT SE101XJT	SE122XAT SE122XIT SE122XJT	SE162XAT SE162XIT SE162XJT	SE202XAT SE202XIT SE202XJT
Power rating (VA/W)	4000 VA/2800 W	6000 VA/4200 W	8000 VA/5600 W	10000VA/7000W	(2) 6000 VA/4200 W for 12000VA/8400W	(2) 8000 VA/5600 W for 16000VA/11200W	(2) 10000VA/7000W for 20000VA/14000W
Output current (A) @ 208 Vrms	19.2	27.9	38.4	46.0	55.8	76.8	92.0
Internal battery	(20) VRLA, 12V 7ah	(20) VRLA, 12V 7ah	(20) VRLA, 12V 9ah	(20) VRLA, 12V 9ah	(40) VRLA, 12V 7ah	(40) VRLA, 12V 9ah	(40) VRLA, 12V 9ah
Communications software	download certificate for MopUPS Express included, upgrade to MopUPS Professional available				download certificate for MopUPS Express included, upgrade to MopUPS Professional available		
UPS dimensions HxWxD (in.)	31.5x11.8x26.6	31.5x11.8x26.6	31.5x11.8x26.6	31.5x11.8x26.6	31.5x11.8x26.6 each	31.5x11.8x26.6 each	31.5x11.8x26.6 each
HxWxD (cm)	80.0x30.0x67.6	80.0x30.0x67.6	80.0x30.0x67.6	80.0x30.0x67.6	80.0x30.0x67.6 each	80.0x30.0x67.6 each	80.0x30.0x67.6 each
UPS net weight - lbs (kg)	325 (148)	325 (148)	380(173)	380(173)	325 (148) each unit	380(173) each unit	380 (173) each unit
UPS ship weight - lbs (kg)	380 (173)	380 (173)	440 (200)	440 (200)	380 (173) each unit	440 (200) each unit	440 (200) each unit
Input connection	HW*	HW*	HW	HW	HW	HW	HW
Output connection**	HW	HW	HW	HW	HW	HW	HW

\* Optional ten foot power cord available (4 kVA - 10' power cord with L6-30P; 6 kVA - 10' power cord with 6-50P). Call ONEAC for details.  
\*\*Optional PDUs available.

## External Battery Part Number

	SEBP610-2
Battery	(40) VRLA, 12V 7ah
Dimensions HxWxD - in	31.3x10.3x21.8
HxWxD - (kg)	(80.0 x 30.0 x 17.6)
Net weight - lbs (kg)	314 (142)
Ship weight - lbs (kg)	3526(162)

# ONEAC SINERGY SE II UPS: Individual Specifications

Sinergy UPS*	kVA	Runtimes (half load/ full load)	Quantity UPS	Quantity External Battery Cabinets	Input/ Output Connectors
SE041	4	37/15	(1) SE041	None	HW**
SE041 + one battery	4	156/66	(1) SE041	(1) SEBP610-2	HW**
SE041 + two batteries	4	310/130	(1) SE041	(2) SEBP610-2	HW**
SE061	6	21/9	(1) SE061	None	HW**
SE061 + one battery	6	84/39	(1) SE061	(1) SEBP610-2	HW**
SE061 + two batteries	6	175/78	(1) SE061	(2) SEBP610-2	HW**
SE081	8	21/6	(1) SE081	None	HW
SE081 + one battery	8	73/23	(1) SE081	(1) SEBP610-2	HW
SE081 + two batteries	8	140/45	(1) SE081	(2) SEBP610-2	HW
SE101	10	13/5	(1) SE101	None	HW
SE101 + one battery	10	60/18	(1) SE101	(1) SEBP610-2	HW
SE101 + two batteries	10	117/35	(1) SE101	(2) SEBP610-2	HW

Sinergy Parallel Kits	kVA	Runtimes (half load/ full load)	Quantity UPS	Quantity External Battery Cabinets	Input/ Output Connectors
SE122	12	21/9	(2) SE061	None	HW
SE122 + two battery	12	84/39	(2) SE061	(2) SEBP610-2	HW
SE122 + four batteries	12	175/78	(2) SE061	(4) SEBP610-2	HW
SE162	16	21/6	(2) SE081	None	HW
SE162 + two battery	16	73/23	(2) SE081	(2) SEBP610-2	HW
SE162 + four batteries	16	140/45	(2) SE081	(4) SEBP610-2	HW
SE202	20	13/5	(2) SE101	None	HW
SE202 + two battery	20	60/18	(2) SE101	(2) SEBP610-2	HW
SE202 + four batteries	20	117/35	(2) SE101	(4) SEBP610-2	HW

\* Optional PDU available. Call ONEAC sales representative.

\*\* Optional input power cords available.

NOTE: Runtimes are based upon fully charged, new batteries. Runtimes are affected by battery age, ambient temperature, site-specific UPS usage patterns, and actual operating load characteristics. Actual runtimes may vary.

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