



by Schneider Electric

User Manual Easy UPS SMV Series 750, 1000, 1500, 2000, 3000 VA

Important Safety Instructions

SAVE THESE INSTRUCTIONS - This manual contains important instructions that should be followed during installation and maintenance of the Easy UPS and batteries.

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in death or serious injury**.

WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in death or serious injury**.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result in minor or moderate injury**.

NOTICE

NOTICE is used to address practices not related to physical injury.

Product Handling Guidelines



<18 kg
<40 lb



18-32 kg
40-70 lb



32-55 kg
70-120 lb



>55 kg
>120 lb



Safety and General Information

General safety

- Adhere to all national and local electrical codes.
- This UPS is for indoor use only. To prevent the risk of fire or electric shock, install in temperature and humidity controlled indoor area, free of conductive contaminants.
Easy UPS must be installed indoor with controlled environment free of excessive dust, corrosive air or conductive dust.
Keep out of direct sun light, water and heat sources.
- Place the unit on the stable floor.
- Be sure that the mains socket outlet that supplies the UPS is installed near the UPS and easily accessible. Avoid using extension cords.
- UPS must be connected to an earthed mains socket outlet.
- Connect the power cable directly to a wall outlet. Do not use surge protectors or extension cords.
- **CAUTION:** This UPS is designed to satisfy the requirement of PCs only.
- Do not connect printers, heaters, or copiers to the UPS.

Battery safety

CAUTION

RISK OF HYDROGEN SULPHIDE GAS AND EXCESSIVE SMOKE

- Replace the battery at least every 5 years or at the end of its service life, whichever is earlier.
- Replace the battery immediately when the UPS indicates battery replacement is necessary.
- Replace batteries with the same number and type of batteries as originally installed in the equipment.
- Replace the battery immediately when the UPS indicates a battery over-temperature condition, or when there is evidence of electrolyte leakage. Power off the UPS, unplug it from the AC input, and disconnect the batteries. Do not operate the UPS until the batteries have been replaced.



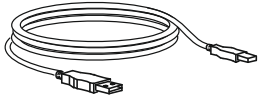
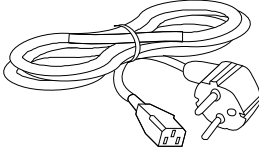
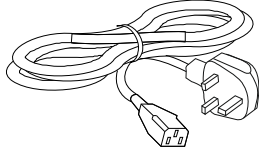
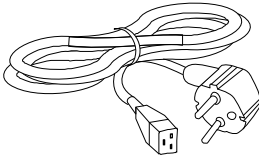
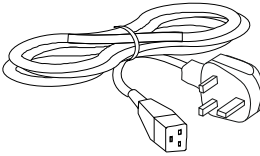
Failure to follow these instructions can result in minor or moderate injury and equipment damage.

- Servicing of user replaceable batteries should be performed or supervised by personnel knowledgeable about batteries and required precautions.
NOTE: In this case batteries are not user replaceable.
- When replacing battery the UPS must be off, and its AC inlet unplugged.
- **CAUTION:** Do not dispose of batteries in a fire. The batteries may explode.
- **CAUTION:** Do not open or mutilate batteries. Released material is harmful to the skin and eyes and may be toxic.
- **CAUTION:** A battery can present a risk of electrical shock and burns by high short-circuit current. Contact with any part of a grounded battery can result in electrical shock. The following precautions should be observed when working on batteries.
 - Remove watches, rings or other metal objects.
 - Use tool with insulated handles.
 - Wear rubber gloves and boots.
 - Do not lay tools or metal parts on top of batteries.
 - Disconnect the charging source prior to connecting or disconnecting battery terminals.
 - Determine if battery is inadvertently grounded. If inadvertently grounded, remove source from ground. Contact with any part of a grounded battery can result in electrical shock. The likelihood of such shock can be reduced if such grounds are removed during installation and maintenance.
- **CAUTION:** The UPS contains internal batteries and may present a shock hazard even when disconnected from AC power.
- **CAUTION:** Battery circuit is not isolated from AC input, hazardous voltage may exist between battery terminals and ground. Test before touching.
- **CAUTION:** Failed batteries can reach temperatures that exceed the burn thresholds for touchable surfaces.

Radio Frequency Warning

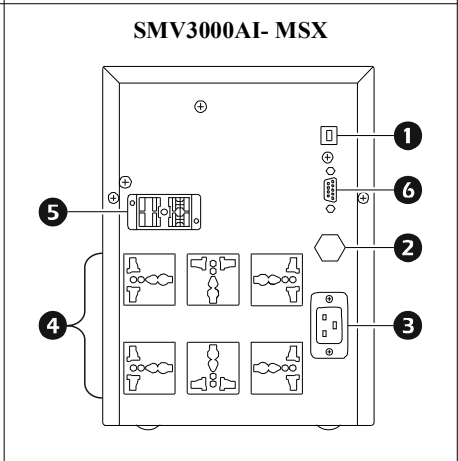
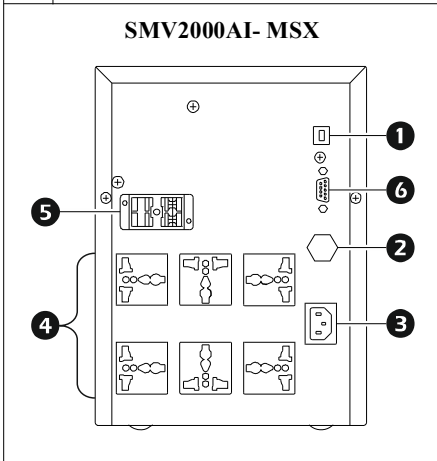
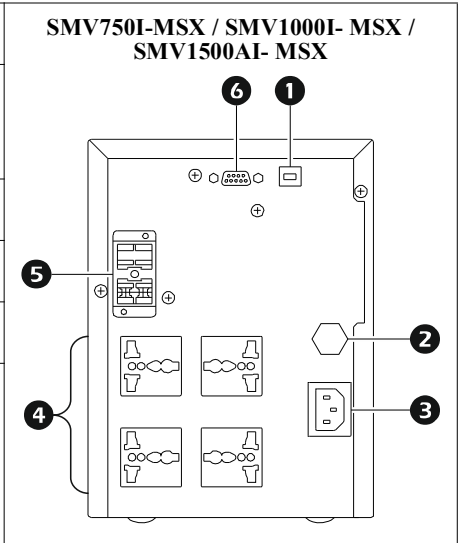
This is a category C2 UPS product. In a residential environment, this product may cause radio interference, in which case the user may be required to take additional measures.

Package Contents

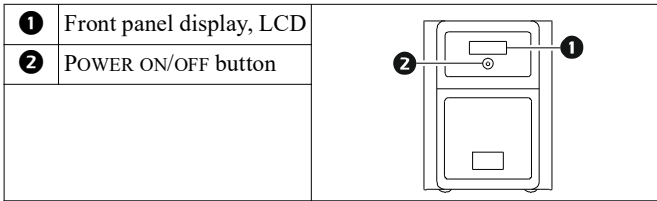
 <p>User manual</p>	 <p>Software, User documentation CD</p>	 <p>USB cable</p>
<p>For Models: SMV750I-MSX SMV1000I-MSX SMV1500AI-MSX SMV2000AI-MSX</p>	 <p>SCHUKO plug to IEC C13 plug</p>	 <p>UK BS 1363 13A plug to IEC C13 plug</p>
<p>For Model: SMV3000AI-MSX</p>	 <p>SCHUKO plug to IEC C19 plug</p>	 <p>UK BS 1363 13A plug to IEC C19 plug</p>

Rear Panel Features

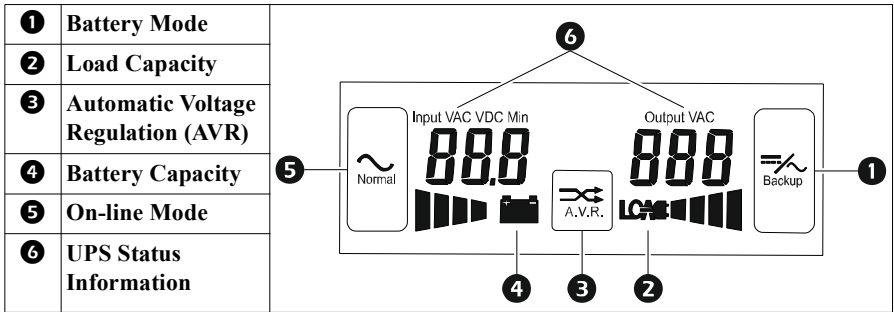
1	USB Port
2	Input Fuse Refer “Specifications” on page 8 for fuse rating.
3	AC Inlet
4	Battery Backup Outlets
5	Battery Connector
6	RS-232 Serial Port



Front Panel Features



Front panel display



Start Up

NOTICE

RISK OF EQUIPMENT DAMAGE

Before installing the Easy UPS, be sure that the input circuit breaker on the UPS upstream is Type C rated at 16 A.

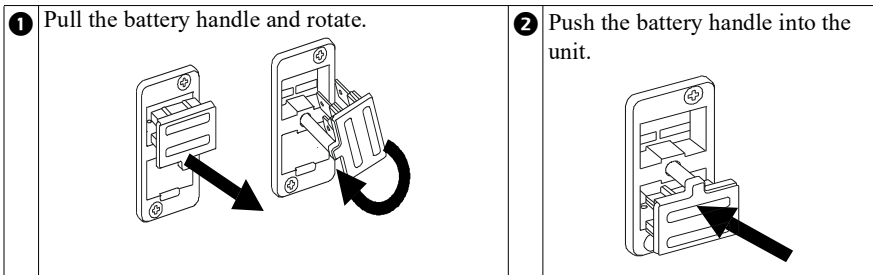
Failure to follow these instructions can result in equipment damage.

Connect battery

The battery connector is located on the rear panel. Refer to “Rear Panel Features” on page 5 for details.

NOTE: Connect prior to operation.

Disconnect prior to transportation. Turn off the UPS and remove input power cable before disconnecting the battery connector.



Connect equipment and input power to Easy UPS

1. Connect equipment to the battery backup outlets of Easy UPS.
2. Plug the Easy UPS power cord directly into a wall outlet, not into a surge protector or power strip.
3. Press the POWER ON/OFF button to turn on the unit.
NOTE: The Easy UPS should charge the battery for at least 8 hours to ensure sufficient runtime.
4. Press the POWER ON/OFF button in 1~3 seconds. Confirm that the Easy UPS is on and is providing power to outlets.

Cold start the UPS

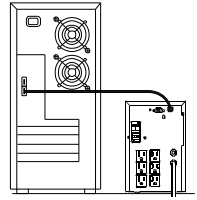
Use the cold start feature to supply power to connected equipment from the UPS batteries when the UPS is off and there is no power utility.

- Press the POWER ON/OFF button. The display panel will illuminate.
- Press the POWER ON/OFF button again to supply battery power to the connected equipment.

Connect and install management software

Easy UPS is provided with management software for unattended operating system shutdown, UPS monitoring, and UPS settings.

Refer to www.apc.com for more information.



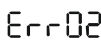
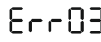



Specifications

Model	SMV 750I- MSX	SMV 1000I- MSX	SMV 1500AI- MSX	SMV 2000AI- MSX	SMV 3000AI- MSX
Input Specifications					
Voltage	220/230/240 VAC				
Voltage range	165-290 VAC \pm 5 VAC			165-295 VAC \pm 8 VAC	
Fuse	8 A	8 A	12 A	20 A	25 A
Frequency range	45-65 Hz (auto sensing) \pm 1 Hz				
Output specifications					
UPS capacity (total)	750 VA/ 525 W	1000 VA/ 700 W	1500 VA/ 1050 W	2000 VA/ 1400 W	3000 VA/ 2100 W
Rated voltage	230 VAC				
Transfer time	Typical 2-6 ms, 12 ms max.				
Waveform	Pure Sinewave				
Battery					
Type (Maintenance-free Lead acid)	12 V / 7 Ah x 2	12 V / 7 Ah x 2	12 V / 10 Ah x 2	12 V / 7 Ah x 4	12 V / 9 Ah x 4
Charging time	4-6 hours recover to 90% capacity				
Physical					
Dimension (D x W x H)	410 x 160 x 220 mm (16.1 x 6.3 x 8.7 in)			455 x 180 x 240 mm (18 x 7.1 x 9.4 in)	
Weight without package	13.6 kg		17.8 kg	23.5 kg	25.2 kg
Packaging Dimension (D x W x H)	508 x 272 x 339 mm (20 x 10.8 x 13.3 in)			604 x 319 x 414 mm (23.8 x 12.5 x 16.3 in)	

Model	SMV 750I- MSX	SMV 1000I- MSX	SMV 1500AI- MSX	SMV 2000AI- MSX	SMV 3000AI- MSX
Weight with package	16.6 kg		20.75 kg	26.9 kg	28.9 kg
Environment					
Operating, temperature and humidity	0-90% RH @ 0-40 °C (non-condensing)		0-95% RH @ 0-40 °C (non-condensing)		
Noise level	< 45 dB				
International Protection Code	IP20				

Audible Indicators and Status Icons

Indication	Status
Beeps every 2 seconds.	Easy UPS is running on battery.
Continuous beeping.	Low battery condition and battery run-time is very low.
Continuous beep and Load Capacity LED is illuminated.	Battery backup outputs are overloaded.
Continuous beep and  illuminated.	 Fan error detected.
	 Inverter error detected.
	 Inverter over voltage.
Beeps every 4 seconds with  illuminated.	The battery is near the end of useful life or is damaged and needs to be replaced.

Troubleshooting

Use the table below to solve minor installation and operation problems.

Problem and/or Possible Cause	Solution
Easy UPS will not turn on	
The Easy UPS is not turned on.	Press the POWER ON/OFF button to turn on the Easy UPS.
The Easy UPS is not connected to AC power, there is no AC power available at the wall outlet, or the AC power is experiencing a brownout or over voltage condition.	Be sure that the power cord is securely connected to the utility power outlet and AC power is available at the utility power outlet. Check that the wall outlet is switched on or input fuse works properly.

Problem and/or Possible Cause	Solution
The battery is not connected.	Connect the battery. Refer to “Connect battery” on page 7 for details.
Connected equipment loses power	
The Easy UPS has experienced an overload condition.	Disconnect non-essential equipment one at a time to reduce the load on the UPS.
The Easy UPS battery is completely discharged.	Connect the Easy UPS to AC power and recharge for 8 hours.
The Easy UPS may require service.	Contact APC by Schneider Electric Customer Support.
Easy UPS is operating on battery power, while connected to AC power	
The input plug is not completely inserted into the utility power socket.	Be sure that the input plug of the UPS is securely connected to the utility power socket.
The utility power socket is not receiving AC power.	Be sure that AC power is available at the utility power socket by connecting another device to the utility power socket.
The input fuse has blown out.	Replace the input fuse with appropriate rating fuse. Refer “Fuse” on page 8 for fuse rating.
The Err message illuminates on the display interface	
Err01 Fan error detected.	Turn the Easy UPS off. If the error message persists, contact APC by Schneider Electric Customer Support.
Err02 Inverter error detected.	Turn the Easy UPS off. Disconnect non-essential equipment from the outlets and turn the Easy UPS on. If the error message persists, contact APC by Schneider Electric Customer Support.
Err03 Inverter over voltage detected.	Contact APC by Schneider Electric Customer Support.
Easy UPS beeping every 4 seconds	
The battery is not connected.	Be sure that battery connector in the rear panel is connected.
The battery is near the end of useful life or is damaged.	Contact APC by Schneider Electric Customer Support if the Easy UPS remains beeping with battery connector securely connected.
Easy UPS has an inadequate battery runtime	
The battery is not fully charged. The battery is near the end of useful life and should be replaced.	Leave the Easy UPS connected to AC power for 8 hours while the battery charges to full capacity. As battery ages, the runtime capability decreases.

Service

If the unit requires service, do not return it to the dealer. Follow these steps:

1. Review the *Troubleshooting* section of the manual to eliminate common problems.
2. If the problem persists, contact APC by Schneider Electric Customer Support.
 - a. Note the model number and serial number and the date of purchase. The model and serial numbers are located on the rear panel of the unit.
 - b. Call APC by Schneider Electric Customer Support and a technician will attempt to solve the problem over the phone. If this is not possible, the technician will issue a Returned Material Authorization Number (RMA#).
 - c. If the unit is under warranty, the repairs are free.
 - d. Service procedures and returns may vary internationally. Refer to the APC by Schneider Electric website for country specific instructions.
3. Pack the unit in the original packaging whenever possible to avoid damage in transit. Never use foam beads for packaging. Damage sustained in transit is not covered under warranty.
4. **Always DISCONNECT THE UPS BATTERIES before shipping. The United States Department of Transportation (DOT), and the International Air Transport Association (IATA) regulations require that UPS batteries be disconnected before shipping.** The internal batteries may remain in the UPS.
5. Write the RMA# provided by Customer Support on the outside of the package.
6. Return the unit by insured, pre-paid carrier to the address provided by Customer Support.

Warranty

Register your product on-line <http://warranty.apc.com>

The standard warranty is two (2) years from the date of purchase. SEIT standard procedure is to replace the original unit with a factory reconditioned unit. Customers who must have the original unit back due to the assignment of asset tags and set depreciation schedules must declare such a need at first contact with an SEIT Technical Support representative. SEIT will ship the replacement unit once the defective unit has been received by the repair department, or cross-ship upon the receipt of a valid credit card number. The customer pays for shipping the unit to SEIT. SEIT pays ground freight transportation costs to ship the replacement unit to the customer.

APC by Schneider Electric IT Customer Support Worldwide

For country specific customer support, go to the APC by Schneider Electric website, www.apc.com.