SOLA

USER GUIDE

ups 305

250 VA, 425 VA, and 600 VA

A Best Power UNINTERRUPTIBLE POWER SYSTEMS *Company*

Important Notice

The UPS ground (earth) conductor carries leakage current from the loads in addition to any leakage current generated by the UPS. This UPS generates no more than 1 mA of current. To limit the total leakage current to 3.5 mA, the load leakage must be limited to 2.5 mA. The three-wire receptacle that you plug the UPS into must have a good (low-impedance) ground (protective earth) connection to provide a safe path for leakage current.

SOLA

ups 305®

250 VA, 425 VA, and 600 VA

User Guide

LTM-1322A

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Safety Instructions

IMPORTANT SAFETY INSTRUCTIONS! SAVE THESE INSTRUCTIONS!

This User Guide contains important instructions for your SOLA 305 that must be followed during installation and operation of the UPS.

CAUTION!

Whenever the unit's On/Off switch is "On," there may be dangerous voltage present at the unit's outlets. This is true because the unit's battery supplies power even if the unit is not plugged into the wall outlet. The unit contains dangerous voltages.

To reduce the risk of electric shock, install the unit in a temperature-controlled and humidity-controlled indoor area free of conductive contaminants.

The power supply cord is intended to serve as the disconnect device. The socket-outlet must be near the equipment and must be easily accessible.

All servicing of this equipment must be performed by qualified service personnel.

Before maintenance or repair, all connections must be removed. Before maintenance, repair, or shipment, the unit must be completely switched off and unplugged or disconnected.

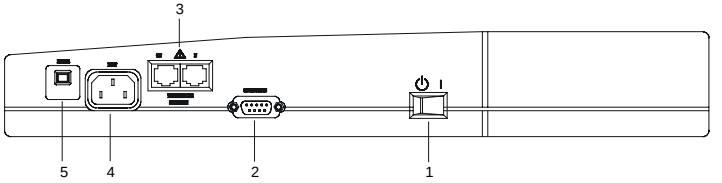
The installation and use of this product must comply with all national, federal, state, municipal, or local codes that apply. For assistance, call the SOLA Service or your local SOLA office.

If the SOLA 305 has been damaged during shipment, call your vendor immediately.

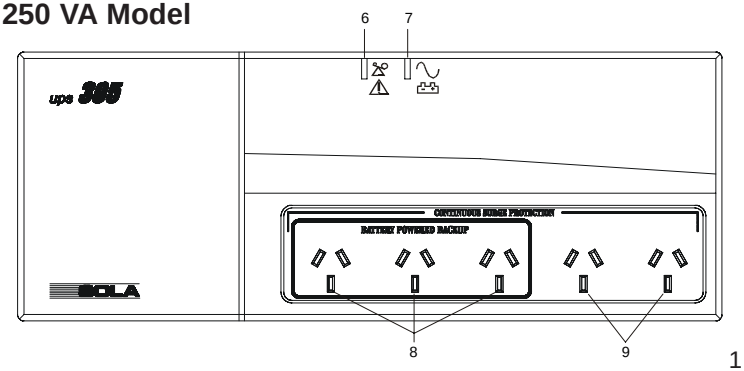
If the SOLA 305 is stored, the batteries should be recharged every 6 months. *If stored above 25° Celsius, recharge the batteries more often.*

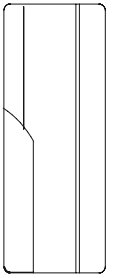
UPS Features

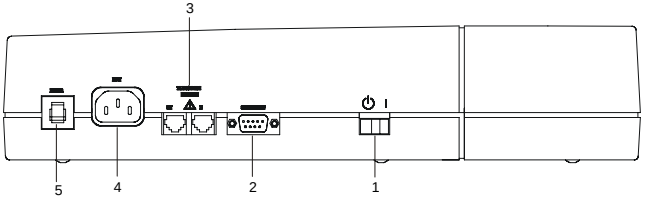
The SOLA 305 provides protection against power problems, including power outages, brownouts and surges. It also provides spike suppression and line noise filtering to protect your equipment. Use the drawings below to identify features of the unit.



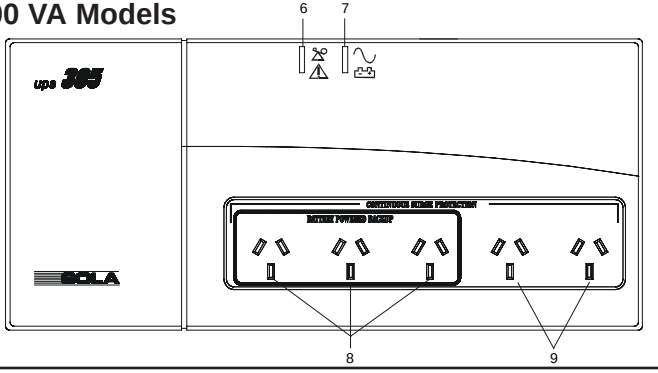
250 VA Model

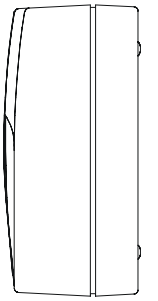






425 VA and 600 VA Models





1 - 0/I (Standby/On) Switch (Page 4)
2 - DB9 Communication Port (Page 9)
3 - RJ11/RJ45 Jacks (Page 5)
4 - Input Power Connector
5 - Circuit Breaker
6 - Fault Indicator (Page 5)
7 - Operating Indicator (Page 5)
8 - UPS & Surge Protected Outlets
9 - Surge Protected Outlets (not battery backed up)

Quick Startup

1 Your SOLA 305 has a removable power cord. Connect the power cord to the back of the unit. Plug the UPS into a wall outlet.

2 Let the unit charge the battery for at least 3 hours. You may use the unit while the battery charges, but the battery backup runtime will be reduced until the battery is fully charged. This will take up to 8 hours after a full discharge while the SOLA 305 is fully loaded.

3 To start the unit, press the On/Standby rocker switch (located left of center on the back panel). When the unit starts, it will beep, and light both of the front panel LEDs several times. The green light should remain on. This indicates normal operation. See Symbols, LEDs and Audible Alarms Section for more information.

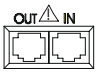
If the unit continues to beep, or if the green light does not remain on even though input power is available from the wall outlet, go to the Troubleshooting section.

4 Switch off the equipment you want to protect with battery backup, and plug it into the outlets labeled “Battery Powered Backup” on the top of the SOLA 305. This equipment will continue to operate from the battery when the input line fails.

5 Switch off the equipment you want to protect against surges only, and plug it into the outlets NOT labeled “Battery Powered Backup.” This equipment will not continue to operate when the input line fails, but will be protected from spikes and surges on the input line.

6 Switch on the protected equipment, one piece at a time. If the UPS beeps an alarm when you start your equipment, the UPS may be overloaded. See the Troubleshooting section.

7 The RJ-11 or RJ-45 Surge Protection jacks will protect telephone equipment that uses an RJ-11 or RJ-45 connection. Plug the phone or fax/modem connection into the surge protection jack labeled “IN” on the back of the SOLA 305. Plug the protected equipment into the surge protection jack labeled “OUT.” *This connection is optional. It is not needed to use the SOLA 305.*



RJ-11 or RJ-45 Jacks

8 Please fill out the warranty registration card and return it to your local SOLA office.

Symbols, LEDs and Audible Alarms

The front panel LEDs and an audible alarm indicate the unit status. The unit beeps whenever the unit is on battery power or an alarm is present. See Table 1 for information about the LEDs and Table 2 for information about beep coding.

Table 1: Symbols and LEDs

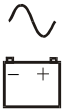
Symbols and LEDs	What It Means
 OPERATING (Green)	***Steady:*** Acceptable input power is present; the unit is running on line power. ***Blinking:*** Input power is not acceptable; the unit is running on battery power. See Table 3 for more information. ***Off:*** No input power is present and the battery is exhausted, or the unit is switched off.
 FAULT (Red)	***Blinking:*** The unit is overloaded or has failed the battery test. ***Steady:*** UPS fault.

Table 2: Audible Beeps

Number of Beeps	What It Means
1 every 5 seconds	***Line Loss:*** The unit is on battery power. See Table 3 for more information.
2 every 5 seconds	***Low Battery Alarm:*** The unit was running on battery power and shut down due to very low battery voltage. The unit will restart automatically when acceptable power returns.
3 every 5 seconds	***Replace the Battery:*** The battery needs to be replaced.
1 beep every half-second	***Output Overload:*** The unit is overloaded.
Continuous	***UPS Fault:*** Phone SOLA Service.

Troubleshooting

If you have a question or problem, the troubleshooting table may help. (See Table 3.) If you need assistance, phone SOLA Service or your local SOLA Customer Service office. Please have the model number and serial number (located on the rear of the unit) available.

If the unit must be returned, SOLA will give you a Return Authorization (RA) number. Phone SOLA for an RA number before returning the unit for any reason.

Table 3: Troubleshooting

Problem	Possible Reasons	What To Do
Green OPERATING LED blinks, Red FAULT LED off, One beep every five seconds. (Battery Operation)	1. Utility power outage. 2. Loose plug. 3. Tripped circuit breaker. 4. Power cord failure.	1. Prepare protected equipment for powering down, and wait for power to return. 2. Make sure the power cord is connected. 3. Reset the circuit breaker. 4. Phone SOLA's Customer Service.
Green OPERATING LED blinks, Red FAULT LED off, Two beeps every five seconds. (Low-battery Operation)	Very low battery voltage.	Plug the unit into a working wall outlet for at least 8 hours to allow the batteries to charge. If the batteries do not recharge, the SOLA 305 will not operate on battery power, or it will beep twice every five seconds immediately. In this case, phone SOLA's Customer Service.
Green OPERATING LED on, Red FAULT LED blinks, Three beeps every five seconds. (Replace Battery)	Unit has failed the battery test.	Turn the unit off and then on to reset the "Replace Battery" alarm and LEDs.
Green OPERATING LED on, Red FAULT LED blinks, One beep every half-second. (Overloaded Operation)	The power required by the equipment is too high.	1. Remove load equipment. 2. Reduce load level until the beeping stops.
Green OPERATING LED off, Red FAULT LED on, Continuous beep. (Malfunction)	1. Output short circuit. 2. Input voltage is out of range when unit is turned on. 3. UPS fault.	1. Turn off or unplug load equipment. 2. Turn unit off until acceptable input voltage is restored. 3. Phone SOLA's Customer Service.

Communication Port

SOLA offers interface kits that allow you to connect many types of computer systems to the SOLA 305's communication port. The operating systems include: Windows v3.1x, 95, 98, NT, OS/2, Novell NetWare, and many versions of UNIX, using CheckUPS Basic software included with each kit. For specific information on SOLA interface kits, call SOLA's Customer Service or your local SOLA dealer.

Pinouts

Pin 1 ***RS232 Level Shutdown:*** +12 VDC signal held for 5 seconds on this pin shuts the SOLA 305 down 120 seconds later. The UPS restarts after 15 seconds when utility power returns.

Pin 2 ***Unused.***

Pin 3** ***Normally Open On-Battery Contact: A normally open contact that closes (pulls to Common) 15 seconds after the UPS switches to battery power.

Pin 4 ***Common:*** The signal ground for all signal pins.

Pin 5** ***Normally Open Low-Battery-Alarm Contact: A normally open contact that closes (pulls to Common) during a Low Battery Alarm.

Pin 6 ***Normally Closed Low-Battery-Alarm Contact:*** A normally closed contact that opens (releases from Common) during a Low Battery Alarm. This tells some shutdown software when to start a computer shutdown.

Pin 7 ***Unused.***

Pin 8** ***Normally Closed On-Battery Contact: A normally closed contact that opens (releases from Common) 15 seconds after the UPS switches to battery power.

Pin 9 ***Unused.***

* Contacts consist of open collector circuits capable of switching up to +30 VDC, 6 mA resistive load.

Specifications

SOLA reserves the right to change specifications without prior notice.

Line Transient Protection: Passes ANSI/IEEE C62.41 Category A testing.

Safety Compliance: TÜV/GS listed, AS3260.

EMC Compliance: CISPR 22 Class B, Vfg 243-91/46-92 B, EN55022, CE Mark Self-certified to: CE Marking Directive 93/68/EEC, Low Voltage Directive 73/23/EEC, C-Tick, AS3548.

Noise (RF) Suppression: Full-time EMI/RFI filtering.

Efficiency: > 95% on line.

Capacity VA/Watts @ 0.67 P.F.: 250VA / 168W; 425VA / 285W; 600VA / 400W.

Voltage Nominal: 240 VAC.

Voltage Range: 200-268 VAC without battery discharge; 0-300 VAC while operating on battery.

Frequency: 50/60 Hz auto-sensing 57-63 Hz (60 Hz); 47-53 Hz (50 Hz) (50/60 Hz ± 1 Hz on battery).

Typical Runtime (minutes): *250VA and 425VA Models:* Full load: 3 minutes. Typical load: 5 minutes.
600VA Model: Full load: 2.5 minutes. Typical load: 5 minutes.

Transfer Time: 4 ms typical.

Telephone line surge suppression: per IEC1000-4-5: 1.2/50 µsec waveform, ± 2kV peak.

Battery: Sealed, maintenance-free, valve-regulated, UL 924 recognized.
250 VA Models: One 12 V or two 6 V, 4.2 AH batteries. Nominal Voltage is 12 VDC.
425 VA Models: One 12 V 7.0 AH battery. Nominal Voltage is 12 VDC.
600 VA Models: One 12 V 9.0 AH battery. Nominal Voltage is 12 VDC.

Battery Recharge Time (to 95% of capacity) *All Models:* 8 hours with output fully loaded.

Overcurrent Protection (on line) *All Models:* Circuit Breaker.

Input Fault Current (maximum): *All Models:* 15 A.

AC input Plug/Cord Information: IEC320 recessed plug.

AC Output Distribution: Australian output receptacles; (3) UPS and Surge Protected,
(2) Surge Protected only.

Load Compatibility: Switch-mode power supply or resistive load.

Audible Noise: < 45 dBa at one meter.

Ventilation: Air around the unit must be free of dust, chemicals, or other materials that corrode or contaminate.

Operating Temperature: 0° - 40° C.

Storage Temperature: -15° to +50° C. Battery life is reduced above 25° C.

If the SOLA 305 unit is stored, the batteries should be recharged every 6 months. *If stored above 25° C, recharge the batteries more often.*

Humidity: 5% - 95% RH (non-condensing).

Dimensions (Height x Width x Length): *250 VA:* 150 x 59 x 393 mm.
425 and 600 VA: 172 x 79 x 376 mm.

Weight: *250 VA:* 3.0 kg.
425 VA: 4.2 kg.
600 VA: 4.3 kg.

Warranty

Warranty Information

This Warranty is subject to SOLA's standard Conditions of Sale which govern all sales of products by SOLA Australia Ltd.

1. SOLA products, in general, are warranted against failure due to faulty materials and/or workmanship for a period of two years from despatch date (ex SOLA store) as per invoice. The Ferroresonant and 95 Series Power Conditioners and SOLA Dry Type Transformers have an extended warranty - 5 years from date of despatch.

2. If, within the applicable Warranty period, any SOLA product does not meet the warranty specified above, and the product was installed and operated in accordance with Australian standards and SOLA standard installation procedures, SOLA shall thereupon correct any defects due to faulty materials and/or workmanship.

3. Any modifications made to the product other than those made by SOLA or its authorised representative may cause the Warranty to be void.

4. For units up to 3kVA that are installed as a portable device, the Warranty covers repair or replacement of defective parts at the factory, or other service locations as nominated by SOLA Australia, provided the unit has been returned by the user packed adequately to prevent shipping damage, and approval has been obtained from SOLA Australia Ltd before shipment. All costs associated with the return of the product to SOLA Australia are at the customer's expense.

5. Units returned for in-warranty repairs, which are found not to be defective, will be subject to an inspection and handling charge, plus transportation charges.

6. High grade batteries, designated for Uninterruptible Power Supply (UPS) applications, are supplied by SOLA for use with SOLA UPS equipment. These batteries have a finite life expectancy depending on a number of variables, including rate of discharge, depth of discharge, operating temperature, etc.

7. Providing that the batteries are used within the limits as set out in the battery manufacturer's warranty statement and are provided as an integral part of new equipment, they are guaranteed for two years, from despatch date as per invoice. A copy of this warranty statement is available on request. Batteries provided as spare parts or replacements have a one year warranty. Other optional warranty terms for batteries are available on request.

8. SOLA reserves the right to charge for replacement batteries if within the one year guarantee period replacement batteries are necessary as a result of misuse or misapplication by the purchaser or end user.

Standard Warranty Registration

UPS Model Number: ..... UPS Serial Number: ..... Date of Purchase: ...../...../.....

Contact Person: .....

Company/Organisation: .....

Address: .....

City: ..... State: ..... Country: ..... Postcode: .....

Telephone: ..... Fax: ..... E-mail: .....

1. Where did you purchase this SOLA UPS from?
   ❑Retail Store ❑Computer Store ❑SOLA Distributor ❑Direct from SOLA
   ❑Electrical Wholesaler ❑Mail Order Catalogue ❑Internet ❑Other .....
2. Why did you purchase a SOLA UPS? (Check all that apply)
   ❑Recommendation ❑Reputation ❑After Purchase Support ❑Features
   ❑Price ❑Other .....
3. What price did you pay for this SOLA UPS? .....
4. What features of a UPS are important to you?
   ❑Appearance ❑Front Panel Display ❑Backup Time ❑RS232
   Communications ❑UPS Management Software ❑Other .....
5. What equipment do you intend to protect with this SOLA UPS?
   ❑Personal Computer(s) ❑Workstation(s) ❑Service/Network Equip.
   ❑Midrange Computer(s) ❑Mainframe(s) ❑Industrial Automation
   ❑Telecommunications Equipment ❑Retail/Point-of-Sale Equipment ❑Facilities/
   Building wide protection ❑Other .....
6. Please specify the equipment being protected by your SOLA UPS?
   Brand.....Model ..... Operating System .....
7. How would you classify your type of business?
   ❑Retail ❑Wholesale/Distribution ❑Manufacturing ❑Telecommunications
   ❑Government/Eduction ❑Banking/Finance ❑Restaurant/Hotel ❑Other .....
8. What is your company's annual revenue?
   ❑Less than $1m ❑$1m-5$m ❑$5m-$20m ❑$20m-$100m ❑Greater than $100m
9. Approximately how many personal computers are there in your company?
   ❑Less than 10 ❑10-20 ❑20-50 ❑50-200 ❑Greater than 200
10. Do you plan to purchase more UPS or Power Protection products?
    ❑ Within 1 month ❑1-6 months ❑6-12 months ❑Unlikely
11. Would you like information about SOLA Extended Warranty and Fastfix Exchange programs?
    ❑Yes ❑No
12. Would you like to be kept informed about new SOLA product developments and be added to our customer service database?
    ❑Yes (you will receive mail from SOLA at least three (3) times per year) ❑No

AFFIX
POSTAGE
STAMP

SOLA Australia Ltd
13 Healey Road
DANDENONG VIC 3175
AUSTRALIA

SOLA Australia Offices

Head Office - Melbourne
SOLA Australia Ltd.
13 Healey Road
Dandenong VIC 3175
Phone: 61-3-9706-5022
Fax: 61-3-9794-9150
National Service and Repair Centre Free Call: 1800 034 401 (except Melbourne)
9768 3105 (Melbourne only)

Customer Service Offices

Adelaide
PO Box 481, Marlestone Business Centre
SA 5033
Phone: 08-8347-3622
Fax: 08-8445-6328

Brisbane
Unit 2, 8 Lockhart Street
Woolloongabba, QLD 4102
Phone: 07-3891-1211
Fax: 07-3891-2492

Perth
Unit 2, 321 Great Eastern Highway
Redcliffe, WA 6104
Phone: 08-9478-3511
Fax: 08-9479-4577

Sydney
67A Ryedale Road
West Ryde, NSW 2093
Phone: 02-9949-6000
Fax: 02-9907-9802

SOLA/BEST Offices

SOLA Australia Ltd.
13 Healey Road
Dandenong VIC 3175
AUSTRALIA
Phone: 61-3-9706 5022
Fax: 61-3-9794 9150

Best Power
PO Box 2
Necadah, Wisconsin 54646
USA
Phone: 1-608-565 7200
Fax: 1-608-565 2221

Best Power Technology Limited
BEST House, Moorside Road
Winchester, Hampshire
ENGLAND SO23 7RX
Phone: 44-1962-844414
Fax: 44-1962-841846

Best Power Technology GmbH
Am Weichselgarten 23
D-91058 Erlangen
GERMANY
Phone: 49-9131-77700
Fax: 49-9131-777050

Borri Elettronica Industriale Srl
Via dei Lavoratori, 124
20092 Cinisello Balsamo (Mi)
MILAN ITALY
Phone: 39-2-6600661-2
Fax: 39-2-6122481

Best Power Technology AG
Limmatstrasse 12
8957 Spreitenbach
SWITZERLAND
Phone: 41-56-4183030
Fax: 41-56-4183033

Best Power Technology Pte. Ltd.
30 Prinsep Street #07-00
SINGAPORE 188647
Phone: 65-430 6128
Fax: 65-430 6170

Best Power Technology Mexico, S.A de C.V
Golfo de Riga, 34, Colonia Tacuba, Mexico D.F. 11410
MEXICO
Phone: 52-5-399 0369
Fax: 52-5-399 1320

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