

# **FALCON® ELECTRIC, INC.**

## SUP Series™ User's Guide

700-1000VA

**SUP700-1C, SUP1.0K-1C**



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# IMPORTANT SAFETY INSTRUCTIONS

## SAVE THESE INSTRUCTIONS

This manual contains important instructions which must be followed during the installation, operation and maintenance of this UPS and its batteries. Please read all instructions before operating this equipment and save this manual for future reference.

### CAUTION

All of the models presented herein are designed for installation and use in a controlled environment free of contamination.

### CAUTION

This UPS utilizes voltage that may be hazardous. Do not attempt to disassemble. This unit contains no user replaceable parts. Refer all servicing to Falcon Electric, Inc.

### CAUTION

This UPS is not intended to be used in conjunction with life support or operating room equipment.

### CAUTION

Always unplug this UPS prior to cleaning and never apply liquid or spray detergent on the UPS.

### CAUTION

Never attempt to service batteries. High voltage exists within the unit, which could cause electrical shock. Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries. When replacing the UPS batteries, use the same number and type of batteries.

### IMPORTANT

Allow at least 24 hours, after the UPS is first installed and turned on, to fully charge the internal battery and assure the maximum backup time is available.

### DO NOT

**DO NOT** plug this UPS into its own output as this may damage the UPS.

**DO NOT** remove or unplug the input cord when the UPS is turned on. This removes the safety ground from the UPS and the equipment connected to the UPS.

### CAUTION

**This UPS contains its own energy source (batteries). The output receptacles may carry live voltage even when the UPS is not connected to an AC source.**

# CHAPTER 1

## FALCON<sup>®</sup> SMP Series - Overview

The FALCON<sup>®</sup> SUP Series UPS has the unique ability to operate from either 120Vac domestic or 230Vac international utility power, while providing 120Vac domestic output power. The SUP does not perform frequency conversion, however it is the ideal solution for the international traveller requiring voltage conversion.

The Line-interactive or Automatic Voltage Regulator (AVR) feature provides output voltage regulation, while the UPS is operating from the utility power. This keeps the connected equipment's operating voltage within reasonable limits during abnormal utility power conditions such as brown-outs, high line voltages and surges.

All SUP models are microprocessor controlled. A Liquid Crystal Display (LCD) is conveniently located on the front panel. This display gives immediate and detailed UPS and power information without having to connect an expensive monitoring computer. An intelligent RS-232 computer interface port is also located on the UPS rear panel in the event remote monitoring or unattended computer shutdown is required. An optional external SNMP/HTTP agent is available, giving the ability to manage the UPS remotely across a LAN, WAN or via the Internet.

Unlike many other line-interactive UPSs on the market, the SUP models produce a sinewave output voltage, just like the incoming utility power. This assures your delicate electronic equipment will always receive the sinewave power it was designed for.

All models have an advanced two-stage battery charger providing safe, fast battery recharging while yielding a longer battery life.

All models have advanced surge protection circuitry to prevent damaging power line transients from reaching your equipment. Additional surge protected, RJ11 telephone jacks are provided on the UPS rear panel.

# CHAPTER 2

## Installation

### Inspecting the Equipment

If any FALCON® equipment has been damaged during shipment, keep the shipping cartons and packing materials for the carrier and file a claim for shipping damage. If you discover damage after acceptance, file a claim for concealed damage.

To file a claim for shipping damage or concealed damage: 1) File with the carrier within 15 days of receipt of the equipment; 2) Send a copy of the damage claim within 15 days to the Falcon® Service Department.

### UPS Setup

1. Verify that the following is included in the UPS shipping carton: UPS, Software CD, Domestic 120Vac Power Cord, European style Schuko Power Cord, Owner's Manual, UPS/Computer Cable and Battery connection jumper plug.
2. Verify that the UPS unit is to be used with the proper input voltage and the equipment to be connected to it's output is designed to operate from a 120Vac source. If the UPS is to be connected to a 230Vac, 50Hz European source verify the connected equipment was designed to operate from a 120Vac, 50Hz power source. This information is stated on the nameplate label located on the model number label located on rear panel of the unit.
3. This UPS has been shipped with the battery connection jumper removed to meet new transportation regulations.

### **IMPORTANT**

**THE BATTERY CONNECTION JUMPER MUST BE INSTALLED PRIOR TO PLUGGING IN AND ATTEMPTING TO TURN ON THE UPS.**

4. Select a suitable location for the UPS, near enough to the computer or equipment to allow connection of the equipment power plug to the receptacles located on the rear panel of the UPS.
5. If you are connecting the UPS to a PC Computer, you may want to install the supplied UPSilon shutdown and management software on your computer after connection the UPS interface cable to the RS-232 interface connector located on the UPS rear panel. Then connect the mating end of the cable to an unused serial port located on the computer rear panel. Before the UPS will be able to communicate properly with your computer, install the supplied computer monitoring and shutdown software.

## Communications Interface

The UPS provides both a contact closure and a true RS-232 computer interface.

### **The definition and setup for RS-232 is as follows:**

Baud Rate : 2400 bps  
Data Length : 8 bits  
Stop Bit : 1 bit  
Parity : None

Pin #6 : RS-232 data Tx out  
Pin #7 : Common for Pin #6 and Pin #9  
Pin #9 : RS-232 data Rx In

### **The definition and setup for DB9 (optional) is as follows:**

Pin #2 : AC Power Failure  
Pin #4 : Common GND of Pin #2 & Pin #5  
Pin #5 : UPS Battery Low  
Pin #6 : Turn off UPS  
Pin #7 : GND for Pin 6

The computer interface pin-out is stated above for reference only. Use Pin #4 as the common for Pins #2 and #5. Pins #2 and #4 are normally closed and will open when the utility fails. Pins #5 and #4 are normally open and will close at the low battery indication.

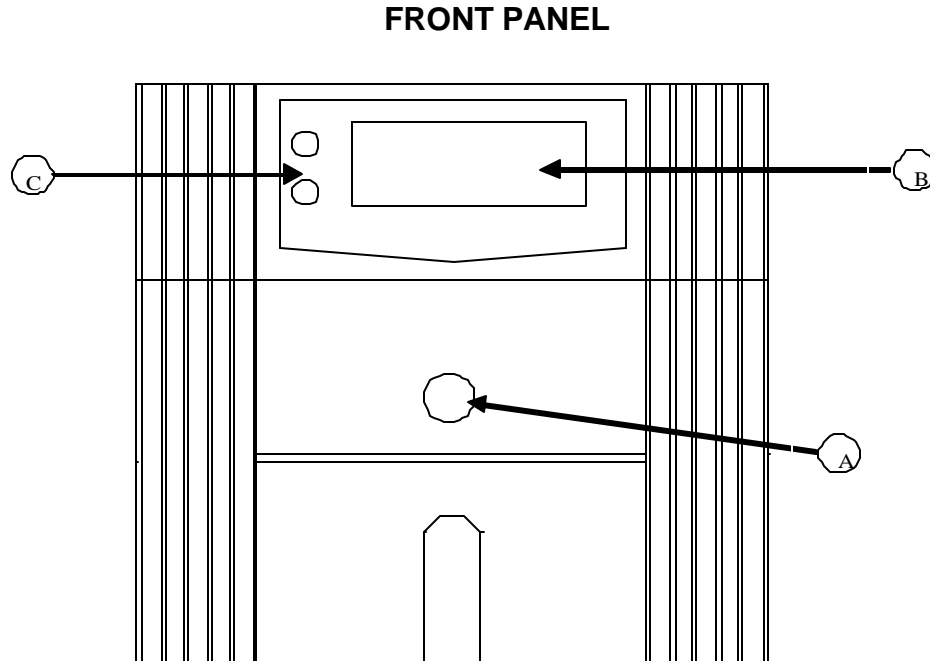
The UPS will shut down when a 5-12 Vdc voltage is applied across Pins #6 and #7 for three seconds, while the UPS is on battery mode.

### **IMPORTANT**

6. **DO NOT BLOCK UPS AIR VENTS. THE UPS MUST NOT BE INSTALLED IN AN ENCLOSED AREA.**
7. If you have not already done so, connect the equipment to be protected to the UPS output receptacles located on the rear panel. Verify that the connected equipment does not exceed the rated output (in watts) of the UPS.
8. Select the proper line cord and connect it to the UPS power inlet. Plug the UPS power cord into the nearest grounded wall outlet. If the UPS does not power up automatically, depress and hold the control button located on the UPS front panel until the UPS turns on.

# CHAPTER 3

## Controls, Displays & Functions



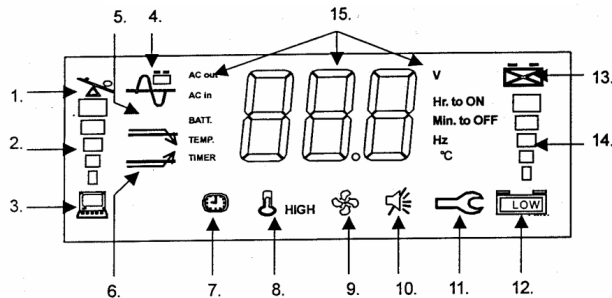
- A. Main Control Button - This button is used to turn the UPS on and off, to perform a UPS self test, or to reset and silence an audible alarm. Refer to page 10 for operation instructions.
- B. A Liquid Crystal Display (LCD) is provided. Please reference the number designation for the display function and the function descriptions referenced in this manual. Refer to pages 6-8 in this manual.
- C. Two LCD metering function select buttons are provided. The upper button scrolls the display through the metering functions in an upward direction, the lower button in a downward direction. Refer to “LCD Metering Display Modes” referenced on page 8 of this manual.

## LCD SYMBOL DESCRIPTIONS

No.	Symbol	Indication
1.		Over load
2.		Load level
3.		UPS is loaded
4.		Normal mode
		Battery mode
		Test mode

No.	Symbol	Indication
6.		Buck mode
6.		Boost mode
7.		Timer is enabled
8.		Thermal alarm
9.		Fan is "ON"
10.		Alarm off
11.		UPS fault
12.		Battery normal
		Battery low

### LCD DISPLAY



1. **Over Load** --The connected load exceeds the UPS output rating. Remove some of the load from the UPS to correct this condition.
2. **Load Level** --Bar graph indicates the percent of UPS load capacity remaining.
3. **UPS is loaded** - This symbol is displayed when the UPS output load exceeds 30 watts and disappears when the load is under 25%.
4. **Normal Mode** - The sinewave symbol will be displayed when the UPS is operating normally from the utility line.  
**Battery Mode** - The sinewave and battery symbols will blink when the UPS is operating on its internal battery.  
**Test Mode** - The sinewave symbol will display steadily and the battery symbol will blink during a UPS self test.
5. **Buck Mode** - The Automatic Voltage Regulator (AVR) is reducing the UPS output voltage due to a high utility voltage condition. The sinewave symbol is also displayed to indicate that the UPS is operating normally from the utility line.



6. **Boost Mode** - The AVR is increasing the UPS output voltage due to a low utility voltage condition or "Brown-out". The sinewave symbol is also displayed to indicate that the UPS is operating normally from the utility line.
7. **Timer is enabled** - This symbol will be displayed during the following conditions:
  - a) The UPS has been programmed to automatically turn on or off using the supplied remote monitoring software.
  - b) The green mode is enabled and the UPS output load is under 25 watts. The UPS will turn off after a 30 second delay.
8. **Over Temperature** - The temperature inside the UPS has exceeded 55°C. If the end-user does not reduce the UPS output load or correct the cause of the UPS overheating, the temperature will continue to rise and upon reaching 60°C the UPS will shutdown to prevent damage due to excessive overheating.
9. **Fan off** - This symbol is used on special extended backup models only.
10. **Alarm off** - The audible alarm has been silenced. To reset the alarm during backup mode, briefly depress the control button.
11. **UPS fault** - Attempt to perform a UPS reset by depressing the control button and holding it for ten seconds. If the UPS resets and operates normally, no further action is required. If the UPS fault indicator is still displayed, the UPS has failed and must be repaired.
12. **Battery low** - When the battery charge level is low, the word "LOW" will be displayed inside the battery normal symbol.
13. **Battery normal** - During normal utility operating this symbol indicates a charged battery.
14. **Battery level** - When the battery is fully charged, all five bar graph segments will be dark. As the battery discharges, the segments will disappear starting from the top segment and end with the bottom segment.

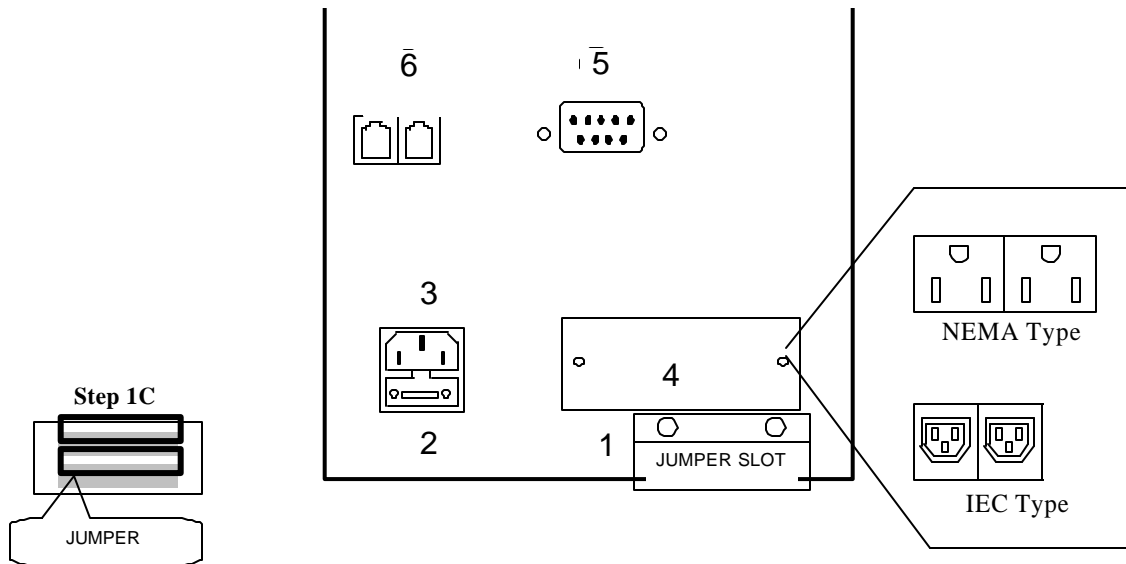
15. **LCD Metering Display** - When the UPS is turned on, this portion of the LCD display indicates the AC output voltage initially. Depressing the downward scroll button will indicate the following each time it is depressed:

### LCD Metering Display Modes

(use display scroll buttons to change modes; modes are in descending order)

Mode	Value	Display Description
AC Output	Voltage	AC Output Voltage
AC Input	Voltage	AC Input Voltage
AC Output	Frequency (Hz)	AC Output Frequency
Battery	Voltage	DC Battery Voltage
Temperature	°C	Internal UPS Temperature
Timer	Minutes to off	The UPS will turn off when the displayed value reaches zero.
Timer	Hours to on	The UPS will turn on when the display reaches zero.
Battery	Minutes to off	The estimated remaining battery run time while in battery backup mode.

### TYPICAL UPS REAR PANEL



1. **Battery Disconnect Jumper** - To install the Jumper use the following procedure.
  - a) Using a #1 Phillips screwdriver remove the two screws securing the battery disconnect cover.
  - b) Remove the battery disconnect jumper plug from the plastic bag.
  - c) Press the disconnect jumper into the socket visible through the hole exposed after removal of the cover. A small popping sound may occur; this is normal.

2. **Input Fuse** - Always replace with the same fuse type and rating.
3. **Inlet** - for connection of incoming power cord.
4. **UPS output receptacles** - The top NEMA type receptacles will be found on all domestic (120V) models. IEC type receptacles will be found on international (230V) models.
5. **DB-9 RS-232** computer interface connector.
6. **Surge protected, RJ11 type telephone jacks** - To provide surge protection for your fax, modem or other telecommunications devices. Connect the incoming telephone line to one of the jacks. Then, connect the fax, modem or other device to be protected to the other jack.
7. **Audible Alarms** - Reference the following table.

	ALARM	PERIOD	STATUS INDICATED
UPS OFF	No Beep	LCD flashes every 2 seconds	Utility Good
	No Beep		Utility Loss
	No Beep		Timer on, refer to operation section #9
UPS TURNED ON	No Beep	Continuously	Normal (utility good)
	Beep (Can be silenced)	One beep every 4 seconds	Operating on battery mode (no load)
		2 beeps every 4 seconds	Operating on battery mode (loaded)
	Beep (Cannot be silenced)	4 beeps per second	Operating on battery mode (LOW BATTERY)
	Beep	8 beeps per second	DEFECTIVE BATTERY

# CHAPTER 4

## Operation

1. **Turning The UPS On and Off**

Depending on how the UPS was turned off, it may automatically turn on when the input plug is plugged in. If it does not turn on automatically, depress the control button located on the front panel for four seconds until the UPS turns on. To turn the UPS off press and hold the control button for five seconds or until the UPS turns off. ***UPS batteries will still continue to recharge after the UPS has turned off.***
2. **UPS Self Test**

Depressing the control button for one second while the UPS is turned on will initiate a self test sequence.
3. **UPS Overload Condition**

To ensure that your computer equipment will be protected during a utility failure, it is important to make sure that the maximum power required from the equipment is not over the rated capacity of the UPS. The LCD overload indicator will be displayed and an audible alarm will sound if the load is over 120% of the UPS's rated output. If the over load is greater than 120% , the UPS will shut down immediately to protect the itself. After three seconds, if the overload is removed the UPS will automatically turn on again. If the overload is still present the UPS will turn off and stay off, requiring the UPS be manually restarted. Always correct any overload condition immediately.
4. **DC Start, Cold Start**

To start the UPS when utility power is not available, press and hold down the control button twice for one second each time. The UPS will start up and run on its internal battery until discharged. If you do not depress the control button to turn the UPS off during battery operation, the UPS will automatically restart when utility voltage is reapplied. The UPS batteries should not be left discharged for long periods of time or battery damage may occur.

Always reconnect the UPS to a utility source, turn the UPS on and allow the batteries to recharge for eight hours after the batteries have been fully discharged due to DC operation.
5. **Green Mode Function**

The UPS is equipped with a Green mode function. If no load is present at the UPS output receptacles (no equipment connected or the load is less than 25 watts), the UPS will shut down within 12 seconds. Should the utility AC be lost during the shut down, the UPS will automatically restart and again shut down after another two minutes of no load being applied.

6. **Battery Charging**

This UPS is shipped from the factory with its batteries fully charged. However, some charge may be lost due to the self discharge characteristics of the internal sealed lead-acid battery. Always allow the UPS to recharge for 24 hours prior to use. To recharge, simply connect the UPS line cord to a powered receptacle. The UPS does not have to be turned on for batteries to recharge. During normal use, the UPS will self recharge should the battery be depleted due to a loss of utility power.

7. **UPS Reset**

In the event the UPS will not accept commands and appears to be locked up, depress the control button for and hold for ten seconds. The UPS CPU will be reset.

8. **Remote Control**

The UPS can be set for an automatic daily shutdown and start up. This command must be set through the RS-232 interface using the supplied software. When this function is set, a timer inside the UPS will begin to run.

The load will be turned off according to the shutdown and start up schedule set in the software, which is then transferred and stored in the UPS memory. During the period of turn off to the next turn on, the status LCD "time entered" symbol will blink.

# CHAPTER 5

## Maintenance & Technical Support

### 1. **Care & Maintenance**

Falcon® SUP Series UPSs are designed to be maintenance free.

They can be cleaned with a damp cloth or non-abrasive cleanser, providing the UPS is turned off and the input plug is disconnected from the utility source.

On a regular basis, check the vents to make sure they are kept free from accumulation of dust, dirt or lint.

### 2. **Battery Replacement Warning**

Momentarily depressing the UPS control button while the UPS is operating normally from utility power will place the UPS into self-test. In the event the UPS batteries are weak, an alarm will sound as an indication that the batteries need to be replaced. For full battery life, keep the UPS close to an ambient temperature of 77°F. The batteries should never be exposed to temperatures below 40°F and above 85°F.

### 3. **Battery Replacement**

This UPS contains sealed maintenance-free batteries (VRLA). When situated in a typical office environment, with the proper charging and limited cycling, these batteries can last many years. **In home, office or computer room environments, the batteries should be replaced every three to five years.**

#### **WARNING**

Never attempt to service batteries. High voltage exists within the unit, which could cause electrical shock. **Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions.** Keep unauthorized personnel away from batteries.

When replacing the UPS batteries, use the same number and type of batteries.

#### **NEVER**

A. **NEVER** dispose of batteries in a fire, as batteries will explode.

B. **NEVER** dispose of used batteries or the UPS in the trash or landfill as it is against federal and state laws. **The UPS and Batteries must be recycled.**

For UPS and battery recycling information, please contact our service department for the name and address of the nearest battery recycling facility.

#### **CAUTION**

A. Do not open or mutilate the battery or batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.

B. A battery can present a risk of electrical shock and high short circuit current. **REFER ALL BATTERY SERVICING OR REPLACEMENT TO A QUALIFIED SERVICE TECHNICIAN. NEVER ATTEMPT TO REPLACE THE BATTERIES.**

## NECESSARY PRECAUTIONS

The following precautions should be observed by a qualified technician when working with batteries:

1. Remove watches, rings, or other metal objects.
2. Use tools with insulated handles.
3. Wear rubber gloves and boots.
4. Do not lay tools or metal parts on top of batteries

### 4. **Storing the UPS and Batteries**

Should you need to store the UPS for a long period, fully recharge the battery just prior to storage and recharge the battery every 6 months by plugging the UPS into a power outlet. It is recommended that the batteries charge for 24 hours after long-term storage.

### 5. **FCC Considerations**

This equipment generates and uses radio frequency energy and if not installed and used properly in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. All models covered in this manual have been tested and found to comply with the limits for a Class A computing device, in accordance with the specifications in FCC regulations, Part 15, Subpart J, which are designed to provide reasonable protection against such interference.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correcting the interference by one or more of the following measures:

- a. Reorient or relocate the receiving antenna.
- b. Increase the separation between the equipment and the receiver.
- c. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- d. Consult the dealer or an experienced radio/television technician for assistance.

## 6. Technical Support

Your FALCON® Electric SUP Series UPS is backed by one of the finest customer service teams assembled. Write, call, fax or email should you require technical assistance or service.

FALCON ELECTRIC, INC.  
5106 Azusa Canyon Road  
Irwindale, CA. 91706  
Voice 626.962.7770  
Fax 626.962.7720  
Service 800.842.6940  
Email: [service@falconups.com](mailto:service@falconups.com)  
[WWW.FALCONUPS.COM](http://WWW.FALCONUPS.COM)

Should service be desired, you must first obtain a Return Material Authorization number (RMA) and return shipping instructions from our customer service department. Please have your UPS model, serial numbers and date of purchase on hand prior to the call. (This information is located on the identification label on the rear panel of the unit.) The information is essential in retrieving your unit's historical records.

The RMA number issued must appear on the outside of the shipping carton. The original shipping container must be used when returning any SUP Series product. Falcon® Electric will not assume any responsibility for shipping damage. In the event of shipping damage you will be charged for repairs due to the damage.

All units must be returned prepaid. The address and shipping instructions will be given to you at the time the RMA is issued.

## 7. Requesting Technical Information or Support.

You may request technical information or support by email or telephone.

Please send your technical or support questions by email to:

**[SUPPORT@FALCONUPS.COM](mailto:SUPPORT@FALCONUPS.COM)**

You may contact a FALCON support engineer directly by calling the FALCON support line between 9:00 am and 4:00 pm PST.

**626.962.7770**

## 8. FALCON Web Support

Product data sheets, specification and owner's guides are available in Adobe .PDF format on our corporate website.

**[WWW.FALCONUPS.COM](http://WWW.FALCONUPS.COM)**



# WARRANTY

## 1. TIME AND SCOPE OF WARRANTY:

- 1.1 FALCON® hereby warrants parts shipped under this Agreement to be free from defective workmanship for a period of **one year** following date of shipment. Accidental damage, misuse or normal wear and tear shall not be construed as a defect.
- 1.2 The date of shipment as used herein will be the date on the Bill of Lading. If no Bill of Lading is issued, the date of shipment shall be shown on seller's shipping document.
- 1.3 No provision of this warranty shall cover equipment which has been altered or modified from the originally specifications manufactured unless authorized in writing.
- 1.4 No provision of this warranty shall cover batteries. However, battery manufacturer's warranties will be passed through to the customer whenever applicable.

## 2. LIMITS OF "IN WARRANTY" SERVICE LIABILITY:

- 2.1 FALCON® is obligated during the in-warranty period to provide service and/or adjustments to equipment returned to the factory at the expense of buyer (the term "factory" as used here-in shall also include any field service centers which may be established by FALCON®) and to repair or replace any part(s) thereof which in the opinion of authorized FALCON® personnel are found to have been defective during the warranty period.
- 2.2 Equipment requiring in-warranty services must be returned to the factory with all transportation charges prepaid, clearly tagged, stating the nature of the trouble experienced, and the disposition of the equipment after repair. The equipment will be returned freight collect by FALCON® to the location specified via the best and least expensive carrier available or via customer's shipping instructions.
- 2.3 During the in-warranty period, no service charges shall be payable by the buyer for service performed other than for service necessitated by accident, misuse, theft, abnormal line or source voltage fluctuations, abnormal conditions of operation, damage by the elements or damage resulting from adjustments, repairs, modifications made by anyone other than FALCON® authorized personnel, or the buyer's failure to reasonably maintain the equipment.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IS GIVEN AND ACCEPTED IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE REMEDIES OF BUYER SHALL BE LIMITED TO THOSE PROVIDED HEREIN. IN NO EVENT WILL SELLER BE LIABLE FOR COLLATERAL OR CONSEQUENTIAL DAMAGES. No person is authorized to assume on behalf of FALCON® any obligation or liability in connection with the sale, warranty or service policy of any products manufactured and/or marketed by FALCON® beyond the warranty description on the face hereof.

3. FALCON® ELECTRIC reserves the right to make changes, additions, and/or improvements in its products without incurring any obligation to install them on its products previously sold. This Warranty is valid for FALCON® product as sold.

<b>Model Number</b>	<b>SUP700-1C</b>	<b>SUP1.0K-1C</b>
<b>Nominal VA</b>	700	1000

### Electrical Input

Nominal AC Voltage	120V or 230V	120V or 230V
Current-Amps	7 (120V), 3.6 (230V)	10 (120V), 5.2 (230V)
AC Voltage Window	-21% to 25%	
Frequency	50/60 Hz (Auto – Tracking)	
Frequency Range	47 – 63Hz	

UPS is designed for use on 120V domestic or 230V international utility power with neutral, line and ground connections.

### Electrical Output

Watts	490	650
Nominal AC Voltage	120V	120V
Frequency	50/60 Hz (Auto-Tracking)	
On-Line Voltage Regulation	± 8%	
On Battery Voltage Regulation	± 8% Typical (prior to low battery warning)	
Waveform	True Sinewave	
Surge Protection	125 Joules MOV	
Unit Protection	Short Circuit, Overload & Over Temperature	
Efficiency AC to AC (Typical)	97% (120Vac Input), 90% (230Vac Input)	

### Battery

DC Voltage	24V	24V
Type	12V, 7AH x 2 Lead Acid Maintenance-Free	12V, 9AH x 2 Lead Acid Maintenance-Free
Back Up Time @ Full Load	5 Minutes	4.5 Minutes
@ 1/2 Load	12 Minutes	11 Minutes
Recharge Time	5 Hours to 90%	

Battery times are approximate.

### Transfer Time

Bypass to Inverter	Black-out, 3ms / Brown-out, 0ms
Inverter to Bypass	0ms

### Electrical Connections

Input	1 - 6' Cord with 5-15P & 1 – 6' Cord with Schuko	1 - 6' Cord with 5 -15P & 1 – 6' Cord with Schuko
Output	(3) 5-15R	(3) 5-15R

### Environmental

Operating Temperature	0° C - 40° C (32° F to 104° F)
Altitude	7,000 Feet
Humidity	10% to 95% Non – Condensing
Cooling	Low Velocity Forced Air Fans
Audible Noise @ 1 meter	< 45dBA

### Controls and Indicators

Control	One Main Control Button – UPS On/Off, Self Test, Reset & Silence Alarms
Selection Control	Two LCD Metering Scroll Function Select Buttons
LCD Display	AC Input Voltage, AC Output Voltage, Output Frequency, DC Battery Voltage, Internal UPS Temperature, Timer – Minutes to Shutdown, Hours to Restart, Battery – Remaining Battery Time
LCD Operational Symbols	Overload, Load Level, UPS is Loaded, Normal Mode, Buck Mode, Boost Mode, Timer Enabled, High Temperature, Fan Off, Alarm Off, UPS Fault, Battery Low, Battery Level
Audible Alarms	Low Battery, Defective Battery, Low Battery, Overload, Over Temperature, AC Out of Range
Communications	RS-232 Serial Port and Contact Closure Signal interface (Bundled UPSil on 2000 Software)

### Mechanical

Dimensions H x W x D Inches (mm)	7.9 x 7.1 x 14.2 (200 x 180 x 360)
Weight lb. (kg)	33.1 (15) 33.1 (15)
Agency Listing	UL1778, CUL, FCC Class A

Note: The UPS will go to Green Mode whenever the output load is under 30 watts.



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