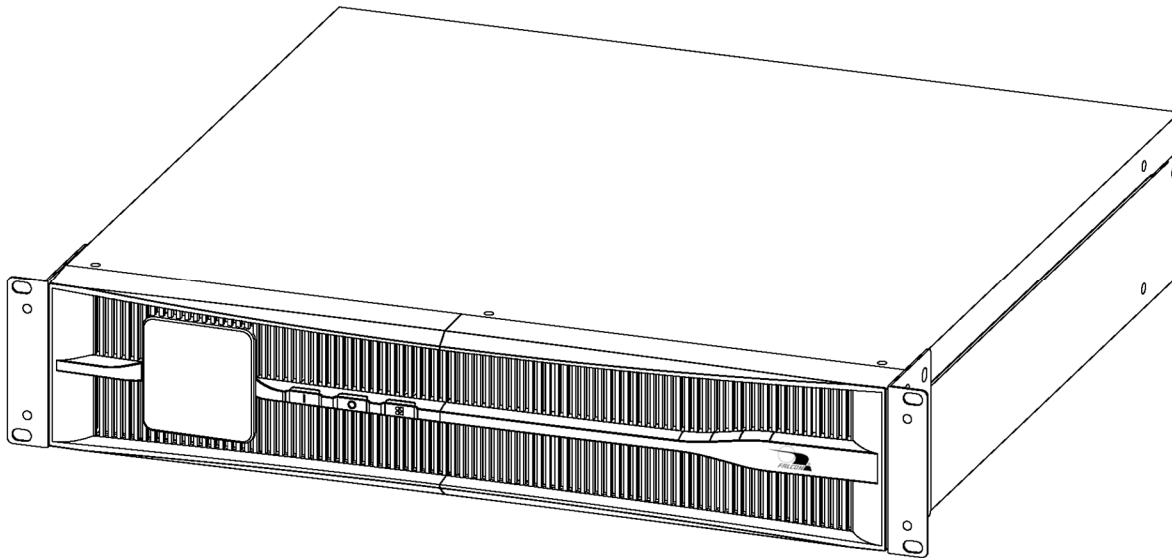




SL LiFePO₄ UPS Installation & User Manual



1kVA to 3kVA

SL1KRM-1

SL2KRM-1

SL3KRM-1

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INTRODUCTION

Manual Overview

This user manual provides basic information about the Falcon SL LiFePO₄ Uninterruptible Power Supply (UPS). SL models are available in nominal power ratings of 1000, 2000, and 3000 volt-amperes (VA).

This manual also provides complete unit installation, safety considerations, important features, as well as detailed operation, configuration and troubleshooting of this device.

UPS Features

● Lithium iron phosphate batteries

The LiFePO₄ batteries cut frequent battery replacements and maintenance costs. The high-power density results in 3 to 4x longer runtimes in a small footprint.

● Advanced safety

Lithium iron cathode material has no thermal runaway issues. The LiFePO₄ battery is safe for the environment. It has no caustic materials or dangerous odors.

● High efficiency

The SL UPS is up to 93% efficient resulting in lower operational costs and energy consumption.

● High power factor

The SL LiFePO₄ UPS output is rated at 0.9 power factor which provides more power for critical equipment. Its on-line design also ensures high reliability.

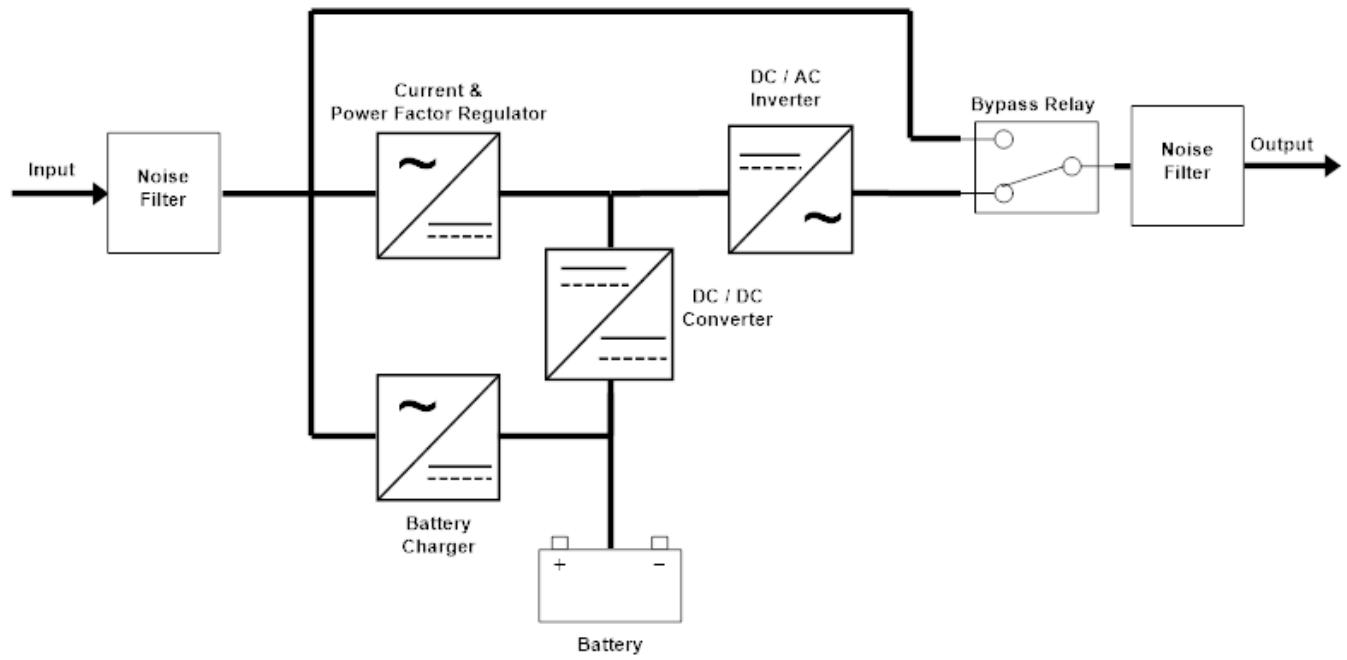
● Innovative design

The rack or free-standing tower configuration makes installation easy. The SL has an easy-to-use display to monitor the UPS and battery status.

● Falcon is recognized for quality and reliability

Falcon Electric is a recognized authority in on-line UPS solutions. Our technical expertise assures you find the right solution—the first time.

Double Conversion On-line UPS Block Diagram



SAFETY

Retain This User Manual

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

Please read all instructions before operating the equipment and save this manual for future reference.

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

This UPS operates from utility power and contains several high current batteries; this information is important to all personnel involved. Please read this manual first before continuing to unpack, install or operate this UPS.

Warnings

CAUTION: Risk of electric shock. Do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

CAUTION - Risk of Electric Shock - Battery Circuit is not isolated from ac input, hazardous voltage may exist between battery terminals and ground. Test before touching.

WARNING: To reduce the risk of fire, replace only with the same type and rating of fuse.

CAUTION - To reduce the risk of fire, connect only to a circuit provided with 15, 20 or 30 amperes maximum branch circuit overcurrent protection in accordance with the National Electric Code, ANSI/NFPA 70. (U.S. Installations only.)

Adhere to all local and national electrical codes.

This UPS should be installed according to the instructions in this manual. Failure to do so could result in unsafe operation and could invalidate your warranty.

This device is not intended for life support applications.

The maximum UPS output load (in watts) must never exceed that shown on the UPS rating label.

Do not connect inductive load type equipment that could severely overload the UPS including but not limited to motors, pumps, vacuums or high voltage contactor coils.

Take proper precautions when lifting or moving the UPS.

If using an external maintenance bypass switch, assure the UPS is manually placed in bypass mode before operating the maintenance bypass switch. Failure to follow this procedure will result in damage to this unit.

Symbols



Important Instruction



Special Note



Recycle



Do not dispose with ordinary trash



IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.

CAUTION: Risk of Energy Hazard, 24V / 48V / 72V, 10.2 Ampere-hour batteries. Before replacing batteries remove conductive jewelry such as chains, wrist watches, and rings. High energy through conductive materials could cause severe burns.

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. It may be toxic.

CAUTION: A battery can present a risk of electrical shock and high short-circuit current. The following precautions should be observed when working on batteries:

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



Servicing of batteries should be performed or supervised by qualified personnel knowledgeable about batteries and the required precautions. Please contact Falcon Service for battery replacement.



All personnel handling UPS must observe precautions for electrostatic sensitive devices.



Never discard the UPS or individual batteries in the trash. Contact your local recycling or hazardous waste center for information on proper disposal of the used batteries.



Never dispose of used batteries or the UPS in the trash or a landfill as it is a violation of federal and state laws. The UPS and batteries must be recycled. For UPS and battery recycling information, please contact your local recycling or hazardous waste center.

Battery Storage

If the UPS system is to be stored for an extended period, the following precautions should be observed to maximize battery life:

- Connect UPS to a properly rated outlet for at least 10 hours to ensure batteries are in a fully charged state prior to long-term storage.
- The ideal ambient temperature for storage should be between 0°C to 40°C. (32°F to 104°F)
- Remove the battery connector prior to storage.



Battery specifications subject to change without notice. Visit battery manufacturers website for latest information.

PRODUCT OVERVIEW

Transportation

The UPS must be handled with care and given special attention due to the high amount of energy stored within its internal batteries. Please retain the shipping container in the unlikely event the UPS needs to be returned for service. The container has been specifically designed to ship the UPS safely.

Operating Conditions

This UPS must be installed in a protected environment, free from moisture, flammable gases or fumes and corrosive substances.

Operate the UPS in a protected environment within the maximum temperature range of 0°C to 60°C (32°F to 140°F). A temperature range of 0°C to 40°C (32°F to 104°F) is ideal. Prolonged use in temperatures above 40°C to maximum 60°C will de-rate the UPS output power capacity. This UPS is designed for use with IT, scientific or data processing class equipment.

The SL LiFePO₄ UPS requires minimal maintenance or monitoring if the documented installation, environmental and operational specifications have been met. The items provided below are basic preventative maintenance measures to maximize UPS service life:

- Cooling Fans:
 - Assure the cooling fan guards / vents are free of dirt / dust build up every 6 to 12 months depending on environment. The UPS vents are located on the rear and / or front panel of the UPS.
- Ambient Temperature:
 - Monitor ambient temperature to ensure it is within the UPS specification.
- Batteries:
 - To maintain optimum battery life, the user should operate the UPS in an ambient temperature of 25°C to 30°C (77°F to 86°F). SL UPS models have batteries that are rated for operation from 0°C to 60°C (32°F to 140°F).

Inspecting the Equipment

Visually inspect the UPS for shipping damage. If the equipment has been damaged during shipment, and is signed for as received, make sure the receiver slip is noted with the detail of the damage exception. Keep the shipping cartons and packing materials for the carrier, and immediately file a claim for “shipping damage” with the carrier. If you discover damage after acceptance, file a claim for “concealed damage.”

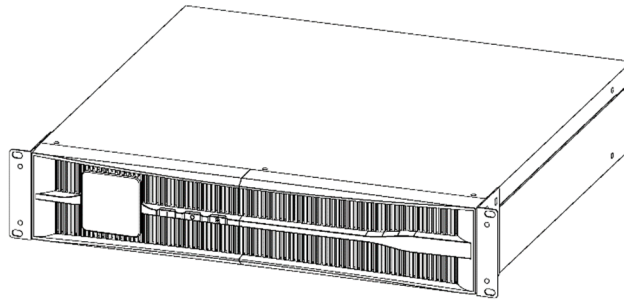
To file a claim for shipping damage or concealed damage:

- You must file with the carrier within 24 hours of receipt of the equipment.
- You must send a copy of the damage claim within 3 days to Falcon Electric, Inc.

Box Contents

The UPS is shipped complete with all cables and accessories required for operation. A full listing of the box contents is provided below:

SL Models: 1kVA to 3kVA



Box Contents:

UPS

Power Cord

Mounting Ears Kit

Tower Stand Kit

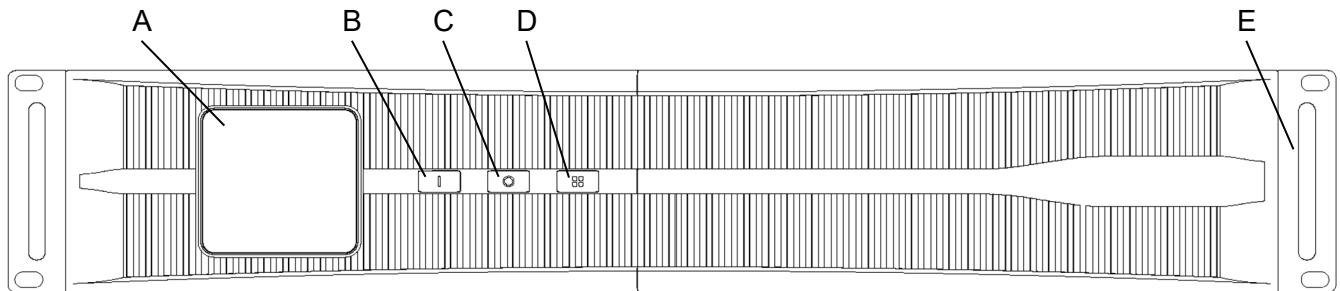
Battery Jumper

Documentation / Upsilon Software

Rack Rails Kit

1kVA to 3kVA Models

Front View



A: LCD Display

B: On Button

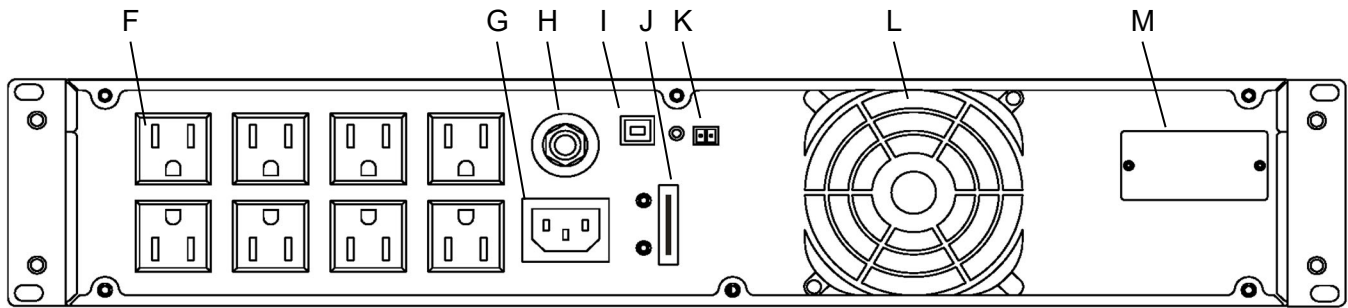
C: Off Button

D: Select Button

E: Mounting Ears

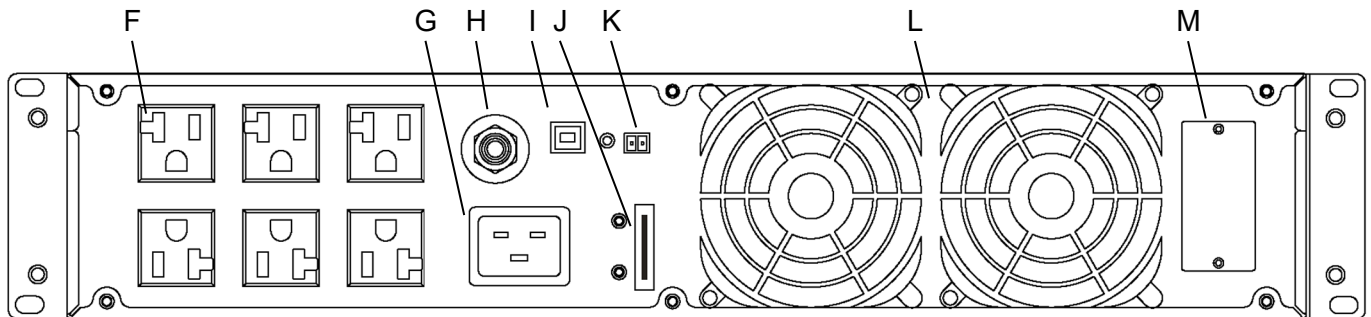
SL1K Rear Panel (120V Model)

Rear View



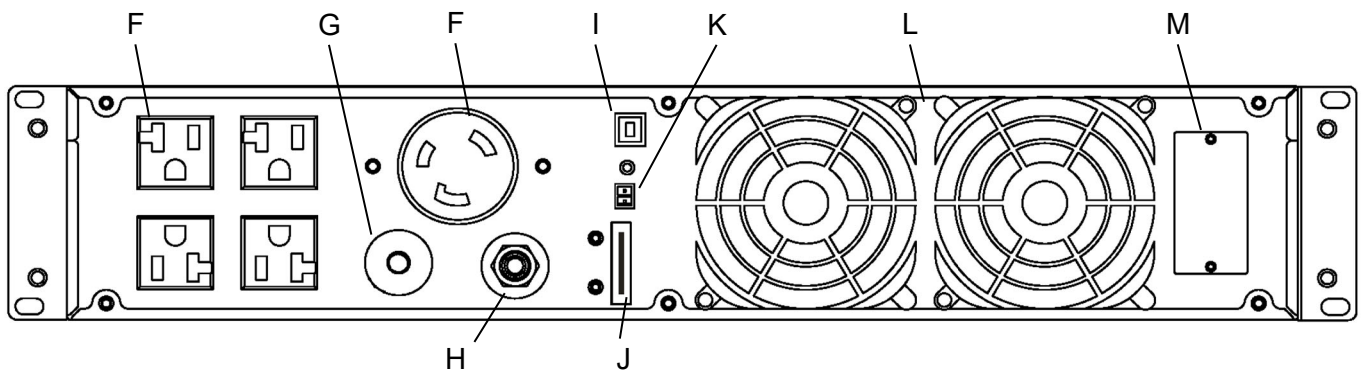
SL2K Rear Panel (120V Model)

Rear View



SL3K Rear Panel (120V Model)

Rear View



F: Power Outlets

G: Power Cord Inlet / Power Cord (3kVA)

H: Input Circuit Breaker

I: USB Port

J: Battery Connector

K: Emergency Power Off (EPO) Terminal

L: Cooling Fans

M: Communication Option Slot

AC Power Cord / Inlet: Connector for line cord or attached line cord that allows system connection to utility power.

Battery Connector: Required jumper to connect the internal batteries to the UPS. This is removed by default for shipping purposes only.

Circuit Breaker: One or more protection devices provided to protect the UPS input from an over current condition.

Power Outlets: Output receptacles providing regulated AC power to the load.

Cooling Fan: One or two devices provided to maintain the proper temperature of the internal electronics.

EPO Interface: Provides an interface for an external emergency power off switch.

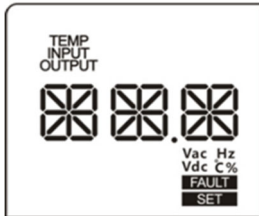
Communication Option Slot: When the cover plate is removed, a card slot is available for options, i.e. SNMP / HTTP Web Interface & Dry Contact Relay Cards.

USB Port: USB Connector provided to access the RS-232 protocol.

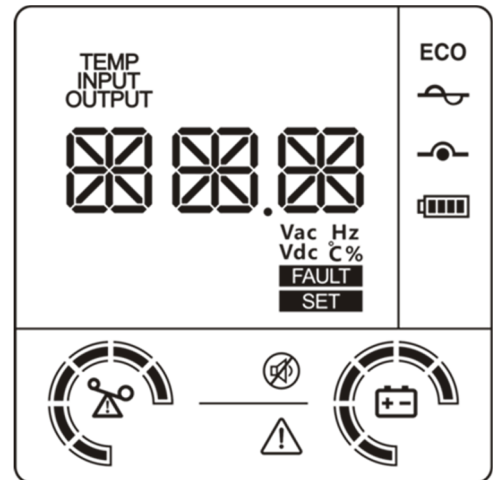
Display & Controls

LCD Display

The diagram to the right shows all available icons of the front panel LCD for the SL models. Refer to the LCD symbols in the left-hand column, below for their functional definition:



Metering: Sixteen segment display & icons provide readings for input voltage / frequency, output voltage / frequency, load percentage, temperature, fault codes, and parameters / operating modes reported from the UPS.



Online Mode: Sinewave icon indicates the UPS is operating in online mode from AC mains power.



Bypass Mode: Indicates the UPS is operating in bypass mode.



Battery Mode: Battery icon indicates AC mains power has been lost and the UPS is operating from battery power.



ECO Mode: Indicates the energy control option is enabled.



Buzzer Silence: Indicates the UPS buzzer is disabled.



Alarm: Warning icon indicates the UPS has suffered a fault condition.

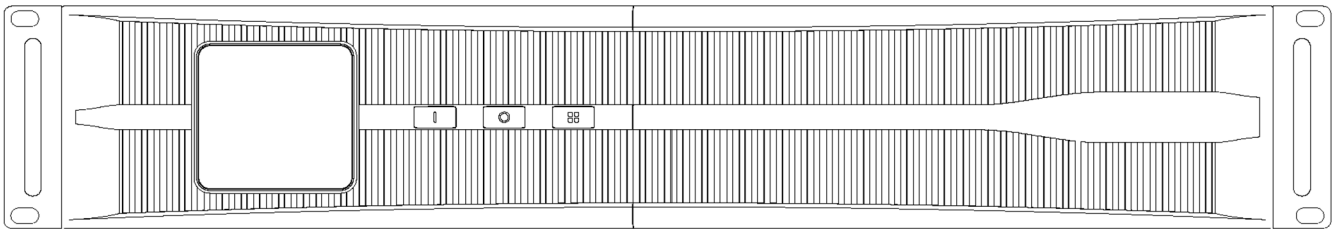


Load Indicator: Load capacity icon indicates how much load is applied to the UPS output. Each section fills as the load increases and empties as the load decreases.



Battery Indicator: Battery capacity icon indicates the charge level of the batteries. Each section fills as the battery voltage increases and empties as the battery voltage decreases.

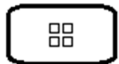
Front Panel Controls



On Button: Multifunctional button powers on the UPS, performs the battery self-test and is used to silence the buzzer during battery mode operation.



Off Button: Multifunctional button used to turn off the UPS when AC power is lost and manually place the UPS in bypass mode.

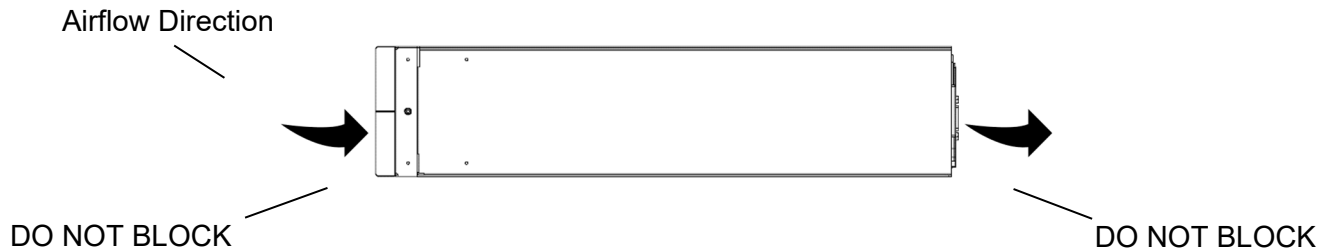


Select Button: Multifunctional button used to scroll through the available metered parameters including input voltage / frequency, output voltage / frequency, load percentage, temperature, fault codes and parameters / operating modes reported from the UPS. This button is also used to access the programmable UPS functions including output voltage, ECO Mode and LCD configuration.

Getting Started

Installation Environment

The UPS can be installed as a standalone tower or rack mounted in a typical 19" equipment rack. The UPS requires 2U (3.5" / 88.9mm) of vertical rack space. For equipment rack mounting, please refer to page 19 of this user's manual.



- Do not block air flow.
- Allow a minimum of 3 inches / 76.2mm clearance from the front and rear panel air vents.
- Environment:
 - Intended for use in a protected environment, free from moisture, flammable gases or fumes and corrosive substances.
 - Ambient Temperature:
 - Ideal: 25°C to 30°C (77°F to 86°F)
 - Maximum: 0°C to 60°C (32°F to 140°F)
 - Humidity:
 - 10-95% (Non-condensing)

Rackmount Installation



Mounting rack rails are provided in the package. Reference the rack rail installation guide included in the packaging.



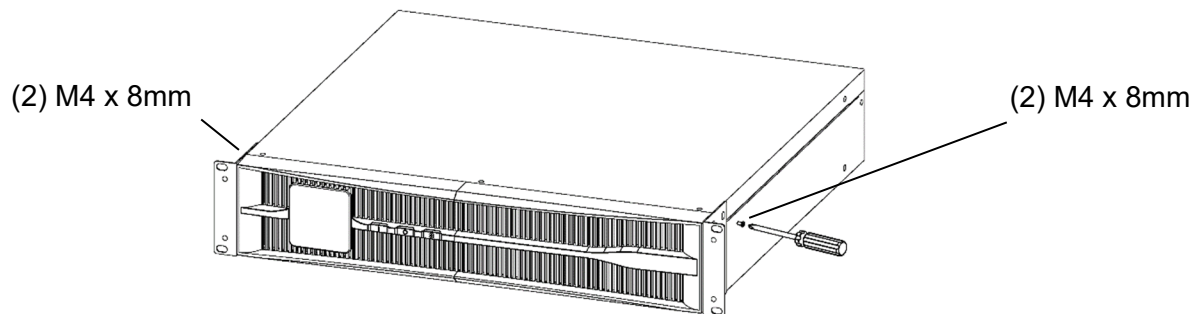
The UPS is designed to fit in a 19" equipment rack. Each UPS inverter module and battery bank requires 2U (3.5 inches / 88.9mm) of vertical rack space.



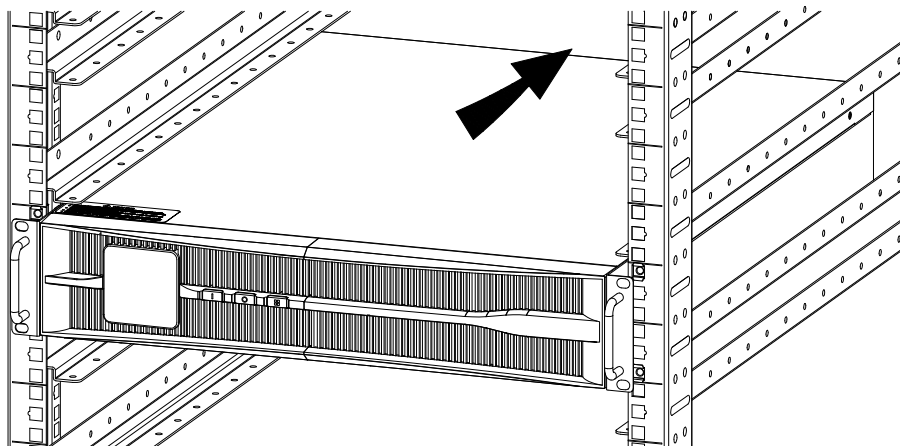
The supplied rack mounting ears are intended to secure the units to the rack rails. They do not support the weight of the UPS or battery bank. Rack shelves / rails are required.

Reference the following procedure to install the UPS in a standard 19" equipment rack:

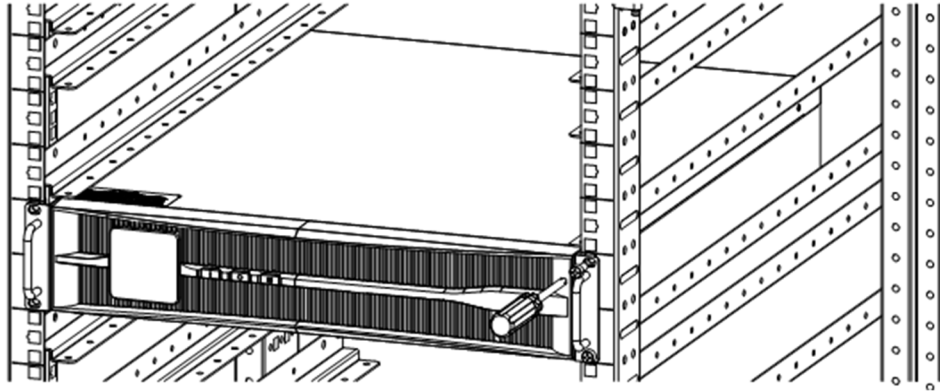
1. Place the UPS on a flat, stable surface with either side of the UPS facing you.
2. Align mounting ears with screw holes on each side of the UPS and secure with the supplied screws. (4) M4 x 8mm.



3. Carefully mount the UPS into rack rails.

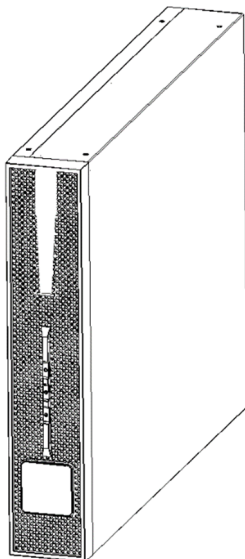


4. Secure the UPS mounting ears to the rack.

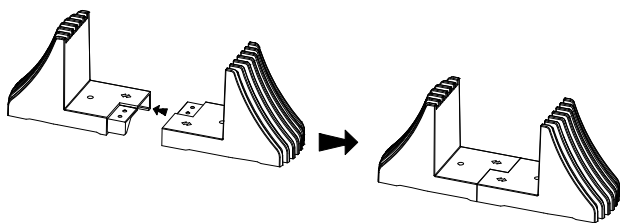


Tower Configuration

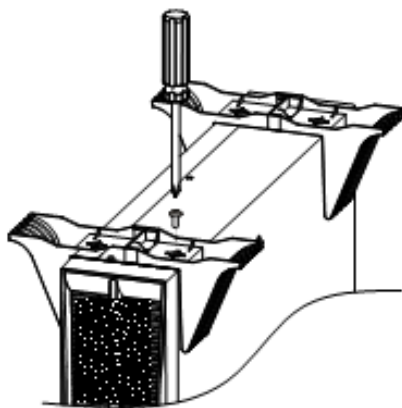
1. Place UPS in vertical position as shown below.



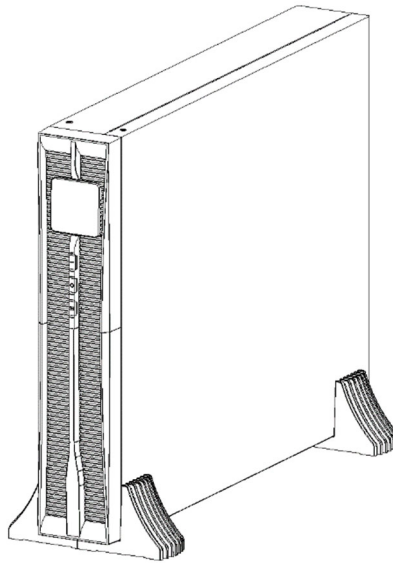
2. Assemble the stands as shown below.



3. Secure the stands onto the UPS using (4) M4x10mm screws. (Two per set)



4. Carefully flip UPS and mount on stable surface as shown below. (See page 29 for LCD settings for tower configuration.)

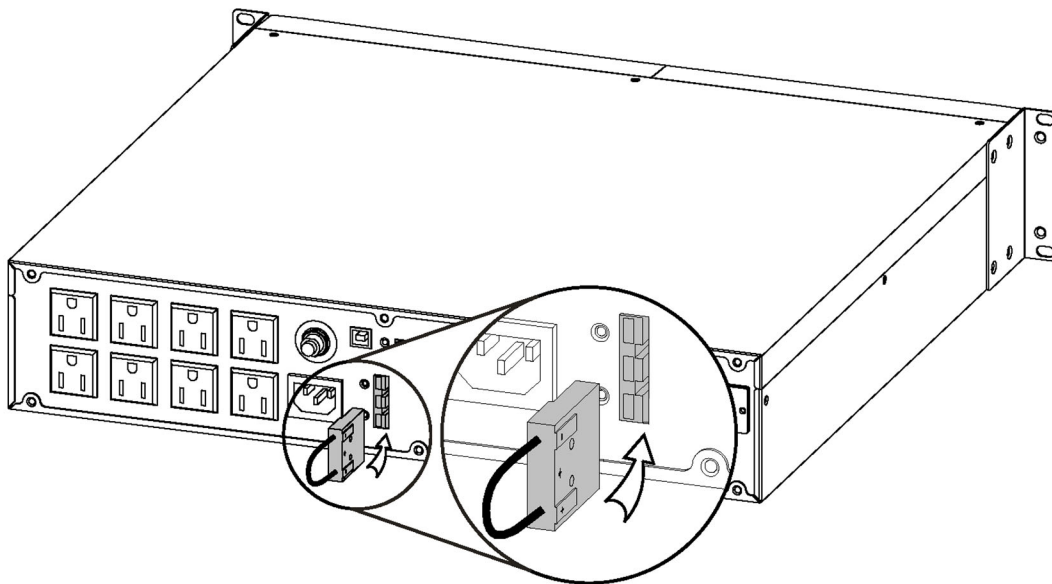


SL Models: 1kVA to 3kVA



Warning: Do not touch battery terminals located on the rear panel of the UPS.

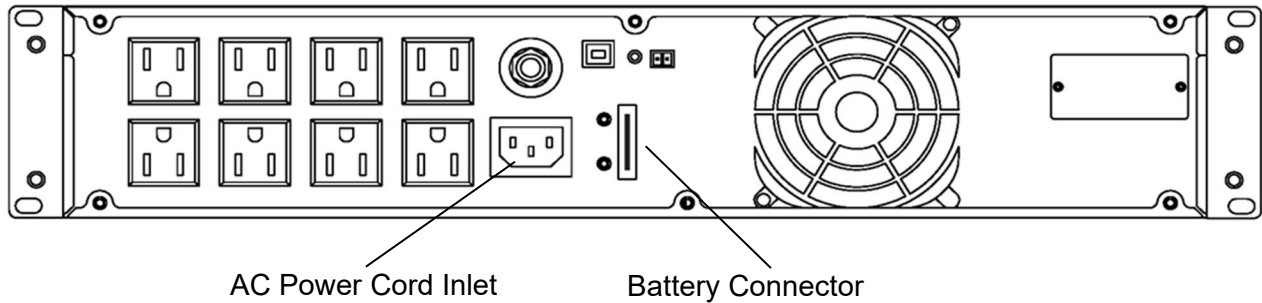
1. By default, the battery connection is not installed to prevent accidental operation during shipment.
2. Locate the battery connector from the package and install the connector as shown below.



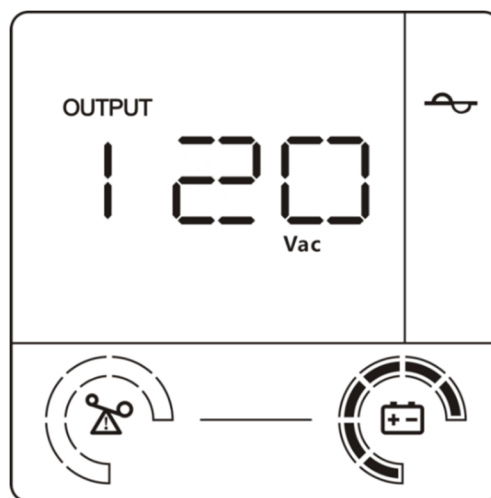
SL Models: 1kVA to 3kVA



UPS shown for illustration purposes only. Rear panel layout and operating voltage may vary.



1. Verify the battery connector has been installed.
2. Connect the supplied AC power cord to the power cord inlet on the UPS. (Note: Some models may have line cord permanently attached.)
3. Connect the plug to a properly rated wall receptacle.
4. The UPS should emit one beep and power on within approximately 5 seconds. (If UPS does not automatically start, press the “On” button for 1 second to wake up UPS.)
5. The UPS will be in online mode and LCD icons will be displayed as shown below.
6. Connect the equipment (load) to the UPS then power on the equipment.
 - a. Note: Connect largest power consumption load first, then connect lower power consumption load on initial start.



DC Start-up Procedure – Utility Power Unavailable



Warning: Verify the connected equipment (load) is turned off prior to starting procedure. Turn on the equipment after the UPS output has been turned on.



Note: In the event utility power is not available, the UPS may be started up in battery mode. The UPS will operate on battery and supply power to the connected equipment until the batteries are depleted. Always charge the batteries immediately by connecting the UPS to utility power.

1. Press the “**On**” button for approximately 1 second, then release.
2. After about 10 seconds, the UPS will operate in battery mode.
3. Connect the equipment (load) to the UPS output receptacles, then power on the equipment.

Turn off UPS – Utility Power Available



Warning: Do not press any other buttons after the shutdown command has been initiated to prevent interruption, fault alarm or unexpected output activation.

1. Turn off any equipment (load) connected to the UPS output.
2. While in online mode, press the “**Off**” button for one second.
 - a. The UPS will transfer to bypass mode after about 5 seconds.
3. Disconnect the UPS power cord from the wall outlet.
 - a. The UPS will shut down after about 5 seconds.

Turn off UPS – Utility Power Unavailable



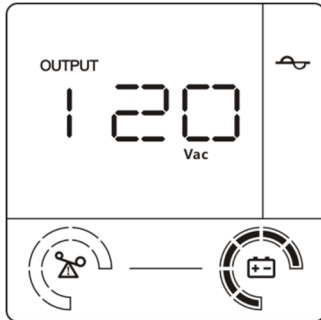
Warning: Do not press any other buttons after the shutdown command has been initiated to prevent interruption, fault alarm or unexpected output activation.

1. Turn off any equipment (load) connected to the UPS output.
2. While in battery mode, press the “**Off**” button for one second.
 - a. The UPS will shut down after about 5 seconds.

UPS Operation

Operating Modes

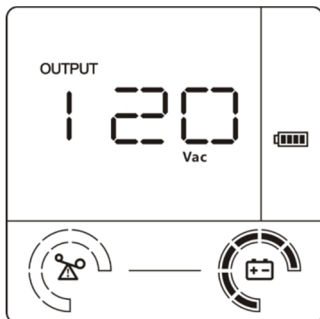
Online Mode



Online mode operation indicates the load, inverter and battery status.

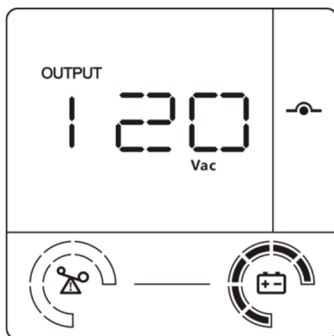
The dark, solid line inside the circle indicates the capacity of the battery or amount of load applied to the UPS.

Battery Mode



When the utility power is not available, the UPS will continue to power the connected load using the internal LiFePO₄ batteries. The UPS will emit an audible tone during battery operation until the batteries are exhausted and the UPS shuts down.

Bypass Mode

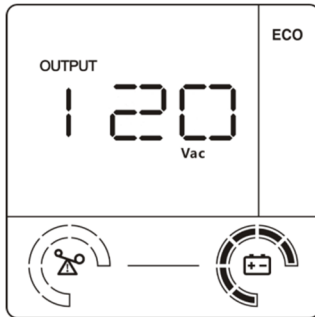


When in bypass mode, the UPS will transfer the load directly to utility power and battery backup is not available. The utility power, however, will continue to be passively filtered.

The UPS will automatically transfer to bypass mode and will sound an audible alarm upon the following conditions:

- Over-temperature
- Overload
- UPS Fault
- Manual Activation

ECO Mode

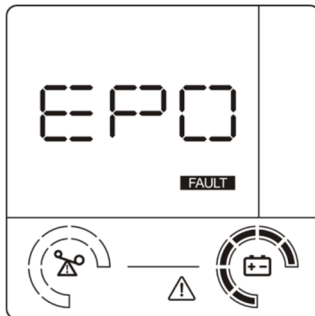


When ECO mode is activated, the UPS will automatically transfer to bypass mode if the connected load is low. The load will operate directly from utility power. The LCD will indicate the UPS is in ECO Mode. If the load is increased, the system will automatically transfer back to normal, on-line operation.

ECO mode is a power saving feature that should only be used:

- In non-critical applications
- With a single connected piece of equipment

EPO Mode (Emergency Power Off)

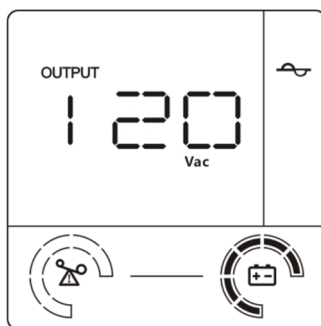


A two-pin, normally open connector is located on the rear panel of the UPS. The mating connector is shipped with the UPS for customer installation.

The EPO function provides an interface for an external Emergency Power Off (EPO) switch. The switch must have a normally open auxiliary contact that closes when the switch is opened. (EPO ACTIVE)

When the external EPO switch is opened, it turns the equipment room power and UPS power off. The UPS output will immediately turn off all connected loads and the LCD will indicate EPO is active and emit a continuous tone. The UPS must be shut down and restarted to continue operation after the external EPO switch provides power to the UPS.

LCD Meter



Use the select button to scroll through the available meter readings.

OUTPUT
120
Vac ——— Output Voltage

OUTPUT
60.0
Hz ——— Output Frequency (Hz)

OUTPUT
20.0
% ——— Output Load (%)

INPUT
120
Vac ——— Input Voltage

INPUT
60.0
Hz ——— Input Frequency (Hz)

INPUT
27.2
Vdc ——— Battery Voltage

TEMP
25.0
°C ——— Internal Temperature (Celsius)

Battery Self-test

1. While the UPS is operating in online mode, press the **“On”** button for 2 seconds, then release.
2. If the batteries are in good condition, the UPS will perform a simple battery test for approximately 10 seconds. During the test, press the **“Select”** button to monitor the battery voltage on the LCD.

UPS Parameters

The following section describes how to configure the UPS setup options using programming mode. Below are the available parameters:

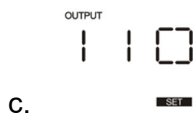
- Programming the ECO (Energy Control Operation) or INV (Inverter Mode).
- Programming output voltage to 110V or 120V.
- Programming LCD layout for tower (TWR) or rackmount (RCK) configuration.



Warning: Do not change the output voltage or ECO setting while powering the connected load. Disconnect all equipment (load) from the UPS output receptacles.

Programming Procedure

1. While the UPS is online, press and hold the **“Select”** button for 5 seconds to enter the configuration mode. The icons will flash when in programming mode, use the **“Select”** button to scroll through the options and press the **“On”** button to set a desired setting. Repeat process to change another setting. (See items a to f below.)



Default Programmed Settings

120V Models

1. ECO Mode: Disabled
2. INV Mode: Enabled
3. 110V Output: Disabled
4. 120V Output: Enabled
5. LCD Tower Configuration: Disabled
6. LCD Rackmount Configuration: Enabled

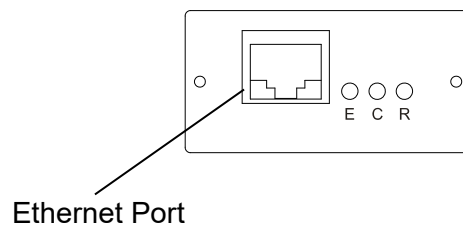
Communication Features

USB

The SL UPS is equipped with (1) USB port located on the UPS rear panel. The USB port interfaces with a standard USB cable included in the package. (4 Pin USB Type A (M) connector – 4 PIN USB Type B (M) connector) Please follow the installation and setup instructions supplied on the software CD.

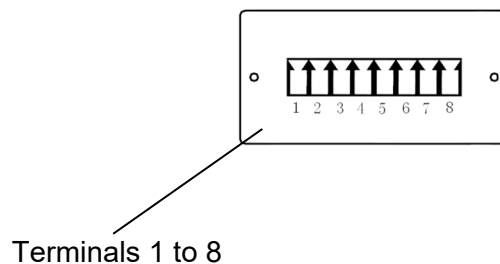
SNMP Card (Optional)

An optional simple network management protocol (SNMP) card is available to monitor UPS status over various protocols including TCP/IP, SNMP, FTP, NTP, HTTP and SMTP.

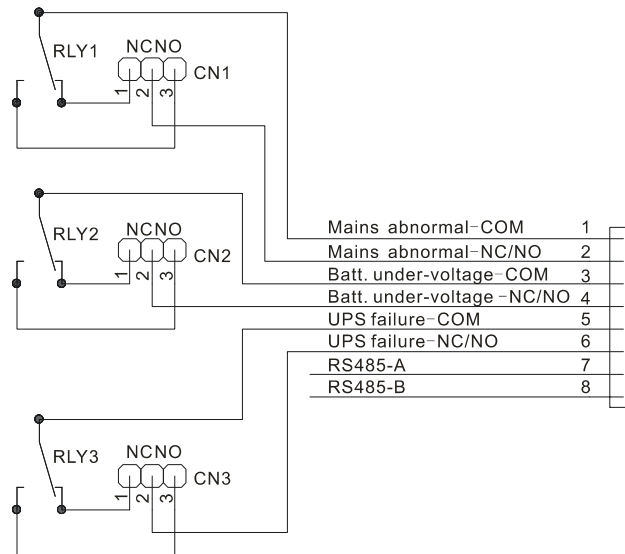


Dry Contact Relay Card (Optional)

An optional dry contact / RS485 relay card is available to monitor UPS status.



RS485 / Dry Contact Relay Card Diagram



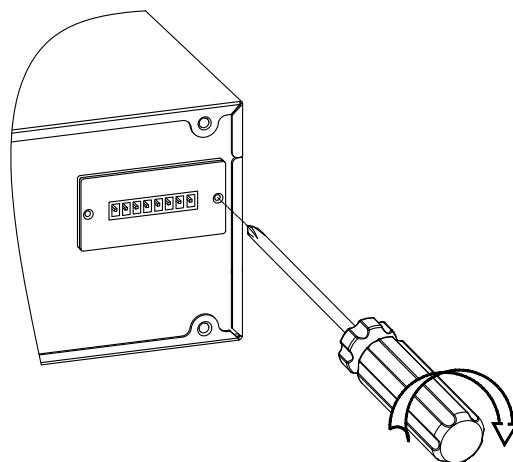
CN1, CN2 and CN3 determine the dry relay contact default setting. (Normally Open or Normally Closed)

The default configuration for CN1 to CN3 is 1-2 for normally closed.

Contact Specifications:

- 60VDC
- 1.25 Amps Max

The SNMP or relay card installs into the communication option slot. Simply remove 2 screws securing the communication slot cover and install either SNMP or Relay Card.



Troubleshooting

Alarms

Troubleshooting Tips



Prior to attempting any troubleshooting, always verify the UPS battery connector is installed and the input voltage, input plug and wiring are correct. Please refer to the table below.

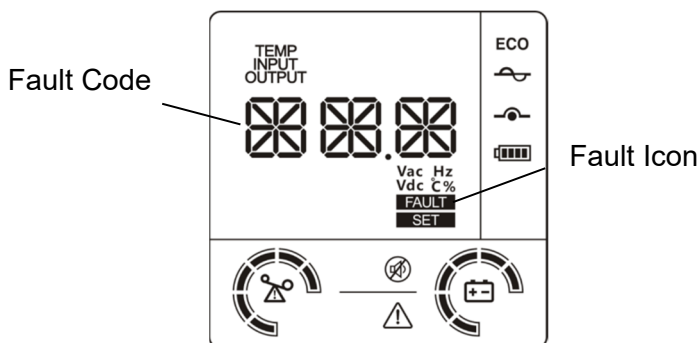
Problem	Possible Cause	Solution
UPS will not turn on.	Input plug is not connected properly. Utility power out of range.	Verify the input power cord and battery connector are properly seated.
UPS will not provide power to the load or is in bypass.	No output from any output receptacle. Output fails as soon as load is connected.	Check the connected cable. Ensure the load does not exceed the maximum rating of the UPS.
UPS drops the load and is in bypass mode with alarm.	Excessive load.	Check the load status; the UPS may be overloaded.
Short battery backup time.	Weak battery.	Perform battery self-test. If the self-test fails, replace the batteries.

Fault Codes

In the event of a severe failure, the UPS features audible alarm and bit codes to alert the user of potential faults. Please refer to the following table to identify and resolve alarms. If errors persist, please contact Falcon Electric for support.



Warning: Do not attempt to troubleshoot the UPS with the load connected to the UPS. Shutdown all connected equipment prior to attempting to troubleshoot the UPS. If a fault occurs, the UPS will switch the load to bypass mode and emit continuous audible alarm with the fault icon on the LCD.



Fault Code	Fault Code Description	Possible Cause	Solution
E P O <small>FAULT</small>	EPO Protection (Continuous Tone)	EPO protection indicates the EPO contact has been activated.	Remove EPO Jumper and restart UPS.
B U S <small>FAULT</small>	Busbar Voltage Fault (Continuous Tone)	Bus voltage fault indicates the DC bus is out of range and inverter output is not available.	Disconnect load from UPS output and restart UPS.
T M P <small>FAULT</small>	IGBT Over-temperature Fault (Continuous Tone)	IGBT Over-temperature fault indicates the inverter IGBT components temperature is out of range and inverter output is not available.	Disconnect load from UPS output and restart UPS.
F A N <small>FAULT</small>	Fan Fault (Rapid Tone)	Fan fault indicates the cooling fan or fans have failed.	Check fan for obstructions to fan operation.
O U T <small>FAULT</small>	Output Fault (Continuous Tone)	Output fault indicates a severe over-current or short circuit of UPS output.	Reduce / remove load to clear error. Restart UPS if error persists.
M I F <small>FAULT</small>	Multiple Inverting Fault (Continuous Tone)	Multiple inverting fault indicates the internal inverter circuitry has suffered component failure.	Disconnect load from UPS output and restart UPS.
B A T <small>FAULT</small>	Battery Fault (Continuous Tone)	Battery fault indicates the batteries are depleted or the battery voltage exceeded high range.	Check battery voltage. Batteries may need to be replaced.

Technical Support

Contact Us

For the latest version of our SL LiFePO₄ UPS specification, please visit our website at falconups.com.

In the event your SL LiFePO₄ UPS requires service, or should any other technical support be required, call or email Falcon Service.

Falcon Electric, Inc.
5116 Azusa Canyon Road
Irwindale, Ca 91706

Service: 800-842-6940

Voice: 626-962-7770

Email: service@falconups.com

www.falconups.com

Please have your UPS model, serial number and date of purchase on hand prior to your call. Serial number information is located on the identification label on the top section of the UPS. This information is essential in retrieving your unit's historical records. Should our service department determine service is required, you will be given a Return Material Authorization number (RMA) along with return shipping instructions.

The RMA number issued must appear on the outside of the shipping carton. The original shipping container must be used when returning any product. Failure to use the original shipping container and packing materials will likely result in irreparable shipping damage.

Falcon Electric will not assume any responsibility for shipping damage. In the event shipping damage is found, you will be notified of the damage and be instructed to file a claim with the freight carrier. You may be billed for all required repairs due to the shipping damage. You must submit a copy of our repair invoice to the carrier for reimbursement. All units must be returned prepaid unless otherwise specified. The address and shipping instructions will be given to you at the time the RMA is issued.

Warranty

LIMITED WARRANTY

Two-Year Limited Warranty: Falcon Electric warrants that this product will be free from defects in materials and workmanship for a period of two years from the date of shipment within the 50 states and Canada (Domestic). The warranty is limited to one year for all other destinations (International).

Procedures: Any defective product must be returned to Falcon. No product can be returned without first obtaining a Return Material Authorization (RMA) number from Falcon. Falcon will repair, replace or refund the purchaser price, at Falcon's sole discretion, for any defective product that is returned to Falcon with an RMA number. For defective product sold domestically, as defined above, returned within 30 days of shipment, Falcon will pay for the shipping costs to and from its service center. For a defective product returned after 30 days but within 90 days of shipment, Falcon will only pay for shipping costs in sending the new or repaired product back to the end-user. For a defective product returned more than 90 days after shipment, all shipping costs will be borne by the end-user. Falcon will not pay any shipping costs sold internationally, as described above.

Exclusions: This limited warranty does not cover damage caused by: (i) improper installation, misuse or neglect; (ii) unauthorized repairs or modifications or use of unauthorized parts; (iii) acts or events outside of Falcon's control, such as fire, accidents, impacts; (iv) normal wear and tear, such as cleaning and replacement of batteries.

The warranty is null and void if: (i) the product is used in conjunction with life support equipment; (ii) The factory seal is broken or shows signs of tampering; or (iii) the battery is allowed to discharge below the minimum battery cutoff point. To prevent this discharge, remove the battery fuse, or switch the battery disconnect to the "off" position when the unit is to be stored without the AC power being supplied to the UPS for more than two days. The battery must be recharged every four to six months when not in use. This limited warranty is not transferable.

Limitations: In no event is Falcon responsible for any special, indirect, secondary or consequential damages, such as personal injury, damage to property, loss of data, lost profits, etc. In no event will Falcon's liability under this limited warranty exceed the purchase price paid for the product in question.

Disclaimers: The limited warranties set forth in this document are the only warranties that apply to Falcon's products. All other warranties are expressly disclaimed, including any implied warranties of merchantability or fitness for a particular purpose. This warranty gives you specific legal rights, and you may have other legal rights that vary from state to state.