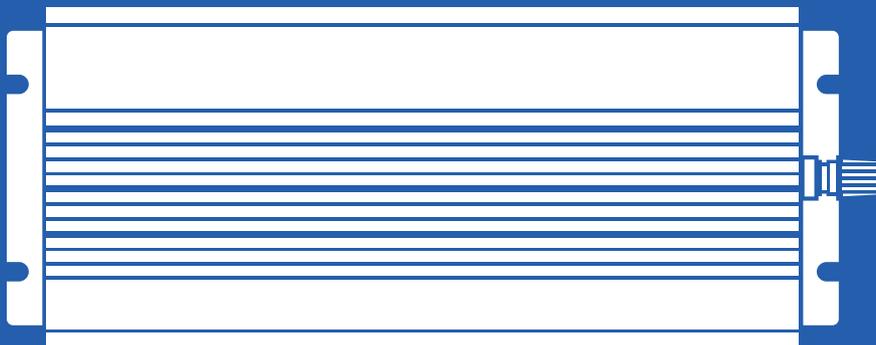




# Primary Sump Pump Backup Power System

INSTRUCTION AND OPERATING MANUAL



Models: FSAINV1500/FSAINV2000

FloodStop® Pump Tech Support: 1-833-786-7779

## GENERAL INFORMATION

To ensure safe and reliable operation, please carefully read this service and installation manual in its entirety before installing and/or using this product. Reasonable care and safe methods in accordance with sound plumbing practices should be strictly adhered to. Before installation, refer to and understand all relevant local plumbing and electrical codes.

**DO NOT THROW AWAY THIS MANUAL.** Keep it in a safe place so that you may refer to it for periodic service and maintenance.

**Always disconnect the power before servicing this product. Failure to do so may result in serious injury or death. Consult with a qualified electrician if you are unsure of the power source or cannot determine whether power has been properly disconnected.**

## SAFETY INFORMATION

Please review and follow the safety information listed below.

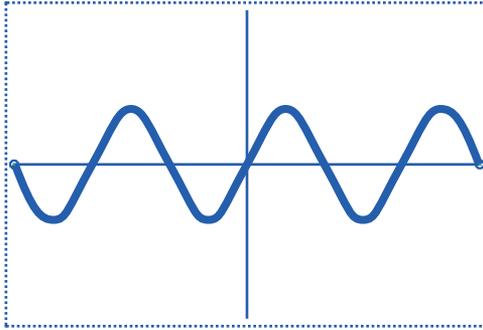


### WARNING

- Risk of electric shock. Always disconnect power before servicing.
- Not to be used as a grid-tie inverter.
- Do not make any electrical connections while standing on a wet surface or with wet hands.
- Electrical connections and wiring for a pump installation should only be made by qualified personnel.
- This equipment is equipped with an approved 3-conductor cord and 3-prong grounding-type plug, and is only for use with a grounded 110/120VAC receptacle.
- For proper and safe operation, the temperature range where this unit is to be installed is 14°F to 120°F and well ventilated. Avoid installing in direct sunlight.
- DO NOT bypass grounding wires or remove the ground prong from the plug.
- DO NOT use an extension cord.
- NEVER lift this product by the electrical power cord.
- NEVER attempt to open or service this unit.
- Do not store anything on top of this unit. This surfaces of this unit may become hot to the touch, particularly during periods of high demand / use.

## PERFORMANCE

The Primary Sump Pump Backup Power System will convert DC power from a 12VDC Deep Cycle Battery to AC power. When the Primary Sump Pump Backup Power System is inverting, the output waveform is a pure sine wave.



## SPECIFICATIONS

### **ATTENTION**

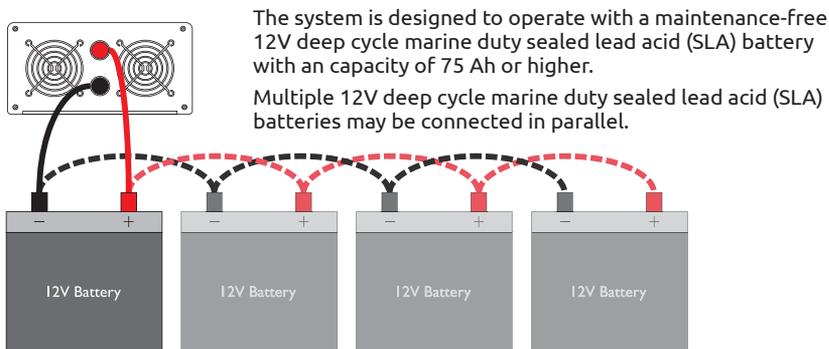
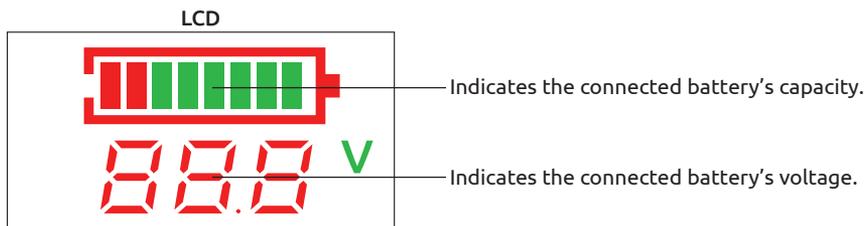
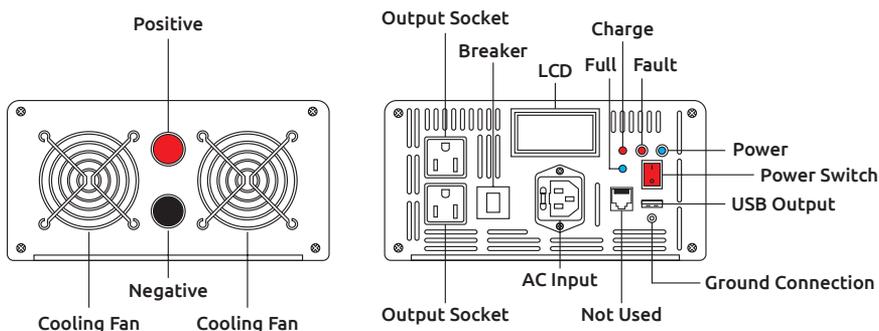
The Primary Sump Pump Backup Power System is grounded via a PCB Ground Plane. This grounding technique is not detected by GFCI testing devices.

Model	BU-1500	BU-2000
Rated Power	1500W	2000W
Surge	3750W	4000W
Input Voltage	12VDC	
Output Voltage	120VAC	
USB Port	5VAC	
Frequency	50/60Hz	
Output Wave	Pure Sine Wave	
Soft Start	Yes	
Cooling Method	Intelligent Cooling Fan	
Protection	Battery Low Voltage/Over Voltage, Over Load, Over Temperature, Short Circuit	
Working Temp.	14°F to 120°F	

## OPERATION

When 120VAC household power is available to the Primary Sump Pump Backup Power System, household power is directly routed through to both of the outlet receptacles. When the unit is powered ON (the "Power" indicator LED will be BLUE), the unit will charge the connected 12VDC Deep Cycle Battery if needed. The "Charge" status indicator LED will be RED while charging the battery. The "Full" status indicator LED will be BLUE once the battery is fully charged. When AC power is lost, the Primary Sump Pump Backup Power System will automatically activate and convert the 12VDC input to 120 VAC pure sine wave output at both of the outlet receptacles.

The "Fault" status indicator LED will turn RED when the Primary Sump Pump Backup Power System is overloaded, overheating, receiving low household voltage, or has a short circuit.



## INSTALLATION

1. Ensure the Backup Power System is powered off and disconnected from both AC and DC power.
2. Remove the Pre-Charge Kit from the positive (RED) battery lead ring. Open the Pre-Charge Kit and wrap one of the resistor wires around the positive (RED) battery lead ring.
3. Using the end not connected to the resistor wire, connect the positive (RED) battery lead to the positive (RED) terminal on the Backup Power System. Tighten the terminal retention knob securely by hand. Do not use any tools to tighten as this may break the retention knob.
4. Connect the negative (BLACK) battery lead to the negative (BLACK) terminal on the Backup Power System. Tighten the terminal retention knob securely by hand. Do not use any tools to tighten as this may break the retention knob.
5. Connect the negative (BLACK) battery lead to the negative (BLACK) terminal on the 12VDC Deep Cycle Battery. Secure the connection per the battery manufacturer's recommendation.
6. Touch and hold the free end of the resistor wire to the positive (Red) terminal on the battery for 3 seconds. Completely remove the resistor wire from the positive (RED) battery lead ring.
7. Connect the positive (RED) battery lead to the positive (RED) terminal on the 12VDC Deep Cycle Battery. Secure the connection per the battery manufacturer's recommendation.
8. Plug the Backup Power System into a 120VAC outlet.
9. Confirm that the power switch is in the OFF position. Plug your sump pump(s) into either of the two 120VAC outlet receptacles.
10. Flip the power switch into the ON position.
11. Allow the Backup Power System to charge the battery until the "Full" status indicator LED is BLUE.
12. Test the AC power functionality by manually activating the connected sump pump(s).
13. Test the DC power functionality by unplugging the Backup Power System from the 120VAC outlet to simulate a power outage. Then, manually activate the connected sump pump(s).
14. Reconnect the Backup Power System to a 120VAC outlet.



An optional grounding wire is included to connect the Primary Sump Pump Backup Power System's case to the mounted wall.



## WARNING

## TROUBLESHOOTING

Always disconnect the power unit from power sources before handling. This guide is designed to help identify reasons for potential operating problems. It is not a service guide. Dismantling of the Primary Sump Pump Backup Power System voids warranty. Servicing of power unit should be referred to FloodStop.

### “FAULT” STATUS INDICATOR LED IS RED

Beep Pattern	Issue	Resolution
Fault Light – 2 Beeps	Low battery voltage	Charge the battery.
Fault Light – 3 Beeps	High battery voltage	Disconnect the battery and connect a 12V battery.
Fault Light – 4 Beeps	Unit overheating	Ensure unit is in a well-ventilated location. Clean the cooling fans if needed.
Fault Light – 5 Beeps	Unit overloaded	Disconnect devices that are overloading the unit. Do not connect devices with a current draw greater than the unit's Max Running Draw. If both outlets are in use, ensure the combined current draw of the units does not exceed the units Max Running Draw.
Fault Light – 6 Beeps	Output short circuit	Disconnect the devices and unplug the unit. Reconnect the unit and connect different devices.

### LOW VOLTAGE ALARM

When the Battery voltage drops below 10VDC, an audible alarm will sound to indicate that it needs to be recharged

### AC FUSE REPLACEMENT

To replace the AC fuse, remove the fuse panel shown in Figure 1. A flat-head screwdriver may be needed. The replacement fuse and the in-use fuse are both marked in Figure 2.

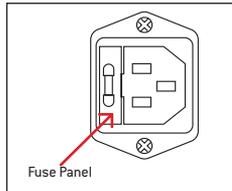


Figure 1

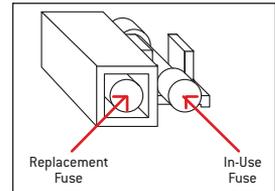


Figure 2

## MAINTENANCE

The Primary Sump Pump Backup System should be checked frequently for debris and/or build up on the cooling fans which may interfere with proper flow to cool the unit during operation. The cooling fans should be cleaned with a vacuum to remove any buildup at least every 3 months, or more frequently if the unit is mounted in an area where excess dust or debris may be present.

Deep Cycle Batteries generally last between 3 to 5 years in a sump pump backup installation. It is recommended that the battery is tested every 6 months to ensure it is ready for service.

# TERMS AND CONDITIONS OF SALE

**General.** The following terms and conditions of sale ("Contract") will be the final, complete and exclusive Contract for sale between the IPS Diversified Products Group entity named on seller's Acknowledgment form ("Seller") and the entity to which Seller is providing Products under the Contract ("Buyer") and supersedes all other communications in regards to the Products, whether written or oral. Any terms and conditions in any of Buyer's other documents that are inconsistent with or add to these terms are hereby objected to and are not binding upon Seller without express written consent, even though there may have been acknowledgment of the Purchase Order, work has commenced or the order has shipped. This Contract may only be amended in a writing signed by both parties. To the extent this Contract is construed as an acceptance of the Buyer's offer, this acceptance is expressly conditioned on the Buyer's assent to any additional or different terms contained in this Contract. When used herein the term "Standard Product" refers to a product that is standard product, currently in stock, and inventoried by Seller and identifiable as returnable. The term "Product" refers to both Standard Product and Non-standard or Non-stocked Product.

**Price.** Quotations are valid for thirty (30) days unless extended in writing by Seller. Prices quoted will be firm for orders accepted at the factory within thirty (30) days, where material is released and scheduled by Seller for shipment within thirty (30) days after the date of order entry; otherwise, Seller reserves the right to apply prices in effect at the time of shipment. Additional charges may be made to cover any extra, unforeseen or unusual cost elements, including without limitation, overtime work authorized by Buyer, special packing, engineering, special certificates determined after quality review, or documentation. All orders are subject to acceptance by Seller and credit approval. Prices do not include sales, use, excise, VAT, GST, and all similar taxes. Total prices on invoices may differ slightly, as price records for electronic calculation may either be on a "list and discount" or on a net basis.

**Packaging, Shipment and Delivery.** Seller will decide how to pack and ship unless specific written instructions are given by Buyer and accepted by Seller. If required, special export packaging that includes extra packaging, fully crated, with corrosion protection and heat-treated lumber can be included for an additional 3% of order value [\$300 minimum fee]. Special packaging will not be provided by Seller unless requested in writing by Buyer. Unless otherwise expressly agreed to in writing by Seller, all shipments are Ex Works (International Incoterms 2020) Seller's departure dock, at which point title also transfers. Buyer will pay all delivery costs and charges. If the Buyer asserts a claim against the transportation company, Seller will cooperate in attempting to resolve the claim. Delivery dates are approximate, not guaranteed, and are subject to prior sale. Goods are deemed delivered on the day the shipment is made available to the carrier.

**Force Majeure.** Seller will not be liable for delays in delivery due to circumstances beyond its reasonable control, including, but not limited to, acts of Buyer, government, nature, or the public enemy, civil or labor unrest, fires, pandemic, floods, explosions, energy shortages, delay in obtaining licenses, or unavailability or reduced availability of supply at its usual source, or other similar events.

**Cancellation and Revision Charges.** Standard Product: no charge for cancellation if made prior to shipment. All other Product will incur a \$100 minimum cancellation charge. Additional charges may apply (up to 100% of the value of the Contract) based on stage of order completion when cancellation or revision is requested. Additional charges may include, but are not limited to, materials ordered, engineering, drawing, or manufacturing development time. Reschedules may not be made unless written notification is received and accepted at the manufacturing location more than 90 days prior to the latest acknowledged shipping date, and then only upon terms which will indemnify Seller against loss. Buyer delays may result in extra costs to Buyer.

**Patents.** Seller will defend and indemnify Buyer against claims by a non-affiliated third party of infringement of United States patents issued at the time of sale to Buyer; provided the claims are based exclusively on infringement by Products designed and manufactured by Seller and not based on the use of the Products in combination with products manufactured or designed by Buyer or others. Seller must be promptly notified in writing, tendered the defense and be allowed to obtain a license for Buyer or substitute a non-infringing equivalent product. In no event will Seller's total liability to Buyer exceed the purchase price of the Product.

**Manufacturing Devices and Technical Information.** Unless otherwise expressly agreed to in writing by Seller, all manufacturing devices, design data and other technical information relating to an order will remain Seller's property. All new intellectual property conceived or created by Seller in the performance of this Contract, whether alone or with any contribution from Buyer, will be owned exclusively by Seller. Buyer's patterns/tooling in Seller's possession are held at Buyer's risk and not covered by Seller's insurance.

**Warranty.** For a period of one year from the date of shipment\*\*, and provided payments for the products have been made by Buyer to Seller, Seller warrants to Buyer that its products: (i) substantially conform to Seller's published specifications and (ii) are free from defects in material or workmanship. Product performance is limited by the capability of the structure and/or system it is installed in. If a warranted product fails to conform to these warranties, Buyer must promptly notify Seller in writing. For a valid warranty claim, Seller will, at its discretion and at no product charge to the Buyer: (j) repair the product; (ii) replace the product; or (iii) offer a full refund of that portion of the purchase price allocable to the non-conforming product. Warranty repair or replacement by Seller will not extend or renew the applicable warranty period. Buyer will obtain Seller's agreement on the specifications of any tests it plans to conduct to determine whether a product non-conformance exists. Buyer will bear the costs of access for Seller's remedial warranty efforts [including removal and replacement of systems, structures or other parts of Buyer's facility], de-installation, decontamination and re-installation. THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. This warranty allocates the risks of product failure between Seller and Buyer. This allocation is recognized by both parties and is reflected in the price of the products. Buyer acknowledges that it has read this warranty, understands it, and agrees to and is bound by its terms.

**What is Not Covered by Warranty.** No representative of Seller has authority to waive, alter, vary or add to the scope of the warranty without prior written approval of an officer of Seller. Seller's warranty does not apply to: (i) products impacted by adverse water conditions, extreme weather or temperatures, or other natural conditions; (ii) improper or unauthorized repair, installation or maintenance of the products by a party other than Seller; (iii) use for purposes or under conditions other than those for which designed, or other abuse, negligence, misuse, unauthorized access, or normal wear and tear; (iv) unauthorized attachments, modifications or disassembly; (v) damage during shipping; or (vi) products purchased from unauthorized distributors, resellers or internet sites. Buyer's care in selection, adequate testing at time of installation and proper installation, operation and maintenance of all products is required for adequate performance.

**Limitations of Liability.** NOTWITHSTANDING ANY PROVISION OF THIS CONTRACT OR THE LAW, IT IS EXPRESSLY AGREED THAT SELLER'S TOTAL LIABILITY FOR ANY DAMAGES, COSTS OR EXPENSES ARISING OUT OF OR RELATED TO THIS CONTRACT OR ITS PRODUCTS, WHETHER BASED IN CONTRACT, WARRANTY, INDEMNITY, TORT/EXTRA-CONTRACTUAL LIABILITY (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT, AS APPLICABLE, OR, AT SELLER'S OPTION, A RETURN OF AN AMOUNT THAT WILL NOT EXCEED THE PURCHASE PRICE. UNDER NO CIRCUMSTANCES WILL SELLER, ITS OFFICERS, DIRECTORS, EMPLOYEES OR ASSIGNS BE LIABLE FOR ANY OTHER REMEDY, LOSS, COST, DAMAGE OR EXPENSE WHETHER DIRECT OR INDIRECT. IN NO EVENT WHATSOEVER WILL SELLER BE LIABLE FOR ANY CONSEQUENTIAL, UNLIQUIDATED, EXEMPLARY OR PUNITIVE DAMAGES, INCLUDING BUT NOT LIMITED TO, LOSS OF USE, INCOME, PROFIT, OR PRODUCTION; INCREASED COST OF OPERATION; SPOILAGE OR DAMAGE TO MATERIAL OR DATA; OR CHANGE OUT COSTS. BUYER WILL INDEMNIFY, DEFEND AND HOLD SELLER HARMLESS FROM ANY LOSS, COST, EXPENSE, DAMAGE, OR CAUSE OF ACTION TO OR BY A THIRD PARTY THAT EXCEEDS THESE LIMITATIONS OF LIABILITY.

**Terms of Payment.** Terms of payment, unless agreed otherwise in writing, are thirty (30) days net from date of invoice, without set-off for any payment from Seller not due under this Contract. 15 10th and 25th Prox, 20th prox. Seller reserves the right to charge interest at the rate of 1.5% per month or the highest rate allowed by law, whichever is lower, for all amounts more than thirty (30) days past due. Costs of collection [including reasonable attorney's fees] will be the responsibility of the Buyer.

**Compliance with Law.** Seller's obligations under this Contract are conditioned upon Buyer's compliance with all export laws of the United States, and as applicable to the United Kingdom and other applicable trade control laws and regulations with regard to the exportation of the Products and any technical data associated therewith. Buyer will not re-export, divert or direct Products other than in and to the ultimate country of destination declared by Buyer and specified as the country of ultimate destination on Seller's invoice.

**Time and Place for Commencing Suit.** Any action by Buyer for breach of any of the terms of this Contract by Seller must be commenced within six (6) months of the alleged breach. The parties consent to the exclusive jurisdiction and venue of the federal and state courts where the applicable IPS business is located in any action arising out or relating to this Contract or the Products and both parties waive any objection they might have to jurisdiction or venue of such forum.

**Legal Construction.** The laws of the state of jurisdiction, per the preceding paragraph, will apply to this Contract, with the exception of its conflict of laws provisions. The failure of Seller to insist upon strict performance of any of the terms and conditions stated herein will not be considered a continuing waiver of any law or condition or of any Seller's rights. The headings in this Contract are informational and do not modify the agreement. The parties specifically exclude the application of the U.N. Convention on the International Sale of Goods.

**Returned Material.** Orders of Standard Product are subject to Seller's returned goods policy.

\*\*The products listed below have different warranty periods. All other terms of the Limited Warranty set forth herein apply to these products, just the duration of the warranty is different. Duration of the warranty begins at date of shipment.

Studor Products: 3 years  
Water-Tite Roofing Products: Life of the current roof system  
Roof Top Blok: 20 years  
Test-Tite Pneumatics: 2.5 years  
AB&A: 6 months  
FloodStop Pumps and Smart Accessories: 3 years



**IPS**  
CORPORATION

500 Distribution Parkway  
Collierville, TN 38017  
Phone: 800-888-8312  
Fax: 901-853-5008  
[www.ipscorp.com](http://www.ipscorp.com)

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