

Hardwire PAD

**Power A/C
Distribution**

USER MANUAL

IMPORTANT SAFETY INSTRUCTIONS

WARNING: Do not attempt to service this product yourself. Opening or removing the cover may expose you to dangerous voltages, even when the AC cord is disconnected from the electrical outlet. Refer all servicing to qualified service personnel.

1. **SAVE THESE INSTRUCTIONS.** This manual contains important instructions that should be followed during installation and operation of the PAD.
2. This product is not intended for use with life support and other U.S. FDA designated "critical" devices. See Limited Warranty
3. Read all safety and operating instructions before operating the PAD as well as the connected UPS system. Adhere to all warnings on the unit and in this manual. Follow all operating and user instructions.
4. Turn the UPS off and unplug the PAD before cleaning. Use only a soft cloth, never liquid or aerosol cleaners.
5. The UPS and PAD are designed for data processing equipment. Do not plug appliances, such as hair dryers, heaters, vacuum cleaners, or electric drills, into the UPS output receptacles.
6. **WARNING:** Do not modify the cables in any way. Consult your dealer if the AC cords do not match the AC receptacle. The PAD must be grounded at all times while in use. Turn off the UPS before unplugging it.
7. The UPS and the PAD are equipped with grounded plugs (plug types vary depending on model). Do not defeat the safety purpose of this plug. If unable to fully insert the plug into the designated receptacle, contact a qualified electrician or your dealer for assistance.
8. Route power supply cords so they are not walked on or pinched in any way.

WARNING: When the PAD is in utility position (maintenance bypass mode) the power to the connected load is not filtered or conditioned. The Sola/Hevi-Duty UPS Connected Equipment Guarantee is not valid in this Mode of Operation.

INTRODUCTION

Congratulations on your choice of the Sola/Hevi-Duty PAD. The Sola/Hevi-Duty PAD provides maintenance bypass capability as well as power output distribution.

The Sola/Hevi-Duty PAD provides an isolated path of power for your UPS system for preventative maintenance as well as service.

SYSTEM DESCRIPTION

The PAD has two modes of operation, UPS (UPS available) and Utility (maintenance bypass)

During the UPS mode, the power is being routed through your UPS system as per Figure 1.

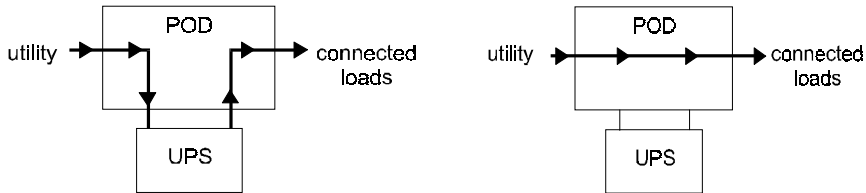
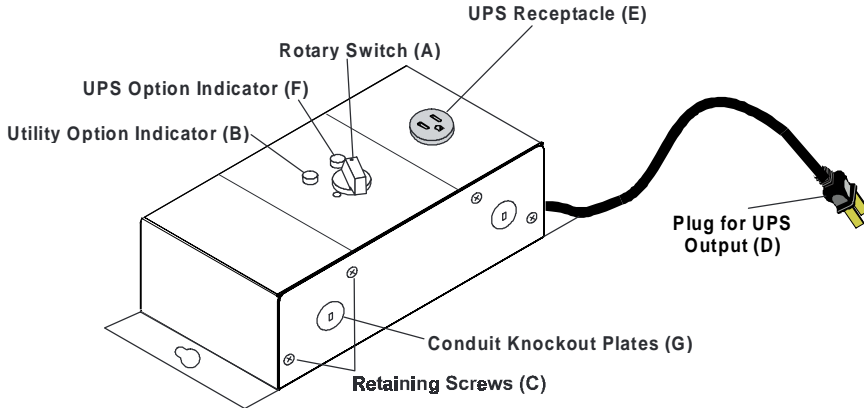


Figure 1

Figure 2

During the UTILITY mode of operation, the power is being routed around (bypassing) the UPS system as per Figure 2. Power is being supplied to the connected load through the PAD™.

CAUTION: Battery back-up and conditioned power are not available during this mode of operation.



NOTE: This manual provides instructions for the PAD only. Refer to your UPS manual for UPS operation and installation instructions.

1. Unpack the PAD carefully, noting the packing method. Retain the box and packing material for possible future shipments.
2. Visually inspect the PAD for freight damage. Report damage to the carrier and your dealer.
3. Verify that the UPS input cord and output receptacle of the UPS match the PAD plug (D) and receptacle (E).
4. If you already have a UPS installed, turn off your loads and unplug them from the UPS. Turn off the UPS and disconnect the input cord.
5. Conduit knockout plates (G) are provided on each side and on the bottom of the PAD for input and output wiring. Use 75^o C copper wiring in compliance with NEC (NFPA 70) and all applicable local electric codes. Refer to next page for wiring sizing guidelines.
6. To obtain access to the terminal blocks, remove the PAD access cover plate by removing the (4) retaining screws (C).
7. Connect the load wiring to the PAD terminal block labeled 'LOAD'.
8. Open the circuit breakers feeding the input wiring. Connect the input wiring to the PAD terminal block labeled 'INPUT'. Recommended external overcurrent protection and wire sizing is listed on next page. Re-install the PADTM access cover plate and tighten the (4) retaining screws (C).
9. Connect UPS input cord to the receptacle (E) on the side of the PAD labeled 'CONNECT UPS LINE CORD HERE'.
10. Connect the PAD UPS output cord (D) (labeled 'CONNECT TO UPS OUTPUT RECEPTACLE') to the output of the UPS system. Make sure the PAD rotary switch (A) is in the UTILITY position. Close the input overcurrent protection breaker.
WARNING: The PAD is now electrically live. Power is now available to the connected loads and the UPS. The Utility lamp (B) should now be illuminated.
11. Start the UPS according to its User's Manual. Turn on the loads and insure all are up and operating according to specification. The PAD now powers your equipment in the Utility Mode
12. Verify that UPS lamp (F) on the PAD is illuminated. If so, transfer the rotary switch from UTILITY to UPS. The load is now being supplied with power through the UPS.

Compression Field Connections

PAD Model Number	Wire Size	Recommended External Overcurrent Protection	Torque
AD115HW	#14 AWG - #8AWG	15A	Max. torque: 2 Nm / 16 lbs-in.
AD120HW	#12 AWG - #8AWG	20A	
AD130HW	#10 AWG - #8AWG	30A	
AD130HWH	#10 AWG - #8AWG	30A	
AD215HW	#14 AWG - #8AWG	15A	
AD220HW	#12 AWG - #8AWG	20A	

INDICATOR LIGHTS

UTILITY:

This lamp is illuminated when utility power is present. It signals that you may transfer the loads to maintenance bypass (utility) operation via the rotary switch. During a utility power outage, this light will be off and the UPS will supply battery back-up power to the connected loads.

UPS:

This light is illuminated when there is output power available from the UPS. It signals that it is safe to transfer the connected loads from utility power back to UPS output power.

OPERATION

To transfer to maintenance bypass (UTILITY) from UPS, use the following steps:

1. Ensure Utility lamp is illuminated. If lamp is not illuminated, refer to troubleshooting table.
2. Transfer the rotary switch from 'UPS' to 'UTILITY', provided the Utility lamp is illuminated on the PAD.
3. Turn the UPS off.
4. Disconnect the two cables connecting the UPS to the PAD.
5. You may now service the UPS.

To transfer to UPS from maintenance bypass (UTILITY), use the following steps:

1. Reconnect the UPS to the PAD. Start the UPS as per the instructions in the UPS User's Manual.
2. Verify that UPS lamp on the PAD is illuminated. If so, transfer the rotary bypass switch from UTILITY to UPS. If the lamp does not illuminate, refer to the troubleshooting table.
3. Conditioned power is now being supplied through the UPS.

SPECIFICATIONS

Transfer Time: < 6 milliseconds
(to and from maintenance bypass)

Operating Ambient Temperature: 0 to +40 degrees C

Storage Ambient Temperature: -20 to +60 degrees C

Weight: 12 Lbs. (max.)

Humidity: 0 to 95% non-condensing

Agency/Standards: UL, c-UL listed

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Utility lamp not illuminated	Utility not present	Call qualified service personnel to restore power
	PAD input wiring not connected to utility	Refer to PAD installation section
	Lamp malfunction	Call technical support for assistance
UPS lamp not illuminated	UPS output power not present	Turn on or replace UPS. Refer to UPS user's manual
	UPS input and/or output cord not connected to PAD	Refer to PAD installation section
	Lamp malfunction	Call technical support for assistance

LIMITED WARRANTY

Sola/Hevi-Duty extends the following LIMITED WARRANTY to the purchaser and to its customer (collectively referred to as the "Purchaser"): the enclosed PAD and components are free from defects in materials and workmanship under normal use, service, and maintenance FOR A PERIOD OF TWO YEARS FROM THE DATE OF ORIGINAL PURCHASE from Sola/Hevi-Duty or the Sola/Hevi-Duty dealer/retailer. THE FOREGOING WARRANTY IS THE ONLY WARRANTY GIVEN AND NO OTHER WARRANTY IS PROVIDED, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Certain aspects of disclaimers are not applicable to consumer products acquired by individuals and used for personal, family, or household purposes (as distinguished from industrial or other purposes). Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Certain repairs or services are the responsibility of the Purchaser and the Purchaser is expected to pay for them. This warranty does not extend to any losses or damages due to misuse, accident, abuse, neglect, negligence, unauthorized modification or alteration, use beyond rated capacity, or improper installation, maintenance, application or use, including, without limitation, use in a manner contrary to the accompanying instructions or applicable codes.

If the PAD fails to conform to the above warranty within the two-year warranty period, Sola/Hevi-Duty will repair or replace the PAD, at Sola/Hevi-Duty's option. Repairs or replacements are warranted for the remainder of the original warranty period. Purchaser, to make a warranty claim, should call 1-800-222-5877 to obtain a Return Authorization number and shipping instructions. Return transportation costs to Sola/Hevi-Duty are the responsibility of the Purchaser.

IN NO EVENT, REGARDLESS OF THE FORM OF THE CLAIM OR CAUSE OF ACTION (WHETHER BASED IN CONTRACT, INFRINGEMENT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT, OR OTHERWISE), SHALL SOLA/HEVI-DUTY'S LIABILITY TO PURCHASER EXCEED THE PRICE PAID BY PURCHASER FOR THE SPECIFIC PAD OR OTHER GOODS PROVIDED BY SOLA/HEVI-DUTY GIVING RISE TO THE CAUSE OF ACTION. IN NO EVENT SHALL SOLA/HEVI-DUTY'S LIABILITY TO PURCHASER EXTEND TO INCLUDE INCIDENTAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES. WITH RESPECT TO CONSUMER PRODUCTS, SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

"LIFE SUPPORT" POLICY:

This product is not recommended, and the Company will not knowingly sell this product, for use with life support and other U.S. FDA designated "critical" devices. ANY SUCH USE BY A USER AUTOMATICALLY VOIDS AND DISCLAIMS ANY AND ALL WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND EXPRESS WARRANTIES THAT THIS PRODUCT WILL CONFORM TO ANY AFFIRMATION OR PROMISE, FOR THIS PRODUCT AND THE USER EXPRESSLY AGREES THAT IN NO EVENT SHALL THE COMPANY BE LIABLE FOR CONSEQUENTIAL OR INDIRECT DAMAGES.