

CyberPower[®]

User's Manual

MBP60AHVIEC82U
(Manual Bypass PDU)

Cyber Power Systems, Inc.
www.cyberpower.com

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

1. SAFETY

- The system has its own power source when connected to the UPS (UPS battery). Consequently, the power outlets may be energized even if the system is disconnected from the AC power source.

Dangerous voltage levels are present within the system.

It should be opened exclusively by qualified service personnel.

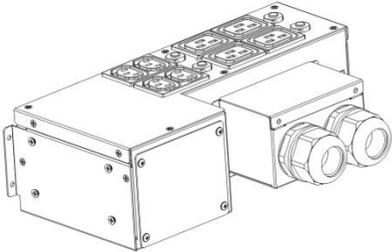
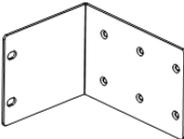
- The product must be properly grounded, always connect the earth wire first.
- The Manual Bypass Module connection instructions and operation described in the manual must be followed in the indicated order. Disconnection and over current protection devices shall be provided by others for AC in/out circuits.
- **CAUTION** - To reduce the risk of fire, the unit connects only to a circuit provided with branch circuit over current protection (please refer to the UPS User Manual for current rating).

The upstream circuit breaker must be easily accessible.

The unit can be disconnected from AC power source by opening this circuit breaker, and if still connected to UPS, by previously shutting down the UPS (refer to the UPS User Manual).

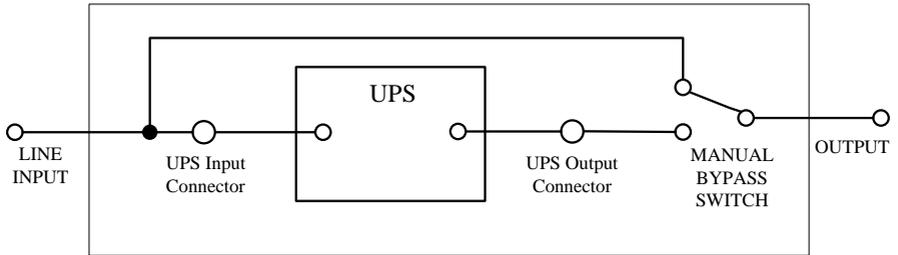
- Check that the indications on the rating plate correspond to your AC powered system and to the actual electrical consumption of all the equipment to be connected to the system.
- Never install the system near liquids or in an excessively damp environment.
- Never let a foreign body penetrate inside the system.
- Never expose the system to direct sunlight or source of heat.
- If the system must be stored prior to installation, storage must be in a dry place.
- All repairs and service should be performed by Authorized Service Personnel only. There are no user serviceable parts inside the Manual Bypass Module.

2. MANUAL BYPASS PDU CONTAINS:

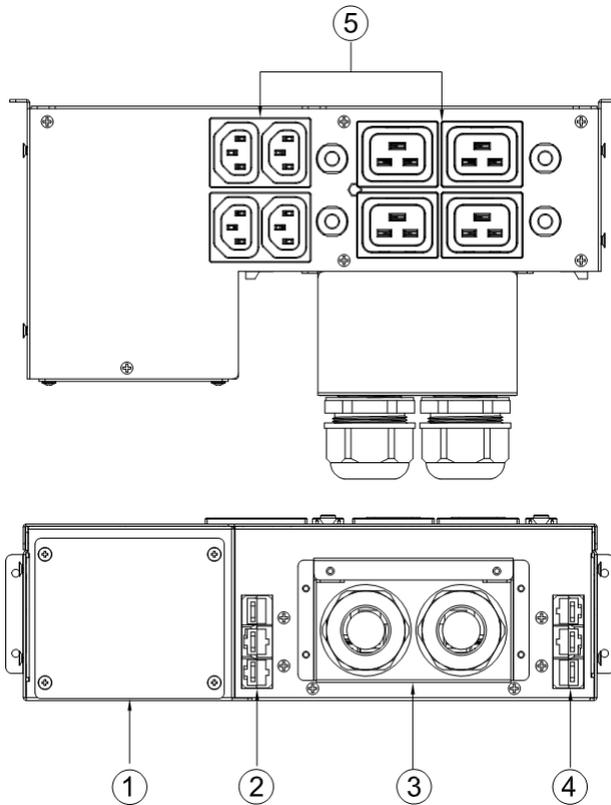
	
<p>Manual Bypass PDU</p>	<p>User's Manual</p>
	
<p>UPS Input Cable(BLUE)</p>	<p>Terminal</p>
	
<p>UPS Output Cable(GRAY)</p>	<p>Flat Head Screws: M4X8L*8PCS</p>
	
<p>Rackmount Ears*2PCS</p>	<p>Round Head Screws: M3X6L*4PC</p>

3. BASIC OPERATION

3.1. Schematic



3.2. Top/Rear Panel Description



① Manual Bypass Switch

The Manual Bypass Module has a manual Bypass rotary switch with two

positions:

- **UPS** → the load is supplied by the UPS.
- **BYPASS** → the load is supplied directly by the AC power source.

② **UPS Output Connector**

Use the connector to attach the Manual Bypass Module to the UPS Output.

③ **Input / Output Terminal Block**

Connect to utility power / your equipment.

④ **UPS Input Connector**

Use the connector to attach the Manual Bypass Module to the UPS Input.

⑤ **Output Socket**

3.3. Electrical Specifications

Line Input	
Phase	Single
Voltage	220~240Vac
Frequency	50/60Hz
Rated Current	60A
Output	
Voltage	220~240Vac
Frequency	50/60Hz
Rated Current	60A

3.4. Operating Environment

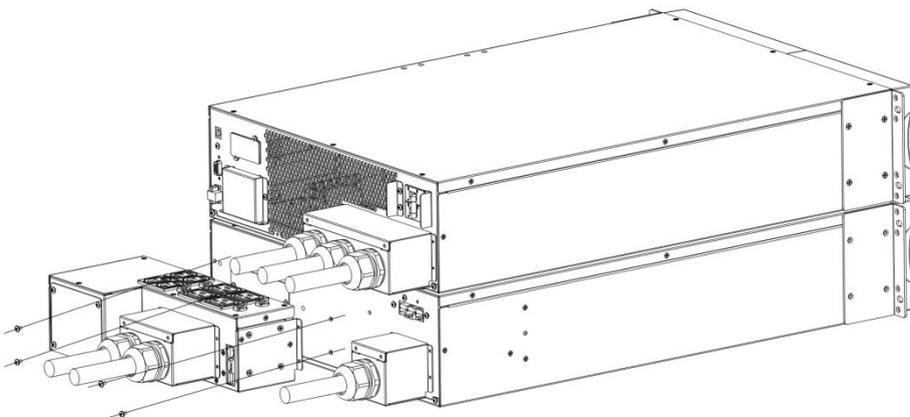
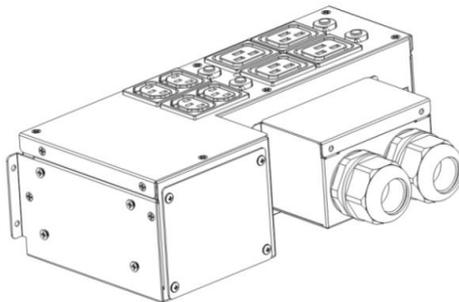
Temperature	Humidity	Storage
0°C~40°C	<95%	-15°C~50°C

3.5. Dimensions and Weights

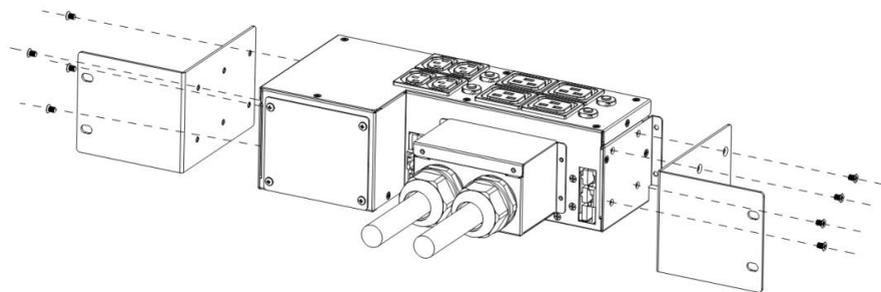
Dimensions W×H×D(mm)	Net Weight(kg)
288*88*141	2.8

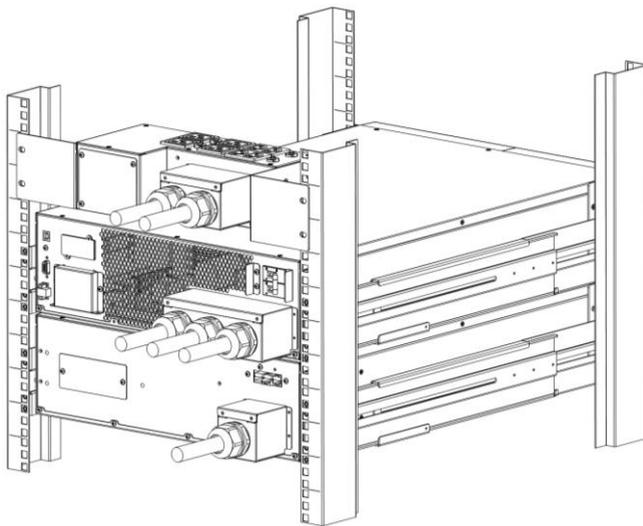
3.6. Hardware Installation

3.6.1. Rear Installation:



3.6.2. Rack Installation:





4. ELECTRICAL INSTALLATION



- This type of connection must be carried out by qualified electrical personnel.
- Refer to the UPS User Manual for circuit breaker current rating and the cable cross-sections, the circuit breaker has to be installed upstream the Manual Bypass Module Normal AC source
- Before carrying out any connection, check that the upstream protection device (Normal AC source) is open "O"(Off).

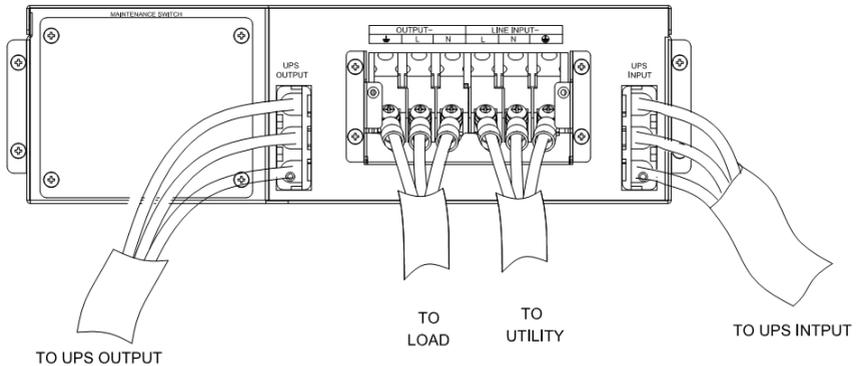


Before proceeding to connect the Manual Bypass Module to the UPS, make sure the UPS has been properly shut down (refer to the UPS user manual).

Always connect the ground wire first.

1. Install the "UPS Input Cable" "UPS Output Cable" and "Battery Cable" to the UPS terminals (refer to the UPS User Manual).
2. Open the Cover of Manual Bypass Switch and verify it is on the "**UPS**" position.
3. according to the following diagram
 - a) Connect the input and output wires to the Manual Bypass Module terminals block.
 - b) Connect the "UPS Input Cable" and "UPS Output Cable" to the corresponding

connector.



4. Reinstall all Useful safety protection covers
5. Connect the battery cable (refer to the UPS User Manual).
6. Set the Manual Bypass Module upstream Breaker to the "ON" position.
7. Set the UPS Input Breaker to the "ON" position and verify the UPS is in Bypass mode.
8. Turn on the UPS (refer to the UPS User Manual).

5. UPS MAINTENANCE WITH MANUAL BYPASS MODULE

This operation allows qualified personnel to remove the detachable Manual Bypass Module from the UPS for routine maintenance or replacement without disrupting power to connected equipment.

5.1. How to remove the UPS with Manual Bypass Module

1. Put the UPS in internal "Bypass mode" (refer to the UPS user manual)
2. Verify that the UPS is on Bypass mode by checking UPS Display Panel (refer to the UPS user manual).



DO NOT OPERATE THE MANUAL BYPASS SWITCH IF THE UPS IS NOT IN BYPASS MODE

3. Set the Manual Bypass Switch to "BYPASS" position after opening the Switch Cover.
4. Set the UPS Input Breaker to the "OFF" position and wait a few minutes, the UPS would shut down.

5. UPS stops, the UPS can now be disconnected, as described below:
 - Disconnect the Battery Cable from Battery module.
 - Disconnect the UPS Input/Output Cables form the Manual Bypass Module.
6. Replace the UPS.



Hazardous voltage and lost load risk: do not manipulate the Manual Bypass Switch without UPS connected the Input and Output cables.

5.2. How to return the UPS with Manual Bypass Module

1. Install the "UPS Input Cable" "UPS Output Cable" and "Battery Cable" to the UPS terminals (refer to the UPS User Manual).
2. Open the Cover of Manual Bypass Switch and check that the Manual Bypass Switch is on the "**BYPASS**" position.
3. Connect the Cables to the corresponding connector.
4. Set the UPS Input Breaker to the "**ON**" position.
5. Verify that the UPS is in Bypass mode by checking display panel (refer to the UPS User Manual).



DO NOT OPERATE THE MANUAL BYPASS SWITCH IF THE UPS IS NOT IN BYPASS MODE

6. Set the Manual Bypass Switch to "**UPS**" position.
7. Turn on the UPS (refer to the UPS user manual).
8. Check the UPS is in Normal mode.



Hazardous voltage and lost load risk: do not manipulate the Manual Bypass Switch without UPS connected the Input and Output cables.

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