The Maintenance Bypass Box is not intended for use in direct patient care or in life support applications.

Properly route power cords so they cannot be walked on or damaged.

Select a location where provides good air circulation for the unit at all times.

Do not operate the unit in extremely dusty and/or unclean areas, locations near heating equipment, or where the unit is exposed to direct sunlight.

Select a location where provides good air circulation for the unit at all times.

Properly route power cords so they cannot be walked on or damaged.

The Maintenance Bypass Box must be well grounded due to a possible risk of current leakage.

The Maintenance Bypass Box is not intended for use in direct patient care or in life support applications.

The Maintenance Bypass Box is designed to operate in conjunction with Delta N series UPS. Please refer to the following table.

<table>
<thead>
<tr>
<th>Maintenance Bypass Box Model</th>
<th>Applicable Delta N series UPS Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDB1511A530035 (single)</td>
<td>UPS103N2002N009</td>
</tr>
<tr>
<td>PDB1512A510035 (parallel)</td>
<td>UPS602N2004N035</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Q’ty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CU Terminal (Type A)</td>
<td>1 PCS</td>
</tr>
<tr>
<td>2</td>
<td>CU Terminal (Type B)</td>
<td>2 PCS</td>
</tr>
<tr>
<td>3</td>
<td>Terminal Holder</td>
<td>12 PCS</td>
</tr>
<tr>
<td>4</td>
<td>Screw for Fastener</td>
<td>1 PCS</td>
</tr>
<tr>
<td>5</td>
<td>Fastener (Type A)</td>
<td>1 PCS</td>
</tr>
<tr>
<td>6</td>
<td>Wire 1</td>
<td>10 PCS</td>
</tr>
<tr>
<td>7</td>
<td>Wire 2</td>
<td>1 PCS</td>
</tr>
<tr>
<td>8</td>
<td>Cable Tie</td>
<td>6 PCS</td>
</tr>
<tr>
<td>9</td>
<td>Screw for Terminal Holder</td>
<td>2 PCS</td>
</tr>
<tr>
<td>10</td>
<td>RS-232 Cable</td>
<td>1 PCS</td>
</tr>
</tbody>
</table>

Model PDB1511A530035, Maintenance Bypass Box for Single UPS Application

Model PDB1512A510035, Maintenance Bypass Box for Parallel UPSs Application

NOTE:
1. If there is any damage or anything missing, please immediately contact the dealer from whom you purchased the unit.
2. If the Maintenance Bypass Box needs to be returned, carefully repack the Maintenance Bypass Box and all of the accessories using the original packing material that came with the unit.

1. If there is any damage or anything missing, please immediately contact the dealer from whom you purchased the unit.
2. If the Maintenance Bypass Box needs to be returned, carefully repack the Maintenance Bypass Box and all of the accessories using the original packing material that came with the unit.

For Single UPS & Parallel UPSs

Standard Compliance

- IEC
- EN62040-1

How to Remove the Front Panel

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Q’ty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Latch (for fastening the front panel)</td>
<td>4 PCS</td>
</tr>
<tr>
<td>2</td>
<td>Latch (for fastening the front panel)</td>
<td>2 PCS</td>
</tr>
<tr>
<td>3</td>
<td>Bypass Switch (please remove the cover’s screw shown in the figure above to see the bypass switch)</td>
<td>1 PCS</td>
</tr>
<tr>
<td>4</td>
<td>Output Breaker</td>
<td>1 PCS</td>
</tr>
<tr>
<td>5</td>
<td>Latch (for fastening the front panel)</td>
<td>1 PCS</td>
</tr>
</tbody>
</table>

Front View after Front Panel Removal

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Q’ty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Latch (for fastening the front panel)</td>
<td>4 PCS</td>
</tr>
<tr>
<td>2</td>
<td>Latch (for fastening the front panel)</td>
<td>2 PCS</td>
</tr>
<tr>
<td>3</td>
<td>Bypass Switch (please remove the cover’s screw shown in the figure above to see the bypass switch)</td>
<td>1 PCS</td>
</tr>
<tr>
<td>4</td>
<td>Output Breaker</td>
<td>1 PCS</td>
</tr>
</tbody>
</table>

Package List
How to Install the UPS(s)
on the Maintenance Bypass Box

**PDB1511A530035**

1. Remove the bottom of the UPS’s four screws shown in Figure 1.

![Figure 1](image1)

2. Place the UPS on the top of the Maintenance Bypass Box.

3. Use the provided four fastener (type A) and eight screws to firmly fix the UPS1 and the UPS2 on the Maintenance Bypass Box. Please fix the two fasteners (type A) on the left side of the UPS1 and fix the two fasteners (type A) on the right side of the UPS2. Each fastener (type A) requires two screws (provided). Please refer to Figure 2.

![Figure 2](image2)

4. Place UPS1 and UPS2 on the top of the Maintenance Bypass Box.

5. Use the provided four fastener (type B) and four screws to firmly fix the rear of UPS1 and UPS2 on the rear of the Maintenance Bypass Box. Please refer to Figure 3.

![Figure 3](image3)

**PDB1512A510035**

1. Loosen the screw (1) to remove the Maintenance Bypass Box’s top cover (2). Please see Figure 3.

![Figure 3](image4)

2. Remove the two cable entry knockouts (1) (please see Figure 3), install the provided two cable glands, six CU terminals (Type C) and twelve heat shrink tubes (please see Figure 10), and perform wiring for main AC input and equipment load. For wiring information, please refer to Wiring.

![Figure 4](image5)

3. Reinstall the Maintenance Bypass Box’s top cover.

4. Remove each UPS’s bottom three screws shown in Figure 4.

![Figure 5](image6)

Wiring

**WARNING:**

Before wiring:

1. Follow Important Safety Instructions.
2. Ensure that all of the breakers/switches are in the OFF position before wiring.
3. Please refer to the following table for input and output cable selection.

![Figure 6](image7)

Continue to the Next Page
Follow Figure 9 and Figure 10 to install the provided accessories on the Maintenance Bypass Box and perform wiring.

**Figure 9**

1. Remove the cover plate shown in Figure 11 to remove the cover plate of the BYPASS SWITCH.
2. Turn on the UPS2’s INPUT BREAKER. The fans will turn on, and the UPS2 will run in bypass mode.
3. Turn on the UPS2’s INPUT BREAKER. The fans will turn on, and the UPS2 will run in bypass mode.
4. If there is a power interruption while the UPS1 and UPS2 are both in bypass mode, the connected load won’t be protected.
5. Turn on the connected equipment.
6. Press and hold the UPS1’s ON button for 3 seconds and release it after you hear one beep to turn the UPS1 on.
7. Press and hold the UPS2’s ON button for 3 seconds and release it after you hear one beep to turn the UPS2 on.
8. Please refer to the UPS’s user manual for more information.

**Start-up Operation**

**PDB1511A530035**

All the equipment and the UPS system must be properly connected and there must be an acceptable AC voltage present. Please refer to the UPS’s user manual for more information.

**NOTE:**

The cover plate of the Maintenance Bypass Box’s bypass switch must still be installed.

1. Turn on the input utility breaker at the service panel.
2. Turn on the Maintenance Bypass Box’s OUTPUT BREAKER.
3. Turn on each connected external battery pack’s circuit breaker.
4. Turn on the UPS’s INPUT BREAKER. The fans will turn on, and the UPS will run in bypass mode.

**NOTE:**

If there is a power interruption while the UPS is in bypass mode, the connected load won’t be protected.

5. Turn on the connected equipment.
6. Press and hold the UPS’s ON button for 3 seconds and release it after you hear one beep to turn the UPS on.
7. Please refer to the UPS’s user manual for more information.

**PDB1512A510035**

All the equipment and the UPS system must be properly connected and there must be an acceptable AC voltage present. Please refer to the UPS’s user manual for more information.

**NOTE:**

The cover plate of the Maintenance Bypass Box’s bypass breaker must still be installed.

1. Turn on the input utility breaker at the service panel.
2. Turn on the Maintenance Bypass Box’s UPS1 OUTPUT BREAKER.
3. Turn on the Maintenance Bypass Box’s UPS2 OUTPUT BREAKER.
4. Turn on each connected external battery pack’s circuit breaker.

Continue to the Next Page ➔
Switch the Maintenance Bypass Box’s BYPASS SWITCH to the NORMAL position.

Turn on the Maintenance Bypass Box’s OUTPUT BREAKER.

Turn on the UPS’s INPUT BREAKER.

Reconnect all of the battery cables, the power cables and the communication cables.

Now, the UPS and the external battery pack(s) can be removed to perform maintenance.

Once the maintenance is complete, re-install the UPS and the external battery pack(s).

Reconnect all of the battery cables, the power cables and the communication cables.

Turn on each connected external battery pack’s circuit breaker.

Turn on the UPS’s INPUT BREAKER.

Turn on the Maintenance Bypass Box’s OUTPUT BREAKER.

Switch the Maintenance Bypass Box’s BYPASS SWITCH to the NORMAL position (see Figure 14).

After you confirm that both of UPS1 and UPS2 have been run in bypass mode, switch the Maintenance Bypass Box’s BYPASS BREAKER to the ON position. The ON/OFF printing is marked on the BYPASS BREAKER (see Figure 17). Now, the connected load is being powered by the utility power.

NOTE: If there is a power interruption while the UPS1 and UPS2 are both in bypass mode, the connected load won’t be protected.

Turn off the UPS1’s INPUT BREAKER.

Turn off the UPS2’s INPUT BREAKER.

Turn off each connected external battery pack’s circuit breaker.

Turn off the Maintenance Bypass Box’s UPS1 OUTPUT BREAKER.

Turn off the Maintenance Bypass Box’s UPS2 OUTPUT BREAKER.

Disconnect the battery cables from the UPS1 and the external battery pack(s).

Disconnect the battery cables from the UPS2 and the external battery pack(s).

Disconnect the power cables from the ‘TO UPS1 INPUT’ and ‘TO UPS1 OUTPUT’ terminals on the Maintenance Bypass Box.

Disconnect the power cables from the ‘TO UPS2 INPUT’ and ‘TO UPS2 OUTPUT’ terminals on the Maintenance Bypass Box.

Disconnect all of the communication cables from the rear panel of the UPS1 and UPS2.

Disconnect all of the communication cables from the rear panel of the UPS1 and UPS2.

Once the maintenance is complete, re-install the UPS1 and UPS2 and the external battery pack(s).

Now, the UPS1, the UPS2 and the external battery pack(s) can be removed to perform maintenance.

NOTE: Under the cover plate, there is a manual bypass detector (see Figure 16) that will be automatically activated to send the UPS a message of transferring in to bypass mode once the cover plate is removed.

NOTE: If there is a power interruption while the UPS is in the bypass mode, the connected load won’t be protected.

Turn off the UPS1’s INPUT BREAKER.

Turn off the UPS2’s INPUT BREAKER.

Turn off each connected external battery pack’s circuit breaker.

Turn off the Maintenance Bypass Box’s UPS1 OUTPUT BREAKER.

Turn off the Maintenance Bypass Box’s UPS2 OUTPUT BREAKER.

Disconnect the battery cables from the UPS1 and the external battery pack(s).

Disconnect the battery cables from the UPS2 and the external battery pack(s).

Disconnect the power cables from the ‘TO UPS1 INPUT’ and ‘TO UPS1 OUTPUT’ terminals on the Maintenance Bypass Box.

Disconnect the power cables from the ‘TO UPS2 INPUT’ and ‘TO UPS2 OUTPUT’ terminals on the Maintenance Bypass Box.

Disconnect all of the communication cables from the rear panel of the UPS1 and UPS2.

Note: If there is a power interruption while the UPS1 and UPS2 are both in bypass mode, the connected load won’t be protected.

Turn off the UPS1’s INPUT BREAKER.

Turn off the UPS2’s INPUT BREAKER.

Turn off each connected external battery pack’s circuit breaker.

Turn off the Maintenance Bypass Box’s UPS1 OUTPUT BREAKER.

Turn off the Maintenance Bypass Box’s UPS2 OUTPUT BREAKER.

Disconnect the battery cables from the UPS1 and the external battery pack(s).

Disconnect the battery cables from the UPS2 and the external battery pack(s).

Disconnect the power cables from the ‘TO UPS1 INPUT’ and ‘TO UPS1 OUTPUT’ terminals on the Maintenance Bypass Box.

Disconnect the power cables from the ‘TO UPS2 INPUT’ and ‘TO UPS2 OUTPUT’ terminals on the Maintenance Bypass Box.

Disconnect all of the communication cables from the rear panel of the UPS1 and UPS2.

Now, the UPS1, the UPS2 and the external battery pack(s) can be removed to perform maintenance.

NOTE: If you encounter any problems that you cannot solve, please ask your local dealer or customer service for more information. Do not attempt to solve the problems if you are not trained for it.

12. Technical Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>PDB1511A530035</th>
<th>PDB1512A510035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal Voltage</td>
<td>200/ 208/ 220/ 230/ 240 Vac</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>50/ 60Hz</td>
<td></td>
</tr>
<tr>
<td>Current (Max.)</td>
<td>63A</td>
<td>125A</td>
</tr>
<tr>
<td>Connection</td>
<td>Terminal Block</td>
<td></td>
</tr>
<tr>
<td>Output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal Voltage</td>
<td>200/ 208/ 220/ 230/ 240 Vac</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>50/ 60Hz</td>
<td></td>
</tr>
<tr>
<td>Power (Max.)</td>
<td>10kVA/ 10kW</td>
<td>20kVA/ 20kW</td>
</tr>
<tr>
<td>Connection</td>
<td>Terminal Block</td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal Operating Altitude</td>
<td>0–10,000 meters (without derating)</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0°C to 40°C (32°F to 104°F)</td>
<td></td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-15°C to 50°C (5°F to 122°F)</td>
<td></td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>5%–95% (non-condensing)</td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions (W x D x H)</td>
<td>190 x 408 x 142.7 mm</td>
<td>382 x 390 x 142.7 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>4 Kg</td>
<td>7.6 Kg</td>
</tr>
</tbody>
</table>

13. Warranty

Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in material and workmanship within the warranty period. If the product has any failure problem within the warranty period, Seller will repair or replace the product at its sole discretion according to the failure situation. This warranty does not apply to normal wear or to damage resulting from improper installation, operation, usage, maintenance or irresistible force (i.e. war, fire, natural disaster, etc.). This warranty also expressly excludes all incidental and consequential damages. Maintenance service for a fee is provided for any damage out of the warranty period. If any maintenance is required, please directly contact the supplier or Seller.

WARNING: The individual user should take care to determine prior to use whether the environment and the load characteristics are suitable, adequate or safe for the installation and the usage of this product. The Quick Guide must be carefully followed. Seller makes no representation or warranty as to the suitability or fitness of this product for any specific application.