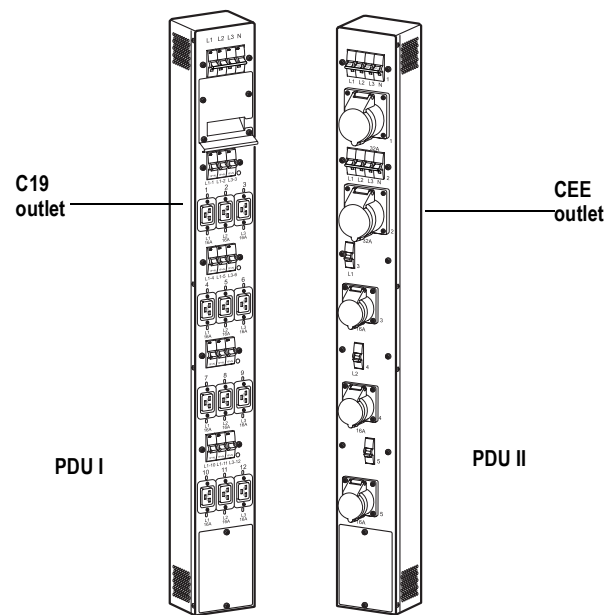




Smart-UPS® VT ISX PDU

Installation

Important Safety Instructions - SAVE THESE INSTRUCTIONS



Always read the separate Safety 990-2822A sheet prior to the installation.



All electrical power and power control wiring must be installed by a qualified electrician, and must comply with local and national regulations for maximum power rating.



The UPS is be supplied from a 380Y/220 V 4W + GND 50/60 Hz or 400Y/230 V 4W + GND 50/60 Hz or 415Y/240 V 4 W + GND 50/60 Hz source.

1 Installation of a Second PDU in the UPS

At the rear, the UPS contains one Power Distribution Unit (PDU) as standard (PDU I). A second PDU can be installed on the right side. The second PDU will either be another PDU I or a PDU II.

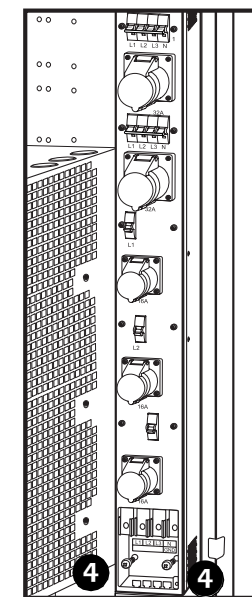
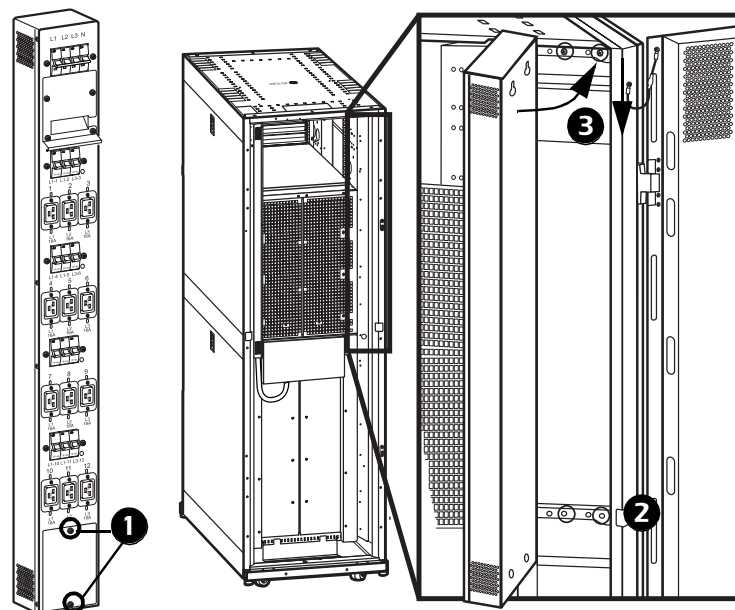
PDU I. PDU I has 5 breaker sets. The top breaker set protects any 3-phased equipment that may be connected to the PDU. The top breaker set operates as a unit and will switch ON/OFF all 3 phases + N (L1, L2, L3, N) when operated. Each of the 4 other breaker sets protects the 3 single-phased C19 outlets (L1, L2, L3) beneath the actual breaker set. The left breaker in each row protects L1, the middle breaker protects L2, and the right breaker protects L3.

PDU II. PDU II has 5 breaker sets. The top 2 breaker sets protect any 3-phased equipment that may be connected to the PDU. Each of the top 2 breaker sets operates as a unit and will switch ON/OFF all 3 phases and Neutral (L1, L2, L3, N) when operated. The breaker sets protect the 2 CEE32 outlets (under the red cover). Each of the 3 other breakers protect the 3 single-phased IEC 309 16A outlets (under the blue covers).

The installation procedures for PDU I and II are identical.

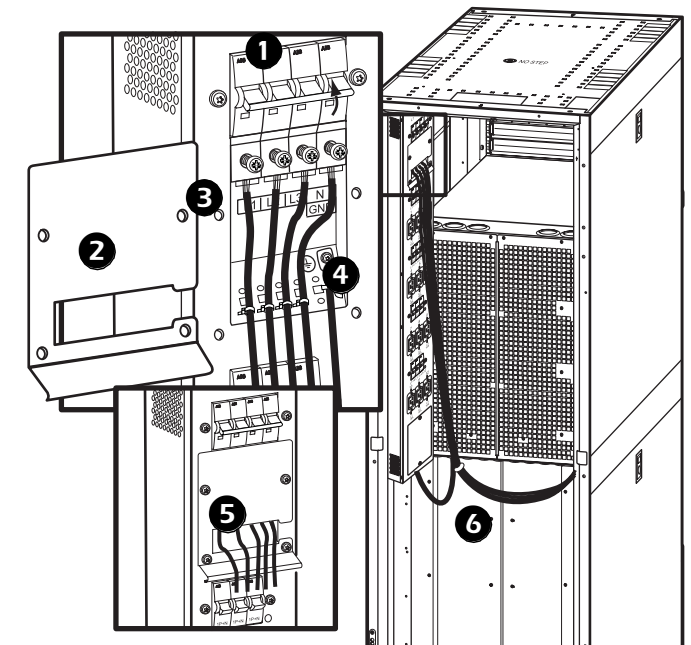
Installing the PDU

The right side panel of the UPS is provided with two sets of screws for the attachment of the second PDU.



- 1 Remove the two M4 torx screws from the lower cover plate of the PDU.
- 2 Remove the two screws from the bottom installation area. Keep the screws for later use.
- 3 Position the two rear sets of holes of the PDU over the provided screws in the side panel, and push down.
- 4 Attach the bottom end of the PDU to the UPS, using the two screws removed in step 2.

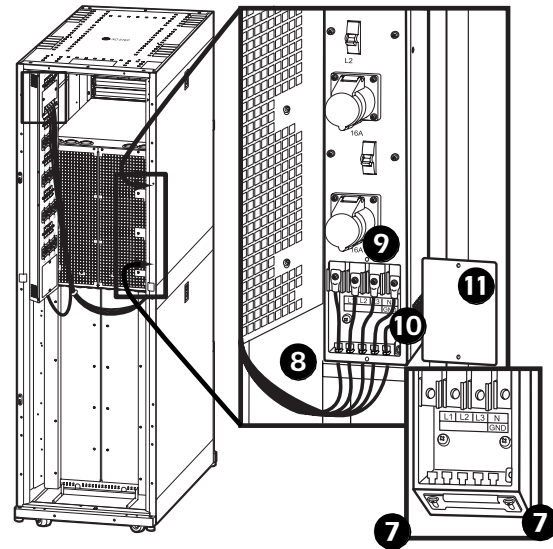
AC and ground cable landings



- 1 Set the PDU breaker to the OFF position.
- 2 Using a torx screwdriver, remove the four M4 screws from the top plate of the left pre-installed PDU.
- 3 Attach the PDU cables (L1,L2,L3,N) to the terminals. Fasten the cables with cable ties (not provided).
- 4 Attach the Ground cable to the ground stud and fasten with cable tie.



- 5 Reinstall the top plate removed in step 2.
- 6 Use cable ties to tie the cables together.



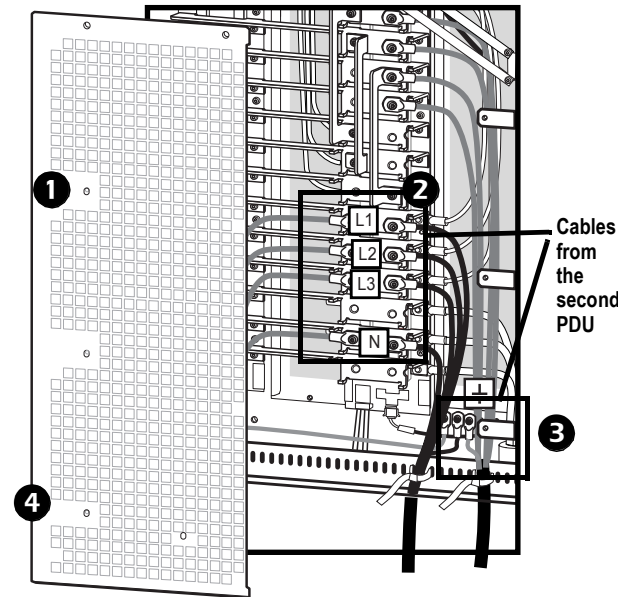
- 7 Loosen (do not remove) the two screws from the bottom cover of the PDU and slide the cover outwards to uncover the cable entrance hole in the bottom cover plate of the second PDU.
- 8 Feed the cables from the left pre-installed PDU through the cable entrance hole.
- 9 Attach the PDU cables (L1, L2, L3, N) to the terminals in the second PDU. Fasten the cables with cable ties.
- 10 Attach the ground cable to the designated stud (labeled Earth). Fasten the cable with a cable tie.
- 11 Reinstall the cover plate using the two removed M4 screws.

Connecting a PDU to the UPS busbars



Always carry out the Total-Power-Off procedure prior to the connection of the PDU to the output terminals of the UPS. Refer to the separate Safety sheet 990-2822A for instructions.

The PDU can also be connected to the right connection area of the output busbars of the UPS.



- 1 Remove the cable landing cover from the UPS.
- 2 Attach the PDU cables (L1, L2, L3, N) to the terminals in the second PDU, and fasten with cable ties.
- 3 Attach the ground cable to the designated stud (labeled Earth) and fasten with cable ties.
- 4 Reinstall the cable landing cover using the removed screws.

2 Connecting Load to the PDU

Preparing to connect the load to the PDU(s)



Note

Connect the load equipment evenly between the 3 phases to avoid overloading the PDU. The total PDU output capacity is about twice the output capability of the UPS. This means that the UPS would be over-loaded if all PDU outlets were loaded to their rating. The load status on the individual phases can be found through the UPS display or through the web interface.



Note

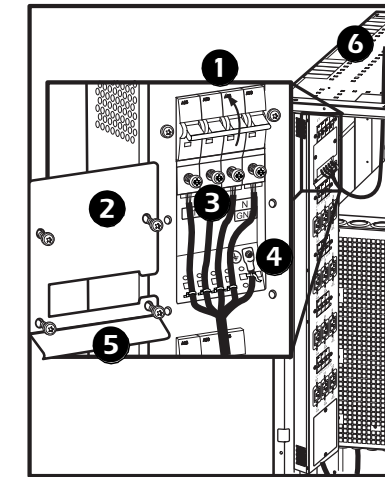
Equipment connected to the 3-phased output may require overcurrent protection with a lower rating than the 3-phased output.



Note

For 3-phased output, the highest current may be in the Neutral conductor at non-linear loads (up to 173%).

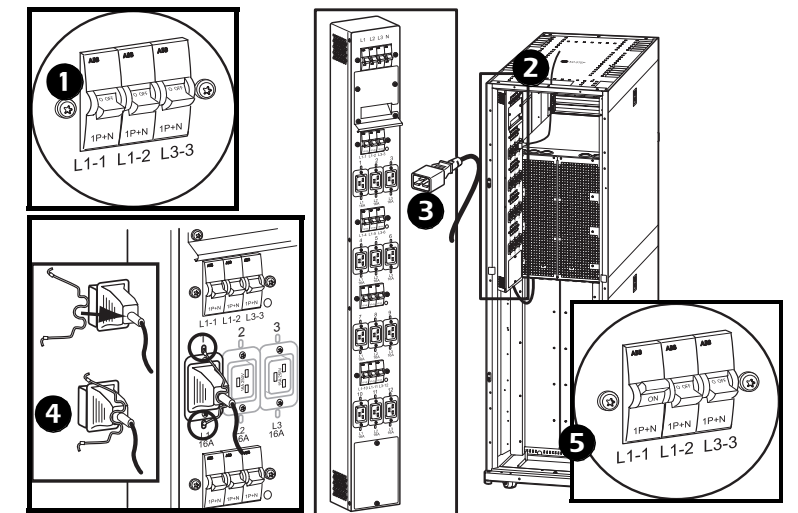
Connecting load to the 3-phased breaker



- 1 Set the PDU breaker to the OFF position.
- 2 Using a torx screwdriver, remove the four M4 screws from the top plate of PDU. Remove the plate.
- 3 Loosen the M6 screws, and connect L1, L2, L3 and N to the terminals. Tighten the screws firmly. Fasten cables with cable ties.

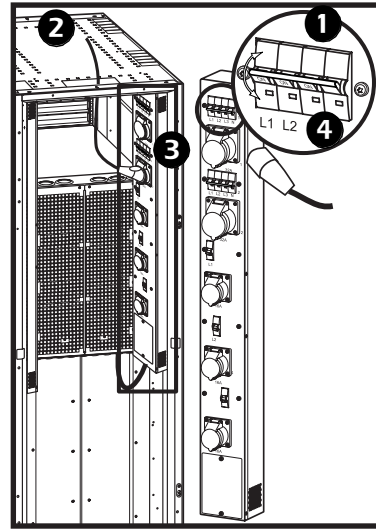
- 4 Attach the ground cable to the stud (labeled Earth) and fasten with cable tie.
- 5 Use a torx screwdriver to reinstall the top plate removed in step 2.
- 6 Feed the cable through the cable outlet in the top cover.

Connecting 1-phase load to PDU I



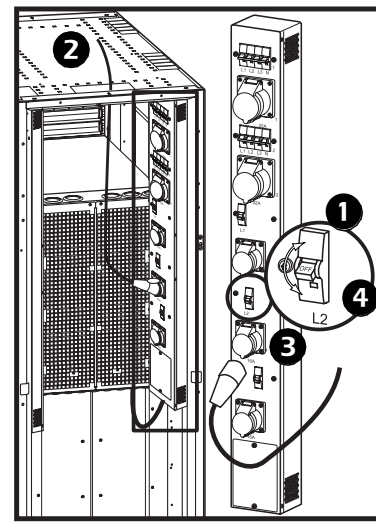
- 1 Set the applicable breaker to the OFF position.
- 2 Guide the load cable down through the top hole.
- 3 Insert the plug from the load into the C19 outlet.
- 4 Secure the plug by inserting the locking brackets.
- 5 Set the applicable breaker to the ON position.

Connecting 3-phase load to PDU II



- ❶ Set the applicable breaker set to the OFF position.
- ❷ Guide the load cable down through the top hole.
- ❸ Lift up the receptacle cover and connect the load to the CEE 32A outlet.
- ❹ Set the breaker set to the ON position.

Connecting 1-phase load to PDU II



- ❶ Set the applicable breaker to the OFF position.
- ❷ Guide the load cable down through the top hole.
- ❸ Lift up the receptacle cover and connect the load to the CEE 16A outlet.
- ❹ Reset the breaker to the ON position.

Disconnecting the load from the PDU(s)

To disconnect the load, set the applicable breaker(s) to the OFF position.

PDU output breaker ratings

Rear of unit	Ambient temperature in front of unit °C	Nominal breaker rating			
		16	32	40	50
Free exhaust	20	16	32	40	50
Free exhaust	30	14.4	30.4	38	47.5
Free exhaust	40	12.8	27.2	34	42.5
Hot aisle containment	25	14.4	30.4	38	47.5

3 Contact Information

If a problem occurs, phone Technical Support at +353 91 702 479 or go to Web Support: support@apc.com. For local country-specific centers: go to www.apc.com/support/contact.

