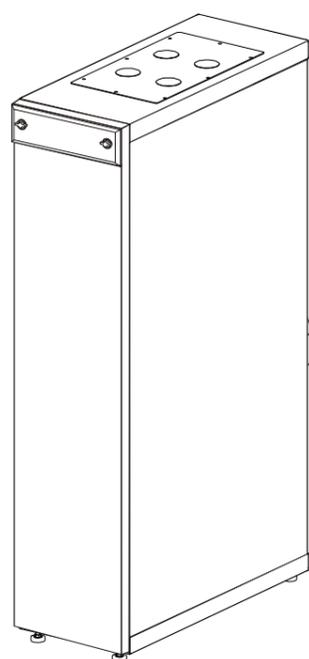
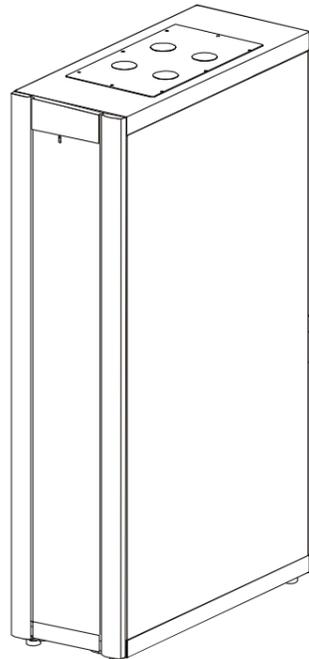


Installation

MGE™ Galaxy™ 3500 and Smart-UPS® VT Maintenance Bypass Panel, Distribution and Transformer Enclosures



MGE™ Galaxy™ 3500



Smart-UPS® VT

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS



Warning: ALL safety instructions in the Safety Sheet (990-2940) must be read, understood and followed when installing the UPS system. Failure to do so could result in equipment damage, serious injury, or death.



Caution: 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.

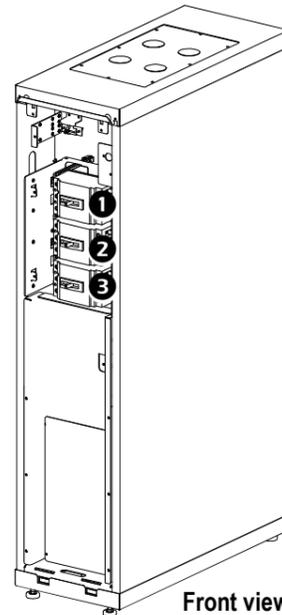


Caution: Operation and Maintenance must only be performed by qualified personnel.



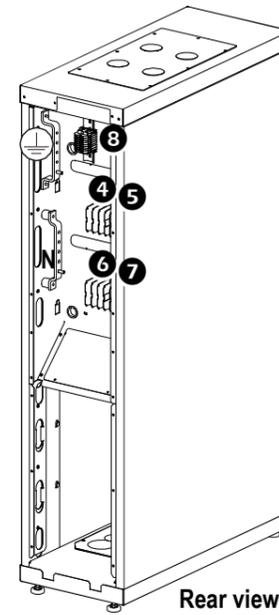
Product Overview

Maintenance Bypass Panel (MBP)



Front view

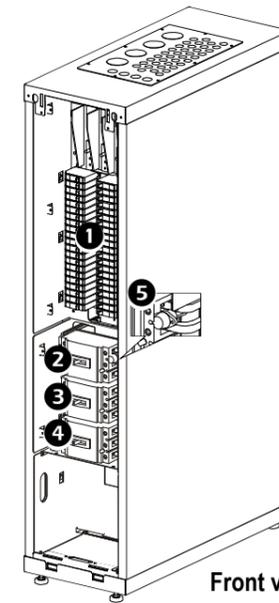
- 1 Q1 input breaker
- 2 Q3 maintenance bypass breaker. A Philips screwdriver is required to unlock Q3
- 3 Q2 output breaker
- 4 Mains input



Rear view

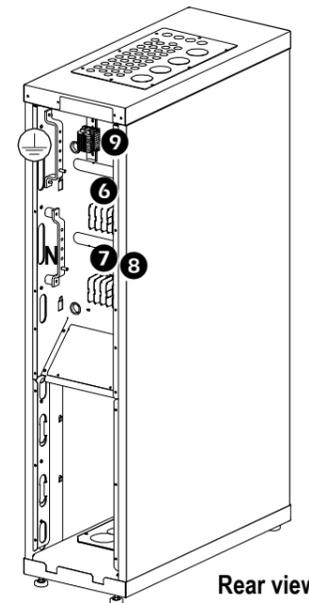
- 5 Critical load
- 6 UPS output
- 7 UPS input
- 8 Control terminal block

MBP with Distribution



Front view

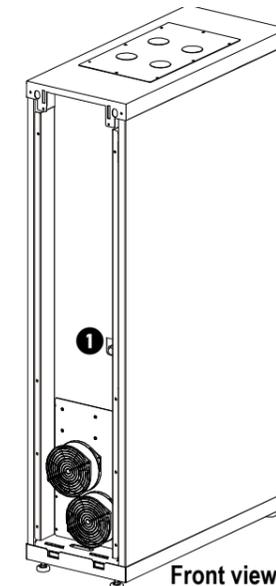
- 1 Distribution panel
- 2 Q1 input breaker
- 3 Q3 maintenance bypass breaker. A Philips screwdriver is required to unlock Q3
- 4 Q2 output breaker
- 5 Control fuse



Rear view

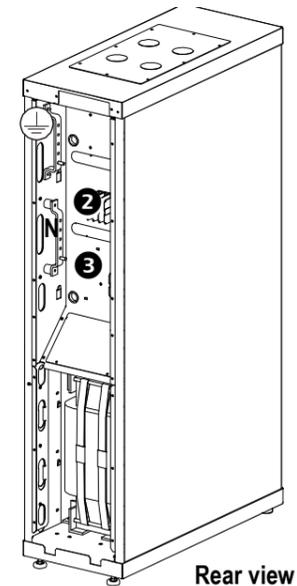
- 6 Mains input
- 7 UPS output
- 8 UPS input
- 9 Control terminal block

Transformer



Front view

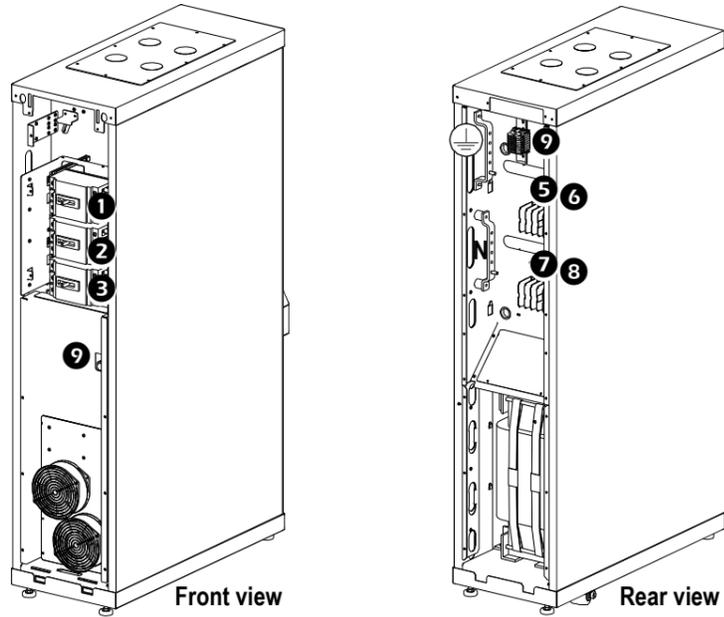
- 1 Control fuse



Rear view

- 2 Mains input
- 3 UPS input

Transformer with MBP



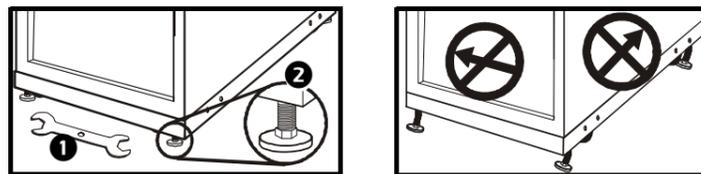
- | | |
|---------------------------------|--------------------------|
| 1 Q1 input breaker | 6 Critical load |
| 2 Q3 maintenance bypass breaker | 7 UPS output |
| 3 Q2 output breaker | 8 UPS input |
| 4 Mains input | 9 Control terminal block |
| 5 Control fuse | |

Site Planning

! **Note:** Refer to the UPS Receiving and Unpacking sheet (990-2940 for MGE Galaxy 3500 and 990-1747 for Smart-UPS VT) to determine the space requirements for the MBP. Consult local codes for any additional requirements. Ideally, install the MBP in a location close to the UPS.

Level the Enclosure

! **Warning:** The system must be installed on a level floor. The leveling feet will stabilize the enclosure, but will not account for a badly sloped floor.



- 1 Use a 13/14 mm wrench to adjust the four leveling feet.

- 2 Ensure that the system is level.



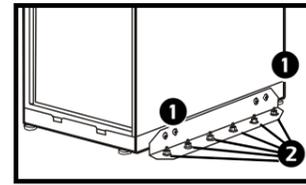
Caution: Do not move the enclosure after the leveling feet have been lowered.

Floor Anchoring (if applicable)

Anchor the enclosure to the floor



Note: Floor-anchoring bolts are not provided with the unit. Purchase the bolts locally (minimum size: M8). Follow the specifications given by the manufacturer when bolting the UPS system to the floor.



- 1 Reuse the two transport brackets (one on each side) that were used to secure the unit to the pallet during transport.

- 2 Drill two to six holes in the floor for each bracket. Attach with bolts.



For seismic applications, see the APC website for seismic requirements.

Prepare for Cables



Note: All external cable connections with the UPS and mains must be made on-site. External cables are not supplied with the shipment.



Note: All control wire connections between the UPS and the MBP must be made on-site. Control wires for Q3 auxiliary are supplied with the shipment.



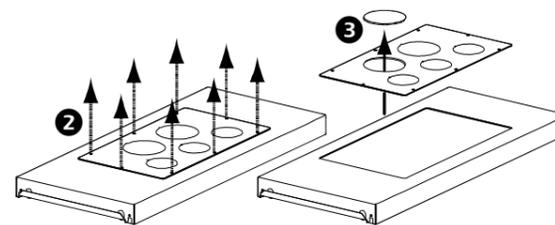
Note: Internal cable connections for adjacent cabinet configurations are supplied with the auxiliary cabinet.

Create knockouts for cable access

- 1 Remove the front panel.

- 2 Remove the top or bottom cover.

- 3 Use a knockout punch to create appropriate-sized holes for the cables/conduits in either the top or bottom cover of the enclosure.

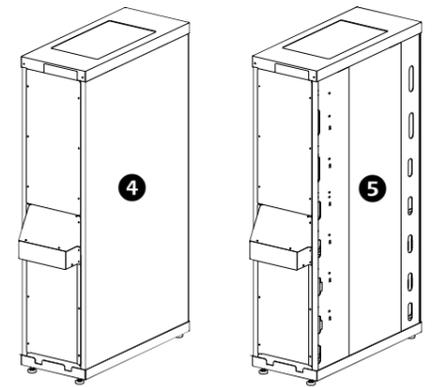


cables/conduits in either the top or bottom cover of the enclosure.

- 4 Remove the left or right side panel.

- 5 Remove the left or right inner panel.

- 6 Install conduits (if applicable) and re-install all the covers.



Run the Cables

Cable entry through I/O box



Note: Bottom cable entry is not applicable to enclosures with transformers.

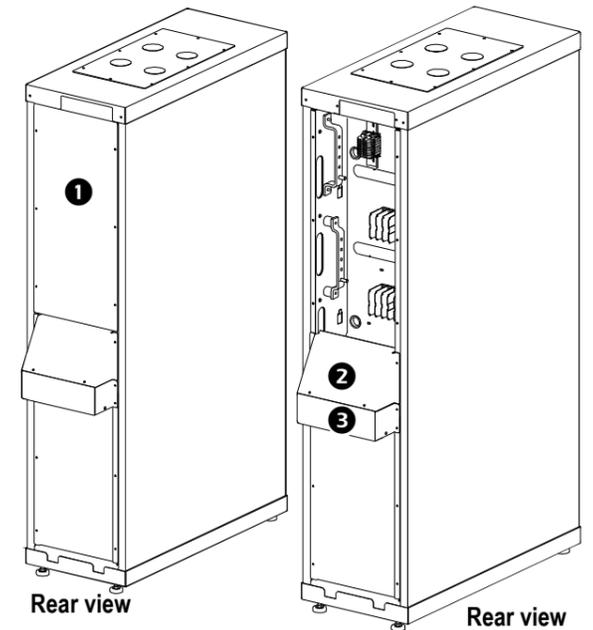
- 1 Remove the upper rear cover.

- 2 Remove the top cover of the I/O box.

- 3 Remove the bottom cover of the I/O box (this one will not be reinstalled).

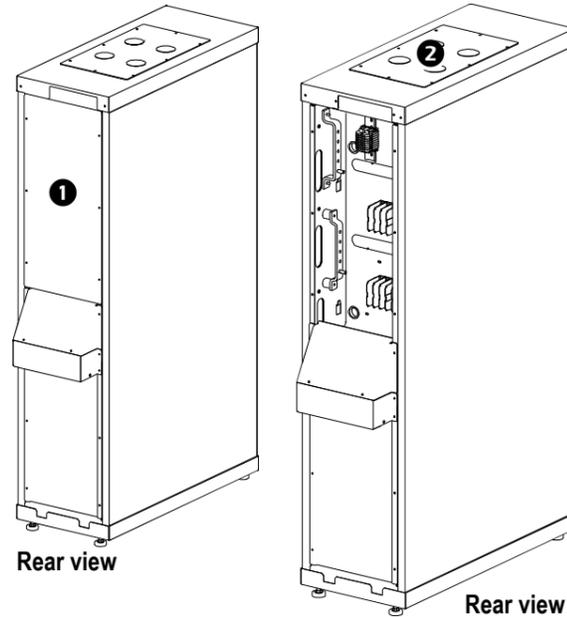
- 4 Route the cables through the I/O box to the cable connection area.

- 5 Re-install the top cover of the I/O box.



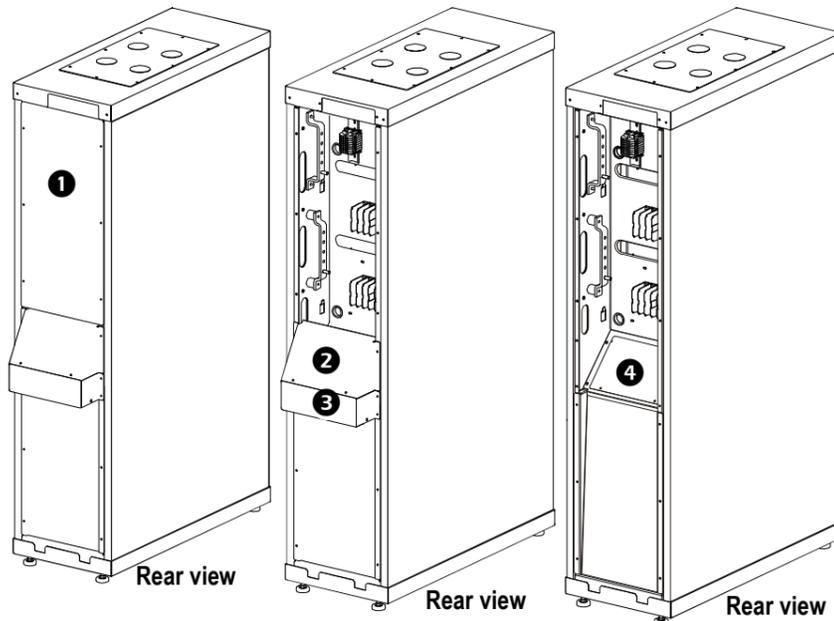
Top cable entry

- ❶ Remove the upper rear cover.
- ❷ Run the cables through the top cover to the cable connection area.
- ❸ Re-install the upper rear cover.



Bottom cable entry

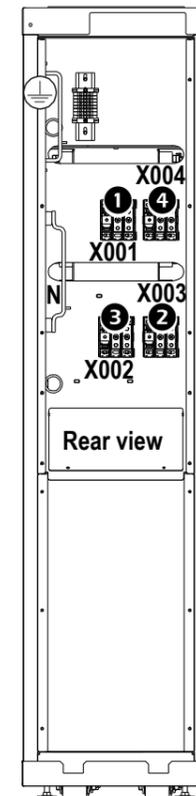
- ❶ Remove the upper rear cover.
- ❷ Remove the top cover of the I/O box.
- ❸ Remove the bottom cover of the I/O box.
- ❹ Remove the plate which blocks the cable access from the bottom.
- ❺ Route the cables through the bottom to the cable connection area.
- ❻ Re-install the I/O box.



Connect Power Cables

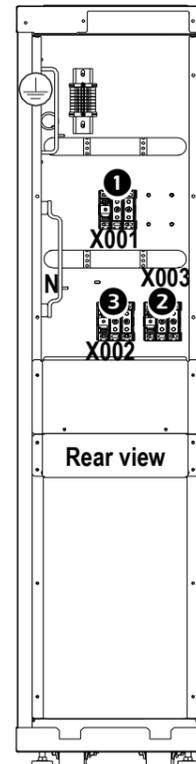
MBP

- ❶ Connect the Mains input cables (L1, L2, L3, N, G) to the Mains input terminals (X001), and the ground and neutral busbars.
- ❷ Connect the UPS input cables (L1, L2, L3, N, G) from the UPS input terminals (X003), and the ground and neutral busbars.
- ❸ Connect the UPS output cables (L1, L2, L3, N, G) from the UPS output terminals (X002), and the ground and neutral busbars.
- ❹ Connect the critical load (L1, L2, L3, N, G) to the load terminals (X004), and the ground and neutral busbars.

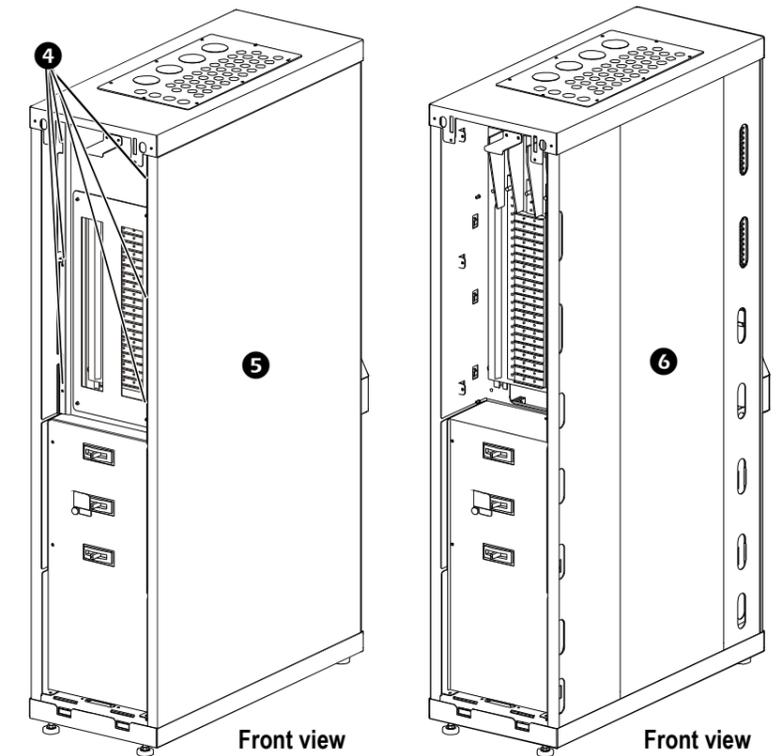


MBP with Distribution

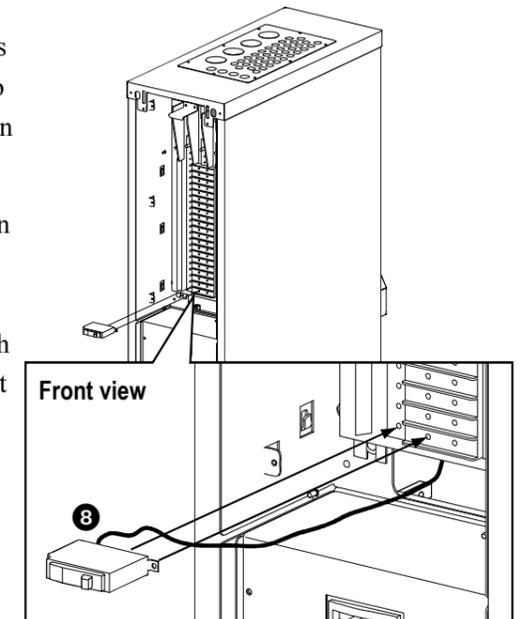
- ❶ Connect the Mains input cables (L1, L2, L3, N, G) to the Mains input terminals (X001), and the ground and neutral busbars.
- ❷ Connect the UPS input cables (L1, L2, L3, N, G) from the UPS input terminals (X003), and the ground and neutral busbars.
- ❸ Connect the UPS output cables (L1, L2, L3, N, G) from the UPS output terminals (X002), and the ground and neutral busbars.



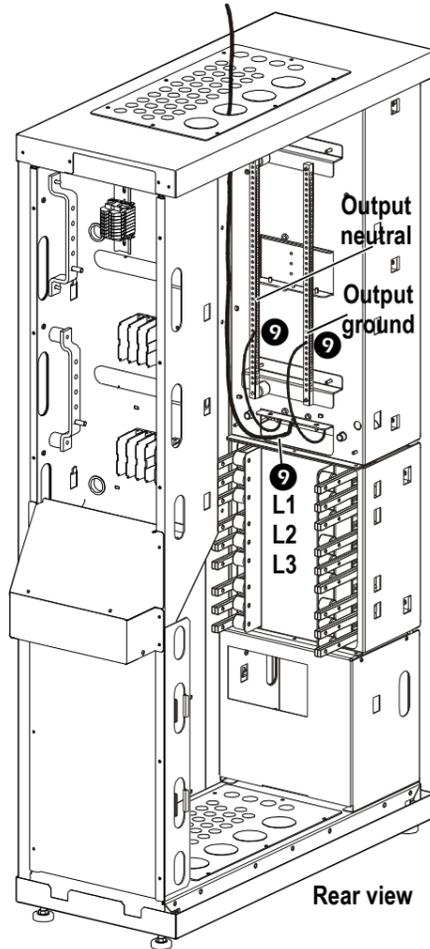
- ❹ Loosen the six screws and remove the inner cover.
- ❺ Remove the left or right side panel.
- ❻ Remove the left or right inner cover.



- ❼ Connect the L1, L2, L3, N, G cables from the critical load to the required distribution modules.
- ❽ Connect the distribution modules to the distribution panel and route the cables through the routing window just below the distribution panel.

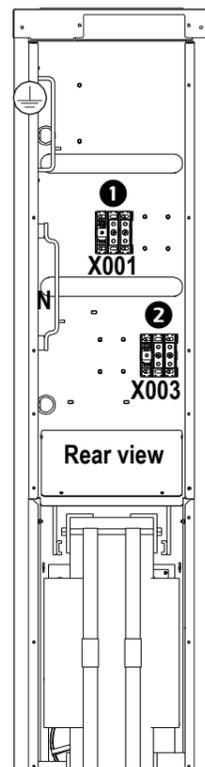


- 9 Connect N and G to the busbars and run L1, L2, L3, through the top or bottom.
- 10 Re-install all covers.



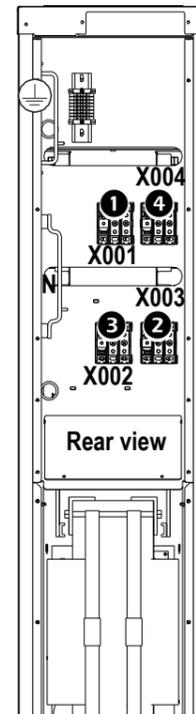
Transformer

- 1 Connect the Mains input cables (L1, L2, L3, N, G) to the Mains input terminals (X001), and the ground and neutral busbars.
- 2 Connect the UPS input cables (L1, L2, L3, N, G) from the UPS input terminals (X003), and the ground and neutral busbars.
- 3 Reinstall the top cover of the I/O box.



Transformer with MBP

- 1 Connect the Mains input cables (L1, L2, L3, N, G) to the Mains input terminals (X001), and the ground and neutral busbars.
- 2 Connect the UPS input cables (L1, L2, L3, N, G) from the UPS input terminals (X003), and the ground and neutral busbars.
- 3 Connect the UPS output cables (L1, L2, L3, N, G) from the UPS output terminals (X002), and the ground and neutral busbars.
- 4 Connect the critical load (L1, L2, L3, N, G) to the load terminals (X004), and the ground and neutral busbars.
- 5 Reinstall the top cover of the I/O box.



Connect the Communication Cables

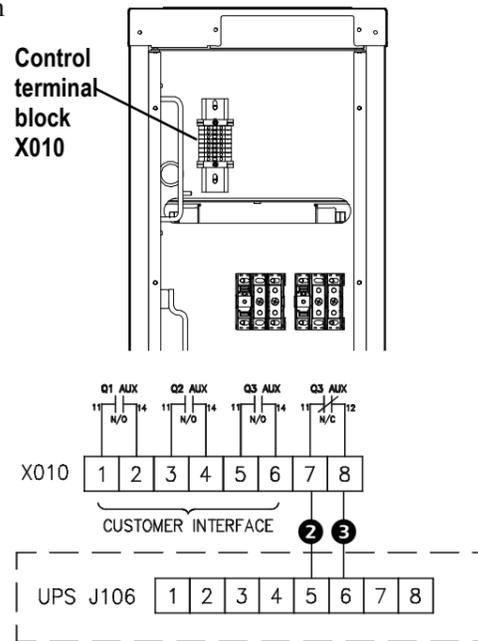


Note: Control wires for Q3 auxiliary are supplied with the shipment.



Note: The transformer has no communication wiring.

- 1 Route the communication cables through the top, bottom, or I/O box.
- 2 Connect the wires between the UPS (J106 port 5) from the MBP (X010 port 7 on the control terminal block).
- 3 Connect the wires between the UPS (J106 port 6) from the MBP (X010 port 8 on the control terminal block).



Specifications

Electrical for SBP10K15F and SBP20K30F

Electrical	10-15 kVA	20-30 kVA
Nom. input voltage	208 V 4W+GND	208 V 4W+GND
Nom. output voltage	208 V 4W+GND	208 V 4W+GND
Circuit breaker rating	60 A	125 A
Wiring (only use copper conductors suitable for at least 75°C)		
Maximum cable size	70 mm ² (2/0 AWG)	70 mm ² (2/0 AWG)
System output/ UPS output cable	25 mm ² (4 AWG)	50 mm ² (1 AWG)
System input/UPS input cable	25 mm ² (4 AWG)	50 mm ² (1 AWG)

Electrical for SBP10K30F-DP, SBPXF10K30F, and XFM10K30F

Electrical	10-30 kVA
Nom. input voltage	208 V 4W+GND
Nom. output voltage	208 V 4W+GND
Circuit breaker rating	125 A
Wiring (only use copper conductors suitable for at least 75°C)	
Maximum cable size	70 mm ² (2/0 AWG)
System output/ UPS output cable	50 mm ² (1 AWG)
System input/UPS input cable	50 mm ² (1 AWG)

Electrical for SBPXF10K30G and XFM10K30G

Electrical	10-30 kVA
Nom. input voltage	480 V 3W+GND
Nom. output voltage	208 V 4W+GND
Circuit breaker rating	50 A
Wiring (only use copper conductors suitable for at least 75°C)	
Maximum cable size	70 mm ² (2/0 AWG)
System output/ UPS output cable	50 mm ² (1 AWG)
System input/UPS input cable	50 mm ² (1 AWG)

Physical

Enclosure	Shipping Weights	Weights	Height	Width	Depth
MBP	156 kg (344 lbs)	122 kg (268 lbs)	1487 mm (58.5 in)	352 mm (14 in)	837 mm (33 in)
MBP with Distribution	189 kg (416 lbs)	154 kg (340 lbs)	1487 mm (58.5 in)	352 mm (14 in)	837 mm (33 in)
Transformer	314 kg (692 lbs)	279 kg (616 lbs)	1487 mm (58.5 in)	352 mm (14 in)	837 mm (33 in)
Transformer with MBP	365 kg (804 lbs)	330 kg (728 lbs)	1487 mm (58.5 in)	352 mm (14 in)	837 mm (33 in)

Environmental

Environmental

Operating environment	Indoor use only, protect from water and conductive contaminants
Operating temperature	0° to 40°C (32° to 104°F)
Humidity	0 to 95%, non-condensing

Torque value

Torque value

Terminal blocks	6.89 Nm (61 lbs in)
Busbars M6	11.3 Nm (100 lbs in)

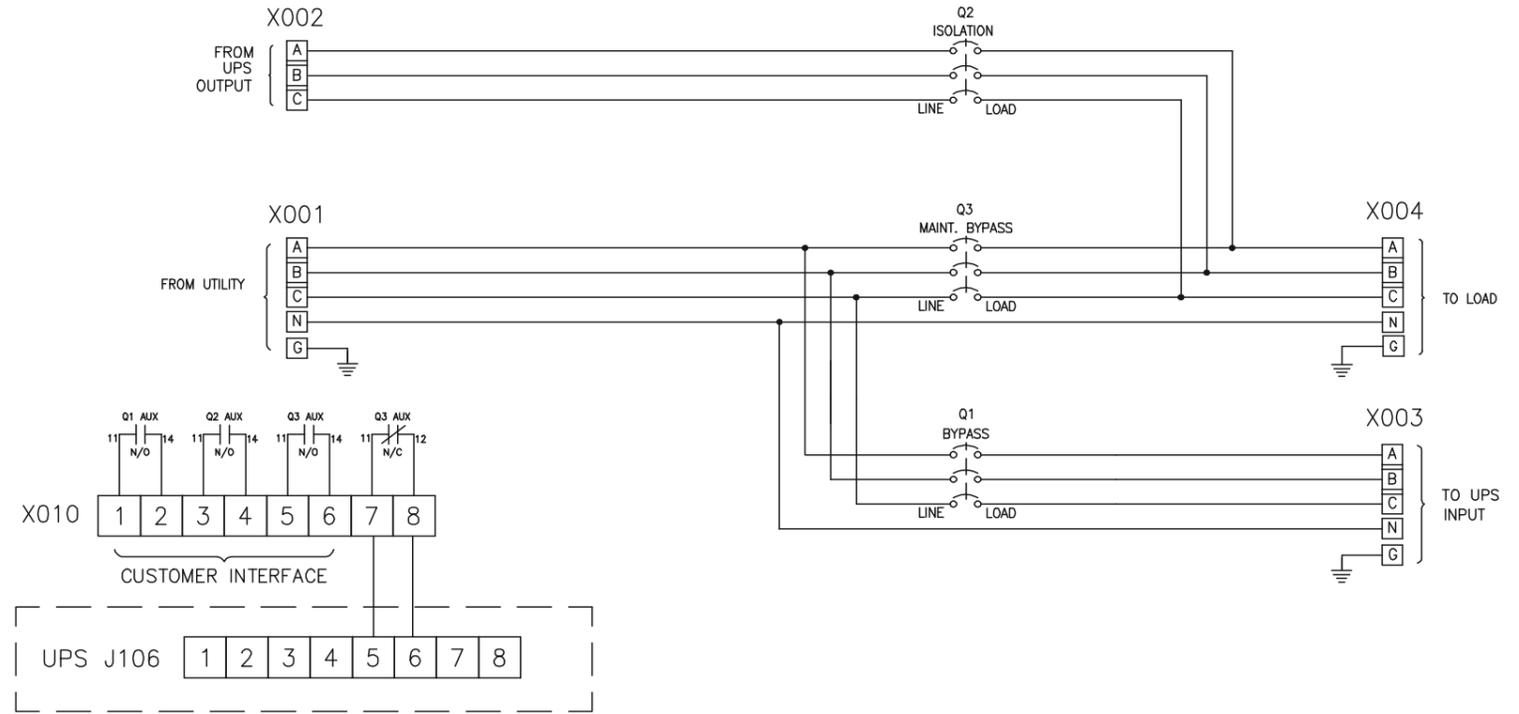
Contact Information

For local, country-specific centers: go to www.apc.com/support/contact.

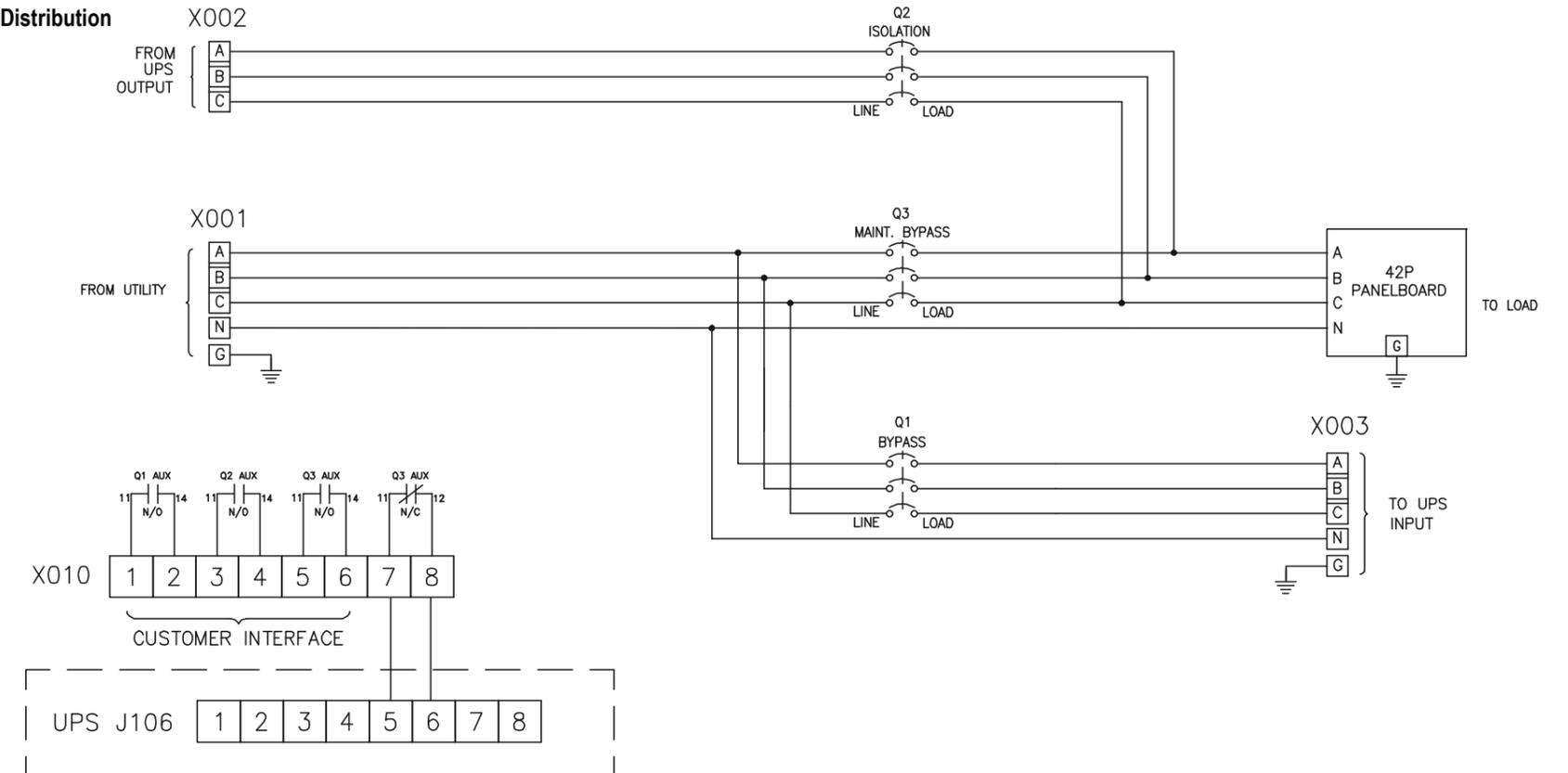
Appendix

Diagram

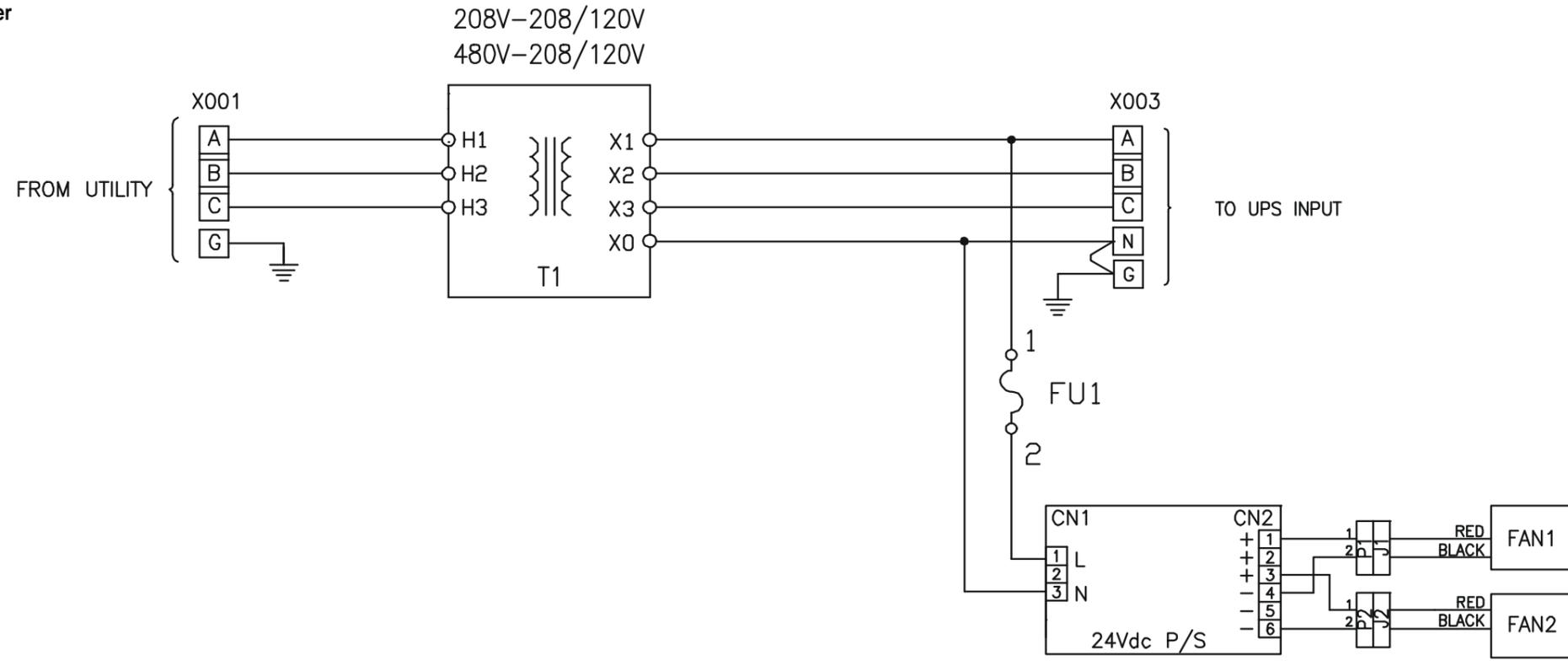
MBP



MBP with Distribution



Transformer



Transformer with MBP

