Installation

Symmetra PX 100 kW 208 V

Optional MBP
Optional Modular PDU
(600:208 V, 480:208 V, 208:208 V, 208 V Transformerless)
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</table>
IMPORTANT SAFETY INSTRUCTIONS – SAVE THESE INSTRUCTIONS

WARNING: ALL safety instructions in the Safety sheet (990-2984) must be read, understood, and followed when installing the UPS system. Failure to do so could result in equipment damage, serious injury, or death.

WARNING: The UPS system does not have built-in disconnection devices for AC input/output and DC input. The customer must provide AC input/output over-current protection and an AC output disconnect device.

WARNING: After the UPS has been electrically wired, do not start it. Start-up is commissioned to Schneider Electric-authorized personnel only.

WARNING: The Sidecar (model PDPM100SC) is required for underfloor wiring into the PDU when the PDU contains a transformer. The Sidecar does not contain a switch or circuit breaker, so a readily accessible disconnect device shall be incorporated external to the equipment.

WARNING: Hazardous voltage. Disconnect all power sources including the batteries before servicing the equipment.

WARNING: For remote XR battery cabinets, the length of the signal and power cables must not exceed 200 m, on the cable that connects the XR battery cabinet to the UPS. For power cables between 50 and 200 m, the voltage drop must be taken into account when the cable size is chosen.

WARNING: 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.
Specifications

Note: All current values are based on a 100 kW maximum configuration of the UPS.

Specifications for Installations without PDU

AC Input

Note: Delta input is not permitted.

<table>
<thead>
<tr>
<th>Connection type, single feed</th>
<th>208 V UPS only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection type, dual feed</td>
<td>3PH + N + G</td>
</tr>
<tr>
<td>Input frequency (Hz)</td>
<td>50 or 60</td>
</tr>
<tr>
<td>Input frequency range (Hz)</td>
<td>40–70</td>
</tr>
<tr>
<td>Nom. input current (A)¹</td>
<td>302</td>
</tr>
<tr>
<td>Max. input current (A)²</td>
<td>332</td>
</tr>
<tr>
<td>Input current limit (A)³</td>
<td>360</td>
</tr>
<tr>
<td>Nom. bypass input current (A)</td>
<td>278</td>
</tr>
<tr>
<td>Maximum Short Circuit Withstand (kA)⁴</td>
<td>30</td>
</tr>
</tbody>
</table>

¹ Input current based on nominal voltage and rated load, batteries fully charged.
² Input current based on full battery recharge, nominal voltage and rated load.
³ Current limitation through electronic current limiting is based on full rated load and limited battery recharge from -10% to -15% input voltage.
⁴ The Maximum Short Circuit Withstand was not evaluated by Underwriters Laboratories.

AC Output

<table>
<thead>
<tr>
<th>Connection type</th>
<th>208 V UPS only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal output current (A)</td>
<td>278</td>
</tr>
</tbody>
</table>

Connection type: 3PH+ N + G or 3PH+G
Recommended Current Rating of Feeder Circuit Breakers

**Caution:** To reduce the risk of fire, connect only to a circuit provided with (see below) amperes maximum branch circuit overcurrent protection in accordance with the National Electric Code, NSI/NFPA 70.

<table>
<thead>
<tr>
<th></th>
<th>208 V UPS only</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mains input (A)</strong></td>
<td>Standard rated (80%)</td>
</tr>
<tr>
<td></td>
<td>450</td>
</tr>
<tr>
<td><strong>Bypass input (A)</strong></td>
<td>350</td>
</tr>
<tr>
<td><strong>Battery (A)</strong></td>
<td>–</td>
</tr>
<tr>
<td><strong>Output (A)</strong></td>
<td>350</td>
</tr>
</tbody>
</table>

Recommended Conductor Sizes per Phase/Neutral

**Caution:** All wiring must comply with all applicable national and/or local electrical codes. Maximum allowable conductor size: 500 kcmil

Conductor sizing in this manual is based on Table 310-16 of the National Electrical Code (NEC) with the following assertions.

- 90°C conductors (THHN) for 75°C termination
- 3 current carrying conductors
- An ambient temperature of 30°C
- Use only copper conductors

If the ambient room temperature is greater than 30°C, larger conductors are to be selected in accordance with the correction factors of the NEC.

Equipment Grounding Conductors (EGC) are sized in accordance with NEC Article 250-122 and Table 250-122.

The conductor sizes are recommendations for maximum configurations. Even if the load is less than the maximum rating, it is wise to plan for future load increases. If the system is operated at a lower load than its rating and it is desired to supply the system with a lower rated breaker and smaller conductors, conductor ampacities are to be selected in accordance with the NEC.

<table>
<thead>
<tr>
<th></th>
<th>208 V UPS only</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mains input</strong></td>
<td>Standard rated (80%)</td>
</tr>
<tr>
<td></td>
<td>2 x 4/0 AWG</td>
</tr>
<tr>
<td><strong>Bypass input</strong></td>
<td>500 kcmil</td>
</tr>
<tr>
<td><strong>Battery</strong></td>
<td>–</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td>500 kcmil</td>
</tr>
<tr>
<td><strong>Equipment Grounding Conductor</strong></td>
<td>3 AWG</td>
</tr>
</tbody>
</table>
Recommended Bolt and Lug Sizes

<table>
<thead>
<tr>
<th>Cable</th>
<th>Terminal Bolt Diameter</th>
<th>Cable Lug Type</th>
<th>Crimping tool CT-720 Crimping Die:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mains input</td>
<td>M10</td>
<td>LCA4/0-12H-X</td>
<td>CD-720-3</td>
</tr>
<tr>
<td>Bypass input</td>
<td>M10</td>
<td>LCA500–12H-X</td>
<td>CD-720-7</td>
</tr>
<tr>
<td>Battery 1</td>
<td>M10</td>
<td>–</td>
<td>LCA300-12H-X</td>
</tr>
<tr>
<td>Battery 2</td>
<td>M10</td>
<td>–</td>
<td>LCA300-12H-X</td>
</tr>
<tr>
<td>Output</td>
<td>M10</td>
<td>LCA500-12H-X</td>
<td>CD-720-7</td>
</tr>
</tbody>
</table>

Specifications for Optional Maintenance Bypass Panel

<table>
<thead>
<tr>
<th>Input Wiring</th>
<th>Output Wiring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum input current (A)</td>
<td>Maximum output current (A)</td>
</tr>
<tr>
<td>332</td>
<td>278</td>
</tr>
<tr>
<td>Wire size</td>
<td>Wire size</td>
</tr>
<tr>
<td>2 x 4/0 AWG</td>
<td>2 x 4/0 AWG</td>
</tr>
</tbody>
</table>

Specifications for Installations with PDU and with MBP

AC Input

<table>
<thead>
<tr>
<th>208 V : 208 V</th>
<th>480 V : 208 V</th>
<th>600 V : 208 V</th>
<th>No transformer and with MBP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection type</td>
<td>3PH+ G+GEC</td>
<td>3PH+ N+G</td>
<td></td>
</tr>
<tr>
<td>Nom. input frequency (Hz)</td>
<td>57-63</td>
<td>40-70</td>
<td></td>
</tr>
<tr>
<td>Nom. input current (A)</td>
<td>307</td>
<td>133</td>
<td>106</td>
</tr>
<tr>
<td>Max. input current (A)</td>
<td>337</td>
<td>146</td>
<td>117</td>
</tr>
<tr>
<td>Input current limit (A)</td>
<td>366</td>
<td>165</td>
<td>127</td>
</tr>
<tr>
<td>Nom. bypass input current (A)</td>
<td>282</td>
<td>122</td>
<td>98</td>
</tr>
<tr>
<td>Maximum Short Circuit Withstand (kA)</td>
<td>65</td>
<td>65</td>
<td>25</td>
</tr>
</tbody>
</table>

1 Input current based on nominal voltage and rated load, batteries fully charged
2 Input current based on full battery recharge, nominal voltage and rated load
3 Current limitation through electronic current limiting is based on full rated load and limited battery recharge from -10% to -15% input voltage.
4 The maximum available fault current was not evaluated by Underwriters Laboratories.
### AC Output

<table>
<thead>
<tr>
<th>Connection type</th>
<th>208 V : 208 V</th>
<th>480 V : 208 V</th>
<th>600 V : 208 V</th>
<th>No transformer and with MBP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output voltage</td>
<td>3 x 208/120 V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal output current (A)</td>
<td>278</td>
<td>278</td>
<td>278</td>
<td>278</td>
</tr>
<tr>
<td>Power Distribution Modules (A) (not included)</td>
<td>20 A, 30 A, 40 A, 50 A, 60 A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subfeed</td>
<td>278 A maximum (included) see following table</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PDU Subfeed Circuit Breaker Trip Currents Merlin Gerin NSJ400 - STR23SP Electronic Trip Unit

<table>
<thead>
<tr>
<th>Io Setting</th>
<th>1</th>
<th>0.98</th>
<th>0.95</th>
<th>0.93</th>
<th>0.90</th>
<th>0.88</th>
<th>0.85</th>
<th>0.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>288</td>
</tr>
<tr>
<td>0.8</td>
<td></td>
<td></td>
<td></td>
<td>297.6</td>
<td>288</td>
<td>281.6</td>
<td>272</td>
<td>256</td>
</tr>
<tr>
<td>0.7</td>
<td>280</td>
<td>274.4</td>
<td>266</td>
<td>260.4</td>
<td>252</td>
<td>246.4</td>
<td>238</td>
<td>224</td>
</tr>
<tr>
<td>0.63</td>
<td>252</td>
<td>247</td>
<td>239.4</td>
<td>234.4</td>
<td>226.8</td>
<td>221.8</td>
<td>214.2</td>
<td>201.6</td>
</tr>
<tr>
<td>0.5</td>
<td>200</td>
<td>196</td>
<td>190</td>
<td>186</td>
<td>180</td>
<td>176</td>
<td>170</td>
<td>160</td>
</tr>
</tbody>
</table>

1 400 A frame, 100% rated @400 A
2 Long-time (LT) overload protection = Io x Io x Ir- Example: 400 x 0.5 x 0.8 = 160 A. See NEC-2008 Art. 240.6 (C) for additional information.
3 Factory default: 400 x 0.93 x 0.8 = 297.6 A or ~ 300 A. The maximum Subfeed Output Loading must not be greater than 278 A/phase.

### Recommended Current Rating of Input Circuit Breaker

<table>
<thead>
<tr>
<th>208 V : 208 V</th>
<th>480 V : 208 V</th>
<th>600 V : 208 V</th>
<th>No transformer and with MBP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mains input (A)</td>
<td>500</td>
<td>225</td>
<td>175</td>
</tr>
</tbody>
</table>

* Standard circuit breakers are rated to carry 80% of their current rating continuously.

### Inrush Currents

The supply overcurrent protective device must be able to handle the below transformer inrush currents.

<table>
<thead>
<tr>
<th>208 V : 208 V</th>
<th>480 V : 208 V</th>
<th>600 V : 208 V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inrush current (A)</td>
<td>4500</td>
<td>2000</td>
</tr>
</tbody>
</table>
Recommended Conductor Sizes

**Caution:** All wiring must comply with all applicable national and/or local electrical codes. Maximum allowable conductor size: 2x350 kcmil

Conductor sizing in this manual is based on Table 310-16 of the 2008 National Electrical Code (NEC) with the following assertions:

- 90°C conductors (THHN) for 75°C termination
- 3 Current Carrying Conductors
- An ambient temperature of 30°C

If the ambient room temperature is greater than 30°C, larger conductors are to be selected in accordance with the correction factors of the NEC.

Equipment Grounding Conductors (EGC) are sized in accordance with NEC Article 250-122 and Table 250-122.

Grounding Electrode Conductors (GEC) are sized in accordance with NEC Article 250-66 and Table 250-66.

The conductor sizes are recommendations for maximum configurations. Even if the load is less than the maximum rating, it is wise to plan for future load increases. If the system is operated at a lower load than its rating and it is desired to supply the system with a lower rated breaker and smaller conductors, conductor ampacities are to be selected in accordance with the NEC. The transformer inrush must be taken into account when sizing conductors.

<table>
<thead>
<tr>
<th></th>
<th>208 V : 208 V</th>
<th>480 V : 208 V</th>
<th>600 V : 208 V</th>
<th>No transformer and with MBP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mains input Ø and N</td>
<td>Cu (2) 4/0</td>
<td>4/0</td>
<td>2/0</td>
<td>(2) 4/0</td>
</tr>
<tr>
<td></td>
<td>Al (2) 300 kcmil</td>
<td>300 kcmil</td>
<td>4/0</td>
<td>(2) 300 kcmil</td>
</tr>
<tr>
<td>Grounding Electrode</td>
<td>Cu 2 AWG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conductor (GEC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Al 1/0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment Grounding</td>
<td>Cu 2 AWG</td>
<td>4 AWG</td>
<td>6 AWG</td>
<td>2 AWG</td>
</tr>
<tr>
<td>Grounding Conductor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(E GC)</td>
<td>Al 1/0</td>
<td>2 AWG</td>
<td>4 AWG</td>
<td>1/0</td>
</tr>
<tr>
<td>Output</td>
<td>Supplied with Power Distribution Modules except for MBP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subfeed output</td>
<td>Cu (2) 2/0 Ø and N, 4 AWG EGC, GEC not required</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Al (2) 4/0 Ø and N, 2 AWG EGC, GEC not required</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ø = phase
N = neutral
(2) = two conductors per phase and neutral (when neutral is required)

Subfeed is required to have two conductors per phase & N for full output due to limited wire bend space.

The No transformer PDU requires a Neutral & does not require GEC.

Cu = Copper conductors, Al = Aluminum conductors
**Batteries**

<table>
<thead>
<tr>
<th>Battery Input</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nom. voltage (VDC)</td>
<td>2 x 192</td>
</tr>
<tr>
<td>( I_{\text{Nom, discharge}} )</td>
<td>282</td>
</tr>
<tr>
<td>( I_{\text{Max, discharge}} )</td>
<td>351</td>
</tr>
<tr>
<td>End of discharge voltage</td>
<td>1.6-1.75 V/cell (automatic, depending on load)</td>
</tr>
</tbody>
</table>

1 Nominal battery discharge current based on rated load and nominal battery voltage (2.0 V/cell)
2 Maximum battery discharge current based on rated load at the end of the discharge (1.6 V/cell)

**Heat Dissipation**

<table>
<thead>
<tr>
<th></th>
<th>Without PDU</th>
<th>With PDU</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>208 V</td>
<td>208 V: 208 V</td>
</tr>
<tr>
<td>Heat Dissipation ( \text{kW (BTU)} )</td>
<td>8.63 (29466)</td>
<td>12.1 (41351)</td>
</tr>
</tbody>
</table>

1 The values given are based on 100 kW load + 10 kW charging power (92.5% AC to AC efficiency and 95.0% efficiency in the charger)
Mechanical Assembly

Re-arrange the Side Panels

WARNING: For safety reasons, the UPS side panels must always be installed on the right side of the PDU even though it is placed up against the UPS.

Note: The type of installation determines the need to re-arrange the side panels. The side panels are installed on the UPS and should be moved to the end of row cabinets.

Remove the Side Panels

WARNING: The side panels must be locked with the red key to avoid unintended access to live parts.

WARNING: Ensure that all bonding clips are in place on the lower edge on the side panel.

1. Unlock the side panels with the red key (provided).
2. Press down on the lock and then pull out and up.
Install the Side Panels

1. Set the base of the panel at an angle and push the panel in.
2. Lock the side panels with the red key.

Install the Internal Conductors for Bottom Entry Systems in Installations with PDU without Transformer

1. Remove the side panel from the PDU.
2. Connect the N, L1, L2, L3 conductors (supplied in the bottom of the cabinet) to the input terminals.
3. Route the cables to the bottom terminal, through the hole in the right side.
4. Connect the N, L1, L2, L3 conductors to the bottom terminals.
Perform Equipotential Bonding

Note: It might be necessary to move some of the equipotential bonding wires to fit your system configuration.

Rear of the System

1. Connect the two equipotential bonding conductors between adjacent cabinets in the system. The bonding conductors are pre-connected to the PDU, Sidecar, MBP, and all the XR battery cabinets. The M8 nuts and washers are supplied in the accessory kit.

Interconnect and Level the Cabinets

WARNING: The system must be installed on a level floor. The leveling feet will stabilize the cabinet, but will not account for a badly sloped floor.

1. Align the cabinets.
2. Turn the joining brackets right and secure with screw to interconnect the cabinets.
3. Use a screwdriver to lower the four leveling feet.

4. Use a 13/17 mm wrench to adjust the leveling feet.

**WARNING:** Do not move the cabinet after the leveling feet have been lowered.
Connect Power Conductors and Communication Cables

The connection of power conductors and communication cables varies depending on configuration. Therefore this section is divided in three parts. Use the procedure specific to your configuration:

- Configuration without PDU
- Configuration with PDU without Transformer
- Configuration with PDU with Transformer

Procedure for System without PDU

System Overview

External communication wires (web, UPS link etc.)

UPS Output
Mains

XR battery cabinet

XR battery cabinet

XR battery cabinet

XR battery cabinet

UPS

Bypass

UPS Output

EPO Switch

BAT

BAT

BAT

BAT

Symmetra PX 100 kW 208 V Installation 990–3659E-001
Prepare for Cables – Systems without PDU

1. Open the rear door of the UPS.
2. Remove all four covers, starting from the top, by loosening the two screws in each cover. Note the orientation of the covers.
3. Lift the cover up and out.

Top Cable Entry

Make Holes in the Top of the UPS

Caution: Drilling or cutting must not take place over the top or inside the enclosure.

1. Remove the cover plates.
2. Drill as many holes as necessary in the solid plate and install the conduits. Re-install the plate with the conduits installed.
Bottom Cable Entry

Make Holes in the Bottom of the UPS

Caution: Drilling or cutting must not take place over the top or inside the enclosure.

1. Disconnect the grounding cable.
2. Remove the screws in front of the bottom plate.
3. Lift the plate to remove it.
4. Drill holes in the plate and install the conduits.

5. Re-install the plate with the conduits installed.
6. Re-install the screws in front of the plate.
7. Re-connect the grounding cable. The required torque value is 8 Nm.
**Connect Power Conductors – Systems without PDU**

**Caution:** Ensure clockwise phase rotation and neutral location. The power terminal bolt diameter is 10 mm. The required torque value is 26 Nm.

1. Route the conductors through top or bottom of the cabinet.
2. In single utility systems, install the three cables (0W3617) included with the unit. Bypass L3 to Input L3, Bypass L2 to Input L2 and Bypass L1 to Input L1.
3. Connect the input conductors to the input busbars (L1, L2, L3, N).
4. Connect the output conductors to the output busbars (L1, L2, L3, N).
5. In dual utility systems, connect the bypass conductors to the bypass busbars (L1, L2, L3).
6. Connect the PE cable in the UPS according to the symbol on the grounding rail.

**Rear view of the UPS**
Connect Maintenance Bypass Panel (Option)

Remove the Breaker Cover Panel from the MBP

1. Remove the front panel by pushing the two latches in the top of the panel.
2. Remove the breaker cover panel by removing the four mounting screws.
3. Perform equipotential bonding and interconnect and level the MBP with the other cabinets – see “Perform Equipotential Bonding” and “Interconnect and Level the Cabinets” on how to do this.

Maintenance Bypass Field Wiring Specification

<table>
<thead>
<tr>
<th>Input wiring</th>
<th>Max input current</th>
<th>Wire size</th>
</tr>
</thead>
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<tr>
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<td>332 A</td>
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<table>
<thead>
<tr>
<th>Output wiring</th>
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<tbody>
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<tr>
<td>30°C</td>
<td>278 A</td>
<td>2 x 4/0</td>
</tr>
<tr>
<td>40°C</td>
<td>278 A</td>
<td>2 x 250 Kcmil</td>
</tr>
</tbody>
</table>
Prepare the MBP for Cables in Bottom Entry Systems

**Caution:** Remove the cover plates from the cabinet. Drilling or cutting of plates must not take place over the top or inside the cabinet or while parts are installed in the cabinet.

**Caution:** Ensure sharp edges from drilling are properly covered to prevent damaging cable insulation.

1. Remove the dedicated bottom cover plate for power cables.

2. Drill holes as needed in the plate for conduits and re-install the plate with the conduits installed.

![Front view of the MBP](image1)

![Front view of the MBP](image2)
Prepare the MBP for Cables in Top Cable Entry Systems

**Caution:** Remove the cover plates from the cabinet. Drilling or cutting of plates must not take place over the top or inside the cabinet or while parts are installed in the cabinet.

**Caution:** Ensure sharp edges from drilling are properly covered to prevent damaging cable insulation.

1. Remove the dedicated top cover plate for power cables.
2. Drill holes as needed in the plate for conduits and re-install the plate with the conduits installed.

**Front view of the MBP**

![Front view of the MBP](image)

**Front view of the MBP**

![Front view of the MBP](image)
Connect Power Conductors between the UPS and the MBP

**Note:** Ensure sharp edges from drilling are properly covered to prevent damaging cable insulation.

The connection can be done from the left or right side of the MBP

1. Untie/cut the zip ties to uncoil the cables

2. Route the output and bypass/input conductors through the side of the MBP and through the cable relief in the UPS

3. Connect L1, L2 & L3 from MBP Q1 bottom and N from MBP Q3 top to the UPS bypass input.

4. Connect L1, L2, L3 and N from MBP Q2 top to the UPS output.

5. Route the signal cable through the side of the MBP and into the UPS.

6. Remove the jumper wire harness between J1 & J2 on the maintenance bypass interface board (OP3199) in the UPS.

7. Connect the signal cable to J1 and J8 on the maintenance interface board (OP3199) in the UPS.

**Note:** Leave the jumper pin between J2 pins 13 & 14.

Right side view of the MBP

Connect Input and Output Power Conductors to the MBP

**Caution:** Ensure clockwise phase rotation. The required torque value for the dual-lug breaker input connector is 31 Nm. Use the long set screws for the input cable range of AWG 2 minimum to 4/0 maximum. Use the short set screws, supplied with MBP, for the input cable range of 250 kcmil minimum to 500 kcmil maximum. Ensure that the plastic cover is installed over the breaker terminals.
1. Route the input conductors through the top or bottom of the MBP to the Q1 input. Remove the plastic cover from the top breaker terminals.

2. Connect the input conductors to the L1, L2, L3, N, EGC (Equipment Grounding Conductor) terminals. Install the plastic cover on the top breaker terminals.

3. Route the output conductors through the top or bottom of the MBP to the Q2 output. Remove the plastic cover from the bottom breaker terminals.

4. Connect the output conductors to the L1, L2, L3, N, EGC terminals. Install the plastic cover on the bottom breaker terminals.
Connect Input and Output Power Conductors from the 150 kVA InfraStruxure PDU to the MBP

**Caution:** Ensure clockwise phase rotation. The required torque value for the dual-lug breaker input connector is 31 Nm. Use the long set screws for the input cable range of AWG 2 minimum to 4/0 maximum. Use the short set screws, supplied with MBP, for the input cable range of 250 kcmil minimum to 500 kcmil maximum. Ensure that the plastic cover is installed over the breaker terminals.

1. Route the transformer output conductors from the chase nipple in the PDU, through the upper open side on the MBP to the Q1 input. Remove the plastic cover from the top breaker terminals.

2. Connect the input conductors to the L1, L2, L3, N, EGC (Equipment Grounding Conductor) terminals. Install the plastic cover on the top breaker terminals.

3. Route the PDU distribution busbar conductors from the chase nipple in PDU, through the upper open side on the MBP to the Q2 output. Remove the plastic cover from the bottom breaker terminals.

4. Connect the output conductors to the L1, L2, L3, N, EGC terminals. Install the plastic cover on the bottom breaker terminals.

**Front view of the MBP**

[Diagram showing MBP with labeled connections]
1. Route the battery breaker trip cable from J1 in the first XR battery cabinet to J3 in the next XR battery cabinet. Repeat the procedure for all XR battery cabinets.

2. Route the battery breaker trip cable from J1 in the last XR battery cabinet to J27 on the EPO/ancillary interface board (0P4123) in the UPS (for remote XR battery cabinet the length of the signal must not exceed 200 m).

3. Route the communication cable from XR Communications port 1 in each XR battery cabinet to port 2 in the next XR battery cabinet. Remove the terminator when necessary.

4. Route the communication cable from XR Communications port 1 in the last XR battery cabinet to the UPS XR Communications port 2 (for remote XR battery cabinet the length of the signal must not exceed 200 m).

5. Route the communication cables from the maintenance bypass panel to the maintenance bypass interface board (0P3199) in the UPS. Refer to the wiring diagram on the next page for connection information.

6. In installations with external switch gear, remove jumper wire harness between J1 and J2.

7. In installations without any switch gear, install jumper wire harness between J1 and J2.

8. Remove the jumper between pins 13 and 14 in J2 in installations without external switchgear/PDU.
Maintenance Bypass Interface Board

**WARNING:** Ensure that the wires are properly retained and kept away from high-voltage lines and breakers.

Make contact closure connections (N/O or N/C) to monitor dry contacts. Up to eight connections can be made - four input contacts and four output relays.

Output relays:

- J2: 240 V / 8 A, 0.3 VA / 1.9 kW

Input signals: Contact load: TTL

- 1/2: Q001 UPS input switch (N/O position)
- 3/4: Q002 UPS output switch (N/O position)
- 5/6: Q003 UPS service bypass switch (N/C position)
- 7/8: OK to operate UPS output switch Q002
- 9/10: OK to operate service bypass switch Q003
- 11/12: Not used
- 13/14: External switchgear present
Procedure for Systems with PDU without Transformer

Overview of Single Utility System

Top Cable Entry System

External communication wires (web, UPS link etc.)

Internal communication wires

Input

Output

XR battery cabinet

Joining kits *

BAT

Input

Output

XR battery cabinet

BAT

UPS

PDU

EPO Switch

Bottom Cable Entry System

External communication wires (web, UPS link etc.)

Internal communication wires

Input

Output

XR battery cabinet

Joining kits *

BAT

Input

UPS

PDU

EPO Switch

EPO
Overview of Dual Utility System

Top Cable Entry System

External communication wires (web, UPS link etc.)

Internal communication wires

XR battery cabinet
Joining kits *
BAT

XR battery cabinet
BAT

XR battery cabinet
BAT

XR battery cabinet
BAT

UPS

EPO Switch

Bottom Cable Entry System

External communication wires (web, UPS link etc.)

Internal communication wires

XR battery cabinet
Joining kits *
BAT

XR battery cabinet
BAT

XR battery cabinet
BAT

XR battery cabinet
BAT

UPS

EPO Switch
Prepare for Cables – Systems with PDU without Transformer

**Caution:** Drilling or cutting must not take place over the top or inside the enclosure.

1. Open the rear door of the UPS.
2. Remove all four covers, starting from the top, by loosening the two screws in each cover. Note the orientation of the covers.
3. Lift the cover up and out.

The following steps are only applicable to systems with the PDU placed to the left of the UPS (front view):

4. Remove the two top cable reliefs from the left side and save for step 7.
5. Remove the bottom cable relief from the right side and save for step 8.
6. Remove the neutral busbar from the right side (rear view) of the UPS by loosening the four bolts, and mount the busbar on the left side of the UPS.
7. Mount the cable reliefs from step 4 on the right side (rear view).
8. Mount the cable relief from step 5 on the left side (rear view).
9. For top entry systems, remove the bottom cover on the rear side of the PDU and throw away or recycle the coil of conductors.

10. Open the front door of the PDU.

11. Remove the upper cover. Use a Phillips screwdriver to remove the captive panel fasteners.
Top Cable Entry

Make Holes in the Top Cover of the PDU

**Caution:** Drilling or cutting must not take place over the top or inside the enclosure.

1. Remove the dedicated cover plate for power cables.

2. Drill holes in the plate for conduits. Re-install the plate with the conduits installed.

3. Remove the dedicated cover plate for subfeed breaker cables.

4. Drill holes in the plate for conduits and re-install the plate with the conduits installed.
Bottom Cable Entry

Make Holes in the Bottom of the PDU

**Caution:** Drilling or cutting must not take place over the top or inside the enclosure.

1. Remove the bottom two plates on the rear side of the PDU.

2. Remove the dedicated cover plate for power cables.

3. Drill holes in the plate for conduits and re-install the plate with the conduits installed.
4. Remove the dedicated cover plate for subfeed breaker cables.

5. Drill holes in the plate for conduits. Re-install the plate with the conduits installed.
Connect Power Conductors – Systems with PDU without Transformer — Top Cable Entry

**Caution:** Ensure clockwise phase rotation and neutral location of the power terminal bolt. The required torque value is 31 Nm.

Front view of the PDU

1. Route the conductors (input conductors in single utility systems or bypass conductors in dual utility systems) through the top of the PDU.
2. Connect the input/bypass conductors to the L1, L2, L3, N terminals. Note: For a 208 V PDU, install the cables on the front hole of the dual cable lugs.
3. Connect the Equipment Ground Conductor (EGC) to the EGC terminal.
4. In dual utility systems, remove the plate and switch the cables around to have Q1 in the bottom and Q5 at the top. Use a Phillips screwdriver to remove the captive panel fasteners. Reinstall the plate.
Connect Power Conductors – Systems with PDU without Transformer — Bottom Cable Entry

**Caution:** Ensure clockwise phase rotation and neutral location of the power terminal bolt. The required torque value is 31 Nm.

1. Route the conductors (input conductors in single utility systems and bypass conductors in dual utility systems) through the bottom of the PDU.
2. Connect the input/bypass conductors to the N, L1, L2, L3 terminals.
3. Connect the Equipment Ground Conductor (EGC) to the terminal.
4. In dual utility systems, remove the plate and switch the cables around to have Q1 in the bottom and Q5 at the top. Use a Phillips screwdriver to remove the captive panel fasteners. Reinstall the plate.
Connect Power Conductors between the UPS and the PDU

1. Open the rear doors of the PDU and the UPS.

2. Remove the cover from the PDU to get access to the power conductors. Use a Phillips screwdriver to remove the captive panel fasteners.

3. Before running the conductors, loosen the three fasteners on each UPS conductor relief next to the PDU.

4. Cut the conductor ties and route the output and bypass/input conductors (input in single utility systems and bypass in dual utility systems) to the UPS through the conductor reliefs. Lay the conductors neatly to minimize conductor build-up.

5. Connect the output and bypass/input conductors from the PDU.

6. In dual utility systems, connect the input conductors to the input busbars (L1, L2, L3).

7. Tighten the three fasteners on each conductor relief.

8. Reinstall the cover in the PDU and close the rear doors.

Rear view of the System
Connect Output Cables to the Subfeed Breaker

**Caution:** Ensure clockwise phase rotation and neutral location of the power terminal bolt. Wire size and torque are specified on breaker.

1. Loosen the four bolts and remove the inner cover to get access to the subfeed breaker.

2. Route the output cables through the top of the PDU and connect them to the subfeed breaker.
Connect Output Cables to the Power Distribution Module

Note: Power Distribution Modules and backplanes are colour-coded: black for 120/208 V and grey for 240/415 V. The colour of the backplane and the colour of the rear of the Power Distribution Module must be black for 120/208 V.

Front view of the PDU

1. Open the latch on the front of the power distribution module.
2. Route the cable on the power distribution module through the top of the cabinet.

Note: Leave a minimum of 178 mm (7 in) of slack in the cable behind the module. The slack is useful in case the module is ever removed or replaced. 254 to 508 mm (10 to 20 in) is recommended, but space restrictions in the PDU and cable diameter size will cause the amount of slack to necessarily vary.

3. Slide the power distribution module into place.
4. Secure the latch to lock the module.
1. Route the battery breaker trip cable from J1 in the first XR battery cabinet to the J3 port in the next XR battery cabinet. Repeat the procedure for all XR battery cabinets.

2. Route the battery breaker trip cable from J1 in the last XR battery cabinet to J27 on the EPO/ancillary interface board (0P4123) in the UPS (for remote XR battery cabinet the length of the signal must not exceed 200 m).

3. Route the communication cable from XR Communications port 1 in each XR battery cabinet to port 2 in the next XR battery cabinet. Remove the terminator when necessary.

4. Route the communication cable from the XR Communications port 1 to port 2 in the last XR battery cabinet in the row to the UPS XR Communications port 2 (for remote XR battery cabinet the length of the signal must not exceed 200 m).

5. In installations with PDU, remove jumper wire harness between J1 and J2.

6. Route the four PDU communication cables from the PDU to J7, J8, J9, and J1 on the maintenance bypass interface board (0P3199) in the UPS.
Procedure for Systems with PDU with Transformer

Note: For bottom cable entry systems, make sure to follow “Install the Internal Conductors for Bottom Entry Systems in Installations with PDU without Transformer” before proceeding to “Perform Equipotential Bonding”.

Overview of Single Utility System

Top Cable Entry System

Bottom Cable Entry System
Dual Utility System

Top Cable Entry System

External communication wires (web, UPS link etc.)

Internal communication wires

XR battery cabinet

Joining kits *

BAT

EPO Switch

Bottom Cable Entry System

External communication wires (web, UPS link etc.)

Internal communication wires

XR battery cabinet

Joining kits *

BAT

EPO Switch

Input

Bypass

Output

PDU

UPS

Bypass

UPS Output
Prepare for Cables – Systems with PDU with Transformer

1. Open the rear door of the UPS.
2. Remove all four covers, starting from the top, by loosening the two screws in each cover. Note the orientation of the covers.
3. Lift the cover up and out.

The following steps are only applicable to systems with the PDU placed to the left of the UPS (front view):

4. Remove the two top cable reliefs from the left side and save for step 7.
5. Remove the bottom cable relief from the right side and save for step 8.
6. Remove the neutral busbar from the right side (rear view) of the UPS by loosening the four bolts, and mount the busbar on the left side of the UPS.
7. Mount the cable reliefs from step 4 on the right side (rear view).
8. Mount the cable relief from step 5 on the left side (rear view).
9. Open the front door of the PDU.

10. Remove the upper cover. Use a Phillips screwdriver to remove the captive panel fasteners.

11. In bottom entry systems, open the front door and remove the inner door of the Sidecar.

12. In bottom entry systems, exchange the chase nipple and the cover plate (if necessary) to have the chase nipple placed on the side against the PDU.

13. In bottom entry systems, remove the PDU side panel from the side placed against the Sidecar.

**Top Cable Entry**

**Make Holes in the Top Cover of the PDU**

**Caution:** Drilling or cutting must not take place over the top or inside the enclosure.
1. Remove the dedicated cover plate for power cables.

2. Drill holes in the plate for conduits. Re-install the plate with the conduits installed.

3. Remove the dedicated cover plate for subfeed breaker cables.

4. Drill holes in the plate for conduits and re-install the plate with the conduits installed.

Bottom Cable Entry

Make Holes in the Bottom of the Sidecar

Caution: Drilling or cutting must not take place over the top or inside the enclosure.
1. Remove the dedicated cover plate.

2. Drill holes in the plate for conduits and re-install the plate with the conduits installed.

Make Holes in the Bottom of the PDU

**Caution:** Drilling or cutting must not take place over the top or inside the enclosure.

1. Loosen the bolt and remove the cover plate for side access in either the left or right side of the PDU (depending on system configuration).

2. Install the chase nipple (from the Sidecar kit) in either the left or right side of the PDU (depending on system configuration). If the chase nipple protrudes beyond the side plane of the cabinet, then reverse the direction so that it does not interfere with the chase nipple from the Sidecar.
Connect Power Conductors – Systems with PDU with Transformer

**Caution:** Ensure clockwise phase rotation and neutral location of the power terminal bolt. The required torque value is 56.5 Nm.

**Note:** For top entry systems, go directly to step 4.

1. Route the conductors (input conductors in single utility systems or bypass conductors in dual utility systems) through the bottom of the Sidecar.

2. Connect the input/bypass conductors to the L1, L2, L3, EGC, and GEC terminals and torque to specifications on label.

---

**Front view of the Sidecar**
3. Take the cables that are preinstalled in the Sidecar and route them through the left or right side (depending on configuration) into the PDU.

4. Route the conductors (input conductors in single utility systems or bypass conductors in dual utility systems) through the top of the PDU in top cable entry systems or through the side from the Sidecar in bottom cable entry systems.

5. Connect the input/bypass conductors to the L1, L2, L3, Grounding Electrode Conductor (GEC) terminals. Note: For a 208 V PDU, install the cables on the front hole of the dual cable lugs.

6. Connect the Equipment Ground Conductor (EGC) to the terminal.

7. In dual utility systems, remove the plate and switch the cables around to have Q1 in the bottom and Q5 at the top. Use a Phillips screwdriver to remove the captive panel fasteners. Reinstall the plate.
Connect Power Conductors between the UPS and the PDU

1. Open the rear doors of the PDU and the UPS.
2. Remove the cover from the PDU to get access to the power conductors. Use a Phillips screwdriver to remove the captive panel fasteners.
3. Before running the conductors, loosen the three fasteners on each UPS conductor relief next to the PDU.
4. Cut the conductor ties and route the output and bypass/input conductors (input in single utility systems and bypass in dual utility systems) to the UPS through the conductor reliefs. Lay the conductors neatly to minimize conductor build-up.
5. Connect the output and bypass/input conductors from the PDU.
6. In dual utility systems, connect the input conductors to the input busbars (L1, L2, L3).
7. Tighten the three fasteners on each conductor relief.
8. Reinstall the cover in the PDU and close the rear doors.

Rear view of the System
Connect Output Cables to the Subfeed Breaker

**Caution:** Ensure clockwise phase rotation and neutral location of the power terminal bolt. Wire size and torque are specified on breaker.

1. Loosen the four bolts and remove the inner cover to get access to the subfeed breaker.

2. Route the output cables through the top of the PDU and connect them to the subfeed breaker.
Connect Output Cables to the Power Distribution Module

Note: Power Distribution Modules and backplanes are colour-coded: black for 120/208 V and grey for 240/415 V. The colour of the backplane and the colour of the rear of the Power Distribution Module must be black for 120/208 V.

Front view of the PDU

1. Open the latch on the front of the power distribution module.
2. Route the cable on the power distribution module through the top of the cabinet.

Note: Leave a minimum of 178 mm (7 in) of slack in the cable behind the module. The slack is useful if the module is ever removed or replaced. 254 to 508 mm (10 to 20 in) is recommended, but space restrictions in the PDU and cable diameter size will cause the amount of slack to necessarily vary.

3. Slide the power distribution module into place.
4. Secure the latch to lock the module.
1. Route the battery breaker trip cable from J1 in the first XR battery cabinet to the J3 port in the next XR battery cabinet. Repeat the procedure for all XR battery cabinets.

2. Route the battery breaker trip cable from J1 in the last XR battery cabinet to J27 on the EPO/ancillary interface board (0P4123) in the UPS (for remote XR battery cabinet the length of the signal must not exceed 200 m).

3. Route the communication cable from XR Communications port 1 in each XR battery cabinet to port 2 in the next XR battery cabinet. Remove the terminator when necessary.

4. Route the communication cable from the XR Communications port 1 to port 2 in the last XR battery cabinet in the row to the UPS XR Communications port 2 (for remote XR battery cabinet the length of the signal must not exceed 200 m).

5. In installations with PDU, remove jumper wire harness between J1 and J2.

6. Route the four PDU communication cables from the PDU to J7, J8, J9, and J1 on the maintenance bypass interface board (0P3199) in the UPS.
Connect Network Communication Wire

1. The network communication wire (supplied) has been pre-connected to the UPS and is located on the top of the cabinet. Connect the cable to your local area network.

Top view of the UPS

Front
Install the Symmetra PX Battery Solution

The Symmetra PX 100 kW UPS can monitor up to four XR battery cabinets.

**Caution:** The system accepts up to 300 kcmil cables. The power terminal bolt diameter is 10 mm and the required torque value is 26 Nm.

**Note:** In installations with third party batteries, follow the documentation provided with the batteries.

**Note:** In remote installations, panels should be installed on free ends (part number 0M-7171D).
Connect the Battery Cables between the XR Battery Cabinets

WARNING: For remote XR battery cabinets, the length of the signal and power cables must not exceed 200 m for the cable that connects the XR battery cabinet to the UPS. For power cables between 50 and 200 m, the voltage drop must be taken into account when the cable size is chosen.

1. In top entry systems, loosen the two top bolts and remove the eight lower bolts from the upper cover plate. Lift the plate to remove it.

2. Loosen the two top bolts and remove the eight lower bolts from the lower cover plate. Lift the plate to remove it.

3. Unwind the cables included in each XR battery cabinet. Remove the cable lugs from the cables that will connect to other XR battery cabinets. For the cables that will connect to the UPS, cut off the cable lug on the end that will be mounted in the XR battery cabinet.

Rear view of the XR battery cabinet  Rear view of the XR battery cabinet
4. Connect the BAT+, BAT-, and CT (midpoint) cables between the XR battery cabinets.

5. Route the BAT+, BAT-, and CT (midpoint) cables from the first XR battery cabinet to the UPS through the side, top, or bottom.

**Rear view of the XR battery cabinets**

6. Connect the equipment grounding cable in the XR battery cabinet that is farthest from the UPS. Route it through the other XR battery cabinets by connecting it from XR battery cabinet to XR battery cabinet to the UPS through the side, top, or bottom.
7. Place the cabinet address on the front side of each XR battery cabinet and PDU/XR front side.

![Diagram of XR FRAME ADDRESS]

**Connect the Battery Cables to the UPS**

The cables can be routed through the side, top, or bottom.

Schneider Electric recommends using a 45° cable lug. If you use straight cable lugs, install a busbar safety bracket between each busbar and cable lug to ensure a safe measure of separation. The brackets are provided with the UPS.

**Note:** Do not remove the 12 pcs M10 nylon hex bolts from the busbars. Mount the cables in the open holes.

**Note:** The M10 bolts, washers, and cable ties are supplied in the UPS accessory kit.

**Note:** The procedure below shows how to connect the battery cables in systems with side cable entry. In top or bottom cable entry systems, run the cables to either the top or the bottom and connect them to the busbars according to the labels.
1. Before running the cables through the side, loosen the three bolts on the cable relief next to the XR battery cabinet.
2. Route the battery cables to the UPS through the holes in the cable relief.
3. Mount the cables to the busbars according to the labels.
4. Tighten the three bolts on the cable relief.

Rear view of the UPS
Emergency Power Off (EPO) Switch

**Note:** EPO switch wiring must comply with local and national Code wiring rules. Review the planned EPO installation and operation with the local Authority Having Jurisdiction (AHJ) before proceeding with the final installation.

**Note:** Connection in spring push connectors has to be made by single solid core or multiple stranded wire terminated with a cable ferrule.

**Note:** The UPS can continue to supply AC power to the load until all AC and DC sources have been disconnected. The built-in EPO function disconnects only the internal DC sources. To fully de-energize all AC and DC power in the UPS, the upstream circuit breaker protecting the input feeder circuit to the UPS must be provided (by others) with a tripping mechanism (usually a shunt trip). The status of the upstream external circuit breaker can be monitored via the circuit breaker’s aux. switch at the Maintenance Bypass Panel interface.

**Note:** The remote disconnect control (EPO station) must provide a dry contact signal (normally open or normally closed) to the UPS and simultaneously provide a signal to the trip mechanism on the upstream external circuit breaker feeding the UPS.

The UPS can be connected to either a dry contact or an external 24 VDC source.

The EPO circuit is considered Class 2 and SELV (Safety Extra Low voltage). A SELV circuit is isolated from primary circuitry through an isolating transformer and designed so that under normal conditions, the voltage is limited to 42.4 Vac peak or 60 VDC. SELV and Class 2 circuits must be isolated from all primary circuitry. Do not connect any circuit to the EPO terminal block unless it can be confirmed that the circuit is SELV or Class 2.

**Installations in the US:**

- CL2Class 2 cable for general purpose use
- CL2Plenum cable for use in a vertical shaft or from floor to floor
- CL2R Racer cable for use in dwellings and raceways
- CL2XLimited use cable for dwellings and raceways

**Installations in Canada:**

- CL2RCertified, type ELC (Extra-Low-Voltage Control Cable)
- CL2XCertified, type ELC (Extra-Low-Voltage Control Cable)
EPO switch wiring diagram

Note: The system is configured for installations without EPO. In systems with N/O EPO, connect the EPO to J25 pin 1 and 2. In systems with N/C EPO, remove the jumper from J24 pin 5 and 6 and connect the EPO to J24 pin 5 and 6.

EPO with internal supply
N/O EPO control
J25
4 Ground
3/2 Relay Coil 1
1 Internal Power
+24 V Supply

N/C EPO control
J24
8 Ground
7/6 Relay Coil 2
5 Internal Power
+24 V Supply

EPO Switch.
Keep EPO wire routing isolated and use separate EPO conduits.

J22
1 Internal Power
+24 V Supply

2 3
4

2/3 Relay Coil 1
4 Ground

Input/output wiring of ancillary equipment
J21
1/2 Battery breaker present
3/4 External battery fuse/battery breaker 1 (N/O position)
5/6 External battery fuse/battery breaker 2 (N/O position)
7/8 Temperature sensor, external battery
9/10 Temperature sensor, external battery present
11/12 Isolation transformer temperature switch (N/C position)
13/14 Isolation transformer temperature switch present

XR battery cabinet
J27
1 120 V AC supply
2/3 NA
4 Neutral

Rear view of the UPS
Options

Install Seismic Option

Replace the Side Panel Lock

1. Remove the side panel from the end of row cabinets.

2. Use a screwdriver to press on the tap that secures the lock to the side panel.

3. Pull the lock out and up and remove it from the side panel.
4. Put the two lock parts together.
5. Loosely tighten the screws.

6. Place the side panel at an angle at the bottom of the frame.

7. Push the top of the side panel in place.
8. Hold the side panel with one hand.
9. Take the lock assembly and guide the top through the hole in the side panel.
10. Lift the lock assembly in place.
11. Ensure that the upper and lower taps are hidden behind the side panel.

12. Secure the two screws in the lock assembly.
13. Install the lock cover using the provided screw.

Install the Rear Anchoring Brackets

1. Secure the floor anchoring bracket to the floor using floor anchoring bolts (not supplied). Use M12 strength class 8.8 or 1/2 in grade 5 steel bolts.
2. Secure the other part of the rear anchoring to the back of the cabinet.

3. Push the cabinet backwards so the cabinet slides under the floor anchoring bracket.

Install the Front Anchoring Bracket

1. Secure the front anchoring bracket to the cabinet.
2. Secure the front anchoring bracket to the floor using floor anchoring bolts (not supplied). Use M12 strength class 8.8 or 1/2 in grade 5 steel bolts.

Install the Top Assembly Bracket

Required parts for each assembly:

- Two top assembly brackets
- Four screws

1. Only applicable for Symmetra PX 100 kW systems: Dispose of the top assembly brackets supplied with the battery cabinet.
2. Place the top assembly bracket over two adjacent cabinets and secure using two screws.
Install the Door Hinge Lock

Note: This procedure is only applicable for 600 mm and 750 mm wide cabinets.

Required parts:

• Two door hinge locks
• Four screws

1. With one hand slide the lock into the hole below the hinge.
2. With the other hand turn the lock 90° holding the bottom of the lock.
3. Push the lock upwards to the bottom of the hinge.
4. Secure it with the two provided screws.
5. Use the same procedure to install the upper door hinge lock.
Install the Battery Locks

Required parts for each battery row:

- One battery locks
- 5 screws

1. Place the battery lock below the battery row.
2. Secure the lock by the five provided screws.
Alternative Use of the Sidecar

The Sidecar can also be used as a convenient means to route overhead cables to/from raised floor applications per NFPA/NEC 70 Article 645:

- As a bottom entry cabinet for PDU and as a cable conduit/chimney for vertical cable routing from the roof to the floor or vice versa.
- As an additional sidecar adjacent to the one above for vertical cable routing from the roof to the floor and vice versa.
- As a sidecar dedicated for vertical cable routing from the roof to the floor and vice versa adjacent to an cabinet.

1. Run the power cables through the top or bottom of the Sidecar (both openings can be used if needed).
Worldwide Customer Support

Customer support is available at no charge via e-mail or telephone. Contact information is available at www.apc.com/support/contact