

| DISTRIBUTION PANEL OPTIONS |                      |             |                              |
|----------------------------|----------------------|-------------|------------------------------|
| OPTION REFERENCE           | BREAKER FRAME RATING | MAX. QTY 3P | SHORT CIRCUIT CURRENT RATING |
| T1                         | 100A                 | 16          | 22kAIC                       |
| T3                         | 225A                 | 12          | 25kAIC                       |
| T5                         | 400A                 | SEE NOTE-11 | 25kAIC                       |

**LEGEND:**  
 - - - - - AC CABLE - PROVIDED BY OTHERS

- NOTES:**
- INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LOCAL AND NATIONAL CODES.
  - PLEASE REFER TO PRODUCT MANUALS FOR ADDITIONAL DETAILS.
  - DRAWING DEPICTS POWER SYSTEM CONNECTIONS AND IS NOT REPRESENTATIVE OF PHYSICAL LAYOUT, PLEASE REFER TO MECHANICAL DRAWINGS FOR PHYSICAL LAYOUT.
  - MAXIMUM RATED SHORT CIRCUIT CURRENT IS 50kA.
  - AC MAIN UTILITY SOURCE SHALL BE 480VAC, 3 $\phi$ , SOLIDLY GROUNDED WYE, 3 WIRE+GROUND (CONTACT Schneider Electric IF OTHER). SEE SHEET 3 FOR SITE PLANNING SUBMITTAL DATA.
  - AC CABLING SHALL BE 600V RATED, 3 WIRE+GROUND.
  - AC BYPASS UTILITY SOURCE SHALL BE 480VAC, 3 $\phi$ , SOLIDLY GROUNDED WYE, 3 WIRE+GROUND (CONTACT Schneider Electric IF OTHER). SEE SHEET 5 FOR SITE PLANNING SUBMITTAL DATA.
  - AC CABLING SHALL BE 600V RATED, 3 WIRE+GROUND.
  - SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. THE I/O FRAME TO MBwD FRAME BUS BAR LINKS SHALL BE REMOVED FOR DUAL MAINS INSTALLATION. FOR SINGLE MAINS INSTALLATION CONTACT Schneider Electric FOR RELATED SUBMITTAL DRAWINGS.
  - THE NEUTRAL TO GROUND SYSTEM BONDING JUMPER PROVIDED BY Schneider Electric SHALL BE INSTALLED FOR 3 WIRE OUTPUT CONFIGURATION. SEE INSTALLATION MANUAL FOR DETAILS.
  - MAXIMUM QUANTITY OF DISTRIBUTION BREAKERS (T5 OPTION ONLY)  
 4 - IF THE NEUTRAL BAR KIT IS INSTALLED  
 8 - IF THE NEUTRAL BAR KIT IS NOT INSTALLED.
  - THIS DRAWING SHOWS MINIMUM NUMBER OF XR BATTERY FRAMES. MAXIMUM (8) XR BATTERY FRAMES CAN BE BAYED TO UPS. BAYING KIT IS SUPPLIED WITH THIS SOLUTION. XR BATTERY FRAME HAS MOTORIZED BREAKER.
  - CABLE LUGS ARE NOT PROVIDED.

| DEVICE RATING                |                   |                 |                    |            |   |
|------------------------------|-------------------|-----------------|--------------------|------------|---|
| DEVICE                       | RATING            | TYPE            | MAKE               | MODEL      | ACCESSORIES                               |
| Q1                           | 1000A, 600V       | 3P MCSW         | Schneider Electric | ON-1003    | 1Aux.sw. K7AS                             |
| Q2                           | 800AT/800AF, 600V | 4P MCCB         | ABB                | S6N800BW-4 | 1Aux.sw. 24Vdc shunt trip                 |
| Q3                           | 800A, 600V        | 4P MCSW         | ABB                | S6H800DW-4 | 1Aux.sw. K7AS                             |
| Q5                           | 800A, 600V        | 3P MCSW         | ABB                | S6H800DW   | 1Aux.sw. K7AS                             |
| INVERTER FUSES F1-F3 / F4-F6 | 1250A, 700V       | HIGH SPEED FUSE | BUSSMANN           | 170M6466   | --  |
| SSW FUSES F1-F3              | 1100A, 700V       | HIGH SPEED FUSE | BUSSMANN           | 170M5167   | --  |
| DC DISCONNECT                | 400A, 600V DC     | 4P MCSW         | ABB                | T5         | 1Aux.contact, 24VDC, Shunt trip, Actuator |

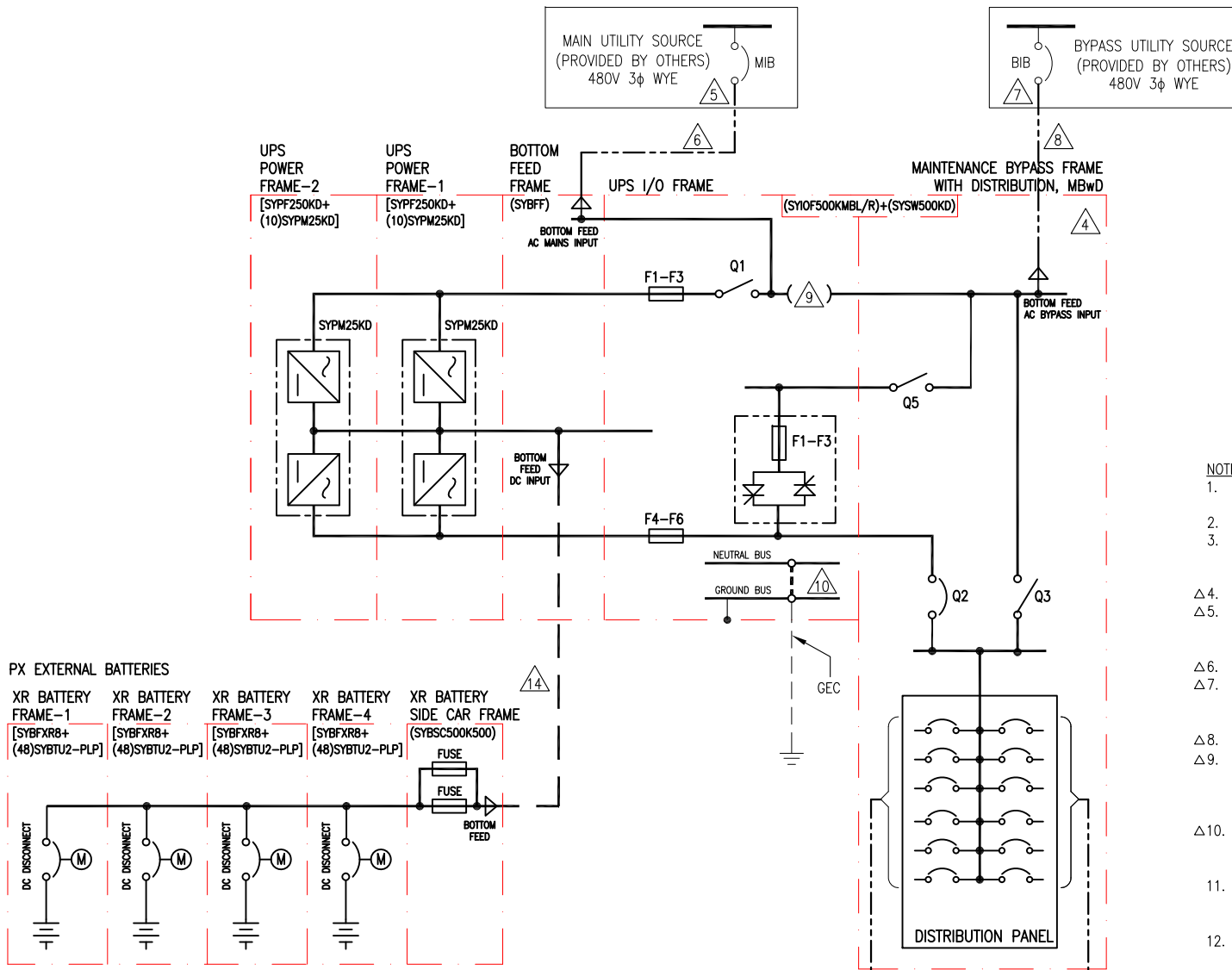
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|                 |  |                     |                      |              |                |
|-----------------|--|---------------------|----------------------|--------------|----------------|
| <b>TITLE:</b>   | SYMMETRA PX<br>INPUT: 480V 3 $\phi$ WYE, DUAL MAINS<br>OUTPUT: 480V 500kVA/kW<br>BOTTOM FEED WITH LINE-UP BATTERIES<br>SYSTEM ONE LINE DIAGRAM | <b>DWG NO.:</b>     | SY500K500BG2C1-3W-SD | <b>REV.:</b> | 8              |
| <b>PROJECT:</b> | SUBMITTAL DRAWINGS   | <b>SHEET 1 OF 3</b> | <b>APPROVED:</b>     | B SHERIDAN   | 03-JUL-15      |
|                 |  |                     |                      |              | PROJ ANGLE N.A |

### 3 WIRE OUTPUT CONFIGURATION, DUAL MAINS

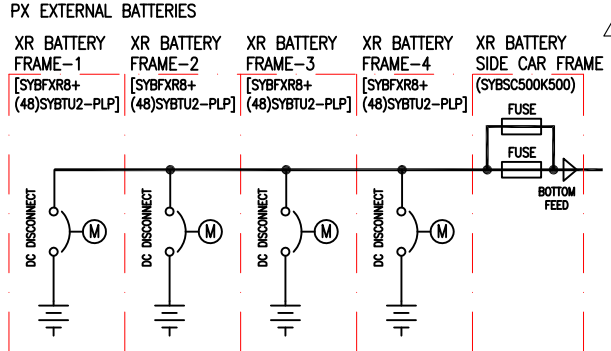
UPS SYSTEM OUTPUT  
 500kVA/kW 480V 3 $\phi$   
 3 WIRE + GROUND



| DISTRIBUTION PANEL OPTIONS |                      |             |                              |
|----------------------------|----------------------|-------------|------------------------------|
| OPTION REFERENCE           | BREAKER FRAME RATING | MAX. QTY 3P | SHORT CIRCUIT CURRENT RATING |
| T1                         | 100A                 | 16          | 22kAIC                       |
| T3                         | 225A                 | 12          | 25kAIC                       |
| T5                         | 400A                 | SEE NOTE-11 | 25kAIC                       |

| LEGEND: |                               |
|---------|-------------------------------|
| ---     | DC CABLE - PROVIDED BY OTHERS |
| ---     | AC CABLE - PROVIDED BY OTHERS |

- NOTES:**
- INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LOCAL AND NATIONAL CODES.
  - PLEASE REFER TO PRODUCT MANUALS FOR ADDITIONAL DETAILS.
  - DRAWING DEPICTS POWER SYSTEM CONNECTIONS AND IS NOT REPRESENTATIVE OF PHYSICAL LAYOUT, PLEASE REFER TO MECHANICAL DRAWINGS FOR PHYSICAL LAYOUT.
  - MAXIMUM RATED SHORT CIRCUIT CURRENT IS 50kA.
  - AC MAIN UTILITY SOURCE SHALL BE 480VAC, 3 $\phi$ , SOLIDLY GROUNDED WYE, 3 WIRE+GROUND (CONTACT Schneider Electric IF OTHER). SEE SHEET 3 FOR SITE PLANNING SUBMITTAL DATA.
  - AC CABLING SHALL BE 600V RATED, 3 WIRE+GROUND.
  - AC BYPASS UTILITY SOURCE SHALL BE 480VAC, 3 $\phi$ , SOLIDLY GROUNDED WYE, 3 WIRE+GROUND (CONTACT Schneider Electric IF OTHER). SEE SHEET 3 FOR SITE PLANNING SUBMITTAL DATA.
  - AC CABLING SHALL BE 600V RATED, 3 WIRE+GROUND.
  - SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. THE I/O FRAME TO MBWD FRAME BUS BAR LINKS SHALL BE REMOVED FOR DUAL MAINS INSTALLATION. FOR SINGLE MAINS INSTALLATION CONTACT Schneider Electric FOR RELATED SUBMITTAL DRAWINGS.
  - THE NEUTRAL TO GROUND SYSTEM BONDING JUMPER PROVIDED BY Schneider Electric SHALL BE INSTALLED FOR 3 WIRE OUTPUT CONFIGURATION. SEE INSTALLATION MANUAL FOR DETAILS.
  - MAXIMUM QUANTITY OF DISTRIBUTION BREAKERS (T5 OPTION ONLY)
    - 4 - IF THE NEUTRAL BAR KIT IS INSTALLED
    - 8 - IF THE NEUTRAL BAR KIT IS NOT INSTALLED.
  - THIS DRAWING SHOWS MINIMUM NUMBER OF BATTERY FRAMES. MAXIMUM (8) XR BATTERY FRAMES, OR THIRD PARTY BATTERIES CAN BE BAYED TO UPS. BAYING KIT IS SUPPLIED WITH THIS SOLUTION. XR BATTERY FRAME HAS MOTORIZED BREAKER.
  - BATTERY SIZING BASED ON MAXIMUM 1 VOLT DROP PER HALF-STRING AT NORMAL RATED DC CURRENT. CE SHALL ADJUST CABLE SIZE BASED ON INSTALLATION PARAMETERS.
  - DC CABLING SHALL BE 1000V RATED, 3-WIRE +GROUND. SEE SHEET 3 FOR ADDITIONAL DATA.
  - CABLE LUGS ARE NOT PROVIDED.



| DEVICE RATING                |                   |                 |                    |            |   |
|------------------------------|-------------------|-----------------|--------------------|------------|---|
| DEVICE                       | RATING            | TYPE            | MAKE               | MODEL      | ACCESSORIES                               |
| Q1                           | 1000A, 600V       | 3P MCSW         | Schneider Electric | ON-1003    | 1Aux.sw. K7AS                             |
| Q2                           | 800AT/800AF, 600V | 4P MCCB         | ABB                | S6N800BW-4 | 1Aux.sw. 24Vdc shunt trip                 |
| Q3                           | 800A, 600V        | 4P MCSW         | ABB                | S6H800DW-4 | 1Aux.sw. K7AS                             |
| Q5                           | 800A, 600V        | 3P MCSW         | ABB                | S6H800DW   | 1Aux.sw. K7AS                             |
| INVERTER FUSES F1-F3 / F4-F6 | 1250A, 700V       | HIGH SPEED FUSE | BUSSMANN           | 170M6466   | --  |
| SSW FUSES F1-F3              | 1100A, 700V       | HIGH SPEED FUSE | BUSSMANN           | 170M5167   | --  |
| DC DISCONNECT                | 400A, 600V DC     | 4P MCSW         | ABB                | T5         | 1Aux.contact, 24VDC, Shunt trip, Actuator |
| DC FUSES                     | 500A, 500V DC     | CLASS J         | FERRAZ SHAWMUT     | AJT500EI   | --  |

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|  |  |                        |
|--|--|------------------------|
| TITLE: SYMMETRA PX<br>INPUT: 480V 3 $\phi$ WYE, DUAL MAINS<br>OUTPUT: 480V 500kVA/kW<br>BOTTOM FEED WITH EXTERNAL BATTERIES<br>SYSTEM ONE LINE DIAGRAM | DWG NO: SY500K500BG2C1-3W-SD                           | REV: 8                 |
| PROJECT: SUBMITTAL DRAWINGS SHEET 2 OF 3   | DRAWN: V BUSH/S CUNHA/BALA<br>ENGINEER: C FLY/A WARNER | 03-JUL-15<br>03-JUL-15 |
|  | APPROVED: B SHERIDAN                                   | 03-JUL-15              |

### 3 WIRE OUTPUT CONFIGURATION, DUAL MAINS

UPS SYSTEM OUTPUT  
500kVA/kW 480V 3 $\phi$   
3 WIRE + GROUND

**Symmetra® PX 250K and 500K UPS Frame Site Planning Data - 480Y/277V Dual Feed with MBWD**

| UPS Rating                    |  | Voltage         |     | Mains AC Input - (MIB) <sup>1</sup> |                     |                              |                   |                              |                             |              | Bypass AC Input - (BIB) <sup>2</sup> |                   |                              |             |             | External Battery System <sup>3, 5</sup> |                             |       |         |        | AC Output <sup>2</sup> |           |
|-------------------------------|--|-----------------|-----|-------------------------------------|---------------------|------------------------------|-------------------|------------------------------|-----------------------------|--------------|--------------------------------------|-------------------|------------------------------|-------------|-------------|---|-----------------------------|-------|---------|--------|------------------------|-----------|
|                               |  |                 |     | Current                             |                     | Recommendations <sup>3</sup> |                   |                              | Currents                    |              | Recommendations <sup>3, 4</sup>      |                   |                              | Nominal VDC | Battery kW  | Current @ Nom. VDC                      | Recommendations             |       | Current |        |                        |           |
| UPS Frame Rating              | Qty of 25kW Power Modules <sup>6</sup> | kVA             | kW  | Input <sup>1</sup>                  | Output <sup>2</sup> | Full Load                    | Max. <sup>6</sup> | 100% OCPD w /Electronic Trip | 80% OCPD w /Electronic Trip | Cable        | NOM.                                 | Max. <sup>7</sup> | 100% OCPD w /Electronic Trip |             |             |   | 80% OCPD w /Electronic Trip | Cable |         |        |                        | 100% OCPD |
| 250kVA/250kW<br>1x 250K Frame | 4                                      | 100             | 100 | 480                                 | 480                 | 139                          | 149               | 600AF/150AT                  | 600AF/150AT                 | 1x 1/0       | 120                                  | 150               | 600AF/125AT                  | 600AF/125AT | 1x 1        | 2x 288                                  | 104                         | 181   | 200A    | 1x 3/0 | 120                    | 150       |
|                               | 5                                      | 125             | 125 | 480                                 | 480                 | 173                          | 186               | 600AF/200AT                  | 600AF/200AT                 | 1x 3/0       | 150                                  | 188               | 600AF/150AT                  | 600AF/150AT | 1x 1/0      | 2x 288                                  | 130                         | 226   | 250A    | 1x 4/0 | 150                    | 188       |
|                               | 6                                      | 150             | 150 | 480                                 | 480                 | 208                          | 223               | 600AF/225AT                  | 600AF/225AT                 | 1x 4/0       | 180                                  | 226               | 600AF/200AT                  | 600AF/200AT | 1x 3/0      | 2x 288                                  | 156                         | 271   | 300A    | 1x 300 | 180                    | 226       |
|                               | 7                                      | 175             | 175 | 480                                 | 480                 | 242                          | 261               | 600AF/300AT                  | 600AF/300AT                 | 1x 300       | 210                                  | 263               | 600AF/225AT                  | 600AF/225AT | 1x 4/0      | 2x 288                                  | 182                         | 316   | 350A    | 1x 400 | 210                    | 263       |
|                               | 8                                      | 200             | 200 | 480                                 | 480                 | 277                          | 298               | 600AF/300AT                  | 600AF/300AT                 | 1x 350       | 241                                  | 301               | 600AF/250AT                  | 600AF/250AT | 1x 250      | 2x 288                                  | 208                         | 362   | 400A    | 1x 500 | 241                    | 301       |
|                               | 9                                      | 225             | 225 | 480                                 | 480                 | 312                          | 335               | 600AF/350AT                  | 600AF/350AT                 | 1 x 400      | 271                                  | 338               | 600AF/300AT                  | 600AF/300AT | 1x 300      | 2x 288                                  | 234                         | 407   | 450A    | 2x 4/0 | 271                    | 338       |
|                               | 10 <sup>8</sup>                        | 250             | 250 | 480                                 | 480                 | 346                          | 372               | 600AF/400AT                  | 600AF/400AT                 | 1x 500       | 301                                  | 376               | 600AF/350AT                  | 600AF/350AT | 1x 350      | 2x 288                                  | 260                         | 452   | 500A    | 2x 4/0 | 301                    | 376       |
| 500kVA/500kW<br>2x 250K Frame | 11                                     | 275             | 275 | 480                                 | 480                 | 381                          | 410               | 600AF/450AT                  | 600AF/450AT                 | 2x 4/0       | 331                                  | 413               | 600AF/350AT                  | 600AF/350AT | 1x 400      | 2x 288                                  | 286                         | 497   | 500A    | 2x 250 | 331                    | 413       |
|                               | 12                                     | 300             | 300 | 480                                 | 480                 | 416                          | 447               | 600AF/450AT                  | 600AF/450AT                 | 2x 4/0       | 361                                  | 451               | 600AF/400AT                  | 600AF/400AT | 1x 500      | 2x 288                                  | 312                         | 543   | 600A    | 2x 300 | 361                    | 451       |
|                               | 13                                     | 325             | 325 | 480                                 | 480                 | 450                          | 484               | 600AF/500AT                  | 800AF/500AT                 | 2x 250       | 391                                  | 489               | 600AF/400AT                  | 600AF/400AT | 2x 3/0      | 2x 288                                  | 339                         | 588   | 600A    | 2x 350 | 391                    | 489       |
|                               | 14                                     | 350             | 350 | 480                                 | 480                 | 485                          | 521               | 600AF/600AT                  | 800AF/600AT                 | 2x 300       | 421                                  | 526               | 600AF/450AT                  | 600AF/450AT | 2x 4/0      | 2x 288                                  | 365                         | 633   | 700A    | 2x 400 | 421                    | 526       |
|                               | 15                                     | 375             | 375 | 480                                 | 480                 | 519                          | 558               | 600AF/600AT                  | 800AF/600AT                 | 2x 300       | 451                                  | 564               | 600AF/480AT                  | 600AF/480AT | 2x 4/0      | 2x 288                                  | 391                         | 678   | 700A    | 2x 500 | 451                    | 564       |
|                               | 16                                     | 400             | 400 | 480                                 | 480                 | 554                          | 596               | 600AF/600AT                  | 800AF/600AT                 | 2x 350       | 481                                  | 601               | 600AF/500AT                  | 800AF/500AT | 2x 250      | 2x 288                                  | 417                         | 723   | 800A    | 2x 500 | 481                    | 601       |
|                               | 17                                     | 425             | 425 | 480                                 | 480                 | 589                          | 633               | 800AF/640AT                  | 800AF/640AT                 | 2x 400       | 511                                  | 639               | 600AF/600AT                  | 800AF/600AT | 2x 300      | 2x 288                                  | 443                         | 769   | 800A    | 3x 300 | 511                    | 639       |
|                               | 18                                     | 450             | 450 | 480                                 | 480                 | 623                          | 670               | 800AF/700AT                  | 1200AF/700AT                | 2x 400       | 541                                  | 677               | 600AF/600AT                  | 800AF/600AT | 2x 300      | 2x 288                                  | 469                         | 814   | 1000A   | 3x400  | 541                    | 677       |
|                               | 19                                     | 475             | 475 | 480                                 | 480                 | 658                          | 707               | 800AF/800AT                  | 1200AF/800AT                | 2x 500       | 571                                  | 714               | 600AF/600AT                  | 800AF/600AT | 2x 350      | 2x 288                                  | 495                         | 859   | 1000A   | 3x 400 | 571                    | 714       |
|                               |  | 20 <sup>9</sup> | 500 | 500                                 | 480                 | 480                          | 693               | 745                          | 800AF/800AT                 | 1200AF/800AT | 2x 500                               | 601               | 752                          | 800AF/640AT | 800AF/640AT | 2x 350                                  | 2x 288                      | 521   | 904     | 1000A  | 3x 400                 | 601       |

**Symmetra® PX**

- Notes.
1. Mains Input source must be 480V Wye 3-wire + Ground or 4-wire+Ground. Contact Schneider Electric if other.
  2. Output is either 480V Wye 3-wire + Ground or 4-wire + Ground. The bypass source must match the output configuration
  3. Recommended cables are AWG/kcmil minimum requirement for three (3) current carrying conductors in raceway, sized for 30°C environment and 75°C terminations. All cabling must comply with installation site conditions and any applicable Local and or National Codes.
  4. See applicable submittal drawings for additional details.
  5. Contact Schneider Electric for assistance with all external battery designs. Maximum allowed DC cabling voltage drop is 1 VDC. DC cabling between the remote battery system and the UPS must be 1000V rated. Schneider Electric Standard external DCD's are rated 500A (PX 250kVA) or 1000A (PX 500kVA).
  6. Electronic Input Current Limit
  7. This is the UPS short time rating of 125% Overload for 10 minutes. Actual short time performance may be limited by the overcurrent protective device selected.
  8. For maximum scalability or future expansion it is recommended that the UPS frames be installed at their full ratings - see bold highlighted data
  9. All OCPD's and cabling are by others.
  10. OCPD = Over Current Protective Device
  11. Final selections are responsibility of engineer of record based on installed conditions and SCC/selective coordination/arc-flash analysis.

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TITLE: SYMMETRA PX  
INPUT: 480V 3Ø WYE, DUAL MAINS  
OUTPUT: 480V 500kVA/kW  
SITE PLANNING SUBMITTAL DATA

PROJECT: SUBMITTAL DRAWINGS | SHEET 3 OF 3

DWG NO: SY500K500BG2C1-3W-SD REV. 6

|                      |           |                |
|----------------------|-----------|----------------|
| DRAWN: BALAMURUGAN   | 03-JUL-15 | PROJ ANGLE N.A |
| ENGINEER: A WARNER   | 03-JUL-15 |                |
| APPROVED: B SHERIDAN | 03-JUL-15 |                |